File - N
Louisville
Correspond.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

RECEIVED
MAY 21 2007
PUBLIC SERVICE
COMMISSION

COPY

May 23, 2000

Mr. Gregory C. Heitzman, P.E.
Vice President – Chief Engineer
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

RE: ***Bluegrass Water Project – Design***

Dear Greg:

Enclosed is a check for $155,957.77 for the balance of payment per your invoices dated November 24, 1999 and February 2, 2000. As I indicated earlier, this amount represented the payment for surveying work, which appeared high at the outset. However, with the additional information received, including Bill Rhodes' letter of May 16, 2000, we understand the scope of work that requires the level of expenditures.

As we discussed previously, by processing this final payment, Louisville Water Company (LWC) acknowledges that Kentucky-American Water Company (KAWC) now owns this design, including easement development. If LWC elects, in the future, to utilize part or all of this design in any fashion, negotiations for reimbursement to KAWC will be required.

Greg, it has been a pleasure working with you and all of your staff. The professional level of everyone involved is a credit to LWC's success through the years. It is a disappointment that this project did not go forward, but perhaps it will be constructed yet.

Thank you for all of your efforts. We hope to work with you again in the near future.

Sincerely,

Linda Bridwell

Linda C. Bridwell, P.E.
Director of Engineering

LCB/dm

Enclosure

c: N. O. Rowe

Greg,
Talked to Jim Brammell today – the check was sent directly from our acctg. dept but he was aware of it and had processed it. Thanks again for everything!
Linda

F:\Engineering\LB\gh(lwc)-bwp-design.doc

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-569-0815

May 16, 2000

Linda C. Bridwell, P.E
Director of Engineering
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

RE: Bluegrass Water Supply Project
Dunaway Fee Comparison

Dear Linda:

LWC has submitted two invoices totaling $855,737.69 for 100% of its expenditures through December 31, 1999. KAWC reimbursed $699,779.92. The $155,957.77 difference, 100% of Dunaway's fee, is being held back pending submittal of unit cost-comparative data for the Dunaway fee.

Dunaway's fee divided by 77,978 feet of pipeline length, computes to a unit of $2.00 per pipeline foot. When costs for pump station site and tank site surveying are deducted, the unit is $ 1.89 per pipeline foot.

It is my understanding that, the only recent LWC project for which such comparative surveying fee data is available is the LaGrange Road Transmission Main. Two proposals were received. The following supporting documents are submitted for Dunaway fee comparison.

1. LWC's 7/19/99 Approval of Presnell Associates proposal: Presnell's $ 20,000 fee for pipeline length of 7,350 feet computes to $ 2.72 per foot.

2. Page 21 of the ClasSickle, Inc proposal: Their proposal of $ 24,431.84 computes to $ 3.32 per foot.

If the above comparisons are sufficient, please remit $155,957.77. LWC is eager close this phase of work on the project. Please call if you have any questions.

Sincerely,

William J. Rhodes, P.E.
Project Manager

received
5/19/00

cc: Greg Heitzman
Jim Brammell

An Equal Opportunity Employer

P

00002

TED NIEMAN

MEMORANDUM
Louisville Water Company

TO: John L. Huber

FROM: Lynn Humphrey L.H.

DATE: July 15, 1999

The Bids and Awards Committee has reviewed bids received on certain projects, purchases, and services. A recommended course of action for each is provided in the summary below and details for each sequence are attached as supporting information.

Authorization is requested to proceed on items for contract award.

PROCUREMENT OF MATERIALS AND SERVICES (includes bids, competitive negotiations, sole source, professional services and emergency contracts)

The Committee recommends that the following contracts be awarded to the lowest responsive bidder as follows:

1. PROF. SVC. Survey Services for LaGrange Road Transmission Improvements
PRESNELL ASSOCIATES, INC. $20,000

*Requires Board of Water Works approval./**Consent Agenda
*** Exception to the purchasing policy and the committee recommends that contract not be awarded.

LH/sd
pc: Gregory C. Heitzman
Robert K. Miller
Lynn Humphrey
Susan Mueller
Roberta Cervantes
Kay Keeler
Anna Norris
Laura Douglas
Richard Royse
Marion Gee
Ted Niemann

APPROVED: _____ DATE: 7/19/99
President
7-19-99

PROPOSAL FORM

LAND SURVEYING SERVICES
LAGRANGE ROAD 20 INCH TRANSMISSION MAIN, LWC PROJECT 98-673

ClasSickle, Inc. proposes to provide the services described in
(firm name)
detail in the submitted TECHNICAL PROPOSAL dated _____.

in response to a Louisville Water Company "Request for Proposal" (RFP) dated

6-28-99, and to compile and complete according to the schedule

required in the Contract, for an amount not to exceed

Twenty four thousand four hundred thirty one dollars

and eighty-four cents, $ 24,431.84.

SECTION I - COMPENSATION BREAKDOWN

		Disadvantaged Business Enterprise (circle one)	
Prime Consultant Fee:	$ 24,431.84	(Yes)	No
Sub-Consultants Fees:			
Firm Name	Estimated Fee		
N/A	$	Yes	No
	$	Yes	No
	$	Yes	No
	$	Yes	No
	$	Yes	No
FEE TOTAL	$ 24,431.84		

06/25/99 21

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (859) 269-2386 • Fax (859) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

April 19, 2000

Mr. Gregory C. Heitzman, P.E.
Vice President – Chief Engineer
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

RE: ***Bluegrass Water Project***

Dear Greg:

Enclosed is payment of $699,779.92 for design costs as agreed upon. I have withheld payment for the amount related to surveying while we continue to review the justification provided. I will either forward the balance or request any further information needed in the near future.

Thank you again for all of your efforts on this. Please do not hesitate to contact me f there are any questions or concerns.

Sincerely,

Linda C. Bridwell

Linda C. Bridwell, P.E.
Director of Engineering

LCB/dm

Enclosure

c: C. D. Bush

F:\Engineering\LB\heitzman.doc

Rev 1/5/00

INVOICE AUTHORIZATION FORM

For Acctg Dept Use Only

Inv Date

Inv #

Vchr #

Voucher In 4-00

PO #

Quan/Price/Ext OK BCB 4/06/00

Approved By

Supplier LOUISVILLE WATER CO.

Total Invoice Amount 689,779.92

Tax

Freight

PO Amt $683,674.04
16,105.88

Business Unit	Object	Subsidiary	Subldgr Type	Subledger
120200	241229			PBW01
120200	183000			

P

00006

COMPANY

YOU ARE HEREBY AUTHORIZED TO DRAW A CHECK FOR $ 699,779.92 TO THE ORDER OF:

LOUISVILLE WATER COMPANY

THIS PAYMENT IS TO BE DATED _____ 19____ IN PAYMENT OF THE FOLLOWING:

120 200. 241 229	–	$ 683,674.04
120 200. 183000. PBWP01 ~~105276~~	–	$ 16,105.88
		$ 699,779.92

MAIL CHECK ON _____ 19____

TRANSMIT CHECK TO _____

Linda Bridwell
REQUESTED BY

P

Colleen [illegible]

00007

LOUISVILLE WATER COMPANY
550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-569-0815

February 7, 2000

Linda C. Bridwell, P.E.
Director of Engineering
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

RE: LWC Contract E-050
Bluegrass Water Supply Project

Dear Linda:

LWC previously submitted its Invoice #42654 in the amount of $839,631.81 for 100% of its costs through October 31, 1999. Enclosed is LWC Invoice Number 42880 in the amount of $16,105.88 for 100% of LWC costs incurred between November 1,1999 December 31, 1999.

The following is in response to your December 17, 1999 invoice clarification requests. Supporting documentation is enclosed for your use.

1. Request for a breakdown of invoiced labor expenses:
   Attached are two Detail Job Charges Printouts, and two spreadsheets which list labor costs charged by each employee through the period ending October 31, 1999. Labor charges subsequent to October 31st, as reflected on the current invoice, were for services provided by William J. Rhodes and James H. Brammell.

2. Request for an explanation of LWC overhead expense calculation:
   LWC calculated overhead is the summation of 57% of all regular time worked, plus 16% of all premium time worked, plus 8% of all time worked by seasonal employees.

3. Request for a final breakdown of the PDR contract expenses:

PDR Engineers	$ 383,294.03
Gannett Fleming	$ 164,002.00
Dunaway	$ 155,957.77
Qore (Atlanta)	$ 27,502.40
PEH	$ 13,630.00
Scott Smith	$ 4,106.25
Law	$ 10,900.00
Cultural Resources	$ 7,811.09
M&G	$ 250.00
Total Payments	$ 767,453.54

received
2/11/00

An Equal Opportunity Employer

P

00008

4. Request for survey expenses justification:

PDR performed a detailed analysis of survey tasks and costs for the KAWC and LWC pipelines.

Tasks Dunaway performed for LWC, but PDR indicates they did not perform for KAWC were estimated to total $ 52,501. They include the following:

• Base Mapping/Verification.....	$ 2,702
• Stake and Profile 100% of Pipeline (KAWC required Profile of 10%).....	$ 31,710
• Drafting Services for Base Mapping	$ 5,883
• Field Locate Buried Tie-ins.....	$ 1,354
• ACAD File of Profile.....	$ 3,920
• Locate Rock Soundings and Bore Holes	$ 6,932
ESTIMATED TOTAL	$ 52,501

Invoiced Dunaway "KAWC Tasks" Pipeline Survey cost is estimated as follows:

Dunaway Invoiced for all work	$ 155,957
Less LWC Pump Station Survey	($ 3,900)
Less LWC Elevated Tank Survey	($ 4,500)
Less Dunaway "non-KAWC Tasks"	($ 52,501)
Net Estimated Dunaway "KAWC Tasks" Fee	$ 95,056

Dunaway pipeline survey costs for "KAWC" tasks distributed over the pipeline length of 77,978 feet computes to $1.22 per foot. This compares favorably to the $1.25 per foot that PDR attributes to the survey costs on KAWC pipeline.

5. Request for a "Direct Other Costs" breakdown:
Details of the Direct Other Costs are highlighted on the Detail Job Charges printout, as referenced in Item 1 above.

The Louisville Water Company is anxious to close this phase of work on this project. As such, you are requested to remit to total amount of the two submitted invoices upon receipt of this letter.

Sincerely,

Gregory C. Heitzman, P.E.
Vice President -Chief Engineer

cc: Jim Brammell
Bill Rhodes

Attach: Invoice #42880
Detail Job Charges Printouts
Labor charge spreadsheets (2)

LOUISVILLE WATER COMPANY
550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-569-0815

February 2, 2000

Kentucky American Water Co. Invoice # 42880

RE: Billing for Preliminary Engineering costs for Lexington Pipeline.

Labor	857.77
Overhead	414.00
Contract Labor	14,834.11
Cost of Job	16,105.88

Amount Due $16,105.88

Payment Due Within 30 Days
To insure proper credit, return one copy of Invoice with payment to Marion Gee

WP/wp

142.001
183.000 J9643

98+99

00012

Name								
Alan Arbuckle	8909	141	0	0	3,721.44	0	0	0399
Karen Willis	8909	74	0	0	2,085.32	0	0	0853
Daniel Tegene	8909	16	0	0	410.72	0	0	1078
Lisa Osburn	8909	26	0	0	390.52	0	0	1144
Jason Jones	8909	10	0	0	143.00	0	0	1184
Bill Rhodes	9643	852	0	0	34,080.00	0	0	0265
Gary Feldkamp	9643	8	0	0	185.20	0	0	0354
Phil Scott	9643	70	0	0	2,287.32	0	0	0532
Lynn Spencer	9643	1	0	0	27.21	0	0	1041
Ron Eiler	9643	9	0	0	249.12	0	0	1044
Patty Kaelin	9643	4	0	0	96.60	0	0	1084
Tori Oberhausen	9643	4	0	0	105.72	0	0	1120
Jason Jones	9643	31.5	0	0	475.97	0	0	1184
Jim Brammell	9643	127	0	0	4,186.93	0	0	1207
Jeremy Smith	9643	8.5	0	0	132.18	0	0	1227
Steve Tucker	9643	35	0	0	992.81	0	0	1261
Serena Riedley	9643	12	0	0	130.20	0	0	1397
Susan Ernst	9815	68	0	0	1,870.68	0	0	0399
Karen Willis	9815	152	0	0	4,459.04	0	0	0853
Patty Kaelin	9815	5	0	0	129.47	0	0	1084
Jason Jones	9815	8	0	0	120.88	0	0	1184

56,280.33

NOTE: THIS SPREADSHEET DISPLAYS LABOR COSTS FOR ALL EMPLOYEES CHARGING TIME TO BLUEGRASS PROJECT IN 1998 & 1999. (GIVES EMPLOYEE NAME)

1997

Name								
Alan Arbuckle	123	0	0	3,118.07	0	0	0399	8909
Karen Willis	137	0	0	3,730.51	0	0	0853	8909
Daniel Tegene	95	0	0	2,419.90	0	0	1078	8909
Jason Jones	11	0	0	152.02	0	0	1184	8909
Wesley Sydnor	50	0	0	542.50	0	0	1257	8909

9,983.00

NOTE! THIS SPREADSHEET DISPLAYS LABOR COST FOR ALL EMPLOYEES CHARGING TIME TO BLUEGRASS PROJECT IN 1997 (GIVES EMPLOYEE NAME)

00013

P

LOUISVILLE WATER COMPANY
550 South Third Street
Louisville, Kentucky 40202

No. 12 Date: 1/26/00

CONTRACTOR:
PDR Engineers, Inc.
400 Meidinger Tower
Louisville, Kentucky 40202
(502) 584-5555

REMITTANCE TO:
PDR Engineers, Inc.
400 Meidinger Tower
Louisville, Kentucky 40202

This is to certify that the above party is entitled to a twelfth payment of

Fourteen thousand Eight-hundred Thirty-four and 11/100 DOLLARS

in conformity with their contract of November 20, 1998

with the LOUISVILLE WATER COMPANY for Consultant Services for Bluegrass Water Supply Project

---

PROJECT No: 98-755 JOB No: 9643

CONTRACT No: E-050

Approved: LOUISVILLE WATER COMPANY

By: _____
James Brammell, P.E.
Business System Owner

_____
William J. Rhodes, P.E.
Project Manager

Payment: $14,834.11

Amount of Contract			Certification	Disbursement	Retained	Uncertified
Original Amount	$779,206.00	Previous	$752,619.43	$752,619.43	$0.00	$0.00
Extras & Credits	$0.00	Present	$14,834.11	$14,834.11	$0.00	N/A
Total Contract	$779,206.00	Total	$767,453.54	$767,453.54	$0.00	$11,752.46
				Balance Uncertified and Retained		$11,752.46

Purchasing _____ Date _____

Accounting _____ Date _____

LOUISVILLE WATER COMPANY
550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-569-0815

November 29, 1999

Linda C. Bridwell, P.E.
Director of Engineering
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Subject: LWC Contract E050
Bluegrass Water Supply Project

Dear Linda:

Enclosed are the following:

- LWC's 100% invoice for its Bluegrass Water Supply Project services through October 31, 1999
- Pipeline plans, specifications, and draft construction cost estimate
- Elevated Tank plans, specifications, and draft construction cost estimate
- Pumping Station plans, specifications, and draft construction cost estimate

In light of KAWC notification that the project is being placed on hold pending re-evaluation of KAWC water supply alternatives, LWC invoice is for 100% of its Bluegrass Project costs through October 31, 1999.

Please be advised that PDR forwarded notice of potential claims for added compensation. LWC requested that PDR provide detailed documentation and justification for any claims, and will keep you informed if PDR pursues.

If you have any questions, please call.

Sincerely,

Gregory C. Heitzman, P.E.
Vice President - Chief Engineer

received
11-30-99

Cc: John Huber
Jim Brammell
Bill Rhodes

An Equal Opportunity Employer

PDR Engineers, Inc.

November 12, 1999

Mr. James H. Brammell, P.E.
Business System Owner, Facility Design
Louisville Water Company
550 South Third Street
Louisville, KY 40202

RE: Bluegrass Water Supply
Environmental Work

Dear Mr. Brammell,

The attached letter has been provided by Scott R. Smith Environmental Management Consultants, Inc. in response to our request for copies of the work-to-date. According to Mr. Mark McGraw with Greenbaum, Doll & McDonald, who is council to Kentucky American Water Company, the reports are 'work products' and not public record. Therefore, copies are not advised.

However, representatives of the Louisville Water Company are welcomed to review the material with Mr. Brad Dillon at the offices of Greenbaum, Doll & McDonald in Louisville.

We trust this letter will be sufficient for your invoicing purposes and we will be happy to arrange a meeting with Mr. Dillon at your request.

Sincerely,

PDR Engineers, Inc.

Raymond W. Ihlenburg, P.E.
Senior Project Manager

V:\group\civil\lwcltr.99

cc: Scott R. Smith, Environmental Mangement Consultants, Inc.
Marcus P. McGraw, Greenbaum, Doll & McDonald
Linda Bridwell, P.E., Kentucky American Water Company
Brad Dillon, Greenbaum, Doll & McDonald

received
11/15/99

462 South 4th Avenue Suite 400, Meidinger Tower Louisville, Kentucky 40202 Phone (502) 584-5555 Fax (502) 584-5696

SCOTT R. SMITH
ENVIRONMENTAL
MANAGEMENT
CONSULTANTS, INC.
WE ALL SHARE THE SAME WORLD

November 11, 1999

Mr. Ray Ihlenberg
PDR Engineers Inc.
Suite 400, Meidinger Tower
Louisville, Kentucky

SUBJECT: Environmental Work Completed
Louisville/Lexington Water Pipeline

Dear Mr. Ihlenberg:

Scott R. Smith Environmental Management Consultants Inc., Cultural Resource Analysists Inc. and Law Engineering has over the past several months been working on addressing a number of environmental/cultural & historical issues with regard to the Louisville/Lexington Water pipeline project. Included below is a list and an overview of the work completed to date.

Cultural & Historical Resources

Work completed to date includes a physical survey of all properties where access could be obtained before work was stopped on the project. Approximately 85%-90% of the properties on the Louisville Water Company portion of the project have been evaluated. Further site specific examination may be required in key areas along stream crossings. The information obtained for the Louisville Water Company portion of the pipeline could be used by the company independently from the remainder of the project.

Information obtained during the survey has been organized, compiled and is ready to be incorporated into a final report once the additional information can be obtained. Several meetings with the State Historical Preservation Officer and staff have been held. Information obtained from these meetings has been utilized to draft the information obtained to date.

Suite 100
167 West Main Street
Lexington, KY 40507

(606) 231-8936
FAX (606) 231-8997
http://www.srsemci.com

Offices in
Kentucky
West Virginia
Ontario

This Is Recycled Paper

SCOTT R. SMITH
ENVIRONMENTAL
MANAGEMENT
CONSULTANTS, INC.

Ecological Surveys

Ecological surveys of the Louisville Water Company portion of the project have been completed. These surveys addressed threatened, endangered or protected species along the project route. The work included review of relevant literature and resources maintained by the Kentucky and U.S. Fish & Wildlife Services as well as the State Nature Preserves Commission. We also had several meetings with the state and federal authorities to elicit any issues or concerns they may have with respect to the project and incorporate their issues into the survey.

Field surveys were completed for protected plants, fish, mussels, bats, mammals, birds, amphibians, and reptiles.

Wetlands Survey

The wetlands survey for the pipeline route has been completed for all properties that we have had cess. The surveys have identified and delineated wetlands along the route. We have worked with e project team members to develop alternative routes to avoid or minimize wetland impacts or develop preliminary mitigation measures.

Environmental Narrative

Environmental issues that the Corps of Engineers have identified were in the process of being written when the project was halted. Areas that work was being completed include: noise, air, water quality, land use, aesthetics, groundwater impacts, fisheries, recreational area impacts, and site contamination issues. Preliminary mitigation measures have been developed, where methods to avoid impacts were not initially determined to be practical or feasible.

Noise

Different project activities have been identified and noise levels associated with project activities have been reviewed. Noise modeling and determination of potential impacts to the nearest receptors has not yet been completed.

Air Quality

Potential impact to air quality from construction activities has been initiated but not completed. pacts to the residential structures along the route for both the construction and post construction . not complete.

SCOTT R. SMITH
ENVIRONMENTAL
MANAGEMENT
CONSULTANTS, INC.

Water Quality

Stream crossing design and crossing methodology has been received and reviewed with a discussion of anticipated impacts initiated.

Land Use

Evaluation of land use along the route has been completed and a draft narrative of potential impacts has been prepared.

Ground Water Impacts

Identification of local groundwater regimes has been developed from publically available information. Evaluation of potential impacts from the project has been initiated, but not completed.

Recreational Areas

Recreational areas have been identified and the impacts of the project to these areas has been initially developed.

Fisheries

Potential impacts to known fisheries resources has been initiated.

Site Contamination Areas

The pipeline route, where access has been provided, has been evaluated with respect to known sources of site contamination available from public documents or information sources and the narrative concerning these areas has been prepared.

Corps of Engineers Permit (Section 404 and Section 10)

Alternatives to the pipeline have been identified and the narrative on some of the alternatives have been drafted. Preliminary work has been completed on the narrative concerning river and stream crossing methods and protective measures. Several meetings with the appropriate staff of the Corps of Engineers have been held. The preliminary work on evaluation of the project purpose and need statement and project description as well as project design considerations have been completed. Additionally, some site specific mapping has been completed for incorporation into the permit application.

SCOTT R. SMITH
ENVIRONMENTAL
MANAGEMENT
CONSULTANTS, INC.

Additional Environmental Permits

Initial work on the following permit applications has been conducted:

Kentucky Pollution Discharge Elimination System (KPDES)
Kentucky Pollution Discharge Elimination System (Stormwater)
Flood plain Construction Permit
Section 401 Water Quality Certification

The work includes gathering appropriate design, location, operation and administrative information to complete the required application forms.

I hope that the information contained herein adequately addresses your clients questions and fulfills your needs. Should you have any further questions, please do not hesitate to give me a call.

Very truly yours,

SCOTT R. SMITH ENVIRONMENTAL
MANAGEMENT CONSULTANTS, INC.

Scott R. Smith

Scott R. Smith
President

H:\1886\ihlenberg.ltr

Linda Bridwell 09/28/99 02:07

To: John Hill/KAWC/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW

Subject: BWP

I spoke with Jim Brammell at LWC this afternoon. They are currently working with PDR to wrap up the punch list of design items and expect to be finished around October 15. At that time, they expect to settle the final bill with PDR and invoice us. Our projected cost is currently $535,000. PDR has made additional cost requests that have not been approved. I also continue to insist on justification of their surveying costs, which I reminded Jim I have not yet received. I would expect to pay this no earlier than December.
Additionally, I believe we will spend $20,000 each month on mediation alone. Additional KAWC charges and AFUDC easily make $50,000 a month a good, if not conservative number.
I also have received invoices this week from Gannett, Schnabel, and legal bills that equal $256,302.
I expect $100,000 in September and $156,000 in October (GF's has not been approved by Dave Reves yet). So cash flow should look like:

September	$125,000
October	$200,000
November	$50,000
December	$585,000

I may be too conservative on the AFUDC, but this will be about as close as I can get right now.

JAN
ROUTT
09/13/99 10:26 AM

To: Nick Rowe/KAWC/AWWSC@AWW, Linda Bridwell/KAWC/AWWSC@AWW
cc: Joe White/KAWC/AWWSC@AWW, Beth Hamm/KAWC/AWWSC@AWW, Dorothy Johnson/KAWC/AWWSC@AWW, Mitzi Combs/KAWC/AWWSC@AWW, Dillard Griffin/KAWC/AWWSC@AWW

Subject: Louisville water quality

Nick, and all,

I had a voice mail from Steve Hubbs this morning, in repsonse to my call about Louisville's recent T& O.

Here is the content:

Louisville contiunes to have MIB (methylisobornial...sp? I forget) in source water at 20-30 ppt.

The highest MIB detected was two different times recently, ten days apart) at about 100 ppt.

They are continuing to treat with PAC...have spent $700,000 to date which is considerable in light of their total annual chemical budget of $1.2 million.

The good news is they are selling enough water to offset these added treatment costs... (aparently even though it has some T & O, people still need lots of it).

They attribute the MIB possibly to some "bottom" (scientific term is benthic) algae in the river.. expect it may continue for 3- to 5 more days or longer based on upstream Ohio R. monitoring.

Steve, here's my transcipt of your voice mail for our folks. Thanks for the update. I look forward to seeing you guys next week.

Jan



"Ray Ihlenburg" <rihlenburg@pdreng.com> on 08/20/99 08:16:46 AM

To: H20PIPER@aol.com
cc: Linda Bridwell/KAWC/AWWSC, jbrammell@lwcky.com, "Hans Probst" <hprobst@pdreng.com>, "mark tate" <mtate@pdreng.com>

Subject: Re: 3 Week Time Extension

Bill, Thank you for the info....keep in mind that we need the review comments from the Water Company before we can finish . This would include resolution of outstanding issues re: telemetry and electric service to the booster station, contacting the property owner about an easement for the access road...etc....We will respond to the scope letter that you sent next week to highlight the status of all phases but feel our budget will not allow us to go much further without your staff's comments....Therefore, we request three weeks to finish after we receive the comments and input that we need to resolve our questions.....We will provide a listing of questions and issues next week. This will include any technical items that Gannett Fleming needs to resolve....

>>> <H20PIPER@aol.com> 08/19 5:51 PM >>>
Ray,

Your request for a 3 week time extension has been approved.

I am US-mailing a letter to you tommorrow.

New completion date is 9/6/99.

Thanks.

Bill



H2OPIPER@aol.com on 08/19/99 05:51:36 PM

To: rihlenburg@pdreng.com
cc: jbrammell@lwcky.com, hprobst@pdreng.com, mtate@pdreng.com, Linda Bridwell/KAWC/AWWSC

Subject: 3 Week Time Extension

Ray,

Your request for a 3 week time extension has been approved.

I am US-mailing a letter to you tommorrow.

New completion date is 9/6/99.

Thanks.

Bill

File - N
Louisville
Correspondence

Linda C. Bridwell, P.E.
Director of Engineering

MEMORANDUM

TO: File

FROM: Linda Bridwell Linda

RE: BWP

DATE: August 9, 1999

On October 28, 1999, we had a conference call with Bob Miller and Greg Heitzman of the Louisville Water Company. Nick Rowe, Coleman Bush and I were involved. A number of contract issues were discussed, however, I particularly wanted to memorialize the commitment that Greg made. KAWC has been particularly concerned with the appearance of a premium cost for the surveying services of Dunaway. This seems to be partly the requirements of LWC and partly because they are a DBE firm that is highly in demand. Although LWC does not require DBE use, they strongly recommend it. KAWC has absolutely no requirement for DBE use. LWC had not provide previously requested information to support that the surveying costs were not unreasonable. During this conversation, Greg made a commitment that they would be willing to pay the difference if in analysis, the cost from Dunaway is a premium. Although there was some talk that the high cost was due to our schedule, we had asked for competitive prices and none were requested of the consultant.

This memorandum has been developed from my handwritten notes taken during the conversation.

********** -COMM.JOURNAL- ********** DATE JUL-28-1999 ***** TIME 09:54 *** P.01

MODE = MEMORY TRANSMISSION START=JUL-28 09:42 END=JUL-28 09:54

FILE NO.= 086

NO.	COM	ABBR/NTWK	STATION NAME/ TELEPHONE NO.	PAGES	PRG.NO.	PROGRAM NAME
001	OK	a	915025693691--8	011/011		

-KAWC -

********** - ***** - **********

File - N Louisville Correspondence

7/27 to Jeff. Pn also faxed the letter to him (per his request) Debbie

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502
606/269-2386

TELECOPY TRANSMITTAL SHEET

FAX No. 606/ 268-6327
We have a Panasonic Panafax UF-755 Facsimile

DATE: 7/28/99

COMPANY: KWC

HAND TO: Jim Brammell

FROM: Debbie Mireault

Number of pages, including cover: 12

If you have any problems with receiving, please call:

Phone: 606/268-6393 Ask for: Debbie

Hard copy mailed: Yes _____ No ✓

PLEASE DELIVER TO THE ABOVE NAMED PERSON IMMEDIATELY

The information contained in this transmission is privileged, confidential and intended only for the use of the individual or entity named above. If you receive this communication in error, please notify Kentucky-American Water Company immediately by telephone, collect and return the original message to us at the address shown via the U.S. Postal Service. You will be reimbursed for the required postage. Thank you.

Message: Call me if there's anything else you may need.

Debbie

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502
606/269-2386

TELECOPY TRANSMITTAL SHEET

FAX No. 606/ 268-6327
We have a Panasonic Panafax UF-755 Facsimile

DATE: 7/28/99

COMPANY: KWC

HAND TO: Jim Brammell

FROM: Debbie Mireault

Number of pages, including cover: 12

If you have any problems with receiving, please call:

Phone: 606/268-6393 Ask for: Debbie

Hard copy mailed: Yes _____ No ✓

PLEASE DELIVER TO THE ABOVE NAMED PERSON IMMEDIATELY

The information contained in this transmission is privileged, confidential and intended only for the use of the individual or entity named above. If you receive this communication in error, please notify Kentucky-American Water Company immediately by telephone, collect and return the original message to us at the address shown via the U.S. Postal Service. You will be reimbursed for the required postage. Thank you.

Message: Call me if there's anything else you may need.

Debbie

Louisville Water Company

DRAFT

Memo

To: Greg Heitzman (LWC), Linda Bridwell (KAWC)

From: Jim Brammell

CC: File

Date: 07/12/99

Re: Bluegrass Water Supply Project – Status Meeting Held 7 July 99

A meeting to discuss the status of the Bluegrass Water Supply project was held at the Louisville Water Company (LWC) on 7 July 99. In attendance were Greg Heitzman and Jim Brammell (LWC) and Linda Bridwell of the Kentucky-American Water Company (KAWC).

The meeting focused on a review of the plans for each of the three project components which are: 1) Pipeline; 2) Pump station; and 3) Elevated storage. Through the course of the plan review the following issues/topics were discussed:

- KAWC intends to bid their portion of the project in the next 6-8 months. The application will be filed in concert with obtaining as-bid prices.
- Linda to contact Tom Skaggs with KY Division of Water and get determination of when he would like to review project plans.
- LWC to determine, in consultation with PDR, when we could be prepared to bid our portion of the project.
- Linda advised that authorization to negotiate easements will not occur until after PSC approval (except easements that are required for BPS and tank sites).
- Linda to provide guidance to LWC on what should be done on the environmental and cultural resources studies for those properties on which access has been denied.
- LWC will prepare pipeline specs to bid the project unclassified.
- Jim to contact LWC's Developer Extensions area to apprise of recent discussions with representatives of Ball Homes on the Beckley Station Road development.
- Greg informed Linda of conversations between LWC and Louisville MSD with respect to proceeding with joint acquisition of a portion of the easements. It was agreed that, if pursued, the details of the arrangement will be agreed to in writing between the LWC and KAWC.

received 7-15-99

- Linda will validate the current pump station design which depicts having the smallest pumping unit sized at 6 MGD. Would a smaller unit or a VFD be appropriate?

- Jim to discuss with consultant a change order to modify the architecture of the pump station such that the façade is consistent with neighboring architecture.

- Linda advised that KAWC needs a detailed cost estimate for all components of the project.

- The site development plan for the BPS and tank at Hwy 55 were discussed. It was agreed that a one-tank-height separation to the BPS will be sufficient.

- Greg reiterated that LWC will be willing to purchase up to 5 acres of the Hwy 55 parcel. Jim to have consultant depict the five acre property boundary on the plans.

- LWC will bid the tank with base storage of 2.5 MG. Alternate bids will be taken for capacities of 1.5 MG and 2.0 MG.

- Jim to provide Greg and Linda with details of LWC's proposed metering arrangement as discussed between Bill Rhodes and Kevin Grant.

- Linda advised that the time extension request as made in the 16 June 99 letter to her is approved. Stream crossing details are due to her by 15 July 99.

It was finally agreed that the next status review meeting is to be held the 3rd or 4th week of August.

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-569-0815

June 16, 1999

Ms. Linda C. Bridwell, P.E.
Director of Engineering
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

RE: Bluegrass Water Project – Time Extension for Consultant Completion

Dear Ms. Bridwell:

This letter is a follow-up to our telephone conversation of June 3rd, subject as above, in which I explained that a time extension request has been received from PDR Engineers, Inc. for completion of their design services for the Bluegrass Water Supply Project.

PDR has formalized their request in letter form, a copy of which is attached. Specifically, PDR has requested a forty-five (45) calendar day extension to the project timeline for the project deliverables. The following table outlines the current required completion dates for key deliverables, as well as the dates that would be in effect if you concur with the extension.

	Current Completion Date	Requested Completion Date
• 100% stream x-ing details	1 April 99	1 July 99
• 90% design for pump station 90% tank plans	1 May 99	15 July 99
• 100% plans & specs for: -pipeline -pumping station -elevated tank	1 June 99	16 Aug 99
• Final project estimate	1 July 99	16 Aug 99

Please advise at your earliest convenience Kentucky American's position on whether this request is acceptable.

Sincerely,

James H. Brammell, P.E.
Business System Owner, Facility Design,
Construction & Maintenance

CC: Greg Heitzman
Bill Rhodes

received
6/21/99

PDR Engineers, Inc.

June 16, 1999

Mr. James H. Brammell. P.E.
Business System Owner, Facility Design
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

Re: Bluegrass Water Supply Project

Dear Mr. Brammell:

PDR Engineers, Inc. would like to request a time extension to the current contract for delivering the pipeline, pump station and water tank plans and specifications for the Bluegrass Water Supply Project.

PDR Engineers, Inc. is requesting a 45-calendar day extension to the project timeline for the deliverables for the project based on the revisions requested by the Louisville Water Company. Based on the 45-calendar day request the following schedule is requested:

Revised Completion Dates	Deliverables
July 1, 1999	100% Stream Crossing Details
July 15, 1999	90% Design Plans for Pumping Station 90% design Plans for Water Tank
August 16, 1999	100% Design Plans and Specifications for: Pipeline Pumping Station Elevated Tank
August 16, 1999	Final Cost Estimate

Revisions in the alignment of the waterline and subsequent changes in the pump station locations have caused delay in the production of plans and specifications. Many of the revisions in alignment which were requested by property owners and the Louisville Water Company have been incorporated into the plans to facilitate the future acquisition of easements along the alignment.

PDR has also been requested by the Louisville Water Company to investigate the possibility of a right-of-way crossing at KY 1848 and to investigate any potential conflicts with the future roadway interchanges at I-64 and I-264 and English Station Road.

462 South 4th Avenue Suite 400, Meidinger Tower Louisville, Kentucky 40202 Phone (502) 584-5555 Fax (502) 584-5556

Attached is a list of the revisions requested during the current contract period requiring additional time to complete the engineering.

We feel this request is reasonable request for additional time while still meeting the delivery schedule to Kentucky American Water Company.

Thank you for your consideration of this matter.

Sincerely,

Mark S. Tate, P.E.
Project Manager

cc: Hans Probst, P.E.
Bill Rhodes, P.E.

file: Bluegrass Water Supply

File - N
LWC
Corresp

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

May 3, 1999

Mr. Jim Brammell
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

Dear Mr. Brammell:

Our design team met on April 22-23 for a progress meeting. During the meeting, PDR/Gannett-Fleming showed us a tentative site layout for the metering point that included the booster station and the tank. After looking at the layout, we expressed our desire for the tank to be located at least the distance away from the edge of the property adjacent to the booster station equal to the height of the tank.

Additionally, we would prefer a tank design with either a single inlet/outlet pipe and no altitude valve or an altitude valve on with separate pipes for inlet/outlet. Obviously, we will defer to your preferences on design, but would like to understand the intended operations in order to optimize our design and operations.

Please let me know if there are any questions or concerns.

Sincerely,

Linda C. Bridwell

Linda C. Bridwell, P.E.
Director of Engineering

LCB/dm

c: Nick Rowe
Dave Reves
Jeff Raffensperger

H:\HOME\DEBBIE\Engt\LB\brammell.doc

File - N
Sof S
Louisville
Corresp.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

April 7, 1999

Mr. Greg Heitzman
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

RE: ***Bluegrass Water Project***

Dear Greg:

Attached is a copy of the information I received from our attorney regarding the right to survey for public utilities. Unfortunately, as you will note, he indicated that the statute specifically excluded utilities owned by a municipality of a first class status.

Please let me know if there are any questions or concerns.

Sincerely,

Linda Bridwell

Linda C. Bridwell, P.E.
Director of Engineering

LCB/dm

Attachment

c: Jim Brammell – LWC
Bill Rhodes

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

April 7, 1999

Mr. Bill Rhodes
13503 Rock Bay Court
Louisville, Kentucky 40245

RE: ***Bluegrass Water Project – Communications***

Dear Bill:

Enclosed is a copy of the original postcard sent to all property owners along the original route. This included property owners parallel to the gas line from the Jefferson/Shelby County line to KY 55. Also included is a copy of previous communications (form letter and newsletter) that were either left with the owners or mailed to them if we were unable to contact the owner with either a field visit or phone call.

Also enclosed is a copy of the letter that we will send to those owners from the county line to KY 55 that are no longer along the route. This letter will hopefully be mailed this week. This should clear up any confusion on the route for these property owners.

Please let me know if there are any questions or concerns.

Sincerely,

Linda Bridwell

Linda C. Bridwell, P.E.
Director of Engineering

LCB/dm

Enclosures

c: Jim Brammell – LWC

Linda C. Bridwell, P.E.
Director – Bluegrass Water Project

March 2, 1999

«Title» «FirstName» «LastName»
«Address1»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

As you may be aware, Kentucky-American Water Company revised the proposed route of its 36-inch ductile iron water supply pipeline. This route revision has resulted in a realignment of the proposed pipeline away from your property. The change in the route was made after careful consideration of a number of issues.

We greatly appreciate all of the input and cooperation that we received. If you have any further questions about this project, please call our toll free hotline a 1-877-24water.

Sincerely,

Linda C. Bridwell, P.E.
Director – Bluegrass Water Project

LCB/dm

File—N
KWC

COMMONWEALTH OF KENTUCKY
OFFICE OF THE ATTORNEY GENERAL

ALBERT B. CHANDLER III
ATTORNEY GENERAL

OFFICE OF RATE INTERVENTION
1024 CAPITAL CENTER DRIVE
FRANKFORT, KY 40601-8204

TEL: (502) 696-5457
FAX: (502) 573-8314

March 10, 1999

Herbert A. Miller, Jr., Esq.
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Mr. Miller:

Per your request, please find enclosed copies of replications of three schedules from the Louisville Water Company/Kentucky-American Water Company *Water Supply Agreement.* Also enclosed is a forecast of Exhibit B, Schedule 1, which reflects rate component calculations under the sixth-year minimum buyer capacity request amount per the agreement.

Sincerely,

David Edward Spenard
Assistant Attorney General

Enclosures (4)

KAWC_lr1

EXHIBIT B
Schedule 1
LWC - KAWC Water Supply Agreement
Calculation of Rate Components

Sixth Year (Pro Forma)

Request (1,000 Gal.)		5,000
Divided by: LWC Production Capacity (1,000 Gal.)		240,000
Request/Production Capacity Quotient		2.083%

CALCULATION OF OPERATING EXPENSE COMPONENT

Net Operating Expenses	Utility Rate Sch. 2; Column 1; Line 50.	31,220,800
Less: Common to Retail Customer Costs	Utility Rate Sch. 2; Column 7; Line 50.	(5,127,330)
Customer Costs	Utility Rate Sch. 2; Column 6; Line 50.	(9,803,200)
Operating Cost		16,290,270
Div. by: LWC's An. Sys. Sales (1,000 Gal.)	Utility Rate Sch. 1; Column 3; Line 4	37,000,000
Op. Exp. Component Quotient (per 1,000 Gal.)		0.44028

CALCULATION OF DEPRECIATION EXPENSE COMPONENT

Depreciation Expense	Utility Rate Sch. 3; Column 1; Line 19	11,010,480
Less: Common to Retail Customer Costs	Utility Rate Sch. 3; Column 7; Line 19	(2,940,510)
Customer Costs	Utility Rate Sch. 3; Column 6; Line 19	(2,663,010)
Depreciation - Plant Funded by CIAC	Utility Rate Sch. 3.	(632,290)
Depreciation Cost		4,774,670
Multiplied by: Request/Production Capacity Quotient		2.083%
Annual Depreciation Expense Component		99,456.38
Divided by: 12-Months		12
Monthly Depreciation Expense Component		8,288.03

CALCULATION OF RETURN ON PLANT INVESTMENT COMPONENT

LWC's Return on Plant Investment	Utility Rate Sch. 4; Column 1; Line 24.	28,585,310
Less: Common to Retail Customer Costs	Utility Rate Sch. 4; Column 7; Line 24.	(7,164,740)
Customer Costs	Utility Rate Sch. 4: Column 6; Line 24.	(1,488,140)
Net Return on Plant Investment		19,932,430
Multiplied by: Request/Production Capacity Quotient		2.083%
Annaul Return on Plant Investment Component		415,192.52
Divided by: 12-Months		12
Monthly Return on Plant Investment Component		34,599.38

CUSTOMER COST COMPONENT

Example based on one 6" meter	259.00

USAGE EXCEEDING REQUEST COMPONENT

Usage of water during any 24 hour period in excess of KAWC's Request will result in a charge to KAWC, with respect to excess consumption, of LWC's Wholesale Rate including its Elevated Service Area Surcharge	1.35

COMPUTATION OF TOTAL WATER BILL

The monthly water bill will be the sum of the following charges: operating expense component; depreciation expense component; return on plant investment component; customer cost component; and the usage exceeding request component.

Utility Rate

Allocation of Louisville Water Company Estimated Depreciation Expense to Functional Cost Components

Year Ended December 31, 1998 (In Thousand Dollars)

Line No.	Item	Total Depreciation Expense	Elevated Service Area	Common to All Customers Base	Extra Capacity Maximum Day	Extra Capacity Maximum Hour	Customer	Common To Only Retail Customers
1)	Land							
2)	Land Improvements and Bldgs.	895.57	17.31	614.57	200.07	13.48	49.73	
3)	Basins and Ground Storage	359.24		248.75	110.49			
4)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06		
5)	High Service Pumps and Equip.	204.84	19.21	128.54	57.09			
6)	Booster Pump Equip.	34.93	24.17	6.67		4.09		
7)	Miscellaneous Pump Equip.	48.65		33.69	14.96			
8)	Sludge Disposal Equip.	64.48		64.48				
9)	Purification Equip.	536.44		371.44	165.00			
10)	Transmission Mains	2,122.63		1,469.76	652.87			
11)	Distribution Mains	1,971.82						1,971.82
12)	Meters	357.76					357.76	
13)	Services	1,302.41					1,302.41	
14)	Meter Installations	447.05					447.05	
15)	Fire Hydrants	409.90						409.90
16)	Sub-total	8,918.14	104.59	3,011.36	1,200.48	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and other Equip.	2,092.34	24.54	706.51	281.65	14.69	506.06	558.79
19)	Total	11,010.48	129.13	3,717.87	1,482.13	77.32	2,663.01	2,940.51

EXHIBIT B
Schedule 1
LWC - KAWC Water Supply Agreement
Calculation of Rate Components

Request (1,000 Gal.)		2,500
Divided by: LWC Production Capacity (1,000 Gal.)		240,000
Request/Production Capacity Quotient		1.042%

CALCULATION OF OPERATING EXPENSE COMPONENT

Net Operating Expenses	Utility Rate Sch. 2; Column 1; Line 50.	31,220,800
Less: Common to Retail Customer Costs	Utility Rate Sch. 2; Column 7; Line 50.	(5,127,330)
Customer Costs	Utility Rate Sch. 2; Column 6; Line 50.	(9,803,200)
Operating Cost		16,290,270
Div. by: LWC's An. Sys. Sales (1,000 Gal.)	Utility Rate Sch. 1; Column 3; Line 4	37,000,000
Op. Exp. Component Quotient (per 1,000 Gal.)		0.44028

CALCULATION OF DEPRECIATION EXPENSE COMPONENT

Depreciation Expense	Utility Rate Sch. 3; Column 1; Line 19	11,010,480
Less: Common to Retail Customer Costs	Utility Rate Sch. 3; Column 7; Line 19	(2,940,510)
Customer Costs	Utility Rate Sch. 3; Column 6; Line 19	(2,663,010)
Depreciation - Plant Funded by CIAC	Utility Rate Sch. 3.	(632,290)
Depreciation Cost		4,774,670
Multiplied by: Request/Production Capacity Quotient		1.042%
Annual Depreciation Expense Component		49,752.06
Divided by: 12-Months		12
Monthly Depreciation Expense Component		4,146.01

CALCULATION OF RETURN ON PLANT INVESTMENT COMPONENT

LWC's Return on Plant Investment	Utility Rate Sch. 4; Column 1; Line 24.	28,585,310
Less: Common to Retail Customer Costs	Utility Rate Sch. 4; Column 7; Line 24.	(7,164,740)
Customer Costs	Utility Rate Sch. 4; Column 6; Line 24.	(1,488,140)
Net Return on Plant Investment		19,932,430
Multiplied by: Request/Production Capacity Quotient		1.042%
Annaul Return on Plant Investment Component		207,695.92
Divided by: 12-Months		12
Monthly Return on Plant Investment Component		17,307.99

CUSTOMER COST COMPONENT

Example based on one 6" meter	259.00

USAGE EXCEEDING REQUEST COMPONENT

Usage of water during any 24 hour period in excess of KAWC's Request will result in a charge to KAWC, with respect to excess consumption, of LWC's Wholesale Rate including its Elevated Service Area Surcharge	1.35

COMPUTATION OF TOTAL WATER BILL

The monthly water bill will be the sum of the following charges: operating expense component; depreciation expense component; return on plant investment component; customer cost component; and the usage exceeding request component.

Utility Rate
Allocation of Louisville Water Company Estimated Net Operating Expense to Functional Cost Components
Year Ended December 31, 1998 (In Thousand Dollars)

Line No.	Item	Net Operating Expense	Elevated Service Area	Common to All Customers Base	Extra Capacity Maximum Day	Extra Capacity Maximum Hour	Customer	Common to Only Retail Customers
1)	Source of Supply	52.44		36.31	16.13			
2)	Power and Pumping							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill, Power	743.19		743.19				
6)	Crescent Hill, Other	434.68		269.42		165.26		
7)	Payne, Raw Water, Power	113.98		113.98				
8)	Payne, Raw Water, Other	178.51		123.61	54.91			
9)	Payne, Fin. Water, Power	645.90	322.95	322.95				
10)	Payne, Fin. Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.86	171.82	9.04				
12)	Boosting Pumping, Other	496.84	397.31	61.56		37.76		
13)	Total Power and Pumping	4,294.38	995.78	2,869.86	186.29	242.45	0.00	
14)	Purification							
15)	Chemicals, Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	Transmission and Distribution							
20)	Transmission Mains	712.95		493.66	219.28			
21)	Distribution Mains	1,789.04						1,789.04
22)	Dist. Storage, Res., & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26
26)	Trans. & Dist. Subtotal	4,427.21	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Trans. & Dist.	5,052.32	23.71	565.00	250.24	1.00	1,839.48	2,372.89
29)	Total Trans. & Dist.	9,479.53	44.49	1,060.09	469.52	1.88	3,451.33	4,452.19
30)	Customer Accts. & Service							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,983.47						
34)	Uncollected Accounts	275.00						
35)	Misc. Customer Accounts	96.82						
36)	Total Cust. Accts. & Service	5,581.80					5,581.80	
37)	Subtotal	24,401.39	1,040.27	7,819.12	1,812.32	244.33	9,033.13	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	Administrative & General							
40)	Administrative and General	12,810.53						
41)	Labor Related Overhead	8,853.50						
42)	Less: Oper.Exp. Applied	(12,262.30)						
43)	Total Admin. & General	9,201.73	392.29	2,948.58	683.42	92.14	3,406.38	1,678.92
44)	Total	33,603.12	1,432.56	10,767.69	2,495.75	336.47	12,439.51	6,131.11
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(80.90)		(80.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.92	1,432.56	11,882.92	2,495.75	479.04	12,814.51	6,131.11
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.82	1,432.56	11,882.92	2,495.75	479.04	9,803.18	5,127.33

File - N
LWC
Correspondence

Nick
Herb
Rita

nda C. Bridwell, P.E.
rector of Engineering

Memo

To: File

From: Linda C. Bridwell

Date: March 2, 1999

Re: ***Meeting w/Louisville Water Company***

On Thursday, February 18, 1999 I met with Greg Heitzman, Bill Rhodes and Jim Brammell of the Louisville Water Company (LWC). The purpose of this meeting was to resolve some issues and provide a mutual status update for design.

The first issue discussed was contact with the property owners in Shelby County. LWC has now selected a route adjacent to I-64 on the north side. KAWC will notify previously-contacted property owners that the route has changed. LWC will be responsible for any future communications with property owners within the route where they will install the pipe. Bill asked me to send him a copy of the previous correspondence we had sent.

The second issue discussed was the schedule change in Greg's letter of January 27, 1999. I agreed to the schedule change. LWC will offer this extension to PDR.

The third issue discussed was the tank site. They would prefer to purchase five acres from us rather than lease. The transaction will be triggered by KAWC once we have closed on the property. We also will need to determine administrative costs.

We further discussed the issue of the competitiveness of the price LWC from Dunaway Engineers. Obviously, at this point, it would not be feasible to develop competitive proposals. LWC will prepare an analysis based on recent work. Greg indicated that Dunaway did have concerns about locating the gas line. Based on our experience, that concern is warranted. LWC also felt that they had obtained a premium price based on the timeline and scope, but that they would be billed on actual hours. This should be significantly reduced based on the shift to the north side. Greg reiterated that LWC would pay for any costs that everyone agreed were not reasonable. The shift to the north side will allow coordination with MSD and easier access for the West Shelby Water District.

We briefly discussed utilities' right of access to survey. I agreed that I would obtain legal information from Herb and forward this to Greg. LWC will wait on us to tell them when to begin easement acquisition on their portion.

Greg reviewed conversations that they have had with the Shelby County water purveyors.

Greg also indicated that they had hired Ted Nieman to head up a new department transmission. At some point during the design, Ted's group will take over.

We will target another meeting during the first week of April.

LCB/dm

Coleman Bush
02/03/99 04:35 PM

To: Herb Miller/KAWC/AWWSC@AWW
cc: Linda Bridwell/KAWC/AWWSC@AWW, ingramjr@skp.com

Subject: RE: SDC

---------- Forwarded by Coleman Bush/KAWC/AWWSC on 02/03/99 04:35 PM ----------

bmiller@lwcky.com on 02/03/99 02:16:03 PM

Please respond to bmiller@lwcky.com

To: Coleman Bush/KAWC/AWWSC
cc:
Subject: RE: SDC

Regarding the SDC, that was waived due to the fact that you are reserving capacity. If documentation is needed, let's have Herb Miller and Joe Helm work on the format.

Yes, I was married on January 2nd, the day of heavy ice and rain storms. Everything is going well and we are quite happy. My new home number is 502-634-0772.

No, I did not play the Crash Test Dummies at the wedding OR the reception. I did play it for my wife, though. As always, she is mostly polite about my choice of friends.

-----Original Message-----
From: cbush@kawc.com [mailto:cbush@kawc.com]
Sent: Thursday, January 28, 1999 9:05 PM
To: bmiller@lwcky.com
Cc: hmiller@kawc.com
Subject: SDC

During negotiations, I recall your waiving the SDC. We need to get that in writing.

Did you tie the knot? And did you play Crash Test Dummies at the wedding?

File - N
Louisville
Correspondence

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-569-0815

January 27, 1999

Ms. Linda Bridwell, P.E.
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Re: Bluegrass Water Supply Project

Dear Ms. Bridwell:

Thank you for your letter of January 20, 1999. Mr. Jim Brammell, Mr. Bill Rhodes, and I met with PDR Engineers (Hans Probst, Ray Ihlenberg, and Mark Tate) on January 21 to review the progress of the design of Louisville Water Company's portion of the Bluegrass Pipeline. I was pleased to see the design is well underway and on schedule to meet the target March deadline. I have provided the following response to the issues identified in your letter.

Item No. 1 - I understand your schedule has been revised to accommodate a route change and you have extended our design completion an additional 120 days from March 7 to July 7, 1999. With this extension, we will advise PDR Engineers that their design completion and final cost estimate have been extended as follows:

- 90 percent design plans of pipeline route, including stream crossing details and permit preparation by 4/1/99 (to meet Corps of Engineers permit date)
- 90 percent design plans of pump station and tank by May 1, 1999
- final design plans and specifications for pipe, pump station, and tank by June 1, 1999
- final project estimate by July 1, 1999

This revised schedule should accommodate PDR's coordination efforts with Gannett-Flemming.

Item No. 2 - I understand you will soon complete your purchase of a 7.34-acre tract in Shelby County. Louisville Water Company desires to own the property where the tank and pump station will be located. I will direct PDR to proceed with the final site plan for location of the tank and master meter assembly and preparation of a property plat and property description. The layout will consider construction of a future tank should operations require such storage. I will move forward with approval by the Board of Water Works to purchase five acres from Kentucky American for a price of $225,000. I will request Mr. Joe Helm to draft a property sale agreement and coordinate this transaction with Mr. Herb Miller.

Item No. 3 - Louisville Water Company authorized PDR Engineers to use Dunaway Engineers as a subcontractor for the route survey work on the pipeline. After review of their cost proposal, we believe the price is competitive. Further, with the high level of construction activity in the area, surveying services are at a premium. To meet our contract commitment of 120 days, we authorized PDR to proceed with Dunaway. To date they have provided timely, reliable service. This is evident from the substantial progress made on the pipeline design to date by PDR. Since we are under contract, it will be difficult to get a competitive price from a competing firm. We will request that PDR provide us documentation supporting the survey service costs. Upon completion of the project design, I would suggest we can compare the cost of route survey on Louisville Water Company's design portion to that of Kentucky American's design portion and apply a percentage of total cost and length to resolve this issue. In addition, we will prepare a summary of similar Louisville Water Company transmission main projects comparing the cost of survey services as a percent of total design services. As indicated in the past, we are willing to pay for any cost differential that can be demonstrated.

received
1/29/99

Item No. 4 - Enclosed is PDR's Route Evaluation report. From this analysis, an alignment along the north side of Interstate 64 has been selected. The Interstate crossing will be just west of Highway 55 to the delivery point. This route was selected from a joint review with PDR and Louisville Water Company staff and considered to be the most cost effective route, considering cost, constructability, and environmental impact. I believe it is safe for you to notify the Shelby County property owners south of Interstate 64 from the Jefferson County line to Highway 55 that an alternate route has been selected. Considering the route change, I request your authorization for Louisville Water Company to begin contacting property owners along the new pipeline route, begin preparing easement plats and descriptions, and initiate easement negotiations. I suggest we set a meeting in February to review our easement acquisition process and the cost parameters for easement purchase. Field work during evaluation of the final route has stirred property owner interest, and timely easement acquisition will both expedite the project and reduce easement costs.

Since we are now under design, please address all design correspondence to Mr. Jim Brammell, Manager of Facility Design and Construction, with a copy to Mr. Bill Rhodes, our Project Manager for the Bluegrass Pipeline, and me. I will continue to be your primary contact for any contract issues regarding the Water Supply Agreement.

Finally, I will ask my secretary, Gale Harper, to arrange a meeting in mid February to allow our respective staffs to meet and review progress of the project design. We can also review our easement procurement process at this meeting.

Please let me know if you need any further information.

Sincerely,

Gregory C. Heitzman, P.E.
Vice President-Chief Engineer

/gh

cc: John Huber, Jim Brammell, Bill Rhodes - Louisville Water Company
Joe Helm - Brown, Todd & Heyburn
Hans Probst, Mark Tate - PDR Engineers

C:\data\msoffice\winword\gch\bridwell Jan99

File - N
Louisville
Corresp.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

January 20, 1999

Mr. Greg Heitzman, P.E.
Vice President
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

RE: ***Bluegrass Water Project Design Services***

Dear Greg:

I understand that design is well underway and I wanted to follow up with a few items:

Item No. 1

Due to the change in our route, we have significantly set back our design schedule. We are on a schedule where we will need to confirm with you the tank location, meter vault location and tank overflow elevation by March 1, 1999. Additionally, we are now anticipating filing an Application for a Section 404 permit and a Section 10 permit with the Army Corps of Engineers April 1, 1999. This means that route selection and stream crossing details must be completed by that time. We do not, however, anticipate completing full project design until September 7, 1999.

I understand that PDR/Gannett Fleming is required to complete design by March 7, 1999 based on the requirements in the water purchase contract. Kentucky-American Water Company (KAWC) is agreeable to relaxing that requirement to allow an additional 120 calendar days for design, as long as the information requested above can be completed within the time scheduled. This would allow design completion by July 7, 1999.

Item No. 2

KAWC is in the process of completing negotiations for the purchase of 7.34 acres in Shelby County for the metering point and booster station site, but we will only be utilizing two acres. The negotiated price of this site is $45,000 per acre. It is my understanding the Louisville Water Company (LWC) may be interested in utilizing part of this site for its additional facilities, including the tank. I would appreciate that if you are interested, you provide me with the amount of land needed and any utilities or special requirements for your site. I understand that you already have a copy of the site layout from PDR. We can begin to negotiate a purchase or leasing agreement with the LWC.

Linda Bridwell 01/13/99 03:30

To: David M Reves/SYSENG/CORP/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW

Subject: BWP - LWC contract

I thought maybe I had only imagined sending you the info. The minimum usage requirements from the LWC contract were listed in a 12/21 response from me to an item that is listed with a 12/11/98 due date under my responsibility, title KAWC contract with LWC.
If there is still any confusion, or any other questions about the contract, please let me know.

PDR Engineers, Inc.

ROUTE EVALUATION

LOUISVILLE WATER COMPANY

BLUEGRASS WATER SUPPLY PROJECT

LWC Project 98-755

December 14, 1998

PDR ENGINEEERS, INC.
400 Meidinger Tower
Louisville, Kentucky 40202
(502) 584-5555

TABLE OF CONTENTS

Summary.....1

Evaluation Narrative.....2

Observations.....5

Route Evaluation Matrix.....Tab A

Route Evaluation Maps.....Tab B

Preliminary Project Estimate.....Tab C

SUMMARY

This report evaluates three pipeline route scenarios for delivery of water to Kentucky-American Water Company (KAWC). Project cost, hydraulics, construction, easement and property acquisition, operation, maintenance, and public acceptance of these scenarios is considered. Significant analysis elements for each route are tabulated in a matrix format for comparison.

Each pipeline route alternative provides KAWC a delivery point west of Highway 55 in Shelby County approximately one-half mile south of I-64 near the LG&E/Western gas transmission main. The LWC English Station Reservoir serves as the origin for all three routes.

This report considers siting a LWC 35 MGD pumping station in Jefferson County in the vicinity of I-265 between Shelbyville Road (US-60) and I-64 and a LWC 2.5 million-gallon elevated storage tank in Shelby County near the end of the project. Detailed site selection analysis for the pumping station and elevated tank has not been conducted as of this time. However, based on information available, preliminary recommendations can be made for siting the pump station and elevated storage tank. Formal recommendations shall be forwarded as a letter amendment.

The primary characteristic of the recommended pipeline route is its northern adjacency to I-64. The recommended route begins west of English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. The route heads south and crosses US-60 and proceeds in a western adjacency to Urton Lane, then crosses Urton Lane to form a western adjacency to I-265 and an existing LG&E easement. The pipeline will convert to 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 2500 feet north of I-64 where it crosses I-265 and forms an eastern adjacency to I-265. Then, the route forms a northeast adjacency to the LG&E gas pipeline easement in the northeast corner of the I-64/I-265 intersection until it reaches I-64 where it follows a northern adjacency until approximately 1250 feet west of Highway 55 in Shelby County. At this point, the pipeline route crosses I-64 to a proposed KAWC pump station site located approximately one-half mile south of I-64 near the LG&E/Western gas transmission main.

Three site alternatives located adjacent to I-265 between I-64 and US-60 are considered for siting the LWC 35 MGD pumping station. At this time, the recommended pump station site is located west of I-265 approximately 2500 feet north of I-64 indicated as Pump Station Site 1. Access can be from Urton Lane along I-265 in easement acquired for the pipeline.

At this time, the recommended elevated storage tank site is located on the seven acre site adjacent to Highway 55 and Brunerstown Road identified by KAWC for their pumping station which is expected to require two acres, leaving five acres available for the LWC elevated tank. This site has elevations up to 790 feet. Three additional areas are considered for siting the elevated tank. These sites located near the I-64 Veechdale exit have elevations up to 810 feet.

The estimated length of the recommended route is 78,900 feet – 6300 feet of 60-inch PCCP and 72,600 feet of 36-inch DIP (or PCCP). Approximately 60 easements will be required. The preliminary estimated cost for the project including engineering and inspection, property rights and acquisition, and construction is $29,004,250.

EVALUATION NARRATIVE

Three routes, two of which have alternates, all providing KAWC a delivery point west of Highway 55 in Shelby County approximately one-half mile south of I-64 near the LG&E/Western gas transmission main and beginning at the LWC English Station Reservoir have been analyzed. This report considers project cost, hydraulics, construction, easement and property acquisition, operation, maintenance, and public acceptance of these scenarios. Significant analysis elements for each route are tabulated in a matrix format for comparison.

ROUTE 1

Route 1 begins at English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. Proceeding southeast, it crosses Shelbyville Road (US-60) and proceeds southeast in a western adjacency to Urton Road, then crosses Urton Road and forms a western adjacency to I-265 and an existing LG&E easement. Upon exiting the LWC pumping station, the pipeline will reduce to a 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 2,500 feet north of I-64 where it crosses I-265 and proceeds south in an eastern adjacency along I-265. It then heads southeast in an eastern adjacency to a LG&E gas pipeline easement until it reaches I-64 where it follows a northern adjacency until approximately 1,250 feet west of Highway 55 in Shelby County. Then it crosses I-64 to a KAWC proposed pumping station site located approximately one-half mile south of I-64 near the LG&E/Western Gas Transmission Main.

ROUTE 1 ALTERNATE

Route 1 Alternate (1A) begins at English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. Proceeding southeast, it crosses Shelbyville Road (US-60) and proceeds southeast in a western adjacency to Urton Road, then crosses Urton Road and forms a western adjacency to I-265 and an existing LG&E easement. Upon exiting the LWC pumping station, the pipeline will reduce to a 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 2,500 feet north of I-64 where it crosses I-265 and proceeds south in an eastern adjacency along I-265. It then heads southeast in an eastern adjacency to a LG&E gas pipeline easement until it reaches I-64 where it follows a northern adjacency until it crosses I-64 south of the Lincoln Ridge Job Corps Center. The route then proceeds in a south adjacency to I-64 until approximately 1250 feet west of Highway 55 in Shelby County to a KAWC proposed pumping station site located approximately one-half mile south of I-64 near the LG&E/Western Gas Transmission Main.

ROUTE 2

Route 2 begins at English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. Proceeding southeast, it crosses Shelbyville Road (US-60) and proceeds southeast in a western adjacency to Urton Road, then crosses Urton Road and forms a western adjacency to I-265 and an existing LG&E easement. Upon exiting the LWC pumping station, the pipeline will reduce to a 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 2,500 feet north of I-64 where it crosses I-265 and proceeds south in an eastern adjacency along I-265. It then heads southeast in an eastern adjacency to the LG&E gas pipeline easement until it reaches I-64 where the route crosses I-64 and continues south approximately 800 feet, then turns east and runs adjacent to an unimproved road for approximately 2,000 feet where it crosses English Station Road. Turning northwest, the route proceeds to I-64 where it proceeds eastward following a southern adjacency to I-64 until approximately 1250 west of Highway 55, where it heads southward to the KAWC proposed pumping station site located approximately one-half mile south of I-64 near the LG&E/Western Gas Transmission Main.

ROUTE 2 ALTERNATE

Route 2 Alternate (2A) begins at English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. Proceeding southeast, it crosses Shelbyville Road (US-60) and proceeds southeast in a western adjacency to Urton Road, then crosses Urton Road and forms a western adjacency to I-265 and an existing LG&E easement. Upon exiting the LWC pumping station, the pipeline will reduce to a 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 2,500 feet north of I-64 where it crosses I-265 and proceeds south in an eastern adjacency along I-265. It then heads southeast in an eastern adjacency to a LG&E gas pipeline easement until it reaches I-64 where it follows a northern adjacency until it crosses I-64 approximately 2,000 feet east of Clark Station Road. The route then proceeds southeast adjacent to a telephone easement until it intersects with Conner Station Road and continues adjacent to the road for approximately 600 feet where it crosses Conner Station Road. Then the route continues adjacent to Conner Station Road for approximately 600 feet where it turns southeast adjacent to an unimproved road until it reaches Majestic Oaks Subdivision. After traversing through Majestic Oaks Subdivision, the route reaches Highway 1399, and follows Highway 1399 until it intersects a road approximately 900 feet north of Highway 1848. There, the route turns east following adjacent to a road until it reaches I-64 where it proceeds east in a southern adjacency to I-64. Approximately 1250 feet west of Highway 55 in Shelby County, the route turns south to a KAWC proposed pumping station site located approximately one-half mile south of I-64 near the LG&E/Western Gas Transmission Main.

ROUTE 3

Route 3 is nearly similar to Route 3b discussed in LWC Preliminary Route Analysis dated May 1, 1998. Route begins at English Station Road across from the 10 million gallon LWC English Station Reservoir using 60-inch PCCP. Proceeding southeast, it crosses Shelbyville Road (US-60) and proceeds southeast in a western adjacency to Urton Road, then crosses Urton Road and forms a western adjacency to I-265 and an existing LG&E easement. Upon exiting the LWC pumping station, the pipeline will reduce to a 36-inch Pressure Class 350 DIP (or 36-inch PCCP alternate) approximately 1,500 feet north of I-64 where it crosses I-265 and proceeds south in an eastern adjacency along I-265. It then heads southeast in an eastern adjacency to the LG&E gas pipeline easement until it reaches I-64 where the route crosses I-64 and continues south approximately 400 feet where it turns east to form a northern adjacency to the existing cross-country LG&E gas transmission main. It then follows the LG&E/Western Gas transmission main to a KAWC proposed pumping station site along Highway 55 located approximately one-half mile south of I-64.

OBSERVATIONS

As shown on the pipeline routes on the USGS maps, all the routes have the same amount of Interstate, highway, railroad, and creek crossings. Therefore, these issues are neutral from an analysis perspective. All routes are expected to encounter significant rock. Trees encountered on the routes will primarily be in wooded areas. Overhead electric and communication towers do not appear to pose significant difficulty to any route. Wetlands and Archeological studies have yet to be conducted so these issues are neutral for all routes. The above mentioned issues are rated neutral for all routes considered. All routes have the same beginning and end.

ROUTE 1

Route 1 appears to be the most favorable, primarily for the following reasons: least amount of property easements and crossings of improved property; and closest proximity to potential in-route markets. Route 1 crosses no signature entries. Driveway crossings and residential/improved landscaping is minimal. The terrain is primarily gentle and has some rolling and hilly areas. The creek bottoms on Route 1 appear to be easier to cross than in Routes 2 and 3. There are approximately 60 property easements required, the majority them being adjacent to Interstates. Traffic control requirements will be minimal except at highway and roadway entries to easements and hard surface secondary road crossings.

Accessibility for equipment and materials delivery, both future and present, is good. The main drawback to this route is a pond, located in the Lincoln Ridge area that will encroach the 50-foot easement necessary for the water line installation.

ROUTE 1 ALTERNATE

Route 1A is the same as Route 1 until it crosses I-64 south of Lincoln Ridge avoiding the pond. Evaluation features of Routes 1 and 1A are closely similar. By making the I-64 crossing at Lincoln Ridge, the approximate number of easements necessary increases to 69. Future service extensions are less desirable with this alignment compared to Route 1.

ROUTE 2

Route 2 follows the same alignment as Routes 1 and 1A until just east of the I-265 and I-64 interchange where it crosses I-64 and forms a southern adjacency to I-64. The terrain and crossings are similar to Routes 1 and 1A. Creek crossings are considered more difficult. The number of easements necessary increases to 79 and includes an active sod farm being operated at Beckley Station Road and Wibble Hill Road adjacent to Floyds Fork. Accessibility for equipment, material, and future service extensions are approximately the same as Route 1A and less desirable than Route 1.

ROUTE 2 ALTERNATE

Route 2A follows Route 1 until approximately 2,000 feet east of Clark Station Road where it turns south and crosses I-64. This route then follows adjacent to improved roads until it once again runs in a southern adjacency to I-64 approximately 1,400 feet east of Highway 1848. The water line from the point east of Highway 1848 then follows Route 1A to its conclusion at Highway 55. Route 2 passes through Majestic Oaks Subdivision which is currently under development and has a significant and completed signature entry. Residential landscaping restoration and public acceptance will become an issue with Route 2A. The terrain and crossings remain nearly the same as Route 2, except where the pipeline follows the cross-country telephone easement between Clark Station Road and Conner Station Road.

The number of easements necessary increases to 88 due mostly to single family lots within the Majestic Oaks Subdivision. Due to proximity to existing roads and the Majestic Oaks Subdivision, traffic control becomes an issue. Accessibility for equipment, material, and future service extensions are approximately the same as Route 1A and 2, and less desirable than Route 1.

ROUTE 3

Route 3 follows the previous routes except that it continues south in a western adjacency to I-265 to approximately 1,500 feet from I-64. It crosses I-265, runs adjacent to an existing LG&E easement, crosses I-64, and then runs in a northern adjacency to the LG&E/Western Gas easement.

Route 3 passes through random properties therefore creating problems with landscaping and driveways. The cross-country terrain for this alignment is more rugged and access for construction material and equipment will be more difficult. The number of easements necessary will increase to 95; many are single family residences. Traffic control will be approximately the same as Route 2 Alternate. The proposed 50 foot LWC easement intersects rather than running adjacent to many of the property lines thus creating a less than desirable reaction from property owners. An additional 50 foot water pipeline easement adjacent to an existing 32 foot gas pipeline easement will be less acceptable to the public than an additional 50 foot water pipeline easement adjacent to an existing 350 foot Interstate Highway right-of-way. Accessibility for equipment, material, and future service extensions will be considerably more difficult than the other routes.

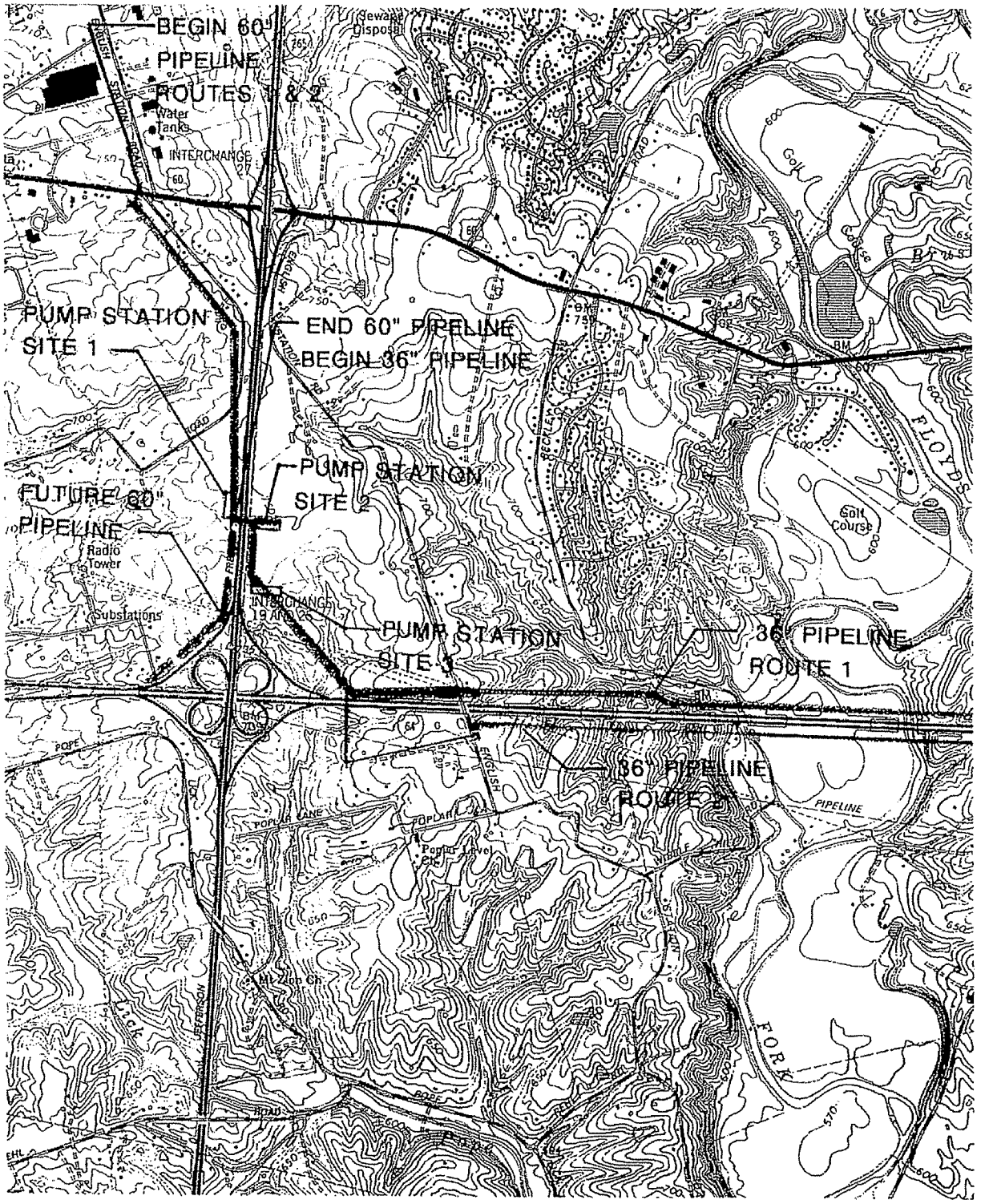
LWC BLUEGRASS WATER SUPPLY ROUTE EVALUATION

ROUTE CHARACTERISTICS

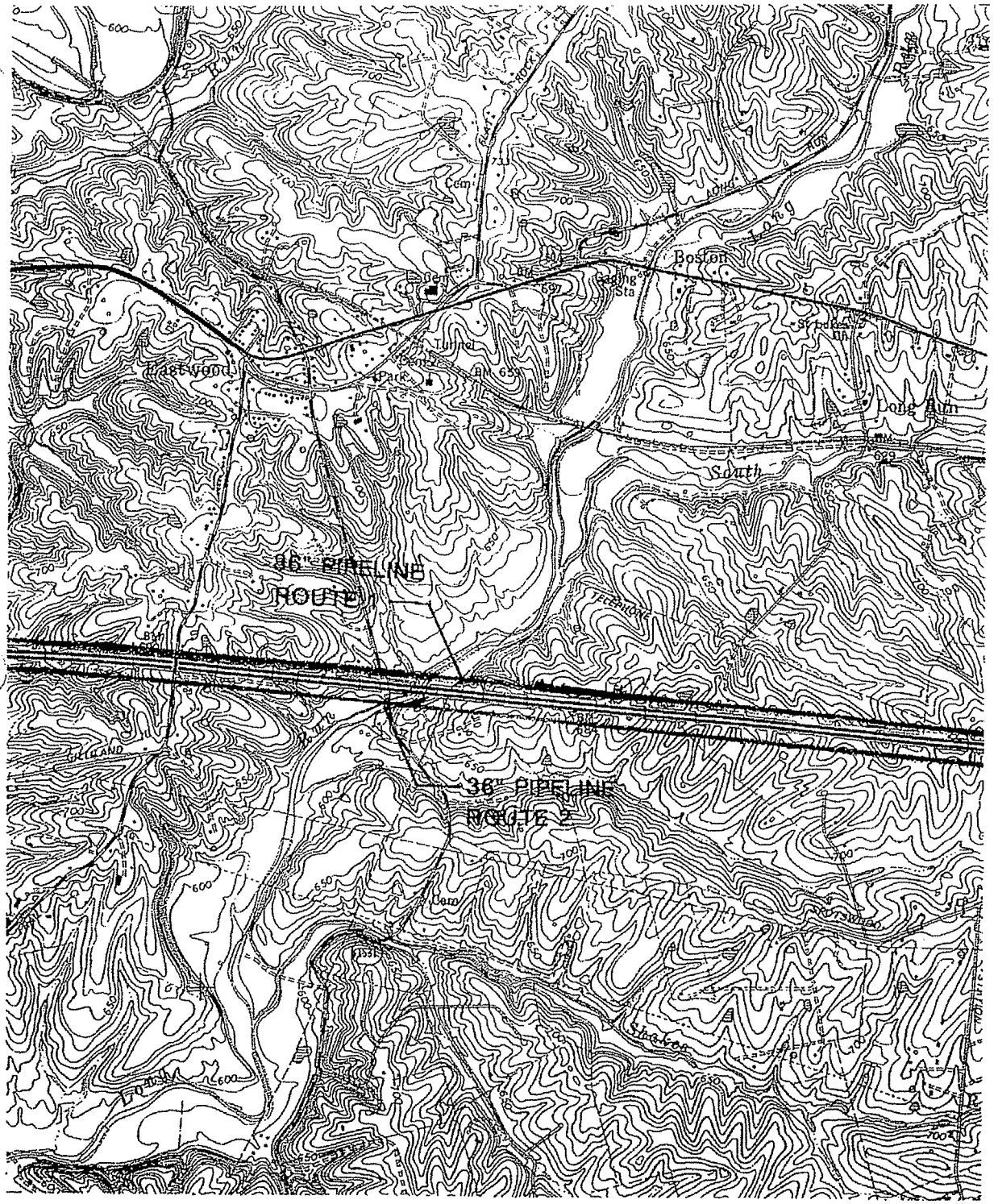
SCENARIO	1 (Blue)	1 Alternate (Blue / Blue Dash / Blue)	2 (Blue / Green / Blue Dash / Blue)	2 Alternate (Blue / Green Dash / Blue Dash / Blue)	3 (Red / Orange) Refer to LWC report of May 1, 1998
DESCRIPTION	West of English Sta across US 60, west of Union, then into field west of I-265, across I-265 appx 2500 ft north of I-64, northwest of 40 ft gas easement to I-64, north of I-64, then across I-64 appx 1250 ft west of Hwy 55 to proposed PS site north of cross-country gas pipeline easement.	West of English Sta across US 60, west of Union, then into field west of I-265, across I-265 appx 2500 ft north of I-64, northwest of 40 ft gas easement to I-64, north of I-64, then across I-64 south of Lincoln Ridge, then adjacent to and south of I-64 to proposed PS site west of Hwy 55 & north of cross-country gas pipeline easement.	West of English Sta across US 60, west of Union, then into field west of I-265, across I-265 appx 2500 ft north of I-64, northwest of 40 ft gas easement to I-64, across I-64, thenadjacent to subdivision street, then adjacent to and south of I-64 to proposed PS site west of Hwy 55 & north of cross-country gas pipeline easement.	West of English Sta across US 60, west of Union, then into field west of I-265, across I-265 appx 2500 ft north of I-64, northwest of 40 ft gas easement to I-64, north of I-64, then across I-64 1250 east of county line, then along telephone easement to Conner Sta Rd to Majestic Oaks subdivision, then south of I-64 to PS site west of Hwy 55 & north of cross-country gas pipeline easement.	West of English Sta across US 60, west of Union, then into field west of I-265, across I-265 appx 1750 ft north of I-64, northwest of 40 ft gas easement to I-64, then across I-64 to north adjacency to 32 in cross-country gas pipeline easement, then to PS site west of Hwy 55.
MAJOR FEATURES CROSSINGS	US-60, I-265, Floyd's Fork, Long Run, Pond @ Lincoln Ridge, Southern RR, Bullskin Creek, I-64	US-60, I-265, Floyd's Fork, Long Run, I-64, Southern RR, Bullskin Creek	US-60, I-265, I-64, Floyd's Fork, Long Run, Southern RR, Bullskin Creek	US-60, I-265, Floyd's Fork, Long Run, I-64, Majestic Oaks Subdivision, Southern RR, Bullskin Creek	US-60, I-265, I-64, Floyd's Fork, Long Run, Southern RR, Bullskin Creek
LENGTH (Est) EASEMENTS (Est) PUMP STATION ELEVATED TANK PRELIMINARY COST (Est)	78,900 ft 60 25 MGD on 2 Acres 2.5 MG on 3 Acres $29,004,250	78,800 ft 69 25 MGD on 2 Acres 2.5 MG on 3 Acres $28,980,500	79,900 ft 79 25 MGD on 2 Acres 2.5 MG on 3 Acres $29,241,750	80,700 ft 88 25 MGD on 2 Acres 2.5 MG on 3 Acres $29,431,750	77,200 ft 95 25 MGD on 2 Acres 2.5 MG on 3 Acres $29,260,500

OBSERVATIONS MATRIX

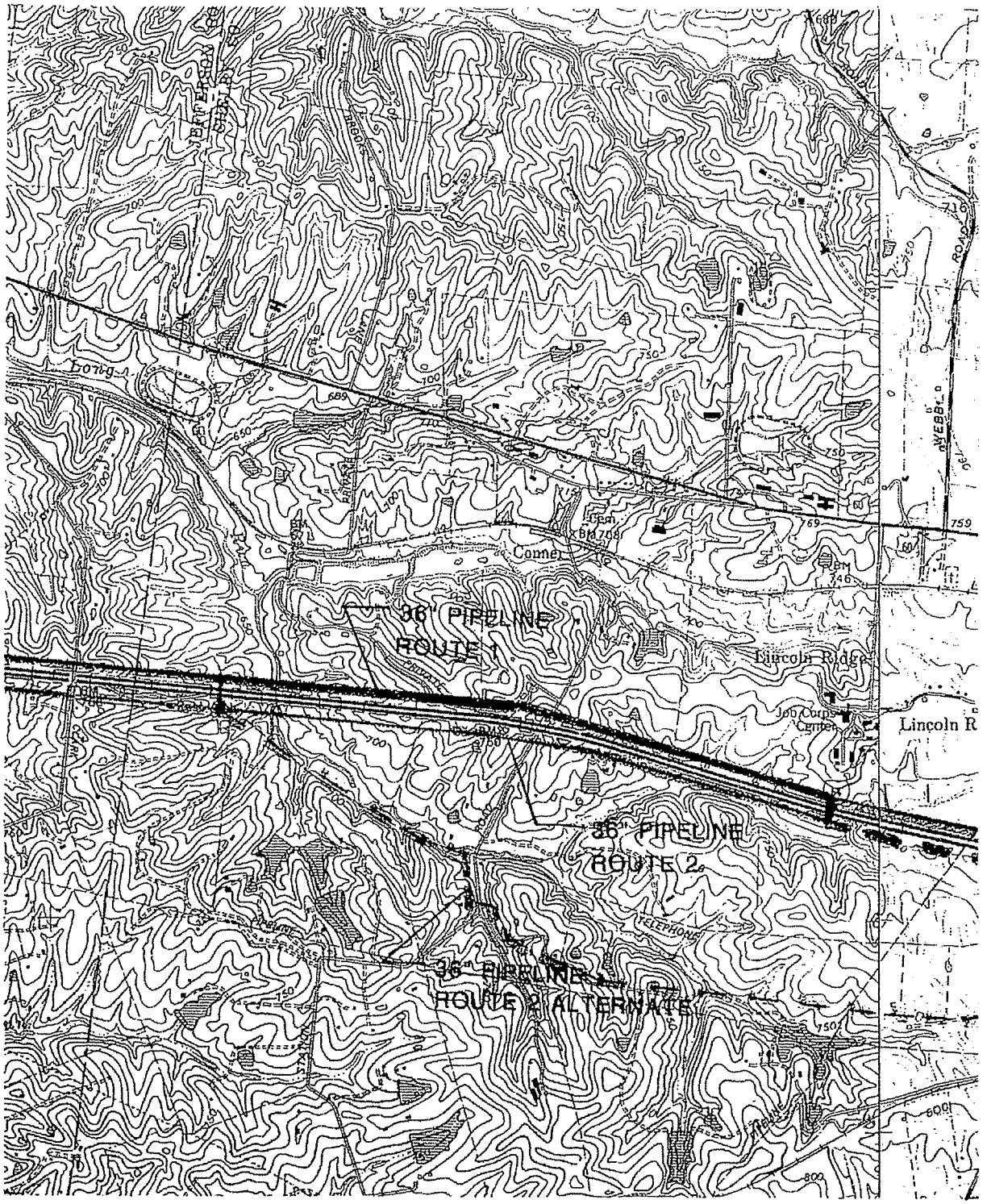
ANALYSIS FACTOR	POSITIVE	NEUTRAL	NEGATIVE	POSITIVE	NEUTRAL	NEGATIVE	POSITIVE	NEUTRAL	NEGATIVE	POSITIVE	NEUTRAL	NEGATIVE	POSITIVE	NEUTRAL	NEGATIVE
COST															
HIGHWAY CROSSINGS		3			3			3			3			3	
RAILWAY CROSSINGS		3			3			3			3			3	
CREEK CROSSINGS		3			3			3			3			3	
ROCK		3			3			3			3			3	
TREES		3			3			3			3			3	
LANDSCAPING	5			5				3				1			1
DRIVEWAYS	5			5				3				1			1
SIGNATURE ENTRY	5			5			5					1		3	
HYDRAULICS															
PS & TANK SITE ALTERNATIVES		3			3			3			3				1
TERRAIN		3			3			3			3				1
CONSTRUCTABILITY															
WETLANDS		3			3			3			3			3	
ARCHAEOLOGICAL		3			3			3			3			3	
UST POTENTIAL	5			5			5			5				3	
OVERHEAD ELECTRIC		3			3			3			3			3	
COMMUNICATIONS TOWERS		3			3			3			3			3	
PIPELINES		3			3			3				1		3	
STRAY CURRENT		3			3			3			3				1
ANODE BEDS		3			3			3			3				1
TRAFFIC CONTROL		3			3			3				1			1
SERVICE EXTENSION	5				3			3			3				1
EASEMENT ACQUISITION															
JEFFERSON COUNTY	5			5				3		5					1
SHELBY COUNTY	5				3			3				1			1
OPERABILITY		3			3			3			3				1
MAINTAINABILITY		3			3			3			3				1
PUBLIC ACCEPTANCE	5			5				3				1			1
COLUMN TOTAL	40	42	0	30	48	0	10	60	0	10	39	7	0	27	13
ROUTE RATING TOTAL		82			78			70			56			40	



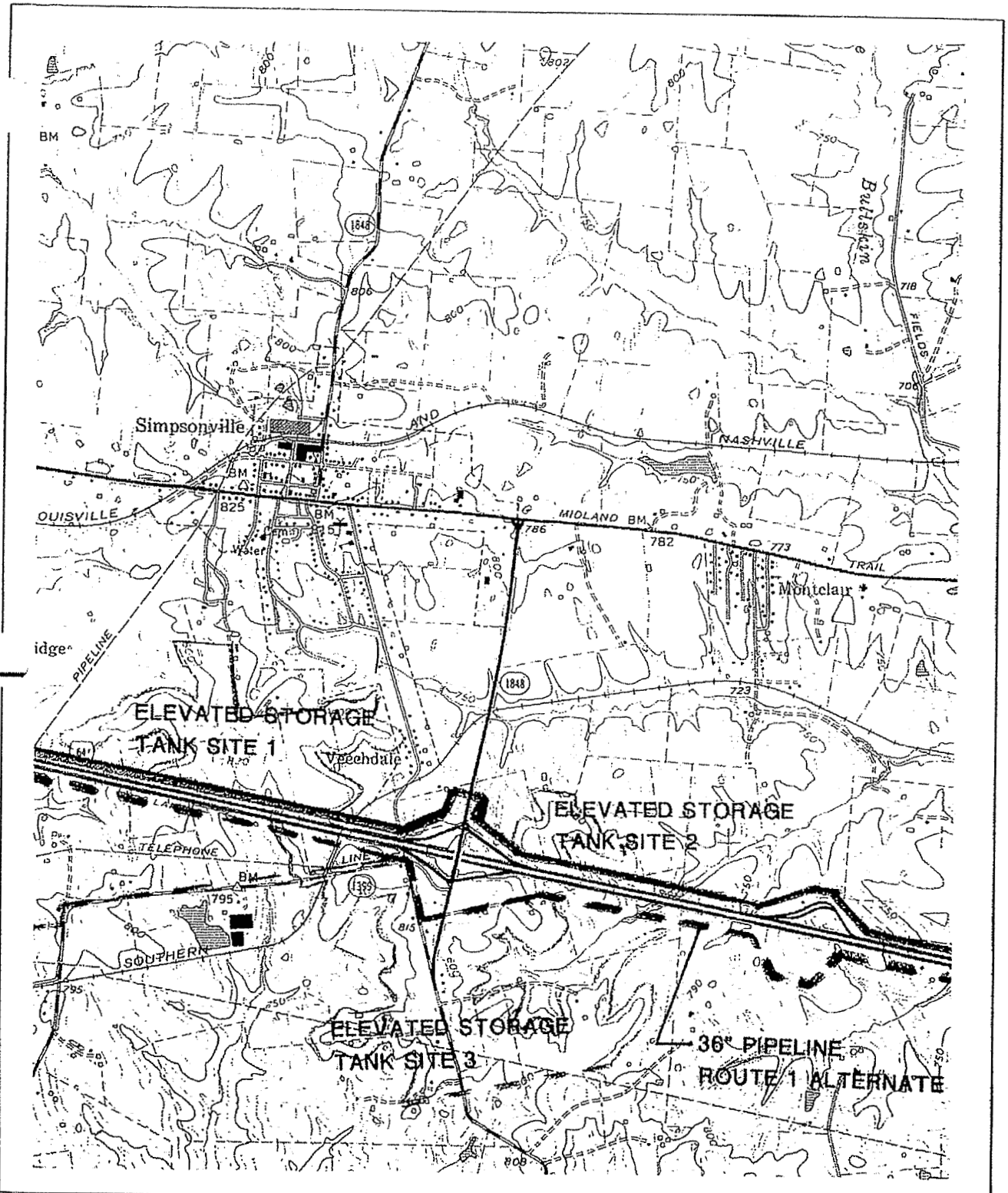
DR Engineers, Inc. Louisville • Lexington • Owensboro • Memphis • Huntsville • Indianapolis • Cincinnati Suite 400 Meidinger Tower – Louisville, Kentucky 40202 • (502) 584-6555 Design Consultant	BLUEGRASS WATER SUPPLY PROJECT ROUTE EVALUATION	LOUISVILLE WATER COMPANY 550 S. 3RD STREET - LOUISVILLE, KENTUCKY 40202 - (502) 569-3600 JOHN L. HUBER – PRESIDENT GREGORY C. HEITKAMP – VICE PRESIDENT/CHIEF ENGINEER SCALE AS NOTED DATE: 12-1-98



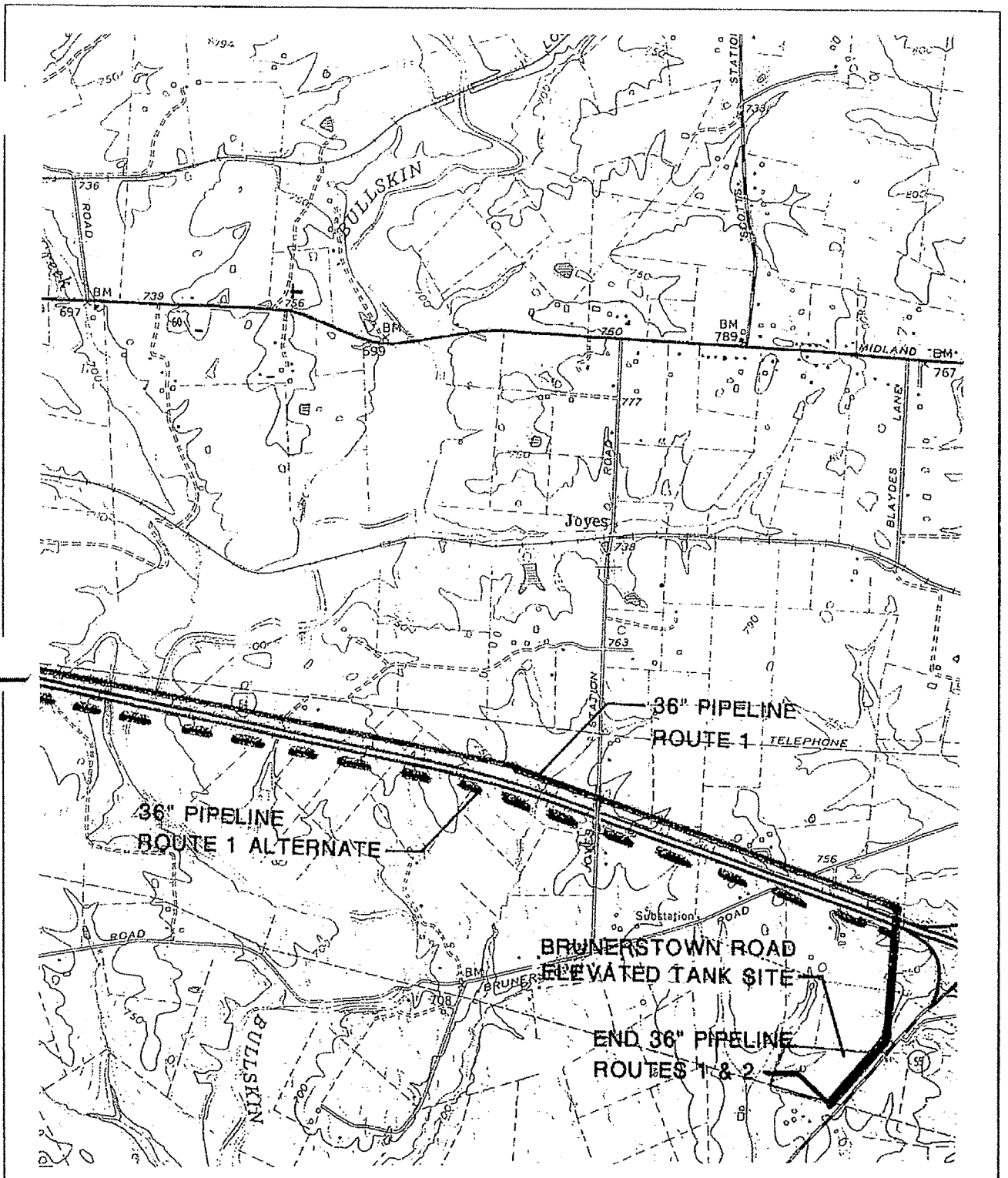
DR Engineers, Inc. Louisville • Lexington • Owensboro • Memphis • Huntsville • Indianapolis • Cincinnati Suite 400 Meidinger Tower • Louisville, Kentucky 40202 • (502) 584-6555 Design Consultant	**BLUEGRASS WATER SUPPLY PROJECT** **ROUTE EVALUATION**	**LOUISVILLE WATER COMPANY** 550 S. 3RD STREET • LOUISVILLE, KENTUCKY 40202 • (502) 569-3600 JOHN L. HUBER – PRESIDENT GREGORY C. HEITKAMP – VICE PRESIDENT/CHIEF ENGINEER SCALE: AS NOTED DATE: 12-1-98



PDR Engineers, Inc. Louisville • Lexington • Owensboro • Memphis • Huntsville • Indianapolis • Cincinnati Suite 400 Meidinger Tower • Louisville, Kentucky 40202 • (502) 584-3555 Design Consultant	**BLUEGRASS WATER SUPPLY PROJECT** **ROUTE EVALUATION**	**LOUISVILLE WATER COMPANY** 550 S. 3RD STREET - LOUISVILLE, KENTUCKY 40202 - (502) 569-3600 JOHN L. HUBER – PRESIDENT GREGORY C. HEITZMAN – VICE PRESIDENT/CHIEF ENGINEER SCALE: AS NOTED DATE: 12-1-98



PDR Engineers, Inc. Louisville • Lexington • Owensboro • Memphis • Huntsville • Indianapolis • Cincinnati Suite 400 Meidinger Tower • Louisville, Kentucky 40202 • (502) 584-5555 Design Consultant	BLUEGRASS WATER SUPPLY PROJECT ROUTE EVALUATION	LOUISVILLE WATER COMPANY 550 S. 3RD STREET • LOUISVILLE, KENTUCKY 40202 • (502) 569-3600 JOHN L. HUBER – PRESIDENT GREGORY C. HEITZMAN – VICE PRESIDENT/CHIEF ENGINEER SCALE AS NOTED DATE 12-1-98



PDR Engineers, Inc. Louisville • Lexington • Greensboro • Memphis • Huntsville • Indianapolis • Cincinnati Suite 400 Meidinger Tower • Louisville, Kentucky 40202 • (502) 584-6555 Design Consultant	BLUEGRASS WATER SUPPLY PROJECT ROUTE EVALUATION	LOUISVILLE WATER COMPANY 550 S. 3RD STREET - LOUISVILLE, KENTUCKY 40202 - (502) 569-3600 JOHN L. HUBER – PRESIDENT GREGORY C. HEITZMAN – VICE PRESIDENT/CHIEF ENGINEER SCALE: AS NOTED DATE: 12-1-98

Linda Bridwell 12/21/98 05:27

To: David M Reves/SYSENG/CORP/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW

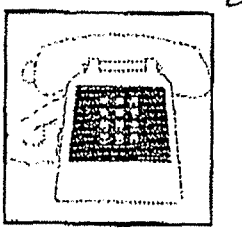
Subject: Louisville Contract

As I indicated in the database discussion, I'll send you a copy of the contract with Louisville. As I stated, the negotiations were agonizing, so I would appreciate it if you don't send a copy to anyone else -- I really don't want our consultant trying to play the role of lawyer, or what if. If there are specific questions, I would appreciate it if you could double check with me, because I was unfortunately involved in almost all of the negotiations and am fairly clear on the intent of the document. As you will see, the engineering issues are fairly straightforward. Thanks, Dave!

File -N
SofS
Louisville
Conespar

STOLL, KEENON & PARK, LLP
201 East Main Street, Suite 1000
Lexington, Kentucky 40507-1380

Telephone: (606) 231-3000
Telecopiers: (606) 253-1093
(606) 253-1027



* * * * * * *

CLIENT MATTER NO.:
0010/010311/100133 [LOCAL]

TELECOPY TRANSMITTAL SHEET

PLEASE DELIVER A COPY TO: Roy W. Mundy II
Linda C. Bridwell
Herbert A. Miller, Jr.
Coleman D. Bush
Nick Rowe

FAX NO.: 268-6327

FROM: Lindsey Ingram, Jr.

DATE: December 2, 1998

NOTE: This telecopy totals 2 page(s) including this cover sheet. If you do not receive all of the pages, please call Sharon Lykins at (606) 231-3034. PLEASE DELIVER IMMEDIATELY UPON RECEIPT.

The information contained in this transmission is privileged, confidential and intended only for the use of the individual or entity named above. If you have received this communication in error, please notify Stoll, Keenon & Park immediately by telephone collect and return the original message to us at the address shown above via the U.S. Postal Service. You will be reimbursed for the required postage. Thank you.

COMMONWEALTH OF KENTUCKY
OFFICE OF THE ATTORNEY GENERAL

ALBERT B. CHANDLER III
ATTORNEY GENERAL

OFFICE OF RATE INTERVENTION
1024 CAPITAL CENTER DRIVE
FRANKFORT, KY 40601-8204
TEL: (502) 696-5457
FAX: (502) 573-8314

November 25, 1998

Via facsimile and regular mail

Mr. Vince Guenthner
Louisville Water Company
550 South Third Street
Louisville, KY 40202

RE: Topics for Discussion on December 3, 1998

Dear Mr. Guenthner:

I appreciate your willingness to meet with me to discuss the Louisville Water Company. Per our telephone conversations on November 20th and 25th, I am providing a summary of topics that I want to discuss.

- Profile of the Louisville Water Company. I wish to obtain information concerning the following: pumping and treatment capacities, interconnections with other water suppliers, the river bank infiltration well project, and the company's financial operating results.

- Water Quality. I wish to obtain information concerning the Louisville Water Company's program for complying with water quality standards.

- Kentucky-American Pipeline Project: I wish to obtain information concerning the following: infrastructure requirements necessary for the Louisville Water Company to supply Kentucky-American with treated water, route of the portion of the pipeline within Jefferson County, and the current status of contract negotiations with the Kentucky-American Water Company.

Again, I appreciate your willingness to meet with me, and I look forward to meeting you in person on Thursday, December 3rd. I will be out of the office during the morning on Monday, November 30th; however, I will be available in the afternoon.

Sincerely,

David Edward Spenard
Assistant Attorney General

AN EQUAL OPPORTUNITY EMPLOYER M/F/D

Linda Bridwell 11/23/98 03:48

To: David M Reves/SYSENG/CORP/AWWSC@AWW
cc:

Subject: Re: Heitzman's Letter to Shelbyville Water Company

Dave, I think everyone understands that we would have to do some work on our side to take much more. There was some initial concern about what was the maximum that Louisville could deliver to us and they came up with this 35 MGD. I'm not too worried since it would take some major changes to need more than 23 MGD (or close to it). Or let me say that there was some excitement because Louisville claims that they have capacity to serve up to 35 at the metering point, but it really doesn't have a significant difference at this point.

David M Reves 11/23/98 03:12 PM

To: Linda Bridwell/KAWC/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW

Subject: Heitzman's Letter to Shelbyville Water Company

Linda: Greg states in this letter (dated November 13, 1998) that "the proposed 36-inch pipeline can supply water up to 12 MGD above the needed 23 MGD capacity to serve KAWC". I hope I misread this or that it was a typo. At 23 MGD, the velocity in the pipeline will be 5.0 ft/sec, which from a surge standpoint, is the maximum "rule of thumb" velocity. Velocities can be higher, but the higher you get, the more risk you take from a surge standpoint (it would be 7.7. ft/sec at 35 MGD). At 23 MGD, the discharge pressure at LWC's booster will be about 75 psi. At 35 MGD, it will be about 155 psi which is still below their limit of 175 psi which is probably where they came up with the 12 MGD. Since the minimum pressure class DIP manufactured is 150 psi, and we agree that the installed pipe should have a rating at least 50 psi higher, the ability for LWC to pump 35 MGD would not even have an effect on the pipe that goes in the ground. I guess LWC can do whatever they want on their side, but I'm really surprised to hear that they would allow velocities that high. Maybe their thinking is that they could live with it for brief periods. The point I want to make however, is that the 36-inch KAWC pipeline has a capacity of maybe a little more than 23 MGD depending on how we select the pressure class of the pipe (maybe another 2-3 MGD). I don't want anyone to think that we can get 35 MGD through this pipe. Since LWC's pressures are so low, the need to operate at higher flows with higher pressures only has an impact on the pump selection, and not the pipeline pressure class or size. However, on the KAWC side, our pressures are so high that every little increase in flow, which in turn increases the pressure, potentially results in the need to either increase the pipeline pressure rating, add more boosters, or increase the pipeline diameter, all of which will be big bucks. Again, I just want to make sure that this is clear to everyone since the issue of the ultimate pipeline capacity has come up several times before.....Dave

File - N
Louisville
Corresp

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-569-0815

JOHN L. HUBER
PRESIDENT

RECEIVED
NOV 18 1998
KENTUCKY AMERICAN WATER COMPANY

November 16, 1998

Mr. Herbert A. Miller, Jr.
Corporate Counsel
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

11/19/98 - Copy to: RM, CB, NR, EG, LB, BB

Note: This is confidential until we file it with the PSC.

Dear Herb:

Enclosed are four fully executed copies of the Water Supply Agreement.

Design of the water main from English Station Road and U. S. Highway 60 to Kentucky Highway 55 at Interstate 64 is being initiated in accordance with Mr. Mundy's recent letter.

Please extend our appreciation to the Kentucky-American staff for the professionalism and courtesy exhibited throughout these negotiations.

Sincerely,

John L. Huber
President

jcm
enclosures

cc: Mr. Joseph B. Helm
Mr. Lindsey W. Ingram, Jr.

WATER SUPPLY AGREEMENT

THIS WATER SUPPLY AGREEMENT, dated as of this 7th day of November, 1998, between

LOUISVILLE WATER COMPANY,
550 South Third Street
Louisville, Kentucky 40202 ("Seller").

and

KENTUCKY-AMERICAN WATER COMPANY,
2300 Richmond Road
Lexington, Kentucky 40502 ("Buyer")

RECITALS

A. Seller, a Kentucky corporation all of the stock of which is owned by the City of Louisville, is governed by the Board of Water Works pursuant to Sections 96.230 through 96.310 of the Kentucky Revised Statutes and is statutorily permitted to sell water to customers taking service in Jefferson, Oldham, Shelby, Spencer, Bullitt and Hardin Counties, Kentucky.

B. Seller owns and operates water treatment and distribution facilities and utilizes its facilities to provide water service on a retail and wholesale basis throughout Jefferson County, Kentucky and in large areas of Oldham, Shelby, Spencer, and Bullitt Counties, including, among others, wholesale service to West Shelby Water District, North Shelby Water District and the City of Taylorsville;

C. Seller has available treatment and storage capacity sufficient to meet Buyer's needs set forth in this Agreement;

D. Buyer, a Kentucky corporation, engages in the manufacture of water for sale and service to customers in the counties of Fayette, Bourbon, Clark, Harrison, Jessamine, Scott, and Woodford; and

E. Buyer is desirous of securing a continuing, dependable source of water to meet the present and future needs of Buyer's customers and plans construction of extended transmission facilities to the Point of Delivery, defined below, to connect its existing system with Seller's.

WITNESSETH:

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the parties agree as follows:

1. DEFINITIONS. In this Agreement, these terms have the meanings indicated below:

(a) Project Facilities: Fixtures, equipment, water transmission mains, metering equipment, vaults, storage facility, pipes, pump station, and other improvements and facilities designed and to be constructed to Seller's specifications and approved by Buyer to be used for delivery of Service under this Agreement together with easements and other real property rights acquired with respect thereto. Such facilities shall be owned by the Seller.

(b) Point of Delivery: The connection of the Project Facilities to Buyer's facilities. The connection will be at a point in Shelby County, Kentucky at or near the intersection of Interstate Highway 64 and Kentucky Highway 55.

(c) Service: The delivery of treated, potable water by Seller to the Point of Delivery under this Agreement pursuant to the standards set forth in Section 9, subsections (a) and (b) and as may be changed by operation of Section 13.

2. DESIGN OF PROJECT FACILITIES:

(a) The Project Facilities will be designed by Seller, Buyer retaining the right to approve the selection by Seller of outside professional engineering assistance in creating such design, such approval not to be unreasonably withheld, and to approve the scope of the design within the framework set forth immediately below. To the extent this Agreement is not executed by August 1, 1998, then the design completion date shall be extended by the time subsequent to August 1, 1998, until execution of this Agreement.

(b) The design of the Project Facilities shall include, among other things, a 60-inch transmission main from Seller's English Station Road Reservoir to the intersection of Interstate Highway 265 and Interstate Highway 64 in Jefferson County, a 36-inch transmission main from such intersection eastwardly to the intersection of Interstate Highway 64 and Kentucky Highway 55 in Shelby County (the location of the Point of Delivery), a 23 million gallon per day pump station situated in the Interstate 265-Interstate 64 intersection area, and a water storage facility with a minimum capacity of 1.0 million gallons situated along the 36-inch transmission main in Shelby County west of the Point of Delivery. Attached, designated EXHIBIT A, is a plat indicating the general location and route of the Project Facilities. Any subsequent change in the design/route which, individually or in the aggregate, increases the costs of the construction or operation of the Project Facilities to be paid by Buyer shall be subject to Buyer's prior written approval, which approval shall not be unreasonably withheld.

(c) Seller understands that the design of the Project Facilities must be fully completed in a form and substance satisfactory to Buyer prior to Buyer's application to the Kentucky Public Service Commission (the "PSC") for a Certificate of Convenience and Necessity. Consequently, the date of completion for such design shall not be later than December 1, 1998, time being of the essence.

(d) Also, on or before December 1, 1998 Seller will provide Buyer with its estimated cost of the portion of the Project Facilities for which Buyer is agreeing to pay as hereinafter provided and an estimate of the cost of the remaining (Seller's) portion.

3. PROPERTY ACQUISITION: Upon receipt by the Seller of Buyer's written instructions and within the limitations of such, Seller will initiate an effort to acquire easements and other property rights needed in the construction and installation of the Project Facilities, keeping Buyer advised from time to time as to its progress and as to any obstacles encountered in such procurement. Seller's efforts to acquire easements and other property rights shall be made expeditiously and in good faith. With respect to property rights being acquired at Buyer's cost, Seller will not purchase any of them without the costs thereof being approved by the Buyer and will not file condemnation actions without Buyer's direction to do so.

4. BIDDING ON CONSTRUCTION OF PROJECT FACILITIES: Upon receipt of written instructions from Buyer, and within the limitations contained therein which shall not be contrary to law or Seller's written contract bidding procedures, Seller will initiate its construction contract bidding process for the Project Facilities, including the advertising for and the taking of bids in accordance with its invitation to bid.

5. CONSTRUCTION OF PROJECT FACILITIES:

(a) Upon receipt of written instructions from Buyer, Seller will proceed with the awarding (preceded by rebidding if previously submitted bids have expired) of the Project Facilities construction contract(s) to the qualified bidder(s) submitting the lowest and best bid(s).

(b) Seller, using a professional engineering firm, registered in Kentucky, will supervise the construction of the Project Facilities and will complete same to the Point of Delivery no later than eighteen months from the date Seller receives the initial written instructions, set forth in Section 5(a), immediately above, time being of the essence. The completion of construction of the Project Facilities with water service being available at the Point of Delivery is referred to as the "Construction Completion Date".

(c) Delays in construction may cause reasonable extension of the Construction Completion Date provided such delays are the result of unanticipated adverse weather conditions, labor unrest, natural disasters, legal obstacles encountered in easement acquisition or other circumstances beyond Seller's control. Also, if Seller deems it necessary to rebid the construction contract(s) because of the expiration of the previous bids, the Construction Completion Date will be extended to accommodate the delay caused by such rebidding.

6. PROJECT FACILITIES' COSTS ALLOCATION:

(a) Except as otherwise provided in Section 6(c) Buyer agrees to pay the reasonable and necessary costs of design, site acquisition and construction of the Project Facilities, which costs include, but are not limited, to the following:

Consulting Engineering Services
Easement and other Property Rights
Easement Acquisition Agent
Recording of Real Estate Documents
Real Property Appraisals
Miscellaneous Out-of-Pocket Expenses
Bid Publication
Construction Contract(s) Obligations
Materials
Reproduction and Printing
Measurable In-house Engineering Planning, Design and Construction Administration

(b) In addition, Buyer agrees to pay Seller's costs incurred with respect to the financing of Buyer's share of the Project Facilities, which costs include but are not limited to, financial advisor charges, bond counsel and other legal expenses, printing and other reproduction costs and marketing and travel expenses and pre-issuance financing costs, referenced in Section 7(a), below.

(c) Seller will be responsible for the costs of the design, site location and construction of the pump station and the Shelby County water storage facility. In addition, Seller shall be responsible for the incremental costs of material and installation of any portion of the transmission main, the diameter of which is greater than 36 inches so long as such increase in diameter is not the requirement of Buyer. Provided, however, in the event the Project Facilities are not built, Buyer will reimburse Seller for the design cost of the pump station and the storage facility in return for which Seller will assign all of its right, title and interest in and to such design to Buyer.

7. INVOICING AND PAYMENT OF BUYER'S COSTS:

(a) Inasmuch as most, if not all, of the costs incurred by Seller on Buyer's behalf in the design, property acquisition, bidding, and construction of the Project Facilities can be paid from the proceeds of issuance of tax-free or taxable revenue bonds, contemplated under Sections 8(a) or (b), below, Seller is agreeable to financing all pre-issuance costs with the understanding that it will be reimbursed in full from the bond proceeds for such costs, including its financing costs, to the extent permitted under the terms of the bond issue; otherwise such reimbursement is to be made by Buyer in accordance with Section 8(c), below.

(b) Seller will advise Buyer of its pre-bond issue design, property acquisition and bidding costs. Seller, within 30 days of such advice, will finance the amount thereof anticipating reimbursement from bond proceeds pursuant to Subsection (a), above.

(c) Construction costs, unless paid directly from bond financing proceeds, will be invoiced by Seller to Buyer as incurred with Buyer to be responsible for providing funds to Seller in advance of any construction contract payment deadline relating to progress and final payments.

(d) Seller's cost incurred on Buyer's behalf not reimbursable, or not to be reimbursed, from bond proceeds will be paid by Buyer in full within 30 days of receipt of Seller's invoice.

(e) Buyer reserves the right to dispute costs it deems to be unreasonable but agrees that it will indemnify Seller and hold it harmless for any judgments, settlements, legal fees

and other costs incurred by Seller as a result of Buyer's refusal to pay Seller with respect to a third party claim.

8. FINANCING OF BUYER'S SHARE OF COSTS OF PROJECT FACILITIES:

Buyer agrees to reimburse Seller for all Project Facilities' costs, the cost of which Buyer has assumed hereinabove. Such reimbursement will take one or more of the following forms:

(a) By reimbursing Seller for its costs, including, but not limited to, debt service and issuance costs, through the issuance of tax-free, municipal revenue bonds by the Seller, the proceeds of which are to be used to pay or to reimburse Seller for the Project Facilities' costs, to the extent such costs are eligible for reimbursement from bond proceeds, it being understood that the contemplated bonds will be sold on a competitive bid basis and the bid award will be made by Seller only after consultation with Buyer. Attached hereto and designated Schedule A is a Projected Debt Amortization Schedule which assumes a $1,000,000 issue, bearing interest at 6% per annum and maturing over a 20 year period, said Schedule being attached for illustrative purposes only; or

(b) Failing the availability of above described tax-free financing, by reimbursing Seller for its costs, including, but not limited to, debt service and cost of issuance, through the issuance of corporate revenue bonds by Seller or Buyer, at Buyer's option, the proceeds of which are to be used to pay or to reimburse Seller for the cost of the Project Facilities, it being understood that the contemplated bonds, if issued by Seller, will be sold on a competitive bid basis with the winning bid to be awarded by Seller only after consultation with Buyer; or

(c) By progress payments from Buyer to Seller to be made within 30 days of invoice, the first such payment to be made within thirty days of Buyer's written advice that no bond issue financing is to be pursued and to be in an amount equal to the sum of all amounts previously incurred by Seller including those financed pursuant to Section 7(a), above, plus the financing cost thereof. The provisions of this subsection also shall be applicable to invoices from Seller that are later determined to be ineligible for reimbursement from bond proceeds.

(d) If Seller's bond instruments permit prepayment of part or all of the debt obligation, and if Buyer is not in default of any of its payments to Seller under this Section and Section 11 of this Agreement, then Buyer has the right to instruct Seller on a timely basis to exercise the prepayment privilege and shall simultaneously pay to Seller the amount of the prepayment needed, including premium, if any, to remit to the holders of the debt instruments being redeemed and any redemption expenses.

(e) Failure of Buyer to provide Seller with readily available funds in time to meet any debt payment requirements or construction contract obligation will result in a 5% penalty on the delinquent amount to be added to such delinquent payment for each month or partial month such payment and penalties thereon are delinquent.

(f) The parties understand and agree that the pledge securing the proposed revenue bonds will be Buyer's promise to pay the debt service thereon. Buyer agrees to cooperate

with Seller in good faith in preparing for and marketing the bond issue, including, but not limited to, the meeting of all disclosure requirements..

9. SERVICE AT THE POINT OF DELIVERY:

(a) Condition. Seller will provide Buyer Service at the Point of Delivery, which meets or exceeds all applicable drinking water standards in effect at the time of delivery.

(b) Flow Rate and Pressure. Seller shall design and construct the Project Facilities to make them capable of delivering water to Buyer at the Point of Delivery having a flow rate of up to 23 million gallons per day and water pressure of not less than thirty pounds per square inch (30 psi).

(c) Rate of Flow Demand. While Buyer is reserving up to 23 million gallons per day of Seller's production capacity, its requirements will be, as presently contemplated, substantially less than that during much of the duration of this Agreement. Such is recognized in Exhibit B, referenced in Section 11, setting forth the parties' rate arrangements. Nevertheless, Buyer may at any time and from time to time be in need of 23 million gallons per day, or significant portions thereof. At the same time, Seller desires as much advance notice as it can get with respect to any significant demand increase by Buyer in order that Seller's operations will not be adversely affected by a sudden, out of the ordinary demand on its production and transmission facilities. With such in mind, the parties pledge to each other open communications, from the Buyer to the Seller of any operational situations that may cause it to significantly increase its water needs in the near future, i.e. plant/equipment outage, drought predictions, etc., and from Seller to Buyer of Seller's operational situations that might adversely affect Seller's ability to immediately respond to any sudden need of Buyer for a significant increase in volume of water at the Point of Delivery, i.e. plant/equipment outages, planned and unplanned, and other factors that might affect its ability to deliver water. Regardless, Seller agrees to supply Buyer's demands, as same may be altered from time to time, and with reference to any sudden significant demand increase, as soon as possible after notification by Buyer, barring problems beyond Seller's control.

(d) Service to Others. Seller warrants and represents that any water service to others prior to the Point of Delivery provided through or from the Project Facilities shall not interfere with its service or diminish its obligations to the Buyer under this Agreement.

(e) Failures. Buyer acknowledges that unexpected supply or treatment problems may occur which are beyond Seller's control. In the event Seller, when called upon, is unable to provide Buyer with Service under the terms of this Agreement for reasons beyond Seller's control, Seller shall use its best efforts to restore the Service to the quality, rate of flow and pressure required. Time is of the essence in all situations where such failure and duty of restoration exists. In the event delivery problems limit or prevent the delivery of water to any of Seller's other customers, then Seller agrees that any restrictions, placed by it or upon it by others as to water delivery, shall apply to the Buyer in the same manner as applied by Seller to other customers.

10. METERING ARRANGEMENTS: Seller agrees to furnish, install, maintain, repair and replace at the Point of Delivery a service meter or battery of meters, including meter house or vault, for properly measuring the quantity of water being delivered to Buyer and to test such metering equipment whenever requested by Buyer but no more frequently than once every six months with the results of such tests provided to Buyer. Buyer may require Seller to conduct tests more often than every six months, but at its own expense. A meter registering between 98.5% and 101.5% of the actual flow shall be deemed to be accurate. Previous readings of any meter disclosed by test to be inaccurate shall be corrected for three months previous to such test in accordance with the percentage of inaccuracy found by such test. If any meter fails to register for any period, the amount of water furnished during such period shall be deemed to be the amount of water delivered in the corresponding period immediately prior to the failure, unless Seller and Buyer shall agree otherwise. An appropriate official of the Buyer shall have access to the meter at reasonable times for the purpose of inspecting and reading such metering facilities.

11. RATES AND PAYMENT:

(a) Buyer shall pay Seller for the Service as determined by the methodology set forth in Exhibit B, attached hereto and incorporated herein, Buyer agreeing that the rate-making methodology contained therein is reasonable for the anticipated annual rate adjustment filings by the Seller with the Kentucky Public Service Commission relating to the provision of Service under this Agreement.

(b) Buyer's meter will be read at the end of each month of Service and shall be invoiced by Seller in accordance with the provisions of Exhibit B, provided, however, the rate paid by Buyer for Service shall never exceed Seller's Wholesale Rate plus its Elevated Service Area Surcharge, if applicable, as adjusted from time to time.

(c) Buyer shall remit payment to Seller for each invoice no later than the 30 calendar days following the mailing or facsimile transmission of such invoice. Failure to make timely payments will cause a penalty of five percent (5%) per month or partial month on each invoice remaining unpaid. Buyer shall have the option of paying such monthly invoices by automatic bank drafts.

12. RESERVATION OF CAPACITY: Seller reserves production capacity to Buyer of 23 million gallons per day (flow rate) for the term of this Agreement.

13. RIGHT TO INCREASE DELIVERY CAPACITY OF PROJECT FACILITIES:

(a) Recognizing that the Project Facilities being financed by Buyer will have a delivery capacity of 23 million gallons of water per day and further recognizing that the Seller financed additions thereto of a pumping station, a Shelby County storage facility and main upsizing will make the Project Facilities expandable to 35 million gallons per day, Seller hereby agrees to give Buyer the right, and the right of first refusal, to acquire up to all of the additional 12 million gallons per day capacity on the following terms and conditions:

(i) When Seller receives a bona fide, acceptable proposal to sell water service from or through the Project Facilities, it will notify Buyer in writing who will have 60 days to exercise its right of first refusal for the acquisition of the capacity contemplated in such proposal. If Buyer chooses to acquire the additional capacity offered, or on its own volition to acquire additional available capacity, it will be obligated as follows:

(ii) To pay Seller a percentage of the then book value of the Seller-financed part of the Project Facilities and any improvements made thereto that is represented by the capacity being acquired as same relates to the total 12 million gallons per day available.

(iii) Pay to Seller all costs incurred by it in any upgrading of the Project Facilities needed to provide the increase in rate of flow to the Point of Delivery.

(iv) To an increase in its Exhibit B capacity Request in an amount equal to the increased daily capacity being acquired, effective at the time that the Seller has made the increase available at the Point of Delivery, it being understood that Seller will make such increased capacity available no later than 12 months from the date of exercise of the right.

(v) To an increase in its Exhibit B minimum monthly usage by an amount equal to 50% of the increased monthly capacity being acquired, effective at the same time the Request increase takes effect.

(b) Upon Buyer's exercise of its rights set forth above in this Section 13, Seller will consider, at Buyer's request, issuance of Seller's debt instrument(s) to finance Buyer's obligations under subsection (a)(ii) and (iii), above, an issuance similar to that contemplated in Section 8(a).

14. ADDITIONAL EXPANSION BY SELLER: Seller agrees that before undertaking any expansion or enlargement of any of the Project Facilities or the Payne plant treatment capacity, it will notify Buyer of its intention to do so and will afford Buyer with a reasonable opportunity to participate in the expansion or enlargement upon terms and conditions mutually agreeable.

15. NOTICE: In addition to the communications called for in subsection 9(c), Buyer will timely notify Seller of any condition or situation, which would adversely affect the quality, quantity or pressure of the water in Seller's system and, likewise, Seller will timely notify Buyer of any condition or situation, which would adversely affect the quality, quantity or pressure of the water at the Point of Delivery.

16. TERM AND EXTENSIONS: The term of this Agreement shall begin on the date it is executed by both parties hereto and shall terminate 50 years after the date Service is initiated. The parties shall execute an addendum showing the date Service is initiated and the termination date 50 years later. One year prior to the termination date the parties hereto shall begin to negotiate in good faith an extension of this Agreement with due and proper consideration for the principles and concepts contained herein, being mindful that the parties are hopeful that their relationship, created herein, will be one of mutual benefit and respect that will last longer than the initial 50 year term.

17. BUYER'S REPRESENTATION AND WARRANTY:

Buyer is a Kentucky corporation with the authority to enter into this Agreement, subject to regulatory approval, and has the authority to perform under the terms of this Agreement.

18. SELLER'S REPRESENTATION AND WARRANTY:

Seller is a Kentucky corporation with the statutory authority through the Board of Water Works to enter into this Agreement and to perform under the terms of this Agreement.

19. TERMINATION:

(a) Buyer may terminate this Agreement upon six (6) months written notice in the event of:

(1) Repeated failure of Seller to provide the Service set forth in this Agreement.

(2) Revocation of Seller's authority to do business.

(b) Seller may terminate this Agreement upon six (6) months written notice in the event of:

(1) Failure of Buyer to deliver to Seller written instructions to proceed with the construction of the Project Facilities within six months of receipt by Buyer of a final, non-appealable Order from the PSC in the form of a Certificate that public convenience and necessity requires the construction.

(2) Buyer's failure to receive after five or more years from the date of this Agreement a final, nonappealable Order, referenced in subsection (1), immediately above, unless at the time of such termination election by Seller, Buyer is pursuing, and continues to pursue, in good faith and with reasonable diligence the desired PSC Order.

(3) Repeated failure of Buyer to pay its invoices for water service on a timely basis.

(4) Repeated failure of Buyer to pay on a timely basis its debt service obligations to Seller, time being of the essence in that regard.

(5) Revocation of Buyer's authority to do business.

20. MISCELLANEOUS PROVISIONS:

(a) This Agreement is subject to the approval of the PSC and receipt by Buyer of a final, non-appealable Order, in a form and written content acceptable to Buyer, from the PSC

in the form of a Certificate of Convenience and Necessity for the facilities to be constructed pursuant to this Agreement. Provided, however, failure to obtain such an Order shall not relieve Buyer of its duties hereunder to reimburse Seller for costs incurred pursuant to the provisions of Sections 2, 3 and 4, above. In the event such Order alters, directly or indirectly, one or more provisions of this Agreement (including the one or more provisions of Exhibit B) and such modification(s) is not acceptable to either party, then this Agreement terminates so long as the terminating party communicates such action to the other party within 60 days of receipt of such Order.

(b) This Agreement does not constitute a partnership, joint venture, agency or other relationship between Buyer and Seller, and Buyer and Seller expressly state that they owe no fiduciary duties to one another and that the relationship is based upon Contract.

(c) This Agreement is binding on the successors and assigns of the parties hereto.

(d) The parties agree that each will have access upon reasonable notice to the books and records of the other relating to the subject matter of this Agreement, such access to exclude records that are subject to a recognized privilege or to protection under the Kentucky Open Records Law. Without limitation, the information subject to access shall include all costs of design, construction, financing, and costs of operation and maintenance of the facilities contemplated by this Agreement.

(e) Buyer reserves the right to develop and use other water supply sources and may obtain water from sources other than the Seller.

(f) The parties agree to operate and maintain their respective facilities in an efficient and economical manner and in accordance with all applicable local, state and federal laws, regulations and performance standards.

(g) This Agreement may be amended at any time by mutual agreement, in writing, of the parties.

(h) Both parties agree to use their best efforts to obtain all regulatory and legal approvals required for the accomplishment of the terms of this Agreement.

(i) The parties acknowledge that the water to be purchased hereunder will be resold in the regular course of business of Buyer and is therefore exempt from Kentucky sales and use tax. To evidence this exemption, Buyer will furnish Seller with a duly executed "Resale Certificate" or such other documentation as the parties deem appropriate.

(j) Seller agrees, subject to its right hereby reserved to self-insure itself up to the first Two Million Dollars in liability, to carry public liability insurance in the minimum amount of Ten Million Dollars per occurrence during the term of this Agreement.

IN WITNESS WHEREOF, the parties have set forth their hand the day and year first above written.

BUYER:

Kentucky-American Water Company

By: Roy W. Mundy, II
Roy W. Mundy, II
President

Date: November 7, 1998

Attest: Herbert A. Miller, Jr., Secretary
Name: Herbert A. Miller, Jr.
Secretary

SELLER:

Louisville Water Company

By: John L. Huber
John L. Huber
President

Date: November 12, 1998

Attest: Robert K. Miller
Name: Robert K. Miller

UTI.D2075:015.jrc
F:\USERS\015\LWC\KYAMEWAT.A13

Schedule A

Bluegrass Water Project Agreement

Projected Debt Amortization Schedule
per $1,000,000 of debt with level debt service payments
at 6% interest for 20 years

Year	Beginning Balance	Interest	Principal	Ending Balance
1	$ 1,000,000	$ 60,000	$ 27,185	$ 972,815
2	$ 972,815	$ 58,369	$ 28,816	$ 944,000
3	$ 944,000	$ 56,640	$ 30,545	$ 913,455
4	$ 913,455	$ 54,807	$ 32,377	$ 881,078
5	$ 881,078	$ 52,865	$ 34,320	$ 846,758
6	$ 846,758	$ 50,805	$ 36,379	$ 810,379
7	$ 810,379	$ 48,623	$ 38,562	$ 771,817
8	$ 771,817	$ 46,309	$ 40,876	$ 730,942
9	$ 730,942	$ 43,857	$ 43,328	$ 687,614
10	$ 687,614	$ 41,257	$ 45,928	$ 641,686
11	$ 641,686	$ 38,501	$ 48,683	$ 593,002
12	$ 593,002	$ 35,580	$ 51,604	$ 541,398
13	$ 541,398	$ 32,484	$ 54,701	$ 486,697
14	$ 486,697	$ 29,202	$ 57,983	$ 428,715
15	$ 428,715	$ 25,723	$ 61,462	$ 367,253
16	$ 367,253	$ 22,035	$ 65,149	$ 302,104
17	$ 302,104	$ 18,126	$ 69,058	$ 233,045
18	$ 233,045	$ 13,983	$ 73,202	$ 159,843
19	$ 159,843	$ 9,591	$ 77,594	$ 82,249
20	$ 82,249	$ 4,935	$ 82,250	$ (0)

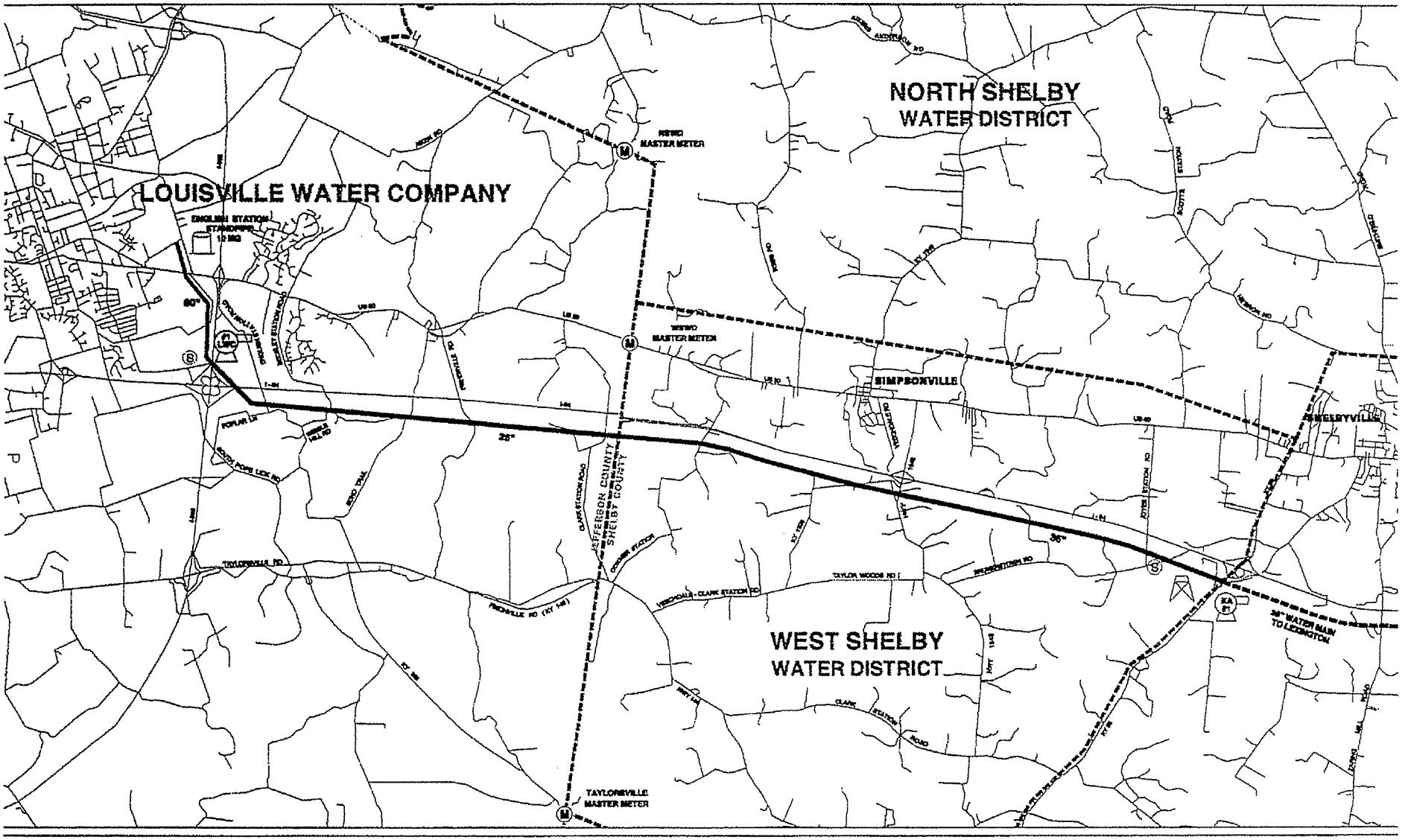


EXHIBIT A

BLUEGRASS WATER PROJECT

0 0.5 1 1.5 2

MILES

- STORAGE RESERVOIR
- MASTER METER
- ELECTRIC SUBSTATIONS
- WATER DISTRICT BOUNDARIES (APPROX.)
- PROPOSED 42" WATER MAIN (LWC)
- PROPOSED 30" WATER MAIN (LWC)
- PROPOSED 36" WATER MAIN (KA)
- PROPOSED ELEVATED STORAGE (LWC)
- PROPOSED PUMPING STATION

07/31/98

00082

WATER SUPPLY AGREEMENT

EXHIBIT B

Rate Arrangements

Because of the unusual situation impacting upon the relationship, i.e. Buyer owning and operating production facilities sufficient, much of the time, to meet its present needs but desiring a second reliable source of water, and Seller presently having production capacity available and being asked to commit to Buyer more capacity than Buyer plans to use for a number of years, the parties have developed the rate arrangements set forth below.

1. Buyer's Capacity Request. On or before July 1 of each calendar year, beginning with the year preceding the first full calendar year of Service, Buyer will notify Seller in writing of its capacity request (the "Request") for the succeeding calendar year, which Request may be any number between 2.5 million gallons per day and 23 million gallons per day; provided, however, Buyer's Request, beginning in the sixth full calendar year of service must be at least 5 million gallons per day. Buyer's Request for the first partial calendar year of service delivered under this Agreement, assuming the initial Service commences after January 1 of any calendar year and the first full calendar year is set at 2.5 million gallons per day unless such amount is raised on a timely basis by Buyer. Subsequent Requests for the next four full calendar years will not be less than 3 million gallons per day for the second full calendar year, 3.5 million gallons per day for the third, 4 million gallons per day for the fourth and 4.5 million gallons per day for the fifth full calendar year.

2. Water Service Rate. The rate for the Service for the term of the Agreement shall be determined by totaling the following components:

(a) The Operating Expense Component, determined for the billing period by dividing the Buyer's usage by the Seller's total sales and multiplying the quotient by Seller's Operating Expenses, less expenses common only to retail customer expenses and to customers generally.

(b) The Depreciation Expense Component, determined for the billing period by dividing the Buyer's Request by the Seller's production capacity and multiplying the quotient by the Seller's Depreciation Expense, less depreciation on contributed capital and depreciation common only to retail customers and to customers generally.

(c) The Return on Plant Investment Component, determined for the billing period by dividing the Buyer's Request by the Seller's production capacity and multiplying the quotient by Seller's Return on Plant Investment, excluding return on plant investment common only to retail customers and to customers generally.

(d) Customer Cost Component, determined for the billing period by the Service Charge, as it may change from time to time, currently contained in Section 6.02.1 of Seller's rate schedule, applied to the number and size of meters installed at Buyer's request.

3. Minimum Usage. Minimum usage of water during the first full calendar year of Service, and for any months of Service prior thereto, shall be, for the months of January, February, March, April, November and December (the "Nonirrgation Months") 36 million gallons per month and for the months of May through October (the "Irrigation Months") 54 million gallons per month. Buyer will be billed for such minimum usage if same is not consumed by it. During the second full calendar year, the minimum usage for the Nonirrgation Months shall be 38.4 million gallons per month and for the Irrigation Months, shall be 57.6 million gallons per month. For the third full calendar year, the minimum usage of water during the Nonirrgation Months shall be 40.8 million gallons per month and 61.2 million gallons per month for the Irrigation Months. For the fourth full calendar year, the minimum usage for water during the Nonirrgation Months shall be 43.2 million gallons per month and for the Irrigation months, 64.8 million gallons per month. During the fifth full calendar year of Service, the minimum usage of water during the Nonirrgation Months shall be 45.6 million gallons per month and during the Irrigation Months, 68.4 million gallons per month. Thereafter, for the remaining months of the Agreement the minimum usage shall be 54.0 million gallons per month for the Nonirrgation months and 66 million per month for the Irrigation months. However, in determining whether Buyer has met its minimum usage for any month, only daily usage by Buyer up to its capacity Request, then in effect, will be considered, usage exceeding such Request not to be included in such computation.

4. Usage Exceeding Request. Usage of water during any 24 hour period in excess of Buyer's Request will result in a charge to Buyer, with respect to the excess consumption, of Seller's Wholesale Rate, as set by the Board of Water Works from time to time, including its Elevated Service Area Surcharge (which Rate, including the surcharge, is presently $1.35 per 1000 gallons).

5. Emergency Excess or Minimum Usage. In the event Buyer's usage is enhanced or diminished for a brief period of time due to unforeseeable or uncontrollable circumstances, for example emergency flushing, Seller agrees to equitably adjust Buyer's Service billing with respect to such emergency.

6. Supporting and Explanatory Schedules. Attached to this Exhibit B are the following described supporting and explanatory schedules:

(a) Schedule 1, entitled Calculation of Rate Components where a Request of 2.5 million gallons per day is in effect and making references to schedules found in "Seller's 1997 Rate Study for 1998."

(b) Schedule 2, relating to the Operating Expense Component.

(c) Schedule 3, relating to the Depreciation Expense Component.

(d) Schedule 4, relating to the Return on Plant Investment Component.

(e) Schedule 5, entitled Calculation of Monthly Water Bill Example.

7. Seller's Production Capacity. As shown in Schedule 1, attached, Seller's present daily production capacity has been determined to be 240,000,000 gallons, based upon data contained in Seller's 1995-2015 Facilities Plan, prepared by CH2M Hill a nationally recognized independent consulting engineering firm. Seller agrees to have its production capacity reviewed and redetermined at least every five years during the term of this Agreement by a nationally recognized independent consulting engineering firm and the redetermination used in Exhibit B computations [Sections 2(b) and 2(c)]. Production capacity, for the purposes of this Agreement, shall mean Seller's combined source pumping, treatment, and treated water pumping capability as determined from its facilities existing at the time of such determination. Provided, however, such capacity, for the purposes of the annual computations to be made pursuant to Section 2 of this Exhibit B, shall never be lower than 240,000,000 gallons.

8. Computations. The computations contained in the attached Schedules are based upon Seller's 1997 Rate Study For FY 1998, using Seller's historical and current financial and operational records, such financial records being prepared in accordance with generally accepted accounting principles, audited annually by a reputable certificated public accounting firm and constitute the same figures used by Seller in preparing its 1998 budget, approved by the Board of Water Works and submitted to Seller's bondholder trustee, an annual exercise. Annual rate revisions will be performed using Seller's budget figures.

UT1.D2075:015.jrc
F:\USERS\015\LWC\WATSUPP8.SCB

EXHIBIT B
Schedule 1
LWC - KAWC WATER SUPPLY AGREEMENT
Calculation of Rate Components

10/8/99

Request (1,000 Gal.)		2,500
ided by: LWC Production Capacity (1,000 Gal.)		240,000
Request / Production Capacity Quotient		1.042%

CALCULATION OF OPERATING EXPENSE COMPONENT

Net Operating Expenses	Utility Rate Schedule 2; Column 1; Line 50.	$ 31,220,800
Less: Common to Retail Customer Costs	Utility Rate Schedule 2; Column 7; Line 50.	(5,127,330)
Customer Costs	Utility Rate Schedule 2; Column 6; Line 50.	(9,803,200)
Operating Cost		$ 16,290,270
Divided by: LWC's Annual System Sales (1,000 Gal.)	Utility Rate Schedule 1; Column 3; Line 4.	37,000,000
Operating Expense Component Quotient (per 1,000 Gal.)		$ 0.44028

CALCULATION OF DEPRECIATION EXPENSE COMPONENT

Depreciation Expense	Utility Rate Schedule 3; Column 1; Line 19.	$ 11,010,480
Less: Common to Retail Customer Costs	Utility Rate Schedule 3; Column 7; Line 19.	(2,940,510)
Customer Costs	Utility Rate Schedule 3; Column 6; Line 19.	(2,663,010)
Depreciation - Plant Funded by CIAC	Utility Rate Schedule 3.	(632,290)
Depreciation Cost		$ 4,774,670
Multiplied by: Request / Production Capacity Quotient		1.042%
Annual Depreciation Expense Component		$ 49,752.06
ided by: 12-Months		12
thly Depreciation Expense Component		$ 4,146.01

CALCULATION OF RETURN ON PLANT INVESTMENT COMPONENT

LWC's Return on Plant Investment	Utility Rate Schedule 4; Column 1; Line 24.	$ 28,585,310
Less: Common to Retail Customer Costs	Utility Rate Schedule 4; Column 7; Line 24.	(7,164,740)
Customer Costs	Utility Rate Schedule 4; Column 6; Line 24.	(1,488,140)
Net Return on Plant Investment		$ 19,932,430
Multiplied by: Request / Production Capacity Quotient		1.042%
Annual Return on Plant Investment Component		$ 207,695.92
Divided by: 12-Months		12
Monthly Return on Plant Investment Component		$ 17,307.99

CUSTOMER COST COMPONENT

Example based on one 6" meter	$ 259.00

USAGE EXCEEDING REQUEST COMPONENT

Usage of water during any 24 hour period in excess of KAWC's Request will result in a charge to KAWC, with respect to excess consumption, of LWC's Wholesale Rate including its Elevated Service Area Surcharge.	$ 1.35

COMPUTATION OF TOTAL WATER BILL

The monthly water bill will be the sum of the following charges: operating expense component; depreciation expense component; return on plant investment component; customer cost component; and the usage exceeding request component.

Schedule 2

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	SOURCE OF SUPPLY	52.44		36.31	16.13			
2)	POWER AND PUMPING							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill Station, Power	743.19		743.19				
6)	Crescent Hill Station, Other	434.68		269.42		165.26		
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98				
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91			
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95				
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.86	171.82	9.04				
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76		
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00	
14)	PURIFICATION							
15)	Chemicals, B.E. Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	TRANSMISSION AND DISTRIBUTION							
20)	Transmission Mains	712.95		493.66	219.28			
21)	Distribution Mains	1,789.04						1,789.04
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26
26)	Transmission & Distribution Subtotal	4,427.20	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Transmission and Distribution	5,052.32	23.71	565.00	250.25	1.00	1,839.47	2,372.89
29)	Total Transmission and Distribution	9,479.52	44.49	1,060.09	469.53	1.88	3,451.34	4,452.19
30)	CUSTOMER ACCOUNTS AND SERVICE							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,983.47						
34)	Uncollected Accounts	275.00						
35)	Miscellaneous Customer Accounts	96.82						
36)	Total Customer Accounts & Service	5,581.80					5,581.80	
37)	Subtotal	24,401.37	1,040.27	7,819.13	1,812.32	244.33	9,033.14	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	ADMINISTRATIVE AND GENERAL							
40)	Administrative and General	12,610.53						
41)	Labor Related Overhead	8,853.50						
42)	Less: Operating Expenses Applied	(12,262.30)						
43)	Total Administrative and General	9,201.73	392.28	2,946.59	683.42	92.14	3,406.39	1,678.91
44)	Total	33,603.10	1,432.55	10,767.72	2,495.74	336.46	12,439.52	6,131.10
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(80.90)		(80.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.90	1,432.55	11,882.95	2,495.74	479.03	12,814.52	6,131.10
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33

Schedule 3

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATIO EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land							
2)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73	
3)	Basins and Ground Storage	359.24		248.75	110.49			
4)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06		
5)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09			
6)	Booster Pump Equipment	34.93	24.17	6.67		4.09		
7)	Miscellaneous Pump Equipment	48.65		33.69	14.96			
8)	Sludge Disposal Equipment	64.48		64.48				
9)	Purification Equipment	536.44		371.44	165.00			
10)	Transmission Mains	2,122.63		1,469.76	652.87			
11)	Distribution Mains	1,971.82						1,971.82
12)	Meters	357.76					357.76	
13)	Services	1,302.41					1,302.41	
14)	Meter Installations	447.05					447.05	
15)	Fire Hydrants	409.90						409.90
16)	Sub-total	8,918.14	104.59	3,011.76	1,200.49	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and Other Equipment	2,092.34	24.54	706.61	281.65	14.69	506.06	558.79
19)	TOTAL	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51

Schedule 3

Schedule 4

UTILITY RATE

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	4,827.66	133.83	2,817.58	889.91	107.15	879.19	
2)	Land Improvements and Buildings	34,449.56	448.15	20,410.16	6,446.36	776.15	6,368.74	
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63			
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26		
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33			
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14		
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65			
8)	Sludge Disposal Equipment	1,704.07		1,704.07				
9)	Purification Equipment	18,576.16		12,862.62	5,713.54			
10)	Transmission Mains	148,269.67		102,665.77	45,603.90			
11)	Distribution Mains	102,856.67						102,856.67
12)	Meters	2,887.58					2,887.58	
13)	Services	40,176.18					40,176.18	
14)	Meter Installations	13,588.90					13,588.90	
15)	Fire Hydrants	16,854.21						16,854.21
16)	Sub-total	410,177.19	3,569.96	156,091.75	64,485.33	2,418.69	63,900.59	119,710.88
17)	Percent	100.00%	0.87%	38.05%	15.72%	0.59%	15.58%	29.19%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	4,150.25	1,714.57	64.31	1,699.02	3,182.94
19)	Total Plant	421,083.21	3,664.88	160,242.00	66,199.90	2,483.00	65,599.61	122,893.82
20)	Other Rate Base Items (1)	9,451.20	82.26	3,596.63	1,485.85	55.73	1,472.38	2,758.35
21)	Sub-total	430,534.41	3,747.14	163,838.63	67,685.75	2,538.73	67,071.99	125,652.17
22)	Contributions and Grants (2)	(132,149.10)		(24,183.29)			(51,538.15)	(56,427.67)
23)	Total Net Plant Investment	298,385.31	3,747.14	139,655.35	67,685.75	2,538.73	15,533.84	69,224.50
24)	Annual Return @ 9.58%	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/25/97

EXHIBIT B
Schedule 5
LWC - KAWC Water Supply Agreement
Calculation of Monthly Water Bill Example

Monthly Minimum Usage (1,000 Gal.)	45,000
Buyer's Daily Request (1,000 Gal.)	2,500

Day	Daily Usage (1,000 Gal.)	Usage Exceeding Request (1,000 Gal.)
1	1,500	0
2	1,500	0
3	2,000	0
4	2,000	0
5	3,000	500
6	3,000	500
7	4,000	1,500
8	4,000	1,500
9	5,000	2,500
10	5,000	2,500
11	6,000	3,500
12	6,000	3,500
13	7,000	4,500
14	7,000	4,500
15	8,000	5,500
16	8,000	5,500
17	9,000	6,500
18	9,000	6,500
19	10,000	7,500
20	10,000	7,500
21	9,000	6,500
22	9,000	6,500
23	8,000	5,500
24	8,000	5,500
25	7,000	4,500
26	7,000	4,500
27	6,000	3,500
28	6,000	3,500
29	5,000	2,500
30	5,000	2,500
Totals	181,000	109,000

Usage Within the Request (1,000 Gal.)		72,000
Multiplied by: Operating Expense Component Quotient (per 1,000 Gal.)	$	0.44028
Operating Expense Component	$	31,700.16
Usage Exceeding Request (1,000 Gal.)		109,000
Multiplied by: Seller's Wholesale Rate (per 1,000 Gal.)	$	1.35
Usage Exceeding Request Component	$	147,150.00
Operating Expense Component	$	31,700.16
Depreciation Expense Component		4,146.01
Return on Plant Investment Component		17,307.99
Usage Exceeding Request Component		147,150.00
Customer Cost Component		259.00
Monthly Water Bill	$	200,563.16
Monthly Water Bill / Buyer's Usage for Month (1,000 Gal.)	$	1.10808
Monthly Debt Service Cost	$	XXX,XXX.XX
Total	$	XXX,XXX.XX

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-569-0815

RECEIVED
NOV 18 1998
KENTUCKY AMERICAN WATER COMPANY

November 13, 1998

Mr. Gene Fouts, Manager
Shelbyville Water Company
Post Office Box 608
Shelbyville, KY 40066

Re: Proposed Bluegrass Pipeline

Dear Gene:

Thank you for meeting with Patti Kaelin and me on September 30, 1998 to discuss Shelbyville's interest in the proposed pipeline to serve Lexington.

From our meeting I understand the City of Shelbyville is interested in serving the area south of Interstate 64 from the pipeline and is willing to commit to a 350,000 gallon per day demand from the pipeline. I have initiated discussions with Kentucky-American about this possibility. The Water Supply Agreement between Louisville Water Company (LWC) and Kentucky American Water Company (KAWC) has been finalized and proposes a delivery point at Interstate 64 and Highway 55. Water delivery west of this delivery point would be a customer of LWC. Water delivery east of this point would be a customer of KAWC. At this time, there is no plan to move the delivery point east to Highway 53, although alternatives may exist to do so.

From preliminary analysis and discussions with KAWC, it appears a water supply connection point at Highway 55 or Highway 53 is feasible to supply the estimated 350,000 gallon per day demand for the area. Through pumping and storage to be built by LWC, the proposed 36-inch pipeline can supply water up to 12 MGD above the needed 23 MGD capacity to serve KAWC. The hydraulic grade at Highway 55 will range from 900 to 950 feet msl. Pumping will be supplied by KAWC at Highway 55 to boost the pressure to Fayette County.

LWC and KAWC anticipate a signed agreement within 30 days, with the agreement subject to the approval of the Kentucky Public Service Commission. Upon execution of the agreement, I will arrange a meeting with representatives from LWC, Shelbyville, and KAWC to discuss the alternatives of water sales from the pipeline.

Sincerely,

Gregory C. Heitzman

Gregory C. Heitzman, P.E.
Vice President-Chief Engineer

/gh

cc: John Huber, Bob Miller - Louisville Water Company
Roy Mundy II, Coleman Bush, Linda Bridwell, Nick Rowe - Kentucky American Water Company

C:\DATA\MSOFFICE\WINWORD\GCH\FOUTS NOV 98

David M Reves 11/11/98 09:45 AM

To: Linda Bridwell/KAWC/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW

Subject: LWC Letter

Linda: I never finished reading the letter that Greg Heitzman sent to you when I was in Lexington last week. Could you fax it to me? Also, I should be wrapping up the minutes today from last week's meeting which will include the hydraulics and recommendations for the current route (based on actual contours), the alternate route down I64 branching off to Leestown Road (which we did last week at the meeting, but I am rechecking it) , and the second alternate route which will follow I64 all the way to New Circle Road. If I'm not able to get this in the overnight mail to you tonight, I'll fax it on Thursday. I'll be out of the office Thursday afternoon, and will be in a materials managment meeting all day Friday (here in my office). If you need to discuss the hydraulics with me, either call me Thursday morning, or else ask a secretary to come and get me out the materials management meeting on Friday.....Dave

Gannett Fleming Valuation and Rate Consultants, Inc.

P.O. Box 67100
Harrisburg, PA 17106-7100

Location:
207 Senate Avenue
Camp Hill, PA 17011

Fax: (717) 763-8150
Phone: (717) 763-7211

RECEIVED
NOV - 9 1998
KENTUCKY AMERICAN WATER COMPANY

C: EJG NOR LCB HAM LWI ab 11/11

November 5, 1998

Mr. Coleman Bush
Vice President and Treasurer
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Coleman:

Thank you for the assignment to perform an evaluation of the economic alternatives to meeting the supply requirements of Kentucky-American Water Company. We estimate that the cost of the study through the submission of direct testimony and exhibits will approximate $25,000 to $30,000. The estimate does not include the cost of services subsequent to the filing, such as responding to interrogatories and attending hearings, as we have little control over the level of effort required.

Enclosed are the requested certificates of insurance.

I look forward to working with you on this project.

Very truly yours,

Bill

WILLIAM M. STOUT, P.E.
President

WMS/car

Enclosure

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) 10/27/1998

PRODUCER 717-533-3371
Aon Risk Services, Inc. of Pennsylvania
22 Northeast Drive
Hershey PA 17033

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Gannett Fleming Valuation and Rate Consultants, Inc.
P.O. Box 67100
Harrisburg, PA 17106-7100

COMPANIES AFFORDING COVERAGE

COMPANY A: HARTFORD ACCIDENT & INDEMNITY
COMPANY B: U S FIDELITY & GUARANTY CO
COMPANY C: TWIN CITY FIRE INSURANCE CO
COMPANY D: HARTFORD CASUALTY INS CO

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS		
A	GENERAL LIABILITY	44UENGA5329W	01/01/1998	01/01/1999	GENERAL AGGREGATE	$	2,000,000
	X COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$	2,000,000
	CLAIMS MADE X OCCUR				PERSONAL & ADV INJURY	$	1,000,000
	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	$	1,000,000
					FIRE DAMAGE (Any one fire)	$	300,000
					MED EXP (Any one person)	$	10,000
A	AUTOMOBILE LIABILITY	44MCPMD2812	01/01/1998	01/01/1999	COMBINED SINGLE LIMIT	$	1,000,000
A	X ANY AUTO	44UENGA5329W	01/01/1998	01/01/1999			
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$	
	SCHEDULED AUTOS						
	X HIRED AUTOS				BODILY INJURY (Per accident)	$	
	X NON-OWNED AUTOS						
					PROPERTY DAMAGE	$	
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$	
	ANY AUTO				OTHER THAN AUTO ONLY:		
					EACH ACCIDENT	$	
					AGGREGATE	$	
B	EXCESS LIABILITY	SUM30000002600	01/01/1998	01/01/1999	EACH OCCURRENCE	$	1,000,000
	X UMBRELLA FORM				AGGREGATE	$	1,000,000
	OTHER THAN UMBRELLA FORM					$	
C	WORKERS COMPENSATION AND	44WBAT4014	01/01/1998	01/01/1999	X WC STATU-TORY LIMITS / OTH-ER		
D	EMPLOYERS' LIABILITY	44WBMD2815	01/01/1998	01/01/1999	EL EACH ACCIDENT	$	100,000
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: INCL / EXCL				EL DISEASE - POLICY LIMIT	$	500,000
					EL DISEASE - EA EMPLOYEE	$	100,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS FOR: FEASIBILITY STUDY. GF PROJECT JOB NO. 35610.

2333 (CR)

CERTIFICATE HOLDER

KENTUCKY-AMERICAN WATER COMPANY
ATTN: MR. COLEMAN BUSH, VP AND TREASURER
2300 RICHMOND ROAD
LEXINGTON, KY 40502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, EXCEPT 10 DAYS NOTICE FOR NON-PAYMENT. BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
AON RISK SERVICES

© ACORD CORPORATION 1995

ACORD CERTIFICATE OF LIABILITY INSURANCE

OP ID TS GANNE-2

DATE (MM/DD/YY) 10/27/98

PRODUCER

Wortley/Poole Professional,Ltd
00 North 17th
ladelphia PA 19103

Kenneth R. Wortley
Phone No. 215-564-6970 Fax No. 215-564-6975

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

Gannett Fleming Valuation
and Rate Consultants, Inc.
P. O. Box 67100
Harrisburg PA 17106-7100

COMPANIES AFFORDING COVERAGE

COMPANY A: Sec Ins Co of Hartford c/oDPIC

COMPANY B:

COMPANY C:

COMPANY D:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$
	COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$
	CLAIMS MADE / OCCUR				PERSONAL & ADV INJURY	$
	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	$
					FIRE DAMAGE (Any one fire)	$
					MED EXP (Any one person)	$
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$
	ANY AUTO					
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
					PROPERTY DAMAGE	$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATUTORY LIMITS / OTHER	
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: INCL / EXCL				EL EACH ACCIDENT	$
					EL DISEASE - POLICY LIMIT	$
					EL DISEASE - EA EMPLOYEE	$
A	OTHER Professional Liability	PL700718	04/01/98	04/01/99	Ea Claim	1,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Re: Feasibility Study. Job Number: 35610.

CERTIFICATE HOLDER

KENTU-1

Kentucky-American Water Co.
Attn: Mr. Coleman Bush
Vice President & Treasurer
2300 Richmond Road
Lexington KY 40502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Kenneth R. Wortley

INVOICE

November 4, 1998

Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502
Attn: Mr. Coleman Bush, Vice President & Treasurer

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.
P.O. BOX 67100
HARRISBURG, PA. 17106-7100
(717) 763-7211

INV. NO. 311-981022

JOB NO. 35610

Services Performed During the Period
October 3, 1998 Through October 30, 1998

Feasibility Study

	Hours	Rate	Amount	Total
Personnel				
W M Stout	3	$175.00	$ 525.00	
P R Herbert	23	120.00	2,760.00	
Support Staff	1	50.00	50.00	$ 3,335.00
Delayed Billing for Expenses				
Printing and Supplies			$ 24.29	
Transportation			24.71	$ 49.00
Total Charges, Oct. 3 - Oct. 30, 1998				$ 3,384.00

Copy

REMITTANCE COPY - PLEASE RETURN WITH PAYMENT

00096

File - N
Louisville
Corresp.

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-569-0815

November 4, 1998

Ms. Linda Bridwell, P.E.
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Re: Bluegrass Water Project Design Services

Dear Ms. Bridwell:

I am in receipt of Mr. Mundy's letter dated October 12, 1998 to Mr. John Huber instructing Louisville Water Company to proceed with the Bluegrass Water Project pipeline design. In addition, I have received your letter of October 26 regarding limitations on consulting design services and Louisville Water Company design standards. This letter serves as documentation of our phone conversation on Wednesday, October 28 regarding these matters. As I understand there are three issues to resolve. I will outline our approach for each of these items:

ITEM No. 1

Louisville Water Company standard is to provide plan, profile, and survey control for all transmission mains, 24-inch and larger. This standard also includes providing both thrust blocks and restrained joints for thrust restraint. This standard will be used for the Louisville Water Company portion of the pipeline design. We will request that PDR provide a competitive alternative proposal to the Dunaway subcontracted survey control work to assure a competitive price is obtained. Documentation will be forwarded to Kentucky American Water Company for review and approval of the subcontracted survey control. If the Dunaway cost is higher, Louisville Water Company will retain the right to use Dunaway and pay the difference in the subcontracted services.

ITEM No. 2

Louisville Water Company has directed PDR to design the 69-inch portion of the transmission main as Prestressed Concrete Pipe (either as reinforced cylinder or embedded cylinder pipe). The 36-inch pipeline scope will be designed to accept both Ductile Iron-Pressure Class 350 or Prestressed Concrete as acceptable alternatives. Both pipelines will require a select limestone fill material around the pipeline and the ductile iron will be polyethylene encased. These are current Louisville Water Company standards to provide suitable bedding and prevent pipeline corrosion. From conversations with you on Wednesday, October 28, Louisville Water Company agrees to pay for the premium cost encountered to install a pressure class pipe above the AWWA industry standard for pressure class applications (i.e. round working pressure up to nearest pressure class and add 100 psi).

ITEM No. 3

Other Louisville Water Company pipeline design elements above industry standards will be evaluated on a case-by-case basis, with Louisville Water Company to pay appreciable betterment based upon bids received.

received
11-9-98

Louisville Water Company has authorized PDR to initiate Phase I-Preliminary Engineering of the pipeline route and design. I anticipate a signed contract with PDR by November 11, authorizing Phase I-Preliminary Design of the pipeline, pump station, and storage facility. Subsequent phases of Easement Acquisition (Phase II) and Final Design/Bid (Phase III) will not proceed until authorization is received from Kentucky-American. Please note that PDR has advised Louisville Water Company that complete design will take approximately 120 days after agreement on the final routing. Assuming the final route is selected by November 15, the final design and bid package would be available by March 15, 1999.

I will initiate a meeting with Louisville Water Company, Kentucky American Water Company, and PDR/Gannett staff the week of November 16 to present our selected route and review the design standards and subcontracting costs. This meeting will also allow us to introduce our respective design and project management teams.

Sincerely,

Gregory C. Heitzman, P.E.
Vice President-Chief Engineer

/gh

cc: Roy Mundy, Nick Rowe, Coleman Bush – Kentucky American Water Company
John Huber, Bob Miller, Jim Bramnell, Bill Rhodes - Louisville Water Company

C:\data\msoffice\winword\gch**bridwell Nov 98**

File - N
Louisville
Correspondence

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

October 26, 1998

Mr. Greg Heitzman
Vice President – Chief Engineer
Louisville Water Company
550 South Third Street
Louisville, Kentucky 40202

RE: Bluegrass Water Project – Agreement for Consulting Services

Dear Greg:

In response to your August 12 letter, we are in general agreement with the additional costs of evaluation of alternative alignments, facilitation of public involvement, title searches for easements, other easement acquisition support services, rock soundings, labeling of rock/bore information, vacuum excavates and associated field research, drafting of connection details and permit support.

While we recognize that it is Louisville Water Company's (LWC) practice to develop plan and profile drawings and the design and installation of thrust blocks, it appears to us that the design fee in your proposal is approximately $180,000 higher still than we would expect. Further, it appears to us that the majority of this cost is part of the surveying effort. At our July 21 meeting, we had asked LWC to consider asking PDR to solicit competitive proposals for their subcontracted surveying work. If, however, LWC does not believe that the surveying costs are high, I would appreciate documentation from similar scope surveying projects by LWC that have recently cost in the same range.

Finally, we continue to be of the opinion that, if your intended alternative to pre-stressed concrete pipe is ductile iron pressure class 350 pipe, then you are requiring well above what is necessary or typical of industry standards. We understand that LWC has a preference for only pre-stressed concrete pipe. However, making a concession to bid one alternative well above industry standards based on operating criteria does not leave us a reasonable assurance that our customers are paying for the most appropriate, cost competitive facilities. We would expect LWC to pay for the price over and above a bid price of a compatible ductile iron alternative (pressure class 200 pipe).

RECEIVED
OCT 20 1998
KENTUCKY AMERICAN WATER CO.

LOUISV
550 SOUTH THI
TEL

JOHN L. HUBER
PRESIDENT

– NR
– CB
– HM

cc also LWI
File-N Linda B
Louisville Correspondence

FYI - I assume John's wording okay (no mention of moving Pt. of delivery? Any other LWC design costs, i.e. upsizing of pipe, etc.? Ken

October 19, 1998

Mr. Roy W. Mundy, II
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Roy:

RE: Your October 12, 1998 Letter

In accordance with the official notice to proceed with the design of the Bluegrass Water Project, we have initiated the design process for the portion of the water main extending from the English Station reservoir at U. S. Highway 60 to Highway 55 at Shelbyville. In accordance with our agreement, the Kentucky-American Water Company will bear the cost of this design absent design costs for the tank and booster station in Jefferson County, which are the responsibility of the Louisville Water Company.

Please contact me after your October 30, 1998 Board of Directors meeting to discuss next steps.

Best wishes.

Sincerely,

John L. Huber
President

jcm

cc: Mr. Gregory C. Heitzman
Mr. Robert K. Miller
Mr. Joseph B. Helm

File-N
@Louisville Corr.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502
(606) 268-6320 • Fax (606) 268-6327

Roy W. Mundy II
President

VIA FACSIMILE & MAIL

October 12, 1998

Mr. John Huber, President
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear John:

This is to follow-up our conversation of this past Friday concerning the Bluegrass Water Project and our negotiations with Louisville Water Company concerning the purchased water agreement. Let me first take a moment again to thank you and your team for your fine efforts in the negotiations with Kentucky-American during the last several months. I realize that there has been a lot of time and effort put into this process by members of both of our staffs – for that I am most appreciative.

Our plans are to present the final contract to our Board of Directors on October 30, 1998 for their final approval, but because of the urgency of the expeditious handling of this project, I would like to give Louisville Water Company authorization to proceed ahead with PDR Engineers so that we may start the design process for your portion of the project. It is imperative that the design work for Louisville be completed as soon as possible as that information will be most critical in the permitting process with the Corps of Engineers and more importantly with our filing of our certificate case with the Commission.

This letter is to serve as that official notice to proceed and Kentucky-American Water Company will bear those costs, absent design costs for the tank and booster which are the responsibility of Louisville Water Company. I will be out of the office this week, however, if you have any questions, please call Nick Rowe at 606-268-6333.

Thanks again, John, for your help in our endeavors.

Sincerely,

Roy W. Mundy II

RWM/NR/pb

c: L. Bridwell C. Bush N. Rowe

F:\shared\Water Supply Project\LWC.contract.ltr 10.12.98.doc

File - N
Louisville
Correspondence

Coleman Bush
10/10/98 08:58 PM

To: Linda Bridwell/KAWC/AWWSC@AWW
cc: Nick Rowe/KAWC/AWWSC@AWW
Subject: Greg Heitzman Call

Greg left a message for me late Friday night. Apparently, they have been talking some real turkey with Shelbyville. He wanted to set up a meeting this week to talk about the ramifications of LWC entering into a contract with Shelbyville to sell them water from the pipeline. I will call you Monday so we can set up a call. If you don't hear from me, please call Greg.

Have you purchased my Christmas gift yet? Just wondering- they are always like, cool beans!

Linda,
Let's discuss! What
is this all about? This may
be a good tool for negotiations!
Nick
12/11/98

To: Lindsey W. Ingram, Jr.; Herb Miller; Linda Bridwell and Mark Frost

Louisville Water Company Agreement — LWC Proposal

Exhibit B Analysis

Exhibit B, paragraph 3

Analysis requested by LWI at our September 9, 1998 meeting

Please advise if you have any questions.

Year	Total min. MGD	annual MG	Years 1-5 non-irrigation months MG	Years 1-5 irrigation months MG	total non-irrigation months MG	total irrigation months MG	total MG	non-irrigation mos MGD	irrigation mos MGD
1	1.5	547.5	36.0	54.0	216.0	324.0	540.0	1.19	1.76
2	1.6	584.0	38.4	57.6	230.4	345.6	576.0	1.27	1.88
3	1.7	620.5	40.8	61.2	244.8	367.2	612.0	1.35	2.00
4	1.8	657.0	43.2	64.8	259.2	388.8	648.0	1.43	2.11
5	1.9	693.5	45.6	68.4	273.6	410.4	684.0	1.51	2.23
6	2.0	730.0	54.0	66.0	324.0	396.0	720.0	1.79	2.15

The above are the agreement amounts as of 9/9/98.

KAWC ORIGINAL PROPOSAL

Year		
1	1.20	1.80
2	1.30	1.90
3	1.40	2.00
4	1.50	2.10
5	1.60	2.20
6	1.70	2.30

Calema

File - N
Louis.
Corr.

P

LINDA, 9.15.98
METER STUFF.
TOM
CC: CB

BLUEGRASS WATER PROJECT: METERS

	Size	Capacity
Protectus Meters:	4"	1500 GPM
	6"	3750 GPM
	8"	5000 GPM
	10"	8000 GPM

Demand		No. of Meters			
MGD	GPM	4"	6"	8"	10"
2.5	1750		1		
3	2100		1		
3.5	2450		1		
4	2800		1		
4.5	3150		1		
5	3500		1		
6	4200			1	
7	4900			1	
8	5600			2	
9	6300			2	
10	7000			2	
11	7700			2	
12	8400			2	
13	9100			2	
14	9800			2	
15	10500			3	
16	11200			3	
17	11900			3	
18	12600			3	
19	13300			3	
20	14000			3	
21	14700			3	
22	15400		1	3	
23	16100		1	3	

NOTE:
I recommend that three (3) - 8" Protectus (or equivalent) meters and one (1) 6" Protectus be installed. The 6" meter is 95% accurate @ 1 GPM! (For that matter, so is the 8" meter!) Using the smaller meters does not accomplish much from my perspective. Let me know what becomes of this issue.
Also, we currently have both of these sizes in our system.

Bgwmeter

Tom Friley 09/15/98 03:51 PM

To: Coleman Bush/KAWC/AWWSC@AWW, Linda Bridwell/KAWC/AWWSC@AWW
cc:

Subject: Meters



BGWMETER.xls

BLUEGRASS WATER PROJECT: METERS

	Size	Capacity
Protectus Meters:	4"	1500 GPM
	6"	3750 GPM
	8"	5000 GPM
	10"	8000 GPM

Demand		No. of Meters			
MGD	GPM	4"	6"	8"	10"
2.5	1750		1		
3	2100		1		
3.5	2450		1		
4	2800		1		
4.5	3150		1		
5	3500		1		
6	4200			1	
7	4900			1	
8	5600			2	
9	6300			2	
10	7000			2	
11	7700			2	
12	8400			2	
13	9100			2	
14	9800			2	
15	10500			3	
16	11200			3	
17	11900			3	
18	12600			3	
19	13300			3	
20	14000			3	
21	14700			3	
22	15400		1	3	
23	16100		1	3	

NOTE:
I recommend that three (3) - 8" Protectus (or equivalent) meters and one (1) 6" Protectus be installed. The 6" meter is 95% accurate @ 1 GPM! (For that matter, so is the 8" meter!) Using the smaller meters does not accomplish much from my perspective. Let me know what becomes of this issue.
Also, we currently have both of these sizes in our system.

Coleman Bush
09/14/98 08:16 PM

To: Linda Bridwell/KAWC/AWWSC@AWW
cc:

Subject: LWC Agreement

We need to provide meter scenarios for Bob so he can evaluate my request for a contract change.

How hard is it to complete the attached worksheet? I need it like, LWC_meters.xls really soon.

LWC/KAWC - Proposed metering arrangement at various purchase levels

To meet peak demand of: MGD	Number of meters 2"	4"	6"	8"
2.5				
3.0				
3.5				
4.0				
4.5				
5.0				
6.0				
7.0				
8.0				
9.0				
10.0				
11.0				
12.0				
13.0				
14.0				
15.0				
16.0				
17.0				
18.0				
19.0				
20.0				
21.0				
22.0				
23.0				

File-N
595
Louisville Co

COMMONWEALTH OF KENTUCKY
PUBLIC SERVICE COMMISSION
730 SCHENKEL LANE
POST OFFICE BOX 615
FRANKFORT, KENTUCKY 40602
(502) 564-3940

August 24, 1998

Hon. Lindsey Ingram, Jr.
Stoll, Keenon & Park, LLP
201 East Main Street
Suite 1000
Lexington, Kentucky 40507-1380

Re: Kentucky-American Water Company

Dear Mr. Ingram:

Pursuant to your request for an informal conference with commissioners and staff, an informal conference has been scheduled for Tuesday, September 22, 1998 at 9:30 a.m. in Conference Room 1 of the Commission's offices at 730 Schenkel Lane, Frankfort, Kentucky.

If you have any questions, please contact Richard Raff of our legal staff at (502) 564-3940, Extension 260.

Sincerely,

Helen C. Helton
Executive Director

cc: David E. Spenard, Esq.
Edward W. Gardner, Esq.
Donald S. Dott, Jr., Esq.
Oscar H. Geralds, Jr., Esq.
Chetan Talwalkar

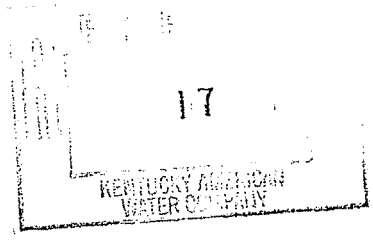
AN EQUAL OPPORTUNITY EMPLOYER M/F/D

LOUISVILLE WATER COMPANY

550 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-569-0815

August 12, 1998



Ms. Linda C. Bridwell, P.E.
Director of Engineering
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

RE: Bluegrass Water Project, Agreement for Consulting Services

Dear Ms. Bridwell:

The purpose of this letter is to apprise you of the status of our negotiations with PDR Engineers, Inc. for the consulting services that are required for the Bluegrass Water Project.

As you recall from your meeting on July 21st in Lexington with Jim Brammell, Karen Willis, Bill Rhodes and Steve Tucker, a number of technical issues were discussed as well as the status of the fee negotiation between LWC and PDR. I have been briefed on the discussions held at that meeting and will respond to a number of the points discussed.

First, it is my understanding that there were a number of items in the LWC-prepared scope of work that may not routinely be included in a Kentucky-American project, but which Kentucky-American has agreed to fund as appropriate project expenses. These items include: evaluation of alternative alignments; facilitation of public involvement; title searches for easements; other easement acquisition support services; rock soundings; labeling of rock/bore information; vacuum excavates and associated field research; drafting of connection details; and permit support. These items remain in the scope of work.

It is my further understanding that there were a number of items discussed on which Kentucky-American has reservations either concerning price or scope. Following are some of these elements along with my perspective. With respect to the scope and cost of the survey effort, it is Louisville Water Company standard practice to require plan and profile information on the construction drawings for all transmission main projects. This is viewed as necessary for the LWC to have accurate control on the locations of our facilities. As such, it is my view that this same level of detail is appropriate on both the 60-inch and 36-inch mains to be constructed for the Bluegrass Water Project.

Another item which is standard practice for the LWC is the design and installation of thrust blocks along project alignments in conjunction with appropriately designed restrained joints. Again, it would be the LWC position that we would follow our standard practice on the Bluegrass Water Project.

On the issue of pipe materials, it is my intent to bid the 60-inch transmission main as PCCP and the 36-inch main as ductile iron, although we would consider receiving alternate bids for PCCP for the 36-inch main. The specification for the 36-inch main will be for pressure class 350 pipe, a concession in that LWC's standard practice is to use schedule 54 pipe in all ductile applications.

Subsequent to the meeting of our staff with you on July 21st, we have continued negotiations with PDR Engineers, Inc. in an effort to reduce costs. Based upon my discussions with PDR, I have concluded that further cost reductions could only be accomplished at the expense of unacceptable scope reductions. As such, my recommendation is that Kentucky-American Water Company authorize the LWC to execute a contract with PDR Engineers, Inc. for the not-to-exceed fee of $779,206 with the understanding that approximately $540,000 of the overall fee is attributable to the pipeline design effort and would be reimbursed by Kentucky-American to LWC.

The terms as outlined in the previous paragraph were presented yesterday to LWC's Board of Water Works and were approved. Upon receipt of your concurrence I will execute the agreement with PDR Engineers and issue the notice-to-proceed. This will allow us to meet the December 1998 target for design completion.

If you have questions, please do not hesitate to contact me. I look forward to your response and to initiating the pipeline design project with PDR.

Yours truly,

Gregory C. Heitzman, P.E.
Vice President, Chief Engineer

CC: Coleman Bush, Kentucky-American Water Company
Jim Brammell, Louisville Water Company

Bluegrass Water Project
Analysis of Depreciation Component of Water Rates
Regarding Contributed Capital

Depreciation including Contributions in Aid of Construction

Total Depreciation	$ 11,010,480
- Common to Only Retail	$ 2,940,510
- Customer Expense	$ 2,663,010
	$ 5,406,960

Depreciation excluding Contributions in Aid of Construction

Total Depreciation	$ 7,555,390
- Common to Only Retail	$ 1,465,210
- Customer Expense	$ 1,315,510
	$ 4,774,670

Difference	$ 632,290
KAWC Percent Portion	1.04167%
KAWC Dollar Portion	$ 6,586.38 Year 1

P

00112

File - N
S of S
Louisville
Corr.

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 346-8360

July 24, 1998
BP 92-12

Mr. Steven D. Tucker
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Re: Kentucky-American Water Company
Bluegrass Water Project

Dear Steve:

Attached are three typical American Water specifications (sections 15106, 15110, and 15115) from a recent pipeline project where ductile iron, prestressed concrete, and steel pipe were competitively bid. We have bid these three materials competitively a number of times in recent years, and these documents have been prepared such that all three materials are specified equally. As we discussed at our meeting on July 21, it is preferred that all three materials be specified and bid for the LWC portion of the pipeline which will be funded by Kentucky-American Water Company. I'd like to note that two of the most recent 36-inch pipelines which were bid in the American Water System in Indiana and Missouri were won by ductile iron and steel respectively.

Please feel free to contact me by phone at (609) 346-8278 or by e-mail at dreves@amwater.com if you have any questions or would like to discuss this further.

Sincerely,

David M. Reves

c: L.C. Bridwell - KAWC (w/att)
T.A. Friley - KAWC
N.O. Rowe - KAWC
J.L Raffensperger - Gannett Fleming, Camp Hill (w/att)
R.W. Ihlenburg - PDR, Louisville (w/att)

SECTION 15106

DUCTILE IRON PIPE AND FITTINGS
(CONTRACTOR Furnished)

PART 1: GENERAL

1.01 COORDINATION OF WORK

Connection to existing pipelines may require shutdown of OWNER facilities. Construction work and connections shall be closely coordinated with the OWNER through the ENGINEER. The ENGINEER, in consult with the OWNER, may select the time, including Saturdays, Sundays, or holidays, which, in the opinion of the ENGINEER, will cause the least inconvenience to the OWNER and/or its customers, for connection to existing pipelines, and the CONTRACTOR will perform such connections at such times as may be directed by the ENGINEER at the Contract prices and no claim for premium time or additional costs will be made by the CONTRACTOR.

1.02 RELATED WORK

Piping - General Provisions - Section 15000

1.03 SUBMITTALS

Shop drawings and manufacturer's literature for all CONTRACTOR supplied materials shall be promptly submitted to the ENGINEER for approval in accordance with Section 1300.

The following items shall be submitted before delivery of ductile iron pipe or fittings:

1. Certification by the manufacturer or supplier that the pipe furnished for this project meets all pertinent AWWA Standards.

2. Laying schedule for boltless restrained joint and push-on joint pipe.

3. Catalog cuts and installation instructions for boltless restrained joint pipe and mechanical joint retainer glands.

4. Certification that all bolts to be furnished conform to the referenced standards and are manufactured in the United States of America.

1.04 PIPE SUPPLIER

Ductile iron pipe shall be as manufactured by U.S. Pipe and Foundry, American Ductile Iron Pipe, McWane, Inc. or Griffin Pipe Products.

PART 2: PRODUCTS

Research has documented that certain pipe materials (such as polyvinyl chloride, polyethylene, and polybutylene) and certain elastomers (such as those used in gasket material) may be subject to permeation by lower-molecular weight organic solvents or petroleum products. Products supplied under this section have been selected based on the non-expectation of encountering petroleum products or organic solvents. If during the course of pipeline installation the CONTRACTOR identifies, or suspects, the presence of petroleum products or any unknown chemical substance the ENGINEER is to be notified immediately. Installation of any further piping in the area of suspected contamination shall be stopped until direction is provided by the ENGINEER.

2.01 PIPE MATERIAL

A. General

Ductile iron pipe shall conform to the latest specifications as adopted by the American National Standards Institute, Inc., (ANSI) and the American Water Works Association (AWWA). Specifically, ductile iron pipe shall conform to ANSI/AWWA C151/A21.51.

The pipe shall be coated outside with a bituminous coating in accordance with ANSI/AWWA C151/A21.51. The pipe interior shall be cement mortar lined and seal coated in compliance with the latest revision of ANSI/AWWA C104/A21.4. The cement mortar lining shall be double thickness.

B. Pipe Class

The class of pipe to be furnished shall be as indicated on the Drawings.

C. Testing

Each length of pipe shall be subjected to a hydrostatic proof test as required by ANSI/AWWA C151/A21.51.

D. Joints

1. Mechanical and Push-On

Mechanical and push-on joints including accessories shall conform to ANSI/AWWA C111/A21.11.

2. Flanged

Flanged joints shall conform to ANSI/AWWA C110/A21.10 or ANSI B16.1 for fittings and ANSI/AWWA C115/A21.15 for pipe. Flanged joints shall not be used in underground installations except within structures or where shown on the Drawings.

All flanged joints shall be furnished with 1/8-inch thick, red rubber or styrene butadiene full face rubber gaskets. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in American Standard for Wrench Head Bolts and Nuts and Wrench Openings (ANSI B18.2). For bolts of 1-3/4-inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for flange bolts and nuts within structures shall conform to ASTM A107.

Material for flange bolts and nuts which will be buried shall be ASTM A304 stainless steel, Grade B, with a minimum yield strength of 35,000 psi. Stainless steel bolts shall be furnished with grade stamp and markings.

E. Ball Joint Pipe

Where shown on the Drawings, ball joint pipe shall be provided. The ball and bell joint pipe shall be a boltless restrained joint pipe with an allowable joint deflection up to 15°. The flexible joint pipe shall be Class 56 and shall be Usiflex as manufactured by U.S. Pipe Company, Flex-Lok Boltless ball joint pipe as manufactured by American Ductile Iron Pipe Company, Snap-Lok river crossing pipe as manufactured by Griffin Pipe Products, or equivalent.

F. Corrosion Protection

All ductile iron pipe installed on this project shall be wrapped in polyethylene. Refer to Section 15131 for polyethylene requirements.

2.02 FITTINGS

A. Ductile Iron Fittings

Standard fittings shall be ductile iron conforming to ANSI/AWWA C110/A21.10. Compact ductile iron fittings shall meet the requirements of ANSI/AWWA C153/A21.53.

1. Working Pressures

Fittings shall be suitable for the following working pressures unless otherwise noted:

Size	Pressure Pounds per Square Inch Compact Ductile Iron	Standard Ductile Iron
3" - 24"	350	350
30" - 54"	250	250

2. Coating and Lining

The fittings shall be coated with a bituminous coating in accordance with ANSI/AWWA C110/A21.10 and lined inside with cement mortar and seal coated in accordance with ANSI/AWWA C104/A21.4. The cement mortar lining shall be double thickness.

B. Joints

1. Mechanical and Push-On

Mechanical and push-on joints including accessories shall conform to ANSI/AWWA C111/A21.11.

2. Flanged

Flanged joints shall meet the requirements of ANSI/AWWA C115/A21.15 or ANSI B16.1. Flanged joints shall not be used in underground installations except within structures or where shown on the Contract Drawings.

All flanged joints shall be furnished with a minimum 1/8-inch, thick red rubber or styrene butadiene full face rubber gasket. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. For bolts of 1-3/4-inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts within structures shall conform to ASTM A107. Material for flange bolts and nuts which will be buried shall be ASTM A304 stainless steel.

3. Restrained

When restrained joints are required, for pipe and fittings, they shall be of the boltless push-on type which provides joint restraint independent of the joint seal. Restrained system shall be suitable for the following working pressures:

Size	Pressure Pounds per Square Inch
4" - 12"	250
14" - 24"	350
30" - 54"	250

Boltless restrained joints shall be either U.S. Pipe and Foundry "TR FLEX", American Ductile Iron Pipe "Lok-Ring", Griffin Pipe "Snap-Lok" or Clow "Super-Lock". Restrained joint pipe shall be furnished with a factory welded retaining ring. The use of field installed retaining rings, such as "Gripper Rings", will not be permitted without the written approval of the ENGINEER.

2.03 MARKING PIPE

Each pipe, fitting or special section shall have plainly marked thereon:

1. Pipe Class
2. Date of Manufacture
3. Manufacturer's name or trademark
4. On bends, the angle turned thereby
5. Manufacturer's identification number

2.04 RANDOM RESTRAINED PIPE LENGTHS AND FITTINGS

In general, field cutting of restrained joint pipe will not be permitted.

An adequate supply of random length shorts shall be maintained on the job at all times for the various pipe sizes specified on the project to facilitate any necessary field changes. The CONTRACTOR shall notify the manufacturer as these items are used so that they may be promptly replaced. As a minimum, one (1) set of 2, 4, 6 and 8 foot lengths of restrained joint pipe shall be maintained at the project site at all times. Random length pipes shall be provided spigot by bell.

The CONTRACTOR shall maintain, on-site, a suitable supply of field installed retaining rings for boltless restrained joints for pipe installations which may require unavoidable field cutting. Field installed retaining rings shall be furnished by the same manufacturer as the pipe, and shall have the same pressure rating as factory installed rings.

No additional payments will be made to maintain this material on-site. The CONTRACTOR shall include the cost of these pipes and retaining rings in the various unit prices bid. At the end of the project, the random length shorts may be incorporated into the pipe alignment without replacement. Following completion of the project, the CONTRACTOR shall remove any excess pipe and fittings from the site.

PART 3: EXECUTION

3.01 INSTALLATION

The provisions specified in Section 15000 shall be strictly followed in addition to the following requirements:

A. Push-On Joints

The surfaces with which the rubber gasket comes in contact shall be thoroughly cleaned just prior to assembly. The gasket shall then be inserted into the groove in the bell. Before starting joint assembly, a liberal coating of special lubricant shall be applied to the gasket and the spigot end. With the spigot end centered in the bell, the spigot end is pushed home.

B. Mechanical Joints

All components shall be cleaned and lubricated with soapy water prior to assembly. Slip the follower gland and gasket over the pipe plain end making sure the small side of the gasket and lip of the gland face the bell socket. Insert the plain end into socket. Push gasket into position with fingers, gasket should be evenly seated. Slide gland into position, insert bolts and tighten must by hand.

Bolts are then tightened alternately (across from one another) to the following normal torques:

Bolt Size	Range of Torque In Foot-Pounds
5/8"	40 - 60
3/4"	60 - 90
1"	70 - 100
1-1/4"	90 - 120

C. Restrained Joints

Assemble and install the push-on joint according to the manufacturer's recommendations. The joint shall be thoroughly cleaned and lubricated. Check the retainer ring fastener.

During "pushing home" of any style piping timber shall be placed between the jacking device (backhoe bucket, pipe jack, etc.) and the pipe being driven home.

At stream crossings, ball joint pipe within the waterway shall be installed before installing pipe on land. The ball joint pipe shall be backfilled, filled with water and allowed to settle for as long as practical before end connections are made.

END OF SECTION

SECTION 15110

STEEL PIPE AND FITTINGS

PART I GENERAL

1.01 WORK INCLUDED

The Contractor shall provide all labor, materials and equipment necessary to furnish, install, paint, test and disinfect all steel pipe, fittings, connections and appurtenances specified herein and shown on the Contract Drawings.

1.02 RELATED WORK

Section 15000 - Piping - General Provisions

1.03 QUALITY ASSURANCE

The Manufacturer shall be experienced in the manufacturing of the type of piping specified herein and shall be able to demonstrate successful completion of at least five installations of similar size and service.

Inspection: All pipe shall be subject to inspection at the place of manufacture in accordance with the provisions of ANSI/AWWA C-200, C-205, C-209, and C-214, as supplemented by the requirements herein. The Contractor shall notify the Owner in writing of the manufacturing starting date not less than seven calendar days prior to the start of any phase of the pipe manufacture.

Welding Requirements: All welding procedures used to fabricate pipe shall be prequalified as required by AWWA C-200. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or spiral welds for pipe cylinders, reinforcing plates, ring flange welds, and plates for lug connections.

The pipe fabricator shall engage an independent testing laboratory certified in the state in which the pipe and fittings will be manufactured to provide in-plant testing and inspection of the pipe and fittings during fabrication, if it does not have certified in-house testing capabilities. Said inspector shall have free access to those parts of the pipe fabricator's plant necessary to ensure compliance with AWWA Standards C-200, C-205, C-208, C-209, and C-214. Materials, fabricated parts and pipe that are discovered to be defective, or do not comply with the requirements of these standards will be subject to rejection at any time prior to final acceptance of the project. Inspection of fabrication shall not relieve the manufacturer of the responsibility to furnish material and perform work in accordance with appropriate AWWA Standards and this specification.

Welder Qualification: All welding shall be done by skilled welders, welding operators, and tackers who have had adequate experience in the methods and materials to be used on this project. Welders shall be qualified, as required by AWWA C-200, not more than six months prior to commencing work on the piping. Machines and electrodes similar to those used in the work shall be used in qualification tests. For shop welding, the Manufacturer shall furnish all material and bear the expense of qualifying all welders.

Testing: All materials used in the manufacturing of the pipe and fittings shall be tested in accordance with the requirements of ANSI/AWWA C-200, C-205, C-209, and C-214 as applicable.

Weld tests shall be conducted weekly and at any other time there is a change in the grade of steel, welding procedure, or welding equipment.

After the joint configuration is completed and prior to lining or coating, each length of pipe and fitting shall be shop tested and certified to a pressure of at least 75 percent of the specified minimum yield strength of the pipe steel.

1.04 REFERENCES

ANSI - American National Standards Institute

B16.1 Cast Iron Pipe Flanges and Flanged Fittings.

B16.5 Pipe Flanges and Flanged Fittings and other Special Alloys.

ASTM American Society for Testing and Materials.

A139 Electric-Fusion Arc-Welded Steel Pipe (Sizes 4-in. and Over, Specification for).

E165 Liquid Penetrant
Inspection, Methods for.

A36 Specification for Structural Steel.

A283 Specification for Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes, and Bars.

A307 Specification for Carbon Steel Externally Threaded Standard Fasteners.

A325 Specification for High Strength Bolts for Structural Steel Joints.

A568 Specification for General Requirements for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.

A570 Specification for Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality.

A572 Specification for High Strength Low Alloy Columbium-Vandium Steels of Structural Quality.

C150 Specification for Portland Cement.

AWS American Welding Society

D1.1 Structural Welding Code - Steel.

AWWA American Water Works Association

C200 Steel Water Pipe 6-Inches and Larger.

C205 Cement-Mortar Protective Lining and Coating for Steel Water Pipe - 4-inches and Larger Shop Applied.

C206 Field Welding of Steel Water Pipe.

C207 Steel Flanges for Water Works Service, 4-inch through 144-inch.

C208 Fabricated Steel Water Pipe Fittings, Dimensions for.

C209 Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipeline.

C214 Tape Coatings Systems for the Exterior of Steel Water Pipelines.

M11 Steel Water Pipe; A Guide for Design and Installation

1.05 SUBMITTALS

Shop Drawings: The Contractor shall submit shop drawings of pipe and fittings in accordance with the *General Requirements* Section, the requirements of ANSI/AWWA Standards and the following supplemental requirements.

1. Shop drawings showing the details and joint dimensions for the pipe, fittings and specials to be supplied for this project.

2. Joint and pipe/fitting wall construction details which indicate the type and thickness of the steel wall; manufacturing tolerances; and all other pertinent information required for the manufacture of the product.

3. Fittings and specials details such as bends, tees, outlets, connections, test bulkheads, or other specials where shown on the Contract Drawings which indicate amount and position of all reinforcement. All fittings and specials shall be properly reinforced to withstand the internal pressure, both circumferential and longitudinal, and the external loading conditions as indicated in the Contract Drawings.

4. Design calculations for pipe wall thickness and reinforcement.

5. Material lists which include and describe all materials to be utilized.

6. Assembly drawings which indicate overall dimensions, the specific number of each pipe and fitting, the location and direction of lay of each pipe identified by Mark Number on pipe laying schedule.

7. Full and complete information regarding location, type, size and extent of all welds shall be shown on the shop drawings. The shop drawings shall distinguish between shop and field welds. Shop drawings shall indicate by welding symbols or sketches the details of the welded joints, and the preparation of parent metal required to make them.

8. Mortar mix design for mortar used in any product supplied under this contract shall be submitted for approval prior to its use.

9. Thrust calculations for all fittings and associated restrained lengths.

Certifications: The Contractor shall furnish a certified affidavit of compliance for all pipe and other products or materials furnished under this Section of the Specifications, as specified in ANSI/AWWA Standards, and the following supplemental requirements:

1. Certified mill test reports for all steel plates incorporated into any product supplied under this Contract as referenced in AWWA C-200.

2. Hydrostatic tests shall be performed on all straight sections of pipe and fittings supplied for this project in accordance with the requirements of AWWA C-200.

3. Certified reports of mortar test cylinders for all cement mortar incorporated into any product supplied under this contract. Cylinders shall be tested in accordance with ASTM C39.

4. Certification that all bolts to be furnished conform to referenced standards and are manufactured in the U.S.A.

5. Certified test reports for each lot of gaskets showing that the physical properties of the rubber compound used in the manufacture of the gaskets meets the requirements of AWWA C-200. Reports shall be submitted for approval prior to release of any gasket material to the site.

6. Production weld tests required by AWWA C-200.

7. List of all qualified welders with certification for the appropriate welding procedures.

8. Certified test reports showing that the physical and mechanical properties of the coating material meets the requirements of AWWA C-214. Reports shall be submitted for each lot coating material prior to application of any material to pipe supplied under this contract.

   All expenses incurred in making samples for certification of tests shall be borne by the Contractor.

9. An affidavit that all materials furnished under this section have been manufactured in the United States of America, and comply with all applicable provisions of ANSI/AWWA Standards.

10. Evidence of certification that the pipe manufacturer's plant is certified under the Steel Plate Fabricator's Association Quality Assurance Program.

1.06 SUPPLIERS

Steel pipe shall be manufactured by Thompson Pipe and Steel Company or L.B. Foster Company.

PART 2 PRODUCTS

2.01 STEEL PIPE AND FITTINGS - MATERIALS AND FABRICATION

A. Pipe

All steel pipe furnished under this contract shall be cement mortar lined steel water pipe designed in accordance with the latest revision of AWWA C-200 except as modified herein. All steel pipe shall be designed in accordance with AWWA M-11. All pipe shall be manufactured new for this project from domestic materials; no pipe from inventory shall be acceptable.

Pipe shall be fabricated from plate, sheet or coils as listed in the latest revision of AWWA C-200. All pipe and fittings shall meet the materials and chemical requirements

of ASTM A139. The lining shall conform to the latest revision of AWWA C-205 for cement mortar linings.

All buried pipe to be furnished on this project shall be designed for the operating pressures indicated in combination with nominal earth cover of ten feet. The following design requirements shall be met:

Working Pressure	150 psi (Route S:STA. 0 + 00 to STA. 50 + 94) 150 psi (Route N:STA. 0+ 00 to STA. 57 + 64) 100 psi (Route S:STA. 50 + 94 to Plant) 100 psi (Route N:STA. 57 + 64 to Plant)
Surge Pressure Allowance	250 psi above working pressure
Test Pressure	200 psi or 250 psi (as noted on Drawings)
Live Load	ASHTO-H-20 Loading or Coopers E-85 Railroad Loading
Dead Load	Up to 10 ft. of earth cover, trench width OD+3 ft., soil weight of 120 pcf.
Impact Factor	1.5
Buckling Design	Considering dead load, internal vacuum and a hydrostatic load of 5 feet over top of pipe.
Bedding Conditions	E' = 2000
Maximum Allowable Horizontal Deflection	2%

Design stress in the pipe wall shall not exceed 50% of the minimum yield point of the steel at working pressure, nor 75% of the minimum yield point of steel at working pressure plus surge pressure.

Those locations where the pipe will have cover greater than 10 feet shall be designed in accordance with the above conditions with the anticipated dead load conditions.

When determining steel wall thicknesses, the structural properties of the internal cement mortar lining shall be neglected. Unless otherwise shown on the Drawings, the minimum thickness of buried steel pipe shall be:

Nominal Diameter	Steel Wall Thickness
20"	0.188"
36"	0.215" (Route N:STA. 57 + 64 to Plant; Route S:STA. 50 + 94 to Plant)
36"	0.25" (Route N:STA. 0 + 00 to STA. 57 + 64; Route S:STA. 0 + 00 to STA. 50 + 94)

The pipe is to be furnished in 40 to 50 foot net laying lengths with special lengths, field trim pieces and closure pieces as required by plan and profile for location of elbows, tees, reducers and other fittings. The Contractor shall comply with applicable OSHA safety regulations concerning trench safety when installing pipe.

B. Fittings

All fittings shall be fabricated in accordance with AWWA C-200 Section 4 from pipe conforming to Paragraph 2.01A of this Specification section. Fittings shall conform to the dimensions of AWWA C-208, "Dimensions for Fabricated Steel Water Pipe Fittings". All tees, laterals and outlets shall be reinforced in accordance with AWWA M-11.

The Contractor shall furnish and install flanged by restrained joint spool sections at all flanged valves and any other location shown on the Contract Drawings. Flanges shall be Class D conforming to the requirements of AWWA C207, "Steel Pipe Flanges for Waterworks Service - Sizes 4 in. through 144 in." Shop lining or coating at all flanged joints shall be continuous to the end of the pipe or the back of the flange. Flange faces shall be shop coated with a rust preventative primer. The exterior of flanges shall be tape coated at the time of installation in accordance with AWWA C209. Flanged drilling shall be compatible to the valve flange. Flanges shall be firmly bolted with hardware conforming to Paragraph 2.05. Gaskets shall be full faced neoprene.

C. Non-Restrained Pipe Joints

Where restrained joints are not called for on the Drawings, pipe joints shall be rubber gasket joints conforming to AWWA C-200. Mechanically coupled or flanged joints shall be provided where shown. The clearance between the bells and spigots shall be such that when combined with the gasket groove and the gasket itself a watertight joint under all operating conditions will be provided. The gasket shall be the sole element depended

on to make the joint watertight. The joint shall be suitable for a safe pressure equal to the class of pipe furnished.

Rubber gasket joints shall be electrically bonded using two #4 copper bonding wires and thermite welding cartridges.

Rubber gasketed joints shall be furnished by a manufacturer who has furnished pipe with joints of similar design, scope and pressure that has been in successful operation for a period of 5 years.

D. Restrained Pipe Joints

Where restrained joints are shown on the Drawings, bell and spigot field welded lap joints shall be used. Joint design shall permit a lap, when the joint is assembled, of at least 1-1/2 inches. Lap joints shall be single welded, full fillet welds equal in thickness to the pipe material, except as specified in Section 3.02. A minimum of two passes of the welding electrode shall be made at each fillet weld. Welding shall be in accordance with AWWA C206, "Standard for Field Welding of Steel Water Pipe".

The lengths of restrained joint pipe shown on the Contract Drawings are a minimum. If the manufacturer's calculations indicate a different restrained length, the longer length shall be provided.

The Contractor shall maintain, on site, an adequate supply of materials for fabrication of field welded restrained joints in the field. The pipe supplier shall furnish the necessary materials and fabrication instruction details. At a minimum, the Contractor shall maintain two butt straps on site.

E. Insulated Joints

At all connections between steel pipe and ductile iron pipe, fittings or valves, joints shall be electrically insulated by the use of flange insulation kits designed specifically for the electrical insulation of flanged pipe joints. The kits shall include full face "Type E Linebacker" gaskets, and insulating washers and sleeves for each flange bolt, as manufactured by PSI, Inc., Houston, Texas. Material shall be recommended by the manufacturer for potable water, buried service, 200 psi line pressure. Bolt holes at flanged insulated joints shall be drilled oversize to maintain proper clearances at insulated bushings.

F. Tapped Bosses

Steel piping shall be furnished with factory-welded tapped boss outlet in the sizes and locations shown on the Contract Drawings, or as required to accommodate connections of gauges, sample lines, etc. as shown on the Drawings. In addition, suitable and suffi-

cient tapped bosses shall be provided to facilitate all pipe testing as necessary. Tapped boss outlets shall be furnished in accordance with AWWA, M-11.

G. Interior Lining

The interior of steel pipe, fittings and specials shall have a cement-mortar lining with a minimum thickness of 0.375 inches and shall conform to the requirements of AWWA C-205, "Cement-Mortar Protective Coating for Steel Water Pipe - 4-in. and Larger - Shop Applied". The nominal diameter of cement mortar lined pipe shall be the inside diameter after lining.

Pipes shall be lined by centrifugal spinning in the factory as described in AWWA C-205; fittings shall be lined by hand-troweling, mechanically, or pneumatically-placed mortar. Cement mortar linings shall conform to AWWA C-205. Cement mortar shall be composed of ASTM C-150 Type I or Type II cement, sand meeting the requirements of ASTM C33, and clean water free of injurious quantities of impurities that would adversely affect the quality of the mortar. Pozzolans or fly ash shall not be used as a cement replacement for the mortar mix. Admixtures for mortar may be used to control setting time and as a water-reducing agent; however, the fabricator shall submit the brand name of the admixture and amounts to be used with the mortar mix design for approval. Any admixture containing chlorides shall not be allowed. Prior to the application of the mortar lining, inside surfaces of the pipe and fittings shall be free of mud, mill lacquer, wax, coal tar, asphalt, oil, grease or any other foreign substance that will affect the mortar bond to the steel pipe. Curing of mortar lining shall begin immediately after lining placement is complete. Delamination, blisters, sand pockets, voids, spalls due to impact or any other defect in the lining shall be repaired in accordance with AWWA C-205. Temperature and shrinkage cracks in the lining less than 1/16" in width need not be repaired.

H. Exterior Coatings

1. Buried Pipe

Pipe shall be coated and wrapped at the fabricator's plant with a prefabricated multi-layer, cold-applied-polyolefin tape conforming to the coating system described in AWWA C-214. The system shall consist of surface preparation, a primer, a 20-mil inner layer for corrosion protection, and two 30-mil outer layers. The pipe surface shall be free of mud, mill lacquer, wax, coal tar, asphalt, oil, grease or any other foreign material prior to blast cleaning. Pipe surface shall be grit blasted to a commercial surface conforming to SSPC SP6 or NACE TM-01-75. Pipe surface shall be visually inspected after abrasive blasting and before primer application to assure adequate surface preparation. A suitable primer meeting the requirements of AWWA C-214 shall be applied to the prepared pipe surface in a thin uniform film at a coverage rate recommended by the primer manufacturer. An inner-layer tape meeting the requirements of AWWA C-214 shall be applied

directly to the primed pipe surface with mechanical coating and wrapping equipment. The inner-layer tape shall be spirally applied with overlap, width and application tension as recommended by the tape manufacturer. The inner-layer shall be electrically tested for flaws in the coating with a holiday tester and repaired as required prior to the application of the outer tape coats. Two outer tape coats conforming to the requirements of AWWA C-214, each consisting of a 30-mil-thick cold-applied-polyolefin tape with a laminated adhesive backing, shall be applied over the inner-layer tape with the same type of mechanical equipment used to apply the inner-layer tape. The seams and overlaps of the outer-layer tapes shall not coincide with the seams and overlaps of previously-applied tape coats. The outer-layer tape shall be spirally applied with overlap width and application tension as recommended by the tape manufacturer. The total thickness of the coating shall be 80 mils.

2. Buried Fittings

Fittings shall be coated and wrapped at the fabricator's plant with a multi-layer, cold-applied-polyolefin tape conforming to a Type II system described in AWWA C-209. The system shall consist of surface preparation, a primer and two 35-mil outer layers. The fitting shall be free of mud, mill lacquer, wax coal tar, asphalt, oil, grease or any other foreign material prior to blast cleaning. Fittings surfaces shall be grit blasted to a commercial surface conforming to SSPC SP6 or NACE TM-01-75. Fitting surface shall be visually inspected after abrasive blasting and before primer application to assure adequate surface preparation. A suitable primer meeting the requirements of AWWA C-209 shall be applied to the prepared fitting surface in a thin uniform film at a coverage rate recommended by the primer manufacturer. Applied directly to the primed surface shall be two outer layer tape coats conforming to the requirements of AWWA C-209, Type II tape coating system. The specific application procedure used or the Type II tape coating system shall be as recommended by the coating manufacturer. A description of the recommended procedure is to be submitted to the Owner for review prior to the start of work. Between applications of the two outer layer coatings, the fabricator shall electrically test the surface of the fitting with a holiday tester, and repair any defects as required prior to applying the second tape coat. The seams and overlaps of the second tape coat shall not coincide with the seams and overlaps of the first coat.

I. Harness Assemblies

Harness assemblies shall be furnished in accordance with AWWA, M-11 at locations shown on the Contact Drawings. Stud bolts shall conform to ASTM A193, Grade B7 or equal. Nuts shall conform to ASTM A-194, Grade 2H or equal. Harness rings and plate material shall conform to ASTM A283 Grade C or ASTM A36 or equal. Stud bolts 5/8 in. through 7/8 in. diameter shall have UNC threads. Stud bolts 1 in. and larger shall have eight (8) UN threads per inch. The maximum allowable bolt stress shall be 40,000 psi.

Harness bolts shall be equally spaced around the pipe unless otherwise shown on the Drawings. The nuts shall be tightened gradually and equally at diametrically opposite sides until snug, to prevent misalignment and to ensure that all studs carry equal loads. The threads of the studs shall protrude a minimum of ½ inch from the nut.

Regardless of the manufacturer's design calculations, the dimensions of harness rings, plates, and bolts shall not be less than detailed on the Contract Drawings.

J. Ball Joints

Ball joints for steel pipe shall be "Mo-flex" as manufactured by Mobile Pulley and Machine Works, Mobile, Alabama. Ball joints shall be factory welded to the pipe barrel by the pipe manufacturer.

2.02 MARKING PIPE

Each pipe, fitting or special section shall have plainly marked thereon.

1. Date of manufacture
2. Manufacturer's name or trademark
3. On bends, the angle turned thereby
4. Serial number or other identification coordinated with the laying schedule
5. Thickness

2.03 FLEXIBLE SLEEVE COUPLINGS

Flexible sleeve couplings shall be used where shown on the Drawing or where directed, to provide proper jointing of piping. Couplings shall be suitable for either buried or non-buried service, depending on location.

The pipe couplings shall be of the gasketed, sleeve type, of type and diameter to properly fit the pipes to be joined. The coupling shall consist of a steel middle ring, steel followers and gaskets, and bolts used to properly compress the gaskets.

All couplings shall be adequately harnessed in accordance with AWWA M-11 and the detail shown on the Contract Drawings to withstand the test pressures of the pipes being joined.

Pipe ends for flexible sleeve couplings shall conform to AWWA C-200, Section 3.6. The outside surfaces of ends of plain-end pipe shall be free from surface defects and shall have the longitudinal or spiral welds ground flush with the plate surface for a sufficient distance from the ends to permit the couplings gaskets to form a watertight seal against the pipe wall.

Steel couplings shall be furnished with a factory-applied epoxy coating "AL-Clad" as furnished by Dresser.

Couplings shall be Style 38, as manufactured by Dresser Manufacturing Division, Bradford, Pennsylvania.

2.04 FLANGE GASKETS

Unless otherwise specified, gaskets for all flanged joints in process piping shall be 1/8" compressed thickness, homogeneous red rubber composition, compressed into sheets resistant to plastic flow. Gaskets shall be equal to Garlock Packing Company No. 22, as supplied by Garlock Packing Company.

2.05 FLANGE BOLTS, NUTS AND WASHERS

Unless otherwise specified, bolts, nuts and washers for pipe flanges shall conform to ATM A307, Grade A (above ground) or ASTM A-193, Grade B-5 (buried). Nuts and washers shall conform to ASTM A194, Grade 2. Bolts shall be full body conforming to the dimensions for heavy hexagon bolts specified in ANSI Standard No. B18.2.1. Nut dimensions shall conform to the current requirements for heavy hexagon nuts specified in ANSI Standard No. B18.2.2. All threads shall conform to the requirements specified in ANSI Standard No. B-1.1, American Standard Coarse Series, Class 2 fit.

PART 3 EXECUTION

3.01 INSTALLATION

Install buried piping as shown, specified, and in accordance with the recommendations of the manufacturer. Trenching and backfilling requirements for pipe laying are specified in Section 2210 and detailed on the Contract Drawings. Pipe shall be laid to the line and grade shown on the Contract Drawings. Deviation to avoid unanticipated obstructions shall be only by approval of the Owner. Slope pipe uniformly between elevations. The pipe shall be handled carefully at all times so as not to damage the tape coat and mortar lining. Wire rope, chains, and unpadded metal handling equipment are unacceptable. When the pipe is unloaded or strung along the line of work, it shall be blocked off of the ground with padded blocks, sand bags, or mounds of sand to protect the pipe coating. The pipe shall not be rolled, dragged, or skidded along the ground at any time. No pipe shall be brought into position until the preceding length has been secured in the pipe envelope. Defective materials shall be immediately removed from the site. Any pipe, fitting or accessory found to be broken or defective after it has been installed shall be removed and replaced at no cost to the Owner. A watertight pipe plug or bulkhead shall be provided and used to prevent the entrance of foreign material whenever pipe-laying operations are not in progress.

The field cutting of steel pipe shall not be allowed unless unanticipated changes in the alignment or location of valves and fittings must be made. Approval of the Owner shall be received by the Contractor before making such changes. Field cutting, when authorized, shall be done neatly, removing only as much coating and lining as is necessary to make the cut. The end cut, whether square or beveled, shall be made accurately by flame cutting or sawing.

3.02 HANDLING

All pipe shall be stulled to maintain a roundness of +/- 1 percent during shipping and handling. Pipe shall be shipped on padded bunks with nylon belt tie-down straps or padded banding located approximately over the stulling. Coated pipe shall be stored on padded skids, sand or dirt berms, sand bags, tires or other suitable means to avoid damaging the exterior coating. Prior to shipment, the ends of cement-mortar lined pipe shall be capped with plastic end caps.

Coated pipe shall be handled with wide belt slings. Chains, cables, hooks, clamps or other equipment likely to cause damage to the pipe or coating shall not be used.

3.03 JOINTING

Rubber gaskets shall be installed in strict accordance with the manufacturer's recommendations. Immediately before jointing the pipe, the outside of the spigot and inside of the bell shall be thoroughly cleaned. The gasket and the bell shall be coated with an approved vegetable soap. Insert the joint to full metal-to-metal contact prior to providing the manufacturer's maximum permissible joint deflection. After the pipe units have been joined, a feeler gage shall be inserted into the joint recess and moved around the periphery of the joint to detect any irregularity in the position of the rubber gasket. If the gasket can be "felt", the joint shall be disassembled and reinstalled. Electrically bond rubber gasketed joints using bonding wires and thermite welding cartridges specified in Section 2.01.

Complete the exterior of rubber gasket joints by priming the non-taped surfaces of the joint, then wrapping two layers of 35 mil tape conforming to the requirements of AWWA C-209 over the joint and bonding wires. Field applied tape shall be compatible with factory applied coatings. Field applied tape coating shall overlap the factory applied tape coating by at least 3 inches.

The exposed surfaces of welded joints shall be thoroughly cleaned prior to jointing. The plain end of the pipe shall be inserted into the bell with a minimum overlap of 1-1/2 inches at any location around the joint circumference. A strip of heat resistant material shall be draped over the pipe for at least 18-inches on each side of the coating holdback during welding to avoid damage to coatings from weld splatter. A single full fillet weld

on the exterior or interior of the joint made with a minimum of two passes shall be provided by certified welders qualified in accordance with American Welding Standard D1.1. The welder grounding clamp shall not be attached to the coated part of the pipe.

The Contractor shall be responsible for the qualification of welders. The qualification testing shall be conducted by an independent testing agency. Qualification testing shall be performed in accordance with AWS D1.1. Results of qualification testing shall be submitted to the Engineer for approval. Results of previous qualification tests performed within six months from the date of pipe installation will be acceptable. Results from qualification tests performed prior to six months from the date of pipe installation will not be acceptable. All costs associated with qualification testing shall be included in the unit prices bid.

Lap joints may be welded from the outside of the joint or from the inside of the pipe. If the Contractor completes the weld on the inside of the joint, the Contractor shall comply with all applicable OSHA regulations, particularly the need to provide adequate ventilation.

Welding shall not be performed when the ambient temperature is less than 0 degrees Fahrenheit, or when surfaces are wet from rain, condensation, snow or ice. Regardless of the ambient temperature, the metal temperature in the pipe wall shall not be less than 60 degrees Fahrenheit within 3 inches of the weld point. Preheating is permitted in accordance with AWWA C206.

Thermal stresses can occur in welded joint pipe during construction due to variations in pipe temperature. The Contractor shall submit to the Engineer a detailed procedure for reducing thermal stresses in welded joint pipe. The methods proposed may involve shading the pipe in the trench, the use of backfill as insulation, and/or making certain joint welds at the time of day when the ambient temperature is the coolest. At a minimum, a closure joint shall be provided every 400 feet within a continuous section of welded joints. The closure joint shall be set so that the spigot of the pipe is inserted deeper into the bell than the normal closed position, all joints are welded except the closure joint, and all backfill is placed over the pipe except at the closure joint. The closure joint is then to be welded when the ambient air temperature is the coolest. If backfill closely follows pipe installation, and the length of exposed trench does not exceed 400 feet, a closure joint will not be required.

Complete the exterior of welded joints by wire brushing the exposed surfaces. Prime the exterior surfaces in accordance with the manufacturer's recommendations, then wrap two layers of 35 mil tape conforming to the requirements of AWWA C-209. Field applied tape coating shall overlap the factory applied tape coating by at least 3 inches, and shall be compatible with the factory applied coating.

The interior joint recess of both rubber gasket and welded joints shall be troweled with a stiff mix of cement mortar. Mortar for interior joint recess shall be comprised of a minimum 1 part cement to not more than 2 parts sand, by weight, dry mixed, and moistened with sufficient water to permit packing and troweling without crumbling. Before placing the joint mortar material against the surfaces of the lining, the surfaces shall be cleaned, all soap removed, and then wetted. The pipeline shall not be filled with water until all field mortared joints have cured for a minimum of 24 hours.

3.04 TEST STATIONS

Install test stations every 1500 to 2000 feet or as shown on the Drawings in accordance with the detail within the Contract Drawings.

3.05 FLANGED JOINTS

Assemble flanged joints with approved full-faced red rubber gaskets 1/8-inch thick. Clean flange faces thoroughly before making the joint. Draw up flange bolts evenly and alternately across flange until the joint is tight. Bolts shall be uniform length, take up the full nut, but not project more than 1/4-inch past the nut.

3.06 FLEXIBLE SLEEVE COUPLING JOINTS

Flexible sleeve couplings shall be installed as per the manufacturer's recommendations.

Joint harnessing with steel rings designed in accordance with AWWA M-11, shall be installed as per the detail on the Contract Drawings and in accordance with this Specification.

Harnessing rods shall be equally spaced around the pipe. In assembling the harness, the nuts shall be tightened gradually and equally until snug to prevent misalignment and to insure that all studs carry equal loads. The threads of the studs shall protrude a minimum of one-half inch from the nuts when piping is pressurized.

END OF SECTION

SECTION 15115

PRESTRESSED CONCRETE PIPE AND FITTINGS

PART 1: GENERAL

1.01 COORDINATION OF WORK

Connection to existing pipelines may require shutdown of OWNER facilities. Construction work and connections shall be closely coordinated with the OWNER through the ENGINEER. The ENGINEER, in consult with the OWNER, may select the time, including Saturdays, Sundays and holidays, which, in the opinion of the ENGINEER, will cause the least inconvenience to the OWNER and/or its customers, for connection to existing pipelines, and the CONTRACTOR will perform such connections at such times as may be directed by the ENGINEER at the Contract prices and no claim for premium time or additional costs will by made by the CONTRACTOR.

1.02 RELATED WORK

Piping - General Provisions - Section 15000

1.03 SUBMITTALS

Shop drawings and manufacturer's literature for all CONTRACTOR supplied materials shall be promptly submitted to the ENGINEER for approval in accordance with Section 1300.

The CONTRACTOR shall submit shop drawings showing the pipe lengths, design details, joint details, specials, installation details, etc., for the ENGINEER's use. Thrust calculations for all fittings and associated restrained lengths shall be furnished by the pipe manufacturer. All calculations shall be signed and sealed by an engineer licensed in the State of Missouri. Pipe shall be fabricated and installed in accordance with these plans. Pipeline layouts shall be submitted for the ENGINEER's field use. Actual mechanical fit of the various units shall be the complete responsibility of the CONTRACTOR and his suppliers.

The design calculations shall be presented in a neat, readable form, with all fixtures, values and units included to facilitate ease of checking. Calculations shall include but not be limited to, the following:

1. pipe size
2. cylinder thickness and outside diameter
3. cylinder yield point and ultimate strength
4. wire diameter
5. wire area
6. wire class
7. wire spacing
8. wire wrapping stress
9. ultimate strength of wire
10. 3-edge bearing load to produce incipient cracking
11. ultimate 3-edge load
12. resultant concrete compression
13. gross wrapping stress in wire
14. compressive strength of core concrete at time of wrapping
15. core thickness
16. outside coating thickness

Prior to manufacture of finished pipe, the manufacturer shall submit certified material test reports for the following materials for the ENGINEER's approval: aggregates; cement; admixtures; wire mesh; reinforcing rod; prestressing wire; steel sheet; plate and shapes; joint rings; bolts; lugs and gaskets. Certified reports shall show the actual results of all required chemical analyses, physical tests, examinations and heat treatments, including times and temperatures.

The following items shall also be submitted to the ENGINEER:

a. Certifications that all design standards specified herein have been met.

b. Certification from the manufacturer of the prestressing wire that the temperature of the wire did not exceed 360 degrees Fahrenheit during the wire drawing process.

c. Certification that water for mortar and concrete mix meets the requirements of ASTM C94.

d. An affidavit that all materials furnished under this section have been manufactured in the United States of America.

1.04 PIPE SUPPLIER

Prestressed concrete cylinder pipe shall be as manufactured by Price Brothers Company, Vianini Pipe, Inc. or Cretex Pressure Pipe, Inc.

PART 2: PRODUCTS

Research has documented that certain pipe materials (such as polyvinyl chloride, polyethylene, and polybutylene) and certain elastomers (such as those used in gasket material) may be subject to permeation by lower molecular weight organic solvents or petroleum products. Products supplied under this section have been selected based on the non-expectation of encountering petroleum products or organic solvents. If during the course of pipeline installation the CONTRACTOR identifies, or suspects, the presence of petroleum products or any unknown chemical substance the ENGINEER is to be notified immediately. Installation of any further piping in the area of suspected contamination shall be stopped until direction is provided by the ENGINEER.

2.01 PIPE MATERIALS

Prestressed concrete cylinder pipe and fittings shall be manufactured in accordance with the latest revision of AWWA Standard C301, "Prestressed Concrete Pressure Pipe, Steel-Cylinder Type, For Water and Other Liquids", and designed in accordance with AWWA Standard C304, "Design of Prestressed Concrete Cylinder Pipe", except as modified herein. The pipe shall be lined cylinder pipe. The pipe shall have the following principal features: a watertight, welded steel cylinder with steel joint rings welded to its ends; a core consisting of a lining of concrete within this steel cylinder; reinforcement consisting of high tensile wire wound around the outside of the core at a predetermined stress and securely fastened at its ends; a coating of dense mortar covering the core and wire except for the necessarily exposed surfaces of the joint rings; and a self-centering joint with a preformed rubber gasket, so designed that the joint will be watertight under all conditions of service. Joint depth for non- restrained joints shall be 4-1/8 inch minimum.

All pipe and fittings to be furnished on this project shall be designed for an operating pressure of 150 psi (Route N:STA. 0 + 00 to STA. 57 + 64; Route S:STA. 0 + 00 to Sta. 50 + 94) or 100 psi (Route N:STA. 57 + 64 to Plant; Route S:STA. 50 + 94 to Plant) in combination with nominal earth cover of ten feet with "ordinary" bedding with flat bottom trench. Ordinary bedding is defined as a Type 3 trench per AWWA Manual M-9. The following design parameters shall also be met:

Load factor for trench bedding:	1.5
Trench test pressure:	200 or 250 psi applied for 3-hour duration
Surge pressure allowance:	250 psi above working pressure

Live Load:	AASHTO H-20
Water Loading:	5 feet above top of pipe

In areas where the Drawings indicate that scouring has occurred during prior floods, the design shall also consider the possibility that fill could be placed in the future to bring the scoured grade back to the surrounding grade. Pipe design in these areas shall be based on the most severe loading condition.

The design trench test pressure and duration shall apply notwithstanding the actual field trench test pressure and duration specified elsewhere.

The pipe shall be designed for no longitudinal crack development on the inner core surface or the outer coating surface under any of the above design conditions. Any circumferential cracks greater than 0.0625-inches (1/16 inch) shall be basis for rejection of the pipe. All circumferential cracks less than 0.0625-inches but greater than 0.015-inches shall be repaired utilizing epoxy grout or cement mortar in strict accordance with the manufacturer's recommendations. Pipe with circumferential cracks less than 0.015 inches shall be acceptable.

Those locations where the pipe will have cover greater than 10 feet shall be designed in accordance with the above conditions with the anticipated dead load conditions.

The pipe manufacturer shall proportion the pipe cement mortar coating mix to take into account the anticipated groundwater chemistry to provide a corrosion resistant coating. The manufacturer shall review the soil chemistry analyses, particularly the pH values, included in the soils investigation report appended to this specification, and include this data in the mortar design mix. At a minimum, the cement mortar shall be proportioned in a ratio of 1 part cement to 2-1/2 parts sand.

The size of the high-tensile wire and the spacing and tension under which it is wound shall be such that the conditions required by the design methods in C304 are met. The design shall fully recognize all losses due to elastic and inelastic deformation, such as relaxation of the wire and plastic strains in the concrete. The average gross wrapping stress in the high-tensile wire shall not exceed 75% of the minimum ultimate tensile strength of the wire. The wire shall not be smaller than 6 gage. The minimum center line spacing of the wire shall be that which produces a clear distance of 3/16" between wires on the barrel of the pipe. The center line spacing of the wire shall not exceed 1 ½ inches. All wire used shall be produced in the United States of America. The CONTRACTOR shall submit design calculations to the ENGINEER prior to the manufacture of any pipe for this project.

All pipe to be furnished on this project shall be specifically manufactured for this project.

The following additional requirements shall be met:

a. All welders and welding operators shall be qualified under AWS D1.1 "Structural Welding Code - Steel", under AWS D1.3 "Structural Welding Code - Sheet Steel", or under Sec. IX of the ASME "Boiler and Pressure Vessel Code" for welding P-No. 1 (carbon or low alloy) steels. Each welder and welding operator shall have qualified or requalified within the past three years.

b. The steel used in the manufacture of cylinders for pipe shall have a minimum yield strength of 33,000 psi. The grade of steel used in the manufacture of bell rings for pipe and fittings shall have a minimum yield strength of 30,000 psi.

c. The slurry application rate ahead of the prestressing wires shall not be less than 1 gal. per 90 sq. ft. The core surface temperature at the time of wrapping shall be at least 35 degrees F.

d. The surface temperature of the wrapped core at the time the mortar coating is applied shall be at least 35 degrees F.

2.02 FITTINGS, ADAPTERS AND SHORTS

Elbows, tees, closures, adaptors and reducers shall be of non-prestressed cylinder type construction and details of their reinforcement shall be submitted to the ENGINEER for approval prior to their manufacture. Other specials, such as outlet pipe or shorts or other types of pipe shall be manufactured from straight sections of prestressed concrete cylinder pipe. All fittings and specials shall be designed to meet the operating and test conditions specified for concrete cylinder pipe. All materials and workmanship shall be provided in accordance with the latest revision of AWWA-C301. The steel used in the manufacture of cylinders for fittings shall have a minimum yield strength equal to or greater than twice the steel stress at the working pressure used in fittings design, or 30,000 psi, whichever is greater.

An adequate supply of random length shorts and bevel adapters shall be maintained on the job for the various pipe sizes specified for the project to facilitate any necessary field changes. The CONTRACTOR shall notify the manufacturer as these items are used so that they may be promptly replaced. As a minimum, 1 set of 2,4,6 and 8 foot lengths shall be maintained and stored on the construction project site. The set shall be furnished as restrained joint pipe and be designed with the maximum gage cylinder for full thrust design. Random length pipe shall be provided spigot by bell. In addition six full bevels and six half bevel adaptors shall also be maintained and stored on the construction project

site. Three half and three full bevel adapters shall be furnished as restrained pipe. The additional short pipe and bevel adapters shall be replaced as necessary, as the project progresses. At the end of the project, the random length shorts and bevels may be incorporated into the pipe alignment without replacement.

The CONTRACTOR shall furnish and install prestressed concrete cylinder pipe and flanged by restrained joint spool sections at all flanged valves and any other location as shown on the Contract Drawings. The cylinder thickness of the spool sections shall be designed for full thrust, dead-end, conditions at a test trench pressure of 200 psi. Flanged drilling shall be compatible to the valve flange. Flanges shall be firmly bolted with high strength stainless steel bolts and nuts conforming to ASTM A304, Grade B, with a minimum yield strength of 35,000 psi. Stainless steel bolts shall be furnished with grade stamp and markings. Gaskets shall be full faced neoprene.

2.03 MARKING PIPE

Each pipe, fitting or special section shall have plainly marked thereon:

1. Pipe class
2. Date of manufacture
3. Manufacturer's name or trademark
4. On bends, the angle turned thereby
5. Identification of fittings to show proper location
6. On beveled pipe, amount of bevel and point of maximum bevel
7. Thickness of steel cylinder

2.04 ANCHORAGE OF CONCRETE FITTINGS

All concrete fittings shall be securely anchored by approved restrained joints. The type of joint shall be the "SNAP RING" joint as manufactured by Price Brothers Company or the "C-CLAMP" joint as manufactured by Vianini Pipe, Inc., installed and protected with mortar in accordance with the manufacturer's recommendation. The use of "Bell Bolt" flexible tied joints will not be considered an acceptable restrained joint alternative. If "Snap Rings" are used, they shall not be used in zones where test pressures exceed the manufacturer's rating. A number of straight pipe lengths both sides of the fittings must be furnished with restrained joints as shown on the drawings and shown on the length of restraint schedule on the Contract Drawings. Deflection of the joints shall be in accordance with the manufacturers recommendations. Where necessary, the steel cylinders in the pipe shall be increased in thickness to provide sufficient cross-sectional area to resist the longitudinal thrust. Thrust at bends shall be calculated as follows:

For bends 0 degrees to 60 degrees:

(Test Pressure) X (Cross Sectional Area) X (Sin(Deflection/2))

For bends 60 degrees to 90 degrees:

(Test Pressure) X (Cross Sectional Area) X (1 - Cos(Deflection))

The cross sectional area shall be based on the joint diameter.

Where heavier gauge cylinders are used, the wire spacing shall be adjusted to maintain the design compression in the concrete core.

The maximum allowable stress for steel cylinder design shall be 15,000 psi at a test pressure of 200 psi. The thrust force at each fitting shall be dissipated to zero over the restrained length shown on the Contract Drawings.

All full bevels shall be furnished with restrained joints. Half bevel pipe joints need not be restrained, unless the joint falls within a restrained pipe zone.

The lengths of restrained joint pipe shown on the Contract Drawings are a minimum. If the manufacturer's calculations indicate a different length, the longer length shall be provided.

The CONTRACTOR shall maintain, on site, an adequate supply of materials for fabrication of field welded restrained joints in the field. The pipe supplier shall furnish the necessary materials and fabrication instruction details.

2.05 INSULATED JOINTS

At all connections between concrete pipe and ductile iron pipe, fittings or valves, or between concrete pipe and steel pipe and fittings, joints shall be electrically insulated by the use of flange insulation kits designed specifically for the electrical insulation of flanged pipe joints. The kits shall include full face "Type E Linebacker" gaskets, and insulating washers and sleeves for each flange bolt, as manufactured by PSI, Inc., Houston, Texas, or approved equal. Material shall be recommended by the manufacturer for potable water, buried service, 200 psi line pressure.

2.06 BALL JOINTS

Where shown on the drawings, ball joint pipe shall be provided. The ball and bell joint pipe shall be fully restrained and permit an allowable joint defection up to 15 degrees.

2.07 INSPECTION OF PIPE

All pipe and fittings used in the work may be factory inspected by a recognized inspection agency engaged by the OWNER. The CONTRACTOR shall inform the OWNER and the inspection agency of the name and address of the foundry or other sources of materials to be used in the work and shall coordinate with the manufacturer to assure that the inspection agency has access at the manufacturer's plant and adequate assistance and notice so that each item may be examined. All reports will be made to the OWNER and the cost of the services of the inspection agency will be borne by the OWNER.

The OWNER reserves the right to request specific records of the manufacturer's tests and inspections. These records may include documents such as records of materials, repairs, and test data. The cost of providing records requested by the OWNER shall be included in the unit prices bid.

2.08 PROOF OF DESIGN TESTS

Prior to manufacture of any prestressed concrete pipe on this project, a proof of design test shall be performed on one completed piece of pipe for each mark number. The test shall be performed on fully completed pipe, including coatings and linings. This test shall consist of subjecting the pipe to a hydrostatic test of 200 psi for a three hour duration.

For concrete pipe, the test will have failed if any cracks develop in excess of those permitted under section 2.01 of this specification, except for cracks within 12-inches of the test plug at the pipe bell.

If the test fails, no more pipe shall be manufactured until the manufacturer is able to demonstrate to the satisfaction of the ENGINEER the cause of failure and the changes that will be made in the pipe design to correct the problem. The test will then be repeated once the pipe design is modified.

The ENGINEER shall have the option to witness the test, and shall be given 10 days notice of the test date. The manufacturer shall submit certified test results.

PART 3: EXECUTION

3.01 HANDLING

Pipe and fittings shall be handled in a manner that will insure their installation in the work in sound, undamaged condition. They shall be handled carefully and shall not be bumped or dropped. No hooks shall be permitted to come in contact with the joint surface.

Every pipe and fitting shall be cleared of debris, dirt, etc., before being laid and shall be kept clean until the work is accepted.

3.02 JOINTING

Rubber gaskets shall be installed in strict accordance with the manufacturer's recommendations. Immediately before jointing the pipe, the outside of the spigot and the inside of the bell shall be thoroughly cleaned. The gasket and the bell shall be coated with an approved vegetable soap. When the pipes have jointed, the interior and exterior of joints shall be sealed with cement mortar grout in the proportions 1:3 in the external recess formed by the shoulder of the spigot and face of the bell in a manner suitable to the ENGINEER. The use of "Flex-Protex" joint fillers, or any other type of cement impregnated polyurethane joint filler shall not be used on this project.

Jointing shall be done in strict conformance with manufacturer's recommendations. Pipe shall be handled with care to avoid damage to the lining and coating.

Jointing of valves shall be in accordance with the details shown on the contract drawings.

END OF SECTION

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 346-8360

July 23, 1998
BP 92-12

MEMORANDUM

To: File

From: Dave Reves

Re: Kentucky-American Water Company
Bluegrass Water Project

A meeting was held in Lexington on July 20 with PDR Engineers (PDR) to review costs proposed to the Louisville Water Company (LWC) for engineering services associated with the referenced project which Kentucky-American Water Company (KAWC) will be funding. In attendance were Linda Bridwell from KAWC, Ray Ihlenburg and Hans Probst representing PDR, and Dave Reves from American Water Works Service Company (AWWSC). A second meeting was held the following day on July 21 with LWC to review the scope of work requested of PDR by LWC, and to determine what is appropriate to be funded by KAWC. In attendance for this meeting were Linda Bridwell and Dave Reves, as well as Jim Brammell, Bill Rhodes, Steve Tucker, and Karen Willis from LWC. The following will summarize the main points of discussion from each meeting.

Meeting with PDR on July 20

1. KAWC has requested that the fees for work done for LWC and for KAWC be separated appropriately. Thus, all fees for pipeline work west of Route 55 will be deducted from the KAWC contract with Gannett Fleming (GF) via Task Order, including work which has already been completed. PDR will then include these fees in their proposal to LWC.

2. It was first pointed out to PDR that in evaluating their fees to LWC for the work that KAWC will be funding, KAWC would expect the fees to be comparable to those which were proposed competitively for the KAWC portion of the work.

3. In order to establish a rough estimate of the appropriate engineering fees that LWC should incur for the portion of their pipeline which KAWC will be funding, the following was performed at the meeting:

   A. The engineering fees proposed to KAWC by GF/PDR for the KAWC portion of

the pipeline were first converted into a unit cost and applied to the LWC pipeline. This resulted in a unit cost of $2.00/ft ($554,000/277,000 feet) which applied to a LWC pipeline length of approximately 80,000 ft results in a cost of $160,000.

B. The specific scope of work requested of PDR by LWC, which is summarized in the attached spreadsheet dated July 22, 1998, was reviewed. Those items, which in the opinion of KAWC and AWWSC, are above and beyond the scope of work required by KAWC for their portion of the project, but that are appropriate to be included in the LWC scope of work and funded by KAWC, are identified below and total approximately $120,000. Only the validity of the items themselves were evaluated at this meeting, and it was assumed at this time, in order to simply complete a rough evaluation, that the associated costs were appropriate. The numbering for each item below corresponds to the numbering in the attached PDR cost breakdown spreadsheet.

IA. Evaluate Alignments and Make Recommendations ($4,080) - This was not part of the KAWC scope of work since a route evaluation had been performed several years earlier, however, it is appropriate that PDR perform this effort in order to confirm the route selection recommended by LWC.

IC. Facilitate Public Involvement ($13,449) - This was not part of the scope of work requested of PDR by KAWC, however, these efforts will be performed for the KAWC portion of the project either in-house or via a public relations consultant. It is appropriate and reasonable for LWC to include these services in their scope of work.

IIA. Title Search ($15,000) - KAWC did not perform a historical title search for each property since no problems with ownership were expected in the rural areas. However, LWC has typically encountered problems in this regard in their system, and thus it is appropriate and reasonable to include these services in their scope of work.

IIC3. Easement Acquisition Support Services ($13,620) - Much of this work relates to the actual easement acquisition which is not in the current KAWC scope of work since they plan to utilize a law firm, in lieu of their engineering consultant, to complete this task. Thus, it is an appropriate task to be included in the LWC scope of work.

IIIB. Rock Soundings ($32,953) - LWC requested that these soundings be performed along the pipeline route to facilitate the design effort, as well as to provide better information to contractors who will bid the project. Although this was not in the original KAWC scope of work, KAWC is currently considering adding it to their scope of work, and thus it is reasonable to be included in the LWC scope of work.

IIIC4. Label Rock/Boring Information ($800) - This item is needed in conjunction with the Rock Soundings item above such that the data is properly indicated on the drawings.

IIIC8. Excavates and Field Research ($3,760) - This item is for extraordinary verification of field conditions. Since the KAWC pipeline will be located mostly in rural areas, this effort was not required. However, since much of the LWC pipeline will travel through heavily populated areas, it is appropriate to be included in the LWC scope of work.

IIIC19. Permits, Submittals, and Reviews ($30,961) - This item was handled separately for the KAWC portion of the work on a time and materials basis and not included in the lump sum fee. Thus, it is appropriate to be included in the LWC scope of work.

IIIE. Prebid, Advertise, Bid Evaluation, and Recommendation ($5,830) - The costs for this item for the KAWC scope of work are separate from the design costs used to develop the $2.00/ft unit cost. Thus, it is appropriate to be included in the LWC scope of work.

C. Costs above and beyond those identified in "A" and "B" above were also discussed as follows:

i. PDR has indicated that their profit margin on the KAWC portion of the project is expected to be 2-3%, but that their typical profit margin is 10%. Allowing a profit margin of 10% vs. 3% on the LWC portion of the project, assuming a total cost of approximately $300,000, results in approximately $20,000 in additional fees.

ii. PDR's workload, as well as LWC's requirements for WBE and MBE involvement on the project, necessitated subcontracting several portions of the work. PDR has estimated an additional $5,000 in fees associated with additional management of these subconsultants.

iii. In the course of performing field work for KAWC, PDR has incurred an estimated $75,000 in additional fees resulting primarily from difficulties in locating the gas main and dealing with the gas companies. Assuming that this same additional level of effort will be required on the LWC portion of the work, the estimated cost in proportion to the length of pipeline is $25,000.

4. All of the costs in item 2 above total $330,000 which is a rough estimate of the amount that KAWC would expect to reimburse LWC for design of 80,000 feet of pipeline. PDR's current proposal to LWC for these services totals $535,000. The difference of $205,000 is significant, and warrants further discussion.

PDR has attributed this primarily to the additional level of field and drafting work that is required by LWC to provide plan and profile drawings for the entire 80,000 feet of pipeline. Units costs for engineering and drafting efforts to add profile to the drawings were submitted by each consultant that proposed on the KAWC portion of the work. The unit cost submitted by GF/PDR was $400/dwg. Thus, for an estimated 50-60 drawings, the additional costs are approximately $25,000 meaning that the additional $180,000 would need to be accounted for in field survey efforts to obtain the additional profile data requested by LWC. However, PDR's cost breakdown includes a total of approximately $172,000 for all survey efforts, thus even without the LWC requirements for pipeline profile, the PDR proposal still appears to be high.

5. PDR indicated that they only had one week to put their proposal together for LWC, thus, they were not able to solicit competitive proposals for the work which they subcontracted.

6. It was concluded that KAWC will first discuss the requirements for plan and profile along the entire pipeline with LWC on July 21, then get back to PDR either directly or through LWC.

Meeting with LWC on July 21

1. The discussions with PDR summarized above were first discussed with LWC. LWC indicated that their requirement for plan and profile drawings is typical of all the pipeline work they do. However, they agreed that their pipeline work is typically in residential areas and not necessarily reflective of the type of terrain that will be encountered for this pipeline. Thus, they agreed to go back and revisit their requirement for profile drawings. It was felt that the same requirements for the KAWC pipeline should generally also apply to the LWC pipeline at least back to the Jefferson/Shelby County line, and possibly as far back into the LWC system as the I-64/Jefferson Freeway interchange. It was noted that the $2.00/ft for the KAWC portion of the project assumed that 20% of the pipeline would required plan and profile drawings, whereas the remaining 80% would only require plan drawings. This may also be a good estimate of the plan/profile ratio that will be required for the LWC pipeline.

2. KAWC also requested that LWC ask PDR to solicit competitive proposals for their subcontracted work. Originally, KAWC had asked LWC to complete their design by December 1, however, since the KAWC portion of the project is behind schedule, there is now time to solicit subconsultant proposals.

3. Although LWC is now not requesting construction services from PDR at this time, it was noted that although KAWC assumed 18 months of construction for their portion of the work, the LWC work could probably be completed in a shorter time frame. LWC indicated that they had previously discussed this with PDR when they were still asking for construction services pricing, and that PDR lowered their construction fees at that time significantly to reflect this change.

4. LWC was requested to structure their bid documents such that pricing will be required for 36-inch pipe with an adder for 60-inch pipe where required by LWC. LWC also indicated that they planned bid all of their work as one package (pipeline, tank, and booster). Their reason for this is that they want a single point of responsibility. However, there would most likely be a cost savings in bidding each of the three portions of work separately to avoid the markup from the prime contractor since he will most likely need to sub out the rest of the work. Additionally, there may be a cost savings in dividing the pipeline work up into smaller sections. Lastly, without separate bids, the actual cost of the pipeline portion of the work which KAWC will be funding would not be truly known.

3. A number of technical issues from the LWC RFP were reviewed and discussed as follows:

   a. LWC requires restrained joint fittings as well as thrust blocks at all pipe fittings. This appears to be excessive. Steve Tucker will forward cost information to Dave for 36-inch restrained joint fittings. This is LWC's standard practice for large diameter transmission mains.

   b. LWC prefers to only bid prestressed concrete pipe, but has agreed to also bid ductile iron pipe. They will further discuss internally the potential for bidding steel pipe. Dave indicated that AWWSC has bid several project with all three materials, and will forward sample specifications to Steve which have been developed such that all three materials are equal. LWC's concern with steel pipe is that they do not have any experience in maintaining it.

   c. LWC's specifications for ductile iron pipe call for 350 psi pressure class with double polywrap for the entire length of pipeline. They feel this is necessary from a corrosion standpoint. This requirement appears to be extremely excessive considering that much of the pipe will operate below 100 psi, and that the soils in this area are not typically corrosive. LWC will discuss this further internally.

   d. LWC was informed that KAWC is planning to purchase approximately 7 acres of land for their first booster station near the intersection of I-64 and Route 55 at the point of delivery. This may also be an appropriate site for LWC's tank, and if so, KAWC would subdivide the property and sell part of it to LWC since only 2 acres (approximate) will be needed for the booster.

   LWC indicated that all of the above items comply with their typical standards, and are not just specific for this project. KAWC will determine if it is appropriate to accept these standards, or if they feel that LWC should be paying the incremental cost for requirements that are well above typical American Water Works and industry standards.

Action Items Resulting From These Meetings

No.	Item	Responsibility	Due By
1	Send LWC our typical specs for bidding DI, RCP, and steel.	Dave Reves	Aug 1

2	Determine if KAWC will accept the additional engineering and construction costs to incorporate LWC standards, or if LWC should be paying for this.	Linda Bridwell	Aug 1

c: Linda Bridwell - KAWC
Tom Friley - KAWC
Nick Rowe - KAWC

	A	B	C	D	E	F	G	H	I	J	K	L
1	MANPOWER/COST PROPOSAL FORM						July 23, 1998					
2	WC PROJECT 98-768											
3	SUPPLY FINISHED WATER TO											
4	KENTUCKY-AMERICAN WATER COMPANY			PSG/E CONSULTANT PROPOSAL FROM:								
5	BLUEGRASS WATER SUPPLY PROJECT			FDR Engineers, Inc.								
6												
7	Base & Optional Routes											
8				Average Personnel Category								
9	TASK											
10	Phase I: Preliminary Engineering											
11	A. Evaluate Alignments & Make Recommendation	2	4	24				4	36		$3,340	
12	1. Cost Estimates			2	8				10		$740	
13	2. Gannett Fleming (GF) See Attachment								0		$0	
14	B. Provide Hydraulic & Surge Analysis		2	2					4		$400	
15	1. GF								0	$12,170	$12,170	
16	C. Facilitate Public Involvement		12	16				8	36		$3,060	
17	1. Displays			12	36	24			72		$3,060	
18	2. Planning Meetings		12	12				4	28		$2,540	
19	3. PVA Involvement Issues			0	48				48		$3,000	
20	D. Phase I Archaeological-Cultural-Historic Survey			4					4		$360	
21	1. Cultural Resource Analysis, etc.								0	$8,225	$8,225	
22	E. Provide Wetlands Delineation			4					4		$360	
23	1. Law Environmental Services								0	$5,300	$5,300	
24	2. Law (Betterment - Protected Species - Wetlands)								0		$0	
25	SUBTOTAL Phase I Hours	4	30	82	92	24	0	16	336		$44,355	
26	Phase II: Easement Acquisition Support Services											
27	A. Title Search (NIC - Suggested Betterment - See Unit Price)								0		$0	
28	1. Title Company through PEH (NIC - Suggested Betterment - See Unit Price)								0	$15,000	$15,000	
29	B. Appraisals (NIC - See Unit Price)								0		$0	
30	1. Appraiser through PEH (NIC - See Unit Price)								0		$0	
31	C. Property Plat Preparation		8	32	32				72		$8,000	
32	1. Plat Preparation - Dunaway								0	$30,000	$30,000	
33	2. Description Preparation - Dunaway (NIC - See Unit Price)								0		$0	
34	3. Easement Acq. Support Services (60 Properties)			32	32				64		$5,120	
35	a. Deed of Easement Doc. - PEH/Consultant								0	$8,500	$8,500	
36	b. Bi-weekly Reports (in PEH/Consultant)								0		$0	
37	c. Maintain Files (in PEH/Consultant)								0		$0	
38	SUBTOTAL Phase II Hours	0	8	64	64	0	0	0	136		$64,620	
39	Phase III: Final Design											
40	A. Final Ground Control & Land Survey		0	48	16	32			104		$7,920	
41	1. Dunaway Engineering								0	$164,870	$164,870	
42	B. Rock Soundings		4	8	16				28		$2,280	
43	1. Alberta - 334 @ $47.80 & 283 @ 37.50			1					0	$29,623	$29,623	
44	2. Geotechnical - Lateral Earth Pressures								0	$1,050	$1,050	
45	C. Final Plan Preparation								0		$0	
46	1. Establish Preliminary Plan Sheets		4	8	8	32			52		$3,320	
47	2. Verify ROW & Property Lines			8	16	32			56		$3,440	
48	3. Verify Utilities - Existing & Proposed			8	16	32			56		$3,440	
49	4. Label Road/Survey Information				16				16		$960	
50	5. Establish Design Alignment		8	102	155	256			521		$33,573	
51	6. Establish Design Profile		8	78	155	773			406		$30,093	
52	7. Establish Appurtenances		4	24	8	48			84		$5,560	
53	8. Re-review and Field Research			8	32	16			56		$3,760	
54	9. Label Property Information			8	32	64			104		$6,181	
55	10. Label Roads, Streams, etc.			4	8	16			28		$1,720	
56	11. List Survey Control			4	16	16			36		$2,280	
57	12. Cover Sheet			8	8	16			32		$1,720	
58	13. Index Sheet			4	16	32			52		$3,040	
59	14. Hydraulic Profile Sheet			8	16	32			56		$5,441	
60	15. Connection Details		8	16	32	72			136		$8,161	
61	16. Detail Sheets		8	16	32	72			136		$8,161	
62	17. Restraint and Thrust Block Calcs & Details		8	16	16	32			88		$4,600	
63	18. Utility Submittals & Reviews		8	24	80			72	184		$14,360	
64	19. Permits, Submittals & Meetings		4	40	200	56		32	332		$21,981	
65	a. Preliminary - Scott R. Smith (COW & COE)								0	$3,000	$3,000	
66	20. GF - Air Chambers								0	$4,780	$4,780	
67	21. GAXOC Checking			76	80	40	80		316		$15,760	
68	D. Specification Preparation			16	48	24		16	104		$7,136	
69	1. GF								0	$1,545	$1,545	
70	E. Project Advertise, Bid Eval., & Recommendation			4	32	16			52		$4,820	
71	1. GF								0	$1,030	$1,030	
72	F. Prepare Final Cost Estimate			4	8	32			44		$2,600	
73	1. GF								0		$0	
74	SUBTOTAL Phase III Hours	0	90	664	998	1224	0	80	3056		$414,962	
75	Phase IV: Contract Administration/Construction Inspection (TBD)											
76	A. Construction Administration/Resident Engineer	0							0		$0	
77	1. GF - Air Chambers								0		$0	
78	B. Resident Construction Inspection	0							0		$0	
79	1. GF - Air Chambers								0		$0	
80	SUBTOTAL Phase IV Hours	0	0	0	0	0	0	0	0		$0	
81	Phase V: Project Finalization (TBD)											
82	A. Walk Through Inspection	0							0		$0	
83	1. GF								0		$0	
84	B. Project Certification								0		$0	
85	C. Project Summary Report	0							0		$0	
86	1. GF								0		$0	
87	SUBTOTAL Phase V Hours	0	0	0	0	0	0	0	0		$0	
88	TOTAL HOURS	4	128	802	1154	1248	0	96	3418		$503,804	
89	EXPENSES (1)										$10,000	
90	EXPENSES (GF)										$1,800	
91	TOTAL ESTIMATED PROJECT COST										$536,704	
92	(1) Expenses include:	2) Reproductions				$ 4,000.00						
93		3) Mileage				$ 5,000.00						
94		4) Telecopies										
95		5) Photos				$ 1,000.00						
96	RATE SCHEDULE (Increase 6% Annually on March 1)											
97		= Hourly Rate	+ Overhead	+ Profit	= Billing Rate							
98	Average Personnel Category	$	1.6171	10%	$		Estimated Drawings					
99	Principal	54.19	87.19	12.04	150.00		Cover Sheet					
100	Chief Water Resources Eng.	39.73	60.27	10.00	110.00		Index Sheets - 2					
101	Project Manager	31.53	48.37	8.10	88.00		Hydraulic Profile Sheets - 4					
102	Project Engineer	25.28	38.56	6.36	70.00		Plan & Profile Sheets - 51					
103	CADD Tech	18.05	27.40	4.55	50.00		Connection Details - 7					
104	Const. Insp.				50.00		Typical Details - 7					
105	Clerical	12.64	19.18	3.18	35.00							

$2.20/ft

File - V Louisville

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Coleman D. Bush
Vice President & Treasurer
(606) 268-6324

July 21, 1998

Honorable Joseph B. Helm
Brown, Todd & Heyburn
400 West Market Street
32nd Floor
Louisville, KY 40202-3363

Dear Joe:

Following our telephone conversation on Friday, we again reviewed the contract in light of the draft submitted dated July 14, 1998. Much of the language proposed in the July 14th draft is acceptable to Kentucky-American, and we appreciate the effort that Louisville Water Company has made to make this a workable agreement. We would like to suggest some language to address issues that arose in our latest discussion and also list the issues that still need to be resolved.

To address Greg's concerns about the December 1, 1998, deadline, we propose to add a sentence at the end of Section 2 (a) as follows: "To the extent this Agreement is not executed by August 1, 1998, then the design completion date shall be extended by the time subsequent to August 1, 1998, until execution of this Agreement."

In order to make sure Louisville's design costs are not stranded, we suggest language at the end of Section 6 (c). "If this Agreement is not approved pursuant to Section 20(a) herein, Buyer will reimburse Seller for Sellers design costs incurred under Section 6(c). In that event, all rights in and to such design shall belong to Buyer."

The notice requirement in Section 9(c) (top of page 7) might be more mutually beneficial if we did not state a specific number, but instead require "as soon as possible after notification...."

In Section 11 (b), we would ask that the words "if applicable" be inserted after the phrase "add-on charge."

In Section 13, we would first suggest that subsections (b), (c), (d) and (e) become (i), (ii), (iii) and (iv), respectively, as being part of (a). New subsection (f) would then become (b).

In Section 13 (a), we propose 90 days within which to exercise the right. In Section 13 (a) (i), we suggest that the first line be: "To pay Seller a percentage of the then book value portion of the Seller-financed part...". Lastly, in Section 13(a) (iii), we propose that the time period be nine (9) months.

As far as Schedule B is concerned, there are several sections upon which we would offer comment. In Section 3 of Schedule B, we had previously mentioned that the distinction between Irrigation Months and Non-irrigation Months be continued beyond the fifth year, and would like to retain this distinction. We propose 48 MGM and 72 MGM, respectively (See attached schedule).

A second concern expressed to Greg on Friday is our concern about flushing the line. Absent an unexpected need, flushing would probably occur once or twice a year (Spring and Fall), and could last for up to 2-3 days. These types of flushings could be scheduled at off-peak hours. These flushings are not events that should trigger an increase in the rate under Section 4 or a change in minimum usage (Section 5). We would entertain a notice requirement under this section.

Finally, we share your concern about the very last sentence of Schedule B. Since the Schedule B is based on your cost of service study, which uses budgeted numbers, why don't we just delete this last sentence?

The remaining issues for which we have not proposed any language, but would like to discuss further with Louisville Water Company are:

1. Definitions of various types of "capacity" including project facilities capacity, system capacity and requested capacity as used in the contract (I think you were going to attempt this); we would like for you to consider separating production capacity from transmission capacity in determining the rate under Schedule B. Both capacities should be certified.

2. Address Louisville's concerns about a drop-dead date in the Agreement if the project is not timely initiated;

3. Whether Section 8 (f) needs to require additional security in the form of bond insurance, or otherwise. This is an unanticipated cost for Kentucky-American and in our opinion is unnecessary unless it reduces the overall cost of the issue.

4. The appropriate term of the Agreement referenced in Section 16.

Schedule B - production capacity certified, no less than 240
Flushing - Preventative language - how often, how long

I hope we can resolve these issues by the end of this week. We look forward to setting up a conference call or meeting with you.

Yours very truly,

Coleman D. Bush
Vice President & Treasurer

CDB/ld

Encl. (1)

Louisville Water Company Agreement Schedule B Analysis			LWC Proposal Years 1-5						
Year	Total min. MGD	annual MG	non-irrigation months MG	irrigation months MG	total non-irrigation months MG	total irrigation months MG	total MG	non-Irrigation mos MGD	irrigation mos MGD
1	1.5	547.5	36.0	54.0	216.0	324.0	540.0	1.19	1.76
2	1.6	584.0	38.4	57.6	230.4	345.6	576.0	1.27	1.88
3	1.7	620.5	40.8	61.2	244.8	367.2	612.0	1.35	2.00
4	1.8	657.0	43.2	64.8	259.2	388.8	648.0	1.43	2.11
5	1.9	693.5	45.6	68.4	273.6	410.4	684.0	1.51	2.23
6	2.0	730.0	48.0	72.0	288.0	432.0	720.0	1.59	2.35

KAWC Proposal Year 6	KAWC ORIGINAL PROPOSAL		
		Year	
		1	1.20	1.80
		2	1.30	1.90
		3	1.40	2.00
		4	1.50	2.10
		5	1.60	2.20
		6	1.70	2.30

LOUISVILLE WATER COMPANY

435 South Third Street
Louisville, KY 40202
(502) 569-3600
(502) 569-3691 – Fax

c: Linda
Herb
Nick
Mark
LWI JM

Fax

To:	Coleman Bush Ky-American Water Company	**From:**	Karen Willis Louisville Water Company
Fax:	606-268-6327	**Pages:**	1
Phone:	502-569-3615	**Date:**	07/16/98
Re:	Updated Information	**CC:**	

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Coleman,

I have reviewed the data contained in the 1995-2015 Facilities Plan provided to you at our last meeting with regard to forecast information. The data reflected in this document for population forecasts appears to still be accurate. More specifically I have reviewed Tables 2-1 and 2-4 and from the information I have available to me, these appear to be accurate reflections of the changes we are seeing in both population and customer changes in the Louisville area.

In addition, I have attached a revised estimate of the cost to design and construct the facilities outlined in the contract. These numbers reflect materials, labor, engineering design and supervision, and easement acquisition.

Should you have any questions, please feel free to call me at (502) 569-3615. Thanks.

Revised Estimate – Bluegrass Water Project

60-inch	10,200 l.f.	PCCP	$375/l.f.	$3,800,000
36-inch	67,000 l.f.	D.I.	$160/l.f.	$10,700,000
2-M Elev. Tank			$0.83/gallon	$1,600,000
25 MGD P.S.			$75,000/MGD	$1,900,000
			TOTAL	**$18,000,000**

File - N Louisville

Roy, Coleman, Nick, Ed, Linda, Mark -

Here are the latest revisions to the proposed WNC contract for your review and comments ASAP. Thank you.

Herb
7/9/98

July 8, 1998
KL-N
Louisville Cor.

English Station Rd. Reservoir – I-64 @ I-265 (60")	$3.8 m
I-64 from I-265 to Shelbyville (36")	$15.1 m
2M elevated tank	$1.6 m
23 MGD P.S.	$1.7 m
	$22.2 m total

LWC portion 1.6 + 1.7 + 1.5
(tank) (P.S.) (60" upsiz
$4.8 m

KAWC $17.4 m.

Note: Numbers are reflective of smaller, yet actual projects that LWC has experience with. With the size of this, an economy of scale could occur resulting in a 10-20% cost reduction in the numbers shown above. Numbers also reflect materials, labor, engineering, and property/easement acquisition. Assumption is the pipe material will be pre-stressed concrete pipe. Over the next week, I will revise the above costs to more accurately reflect the size of the job and possibly the use of ductile iron.

File-N
Laurelcom.

Schedule A

Bluegrass Water Project Agreement

Projected Debt Amortization Schedule
per $1,000,000 of debt with level debt service payments
at 6% interest for 20 years

Year	Beginning Balance	Interest	Principal	Ending Balance
1	$ 1,000,000	$ 60,000	$ 27,185	$ 972,815
2	$ 972,815	$ 58,369	$ 28,816	$ 944,000
3	$ 944,000	$ 56,640	$ 30,545	$ 913,455
4	$ 913,455	$ 54,807	$ 32,377	$ 881,078
5	$ 881,078	$ 52,865	$ 34,320	$ 846,758
6	$ 846,758	$ 50,805	$ 36,379	$ 810,379
7	$ 810,379	$ 48,623	$ 38,562	$ 771,817
8	$ 771,817	$ 46,309	$ 40,876	$ 730,942
9	$ 730,942	$ 43,857	$ 43,328	$ 687,614
10	$ 687,614	$ 41,257	$ 45,928	$ 641,686
11	$ 641,686	$ 38,501	$ 48,683	$ 593,002
12	$ 593,002	$ 35,580	$ 51,604	$ 541,398
13	$ 541,398	$ 32,484	$ 54,701	$ 486,697
14	$ 486,697	$ 29,202	$ 57,983	$ 428,715
15	$ 428,715	$ 25,723	$ 61,462	$ 367,253
16	$ 367,253	$ 22,035	$ 65,149	$ 302,104
17	$ 302,104	$ 18,126	$ 69,058	$ 233,045
18	$ 233,045	$ 13,983	$ 73,202	$ 159,843
19	$ 159,843	$ 9,591	$ 77,594	$ 82,249
20	$ 82,249	$ 4,935	$ 82,250	$ (0)

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Coleman D. Bush
Vice President & Treasurer
(606) 268-6324

Faxed 6/16/98

June 12, 1998

Mr. Robert K. Miller, Vice President of Finance and Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Bob:

I ran your model using a reserved capacity of 4 MGD. This produces a rate that is closer to our expectations.

A copy of the schedule is attached.

Please call me on Monday so that we can set up another meeting. We are anxious to keep our negotiations on a fast track.

Sincerely,

Coleman

Coleman Bush
Vice President and Treasurer

Bluegrass Water Project - Sample Monthly Bill Calculation

		Operating Cost			Depreciation	Return on Plant	Customer Cost	Excess Rate Cost				
Day	Consumption	Consumption Below Amount Reserved	Standard Rate per 1,000 gallons	Total Operating Cost	Total Depreciation Cost	Total Return on Plant Invest	Estimated Customer Cost	Consumption Above Amount Reserved	Excess Rate per 1,000 gallons	Excess Rate Cost	Total	Effective Rate per 1,000 gallons
	1,000 gallons											
1	1,500	1,500	$0.44	$660.42	$249.16	$934.53	$28.77	-	$1.35	$0.00	$1,872.88	1.25
2	1,500	1,500	$0.44	$660.42	$249.16	$934.53	$28.77	-	$1.35	$0.00	$1,872.88	1.25
3	2,000	2,000	$0.44	$880.56	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,093.01	1.05
4	2,000	2,000	$0.44	$880.56	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,093.01	1.05
5	3,000	3,000	$0.44	$1,320.83	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,533.29	0.84
6	3,000	3,000	$0.44	$1,320.83	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,533.29	0.84
7	4,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,973.57	0.74
8	4,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	-	$1.35	$0.00	$2,973.57	0.74
9	5,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	1,000	$1.35	$1,350.00	$4,323.57	0.86
10	5,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	1,000	$1.35	$1,350.00	$4,323.57	0.86
11	6,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	2,000	$1.35	$2,700.00	$5,673.57	0.95
12	6,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	2,000	$1.35	$2,700.00	$5,673.57	0.95
13	7,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	3,000	$1.35	$4,050.00	$7,023.57	1.00
14	7,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	3,000	$1.35	$4,050.00	$7,023.57	1.00
15	8,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	4,000	$1.35	$5,400.00	$8,373.57	1.05
16	8,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	4,000	$1.35	$5,400.00	$8,373.57	1.05
17	9,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	5,000	$1.35	$6,750.00	$9,723.57	1.08
18	9,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	5,000	$1.35	$6,750.00	$9,723.57	1.08
19	10,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	6,000	$1.35	$8,100.00	$11,073.57	1.11
20	10,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	6,000	$1.35	$8,100.00	$11,073.57	1.11
21	9,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	5,000	$1.35	$6,750.00	$9,723.57	1.08
22	9,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	5,000	$1.35	$6,750.00	$9,723.57	1.08
23	8,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	4,000	$1.35	$5,400.00	$8,373.57	1.05
24	8,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	4,000	$1.35	$5,400.00	$8,373.57	1.05
25	7,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	3,000	$1.35	$4,050.00	$7,023.57	1.00
26	7,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	3,000	$1.35	$4,050.00	$7,023.57	1.00
27	6,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	2,000	$1.35	$2,700.00	$5,673.57	0.95
28	6,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	2,000	$1.35	$2,700.00	$5,673.57	0.95
29	5,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	1,000	$1.35	$1,350.00	$4,323.57	0.86
30	5,000	4,000	$0.44	$1,761.11	$249.16	$934.53	$28.77	1,000	$1.35	$1,350.00	$4,323.57	0.86
	181,000	109,000		47,990.25	7,474.92	28,035.83	863.01	72,000		97,200	$181,564.02	1.00
	Actual Usage	Billed Usage						Excess Usage				
	1,000 gallons	1,000 gallons						1,000 gallons				

Assumptions:

Reserve Capacity Request	4000	thousand gallons per day
Minimum Usage per Day	N/A	thousand gallons per day
LWC System Consumption	101369.863	thousand gallons per day
LWC Operating Cost	44,631	per day
LWC Depreciation Cost	14,950	per day
LWC Return on Plant	56,072	per day
LWC System Capacity	240000	thousand gallons per day

BROWN, TODD & HEYBURN, PLLC
400 W. MARKET STREET, 32ND FLOOR
LOUISVILLE, KENTUCKY 40202-3363
(502) 589-5400
FAX: (502) 581-1087

THE INFORMATION CONTAINED IN THIS FAX IS CONFIDENTIAL AND INTENDED FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED BELOW. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT (OR THE EMPLOYEE OR AGENT RESPONSIBLE TO DELIVER IT TO THE INTENDED RECIPIENT), YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US BY COLLECT TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS AT OUR EXPENSE.

Fax Message Date: June 5, 19

To: Herb Miller

Company/Firm: Kentucky-American Water Company

City/State/Country: Richmond, KY

Fax Number: 606-268-6327

Confirm Number:

Number of Pages (Including Cover Sheet):

From: Joseph B. Helm

Subject:

Message: Attached are clean and blacklined copies of LWC's latest version of the proposed Supply Agreement.

___ Original **WILL** follow by:
First Class Mail ___
Certified Mail ___
Registered Mail ___
Overnight Delivery ___
Hand Delivery ___
___ Original **WILL NOT** follow

If you do not receive all the pages, call (502) 589-5400, ext 214, as soon as possible and ask fo operator _____.

Time Sent: Return To: Joseph B. Helm 31-north

Client No.: UT1 Matter No.: D2075

WATER SUPPLY AGREEMENT

THIS WATER SUPPLY AGREEMENT, dated as of this _____ day of _____, 1998, between

LOUISVILLE WATER COMPANY,
435 South Third Street
(soon to be 550 South Third Street)
Louisville, Kentucky 40202 ("Seller").

and

KENTUCKY-AMERICAN WATER COMPANY,
2300 Richmond Road
Lexington, Kentucky 40502 ("Buyer")

RECITALS

A. Seller, a Kentucky corporation all of the stock of which is owned by the City of Louisville, is governed by the Board of Water Works pursuant to Sections 96.230 through ~~96.315~~ **96.310** of the Kentucky Revised Statutes; and is statutorily permitted to sell water to customers taking ~~services~~ **service** in Jefferson, Oldham, Shelby, Spencer, Bullitt and Hardin Counties, Kentucky.

B. Seller owns and operates water treatment and distribution facilities and utilizes its facilities to provide water service on a retail and wholesale basis ~~to~~ **throughout** Jefferson County, **Kentucky** and **in** large areas of Oldham, Shelby, Spencer, and Bullitt Counties, including, among others, wholesale service to West Shelby Water District, North Shelby Water District and the City of Taylorsville;

C. Seller ~~at this time~~ has available ~~reserve~~ **treatment and storage** capacity sufficient to meet Buyer's needs set forth ~~under~~ **in** this Agreement;

D. Buyer, a Kentucky corporation, engages in the ~~treatment and distribution~~ **manufacture** of water for sale to customers in the counties of Fayette, Bourbon, Clark, Harrison, Jessamine, Scott, and Woodford; and

E. Buyer is desirous of ~~entering into an agreement to provide it an additional~~ **securing a continuing**, dependable source of water to meet the present and future needs of Buyer's customers **and plans construction of extended transmission facilities to the Point of Delivery, defined below, to connect its existing system with Seller's**.

WITNESSETH:

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the parties ~~hereby~~ agree as follows:

1. DEFINITIONS. In this Agreement, these terms have the meanings indicated below:

(a) Project Facilities: Fixtures, equipment, water transmission mains, ~~meters~~ **metering equipment**, vaults, storage ~~tank;~~ **facility,** pipes, ~~pumps; buildings~~ **pump station,** and other improvements and facilities **designed to Seller's specifications and** approved by Buyer **to be used** for delivery of Service under this Agreement. Such facilities shall be owned by the Seller ~~upon completion~~.

(b) Point of Delivery: The connection of the Project Facilities to Buyer's facilities (the "Point of Delivery") will be at a point in Shelby County, Kentucky at or near the intersection of Interstate Highway 64 and Kentucky Highway 55.

(c) Service: The ~~actual~~ delivery of treated, potable water by Seller to the Point of Delivery under this Agreement pursuant to the standards set forth in Section 6, subsections (a) and (b).

2. DESIGN OF PROJECT FACILITIES:

(a) The Project Facilities will be designed by Seller, Buyer retaining the right to approve the selection by Seller of any outside professional engineering assistance in creating such design, such approval not to be unreasonably withheld, **and**

~~(b) Buyer will have the right~~ to approve the scope of the design, ~~subject to Seller's right to upsize the Project Facilities' transmission main from a 36 inch main, needed to provide Buyer with the requested Service, to a larger circumference to assist Seller in providing water service to existing and future Shelby County customers, it being agreed that the design and construction cost of such upsizing to accommodate Seller shall be borne by Seller.~~

~~(c) Buyer agrees to pay the actual and reasonable costs of the~~ **within the framework set forth immediately below.**

(b) **The** design of the Project Facilities ~~(except design costs attributable to Seller's upsizing), such costs to include professional engineering fees and measurable internal costs of engineering planning and design~~ **shall include, among other things, a 60-inch transmission main from Seller's English Station Road Reservoir to the intersection of Interstate Highway 264 and Interstate Highway 64 in Jefferson County, a 36-inch transmission main from such intersection eastwardly to the intersection of Interstate Highway 64 and Kentucky Highway 55 in Shelby County (the location of the Point of Delivery), a 25 million gallon per day pump station situated in I 264-I 64 intersection area, and a water storage facility with a minimum capacity of 1.5 million gallons situated along the 36-inch transmission main in Shelby County west of**

the Point of Delivery. Attached, designated EXHIBIT I, is a plat indicating the general location and route of the Project Facilities. Any subsequent change in the design which, individually or in the aggregate, increases the cost of the construction of the Project Facilities shall be subject to Buyer's prior written approval, which approval shall not be unreasonably withheld.

~~(d)~~**(c)** Seller understands that the design must be fully completed in a form and substance satisfactory to Buyer prior to Buyer's application to the **Kentucky** Public Service Commission **(the "PSC")** for a Certificate of Convenience and Necessity. Consequently, the date of completion for such design shall not be later than ~~October 21, 1998~~ **_____, 199_** , time being of the essence.

~~(c)~~**(d)** Also, on or before ~~October 21, 1998~~ **_____, 199_** Seller will provide Buyer with its estimated cost of the ~~Project Facilities (not including upsizing costs), including costs of design, construction and easement acquisition~~ **portion of the Project Facilities for which Buyer is agreeing to pay as hereinafter provided, and an estimate of the cost of the remaining portion.**

3. EASEMENT ACQUISITION: Upon receipt by the Seller of Buyer's written instructions **and within the limitations of such**, Seller will initiate an effort to acquire ~~options for~~ pipeline and any other easements **and property** needed in the construction and installation of the Project Facilities, keeping Buyer advised **from time to time** as to its progress and as to any obstacles encountered in such procurement. ~~Buyer agrees to reimburse Seller for its out of pocket expenses (legal, appraisal, agent negotiations and other) and internal staff work costs with respect to such easement option work after the final costs thereof have been ascertained.~~ **Seller will not purchase any easements or easement options without the purchase and/or option price being approved by the Buyer and will not file a condemnation action without Buyer's direction to do so.**

4. CONSTRUCTION OF PROJECT FACILITIES:

(a) ~~Seller will construct~~ **Upon receipt of written instructions from Buyer, Seller will proceed with its contract awarding process for the construction of** the Project Facilities ~~at Buyer's expense (except for upsizing cost). In the performance thereof, Seller may avail itself of the services of an outside professional engineering firm, approved by Buyer, and will be responsible for the letting of the construction contract(s) for competitive bidding, Buyer reserving,~~ **including the advertising for and the taking of bids in accordance with its invitation to bid and the awarding of the contract(s) to a qualified bidder(s) submitting the lowest and best bid(s). Buyer reserves** the right to veto any bid or bidder ~~for reasonable cause.~~ **but understands that in doing so it cannot act arbitrarily or unreasonably.**

~~(b) Completion of~~**(b) Seller with professional engineering assistance will supervise the** construction of the Project Facilities and ~~Service at~~ **will complete same to** the Point of Delivery ~~will be accomplished no later than 18 months ("Construction Completion Date") from the date Buyer notifies Seller in writing to advertise the construction contract(s) for bids~~

("~~Construction Commencement~~ no later than eighteen months from the date Seller receives the initial written instructions, set forth in subparagraph (a), immediately above ("Construction Completion Date"), time being of the essence.

(c) Delays in construction will cause extension of the Construction Completion Date provided such delays are the result of ~~sudden and unexpected~~ unanticipated adverse weather conditions, labor unrest, natural disasters, legal obstacles encountered in easement acquisition ~~obstacles~~ or other circumstances beyond Seller's control.

5. ~~REIMBURSEMENT TO SELLER FOR CONSTRUCTION COSTS FOR THE PROJECT FACILITIES~~ PROJECT FACILITIES COSTS ALLOCATION AND INVOICING:

~~(a)~~ Buyer agrees to pay the cost of design, easement acquisition and construction of the Project Facilities, including consulting engineering, reproduction, easement acquisition agent, recording, appraisal, bid advertisement, construction contract obligations, material, measurable in-house engineering planning, design and construction administration, and miscellaneous out of pocket costs, directly relating to the design and construction of the Project Facilities. In addition, Buyer agrees to pay Seller's costs incurred with respect to the financing of Buyer's share of the Project Facilities, which costs include, but are not limited to, financial advisor charges, legal expenses, printing and other reproduction costs and travel expenses. PROVIDED, HOWEVER, Buyer will not be responsible for the costs of the design, site location and construction of ~~the 25 million gallon per day~~ pump station and the Shelby County water storage facility and the incremental costs of material and installation of any portion of the transmission main, ~~the circumference of which is~~ greater than 36 inches (including the incremental cost of the 60-inch main from the English Station Reservoir to the intersection of Interstate Highway 264 and Interstate Highway 64, referenced in paragraph 2(b) hereinabove), all such costs and any financing of same being Seller's responsibility.

(a) Design costs incurred by Seller will be billed to Buyer upon completion of the design, i.e. within 30 days of delivery of same to Buyer for inclusion in Buyer's PSC application for a Certificate of Convenience and Necessity. Such costs will include professional engineering fees, reproduction expenses and measurable in house engineering planning and design work.

(b) Easement acquisition costs will be billed to Buyer by Seller periodically, as incurred.

(c) Constructions costs, unless paid directly from bond financing proceeds, will be billed by Seller to Buyer as incurred with Buyer to be responsible for providing funds to Seller in advance of any construction contract payment deadline relating to progress and final payments.

(d) Buyer reserves the right to dispute costs it deems to be unreasonable but agrees that it will indemnify Seller and hold it harmless for any judgments, settlements, legal fees and other costs incurred by Seller as a result of Buyer's refusal to pay Seller with respect to a third party claim.

(e) Subject to the provisions of subsection (f), immediately below, Buyer will pay Seller in full within 20 days of receipt of Seller's invoice of a Project Facility cost.

(f) It appearing that most, if not all, of the costs incurred by Seller in the design, easement acquisition, and construction of the Project Facilities can be paid from the proceeds of issuance of the tax-free or taxable bonds, contemplated under Section 6(a) or 6(b), below, Seller is agreeable to financing all pre-issuance costs with the understanding that it will be reimbursed in full from the bond proceeds for such costs, including the financing costs, to the extent permitted under the terms of the subsequent bond issue; otherwise such reimbursement is to be made in accordance with Section 6(c), below.

6. FINANCING OF BUYER'S SHARE OF PROJECT FACILITIES' CONSTRUCTION COSTS:

Buyer agrees to reimburse Seller for all ~~costs incurred by Seller with respect to the design, construction and easement acquisition of and for the Project Facilities~~ Project Facilities' costs, the responsibility for which Buyer has assumed hereinabove. Such reimbursement will take one or more of the following forms:

~~(i) By payment of cash within 30 days of invoice; or~~

~~(ii)~~(a) By reimbursing Seller for its costs, including debt service~~, incurred in~~ and issuance costs, through the issuance of tax-free, municipal bonds by the Seller, the proceeds of which are to be used to pay or to reimburse Seller for the ~~design, construction and easement acquisition costs;~~ Project Facilities' costs, to the extent such costs are eligible for reimbursement from bond proceeds, it being understood that the contemplated bonds will be sold on a competitive bid basis and the bid ~~will not be awarded until Buyer has approved same, which approval would include agreement to the interest rate and other issuance costs relating thereto; or~~ award will be made by Seller only after consultation with Buyer. Attached hereto and designated Schedule A is a Projected Debt Amortization Schedule which assumes a $1,000,000 issue, bearing interest at 6% per annum and maturing over a 20 year period, said Schedule being attached for illustrative purposes only; or

~~(iii) Failing the other two alternatives, issuance by Seller of conventional debt instruments to recoup its indicated costs, Buyer agreeing to provide all of the debt service and any other cost relating to such financing;~~(b) Failing the availability of above described tax-free financing, by reimbursing Seller for its costs, including debt service and cost of issuance, through the issuance of corporate bonds by Seller or Buyer, at Buyer's option, the proceeds

of which are to be used to pay or to reimburse Seller for the cost of the Project Facilities, it being understood that the contemplated bonds, if issued by Seller, will be sold on a competitive bid basis with the winning bid to be awarded by Seller only after consultation with Buyer; or

~~(b) If Seller's debt~~(c) By progress payments from Buyer to Seller to be made within 20 days of invoice, the first such payment to be made within thirty days of Buyer's written advice that no bond issue financing is to be pursued and to be in an amount equal to the sum of all amounts previously incurred by Seller including those financed pursuant to Section 5(f), above, plus the financing cost thereof.

(d) If Seller's bond instruments permit prepayment of part or all of the debt obligation, and if Buyer is not in default of any of its payments to Seller under this Section and Section 8 9 of this Agreement, then Buyer has the right to instruct Seller on a timely basis to exercise the prepayment privilege and shall simultaneously pay to Seller the amount of the prepayment needed, including premium, if any, to remit to the holders of the debt instruments being ~~prepaid~~ redeemed and any redemption expenses.

~~(c)~~(e) Failure of Buyer to provide Seller with readily available funds in time to meet any debt payment requirements or construction contract obligation will result in a 5% penalty on the delinquent amount to be added to such delinquent payment for each month or partial month such payment and penalties ~~thereto are delinquent.~~ thereon are delinquent.

~~(d) Buyer agrees to pledge~~(f) Buyer understands and agrees that Seller most likely will assign its rights under this Agreement as security on Seller's bonded indebtedness, ~~if called upon to do so, all of its rights~~ incurred by it with respect to the Project Facilities and further agrees to cooperate with Seller in preparing for and marketing the bond issue.

~~7.~~

~~6.~~ SERVICE AT THE POINT OF DELIVERY:

(a) Condition. ~~Buyer will pay Seller for~~ Seller will provide Buyer Service at the Point of Delivery, ~~provided Service is delivered to the Point of Delivery in a potable condition,~~ which meets or exceeds all minimum state of Kentucky and federal drinking water standards in effect at the time of delivery.

(b) Rate of Flow and Pressure. Seller shall design and construct the Project Facilities to ~~furnish Service~~ make them capable of delivering water to Buyer at the Point of Delivery ~~with a maximum~~ having a flow rate of ~~16,000~~ up to16,000 gallons per minute and a ~~minium~~ water pressure of not less than thirty ~~(30)~~ pounds per square inch (30 psi).

(c) Failures. In the event Seller, when called upon, is unable to provide Buyer with Service under the terms of this Section (as same may be modified in the future under the

provisions of Schedule B, referenced hereinafter, and/or Section 12, below) for reasons beyond Seller's control, Seller shall use its best efforts to restore the ~~water~~ **Service** to ~~a~~ **the** quality, rate of flow and pressure as required ~~in this Section~~. Time is of the essence in all situations where such a failure and **duty of** restoration exist.

~~7~~ **8**. METERING ARRANGEMENTS: Seller agrees to furnish, install, maintain, repair and replace at the Point of Delivery a service meter or battery of meters, including meter house or vault, for properly measuring the quantity of water being delivered to Buyer and to test such metering equipment whenever requested by Buyer but no more frequently than once every six months with the results of such tests provided to Buyer. Buyer may require Seller to conduct tests more often than every six months, but at its own expense. A meter registering within the warranty limits specified by the manufacturer thereof shall be deemed to be accurate. Previous readings of any meter disclosed by test to be inaccurate shall be corrected for three months previous to such test in accordance with the percentage of inaccuracy found by such test. If any meter fails to register for any period the amount of water furnished during such period shall be deemed to be the amount of water delivered in the corresponding period immediately prior to the failure, unless Seller and Buyer shall agree otherwise. An appropriate official of the Buyer shall have access to the meter at reasonable times for the purpose of inspecting and reading such metering facilities.

~~8~~ **9**. RATES AND PAYMENT:

(a) Buyer shall pay Seller for the Service ~~actually delivered to the Point of Delivery in accordance with this Agreement pursuant to~~ **as determined by** the rates and terms set forth in Schedule B, attached hereto and incorporated herein. ~~Buyer hereby waives any right it may have to protest before~~, **Buyer agreeing to consent to and waive objections to any and all rate adjustment filings made by Seller with** the Kentucky Public Service Commission or elsewhere ~~a rate adjustment~~ **so long as such filing constitutes rate adjustments** made in accordance with ~~this Agreement.~~ **Schedule B.**

~~(b) Seller shall invoice Buyer monthly for water usage, and~~**(b) Buyer's meter will be read at midnight on the last day of each month of Service and shall be invoiced monthly by Seller based upon Buyer's consumption for such month or based upon Buyer's minimum consumption obligation for such month, whichever is greater.**

(c) Buyer shall remit payment to Seller for each invoice no later than the 20 calendar days following the mailing **or facsimile transmission** of such invoice. Failure to make timely payments will cause a penalty of five percent (5%) per month or partial month on each invoice remaining unpaid.

~~9~~ **10**. SERVICE TO OTHERS: Seller warrants and represents that any water service to others prior to the Point of Delivery provided through or from the Project Facilities shall not interfere with its service or diminish its obligations to the Buyer under this Agreement.

~~10. RESERVATION OF SELLER'S CAPACITY. Seller agrees, throughout the term of this Agreement, to reserve water treatment capacity of not less than that needed under this Agreement to treat and deliver the Service to the Point of Delivery.~~ **11. RESERVATION OF CAPACITY: Seller reserves treatment and delivery capacity to Buyer of sixteen thousand gallons per minute (flow rate), subject to possible future modification of such reserved capacity from operation of the provision of Schedule B, attached, and/or Section 12, below.**

~~11~~ **12**. ADDITIONAL EXPANSION BY SELLER: Seller agrees that upon undertaking any expansion or enlargement of the capacity of its ~~existing supply or treatment facilities, or~~ pumping, transmission and storage facilities ~~to the extent that the expansion or enlargement relates to the provision of Service~~ **providing Service to the Point of Delivery** under this Agreement, it will notify Buyer of its intention to do so and will afford Buyer with a reasonable opportunity to participate in the expansion or enlargement ~~with a commensurate extension of the term of the contract and other terms~~ **upon terms and conditions** mutually agreeable.

~~12~~ **13**. LIMITATION OF SERVICE TO BUYER FOR REASONS BEYOND SELLER'S CONTROL:

~~(a)~~ Buyer acknowledges that unexpected supply or treatment problems may occur which are beyond Seller's control. In the event such ~~unexpected~~ problems ~~limit or prevent~~ **impair** Seller's ability to deliver Service to the Point of Delivery, and such problems limit or prevent the delivery **of water** to any of Seller's **other** customers, then Seller agrees that any restrictions on **placed by it upon** water delivery shall apply to the Buyer in ~~a similar~~ **the same** manner ~~which~~ **to that applied by** Seller ~~applies~~ to its other customers. ~~, excluding medical facilities, of the highest and most important priority.~~

~~(b)~~ Seller will use its best efforts to restore full Service to Buyer as promptly and completely as possible. ~~Time is~~, **time being** of the essence ~~for the restoration of full service.~~

~~13~~ **14**. NOTICE: Buyer will ~~provide~~ timely ~~notice to~~ **notify** Seller of any ~~emergency or~~ condition **or situation**, which would adversely affect the quality, quantity or pressure of the water in Seller's system and, likewise, Seller will ~~provide~~ timely ~~notice to~~ **notify** Buyer of any ~~emergency or~~ condition **or situation**, which would adversely affect the quality, quantity or pressure of the water at the Point of Delivery.

~~14~~ **15**. TERM AND EXTENSIONS: The term of this Agreement shall begin on the date this Agreement is executed by both parties hereto and shall terminate on December 31, ~~2~~_____. **20__**.

~~15. BUYER'S REPRESENTATIONS AND WARRANTIES.~~ **16. B U Y E R ' S REPRESENTATION AND WARRANTY:**

~~(a)~~ Buyer is a Kentucky corporation with the authority to enter into this Agreement, subject to regulatory approval, and has the authority to perform under the terms of this Agreement.

~~(b) Buyer shall be responsible for the maintenance of water quality after the Point of Delivery provided that Seller has delivered Service to the Point of Delivery pursuant to this Agreement.~~

~~(c) Provided Seller has delivered Service to the Point of Delivery pursuant to this Agreement, Buyer shall be responsible for any bursting or breakage of pipes or damages to persons or property after the water is delivered to the Point of Delivery.~~

~~16. SELLER'S REPRESENTATIONS AND WARRANTIES.~~

~~(a)~~ 17. SELLER'S REPRESENTATION AND WARRANTY:

Seller is a Kentucky corporation~~, all the stock of which is owned by the City of Louisville, with the authority~~ **with the statutory authority through the Board of Water Works** to enter into this Agreement~~, and has the authority~~ **and** to perform under the terms of this Agreement.

~~(b) Seller will deliver Service to the Point of Delivery that meets or exceeds the applicable quality standard of all local, state and federal regulatory agencies having jurisdiction over the service as such may change from time to time and the requirements of Section 6 of this Agreement, subject to interruptions beyond its control.~~

~~(c) Seller shall be responsible for the Project Facilities and the quality, rate of flow and pressure of the water at the Point of Delivery.~~

~~17~~ 18. TERMINATION:

(a) Buyer may terminate this Agreement upon six (6) months written notice in the event of:

(1) Repeated failure of Seller to meet its ~~commitment to reserve capacity, or to meet the water delivery requirements in Section 6 hereof.~~ **reserve capacity commitment set forth in Section 11, above, or to provide the Service set forth in Section 6, above.**

(2) Revocation of Seller's authority to do business.

~~(3) Seller's breach of any of the Representations and Warranties in this Agreement as determined by a Court of Law in the Commonwealth of Kentucky.~~

(b) Seller may terminate this Agreement upon six (6) months written notice in the event of:

(1) **Failure of Buyer to deliver to Seller, within ___ months of receipt by Buyer of a final, non-appealable Order from the Kentucky Public Service Commission in the form of a Certificate of Convenience and Necessity permitting Buyer, among other things, to finance the Project Facilities to the extent provided herein, with written instructions to**

proceed with the bidding on and construction of the Project Facilities as set forth in Section 4.

(2) Repeated failure of Buyer to pay its invoices for water service on a timely basis.

~~(2)~~**(3)** Repeated failure of Buyer to pay on a timely basis its debt service obligations to Seller, time being of the essence in that regard.

~~(3)~~**(4)** Revocation of ~~Seller's~~ **Buyer's** authority to do business.

~~(4) Buyer's breach of any of the Representations or Warranties in this Agreement as determined by a Court of Law in the Commonwealth of Kentucky.~~

~~18~~ **19**. MISCELLANEOUS PROVISIONS:

(a) This Agreement is subject to the approval of the Kentucky Public Service Commission ("PSC") and receipt by Buyer of a final, non-appealable Order from the PSC in the form of a Certificate of Convenience and Necessity for the facilities to be constructed pursuant to this Agreement. Provided, however, failure to obtain such an Order shall not relieve Buyer of its duties hereunder to reimburse Seller for ~~indicated costs.~~ **costs incurred pursuant to the provisions of Sections 2 and 3, above. In the event such approval Order undertakes to alter one or more provision of this Agreement and such modification is not acceptable to either party, then this Agreement terminates so long as the terminating party communicates such election to the other party within 15 days of receipt of such Order.**

(b) This Agreement does not constitute a partnership, joint venture, agency or other relationship between Buyer and Seller, and Buyer and Seller expressly state that they owe no fiduciary duties to one another and that the relationship is based upon Contract.

(c) This Agreement is binding on the successors and assigns of the parties hereto.

(d) Buyer and Seller agree that each of them shall have access to the books and records of the other, which are related to matters which are the subject of this Agreement, at such reasonable notice, except as those records may be subject to a recognized privilege that are confidential or may be protected by the Kentucky Open Records Law. Without limitation, the information subject to access shall include all costs of design, construction, financing, and costs of operation and maintenance of the facilities contemplated by this Agreement.

(e) Buyer reserves the right to develop and use other water supply sources and may obtain water from sources other than the Seller.

(f) The parties agree to operate and maintain their respective facilities in an efficient and economical manner and in accordance with all applicable local, state and federal laws, regulations and performance standards.

(g) This Agreement may be amended at any time by mutual agreement, in writing, of the parties.

(h) Both parties agree to use their best efforts to obtain all regulatory and legal approvals required for the accomplishment of the terms of this Agreement.

(i) The parties acknowledge that the water to be purchased hereunder will be resold in the regular course of business of Buyer and is therefore exempt from Kentucky sales and use tax. To evidence this exemption, Buyer will furnish Seller with a duly executed "Resale Certificate" or such other documentation as the parties deem appropriate.

(j) Seller agrees, subject to its right hereby reserved to self-insure itself up to the first One Million Dollars in liability, to carry public liability insurance in the minimum amount of Ten Million Dollars per occurrence during the term of this Agreement.

IN WITNESS WHEREOF, the parties have set forth their hand the day and year first above written.

BUYER:	SELLER:
Kentucky-American Water Company	Louisville Water Company
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____
Attest: _____	Attest: _____

UTI.D2075:015.jrc
F:\USERS\015\LWC\KYAMEWAT.RED

MODE = MEMORY TRANSMISSION START=MAY-29 15:14 END=MAY-29 15:16

FILE NO.= 230

NO.	COM	ABBR/NTWK	STATION NAME/ TELEPHONE NO.	PAGES	PRG.NO.	PROGRAM NAME
001	OK	#	915025852806--8	003/003		

-KAWC -

********** - ***** - **********



2300 Richmond Road • Lexington, Kentucky 40502
606/269-2386

TELECOPY TRANSMITTAL SHEET

FAX No. 606/ 268-6327
We have a Sharp Model FO-800 Facsimile

DATE: 5/29/98

COMPANY: LOUISVILLE WATER COMPANY

HAND TO: ROBERT K. MILLER – 502.585.2806

FROM: Coleman Bush

Number of pages, including cover: 3

If you have any problems with receiving, please call:

Phone: 606/268-6364 Ask for: Larine Donoho

Hard copy mailed: Yes X No

PLEASE DELIVER TO THE ABOVE NAMED PERSON IMMEDIATELY

The information contained in this transmission is privileged, confidential and intended only for the use of the individual or entity named above. If you receive this communication in error, please notify Kentucky-American Water Company immediately by telephone, collect and return the original message to us at the address shown via the U.S. Postal Service. You will be reimbursed for the required postage.. Thank you.

Message:

If transmitted document is not legible, please call the above number and an original document will be mailed to you.

Kentucky-American Water Company

2300 Richmond Road · Lexington, Kentucky 40502 · (606) 269-2386 · Fax (606) 268-6327

Coleman D. Bush
Vice President & Treasurer
(606) 268-6324

May 28, 1998

Mr. Robert K. Miller, Vice President of Finance and Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Bob:

I feel that we had a very productive meeting last Friday. As you can imagine, at Kentucky-American, we have explored the various point of delivery and rate alternatives at length.

We offer the following for your consideration:

- While many of the details will require significantly more discussion, we understand your offer regarding point of delivery to be: For a point of delivery located at or near KY 55, Louisville Water Company ("LWC") will build, at its expense, one booster station to be located in Jefferson County and one storage tank (size and location to be determined). This is acceptable to us for the following consideration. It is estimated that these additional facilities will add up to 12 MGD to the capacity of the project facilities. We propose that Kentucky-American Water Company ("KAWC") be allowed to reserve one half of this additional capacity at no additional cost to KAWC.

- Regarding the water rate, we are pleased that the permanent ratchet is no longer an issue. In previous negotiations, you mentioned the possibility of phasing in the reserved capacity amount. We propose that we reserve 3 MGD in year 1; 4 MGD in year 2; 5 MGD in year 3 and 6 MGD in year 4 and thereafter, subject to the dictates of actual operation. The 1.5 and 2.0 "excess use" multiples are intriguing but do not appear to withstand a cost-based test. Unless the 1.5 and 2.0 "excess use" multiples produce a more favorable rate, we propose an "excess use" rate of $1.22 per thousand gallons (including the ESA charge) tied to some peak event in your system. Above that, we propose that the standard wholesale rate (including the ESA charge) apply.

I will be out of town until June 8. I propose that we set a meeting for that week to try to bring these negotiations to a close. If a meeting sometime the week of June 8 is acceptable, please contact Herb Miller at 606.268.6339

Sincerely,

Coleman Bush
Vice President and Treasurer

C: Roy W, Mundy II
Nick O. Rowe
Herbert A. Miller, Jr.
Linda C. Bridwell
Mark C. Frost

Linda C. Bridwell, P.E.
Director of Engineering

MEMORANDUM

TO: Coleman Bush

FROM: Linda Bridwell

RE: Bluegrass Water Project

DATE: May 27, 1998

Here is the cost breakdown I've estimated:

Point of Delivery at County Line, 2 boosters only		Additional booster @ I-64 & I-275, Point of Delivery KY 55
Louisville Capital Costs:		
38,800' of 36" from English Station to County Line	$4,494,592	$ 4,494,592
40,800' of 36" from County Line to KY 55	$ 0	$ 4,569,400
Design	$ 250,000	$ 400,000
Easements	$ 194,000	$ 398,000
Interstate Bores	$ 250,000	$ 250,000
Total	~~$5,353,592~~	$10,111,992
KAWC Capital Costs:		
40,800' of 36" from County Line to KY 55	$5,164,440	$ 0
2 booster stations	$4,546,500	$ 2,246,500
40,800' of Easements	$ 204,000	$ 0
Annual Power Costs:	$ 129,293	$ 53,909

As you can see, our capital obligation to Louisville increases by an estimated $4,758,400, while our own capital costs decrease by $5,668,440. Additionally, I am estimating that we will save an average of $75,400 annually in power costs. These capital costs estimates do not include AFUDC. There is the additional likelihood that our booster site construction costs will be reduced because of the availability of power at KY 55, perhaps as much as $100,000.

I have not included the costs for which Louisville will be solely responsible. This includes the incremental construction cost of 10,000 feet of 60" main, a third booster, and at least 500,000 gallons of storage. I would estimate this somewhere around an additional $4,000,000 to $5,000,000, but I have not looked at this in detail.

Finally, without any additional sales, we would have to purchase an additional 71,000 gallons per day with this size storage.

Please let me know if there are any questions or concerns.

C: R.W. Mundy, II H.A. Miller
N.O. Rowe E.J. Grubb M. Frost

KENTUCKY-AMERICAN
Bluegrass Water Project
Present Value Analysis @ 9.2%

	ENGLISH STATION TO JEFFERSON CO. LINE	JEFFERSON CO. LINE TO HIGHWAY 55	ENGLISH STATION TO HIGHWAY 55
Louisville Water Co. Interest Rate	6%	6%	6%
Net Present Value Discount Rate	9.2%	9.2%	9.2%
Estimated Facility Cost	$ 5,188,592	$ 4,923,400	$10,111,992

	ENGLISH STATION TO JEFFERSON CO. LINE				JEFFERSON CO. LINE TO HIGHWAY 55				ENGLISH STATION TO HIGHWAY 55			
	Annual Debt Service	30 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings	Annual Debt Service	30 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings	Annual Debt Service	30 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings
Rate Base Recovery	N/A	$14,774,937	$ 5,753,747		N/A	$14,037,393	$ 5,462,474		N/A	$28,812,337	$11,216,227	
LWC Financing Alternatives:												
15 - Year Term	$ 534,232	$ 8,013,480	$ 4,255,903	$ 1,497,844	$ 506,927	$ 7,603,905	$ 4,038,380	$ 1,424,094	$ 1,041,159	$15,617,385	$ 8,294,283	$ 2,921,944
20 - Year Term	$ 452,365	$ 9,047,300	$ 4,071,248	$ 1,682,499	$ 429,244	$ 8,584,880	$ 3,863,161	$ 1,599,313	$ 881,610	$17,632,200	$ 7,934,419	$ 3,281,808
25 - Year Term	$ 405,887	$10,147,175	$ 3,923,105	$ 1,830,642	$ 385,141	$ 9,628,525	$ 3,722,584	$ 1,739,890	$ 791,028	$19,775,700	$ 7,645,689	$ 3,570,538
30 - Year Term	$ 376,946	$11,308,380	$ 3,804,950	$ 1,948,797	$ 357,680	$10,730,400	$ 3,610,476	$ 1,851,998	$ 734,625	$22,038,750	$ 7,415,417	$ 3,800,810
40 - Year Term	$ 344,842	$10,345,260	$ 3,480,888	$ 2,272,859	$ 327,217	$ 9,816,510	$ 3,302,978	$ 2,159,496	$ 672,059	$20,161,770	$ 6,783,866	$ 4,432,361

				Check #'s
Rate Base Recovery	$ -	$28,812,330	$11,216,221	$ -
LWC Financing Alternatives:				
15 - Year Term	$ 1,041,159	$15,617,385	$ 8,294,283	$ 2,921,938
20 - Year Term	$ 881,609	$17,632,180	$ 7,934,409	$ 3,281,812
25 - Year Term	$ 791,028	$19,775,700	$ 7,645,689	$ 3,570,532
30 - Year Term	$ 734,626	$22,038,780	$ 7,415,426	$ 3,800,795
40 - Year Term	$ 672,059	$20,161,770	$ 6,783,866	$ 4,432,355

Date: 8/10/98.
Workbook: LWCFinancing-Model-30yr.
Sheet: NPV 9.2%.

KENTUCKY-AMERIC... WATER COMPANY
Bluegrass Water Project
Cost to Consturct Project Facilities

Cost of LWC Facilities:

	2 Boosters POD Co. Line	POD KY 55	3rd Booster POD KY 55
36" Main Cost in Jefferson Co.	$ 4,494,592	$ -	$ 4,494,592
Add: 36" Main Cost - Jef. Co. to KY 55	0	4,569,400	4,569,400
Design Costs	250,000	150,000	400,000
Easements	194,000	204,000	398,000
Interestate Bores	250,000	0	250,000
Estimated Cost of LWC Facilities	$ 5,188,592	$ 4,923,400	$ 10,111,992
Less: Easements	194,000	204,000	398,000
Depreciation Basis of LWC Facilities	$ 4,994,592	$ 4,719,400	$ 9,713,992
1/2 Year Straight Line Dep	$ 29,468	$ 27,844	$ 57,313
Annual Straight Line Dep	$ 58,936	$ 55,689	$ 114,625

July 8, 1998

English Station Rd Reservoir – I-64 & I-265 (60")	$3.8 m
I-64 from I-265 to Shelbyville (36")	$15.1 m
2M elevated tank	$ 1.6 m
23 MGD P.S.	$ 1.7 m
	$22.2 m total

LWC portion 1.6 + 1.7 + 1.5 (tank) (P.S.) (60" upsize)

$4.8 m

KAWC $17.4 m

Note: Numbers are reflective of smaller, yet actual projects that LWC has experience with. With the size of this, an economy of scale could occur resulting in a 10–20% cost reduction in the numbers shown above. Numbers also reflect materials, labor, engineering, and property/easement acquisition. Assumption is the pipe material will be pre-stressed concrete pipe. Over the next week, I will revise the above costs to more accurately reflect the size of the job and possibly the use of ductile iron.

9:50a

CDBush 606.268.24
CD Bush
Needed -
Long term projections, demands, strategic planning for LWC.

Contract Negotiations with Louisville Water Company
July 8, 1998 at ~~9:30a~~ in Louisville
Agenda Items

1. Question as to immediate availability of 23 MGD. Joe, LWI & Herb will work on language.

2. Rate - Latest LWC offer is:

year	min. purchase MGD	reserved capacity MGD	constant rate
1	1.5	2.5	0.952661
2	1.6	3.0	1.013113
3	1.7	3.5	1.066453
4	1.8	4.0	1.113866
5	1.9	4.5	1.156289
6	2.0	5.0	1.194469

My suggested alternative:

year	min. purchase MGD	reserved capacity MGD	constant rate
1	1.5	2.5	0.952661
2	1.6	3.0	1.013113
3	1.7	3.5	1.066453
4	1.8	4.0	1.113866
5	1.9	4.0	1.078414
6	2.0	4.0	1.046507

★ KAWC ~~demands~~
Risk Analysis? ★

We should look at minimum use on the basis of a yearly average, that is, total use divided by 365. alternative summer vs winter minimum
OK The rate should be specified Schedule B or the standard wholesale rate, whichever is lower.

May - Sept
± 20 %

3. Is right of first refusal available for additional 12 MGD? Joe indicated that it was not. If we are given the right to take this at our option, what is the cost? (over)

4. We have not resolved the depreciation on CIAC issue.

5. What is the estimated cost of the Project Facilities, in detail?

6. We need to go through the contract page by page again, discussing the changes.

7. Paragraphs 7 and 8 need particular attention.

8. Long term demand projections, STRATEGIC PLANNING FOR LWC

9. 1st year - pay interest only

10.

Karen will provide + 1 week

P

00182

Bluegrass Water Project
Analysis of Depreciation Component of Water Rates
Regarding Contributed Capital

Depreciation including Contributions in Aid of Construction

Total Depreciation	$	11,010,480
- Common to Only Retail	$	2,940,510
- Customer Expense	$	2,663,010
	$	5,406,960

Depreciation excluding Contributions in Aid of Construction

Total Depreciation	$	7,555,390
- Common to Only Retail	$	1,465,210
- Customer Expense	$	1,315,510
	$	4,774,670

Difference	$	632,290
KAWC Percent Portion		1.04167%
KAWC Dollar Portion	$	6,586.38

P

00183

hole punch

~~CB~~

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502
(606) 268-6320 • Fax (606) 268-6327

Roy W. Mundy II
President

June 19, 1998

Mr. John Huber, President
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Dear John:

Thank you again for the hard work you and your staff have put into our negotiations toward the water purchase agreement between the Louisville Water Company and Kentucky-American Water Company. My purpose in writing is to state the current position of KAWC regarding what I consider to be our only significant remaining issue, and to make a suggestion as to how we might bring these issues to a close.

POINT OF DELIVERY:

We are in agreement with your request to move the point of delivery to the intersection of Interstate Highway 64 and Kentucky Highway 55. Our understanding is that this request includes a 25-MGD pump station and water storage tank designed and installed entirely at the expense of LWC (tank capacity to be determined).

ADDITIONAL 12 MGD OF CAPACITY CREATED BY PUMP STATION AND TANK REFERENCED ABOVE:

We understand that you have offered KAWC the right of first refusal for any increment of this additional capacity. Our request that one-half of this additional capacity be reserved for us at no additional cost was denied. I assume that if we agree to the first refusal concept of the 12 MGD in lieu of an absolute reserve, our cost to accept a portion of the 12 MGD would be in accord with current contract terms.

UPSIZING PROJECT FACILITIES:

We continue to disagree on LWC's share of the cost when the line is upsized, but to complete the contract, we will accept your representation that the incremental cost approach has been universally applied by LWC in situations where upsizing has been done.

DEPRECIATION ON CIAC:

The Public Service Commission does not allow KAWC to recover depreciation on contributed property and it is likely that they would look with disfavor on a rate that included such a cost. We suggest that depreciation on contributed property, if any, be removed from our rate calculation.

MINIMUM LEVEL OF SALES:

You have indicated that your board is interested in a guaranteed stream of revenue. We suggest that a minimum level of sales is unnecessary because the reserved capacity rate requires a minimum, and guaranteed, level of revenue, as it may increase from time to time, over the life of the contract.

RESERVED CAPACITY:

Our decision in these negotiations must be made among the various alternatives to the source of supply deficit. We must minimize our annual operating costs. It is obvious that the closer our reserved capacity is to our actual average use, the lower our per-unit rate will be. We propose that our initial reserved capacity be 2.5 MGD. We also propose that this reserve increase .5 MGD in the succeeding three years until it reaches 4 MGD. A reserved capacity of 6 MGD, while our average use remains at around 2 MGD, produces a rate that creates little, if any, benefit for KAWC. In fact, at an actual use of 1.5 MGD, the rate, using a 6-MGD reserved capacity, is $1.79 per thousand gallons.

I am hopeful that prior to our next meeting as a group, I could discuss these issues with you privately. We may be able to bring closure to some of them.

Sincerely,

Roy W. Mundy II
President

SCHEDULE B
BLUEGRASS WATER PROJECT AGREEMENT

Seller System Capacity/ Buyer Reserve Capacity Request

The Seller shall establish, in writing every five years, the Seller System Capacity as determined by a consulting engineer of national reknown.

Buyer shall notify Seller, in writing, the Buyer Reserve Capacity request for the coming year by July 1st of the previous year. Annually, the Seller may ~~reserve a minimum~~ of six (6) million gallons per day (MGD), and up to a maximum of 23 MGD capacity to the Buyer. The Seller has up to 12 months to make the necessary improvements to provide the new Buyer Reserve Capacity request.

Should the Seller be approached to sell any capacity from the Project Facilities to anyone other than the Buyer, ~~that would~~ limit the Seller's ability to provide the Buyer Reserve Capacity up to the 23 MGD, the Buyer has up to six (6) months from the time of notification from the Seller to respond to the Seller with a new Buyer Reserve Capacity request.

2. Water Rate for Agreement

The invoice for all water purchased by the Buyer until the end of the agreement shall be comprised of the following components: 1) Operating Cost, 2) Depreciation Cost, 3) Return on Plant Investment, and 4) Customer costs. These components are defined as follows:

- Operating Cost Component
  (Buyer Consumption / Seller Total System Sales) * (Seller operating expenses - common to only retail costs – customer costs)

- Depreciation Cost Component
  (Buyer Reserved Capacity / Seller System Capacity) * (Seller depreciation expenses - common to only retail costs – customer costs)

- Return on Plant Investment Component
  (Buyer Reserved Capacity / Seller System Capacity) * (Seller return on plant investment – common to only retail costs – customer costs)

- Customer Costs
  Actual expenses assignable to the Buyer including, but not limited to, metering, billing, collection, and operation and maintenance on Buyer specific assets.

3. Minimum Consumption and Peaking Factor

Buyer consumption for each day shall be determined ~~by the metered~~ usage from midnight until midnight. Minimum Buyer consumption will be 2.0 MGD. If Buyer consumption is unusually high due to unforeseeable and uncontrollable circumstances, then the Seller will consider, at its own discretion without setting precedent, waiving the additional charges as described below for the affected period. If buyer consumption is low due to unforeseeable and uncontrollable circumstances, then the Seller will consider, at its own discretion without setting precedent, waiving the daily minimum required as described above for the affected period.

Should the Buyer consumption remain below the Buyer Reserve Capacity for each day, the rate per 1,000 gallons shall be according to paragraph 2 above. Should the buyer consumption exceed the Buyer Reserve for any given day, the rate shall be as identified in paragraph 2 up to the Buyer Reserve Capacity, and any additional consumption shall be at the current LWC wholesale rate plus elevated service charge ($1.35/1,000 gallons – 1998).

How will KA'S use affect wholesale rate?

Bluegrass Water Project - Sample Monthly Bill Calculation

		Operating Cost			Depreciation	Return on Plant	Customer Cost	Excess Rate Cost				
Day	Consumption	Consumption Below Amount	Standard Rate per	Total Operating	Total Depreciation	Total Return on	Estimated Customer	Consumption Above Amount	Excess Rate per	Excess Rate	Total	Effective Rate per
	1,000 gallons	Reserved	1,000 gallons	Cost	Cost	Plant Invest	Cost	Reserved	1,000 gallons	Cost		1,000 gallons
1	1,500	2,000	$0.44	$880.56	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$2,684.86	1.79
2	1,500	2,000	$0.44	$880.56	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$2,684.86	1.79
3	2,000	2,000	$0.44	$880.56	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$2,684.86	1.34
4	2,000	2,000	$0.44	$880.56	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$2,684.86	1.34
5	3,000	3,000	$0.44	$1,320.83	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$3,125.14	1.04
6	3,000	3,000	$0.44	$1,320.83	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$3,125.14	1.04
7	4,000	4,000	$0.44	$1,761.11	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$3,565.41	0.89
8	4,000	4,000	$0.44	$1,761.11	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$3,565.41	0.89
9	5,000	5,000	$0.44	$2,201.39	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,005.69	0.80
10	5,000	5,000	$0.44	$2,201.39	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,005.69	0.80
11	6,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,445.97	0.74
12	6,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,445.97	0.74
13	7,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	1,000	$1.35	$1,350.00	$5,795.97	0.83
14	7,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	1,000	$1.35	$1,350.00	$5,795.97	0.83
15	8,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	2,000	$1.35	$2,700.00	$7,145.97	0.89
16	8,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	2,000	$1.35	$2,700.00	$7,145.97	0.89
17	9,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	3,000	$1.35	$4,050.00	$8,495.97	0.94
18	9,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	3,000	$1.35	$4,050.00	$8,495.97	0.94
19	10,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	4,000	$1.35	$5,400.00	$9,845.97	0.98
20	10,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	4,000	$1.35	$5,400.00	$9,845.97	0.98
21	9,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	3,000	$1.35	$4,050.00	$8,495.97	0.94
22	9,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	3,000	$1.35	$4,050.00	$8,495.97	0.94
23	8,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	2,000	$1.35	$2,700.00	$7,145.97	0.89
24	8,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	2,000	$1.35	$2,700.00	$7,145.97	0.89
25	7,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	1,000	$1.35	$1,350.00	$5,795.97	0.83
26	7,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	1,000	$1.35	$1,350.00	$5,795.97	0.83
27	6,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,445.97	0.74
28	6,000	6,000	$0.44	$2,641.67	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,445.97	0.74
29	5,000	5,000	$0.44	$2,201.39	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,005.69	0.80
30	5,000	5,000	$0.44	$2,201.39	$373.75	$1,401.79	$28.77	-	$1.35	$0.00	$4,005.69	0.80
	181,000	150,000		66,041.64	11,212.38	42,053.75	863.01	32,000		43,200	$163,370.78	0.90
	Actual Usage	Billed Usage						Excess Usage				
	1,000 gallons	1,000 gallons						1,000 gallons				

Assumptions:

Reserve Capacity Request	6000 thousand gallons per day
Minimum Usage per Day	2000 thousand gallons per day
LWC System Consumption	101369.863 thousand gallons per day
LWC Operating Cost	44,631 per day
LWC Depreciation Cost	14,950 per day
LWC Return on Plant	56,872 per day
LWC System Capacity	240000 thousand gallons per day

2.

neg. gallons rate

1500

Treatment Train bottleneck — how much does it take to remove bottleneck

P

00188

KENTUCKY-AME[illegible] WATER COMPANY
BLUEGRAS[illegible]R PROJECT
Present Value Analysis
Facilities from English Station to KY Highway 55

Louisville Water Co. Interest Rate	6%	6%	6%
Net Present Value Discount Rate	8%	8%	8%
Estimated Facility Cost	$ 5,188,592	$ 4,923,400	$10,111,992

Rate Base Recovery	ENGLISH STATION TO JEFFERSON CO. LINE				JEFFERSON CO. LINE TO HIGHWAY 55				ENGLISH STATION TO HIGHWAY 55			
	Annual Debt Service	40 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings	Annual Debt Service	40 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings	Annual Debt Service	40 Year Totals of Alternatives	Net Present Value of Alternatives	Net Present Value Savings
	N/A	$17,843,406	$ 6,531,317		N/A	$16,962,301	$ 6,201,870		N/A	$34,805,719	$12,733,195	
LWC Financing Alternatives:												
15 - Year Term	$ 534,232	$ 8,013,480	$ 4,572,747	$ 1,958,570	$ 506,927	$ 7,603,905	$ 4,339,031	$ 1,862,839	$ 1,041,159	$15,617,385	$ 8,911,778	$ 3,821,417
20 - Year Term	$ 452,365	$ 9,047,300	$ 4,441,386	$ 2,089,931	$ 429,244	$ 8,584,880	$ 4,214,381	$ 1,987,489	$ 881,610	$17,632,200	$ 8,655,777	$ 4,077,418
25 - Year Term	$ 405,887	$10,147,175	$ 4,332,753	$ 2,198,564	$ 385,141	$ 9,628,525	$ 4,111,294	$ 2,090,576	$ 791,028	$19,775,700	$ 8,444,047	$ 4,289,148
30 - Year Term	$ 376,946	$11,308,380	$ 4,243,576	$ 2,287,741	$ 357,680	$10,730,400	$ 4,026,684	$ 2,175,186	$ 734,625	$22,038,750	$ 8,270,249	$ 4,462,946
40 - Year Term	$ 344,842	$13,793,680	$ 4,112,108	$ 2,419,209	$ 327,217	$13,088,680	$ 3,901,936	$ 2,299,934	$ 672,059	$26,882,360	$ 8,014,044	$ 4,719,151

Rate Base Recovery			Check #
	$34,805,707	$12,733,187	$ -
LWC Financing Alternatives:			
15 - Year Term	$15,617,385	$ 8,911,778	$ 3,821,409
20 - Year Term	$17,632,160	$ 8,655,767	$ 4,077,420
25 - Year Term	$19,775,700	$ 8,444,047	$ 4,289,140
30 - Year Term	$22,038,780	$ 8,270,260	$ 4,462,927
40 - Year Term	$26,882,360	$ 8,014,044	$ 4,719,143

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: NPV.

00189

KENTUCKY-AMERICAN WATER COMPANY

Bluegrass Water Project

Comparision of Funding Alternatives

ENGLISH STATION TO JEFFERSON COUNTY LINE:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
LWC Facilities - Rate Base	$ 660,948	$ 676,665	$ 662,793	$ 648,917	$ 635,047	$ 621,173	$ 607,303	$ 593,429	$ 579,555	$ 565,683
LWC Facilities - Louisville Financing:										
15 Year Term @ 6%	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232
20 Year Term @ 6%	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365
25 Year Term @ 6%	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887
30 Year Term @ 6%	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946
40 Year Term @ 6%	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842

JEFFERSON COUNTY LINE TO HIGHWAY 55:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
LWC Facilities - Rate Base	$ 627,081	$ 641,933	$ 628,826	$ 615,716	$ 602,607	$ 589,497	$ 576,390	$ 563,282	$ 550,174	$ 537,066
LWC Facilities - Louisville Financing:										
15 Year Term @ 6%	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927
20 Year Term @ 6%	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244
25 Year Term @ 6%	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141
30 Year Term @ 6%	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680
40 Year Term @ 6%	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217

ENGLISH STATION TO HIGHWAY 55:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
LWC Facilities - Rate Base	$ 1,288,031	$ 1,318,600	$ 1,291,617	$ 1,264,637	$ 1,237,654	$ 1,210,674	$ 1,183,692	$ 1,156,712	$ 1,129,729	$ 1,102,749
LWC Facilities - Louisville Financing:										
15 Year Term @ 6%	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159
20 Year Term @ 6%	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028
30 Year Term @ 6%	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

CHECK NUMBERS:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
LWC Facilities - Rate Base	$ 1,288,029	$ 1,318,598	$ 1,291,619	$ 1,264,633	$ 1,237,654	$ 1,210,670	$ 1,183,693	$ 1,156,711	$ 1,129,729	$ 1,102,749
LWC Facilities - Louisville Financing:										
15 Year Term @ 6%	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159
20 Year Term @ 6%	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028
30 Year Term @ 6%	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

Date: 6/12/98.
Workbook:LWCFinancing-Model.
Sheet: Comparision.

KENTUCKY-AMERICAN WATER COMPANY
Bluegrass Water Project
Comparision of Funding Alternatives

ENGLISH STATION TO JEFFER

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
LWC Facilities - Rate Base	$ 551,809	$ 537,938	$ 524,065	$ 510,192	$ 496,320	$ 482,445	$ 468,574	$ 454,700	$ 440,830	$ 426,956
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ 534,232	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365	$ 452,365
25 Year Term @ 6%	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887
30 Year Term @ 6%	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946
40 Year Term @ 6%	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842

JEFFERSON COUNTY LINE TO

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
LWC Facilities - Rate Base	$ 523,958	$ 510,847	$ 497,741	$ 484,632	$ 471,522	$ 458,415	$ 445,307	$ 432,199	$ 419,090	$ 405,982
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ 506,927	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244	$ 429,244
25 Year Term @ 6%	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141
30 Year Term @ 6%	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680
40 Year Term @ 6%	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217

ENGLISH STATION TO HIGHW

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
LWC Facilities - Rate Base	$ 1,075,767	$ 1,048,786	$ 1,021,804	$ 994,824	$ 967,843	$ 940,861	$ 913,881	$ 886,899	$ 859,918	$ 832,938
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610	$ 881,610
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028
30 Year Term @ 6%	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

CHECK NUMBERS:

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
LWC Facilities - Rate Base	$ 1,075,767	$ 1,048,785	$ 1,021,806	$ 994,824	$ 967,842	$ 940,860	$ 913,881	$ 886,899	$ 859,920	$ 832,938
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ 1,041,159	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609	$ 881,609
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028
30 Year Term @ 6%	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

Date: 6/12/98.
Workbook:LWCFinancing-Model.
Sheet: Comparision.

KENTUCKY-AMERI... WATER COMPANY
Bluegrass Water Project
Comparision of Funding Alternatives

ENGLISH STATION TO JEFFER

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
LWC Facilities - Rate Base	$ 413,084	$ 399,208	$ 385,336	$ 371,464	$ 357,592	$ 349,579	$ 345,080	$ 340,581	$ 336,084	$ 331,587
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ 405,887	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946	$ 376,946
40 Year Term @ 6%	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842

JEFFERSON COUNTY LINE TO

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
LWC Facilities - Rate Base	$ 392,874	$ 379,766	$ 366,657	$ 353,549	$ 340,440	$ 332,868	$ 328,618	$ 324,369	$ 320,119	$ 315,868
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ 385,141	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680	$ 357,680
40 Year Term @ 6%	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217

ENGLISH STATION TO HIGHW

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
LWC Facilities - Rate Base	$ 805,956	$ 778,975	$ 751,995	$ 725,013	$ 698,032	$ 682,447	$ 673,698	$ 664,950	$ 656,201	$ 647,454
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625	$ 734,625
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

CHECK NUMBERS:

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
LWC Facilities - Rate Base	$ 805,958	$ 778,974	$ 751,993	$ 725,013	$ 698,032	$ 682,447	$ 673,698	$ 664,950	$ 656,203	$ 647,455
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ 791,028	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626	$ 734,626
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

Date: 6/12/98.
Workbook:LWCFinancing-Model.
Sheet: Comparision.

KENTUCKY-AMERICAN WATER COMPANY
Bluegrass Water Project
Comparision of Funding Alternatives

ENGLISH STATION TO JEFFER

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
LWC Facilities - Rate Base	$ 327,088	$ 322,591	$ 318,092	$ 313,595	$ 309,096	$ 304,598	$ 300,101	$ 295,601	$ 291,103	$ 286,604
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40 Year Term @ 6%	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842	$ 344,842

JEFFERSON COUNTY LINE TO

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
LWC Facilities - Rate Base	$ 311,616	$ 307,366	$ 303,117	$ 298,867	$ 294,616	$ 290,366	$ 286,116	$ 281,865	$ 277,615	$ 273,364
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40 Year Term @ 6%	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217	$ 327,217

ENGLISH STATION TO HIGHW

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
LWC Facilities - Rate Base	$ 638,706	$ 629,957	$ 621,208	$ 612,460	$ 603,713	$ 594,963	$ 586,214	$ 577,469	$ 568,720	$ 559,972
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

CHECK NUMBERS:

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
LWC Facilities - Rate Base	$ 638,704	$ 629,957	$ 621,209	$ 612,462	$ 603,712	$ 594,964	$ 586,217	$ 577,466	$ 568,718	$ 559,968
LWC Facilties - Louisville Financi										
15 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30 Year Term @ 6%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40 Year Term @ 6%	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059	$ 672,059

Date: 6/12/98.
Workbook:LWCFinancing-Model.
Sheet: Comparision.

00193

KENTUCKY-AMERICAN WATER COMPANY
Bluegrass Water Project
Comparision of Funding Alternatives

ENGLISH STATION TO JEFFER

	TOTALS	8% NPV
LWC Facilities - Rate Base	$ 17,843,406	$ 6,531,317
LWC Facilties - Louisville Financi		
15 Year Term @ 6%	$ 8,013,480	$ 4,572,747
20 Year Term @ 6%	$ 9,047,300	$ 4,441,386
25 Year Term @ 6%	$ 10,147,175	$ 4,332,753
30 Year Term @ 6%	$ 11,308,380	$ 4,243,576
40 Year Term @ 6%	$ 13,793,680	$ 4,112,108

JEFFERSON COUNTY LINE TO

	TOTALS	8% NPV
LWC Facilities - Rate Base	$ 16,962,301	$ 6,201,870
LWC Facilties - Louisville Financi		
15 Year Term @ 6%	$ 7,603,905	$ 4,339,031
20 Year Term @ 6%	$ 8,584,880	$ 4,214,381
25 Year Term @ 6%	$ 9,628,525	$ 4,111,294
30 Year Term @ 6%	$ 10,730,400	$ 4,026,684
40 Year Term @ 6%	$ 13,088,680	$ 3,901,936

ENGLISH STATION TO HIGHW

	TOTALS	8% NPV
LWC Facilities - Rate Base	$ 34,805,719	$ 12,733,195
LWC Facilties - Louisville Financi		
15 Year Term @ 6%	$ 15,617,385	$ 8,911,778
20 Year Term @ 6%	$ 17,632,200	$ 8,655,777
25 Year Term @ 6%	$ 19,775,700	$ 8,444,047
30 Year Term @ 6%	$ 22,038,750	$ 8,270,249
40 Year Term @ 6%	$ 26,882,360	$ 8,014,044

CHECK NUMBERS:

	TOTALS	8% NPV	
LWC Facilities - Rate Base	$ 34,805,707	$ 12,733,187	$ 8
LWC Facilties - Louisville Financi			
15 Year Term @ 6%	$ 15,617,385	$ 8,911,778	$ -
20 Year Term @ 6%	$ 17,632,180	$ 8,655,767	$ 10
25 Year Term @ 6%	$ 19,775,700	$ 8,444,047	$ -
30 Year Term @ 6%	$ 22,038,780	$ 8,270,260	$ (11)
40 Year Term @ 6%	$ 26,882,360	$ 8,014,044	$ -

Date: 6/12/98.
Workbook:LWCFinancing-Model.
Sheet: Comparision.

KENTUCKY-AMERICAN WATER COMPANY
Rate Base: English Station to Jefferson County Line

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Rate Base Additions:										
Utiltiy Plant in Service	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Rate Base Deductions:										
Accumulated Depreciation	$ 29,468	$ 88,404	$ 147,340	$ 206,276	$ 265,212	$ 324,148	$ 383,084	$ 442,020	$ 500,956	$ 559,892
Accumulated Deferred Taxes	38,505	95,355	152,205	209,055	265,905	322,755	379,605	436,455	493,305	550,155
Total Rate Base Deductions	$ 67,973	$ 183,759	$ 299,545	$ 415,331	$ 531,117	$ 646,903	$ 762,689	$ 878,475	$ 994,261	$ 1,110,047
Net Investment Rate Base	$ 5,120,619	$ 5,004,833	$ 4,889,047	$ 4,773,261	$ 4,657,475	$ 4,541,689	$ 4,425,903	$ 4,310,117	$ 4,194,331	$ 4,078,545
Net Investment Rate Base	$ 5,120,619	$ 5,004,833	$ 4,889,047	$ 4,773,261	$ 4,657,475	$ 4,541,689	$ 4,425,903	$ 4,310,117	$ 4,194,331	$ 4,078,545
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 440,373	$ 430,416	$ 420,458	$ 410,500	$ 400,543	$ 390,585	$ 380,628	$ 370,670	$ 360,712	$ 350,755
NOI Impact - Jefferson Facilities	47,821	28,529	26,810	25,093	23,374	21,656	19,937	18,219	16,501	14,783
NOI Deficiency	$ 392,552	$ 401,887	$ 393,648	$ 385,407	$ 377,169	$ 368,929	$ 360,691	$ 352,451	$ 344,211	$ 335,972
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 660,948	$ 676,665	$ 662,793	$ 648,917	$ 635,047	$ 621,173	$ 607,303	$ 593,429	$ 579,555	$ 565,683
Annual Debt Service:	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946
Savings	$ 284,002	$ 299,719	$ 285,847	$ 271,971	$ 258,101	$ 244,227	$ 230,357	$ 216,483	$ 202,609	$ 188,737

Cost of Facilities:	$ 5,188,592
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$376,946

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 29,468	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936
Property Taxes	35,902	35,492	35,082	34,672	34,262	33,852	33,442	33,031	32,621	32,211
Impact on Operating Exp.	$ 65,370	$ 94,428	$ 94,018	$ 93,608	$ 93,198	$ 92,788	$ 92,378	$ 91,967	$ 91,557	$ 91,147
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 38,965	$ 56,314	$ 56,070	$ 55,825	$ 55,581	$ 55,336	$ 55,092	$ 54,847	$ 54,602	$ 54,358
Inc. Taxes - Interest Synch.	(86,806)	(84,843)	(82,880)	(80,918)	(78,955)	(76,992)	(75,029)	(73,066)	(71,103)	(69,141)
Op. Exp. Impact - Jefferson Facil.	$ (47,821)	$ (28,529)	$ (26,810)	$ (25,093)	$ (23,374)	$ (21,656)	$ (19,937)	$ (18,219)	$ (16,501)	$ (14,783)
NOI Impact - Jefferson Facilities	$ 47,821	$ 28,529	$ 26,810	$ 25,093	$ 23,374	$ 21,656	$ 19,937	$ 18,219	$ 16,501	$ 14,783
Property Taxes:										
UPIS	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Less: Accumulated Dep.	29,468	88,404	147,340	206,276	265,212	324,148	383,084	442,020	500,956	559,892
Property Tax Basis	$ 5,159,124	$ 5,100,188	$ 5,041,252	$ 4,982,316	$ 4,923,380	$ 4,864,444	$ 4,805,508	$ 4,746,572	$ 4,687,636	$ 4,628,700
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 35,902	$ 35,492	$ 35,082	$ 34,672	$ 34,262	$ 33,852	$ 33,442	$ 33,031	$ 32,621	$ 32,211
Interest Synchronization:										
Rate Base	$ 5,120,619	$ 5,004,833	$ 4,889,047	$ 4,773,261	$ 4,657,475	$ 4,541,689	$ 4,425,903	$ 4,310,117	$ 4,194,331	$ 4,078,545
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 215,066	$ 210,203	$ 205,340	$ 200,477	$ 195,614	$ 190,751	$ 185,888	$ 181,025	$ 176,162	$ 171,299
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (86,806)	$ (84,843)	$ (82,880)	$ (80,918)	$ (78,955)	$ (76,992)	$ (75,029)	$ (73,066)	$ (71,103)	$ (69,141)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB EngS-to-Line.

KENTUCKY-AMER[illegible] WATER COMPANY
Rate Base: English Sta[illegible] Jeffferson County Line

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Rate Base Additions:										
Utiltiy Plant in Service	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Rate Base Deductions:										
Accumulated Depreciation	$ 618,828	$ 677,764	$ 736,700	$ 795,636	$ 854,572	$ 913,508	$ 972,444	$ 1,031,380	$ 1,090,316	$ 1,149,252
Accumulated Deferred Taxes	607,005	663,855	720,705	777,555	834,405	891,255	948,105	1,004,955	1,061,805	1,118,655
Total Rate Base Deductions	$ 1,225,833	$ 1,341,619	$ 1,457,405	$ 1,573,191	$ 1,688,977	$ 1,804,763	$ 1,920,549	$ 2,036,335	$ 2,152,121	$ 2,267,907
Net Investment Rate Base	$ 3,962,759	$ 3,846,973	$ 3,731,187	$ 3,615,401	$ 3,499,615	$ 3,383,829	$ 3,268,043	$ 3,152,257	$ 3,036,471	$ 2,920,685
Net Investment Rate Base	$ 3,962,759	$ 3,846,973	$ 3,731,187	$ 3,615,401	$ 3,499,615	$ 3,383,829	$ 3,268,043	$ 3,152,257	$ 3,036,471	$ 2,920,685
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 340,797	$ 330,840	$ 320,882	$ 310,924	$ 300,967	$ 291,009	$ 281,052	$ 271,094	$ 261,137	$ 251,179
NOI Impact - Jefferson Facilities	13,065	11,346	9,628	7,909	6,191	4,474	2,755	1,037	(682)	(2,400)
NOI Deficiency	$ 327,732	$ 319,494	$ 311,254	$ 303,015	$ 294,776	$ 286,535	$ 278,297	$ 270,057	$ 261,819	$ 253,579
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 551,809	$ 537,938	$ 524,065	$ 510,192	$ 496,320	$ 482,445	$ 468,574	$ 454,700	$ 440,830	$ 426,956
Annual Debt Service:	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946
Savings	$ 174,863	$ 160,992	$ 147,119	$ 133,246	$ 119,374	$ 105,499	$ 91,628	$ 77,754	$ 63,884	$ 50,010

Cost of Facilities:	$ 5,188,592
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$376,946

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936
Property Taxes	31,801	31,391	30,981	30,571	30,160	29,750	29,340	28,930	28,520	28,110
Impact on Operating Exp.	$ 90,737	$ 90,327	$ 89,917	$ 89,507	$ 89,096	$ 88,686	$ 88,276	$ 87,866	$ 87,456	$ 87,046
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 54,113	$ 53,869	$ 53,624	$ 53,380	$ 53,135	$ 52,890	$ 52,646	$ 52,401	$ 52,157	$ 51,912
Inc. Taxes - Interest Synch.	(67,178)	(65,215)	(63,252)	(61,289)	(59,326)	(57,364)	(55,401)	(53,438)	(51,475)	(49,512)
Op. Exp. Impact - Jefferson Facil.	$ (13,065)	$ (11,346)	$ (9,628)	$ (7,909)	$ (6,191)	$ (4,474)	$ (2,755)	$ (1,037)	$ 682	$ 2,400
NOI Impact - Jefferson Facilities	$ 13,065	$ 11,346	$ 9,628	$ 7,909	$ 6,191	$ 4,474	$ 2,755	$ 1,037	$ (682)	$ (2,400)
Property Taxes:										
UPIS	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Less: Accumulated Dep.	618,828	677,764	736,700	795,636	854,572	913,508	972,444	1,031,380	1,090,316	1,149,252
Property Tax Basis	$ 4,569,764	$ 4,510,828	$ 4,451,892	$ 4,392,956	$ 4,334,020	$ 4,275,084	$ 4,216,148	$ 4,157,212	$ 4,098,276	$ 4,039,340
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 31,801	$ 31,391	$ 30,981	$ 30,571	$ 30,160	$ 29,750	$ 29,340	$ 28,930	$ 28,520	$ 28,110
Interest Synchronization:										
Rate Base	$ 3,962,759	$ 3,846,973	$ 3,731,187	$ 3,615,401	$ 3,499,615	$ 3,383,829	$ 3,268,043	$ 3,152,257	$ 3,036,471	$ 2,920,685
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 166,436	$ 161,573	$ 156,710	$ 151,847	$ 146,984	$ 142,121	$ 137,258	$ 132,395	$ 127,532	$ 122,669
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (67,178)	$ (65,215)	$ (63,252)	$ (61,289)	$ (59,326)	$ (57,364)	$ (55,401)	$ (53,438)	$ (51,475)	$ (49,512)

00196

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB EngS-to-Line.

KENTUCKY-AMERICAN WATER COMPANY
Rate Base: English Sta Jeffferson County Line

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Rate Base Additions:										
Utiltiy Plant in Service	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Rate Base Deductions:										
Accumulated Depreciation	$ 1,208,188	$ 1,267,124	$ 1,326,060	$ 1,384,996	$ 1,443,932	$ 1,502,868	$ 1,561,804	$ 1,620,740	$ 1,679,676	$ 1,738,612
Accumulated Deferred Taxes	1,175,505	1,232,355	1,289,205	1,346,055	1,402,905	1,409,356	1,385,568	1,361,780	1,337,992	1,314,204
Total Rate Base Deductions	$ 2,383,693	$ 2,499,479	$ 2,615,265	$ 2,731,051	$ 2,846,837	$ 2,912,224	$ 2,947,372	$ 2,982,520	$ 3,017,668	$ 3,052,816
Net Investment Rate Base	$ 2,804,899	$ 2,689,113	$ 2,573,327	$ 2,457,541	$ 2,341,755	$ 2,276,368	$ 2,241,220	$ 2,206,072	$ 2,170,924	$ 2,135,776
Net Investment Rate Base	$ 2,804,899	$ 2,689,113	$ 2,573,327	$ 2,457,541	$ 2,341,755	$ 2,276,368	$ 2,241,220	$ 2,206,072	$ 2,170,924	$ 2,135,776
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 241,221	$ 231,264	$ 221,306	$ 211,349	$ 201,391	$ 195,768	$ 192,745	$ 189,722	$ 186,699	$ 183,677
NOI Impact - Jefferson Facilities	(4,119)	(5,835)	(7,554)	(9,272)	(10,991)	(11,855)	(12,206)	(12,557)	(12,909)	(13,260)
NOI Deficiency	$ 245,340	$ 237,099	$ 228,860	$ 220,621	$ 212,382	$ 207,623	$ 204,951	$ 202,279	$ 199,608	$ 196,937
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 413,084	$ 399,208	$ 385,336	$ 371,464	$ 357,592	$ 349,579	$ 345,080	$ 340,581	$ 336,084	$ 331,587
Annual Debt Service:	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946	376,946
Savings	$ 36,138	$ 22,262	$ 8,390	$ (5,482)	$ (19,354)	$ (27,367)	$ (31,866)	$ (36,365)	$ (40,862)	$ (45,359)

Cost of Facilities:	$ 5,188,592
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$376,946

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936
Property Taxes	27,700	27,289	26,879	26,469	26,059	25,649	25,239	24,829	24,419	24,008
Impact on Operating Exp.	$ 86,636	$ 86,225	$ 85,815	$ 85,405	$ 84,995	$ 84,585	$ 84,175	$ 83,765	$ 83,355	$ 82,944
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 51,668	$ 51,422	$ 51,178	$ 50,933	$ 50,689	$ 50,444	$ 50,200	$ 49,955	$ 49,711	$ 49,466
Inc. Taxes - Interest Synch.	(47,549)	(45,587)	(43,624)	(41,661)	(39,698)	(38,589)	(37,994)	(37,398)	(36,802)	(36,206)
Op. Exp. Impact - Jefferson Facil.	$ 4,119	$ 5,835	$ 7,554	$ 9,272	$ 10,991	$ 11,855	$ 12,206	$ 12,557	$ 12,909	$ 13,260
NOI Impact - Jefferson Facilities	$ (4,119)	$ (5,835)	$ (7,554)	$ (9,272)	$ (10,991)	$ (11,855)	$ (12,206)	$ (12,557)	$ (12,909)	$ (13,260)
Property Taxes:										
UPIS	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Less: Accumulated Dep.	1,208,188	1,267,124	1,326,060	1,384,996	1,443,932	1,502,868	1,561,804	1,620,740	1,679,676	1,738,612
Property Tax Basis	$ 3,980,404	$ 3,921,468	$ 3,862,532	$ 3,803,596	$ 3,744,660	$ 3,685,724	$ 3,626,788	$ 3,567,852	$ 3,508,916	$ 3,449,980
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 27,700	$ 27,289	$ 26,879	$ 26,469	$ 26,059	$ 25,649	$ 25,239	$ 24,829	$ 24,419	$ 24,008
Interest Synchronization:										
Rate Base	$ 2,804,899	$ 2,689,113	$ 2,573,327	$ 2,457,541	$ 2,341,755	$ 2,276,368	$ 2,241,220	$ 2,206,072	$ 2,170,924	$ 2,135,776
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 117,806	$ 112,943	$ 108,080	$ 103,217	$ 98,354	$ 95,607	$ 94,131	$ 92,655	$ 91,179	$ 89,703
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (47,549)	$ (45,587)	$ (43,624)	$ (41,661)	$ (39,698)	$ (38,589)	$ (37,994)	$ (37,398)	$ (36,802)	$ (36,206)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB EngS-to-Line.

00197

KENTUCKY-AMER WATER COMPANY

Rate Base: English Sta Jeffferson County Line

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Rate Base Additions:										
Utiltiy Plant in Service	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Rate Base Deductions:										
Accumulated Depreciation	$ 1,797,548	$ 1,856,484	$ 1,915,420	$ 1,974,356	$ 2,033,292	$ 2,092,228	$ 2,151,164	$ 2,210,100	$ 2,269,036	$ 2,327,972
Accumulated Deferred Taxes	1,290,416	1,266,628	1,242,840	1,219,052	1,195,264	1,171,476	1,147,688	1,123,900	1,100,112	1,076,324
Total Rate Base Deductions	$ 3,087,964	$ 3,123,112	$ 3,158,260	$ 3,193,408	$ 3,228,556	$ 3,263,704	$ 3,298,852	$ 3,334,000	$ 3,369,148	$ 3,404,296
Net Investment Rate Base	$ 2,100,628	$ 2,065,480	$ 2,030,332	$ 1,995,184	$ 1,960,036	$ 1,924,888	$ 1,889,740	$ 1,854,592	$ 1,819,444	$ 1,784,296
Net Investment Rate Base	$ 2,100,628	$ 2,065,480	$ 2,030,332	$ 1,995,184	$ 1,960,036	$ 1,924,888	$ 1,889,740	$ 1,854,592	$ 1,819,444	$ 1,784,296
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 180,654	$ 177,631	$ 174,609	$ 171,586	$ 168,563	$ 165,540	$ 162,518	$ 159,495	$ 156,472	$ 153,449
NOI Impact - Jefferson Facilities	(13,611)	(13,963)	(14,313)	(14,665)	(15,016)	(15,368)	(15,719)	(16,069)	(16,421)	(16,772)
NOI Deficiency	$ 194,265	$ 191,594	$ 188,922	$ 186,251	$ 183,579	$ 180,908	$ 178,237	$ 175,564	$ 172,893	$ 170,221
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 327,088	$ 322,591	$ 318,092	$ 313,595	$ 309,096	$ 304,598	$ 300,101	$ 295,601	$ 291,103	$ 286,604
Annual Debt Service:	0	0	0	0	0	0	0	0	0	0
Savings	$ 327,088	$ 322,591	$ 318,092	$ 313,595	$ 309,096	$ 304,598	$ 300,101	$ 295,601	$ 291,103	$ 286,604

Cost of Facilities:	$ 5,188,592
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$376,946

"D

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936	$ 58,936
Property Taxes	23,598	23,188	22,778	22,368	21,958	21,548	21,137	20,727	20,317	19,907
Impact on Operating Exp.	$ 82,534	$ 82,124	$ 81,714	$ 81,304	$ 80,894	$ 80,484	$ 80,073	$ 79,663	$ 79,253	$ 78,843
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 49,221	$ 48,977	$ 48,732	$ 48,488	$ 48,243	$ 47,999	$ 47,754	$ 47,509	$ 47,265	$ 47,020
Inc. Taxes - Interest Synch.	(35,610)	(35,014)	(34,419)	(33,823)	(33,227)	(32,631)	(32,035)	(31,440)	(30,844)	(30,248)
Op. Exp. Impact - Jefferson Facil.	$ 13,611	$ 13,963	$ 14,313	$ 14,665	$ 15,016	$ 15,368	$ 15,719	$ 16,069	$ 16,421	$ 16,772
NOI Impact - Jefferson Facilities	$ (13,611)	$ (13,963)	$ (14,313)	$ (14,665)	$ (15,016)	$ (15,368)	$ (15,719)	$ (16,069)	$ (16,421)	$ (16,772)
Property Taxes:										
UPIS	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592	$ 5,188,592
Less: Accumulated Dep.	1,797,548	1,856,484	1,915,420	1,974,356	2,033,292	2,092,228	2,151,164	2,210,100	2,269,036	2,327,972
Property Tax Basis	$ 3,391,044	$ 3,332,108	$ 3,273,172	$ 3,214,236	$ 3,155,300	$ 3,096,364	$ 3,037,428	$ 2,978,492	$ 2,919,556	$ 2,860,620
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 23,598	$ 23,188	$ 22,778	$ 22,368	$ 21,958	$ 21,548	$ 21,137	$ 20,727	$ 20,317	$ 19,907
Interest Synchronization:										
Rate Base	$ 2,100,628	$ 2,065,480	$ 2,030,332	$ 1,995,184	$ 1,960,036	$ 1,924,888	$ 1,889,740	$ 1,854,592	$ 1,819,444	$ 1,784,296
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 88,226	$ 86,750	$ 85,274	$ 83,798	$ 82,322	$ 80,845	$ 79,369	$ 77,893	$ 76,417	$ 74,940
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (35,610)	$ (35,014)	$ (34,419)	$ (33,823)	$ (33,227)	$ (32,631)	$ (32,035)	$ (31,440)	$ (30,844)	$ (30,248)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB EngS-to-Line.

00198

KENTUCKY-AMER WATER COMPANY
Rate Base: English Sta Jeffferson County Line

		40 Year Totals	NPV
Rate Base Additions:			
Utiltiy Plant in Service			
Rate Base Deductions:			
Accumulated Depreciation	$	2,327,972	
Accumulated Deferred Taxes	$	1,076,324	
Total Rate Base Deductions			
Net Investment Rate Base			
Net Investment Rate Base			
Multiplied by: Rate of Return			
Required NOI			
NOI Impact - Jefferson Facilities			
NOI Deficiency			
Multiplied by: Gross-up Factor			
Revenue Requriement	$	**17,843,406**	**$6,531,317**
Annual Debt Service:		**$11,308,380**	**$4,243,576**
Savings	$	**6,535,026**	**$2,287,741**

Cost of Facilities:	$	5,188,592
LWC Loan Term:		30
LWC Interest Rate:		6%
Annual Debt Service		$376,946

Operating Revenue
Operating Expenses:
Depreciation
Property Taxes
Impact on Operating Exp.
Multiplied by: Tax Reciprocal
Net Impact on Operating Exp.
Inc. Taxes - Interest Synch.
Op. Exp. Impact - Jefferson Facil.
NOI Impact - Jefferson Facilities

Property Taxes:
UPIS
Less: Accumulated Dep.
Property Tax Basis
Multiplied by: Tax Rate
Annual Property Tax Exp

Interest Synchronization:
Rate Base
Multiplied by: Weighted Debt Rate
Interest Synchronization
Multiplied by: Comp. Tax Rate
Income Taxes - Interest Synch.

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB EngS-to-Line.

00199

KENTUCKY-AMERICAN WATER COMPANY

Bluegrass Water Project

Rate Base: Jefferson County Line to Highway 55

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Rate Base Additions:										
Utility Plant in Service	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Rate Base Deductions:										
Accumulated Depreciation	$ 27,844	$ 83,533	$ 139,222	$ 194,911	$ 250,600	$ 306,289	$ 361,978	$ 417,667	$ 473,356	$ 529,045
Accumulated Deferred Taxes	36,383	90,100	143,817	197,534	251,251	304,968	358,685	412,402	466,119	519,836
Total Rate Base Deductions	$ 64,227	$ 173,633	$ 283,039	$ 392,445	$ 501,851	$ 611,257	$ 720,663	$ 830,069	$ 939,475	$ 1,048,881
Net Investment Rate Base	$ 4,859,173	$ 4,749,767	$ 4,640,361	$ 4,530,955	$ 4,421,549	$ 4,312,143	$ 4,202,737	$ 4,093,331	$ 3,983,925	$ 3,874,519
Net Investment Rate Base	$ 4,859,173	$ 4,749,767	$ 4,640,361	$ 4,530,955	$ 4,421,549	$ 4,312,143	$ 4,202,737	$ 4,093,331	$ 3,983,925	$ 3,874,519
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 417,889	$ 408,460	$ 399,071	$ 389,662	$ 380,253	$ 370,844	$ 361,435	$ 352,026	$ 342,618	$ 333,209
NOI Impact - Jefferson Facilities	45,451	27,221	25,597	23,974	22,351	20,728	19,104	17,480	15,857	14,233
NOI Deficiency	$ 372,438	$ 381,259	$ 373,474	$ 365,688	$ 357,902	$ 350,116	$ 342,331	$ 334,546	$ 326,761	$ 318,976
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 627,081	$ 641,933	$ 628,826	$ 615,716	$ 602,607	$ 589,497	$ 576,390	$ 563,282	$ 550,174	$ 537,066
Annual Debt Service:	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680
Savings	$ 269,401	$ 284,253	$ 271,146	$ 258,036	$ 244,927	$ 231,817	$ 218,710	$ 205,602	$ 192,494	$ 179,386

Cost of Facilities:	$ 4,923,400
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$357,680

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 27,844	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689
Property Taxes	34,068	33,681	33,293	32,906	32,518	32,130	31,743	31,355	30,968	30,580
Impact on Operating Exp.	$ 61,912	$ 89,370	$ 88,982	$ 88,595	$ 88,207	$ 87,819	$ 87,432	$ 87,044	$ 86,657	$ 86,269
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 36,923	$ 53,298	$ 53,067	$ 52,836	$ 52,604	$ 52,373	$ 52,142	$ 51,911	$ 51,680	$ 51,449
Inc. Taxes - Interest Synch.	(82,374)	(80,519)	(78,664)	(76,810)	(74,955)	(73,101)	(71,246)	(69,391)	(67,537)	(65,682)
Op. Exp. Impact - Jefferson Facil.	$ (45,451)	$ (27,221)	$ (25,597)	$ (23,974)	$ (22,351)	$ (20,728)	$ (19,104)	$ (17,480)	$ (15,857)	$ (14,233)
NOI Impact - Jefferson Facilities	$ 45,451	$ 27,221	$ 25,597	$ 23,974	$ 22,351	$ 20,728	$ 19,104	$ 17,480	$ 15,857	$ 14,233
Property Taxes:										
UPIS	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Less: Accumulated Dep.	27,844	83,533	139,222	194,911	250,600	306,289	361,978	417,667	473,356	529,045
Property Tax Basis	$ 4,895,556	$ 4,839,867	$ 4,784,178	$ 4,728,489	$ 4,672,800	$ 4,617,111	$ 4,561,422	$ 4,505,733	$ 4,450,044	$ 4,394,355
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 34,068	$ 33,681	$ 33,293	$ 32,906	$ 32,518	$ 32,130	$ 31,743	$ 31,355	$ 30,968	$ 30,580
Interest Synchronization:										
Rate Base	$ 4,859,173	$ 4,749,767	$ 4,640,361	$ 4,530,955	$ 4,421,549	$ 4,312,143	$ 4,202,737	$ 4,093,331	$ 3,983,925	$ 3,874,519
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 204,085	$ 199,490	$ 194,895	$ 190,300	$ 185,705	$ 181,110	$ 176,515	$ 171,920	$ 167,325	$ 162,730
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (82,374)	$ (80,519)	$ (78,664)	$ (76,810)	$ (74,955)	$ (73,101)	$ (71,246)	$ (69,391)	$ (67,537)	$ (65,682)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Line-to-55.

KENTUCKY-AMER WATER COMPANY

Bluegrass r Project

Rate Base: Jefferson County Line to Highway 55

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Rate Base Additions:										
Utility Plant In Service	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Rate Base Deductions:										
Accumulated Depreciation	$ 584,734	$ 640,423	$ 696,112	$ 751,801	$ 807,490	$ 863,179	$ 918,868	$ 974,557	$ 1,030,246	$ 1,085,935
Accumulated Deferred Taxes	573,553	627,270	680,987	734,704	788,421	842,138	895,855	949,572	1,003,289	1,057,006
Total Rate Base Deductions	$ 1,158,287	$ 1,267,693	$ 1,377,099	$ 1,486,505	$ 1,595,911	$ 1,705,317	$ 1,814,723	$ 1,924,129	$ 2,033,535	$ 2,142,941
Net Investment Rate Base	$ 3,765,113	$ 3,655,707	$ 3,546,301	$ 3,436,895	$ 3,327,489	$ 3,218,083	$ 3,108,677	$ 2,999,271	$ 2,889,865	$ 2,780,459
Net Investment Rate Base	$ 3,765,113	$ 3,655,707	$ 3,546,301	$ 3,436,895	$ 3,327,489	$ 3,218,083	$ 3,108,677	$ 2,999,271	$ 2,889,865	$ 2,780,459
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 323,800	$ 314,391	$ 304,982	$ 295,573	$ 286,164	$ 276,755	$ 267,346	$ 257,937	$ 248,528	$ 239,119
NOI Impact - Jefferson Facilities	12,609	10,987	9,362	7,739	6,116	4,492	2,868	1,244	(379)	(2,003)
NOI Deficiency	$ 311,191	$ 303,404	$ 295,620	$ 287,834	$ 280,048	$ 272,263	$ 264,478	$ 256,693	$ 248,907	$ 241,122
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 523,958	$ 510,847	$ 497,741	$ 484,632	$ 471,522	$ 458,415	$ 445,307	$ 432,199	$ 419,090	$ 405,982
Annual Debt Service:	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680
Savings	$ 166,278	$ 153,167	$ 140,061	$ 126,952	$ 113,842	$ 100,735	$ 87,627	$ 74,519	$ 61,410	$ 48,302

Cost of Facilities:	$ 4,923,400
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$357,680

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689
Property Taxes	30,193	29,805	29,418	29,030	28,643	28,255	27,868	27,480	27,092	26,705
Impact on Operating Exp.	$ 85,882	$ 85,494	$ 85,107	$ 84,719	$ 84,332	$ 83,944	$ 83,557	$ 83,169	$ 82,781	$ 82,394
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 51,218	$ 50,986	$ 50,756	$ 50,524	$ 50,293	$ 50,062	$ 49,831	$ 49,600	$ 49,369	$ 49,138
Inc. Taxes - Interest Synch.	(63,827)	(61,973)	(60,118)	(58,263)	(56,409)	(54,554)	(52,699)	(50,844)	(48,990)	(47,135)
Op. Exp. Impact - Jefferson Facil.	$ (12,609)	$ (10,987)	$ (9,362)	$ (7,739)	$ (6,116)	$ (4,492)	$ (2,868)	$ (1,244)	$ 379	$ 2,003
NOI Impact - Jefferson Facilities	$ 12,609	$ 10,987	$ 9,362	$ 7,739	$ 6,116	$ 4,492	$ 2,868	$ 1,244	$ (379)	$ (2,003)
Property Taxes:										
UPIS	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Less: Accumulated Dep.	584,734	640,423	696,112	751,801	807,490	863,179	918,868	974,557	1,030,246	1,085,935
Property Tax Basis	$ 4,338,666	$ 4,282,977	$ 4,227,288	$ 4,171,599	$ 4,115,910	$ 4,060,221	$ 4,004,532	$ 3,948,843	$ 3,893,154	$ 3,837,465
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 30,193	$ 29,805	$ 29,418	$ 29,030	$ 28,643	$ 28,255	$ 27,868	$ 27,480	$ 27,092	$ 26,705
Interest Synchronization:										
Rate Base	$ 3,765,113	$ 3,655,707	$ 3,546,301	$ 3,436,895	$ 3,327,489	$ 3,218,083	$ 3,108,677	$ 2,999,271	$ 2,889,865	$ 2,780,459
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 158,135	$ 153,540	$ 148,945	$ 144,350	$ 139,755	$ 135,159	$ 130,564	$ 125,969	$ 121,374	$ 116,779
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (63,827)	$ (61,973)	$ (60,118)	$ (58,263)	$ (56,409)	$ (54,554)	$ (52,699)	$ (50,844)	$ (48,990)	$ (47,135)

00201

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Line-to-55.

KENTUCKY-AMER... WATER COMPANY

Bluegras... r Project

Rate Base: Jefferson ... ty Line to Highway 55

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Rate Base Additions:										
Utiltiy Plant in Service	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Rate Base Deductions:										
Accumulated Depreciation	$ 1,141,624	$ 1,197,313	$ 1,253,002	$ 1,308,691	$ 1,364,380	$ 1,420,069	$ 1,475,758	$ 1,531,447	$ 1,587,136	$ 1,642,825
Accumulated Deferred Taxes	1,110,723	1,164,440	1,218,157	1,271,874	1,325,591	1,331,687	1,309,210	1,286,733	1,264,256	1,241,779
Total Rate Base Deductions	$ 2,252,347	$ 2,361,753	$ 2,471,159	$ 2,580,565	$ 2,689,971	$ 2,751,756	$ 2,784,968	$ 2,818,180	$ 2,851,392	$ 2,884,604
Net Investment Rate Base	$ 2,671,053	$ 2,561,647	$ 2,452,241	$ 2,342,835	$ 2,233,429	$ 2,171,644	$ 2,138,432	$ 2,105,220	$ 2,072,008	$ 2,038,796
Net Investment Rate Base	$ 2,671,053	$ 2,561,647	$ 2,452,241	$ 2,342,835	$ 2,233,429	$ 2,171,644	$ 2,138,432	$ 2,105,220	$ 2,072,008	$ 2,038,796
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 229,711	$ 220,302	$ 210,893	$ 201,484	$ 192,075	$ 186,761	$ 183,905	$ 181,049	$ 178,193	$ 175,336
NOI Impact - Jefferson Facilities	(3,626)	(5,250)	(6,873)	(8,497)	(10,120)	(10,937)	(11,269)	(11,601)	(11,933)	(12,265)
NOI Deficiency	$ 233,337	$ 225,552	$ 217,766	$ 209,981	$ 202,195	$ 197,698	$ 195,174	$ 192,650	$ 190,126	$ 187,601
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 392,874	$ 379,766	$ 366,657	$ 353,549	$ 340,440	$ 332,868	$ 328,618	$ 324,369	$ 320,119	$ 315,868
Annual Debt Service:	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680	357,680
Savings	$ 35,194	$ 22,086	$ 8,977	$ (4,131)	$ (17,240)	$ (24,812)	$ (29,062)	$ (33,311)	$ (37,561)	$ (41,812)

Cost of Facilities:	$ 4,923,400
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$357,680

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689
Property Taxes	26,317	25,930	25,542	25,155	24,767	24,380	23,992	23,605	23,217	22,830
Impact on Operating Exp.	$ 82,006	$ 81,619	$ 81,231	$ 80,844	$ 80,456	$ 80,069	$ 79,681	$ 79,294	$ 78,906	$ 78,519
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 48,906	$ 48,676	$ 48,444	$ 48,213	$ 47,982	$ 47,751	$ 47,520	$ 47,289	$ 47,058	$ 46,827
Inc. Taxes - Interest Synch.	(45,280)	(43,426)	(41,571)	(39,716)	(37,862)	(36,814)	(36,251)	(35,688)	(35,125)	(34,562)
Op. Exp. Impact - Jefferson Facil.	$ 3,626	$ 5,250	$ 6,873	$ 8,497	$ 10,120	$ 10,937	$ 11,269	$ 11,601	$ 11,933	$ 12,265
NOI Impact - Jefferson Facilities	$ (3,626)	$ (5,250)	$ (6,873)	$ (8,497)	$ (10,120)	$ (10,937)	$ (11,269)	$ (11,601)	$ (11,933)	$ (12,265)
Property Taxes:										
UPIS	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Less: Accumulated Dep.	1,141,624	1,197,313	1,253,002	1,308,691	1,364,380	1,420,069	1,475,758	1,531,447	1,587,136	1,642,825
Property Tax Basis	$ 3,781,776	$ 3,726,087	$ 3,670,398	$ 3,614,709	$ 3,559,020	$ 3,503,331	$ 3,447,642	$ 3,391,953	$ 3,336,264	$ 3,280,575
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 26,317	$ 25,930	$ 25,542	$ 25,155	$ 24,767	$ 24,380	$ 23,992	$ 23,605	$ 23,217	$ 22,830
Interest Synchronization:										
Rate Base	$ 2,671,053	$ 2,561,647	$ 2,452,241	$ 2,342,835	$ 2,233,429	$ 2,171,644	$ 2,138,432	$ 2,105,220	$ 2,072,008	$ 2,038,796
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 112,184	$ 107,589	$ 102,994	$ 98,399	$ 93,804	$ 91,209	$ 89,814	$ 88,419	$ 87,024	$ 85,629
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (45,280)	$ (43,426)	$ (41,571)	$ (39,716)	$ (37,862)	$ (36,814)	$ (36,251)	$ (35,688)	$ (35,125)	$ (34,562)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Line-to-55.

20202

KENTUCKY-AMERICAN WATER COMPANY

Bluegrass Water Project

Rate Base: Jefferson County Line to Highway 55

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Rate Base Additions:										
Utility Plant in Service	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Rate Base Deductions:										
Accumulated Depreciation	$ 1,698,514	$ 1,754,203	$ 1,809,892	$ 1,865,581	$ 1,921,270	$ 1,976,959	$ 2,032,648	$ 2,088,337	$ 2,144,026	$ 2,199,715
Accumulated Deferred Taxes	1,219,302	1,196,825	1,174,348	1,151,871	1,129,394	1,106,917	1,084,440	1,061,963	1,039,486	1,017,009
Total Rate Base Deductions	$ 2,917,816	$ 2,951,028	$ 2,984,240	$ 3,017,452	$ 3,050,664	$ 3,083,876	$ 3,117,088	$ 3,150,300	$ 3,183,512	$ 3,216,724
Net Investment Rate Base	$ 2,005,584	$ 1,972,372	$ 1,939,160	$ 1,905,948	$ 1,872,736	$ 1,839,524	$ 1,806,312	$ 1,773,100	$ 1,739,888	$ 1,706,676
Net Investment Rate Base	$ 2,005,584	$ 1,972,372	$ 1,939,160	$ 1,905,948	$ 1,872,736	$ 1,839,524	$ 1,806,312	$ 1,773,100	$ 1,739,888	$ 1,706,676
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 172,480	$ 169,624	$ 166,768	$ 163,912	$ 161,055	$ 158,199	$ 155,343	$ 152,487	$ 149,630	$ 146,774
NOI Impact - Jefferson Facilities	(12,596)	(12,928)	(13,260)	(13,592)	(13,924)	(14,256)	(14,588)	(14,919)	(15,252)	(15,583)
NOI Deficiency	$ 185,076	$ 182,552	$ 180,028	$ 177,504	$ 174,979	$ 172,455	$ 169,931	$ 167,406	$ 164,882	$ 162,357
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 311,616	$ 307,366	$ 303,117	$ 298,867	$ 294,616	$ 290,366	$ 286,116	$ 281,865	$ 277,615	$ 273,364
Annual Debt Service:	0	0	0	0	0	0	0	0	0	0
Savings	$ 311,616	$ 307,366	$ 303,117	$ 298,867	$ 294,616	$ 290,366	$ 286,116	$ 281,865	$ 277,615	$ 273,364

Cost of Facilities:	$ 4,923,400
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$357,680

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689	$ 55,689
Property Taxes	22,442	22,054	21,667	21,279	20,892	20,504	20,117	19,729	19,342	18,954
Impact on Operating Exp.	$ 78,131	$ 77,743	$ 77,356	$ 76,968	$ 76,581	$ 76,193	$ 75,806	$ 75,418	$ 75,031	$ 74,643
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 46,595	$ 46,364	$ 46,133	$ 45,902	$ 45,671	$ 45,440	$ 45,209	$ 44,977	$ 44,747	$ 44,515
Inc. Taxes - Interest Synch.	(33,999)	(33,436)	(32,873)	(32,310)	(31,747)	(31,184)	(30,621)	(30,058)	(29,495)	(28,932)
Op. Exp. Impact - Jefferson Facil.	$ 12,596	$ 12,928	$ 13,260	$ 13,592	$ 13,924	$ 14,256	$ 14,588	$ 14,919	$ 15,252	$ 15,583
NOI Impact - Jefferson Facilities	$ (12,596)	$ (12,928)	$ (13,260)	$ (13,592)	$ (13,924)	$ (14,256)	$ (14,588)	$ (14,919)	$ (15,252)	$ (15,583)
Property Taxes:										
UPIS	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400	$ 4,923,400
Less: Accumulated Dep.	1,698,514	1,754,203	1,809,892	1,865,581	1,921,270	1,976,959	2,032,648	2,088,337	2,144,026	2,199,715
Property Tax Basis	$ 3,224,886	$ 3,169,197	$ 3,113,508	$ 3,057,819	$ 3,002,130	$ 2,946,441	$ 2,890,752	$ 2,835,063	$ 2,779,374	$ 2,723,685
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 22,442	$ 22,054	$ 21,667	$ 21,279	$ 20,892	$ 20,504	$ 20,117	$ 19,729	$ 19,342	$ 18,954
Interest Synchronization:										
Rate Base	$ 2,005,584	$ 1,972,372	$ 1,939,160	$ 1,905,948	$ 1,872,736	$ 1,839,524	$ 1,806,312	$ 1,773,100	$ 1,739,888	$ 1,706,676
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 84,235	$ 82,840	$ 81,445	$ 80,050	$ 78,655	$ 77,260	$ 75,865	$ 74,470	$ 73,075	$ 71,680
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (33,999)	$ (33,436)	$ (32,873)	$ (32,310)	$ (31,747)	$ (31,184)	$ (30,621)	$ (30,058)	$ (29,495)	$ (28,932)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Line-to-55.

00203

		40 Year Totals	NPV
Rate Base Additions:			
Utility Plant in Service			
Rate Base Deductions:			
Accumulated Depreciation		$ 2,199,715	
Accumulated Deferred Taxes		$ 1,017,009	
Total Rate Base Deductions			
Net Investment Rate Base			
Net Investment Rate Base			
Multiplied by: Rate of Return			
Required NOI			
NOI Impact - Jefferson Facilities			
NOI Deficiency			
Multiplied by: Gross-up Factor			
Revenue Requriement		$ 16,962,301	$6,201,870
Annual Debt Service:		$10,730,400	$4,026,684
Savings		$ 6,231,901	$2,175,186

Cost of Facilities:	$ 4,923,400
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$357,680

Operating Revenue	
Operating Expenses:	
Depreciation	
Property Taxes	
Impact on Operating Exp.	
Multiplied by: Tax Reciprocal	
Net Impact on Operating Exp.	
Inc. Taxes - Interest Synch.	
Op. Exp. Impact - Jefferson Facil.	
NOI Impact - Jefferson Facilities	
Property Taxes:	
UPIS	
Less: Accumulated Dep.	
Property Tax Basis	
Multiplied by: Tax Rate	
Annual Property Tax Exp	
Interest Synchronization:	
Rate Base	
Multiplied by: Weighted Debt Rate	
Interest Synchronization	
Multiplied by: Comp. Tax Rate	
Income Taxes - Interest Synch.	

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Line-to-55.

KENTUCKY-AMERICAN WATER COMPANY
Bluegrass Water Project
Rate Base: English Station to Highway 55

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Rate Base Additions:										
Utiltiy Plant in Service	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Rate Base Deductions:										
Accumulated Depreciation	$ 57,313	$ 171,938	$ 286,563	$ 401,188	$ 515,813	$ 630,438	$ 745,063	$ 859,688	$ 974,313	$ 1,088,938
Accumulated Deferred Taxes	74,887	185,454	296,021	406,588	517,155	627,722	738,289	848,856	959,423	1,069,990
Total Rate Base Deductions	$ 132,200	$ 357,392	$ 582,584	$ 807,776	$ 1,032,968	$ 1,258,160	$ 1,483,352	$ 1,708,544	$ 1,933,736	$ 2,158,928
Net Investment Rate Base	$ 9,979,792	$ 9,754,600	$ 9,529,408	$ 9,304,216	$ 9,079,024	$ 8,853,832	$ 8,628,640	$ 8,403,448	$ 8,178,256	$ 7,953,064
Net Investment Rate Base	$ 9,979,792	$ 9,754,600	$ 9,529,408	$ 9,304,216	$ 9,079,024	$ 8,853,832	$ 8,628,640	$ 8,403,448	$ 8,178,256	$ 7,953,064
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 858,262	$ 838,896	$ 819,529	$ 800,163	$ 780,796	$ 761,430	$ 742,063	$ 722,697	$ 703,330	$ 683,964
NOI Impact - Jefferson Facilities	93,271	55,749	52,408	49,066	45,725	42,383	39,041	35,699	32,358	29,016
NOI Deficiency	$ 764,991	$ 783,147	$ 767,121	$ 751,097	$ 735,071	$ 719,047	$ 703,022	$ 686,998	$ 670,972	$ 654,948
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 1,288,031	$ 1,318,600	$ 1,291,617	$ 1,264,637	$ 1,237,654	$ 1,210,674	$ 1,183,692	$ 1,156,712	$ 1,129,729	$ 1,102,749
Annual Debt Service:	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625
Savings	$ 553,406	$ 583,975	$ 556,992	$ 530,012	$ 503,029	$ 476,049	$ 449,067	$ 422,087	$ 395,104	$ 368,124

Cost of Facilities:	$ 10,111,992
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$734,625

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 57,313	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625
Property Taxes	69,971	69,173	68,375	67,577	66,780	65,982	65,184	64,387	63,589	62,791
Impact on Operating Exp.	$ 127,284	$ 183,798	$ 183,000	$ 182,202	$ 181,405	$ 180,607	$ 179,809	$ 179,012	$ 178,214	$ 177,416
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 75,909	$ 109,613	$ 109,137	$ 108,661	$ 108,185	$ 107,709	$ 107,234	$ 106,758	$ 106,282	$ 105,806
Inc. Taxes - Interest Synch.	(169,180)	(165,362)	(161,545)	(157,727)	(153,910)	(150,092)	(146,275)	(142,457)	(138,640)	(134,822)
Op. Exp. Impact - Jefferson Facil.	$ (93,271)	$ (55,749)	$ (52,408)	$ (49,066)	$ (45,725)	$ (42,383)	$ (39,041)	$ (35,699)	$ (32,358)	$ (29,016)
NOI Impact - Jefferson Facilities	$ 93,271	$ 55,749	$ 52,408	$ 49,066	$ 45,725	$ 42,383	$ 39,041	$ 35,699	$ 32,358	$ 29,016
Property Taxes:										
UPIS	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Less: Accumulated Dep.	57,313	171,938	286,563	401,188	515,813	630,438	745,063	859,688	974,313	1,088,938
Property Tax Basis	$ 10,054,679	$ 9,940,054	$ 9,825,429	$ 9,710,804	$ 9,596,179	$ 9,481,554	$ 9,366,929	$ 9,252,304	$ 9,137,679	$ 9,023,054
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 69,971	$ 69,173	$ 68,375	$ 67,577	$ 66,780	$ 65,982	$ 65,184	$ 64,387	$ 63,589	$ 62,791
Interest Synchronization:										
Rate Base	$ 9,979,792	$ 9,754,600	$ 9,529,408	$ 9,304,216	$ 9,079,024	$ 8,853,832	$ 8,628,640	$ 8,403,448	$ 8,178,256	$ 7,953,064
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 419,151	$ 409,693	$ 400,235	$ 390,777	$ 381,319	$ 371,861	$ 362,403	$ 352,945	$ 343,487	$ 334,029
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (169,180)	$ (165,362)	$ (161,545)	$ (157,727)	$ (153,910)	$ (150,092)	$ (146,275)	$ (142,457)	$ (138,640)	$ (134,822)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Total.

00205

KENTUCKY-AMER[illegible] WATER COMPANY
Bluegras[illegible] ir Project
Rate Base: Englis[illegible] on to Highway 55

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Rate Base Additions:										
Utility Plant in Service	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Rate Base Deductions:										
Accumulated Depreciation	$ 1,203,563	$ 1,318,188	$ 1,432,813	$ 1,547,438	$ 1,662,063	$ 1,776,688	$ 1,891,313	$ 2,005,938	$ 2,120,563	$ 2,235,188
Accumulated Deferred Taxes	1,180,557	1,291,124	1,401,691	1,512,258	1,622,825	1,733,392	1,843,959	1,954,526	2,065,093	2,175,660
Total Rate Base Deductions	$ 2,384,120	$ 2,609,312	$ 2,834,504	$ 3,059,696	$ 3,284,888	$ 3,510,080	$ 3,735,272	$ 3,960,464	$ 4,185,656	$ 4,410,848
Net Investment Rate Base	$ 7,727,872	$ 7,502,680	$ 7,277,488	$ 7,052,296	$ 6,827,104	$ 6,601,912	$ 6,376,720	$ 6,151,528	$ 5,926,336	$ 5,701,144
Net Investment Rate Base	$ 7,727,872	$ 7,502,680	$ 7,277,488	$ 7,052,296	$ 6,827,104	$ 6,601,912	$ 6,376,720	$ 6,151,528	$ 5,926,336	$ 5,701,144
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 664,597	$ 645,230	$ 625,864	$ 606,497	$ 587,131	$ 567,764	$ 548,398	$ 529,031	$ 509,665	$ 490,298
NOI Impact - Jefferson Facilities	25,674	22,332	18,991	15,648	12,307	8,965	5,623	2,281	(1,060)	(4,403)
NOI Deficiency	$ 638,923	$ 622,898	$ 606,873	$ 590,849	$ 574,824	$ 558,799	$ 542,775	$ 526,750	$ 510,725	$ 494,701
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 1,075,767	$ 1,048,786	$ 1,021,804	$ 994,824	$ 967,843	$ 940,861	$ 913,881	$ 886,899	$ 859,918	$ 832,938
Annual Debt Service:	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625
Savings	$ 341,142	$ 314,161	$ 287,179	$ 260,199	$ 233,218	$ 206,236	$ 179,256	$ 152,274	$ 125,293	$ 98,313

Cost of Facilities:	$ 10,111,992
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$734,625

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625
Property Taxes	61,994	61,196	60,398	59,601	58,803	58,005	57,208	56,410	55,612	54,815
Impact on Operating Exp.	$ 176,619	$ 175,821	$ 175,023	$ 174,226	$ 173,428	$ 172,630	$ 171,833	$ 171,035	$ 170,237	$ 169,440
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 105,331	$ 104,855	$ 104,379	$ 103,904	$ 103,428	$ 102,952	$ 102,477	$ 102,001	$ 101,525	$ 101,050
Inc. Taxes - Interest Synch.	(131,005)	(127,187)	(123,370)	(119,552)	(115,735)	(111,917)	(108,100)	(104,282)	(100,465)	(96,647)
Op. Exp. Impact - Jefferson Facil.	$ (25,674)	$ (22,332)	$ (18,991)	$ (15,648)	$ (12,307)	$ (8,965)	$ (5,623)	$ (2,281)	$ 1,060	$ 4,403
NOI Impact - Jefferson Facilities	$ 25,674	$ 22,332	$ 18,991	$ 15,648	$ 12,307	$ 8,965	$ 5,623	$ 2,281	$ (1,060)	$ (4,403)
Property Taxes:										
UPIS	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Less: Accumulated Dep.	1,203,563	1,318,188	1,432,813	1,547,438	1,662,063	1,776,688	1,891,313	2,005,938	2,120,563	2,235,188
Property Tax Basis	$ 8,908,429	$ 8,793,804	$ 8,679,179	$ 8,564,554	$ 8,449,929	$ 8,335,304	$ 8,220,679	$ 8,106,054	$ 7,991,429	$ 7,876,804
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 61,994	$ 61,196	$ 60,398	$ 59,601	$ 58,803	$ 58,005	$ 57,208	$ 56,410	$ 55,612	$ 54,815
Interest Synchronization:										
Rate Base	$ 7,727,872	$ 7,502,680	$ 7,277,488	$ 7,052,296	$ 6,827,104	$ 6,601,912	$ 6,376,720	$ 6,151,528	$ 5,926,336	$ 5,701,144
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 324,571	$ 315,113	$ 305,654	$ 296,196	$ 286,738	$ 277,280	$ 267,822	$ 258,364	$ 248,906	$ 239,448
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (131,005)	$ (127,187)	$ (123,370)	$ (119,552)	$ (115,735)	$ (111,917)	$ (108,100)	$ (104,282)	$ (100,465)	$ (96,647)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Total.

KENTUCKY-AMERICAN WATER COMPANY
Bluegrass Water Project
Rate Base: English Station to Highway 55

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Rate Base Additions:										
Utility Plant in Service	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Rate Base Deductions:										
Accumulated Depreciation	$ 2,349,813	$ 2,464,438	$ 2,579,063	$ 2,693,688	$ 2,808,313	$ 2,922,938	$ 3,037,563	$ 3,152,188	$ 3,266,813	$ 3,381,438
Accumulated Deferred Taxes	2,286,227	2,396,794	2,507,361	2,617,928	2,728,495	2,741,042	2,694,776	2,648,510	2,602,244	2,555,978
Total Rate Base Deductions	$ 4,636,040	$ 4,861,232	$ 5,086,424	$ 5,311,616	$ 5,536,808	$ 5,663,980	$ 5,732,339	$ 5,800,698	$ 5,869,057	$ 5,937,416
Net Investment Rate Base	$ 5,475,952	$ 5,250,760	$ 5,025,568	$ 4,800,376	$ 4,575,184	$ 4,448,012	$ 4,379,653	$ 4,311,294	$ 4,242,935	$ 4,174,576
Net Investment Rate Base	$ 5,475,952	$ 5,250,760	$ 5,025,568	$ 4,800,376	$ 4,575,184	$ 4,448,012	$ 4,379,653	$ 4,311,294	$ 4,242,935	$ 4,174,576
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 470,932	$ 451,565	$ 432,199	$ 412,832	$ 393,466	$ 382,529	$ 376,650	$ 370,771	$ 364,892	$ 359,014
NOI Impact - Jefferson Facilities	(7,744)	(11,086)	(14,428)	(17,770)	(21,111)	(22,792)	(23,475)	(24,158)	(24,841)	(25,524)
NOI Deficiency	$ 478,676	$ 462,651	$ 446,627	$ 430,602	$ 414,577	$ 405,321	$ 400,125	$ 394,929	$ 389,733	$ 384,538
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 805,956	$ 778,975	$ 751,995	$ 725,013	$ 698,032	$ 682,447	$ 673,698	$ 664,950	$ 656,201	$ 647,454
Annual Debt Service:	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625	734,625
Savings	$ 71,331	$ 44,350	$ 17,370	$ (9,612)	$ (36,593)	$ (52,178)	$ (60,927)	$ (69,675)	$ (78,424)	$ (87,171)

Cost of Facilities:	$ 10,111,992
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$734,625

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:										
Depreciation	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625
Property Taxes	54,017	53,219	52,422	51,624	50,826	50,029	49,231	48,433	47,636	46,838
Impact on Operating Exp.	$ 168,642	$ 167,844	$ 167,047	$ 166,249	$ 165,451	$ 164,654	$ 163,856	$ 163,058	$ 162,261	$ 161,463
Multiplied by: Tax Reciprocal	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Net Impact on Operating Exp.	$ 100,574	$ 100,098	$ 99,623	$ 99,147	$ 98,671	$ 98,196	$ 97,720	$ 97,244	$ 96,768	$ 96,292
Inc. Taxes - Interest Synch.	(92,830)	(89,012)	(85,195)	(81,377)	(77,560)	(75,404)	(74,245)	(73,086)	(71,927)	(70,768)
Op. Exp. Impact - Jefferson Facil.	$ 7,744	$ 11,086	$ 14,428	$ 17,770	$ 21,111	$ 22,792	$ 23,475	$ 24,158	$ 24,841	$ 25,524
NOI Impact - Jefferson Facilities	$ (7,744)	$ (11,086)	$ (14,428)	$ (17,770)	$ (21,111)	$ (22,792)	$ (23,475)	$ (24,158)	$ (24,841)	$ (25,524)
Property Taxes:										
UPIS	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Less: Accumulated Dep.	2,349,813	2,464,438	2,579,063	2,693,688	2,808,313	2,922,938	3,037,563	3,152,188	3,266,813	3,381,438
Property Tax Basis	$ 7,762,179	$ 7,647,554	$ 7,532,929	$ 7,418,304	$ 7,303,679	$ 7,189,054	$ 7,074,429	$ 6,959,804	$ 6,845,179	$ 6,730,554
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 54,017	$ 53,219	$ 52,422	$ 51,624	$ 50,826	$ 50,029	$ 49,231	$ 48,433	$ 47,636	$ 46,838
Interest Synchronization:										
Rate Base	$ 5,475,952	$ 5,250,760	$ 5,025,568	$ 4,800,376	$ 4,575,184	$ 4,448,012	$ 4,379,653	$ 4,311,294	$ 4,242,935	$ 4,174,576
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 229,990	$ 220,532	$ 211,074	$ 201,616	$ 192,158	$ 186,817	$ 183,945	$ 181,074	$ 178,203	$ 175,332
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (92,830)	$ (89,012)	$ (85,195)	$ (81,377)	$ (77,560)	$ (75,404)	$ (74,245)	$ (73,086)	$ (71,927)	$ (70,768)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Total.

KENTUCKY-AMER[illegible] WATER COMPANY
Bluegras[illegible]r Project
Rate Base: Englis[illegible]ion to Highway 55

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Rate Base Additions:										
Utility Plant in Service	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Rate Base Deductions:										
Accumulated Depreciation	$ 3,496,063	$ 3,610,688	$ 3,725,313	$ 3,839,938	$ 3,954,563	$ 4,069,188	$ 4,183,813	$ 4,298,438	$ 4,413,063	$ 4,527,688
Accumulated Deferred Taxes	2,509,712	2,463,446	2,417,180	2,370,914	2,324,648	2,278,382	2,232,116	2,185,850	2,139,584	2,093,318
Total Rate Base Deductions	$ 6,005,775	$ 6,074,134	$ 6,142,493	$ 6,210,852	$ 6,279,211	$ 6,347,570	$ 6,415,929	$ 6,484,288	$ 6,552,647	$ 6,621,006
Net Investment Rate Base	$ 4,106,217	$ 4,037,858	$ 3,969,499	$ 3,901,140	$ 3,832,781	$ 3,764,422	$ 3,696,063	$ 3,627,704	$ 3,559,345	$ 3,490,986
Net Investment Rate Base	$ 4,106,217	$ 4,037,858	$ 3,969,499	$ 3,901,140	$ 3,832,781	$ 3,764,422	$ 3,696,063	$ 3,627,704	$ 3,559,345	$ 3,490,986
Multiplied by: Rate of Return	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%	8.60%
Required NOI	$ 353,135	$ 347,256	$ 341,377	$ 335,498	$ 329,619	$ 323,740	$ 317,861	$ 311,983	$ 306,104	$ 300,225
NOI Impact - Jefferson Facilities	(26,207)	(26,890)	(27,573)	(28,256)	(28,940)	(29,622)	(30,305)	(30,989)	(31,672)	(32,355)
NOI Deficiency	$ 379,342	$ 374,146	$ 368,950	$ 363,754	$ 358,559	$ 353,362	$ 348,166	$ 342,972	$ 337,776	$ 332,580
Multiplied by: Gross-up Factor	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990	1.68371990
Revenue Requriement	$ 638,706	$ 629,957	$ 621,208	$ 612,460	$ 603,713	$ 594,963	$ 586,214	$ 577,469	$ 568,720	$ 559,972
Annual Debt Service:	0	0	0	0	0	0	0	0	0	0
Savings	$ 638,706	$ 629,957	$ 621,208	$ 612,460	$ 603,713	$ 594,963	$ 586,214	$ 577,469	$ 568,720	$ 559,972

Cost of Facilities:	$ 10,111,992
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$734,625

Operating Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses:	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625	$ 114,625
Depreciation	46,040	45,243	44,445	43,647	42,850	42,052	41,254	40,457	39,659	38,861
Property Taxes	$ 160,665	$ 159,868	$ 159,070	$ 158,272	$ 157,475	$ 156,677	$ 155,879	$ 155,082	$ 154,284	$ 153,486
Impact on Operating Exp.	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%	59.63750%
Multiplied by: Tax Reciprocal	$ 95,817	$ 95,341	$ 94,865	$ 94,389	$ 93,914	$ 93,438	$ 92,962	$ 92,487	$ 92,011	$ 91,535
Net Impact on Operating Exp.	(69,610)	(68,451)	(67,292)	(66,133)	(64,974)	(63,816)	(62,657)	(61,498)	(60,339)	(59,180)
Inc. Taxes - Interest Synch.	$ 26,207	$ 26,890	$ 27,573	$ 28,256	$ 28,940	$ 29,622	$ 30,305	$ 30,989	$ 31,672	$ 32,355
Op. Exp. Impact - Jefferson Facil.	$ (26,207)	$ (26,890)	$ (27,573)	$ (28,256)	$ (28,940)	$ (29,622)	$ (30,305)	$ (30,989)	$ (31,672)	$ (32,355)
NOI Impact - Jefferson Facilities										
Property Taxes:										
UPIS	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992	$ 10,111,992
Less: Accumulated Dep.	3,496,063	3,610,688	3,725,313	3,839,938	3,954,563	4,069,188	4,183,813	4,298,438	4,413,063	4,527,688
Property Tax Basis	$ 6,615,929	$ 6,501,304	$ 6,386,679	$ 6,272,054	$ 6,157,429	$ 6,042,804	$ 5,928,179	$ 5,813,554	$ 5,698,929	$ 5,584,304
Multiplied by: Tax Rate	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959	0.006959
Annual Property Tax Exp	$ 46,040	$ 45,243	$ 44,445	$ 43,647	$ 42,850	$ 42,052	$ 41,254	$ 40,457	$ 39,659	$ 38,861
Interest Synchronization:										
Rate Base	$ 4,106,217	$ 4,037,858	$ 3,969,499	$ 3,901,140	$ 3,832,781	$ 3,764,422	$ 3,696,063	$ 3,627,704	$ 3,559,345	$ 3,490,986
Multiplied by: Weighted Debt Rate	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Interest Synchronization	$ 172,461	$ 169,590	$ 166,719	$ 163,848	$ 160,977	$ 158,106	$ 155,235	$ 152,364	$ 149,492	$ 146,621
Multiplied by: Comp. Tax Rate	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%	40.36250%
Income Taxes - Interest Synch.	$ (69,610)	$ (68,451)	$ (67,292)	$ (66,133)	$ (64,974)	$ (63,816)	$ (62,657)	$ (61,498)	$ (60,339)	$ (59,180)

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Total.

00208

KENTUCKY-AMER[illegible]WATER COMPANY
Bluegras[illegible]r Project
Rate Base: Englis[illegible]ion to Highway 55

		40 Year Totals	NPV	Check #
Rate Base Additions:				
Utiltiy Plant in Service				$ 10,111,992
Rate Base Deductions:				
Accumulated Depreciation				$ 4,527,687
Accumulated Deferred Taxes				2,093,333
Total Rate Base Deductions				$ 6,621,020
Net Investment Rate Base				$ 3,490,972
Net Investment Rate Base				$ 3,490,972
Multiplied by: Rate of Return				8.60%
Required NOI				$ 300,223
NOI Impact - Jefferson Facilities				(32,355)
NOI Deficiency				$ 332,578
Multiplied by: Gross-up Factor				1.68371990
Revenue Requriement	$	34,806,719	$12,733,195	$ 559,968
Annual Debt Service:		$22,038,750	$8,270,249	
Savings	$	12,766,969	$4,462,946	

Cost of Facilities:	$ 10,111,992
LWC Loan Term:	30
LWC Interest Rate:	6%
Annual Debt Service	$734,625

Operating Revenue
Operating Expenses:
  Depreciation
  Property Taxes
    Impact on Operating Exp.
Multiplied by: Tax Reciprocal
Net Impact on Operating Exp.
Inc. Taxes - Interest Synch.
Op. Exp. Impact - Jefferson Facil.
NOI Impact - Jefferson Facilities

Property Taxes:
  UPIS
  Less: Accumulated Dep.
  Property Tax Basis
  Multiplied by: Tax Rate
Annual Property Tax Exp

Interest Synchronization:
  Rate Base
  Multiplied by: Weighted Debt Rate
  Interest Synchronization
  Multiplied by: Comp. Tax Rate
Income Taxes - Interest Synch.

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: RB Total.

00209

ENGLISH STATION TO JEFFERSON COUNTY LINE:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Depreciation Basis of LWC Facilities	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592
Tax Depreciation Rates	2.500%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 124,865	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784
Less: Straight Line Depreciation (1st Year 1/2)	29,468	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936
Net Difference Between Book & Tax Dep.	$ 95,397	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848
Net Difference Between Book & Tax Dep.	$ 95,397	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 38,505	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850
Accumulated Deferred Income Tax - Dep	**$ 38,505**	**$ 95,355**	**$ 152,205**	**$ 209,055**	**$ 265,905**	**$ 322,755**	**$ 379,605**	**$ 436,455**	**$ 493,305**	**$ 550,155**
Accumulated Dep. - Tax Basis	$ 124,865	$ 324,649	$ 524,433	$ 724,217	$ 924,001	$ 1,123,785	$ 1,323,569	$ 1,523,353	$ 1,723,137	$ 1,922,921
Accumulated Dep. - Book Basis	**$ 29,468**	**$ 88,404**	**$ 147,340**	**$ 206,276**	**$ 265,212**	**$ 324,148**	**$ 383,084**	**$ 442,020**	**$ 500,956**	**$ 559,892**

JEFFERSON COUNTY LINE TO HIGHWAY 55:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Depreciation Basis of LWC Facilities	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Tax Depreciation Rates	2.500%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 117,985	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776
Less: Straight Line Depreciation (1st Year 1/2)	27,844	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689
Net Difference Between Book & Tax Dep.	$ 90,141	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087
Net Difference Between Book & Tax Dep.	$ 90,141	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 36,383	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717
Accumulated Deferred Income Tax - Dep	**$ 36,383**	**$ 90,100**	**$ 143,817**	**$ 197,534**	**$ 251,251**	**$ 304,968**	**$ 358,685**	**$ 412,402**	**$ 466,119**	**$ 519,836**
Accumulated Dep. - Tax Basis	$ 117,985	$ 306,761	$ 495,537	$ 684,313	$ 873,089	$ 1,061,865	$ 1,250,641	$ 1,439,417	$ 1,628,193	$ 1,816,969
Accumulated Dep. - Book Basis	**$ 27,844**	**$ 83,533**	**$ 139,222**	**$ 194,911**	**$ 250,600**	**$ 306,289**	**$ 361,978**	**$ 417,667**	**$ 473,356**	**$ 529,045**

ENGLISH STATION TO HIGHWAY 55:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Depreciation Basis of LWC Facilities	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992
Tax Depreciation Rates	2.500%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 242,850	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560
Less: Straight Line Depreciation (1st Year 1/2)	57,313	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625
Net Difference Between Book & Tax Dep.	$ 185,537	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935
Net Difference Between Book & Tax Dep.	$ 185,537	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 74,887	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567
Accumulated Deferred Income Tax - Dep	**$ 74,887**	**$ 185,454**	**$ 296,021**	**$ 406,588**	**$ 517,155**	**$ 627,722**	**$ 738,289**	**$ 848,856**	**$ 959,423**	**$ 1,069,990**
Accumulated Dep. - Tax Basis	$ 242,850	$ 631,410	$ 1,019,970	$ 1,408,530	$ 1,797,090	$ 2,185,650	$ 2,574,210	$ 2,962,770	$ 3,351,330	$ 3,739,890
Accumulated Dep. - Book Basis	**$ 57,313**	**$ 171,938**	**$ 286,563**	**$ 401,188**	**$ 515,813**	**$ 630,438**	**$ 745,063**	**$ 859,688**	**$ 974,313**	**$ 1,088,938**

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: Depreciation.

ENGLISH STATION TO JEFFERSON COUNTY LINE:

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Depreciation Basis of LWC Facilities	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784
Less: Straight Line Depreciation (1st Year 1/2)	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936
Net Difference Between Book & Tax Dep.	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848
Net Difference Between Book & Tax Dep.	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850
Accumulated Deferred Income Tax - Dep	**$ 607,005**	**$ 663,855**	**$ 720,705**	**$ 777,555**	**$ 834,405**	**$ 891,255**	**$ 948,105**	**$ 1,004,955**	**$ 1,061,805**	**$ 1,118,655**
Accumulated Dep. - Tax Basis	$ 2,122,705	$ 2,322,489	$ 2,522,273	$ 2,722,057	$ 2,921,841	$ 3,121,625	$ 3,321,409	$ 3,521,193	$ 3,720,977	$ 3,920,761
Accumulated Dep. - Book Basis	**$ 618,828**	**$ 677,764**	**$ 736,700**	**$ 795,636**	**$ 854,572**	**$ 913,508**	**$ 972,444**	**$ 1,031,380**	**$ 1,090,316**	**$ 1,149,252**

JEFFERSON COUNTY LINE TO HIGHWAY 55:

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Depreciation Basis of LWC Facilities	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776
Less: Straight Line Depreciation (1st Year 1/2)	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689
Net Difference Between Book & Tax Dep.	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087
Net Difference Between Book & Tax Dep.	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717
Accumulated Deferred Income Tax - Dep	**$ 573,553**	**$ 627,270**	**$ 680,987**	**$ 734,704**	**$ 788,421**	**$ 842,138**	**$ 895,855**	**$ 949,572**	**$ 1,003,289**	**$ 1,057,006**
Accumulated Dep. - Tax Basis	$ 2,005,745	$ 2,194,521	$ 2,383,297	$ 2,572,073	$ 2,760,849	$ 2,949,625	$ 3,138,401	$ 3,327,177	$ 3,515,953	$ 3,704,729
Accumulated Dep. - Book Basis	$ 584,734	$ 640,423	$ 696,112	$ 751,801	$ 807,490	$ 863,179	$ 918,868	$ 974,557	$ 1,030,246	$ 1,085,935

ENGLISH STATION TO HIGHWAY 55:

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Depreciation Basis of LWC Facilities	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Accelerated Income Tax Depreciation	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560
Less: Straight Line Depreciation (1st Year 1/2)	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625
Net Difference Between Book & Tax Dep.	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935
Net Difference Between Book & Tax Dep.	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567
Accumulated Deferred Income Tax - Dep	**$ 1,180,557**	**$ 1,291,124**	**$ 1,401,691**	**$ 1,512,258**	**$ 1,622,825**	**$ 1,733,392**	**$ 1,843,959**	**$ 1,954,526**	**$ 2,065,093**	**$ 2,175,660**
Accumulated Dep. - Tax Basis	$ 4,128,450	$ 4,517,010	$ 4,905,570	$ 5,294,130	$ 5,682,690	$ 6,071,250	$ 6,459,810	$ 6,848,370	$ 7,236,930	$ 7,625,490
Accumulated Dep. - Book Basis	**$ 1,203,563**	**$ 1,318,188**	**$ 1,432,813**	**$ 1,547,438**	**$ 1,662,063**	**$ 1,776,688**	**$ 1,891,313**	**$ 2,005,938**	**$ 2,120,563**	**$ 2,235,188**

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: Depreciation.

KENTUCKY-AME[illegible] WATER COMPANY
Bluegra[illegible] r Project
Depreciati[illegible] red Taxes

P[illegible] 4.

ENGLISH STATION TO JEFFERSON COUNTY LINE:

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Depreciation Basis of LWC Facilities	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	1.500%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 199,784	$ 74,919	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936
Net Difference Between Book & Tax Dep.	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 15,983	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)
Net Difference Between Book & Tax Dep.	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 140,848	$ 15,983	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 56,850	$ 6,451	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)
Accumulated Deferred Income Tax - Dep	$ 1,175,505	$ 1,232,355	$ 1,289,205	$ 1,346,055	$ 1,402,905	$ 1,409,356	$ 1,385,568	$ 1,361,780	$ 1,337,992	$ 1,314,204
Accumulated Dep. - Tax Basis	$ 4,120,545	$ 4,320,329	$ 4,520,113	$ 4,719,897	$ 4,919,681	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600
Accumulated Dep. - Book Basis	$ 1,208,188	$ 1,267,124	$ 1,326,060	$ 1,384,996	$ 1,443,932	$ 1,502,868	$ 1,561,804	$ 1,620,740	$ 1,679,676	$ 1,738,612

JEFFERSON COUNTY LINE TO HIGHWAY 55:

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Depreciation Basis of LWC Facilities	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	1.500%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 188,776	$ 70,791	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689
Net Difference Between Book & Tax Dep.	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 15,102	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)
Net Difference Between Book & Tax Dep.	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 133,087	$ 15,102	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 53,717	$ 6,096	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)
Accumulated Deferred Income Tax - Dep	$ 1,110,723	$ 1,164,440	$ 1,218,157	$ 1,271,874	$ 1,325,591	$ 1,331,687	$ 1,309,210	$ 1,286,733	$ 1,264,256	$ 1,241,779
Accumulated Dep. - Tax Basis	$ 3,893,505	$ 4,082,281	$ 4,271,057	$ 4,459,833	$ 4,648,609	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Accumulated Dep. - Book Basis	$ 1,141,624	$ 1,197,313	$ 1,253,002	$ 1,308,691	$ 1,364,380	$ 1,420,069	$ 1,475,758	$ 1,531,447	$ 1,587,136	$ 1,642,825

ENGLISH STATION TO HIGHWAY 55:

	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Depreciation Basis of LWC Facilities	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992
Tax Depreciation Rates	4.00%	4.00%	4.00%	4.00%	4.00%	1.500%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 388,560	$ 145,710	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625
Net Difference Between Book & Tax Dep.	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 31,085	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)
Net Difference Between Book & Tax Dep.	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 273,935	$ 31,085	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 110,567	$ 12,547	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)
Accumulated Deferred Income Tax - Dep	$ 2,286,227	$ 2,396,794	$ 2,507,361	$ 2,617,928	$ 2,728,496	$ 2,741,042	$ 2,694,776	$ 2,648,510	$ 2,602,244	$ 2,555,978
Accumulated Dep. - Tax Basis	$ 8,014,050	$ 8,402,610	$ 8,791,170	$ 9,179,730	$ 9,568,290	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000
Accumulated Dep. - Book Basis	$ 2,349,813	$ 2,464,438	$ 2,579,063	$ 2,693,688	$ 2,808,313	$ 2,922,938	$ 3,037,563	$ 3,152,188	$ 3,266,813	$ 3,381,438

Date: 6/12/98,
Workbook: LWCFinancing-Model,
Sheet: Depreciation,

00212

ENGLISH STATION TO JEFFERSON COUNTY LINE:

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Depreciation Basis of LWC Facilities	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592	$ 4,994,592
Tax Depreciation Rates	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936	58,936
Net Difference Between Book & Tax Dep.	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)
Net Difference Between Book & Tax Dep.	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)	$ (58,936)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)	$ (23,788)
Accumulated Deferred Income Tax - Dep	$ 1,290,416	$ 1,266,628	$ 1,242,840	$ 1,219,052	$ 1,195,264	$ 1,171,476	$ 1,147,688	$ 1,123,900	$ 1,100,112	$ 1,076,324
Accumulated Dep. - Tax Basis	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600	$ 4,994,600
Accumulated Dep. - Book Basis	$ 1,797,548	$ 1,856,484	$ 1,915,420	$ 1,974,356	$ 2,033,292	$ 2,092,228	$ 2,151,164	$ 2,210,100	$ 2,269,036	$ 2,327,972

JEFFERSON COUNTY LINE TO HIGHWAY 55:

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Depreciation Basis of LWC Facilities	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Tax Depreciation Rates	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689	55,689
Net Difference Between Book & Tax Dep.	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)
Net Difference Between Book & Tax Dep.	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)	$ (55,689)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)	$ (22,477)
Accumulated Deferred Income Tax - Dep	$ 1,219,302	$ 1,196,825	$ 1,174,348	$ 1,151,871	$ 1,129,394	$ 1,106,917	$ 1,084,440	$ 1,061,963	$ 1,039,486	$ 1,017,009
Accumulated Dep. - Tax Basis	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400	$ 4,719,400
Accumulated Dep. - Book Basis	$ 1,698,514	$ 1,754,203	$ 1,809,892	$ 1,865,581	$ 1,921,270	$ 1,976,959	$ 2,032,648	$ 2,088,337	$ 2,144,026	$ 2,199,715

ENGLISH STATION TO HIGHWAY 55:

	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Depreciation Basis of LWC Facilities	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992	$ 9,713,992
Tax Depreciation Rates	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Accelerated Income Tax Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less: Straight Line Depreciation (1st Year 1/2)	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625	114,625
Net Difference Between Book & Tax Dep.	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)
Net Difference Between Book & Tax Dep.	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)	$ (114,625)
Multiplied by: Composite Tax Rate	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%	40.3625%
Deferred Income Tax Exp - Dep	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)	$ (46,266)
Accumulated Deferred Income Tax - Dep	$ 2,509,712	$ 2,463,446	$ 2,417,180	$ 2,370,914	$ 2,324,648	$ 2,278,382	$ 2,232,116	$ 2,185,850	$ 2,139,584	$ 2,093,318
Accumulated Dep. - Tax Basis	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000	$ 9,714,000
Accumulated Dep. - Book Basis	$ 3,496,063	$ 3,610,688	$ 3,725,313	$ 3,839,938	$ 3,954,563	$ 4,069,188	$ 4,183,813	$ 4,298,438	$ 4,413,063	$ 4,527,688

Date: 6/12/98.
Workbook: LWCFinancing-Model.
Sheet: Depreciation.

BLUEGRASS WATER SUPPLY PROJECT

KENTUCKY AMERICAN WATER COMPANY
AND
LOUISVILLE WATER COMPANY
WATER SUPPLY PROPOSAL

MAY 22, 1998

ISSUES

- 1998 Contract binds Louisville Water Company (LWC) to a three to five year commitment to reserve production and transmission capacity for Kentucky American Water Company (KAWC), until the Public Service Commission (PSC) approves the pipeline and all appeals are exhausted.
- LWC desires to protect franchise area rights provided through KRS 96.265 to serve Jefferson County and all adjacent counties, including Shelby County.
- LWC currently provides wholesale water service to the North Shelby Water District under a 40-year contract.
- LWC currently provides wholesale water service to the West Shelby Water District under a 40-year contract.
- By year 2010, Shelbyville will no longer provide water to NSWD and WSWD under contract and LWC desires to protect water service opportunities to these water districts.
- The current water demand in Shelby County cannot justify LWC's investment in Shelby County at this time. The investment in pumping, storage, and pipe upsizing would exceed $10 million.

PROPOSAL

Contract to provide the following technical components:

1. Delivery point and master meter at the Jefferson County line, near Interstate 64.
2. LWC will design, construct, and own 10,200 feet of 60-inch main along I-265 and 25,200 feet of 36-inch main along I-64 to the Jefferson/Shelby County line.
3. LWC will pay for incremental upsizing from 36-inch to 60-inch (material and construction costs).
4. KAWC will pay for 35,400 feet of 36-inch main from the English Station Reservoir to Delivery Point.
5. Design flow will consist of 23 MGD, (5 fps), a minimum operating pressure of 30 psi, and a maximum operating pressure of 175 psi.
6. LWC allowed connections to distribution system inside Jefferson County
7. The first pump station will be located in Shelby County, near I-64 and the Jefferson/Shelby County line.
8. LWC to negotiate with PDR/Gannett-Fleming for design services to expedite project design and coordination.
9. The design and final cost estimate will be complete by October 1998.
10. Easements platted/surveyed and appraised by October 1998.

CONTRACT OPTION

1. LWC may upsize the pipeline and extend the delivery point east to Kentucky Highway 55.
2. LWC would own the pipeline, pumping, and storage to the delivery point.
3. LWC would design and construct the Jefferson County BPS at I-265 and Shelby County Storage at Highway 1848 or Highway 55.
4. LWC will pay for any pipe upsizing (to 42" or 48"), additional booster pump station, and storage to provide up to 35 MGD capacity to Highway 55 at I-64, and any pump station relocation/design costs.
5. KAWC would move the pump station from the Jefferson/Shelby County line to the Highway 55 delivery point.
6. Design flow up to 35 MGD (8 fps in 36"or 5 fps in 42"), maximum pressure 175 psi.
7. Option must be exercised prior to PSC approval and settlement of any appeals.

LWC ADVANTAGES WITH OPTION:

1. Protects LWC interests to serve western Shelby County customers.
2. Provides high pressure service to eastern Jefferson County.
3. Reduces low suction pressure operating risk along the Jefferson County portion of pipeline.
4. Provides Interstate accessibility to pump station and storage sites.
5. Improves pumping efficiencies, reduces operating costs.
6. Improves reliability of pump operations.
7. Reduces surge risk.
8. Positions pipeline project for future water sales.
9. Provides flexibility on Jefferson County route (to minimize easement and construction costs).

KAWC ADVANTAGES WITH OPTION:

1. Reduces operating risk of two pump stations by having three lifts.
2. Reduces operating cost of lower head pump station.
3. Reduces pipeline pressures to less than 175 psi (from above 275 psi).
4. Reduces pressure surge operating risks and associated surge costs.
5. Reduced pressure class pipe resulting in lower pipeline and pump station costs.
6. Accessibility to Shelby County pump station for maintenance and chemical deliveries, closer to Lexington.
7. Available power to pump station, 480 volt electric substations available at Joyes Station Rd.
8. Tax exempt financing of additional 40,000 feet of 36-inch pipeline.
9. Cost sharing for additional capacity to Highway 55.
10. Additional 12 MGD flow availability at Highway 55 for future sales or conditions exceeding 23 MGD drought demand with no additional cost to justify to KY PSC.

Right of first refusal
to purchase capacity in
upsizing

Bluegrass Water Supply Project Alternatives	
Scenario A	**Scenario B**
LWC Ownership: English Station to US Hwy 55	LWC Ownership: English Station to Jefferson/Shelby Co Line
KAWC Ownership: US Hwy 55 to Lexington	KAWC Ownership: Jefferson/Shelby County Line to Lexington
LWC Length: 74,700 feet (14.1 miles) (I-64)	LWC Length: 35,400 feet (6.7 miles) (US 60 or I-64)
KAWC Length: 237,700 feet (45.0 miles) (I-64)	KAWC Length: 277,000 feet (52.4 miles) (I-64)
Size: 36-inch minimum (upsize potential to 42" or 48")	Size: 36-inch
Capacity: 23 MGD (up to 40 MGD with main upsizing)	Capacity: 23 MGD
Pump Stations: 2 (Shelby County and Ky River)	Pump Stations: 2 (Shelby County and Ky River)
Advantages/Disadvantages:	**Advantages/Disadvantages:**
1. Pressure > 40 psi along entire route	1. Pressure < 30 psi in Jefferson County
2. Pressure < 200 psi along entire route	2. Pressure > 250 psi in Shelby County
3. LWC BPS at I-265 and I-64	3. Requires 3rd BPS in Jefferson County
4. KAWC BPS at Hwy 55 and at Kentucky River	4. Poor access for power and chemical delivery
5. Cross country easements (< $20,000/acre land value)	5. US 60 Easement Costs (>$50,000/acre land value)
6. Parallel I-64 and LG&E Gas Line (improved constructability)	6. US 60 Route Constructability (RR, Creek, trees, terrain, pipe storage)
7. LWC to upsize to 42" or 48" main for up to 40 MGD capacity	7. Maximum capacity of 23 MGD
8. LWC shares in cost of BPS in Jefferson County	8. Minimizes KAWC investment in Jefferson County
9. Lower Operating Risks (< 200 psi pressure)	
10. Lower construction costs for BPS, Pipe, Valves, and Surge Relief	
11. Opportunity for Shelby Water Utilities to participate in storage, pumping, upsizing	
12. Improved WQ due to potential sales along route	
13. Shelby County buy-in to project	
14. Takes advantage of natural terrain for location of BPS, master meter, and future storage	
15. Available power substations for Jefferson (Pope Lick) and Shelby (Joyes Station) BPS	
16. Allows KAWC to reserve additional capacity in future due to upsizing by LWC	
17. BPS, Storage, Delivery Point Master Meter all near Interstate access via interchange.	
18. KAWC direct project costs reduced; shifted to LWC through tax-exempt financing	

5/22/98

~~Story of Vacation to Bob~~

Talk to Ed about LWC carrying cost during const. TAX-EXEMPT will be taken down, invested, — we will get benefit of int income.

"Bob agreed that we could reserve 23 with right of first refusal."

GH They will discuss a refunding concept for add'l customers on the "OPTION".

Greg is clear that he understands we will have a 23 MG reserve w/o paying for it

Also, J.H. said under demand urgent scenario, KAWC would be treated equally.

P

DRAFT

Louisville Water Company

Wholesale Rate Alternatives
Proposal to
Kentucky-American Water Company

Points to think about
mid point reopener
True up OK

Table of Contents

DRAFT

KAWC Customer Interests Profile.....3
LWC Customer Interests Profile.....4
Controlled Growth And Conservation Advocate Interests Profile.....5
State Water Customer Interest Profile.....6
Louisville Water Company
Service Area Profile.....7
Water Rate Alternatives.....8
Why Alternative Rate Option For Kentucky-American Water Company?.....9
Standard Wholesale Rate.....10
Standard Wholesale Rate Sample Bill.....11
Commitments to
Standard Wholesale Customer.....12
Reserved Capacity Rate.....13
Reserved Capacity Rate Sample Bill.....14
Commitments to
Reserved Capacity Customers.....15
Other Factors.....16
Conclusion.....17

00219

DRAFT

KAWC Customer Interests Profile

- Limited Sources of Supply
- Growing System Requirements
- Continued High Quality Water
- Reliable Drought-Proof Supply
- Incremental Additions of Capacity
- Low Unit Cost of Water
- Predictable Future Costs

00220

DRAFT

LWC Customer Interests Profile

- Reserve Capacity Currently Available
- Seeking High-Volume Predictable-Demand Customers
- Recover Plant Investment Over Larger Sales Base
- Offset Low Growth System Requirements
- Offset Low Flow Plumbing Device Effects

00221

DRAFT

Controlled Growth And Conservation Advocate Interests Profile

- Lowest Cost Solution
- Participation In Demand Planning
- Allow for Flexible Future Solutions

00222

DRAFT

State Water Customer Interest Profile

- High Quality Water
- Reliable Supply
- Low Costs
- Choice of Supplier
- Local Control of Distribution Systems

00223

DRAFT

Louisville Water Company
Service Area Profile

- LWC is authorized to serve Jefferson County and adjoining counties on a retail basis and beyond on a wholesale basis
- LWC serves Jefferson County and parts of Bullitt and Oldham Counties on a retail basis. LWC operates and maintains KTWD#1 in Bullitt County. LWC provides wholesale serve to:
  - North Shelby and West Shelby in Shelby County
  - Taylorsville in Spencer County
  - Mt. Washington in Bullitt County
  - Shepherdsville and KTWD #2 through KTWD #1
- LWC has available production and transmission capacity that is not expected to be immediately needed by retail customers

00224

DRAFT

Water Rate Alternatives

- Standard Wholesale Water Rate
  - Established Rate As Approved By Board of Water Works for Existing Wholesale Customers
  - Premise - Service to Meet Wholesale Customer Needs as Established by the Usage of its Retail Customers
- Reserved Capacity Rate
  - Newly Developed Rate for Large Water Users With Minimum Daily Usage
  - Premise - Service to Meet Wholesale Customer Needs as Established in Advance Through Capacity Request for Fixed Length of Time

00225

DRAFT

Why Alternative Rate Option For Kentucky-American Water Company?

- Existing Wholesale Rate Class Dissimilar In Size And Demand From Kentucky-American Water Company:
  - Size

KAWC	3 - 10 MGD
Wholesale Rate Class	< 3 MGD

  - Maximum Day / Average Day

KAWC	1:1 to 5:1
Wholesale Rate Class	1.4:1

- Pricing set based on historical demand factors does not send time-relevant price signals during drought event
- Lengthy transmission line conducive to managed demand

00226

DRAFT

Standard Wholesale Rate

- Premise - Service to Meet Wholesale Customer Needs as Established by the Usage of its Retail Customers
- Cost Components:

Commodity Rate	$1.16 / TG
Elevated Service Area Surcharge	$0.19 / TG
• Total Commodity Charge	$1.35 / TG
• Customer Charge	$3.50 / MEU
• System Development Charge	$700.00 / MEU
• Extension of System Capital Contribution	

00227

DRAFT

Standard Wholesale Rate Sample Bill

Annual Water Bill	
Commodity Rate @ $1.16/TG	$1,270,200
Elevated Service Area Surcharge @ $0.19/TG	208,050
Total Annual Commodity Charge	$1,478,250
Customer Charge @ 3.50/MEU	$48,300
Total Annual Water Bill	$1,526,550

Initial Capital Outlay	
Extension of System Capital Contribution	$11,000,000
System Development Charge	$805,000
Total Initial Capital Outlay	$11,805,000

Assumptions:
Usage 3MGD (1,095,000 TG per year)
Equivalent Meter Units (1,150)

00228

DRAFT

Commitments to Standard Wholesale Customer

- Billings Based on Actual Water Usage
- Demand Factors Set Based on Wholesale Class
- Continuous Water Service

00229

DRAFT

Reserved Capacity Rate

- Premise - Service to Meet Wholesale Customer Needs as Established in Advanced Through Capacity Request
- Cost Components:
  - Operating Cost Component = (Customer Usage / System Usage) * (Total Operating Costs - Customer Costs - Retail Costs)
  - Depreciation Cost Component = (Reserved Capacity / System Capacity) * (Total Depreciation Costs - Customer Costs - Retail Costs)
  - Return on Plant Investment Component = (Reserved Capacity / System Capacity) * (Total Return on Plant Investment - Customer Costs - Retail Costs)
  - Customer Charge Based on Actual Charges from Metering, Billing, Collection, and Customer Specific Assets
  - Extension of System Financing Available

00230

DRAFT

Reserved Capacity Rate Sample Bill

Annual Water Bill

Operating Cost Component	$468,246
Depreciation Cost Component	136,417
Return on Plant Investment Component	528,516
Total Annual Commodity Charge	$1,133,180
Customer Charge	$48,300
Total Annual Water Bill	$1,181,480

Jack ? →

Bob will get back

Assumptions:
Usage 3MGD (1,095,000 TG per year)
Customer Charge $48,300
LWC System Capacity 240MGD
KAWC Reserved Capacity Request 6MGD

Annual Debt Service

Principal Amount $11,000,000 @ 6% for 20 Years	$959,030

P

00231

DRAFT

Commitments to Reserved Capacity Customers

- Billing Based on Combination of Actual Usage and Reserved Capacity as Established Through Customer Request
- Usage Above Reserved Capacity Establishes New Five-Year Minimum
- Minimum Usage At 3 MGD or 50 percent of Reserved Capacity, Whichever is Higher
- Water Service for Life of Contract

00232

DRAFT

Other Factors

- Acknowlegement that Adjoining Counties to be Served by LWC
- Peak Established on 24-Hour Midnight to Midnight Usage
- 5-Year Notice of Intent Prior to End of Contract
- 5-Year Capacity Reserve Estimates by KAWC (Non-Binding)
- 5-Year Forecast of Rates by LWC (Non-Binding)

00233

DRAFT

Conclusion

- Water Rate Alternatives Allow Customer to Select Option that Best Suits Their System Needs
- Standard Wholesale Water Rate Option Provides Service to Meet Wholesale Customer Needs as Established by the Usage of its Retail Customers: Higher Flexibility
- Reserved Capacity Water Rate Option Provides Service to Meet Wholesale Customer Needs as Established in Advance Through Capacity Request for Life of Contract

269-3782

Linda C. Bridwell, P.E.
Director of Engineering

MEMORANDUM

TO: Coleman Bush

FROM: Linda Bridwell

RE: Bluegrass Water Project

DATE: May 21, 1998

Coleman, what I have attempted to do is compile a projection of how often we would need how much water in each of the forecasted years.

There are 10 graphs attached, one for each of the 5 year projections from 2000 – 2020 for both normal weather conditions and our projected hot and dry weather conditions. The graphs demonstrate the projected water needs above our treatment capacity (63.5 MGD, assuming 1.5 mgd needed for in-plant use). The different data lines project a single day need, a three consecutive day average need, a five consecutive day average need, a seven consecutive day average need, and a ten consecutive day average need. The confidence interval is the projected percentage of occurrence for that water need or less.

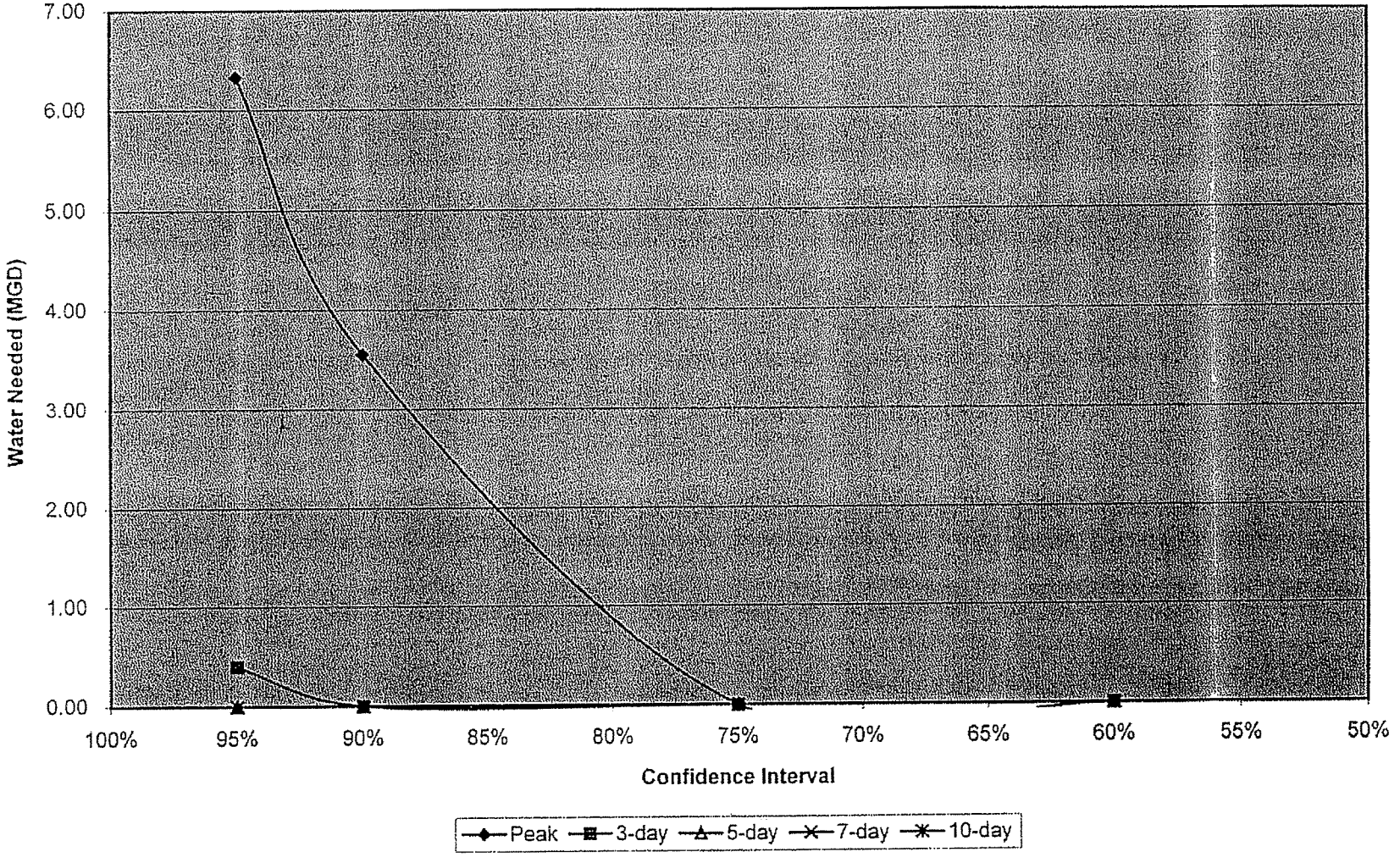
For example, in the year 2020, under hot, dry weather conditions, the 95 % confidence interval for a three consecutive day average need is 17.60 mgd. That means that 95 % of the time we will need 17.60 mgd or less. Or that there is only a 5% chance that we will need more for three consecutive days, averaged together. On the same graph, the 60% confidence interval for three days is 9.73 mgd. This means that 60% of the time we will need 9.73 mgd or less. Or there is a 40% probability we will need more than that amount for three consecutive days. The confidence interval is based on a bell curve. The higher percentage, the more confidence that your projection falls within that area of the curve.

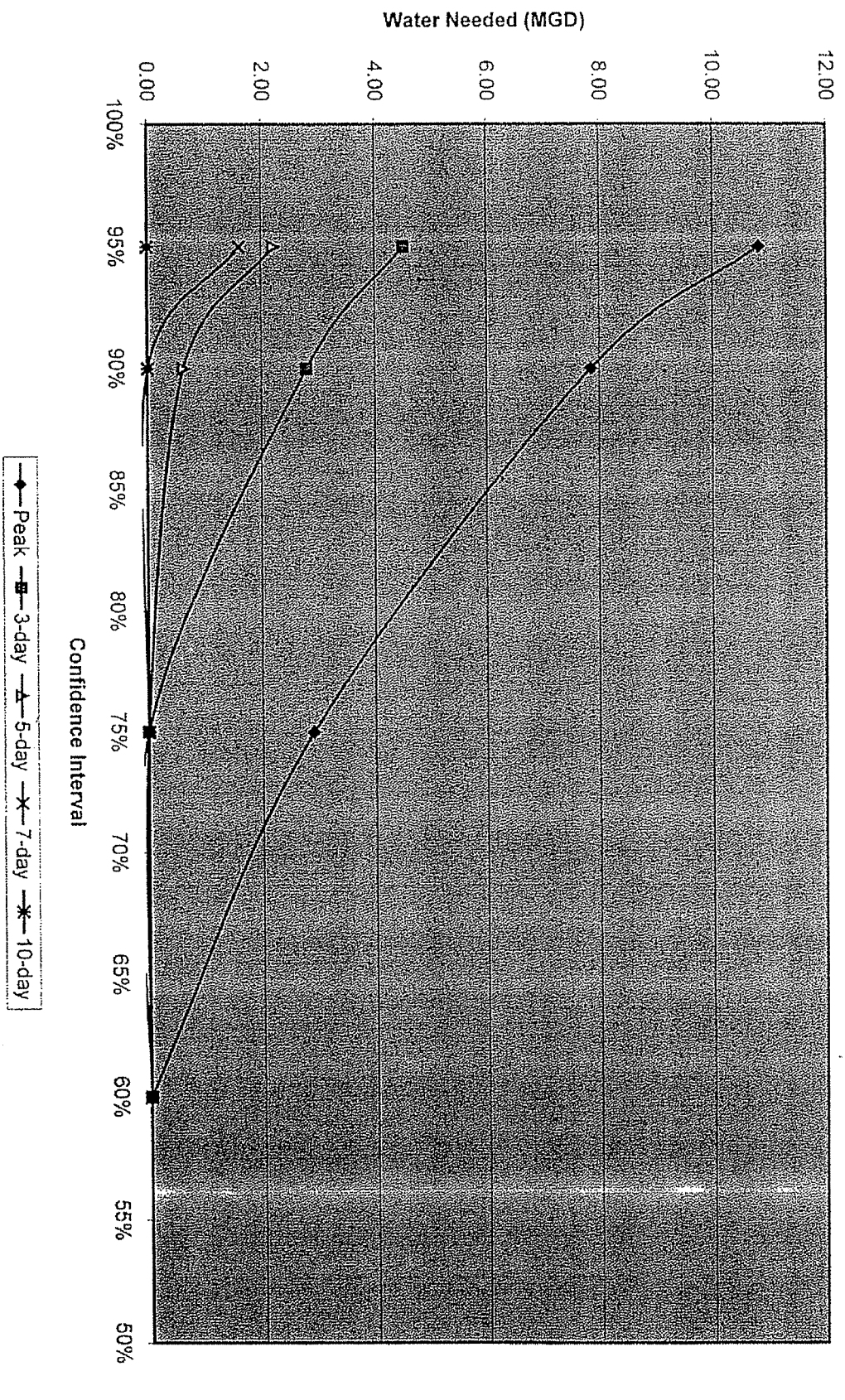
There are two particular items to note: 1) These projections do not include the projected conservation impacts from our public education and plumbing code impacts. That is why the peak projections are a little high (25.00 mgd in 2020 for hot, dry rather than 23 mgd). 2) The 3-,5-,7- and 10-day projections are based on average of consecutive days. I did not try to go back and pick up the 3 single highest days of the year.

Also of note, the projections only use historical data from 1982-1997. I simply did not have the time to go back and pick up daily data prior to 1982. I don't anticipate that impacting the projections significantly. It may make them more statistically accurate but it would also pick up years where customer usage patterns were different (fewer dishwashers, less landscaping, no low-use toilets, larger families).

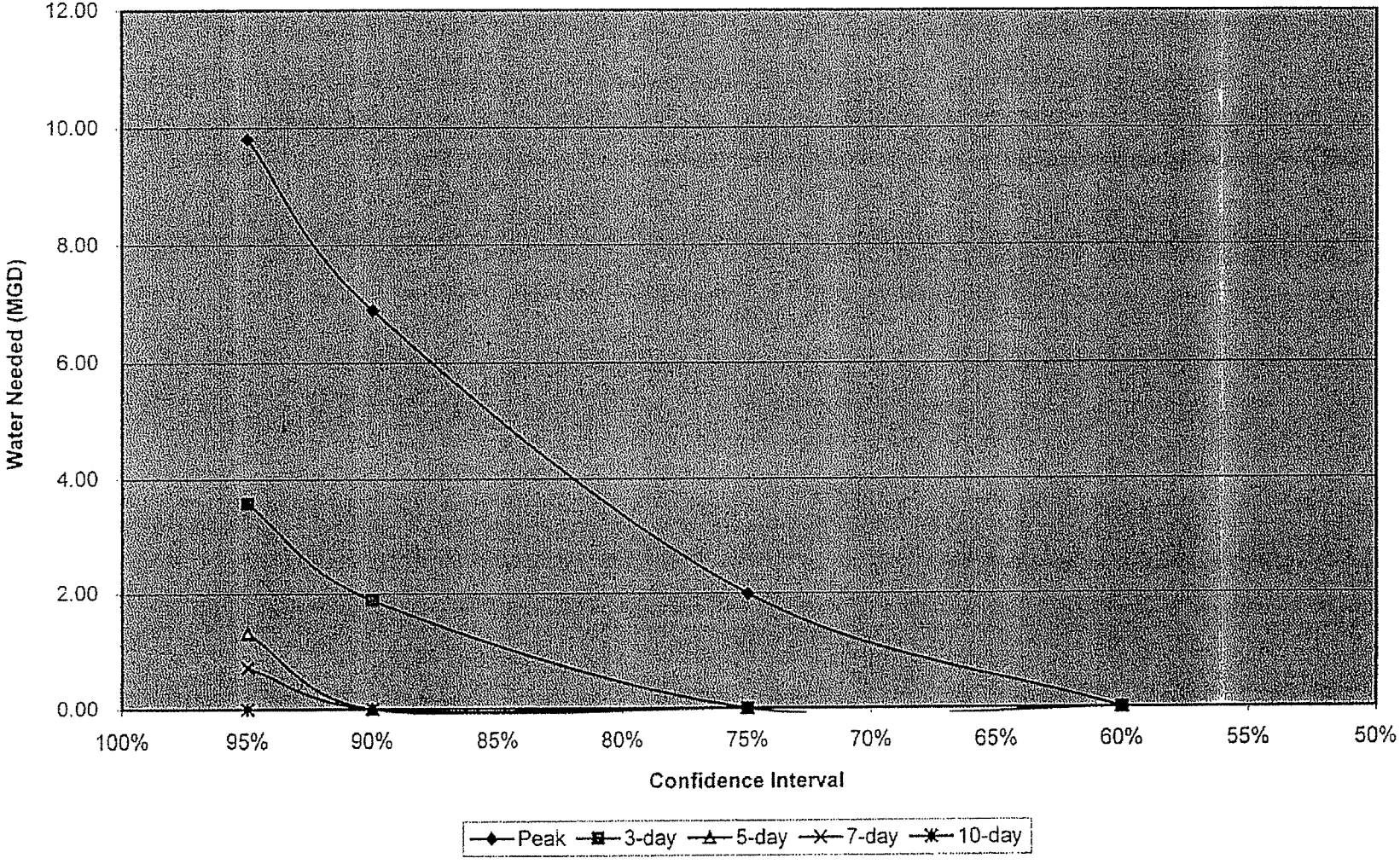
Obviously, we would need to consider a reasonable operating scenario to be at least 85-90 % under normal weather conditions and 75-80% under hot, dry conditions. Remember our projected water quality needs are 2.44 mgd in the summer and 1.831 in the winter.

2000, Normal Weather

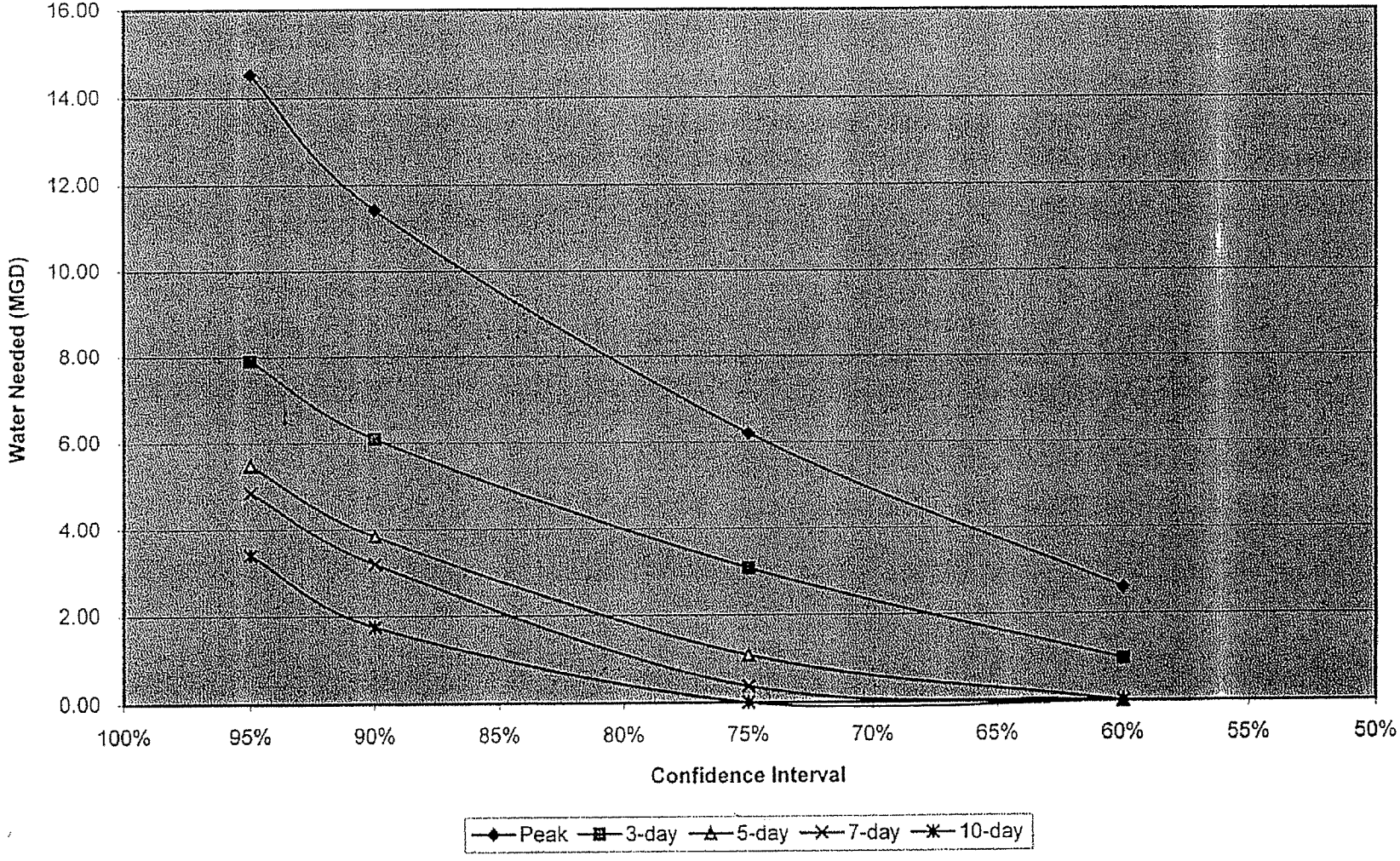



2000, Hot & Dry
Water Needed (MGD)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
100%
95%
90%
85%
80%
75%
70%
65%
60%
55%
50%
Confidence Interval
Peak
3-day
5-day
7-day
10-day

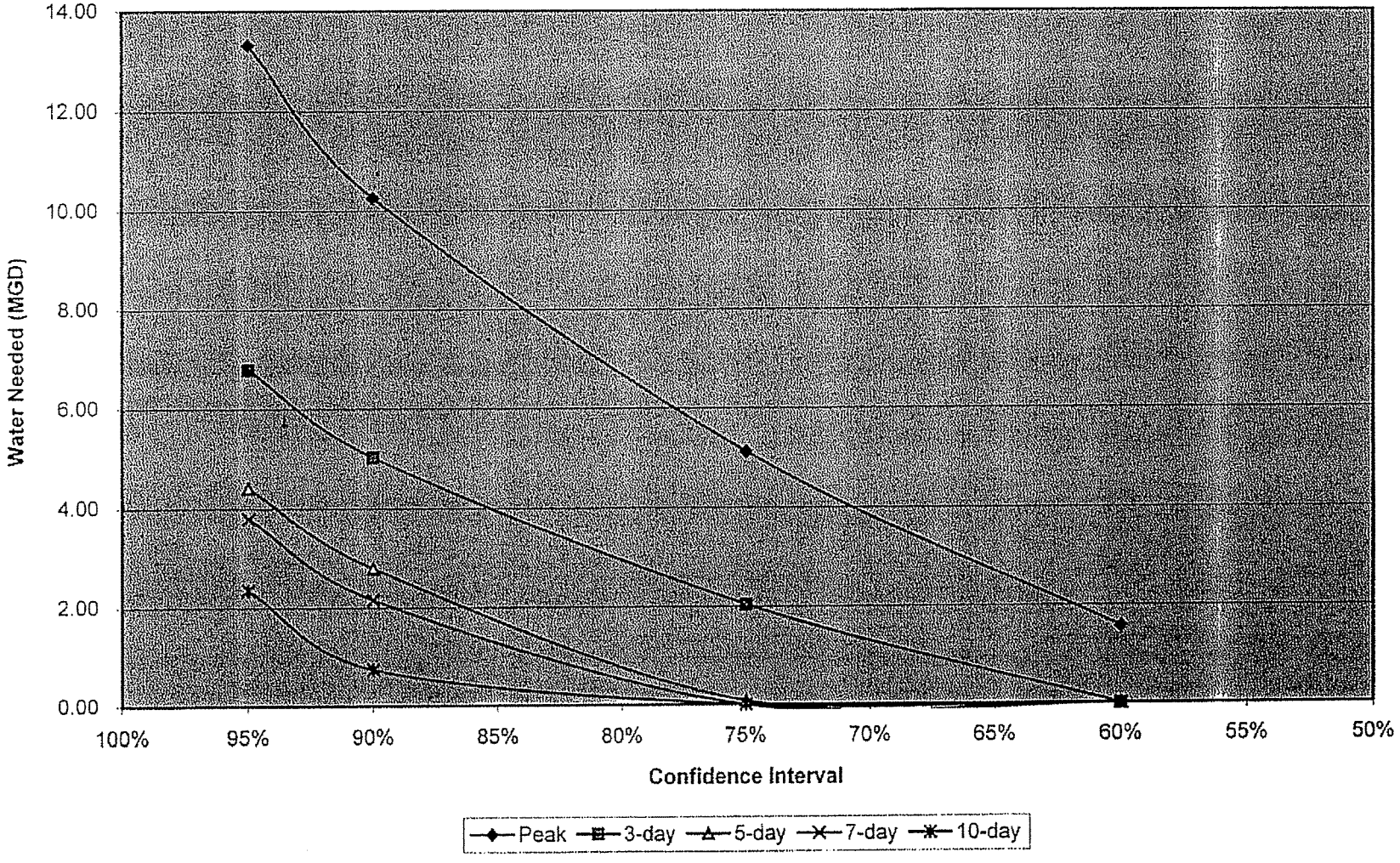
2005, Normal Weather



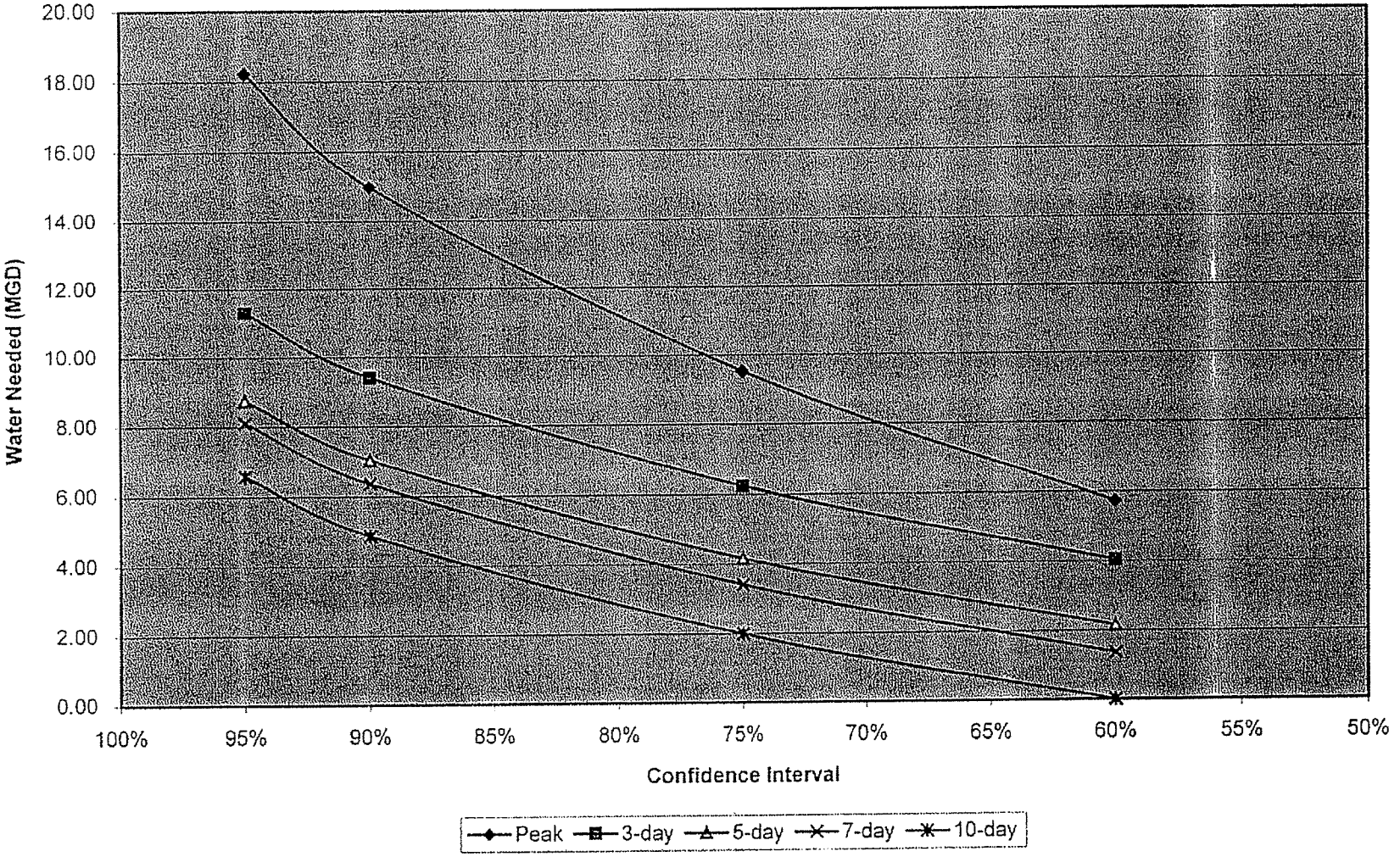
2005, Hot & Dry Weather



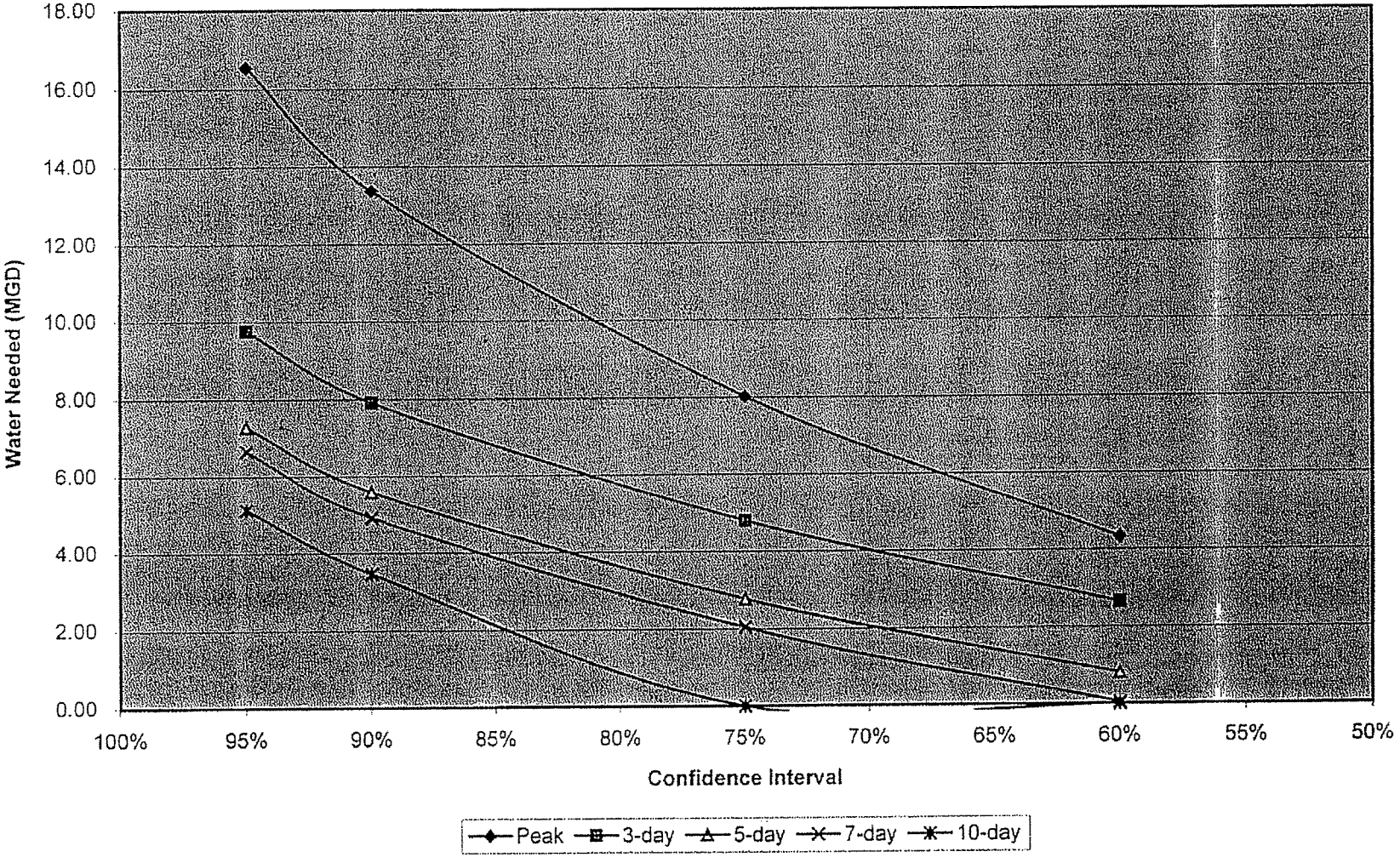
2010, Normal Weather



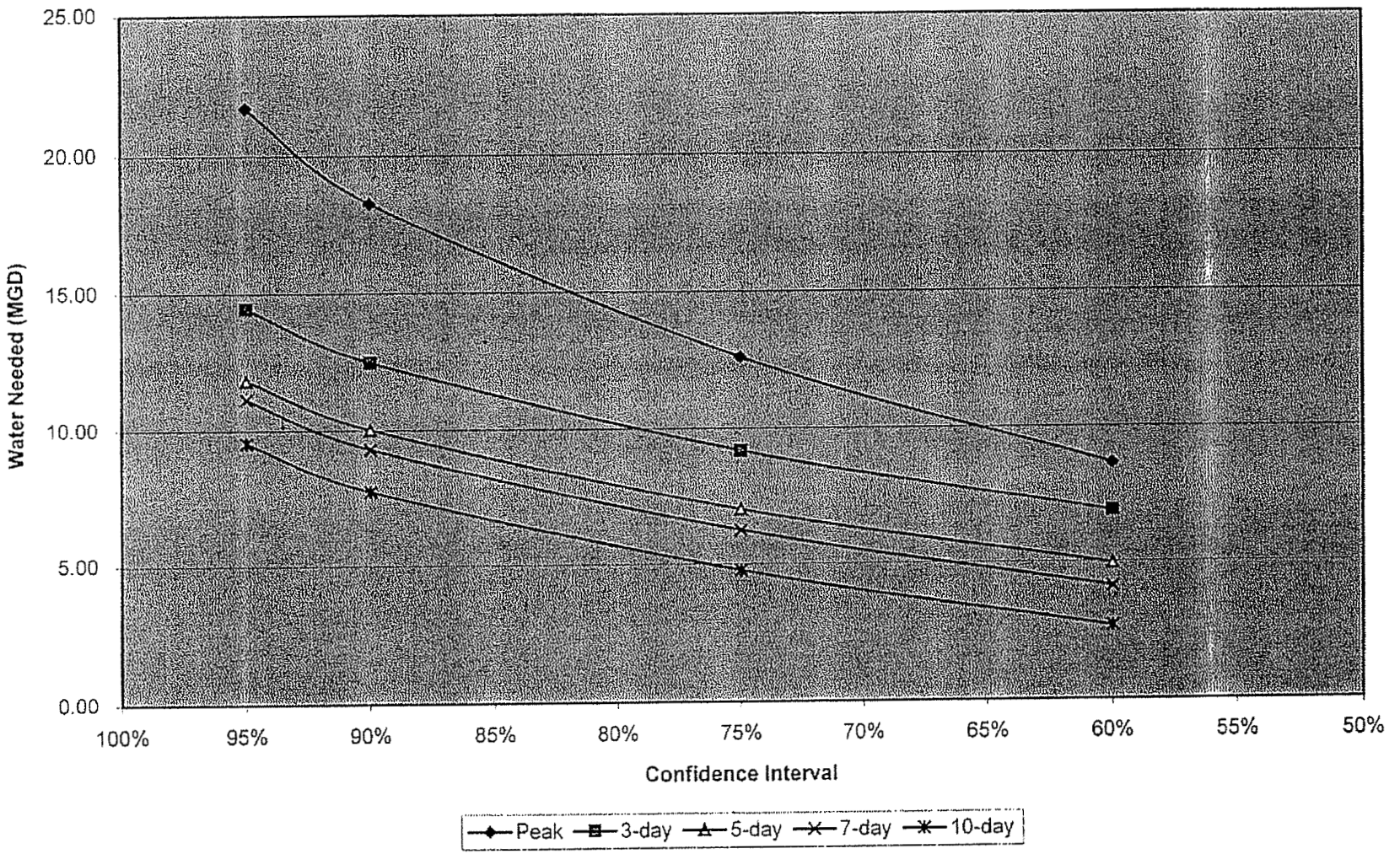
2010, Hot & Dry Weather

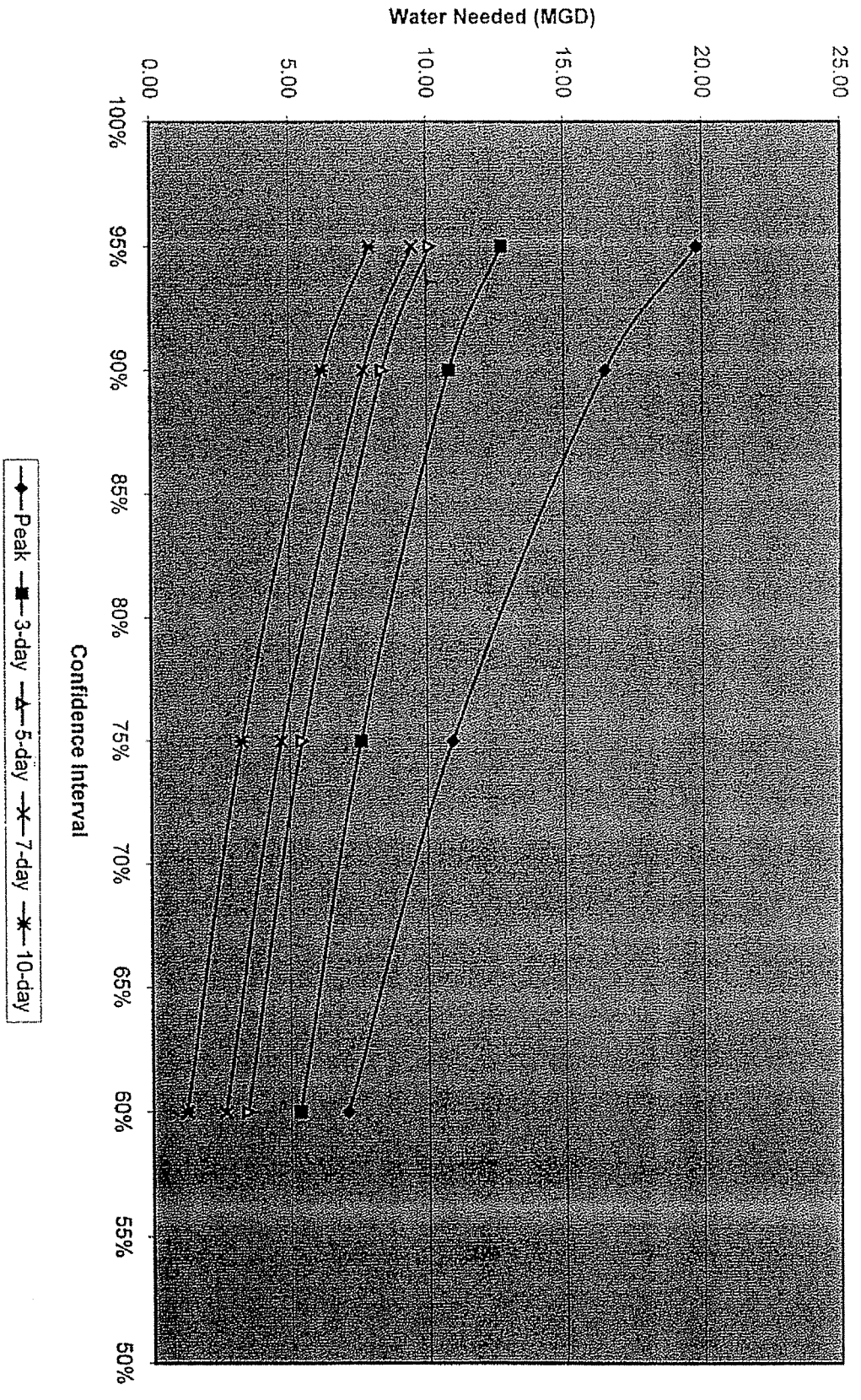


2015, Normal Weather

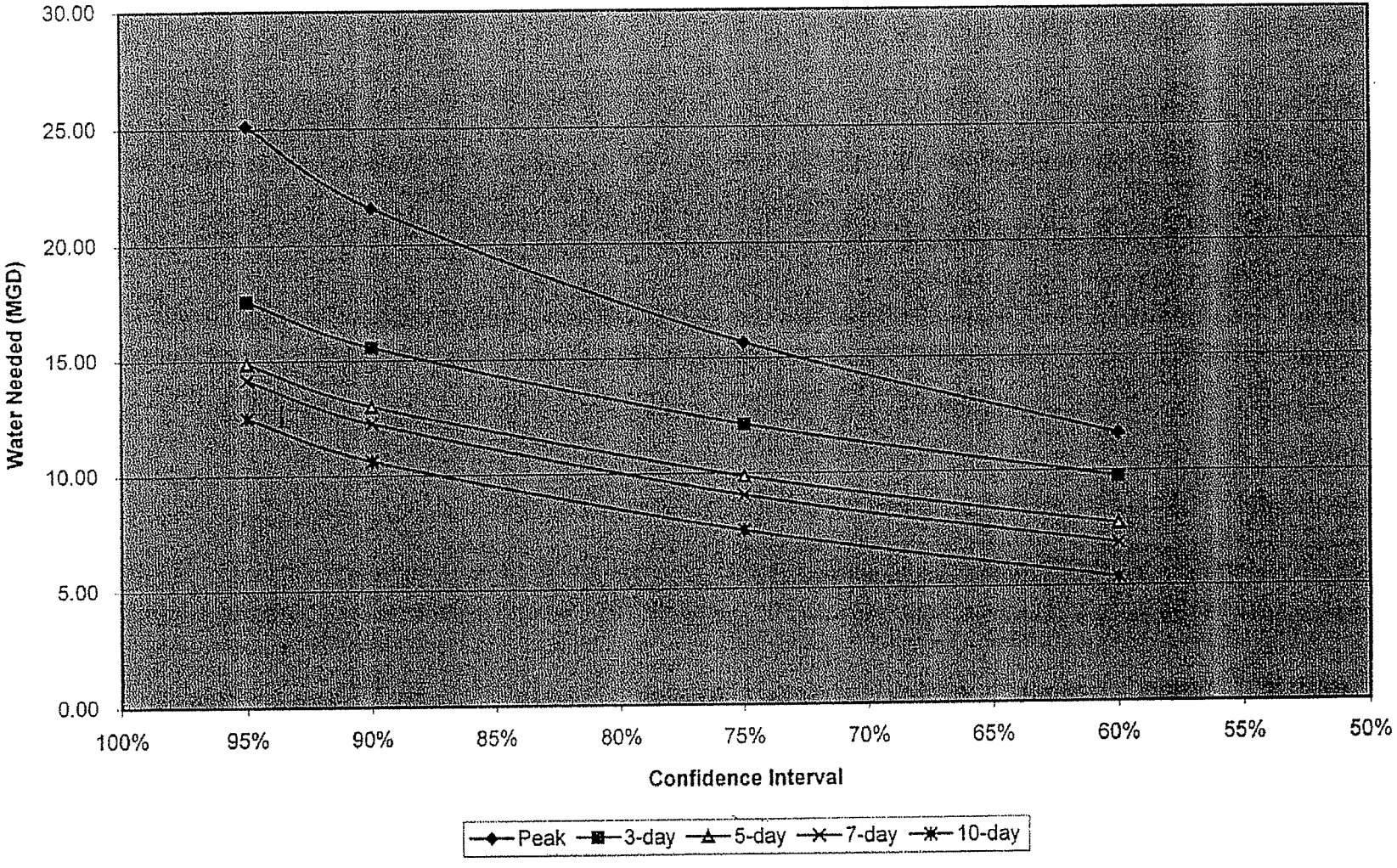


2015, Hot & Dry Weather




2020, Normal Weather
Water Needed (MGD)
25.00
20.00
15.00
10.00
5.00
0.00
100%
95%
90%
85%
80%
75%
70%
65%
60%
55%
50%
Confidence Interval
Peak
3-day
5-day
7-day
10-day

2020, Hot & Dry Weather



Kentucky-American Water Company, Projected Water Needs 5/21/98

2000, Normal Weather

	Peak	3-day	5-day	7-day	10-day
0.95	6.33	0.40	0.00	0.00	0.00
0.90	3.55	0.00	0.00	0.00	0.00
0.75	0.00	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00

2000, Hot & Dry

	Peak	3-day	5-day	7-day	10-day
0.95	10.82	4.50	2.20	1.60	0.00
0.90	7.85	2.78	0.63	0.01	0.00
0.75	2.89	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00

2005, Normal Weather

	Peak	3-day	5-day	7-day	10-day
0.95	9.81	3.58	1.31	0.72	0.00
0.90	6.89	1.88	0.00	0.00	0.00
0.75	1.99	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00

2005, Hot & Dry

	Peak	3-day	5-day	7-day	10-day
0.95	14.53	7.90	5.48	4.85	3.39
0.90	11.41	6.09	3.83	3.18	1.75
0.75	6.20	3.07	1.08	0.37	0.00
0.60	2.59	0.97	0.00	0.00	0.00

2010, Normal Weather

	Peak	3-day	5-day	7-day	10-day
0.95	13.32	6.79	4.41	3.80	2.35
0.90	10.26	5.02	2.79	2.15	0.75
0.75	5.12	2.04	0.08	0.00	0.00
0.60	1.57	0.00	0.00	0.00	0.00

2010, Hot & Dry

	Peak	3-day	5-day	7-day	10-day
0.95	18.23	11.29	8.75	8.11	6.57
0.90	14.97	9.40	7.03	6.35	4.86
0.75	9.52	6.23	4.15	3.41	1.99
0.60	5.73	4.04	2.16	1.37	0.01

2015, Normal Weather

	Peak	3-day	5-day	7-day	10-day
0.95	16.56	9.76	7.27	6.64	5.13
0.90	13.37	7.91	5.59	4.92	3.46
0.75	8.02	4.80	2.77	2.04	0.00
0.60	4.32	2.65	0.81	0.04	0.00

2015, Hot & Dry

	Peak	3-day	5-day	7-day	10-day
0.95	21.69	14.45	11.81	11.13	9.53
0.90	18.29	12.48	10.02	9.30	7.75
0.75	12.60	9.18	7.01	6.24	4.76
0.60	8.66	6.89	4.94	4.12	2.69

2020, Normal Weather

	Peak	3-day	5-day	7-day	10-day
0.95	19.80	12.72	10.14	9.47	7.91
0.90	16.48	10.80	8.39	7.69	6.17
0.75	10.91	7.57	5.45	4.69	3.25
0.60	7.06	5.33	3.42	2.62	1.23

2020, Hot & Dry

	Peak	3-day	5-day	7-day	10-day
0.95	25.13	17.60	14.85	14.14	12.48
0.90	21.60	15.55	12.98	12.24	10.62
0.75	15.67	12.11	9.86	9.05	7.52
0.60	11.58	9.73	7.70	6.85	5.37

Year	Average	Peak day / average	X-Xbar	(x-Xbar)^2
1982	31.89	1.44	-0.03	0.00
1983	32.70	1.56	0.09	0.01
1984	33.20	1.48	0.00	0.00
1985	33.70	1.39	-0.09	0.01
1986	35.94	1.60	0.12	0.02
1987	38.52	1.42	-0.05	0.00
1988	36.91	1.73	0.26	0.07
1989	33.43	1.43	-0.05	0.00
1990	34.53	1.68	0.21	0.04
1991	37.01	1.52	0.05	0.00
1992	36.42	0.84	-0.64	0.41
1993	39.54	1.53	0.05	0.00
1994	39.70	1.47	0.00	0.00
1995	39.90	1.60	0.12	0.02
1996	39.14	1.37	-0.10	0.01
1997	39.53	1.54	0.06	0.00
		1.47	0.00	0.59

Standard Deviation = sqrt(sum(x-xbar)^2)
= 0.77

n=number of points = 16.00

s= S.D./sqrt(n-1) = 0.20

Confidence Factor = Average + (s*a)

				2000		2005		2010		2015		2020	
				Avg Day	Peak Day	Avg Day	Peak Day	Avg Day	Peak Day	Avg Day	Peak Day	Avg Day	Peak Day
Confidence Factors	95%, a =	1.65	1.80	38.79	69.83	40.72	73.31	42.67	76.82	44.47	80.06	46.27	83.30
	90%, a =	1.28	1.73		67.05		70.39		73.76		76.87		79.98
	75%, a =	0.67	1.61		62.38		65.49		68.62		71.52		74.41
	60%, a =	0.25	1.52		59.15		62.10		65.07		67.82		70.56
			Hot, Dry	41.28	74.32	43.34	78.03	45.40	81.73	47.32	85.19	49.23	88.63
					71.35		74.91		78.47		81.79		85.10
					66.39		69.70		73.02		76.10		79.17
					62.95		66.09		69.23		72.16		75.08

Year	Average	3-day avg/ average	X-Xbar	(x-Xbar)^2
1982	31.89	1.37	-0.09	0.01
1983	32.70	1.55	0.09	0.01
1984	33.20	1.40	-0.05	0.00
1985	33.70	1.33	-0.12	0.02
1986	35.94	1.58	0.13	0.02
1987	38.52	1.41	-0.05	0.00
1988	36.91	1.70	0.24	0.06
1989	33.43	1.35	-0.11	0.01
1990	34.53	1.58	0.12	0.02
1991	37.01	1.48	0.02	0.00
1992	36.42	1.26	-0.20	0.04
1993	39.54	1.52	0.06	0.00
1994	39.70	1.46	0.00	0.00
1995	39.90	1.50	0.04	0.00
1996	39.14	1.34	-0.12	0.01
1997	39.53	1.50	0.04	0.00
		1.46	0.00	0.20

Standard Deviation = sqrt(sum(x-xbar)^2)
= 0.44

n=number of points = 16.00

s= S.D./sqrt(n-1) = 0.11

Confidence Factor = Average + (s*a)

					2000		2005		2010		2015		2020	
					Avg Day	3-day	Avg Day	3-day	Avg Day	3-day	Avg Day	3-day	Avg Day	3-day
Confidence Factors	95%, a =	1.65	1.65		38.79	63.90	40.72	67.08	42.67	70.29	44.47	73.26	46.27	76.22
	90%, a =	1.28	1.61			62.29		65.38		68.52		71.41		74.30
	75%, a =	0.67	1.54			59.58		62.54		65.54		68.30		71.07
	60%, a =	0.25	1.49			57.70		60.57		63.47		66.15		68.63
				Hot, Dry	41.28	68.00	43.34	71.40	45.40	74.79	47.32	77.95	49.23	81.10
						66.28		69.59		72.90		75.98		79.05
						63.40		66.57		69.73		72.68		75.61
						61.41		64.47		67.54		70.39		73.23

Year	Average	5-day avg/ average	X-Xbar	(x-Xbar)^2
1982	31.89	1.34	-0.08	0.01
1983	32.70	1.50	0.08	0.01
1984	33.20	1.34	-0.08	0.01
1985	33.70	1.29	-0.13	0.02
1986	35.94	1.58	0.16	0.03
1987	38.52	1.39	-0.03	0.00
1988	36.91	1.58	0.16	0.03
1989	33.43	1.32	-0.10	0.01
1990	34.53	1.49	0.07	0.01
1991	37.01	1.45	0.03	0.00
1992	36.42	1.22	-0.20	0.04
1993	39.54	1.50	0.08	0.01
1994	39.70	1.44	0.02	0.00
1995	39.90	1.47	0.05	0.00
1996	39.14	1.34	-0.08	0.01
1997	39.53	1.47	0.05	0.00
		1.42	0.00	0.16

Standard Deviation = sqrt(sum(x-xbar)^2)
= 0.40

n=number of points = 16.00

s= S.D./sqrt(n-1) = 0.10

Confidence Factor = Average + (s*a)

				2000		2005		2010		2015		2020	
				Avg Day	5-day	Avg Day	5-day	Avg Day	5-day	Avg Day	5-day	Avg Day	5-day
Confidence Factors	95%, a =	1.65	1.59	38.79	61.73	40.72	64.81	42.67	67.91	44.47	70.77	46.27	73.64
	90%, a =	1.28	1.55		60.26		63.26		66.29		69.09		71.89
	75%, a =	0.67	1.49		57.80		60.68		63.58		66.27		68.95
	60%, a =	0.25	1.45		56.10		58.89		61.71		64.31		66.92
			Hot, Dry	41.28	65.70	43.34	68.98	45.40	72.25	47.32	75.31	49.23	78.35
					64.13		67.33		70.53		73.52		76.48
					61.51		64.58		67.65		70.51		73.36
					59.70		62.68		65.66		68.44		71.20

Year	Average	7-day avg/ average	X-Xbar	(x-Xbar)^2
1982	31.89	1.31	-0.09	0.01
1983	32.70	1.50	0.09	0.01
1984	33.20	1.34	-0.07	0.00
1985	33.70	1.27	-0.14	0.02
1986	35.94	1.55	0.15	0.02
1987	38.52	1.38	-0.02	0.00
1988	36.91	1.56	0.16	0.02
1989	33.43	1.31	-0.09	0.01
1990	34.53	1.48	0.08	0.01
1991	37.01	1.45	0.05	0.00
1992	36.42	1.19	-0.22	0.05
1993	39.54	1.46	0.06	0.00
1994	39.70	1.44	0.03	0.00
1995	39.90	1.43	0.03	0.00
1996	39.14	1.31	-0.09	0.01
1997	39.53	1.46	0.06	0.00
		1.40	0.00	0.17

Standard Deviation = sqrt(sum(x-xbar)^2)
= 0.41

n=number of points = 16.00

s= S.D./sqrt(n-1) = 0.11

Confidence Factor = Average + (s*a)

					2000		2005		2010		2015		2020	
					Avg Day	7-day	Avg Day	7-day	Avg Day	7-day	Avg Day	7-day	Avg Day	7-day
Confidence Factors	95%, a =	1.65	1.58		38.79	61.18	40.72	64.22	42.67	67.30	44.47	70.14	46.27	72.97
	90%, a =	1.28	1.54			59.68		62.65		65.65		68.42		71.19
	75%, a =	0.67	1.47			57.17		60.01		62.89		65.54		68.19
	60%, a =	0.25	1.43			55.43		58.19		60.97		63.54		66.12
				Hot, Dry	41.28	65.10	43.34	68.35	45.40	71.60	47.32	74.63	49.23	77.64
						63.51		66.68		69.85		72.80		75.74
						60.84		63.87		66.91		69.74		72.55
						58.99		61.93		64.87		67.62		70.35

Year	Average	10-day avg/ average	X-Xbar	(x-Xbar)^2
1982	31.89	1.26	-0.11	0.01
1983	32.70	1.48	0.11	0.01
1984	33.20	1.31	-0.06	0.00
1985	33.70	1.23	-0.14	0.02
1986	35.94	1.51	0.13	0.02
1987	38.52	1.36	-0.02	0.00
1988	36.91	1.53	0.16	0.02
1989	33.43	1.31	-0.07	0.00
1990	34.53	1.46	0.09	0.01
1991	37.01	1.43	0.06	0.00
1992	36.42	1.18	-0.20	0.04
1993	39.54	1.40	0.03	0.00
1994	39.70	1.40	0.03	0.00
1995	39.90	1.44	0.07	0.00
1996	39.14	1.28	-0.10	0.01
1997	39.53	1.40	0.03	0.00
		1.37	0.00	0.16

Standard Deviation = sqrt(sum(x-xbar)^2)
= 0.40

n=number of points = 16.00

s= S.D./sqrt(n-1) = 0.10

Confidence Factor = Average + (s*a)

				2000		2005		2010		2015		2020	
				Avg Day	10-day	Avg Day	10-day	Avg Day	10-day	Avg Day	10-day	Avg Day	10-day
Confidence Factors	95%, a =	1.65	1.54	38.79	59.86	40.72	62.84	42.67	65.85	44.47	68.63	46.27	71.41
	90%, a =	1.28	1.51		58.40		61.31		64.25		66.96		69.67
	75%, a =	0.67	1.44		55.96		58.74		61.55		64.15		66.75
	60%, a =	0.25	1.40		54.26		56.96		59.69		62.21		64.73
			Hot, Dry	41.28	63.71	43.34	66.89	45.40	70.07	47.32	73.03	49.23	75.98
					62.15		65.25		68.36		71.25		74.12
					59.55		62.52		65.49		68.26		71.02
					57.75		60.63		63.51		66.19		68.87

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Coleman D. Bush
Vice President & Treasurer
(606) 268-6324

May 11, 1998

Mr. Robert K. Miller, Vice President of Finance and Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Bob:

As we continue our negotiations and as you prepare to present the current status of the negotiations to your board, there is one area I would like for you to reconsider. In my letter of April 6, I proposed some form of revenue sharing for new customers who may tap onto this line. You told me that this would not be considered.

Continuing in a similar vein, I would like for you to think about another method of cost allocation. In your proposal, the Project Facilities would be the property of Louisville Water Company, installed entirely at Kentucky-American Water Company's expense. All revenues, less the marginal cost of providing service to Kentucky-American, will serve to benefit the Louisville Water Company ratepayers in the form of reduced rates.

According to your 1997 financial statements, Louisville Water Company's net plant is approximately $393 million. CIAC's are approximately $129 million for a net investment of $264 million. With annual revenues of $77 million, LWC has invested approximately $3.43 per revenue dollar. LWC's one-time investment in the Project Facilities based on this formula is more equitable to the customers of KAWC and would be viewed by the Public Service Commission as a more reasonable settlement because LWC would have some investment base for the revenues generated. For example, if we were to reach agreement at $1 per thousand gallons on annual sales of 779,640 (thousand gallons), LWC's participation in the line would be $2.674 million ($779,640 times 3.43). This is an oversimplification of the process, but other things being equal, investment by LWC in the line would bring the customers of Lexington on parity with Louisville customers in terms of sharing certain costs.

Please call me today or Tuesday morning so we can discuss this issue further.

Sincerely,

Coleman Bush
Vice President and Treasurer

C: Roy W. Mundy II, Herb Miller, Edward J. Grubb, Lindsey Ingram, Nick Rowe, Mark Frost and Linda Bridwell

Kentucky-American Water Company

2300 Richmond Road · Lexington, Kentucky 40502
(606) 268-6320 · Fax (606) 268-6327

Roy W. Mundy II
President

May 11, 1998

Mr. John Huber, President
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Dear John:

I would like to express my appreciation for the time and dedication that you and your staff have put into developing our contract to this point and for your continued willingness to discuss the various issues.

Coleman, Linda and Mark contacted Greg on Thursday, May 7, 1998 to clarify some of the issues that we discussed on Tuesday. We want to make sure that we clearly understand your position on some matters and that you also understand our needs as you approach your board tomorrow. Our needs are, in essence, the needs of our customers. Our customers require an additional source of quality water at a fair cost. As you know, before our contract is finalized, the Public Service Commission must approve it. Our diligence would not vary regardless, but we have approached the negotiations with the regulatory process, and its attendant scrutiny, in mind.

At our meeting on Tuesday, we talked at length about the issue of developing a defensible reserve capacity number. Greg suggested that we approach this issue by measuring various scenarios regarding the frequency, severity and time of a drought event. This information is to be supplied to Bob so that he can run the various reserve capacity and peak event scenarios through his rate model. Through our discussion with Greg, Linda gained a firm understanding of what he is proposing and will supply those numbers to Bob next week.

In talking to Greg, we were also seeking clarification on the issues of upsizing and point of delivery. There have been numerous scenarios presented, and I will attempt in this letter to state what I believe to be your position and also to confirm our position on these matters.

The first scenario: **Point of delivery at the Jefferson/Shelby County line with upsizing.** We understand that your position on upsizing under this scenario would be to do so on an incremental basis, basically paying the increased cost of larger pipe and any increase in installation costs within Jefferson County. Our position on upsizing this main is that the costs should be shared on a carrying capacity basis. In discussing the scenario on Tuesday relating to facilities beyond the Jefferson County line, you offered, as an example, an upsizing scenario that

would increase the capacity of the line from 23 to 40 MGD. On this basis, I believe your comment was that the sharing could be 23/40 KAWC and 17/40 LWC. I am certainly not trying to imply that this was an offer on your behalf, but am using this to illustrate that we feel this is the fair way to share the costs on any upsizing as LWC will obviously have that capacity for its future needs.

The second scenario: **Point of delivery in Shelby County at Highway 55 with upsizing.** As I mentioned on Tuesday, for us to consider moving the point of delivery, KAWC expects that a substantial investment be made by LWC. Offering this proposal means that the line has value to LWC, the total cost of which should not be borne by KAWC's customers. We discussed this proposal at length on Tuesday, but I want to make sure that we both have the same understanding. One possible scenario I presented was for LWC to pick up the entire cost of the line from the Shelby County line to Highway 55. Sharing the upsizing of the line from English Station to Highway 55 on the carrying capacity basis mentioned above is also worthy of consideration.

During the discussion between Linda, Coleman, Mark and Greg on Thursday, Greg mentioned that he would like to consider a third pump station. Under a scenario where LWC would see the need for a third pump station, but KAWC did not have an immediate need for it, Greg asked that KAWC consider participating in this third pump station on a carrying capacity basis. We would be willing to listen to a proposal on how a third pump station could benefit us.

One last issue that hasn't been discussed by us, but one Coleman has suggested to Bob is the consideration LWC will give KAWC as a result of KAWC becoming a guaranteed customer providing several hundred thousand dollars a year in revenues. When such opportunities are available to us, we are willing to invest certain capital to obtain such a user based upon revenue projections (not necessarily guarantees). It is possible that some of the issues we are now discussing will open that opportunity for such consideration.

Again, thank you and your team for the sincere efforts you've shown in our negotiations. If you should have any questions or comments regarding this matter, please let me know.

Very truly yours,

Roy W. Mundy II
President

RWM/pb

c: Bob Miller, Coleman Bush, Herb Miller, Greg Heitzman, Mark Frost, Nick Rowe, Linda Bridwell, L.W. Ingram, Esq.

Greg H. 5/7/98

Frequency

Over a twenty year period, an event may be expected to occur

40 year contract life

Pipeline design is drought of record

What frequency of event might occur over the life

"How often in a 40 year period would

Limit expect to use — gallons per day 2 weeks — months."

6 MGD for a month

# of times over

1) Dimension — min flow
2)

How often will we need — gallons
frequency of X gallons
duration of X gallons

2nd Scenario

2 – incremental basis – PoD at Jeff Co line

3 – delivery pt during SS
instead of inc. cost, sharing
Could be prorate costs

Not clear on how much of
the line
Jeff Co line to PoD

~~If we can demonstrate that we do not need a pump sta. but there is a 3rd one put in~~

If pump sta is not needed
for KAWC, but a 3rd Sta is
needed, put on the table for us
to participate, – if we decide
we would participate on a
CC basis

LWC
Comp planning
Study

5/5/98

23 → 40

possible?

LW 17/40's of fuel cost

Risk Management

comparably to any other customers - wholesale rate within class - "PROBABLY ~~SA~~ UNIQUE CUSTOMERS"

risk averse

revisit reserved capacity

FUNDAMENTAL TRUTH - COST RECOVERY

I guaranteed amt of water
II Control Peaks
III Reserved Cap is at Prod.

Cost of 23 MGD

Bob: "Some type of price recovery will be appropriate when a peak occurs."

Price wholesale rate as if we were our own class

From KAWC - non binding reserved cap amt each year.

Bob wants a "good-faith" cap reserve

A Elec demand charge — how set A

Bob will put ~~out it~~ cond. in contract under which they would be willing to waive a peak.

Peak is based on midnight midnight peak

Bob will provide language re how a peak is established

Bob: We can ramp rate in

Cap request has to pass a "reasonableness" test.

JH: The scenario is that it builds slowly

JH: Reserved capacity is based on historical MAX

For disc purposes - let's lay out what we see over 5 years, then Bib will provide rate

JH: "Reserve cap 6MGD - I think I have an idea I can sell, anything less, I will have some trouble"

GH: Severity, frequency, time of drought event measure probability. I think we can work something out.

TIMEFRAME

A LWC ⊖ POD issue over next week - 2 weeks
option of ext to Shelby is viable to us
we can put firm'g in your hands
yes or no w/cont sharing

JH at least a mo. to bring it to closure.

RM As long as the concept is substantive inv.

GM. within 2 weeks, we can do that

RA. No later than 2 weeks.

CB have Jack run COS scenarios re conventional rate making

JH: We can achieve consensus within 2 weeks on route

BM: 1) build simple rate model
2) use data for int rate
3) 5 year forecast of res cap forecast from KAN.
4) non binding 5 year forecast of rates from LWC
5) KANC gives LWC ~~[illegible]~~ various scenarios for for severity, frequency, timing of drought event - ask Greg H.

Joe & LWT will talk about
contract term, recital, etc.
Contemporaneously

May 22 ref conf

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

File-N Louisville Corr.

David M. Reves, P.E.
American Water Works Service Company
1025 Laurel Oak Road
P.O. Box 1770
Voorhees, NJ 08043

RE: Bluegrass Water Project, Louisville Water Company Issues

Dear Dave:

This afternoon Nick Rowe and I had the opportunity to talk with Greg Heitzman and Karen Willis. On Friday April 24, Karen and I had discussed the issues that still needed to be resolved. I want to summarize our conversation:

-The proposed 36" pipeline from the English Station tank along US 60 will not be able to provide 23 MGD at a minimum of 30 psi at two locations along the line in Jefferson County. The 30 psi requirement is a Division of Water regulation which is for all water lines. If the critical points were at locations where there would be no other tie-ins for 2-3 miles on either side and were just an issue of elevation, we could approach the Division of Water about a waiver. Unfortunately, these points are at highly populated areas and Louisville is concerned about a depression of pressures based on the flowrate from the surrounding distribution system. Although Greg did distinguish their analysis as a fixed grade review, these critical points cannot be corrected without additional energy.

-If the pipeline from the English Station tank along US 60 is increased to a 48" main, the critical points are within margins that Louisville would be willing to consider. An upsizing to 42" main will not achieve the reduced friction losses to eliminate the critical points.

-An increase of approximately 100 feet of hydraulic head would also correct the critical points on a 36" main. Karen will forward us copies of the additional hydraulic grade line profiles.

-I expressed to them my concerns with water quality issues by increasing the pipe size.

-If a booster is needed in Jefferson County, I expressed a preference from a constructability standpoint on the I-64 corridor. We discussed that this will also provide greater flexibility in our booster station locations for electrical and chemical delivery considerations.

Louisville is completing a determination to upsize the pipeline to the point of delivery. This will be based on projected growth to their existing wholesale customers in Shelby County. This will be complete next week.

Louisville has also undertaken a review of the constructability of the two routes, to be complete next week. The initial draft information had recommended the I-64 route based on construction feasibility issues.

Greg indicated that they did not feel that there was any other route from the English Station tank that would enable them to provide the 23 mgd at 30 psi with a 36" pipe, without a booster. It is not merely an issue of trying to avoid a couple of high elevation points. Greg welcomed any additional review from our consultant on their hydraulic determinations.

Additionally, there is still some negotiation on the point of delivery. They have agreed to complete work by next week regarding the economic considerations of a point east of the Jefferson County line. This point would be no further east than KY highway 55.

Obviously, this will alter our design scope, although not significantly at this point. I have indicated to Greg that we gave Gannett-Fleming the official notice to proceed on April 20 and that we need to determine the exact level of changes by next week.

Please call me when you have had a chance to review this information.

Sincerely,

Linda Bridwell

Linda Bridwell, P.E.
Director of Engineering

C: N.O. Rowe
G.C. Heitzman, PE
K.A. Willis, PE

File - N Louisville

LOUISVILLE WATER COMPANY

435 South Third Street
Louisville, KY 40202
(502) 569-3600
(502) 569-3691 - Fax

Fax

To:	Linda Bridwell	**From:**	Karen Willis
	Ky-American Water Company		Louisville Water Company
Fax	606-268-6327	**Pages:**	1
Phone:	502-569-3615	**Date:**	04/29/98
Re:	Letter to Dave Reves	**CC:**	

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Linda,

I have marked up the letter you faxed to reflect our conversation yesterday morning. Your letter addressed the points adequately, I just provided further clarification where possible. Please review and if you have any questions or you are not in agreement with the changes, please call me at 502-569-3615.

The HGL profiles for the US 60 will go out in Thursday's mail and I will send them overnight to ensure you get them by Friday. The second set of profiles to address the I-64 route will be available the middle of next week. We had only completed the profile for the US 60 route initially, but with the renewed interest in the I-64 route, the profiles for this route will be accomplished and forwarded to you and Dave.

Thanks!

PAGE 01 LOUISVILLE WATER 502-569-3691 10:34 04/29/1998

File - N
Louisville
Correspondence

Roy
Linda
I would like to meet sometime today regarding the contract - please call me
Ellen

LWC Negotiation points:

1 Reserved capacity rate based on plant capacity of 300 MGD – 270 MGD

2 Are there any savings in ESA rate?

3 Customer charges based on actual costs as proposed by LWC

4 Right of first refusal to reserve more capacity before any customer is added with = or > than 1 MGD demand

5 Calculate reserved capacity rate for WMU (exclusive of water) using same method as LWC

6 Are there some LWC transmission mains we won't use?

7 How is demand portion of power allocated?

8 Ask Bob about Utility Rate of .99

9 Price all consumption above base at existing wholesale rate (less retail costs) until max day demand equals 95% of plant capacity.

10 Work drought events, etc. into contract

Reserved Capacity Rate

KAWC projected daily usage (MG)	2.136
LWC projected 1998 usage (before KAWC)	37000
LWC total capacity (MGD)	300
KAWC reserved capacity (MGD)	2.136
KAWC reserved capacity ratio	0.00712

Premium above reserved capacity

Operating Cost Component:

KAWC Annual Usage (MG)/	779.64
System Annual Usage	37779.64
Ratio KAWC/System	0.020637
Total Operating Costs (000)	31220.8
Less:	
customer costs	9803.2
retail costs	5127.33
Net	16290.27
KAWC share	*336.17*

Depreciation Cost Component:

Total Depreciation Costs	11010.48
Less:	
customer costs	2663.01
retail costs	2940.51
Net	5406.96
KAWC share	*38.50*

Return on Plant Investment Component:

Total Return	28585.31
Less:	
customer costs	1488.14
retail costs	7164.74
Net	19932.43
KAWC share	*141.92*
TOTAL COST	516.59
per 1000 gal	0.662602

appsl\coleman\treasurydeptfiles\bwpfiles\lwc1998coss

Louisville Water Company
Allocation of estimated net operating expense to functional cost components
Year ended December 31, 1998 (in thousand dollars)

Line No.	Item	Net operating expense	Elevated service area	Base	Maximum day	Maximum hour	Customer	Common to only retail
1	SOURCE OF SUPPLY	52.44		36.31	16.13			
2	POWER AND PUMPING							
3	Zorn Station, power	866.07		866.07				
4	Zorn Station, other	427.14		295.76	131.38			
5	Crescent Hill Station, power	743.19		743.19				
6	Crescent Hill Station, other	434.68		269.42		165.26		
7	BE Payne Station, raw water, power	113.98		113.98				
8	BE Payne Station, raw water, other	178.51		123.60	54.91			
9	BE Payne Station, finished water, power	645.90	322.95	322.95				
10	BE Payne Station, finished water, other	207.41	103.70	64.28		39.43		
11	Boosting pumping, power	180.86	171.82	9.04				
12	Boosting pumping, other	496.64	397.31	61.56		37.76		
13	Total power and pumping	4294.38	995.78	2869.86	186.29	242.45	0.00	0.00
14	PURIFICATION							
15	Chemicals, BE Payne	977.05		977.05				
16	Chemicals, Crescent Hill	308.54		308.54				
17	Purification, other	3707.65		2567.25	1140.40			
18	Total purification	4993.24	0	3852.84	1140.40	0	0	0
19	TRANSMISSION AND DISTRIBUTION							
20	Transmission mains	712.95		493.66	219.29			
21	Distribution mains	1789.04						1789.04
22	Distribution storage, res & tanks	23.09	20.78	1.43		0.88		
23	Services	1126.75					1126.75	
24	Meters	485.12					485.12	
25	Hydrants	290.26						290.26
26	Transmission &distribution subtotal	4427.21	20.781	495.0913	219.2889	0.877859	1611.87	2079.3
27	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28	General transmission and distribtion	5052.32	23.72	565.00	250.25	1.00	1839.46	2372.89
29	Total transmission and distribution	9479.53	44.49622	1060.088	469.5429	1.879669	3451.3317	4452.191
30	CUSTOMER ACCOUNTS AND SERVICE							
31	Supervision	201.12						
32	Meter reading	1025.39						
33	Customer records	3983.47						
34	Uncollectible Accounts	275.00						
35	Miscellaneous customer accounts	96.82						
36	Total customer accounts & service	5581.80					5581.80	
37	Subtotal	24401.39	1040.28	7819.10	1812.36	244.33	9033.13	4452.19
38	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39	ADMINISTRATIVE AND GENERAL							
40	Administrative and general	12610.53						
41	Labor related overhead	8853.5						
42	Less: Operating expenses applied	-12262.3						
43	Total administrative and general	9201.73	392.29	2948.57	683.44	92.14	3406.38	1678.92
44	Total	33603.12	1432.56	10767.67	2495.80	336.47	12439.51	6131.11
45	Free Water in lieu of taxes	963.70		963.70				
46	Amortization	-80.90		-80.90				
47	Retirement of assets	750.00		232.43		142.56	375.00	
48	Total operating expenses	35235.92	1432.56	11882.89	2495.80	479.05	12814.51	6131.11
49	Other operating income	-4015.10					-3011.33	-1003.78
50	Net oprating expnse	31220.82	1432.56	11882.89	2495.80	479.05	9803.19	5127.33

Louisville Water Company
Allocation of estimated depreciation expense to functional cost components
Year ended December 31, 1998 (in thousand dollars)

Line No.	Item	Total depreciation expense	Elevated service area	Base	Maximum day	Maximum hour	Customer	Common to only retail	
1	Land								
2	Land improvements and buildings	895.57	17.31	614.97	200.07	13.48	49.73		895.56
3	Basins and ground storage	359.24		248.75	110.49				359.24
4	Standpipes and elevated storage	162.42	43.90	73.46		45.06			162.42
5	High service pumps and equipment	204.84	19.21	128.54	57.09				204.84
6	Booster pump equipment	34.93	24.17	6.67		4.09			34.93
7	Miscellaneous pump equipment	48.65		33.69	14.96				48.65
8	Sludge disposal equipment	64.48		64.48					64.48
9	Purification equipment	536.44		371.45	164.99				536.44
10	Transmission mains	2122.63		1469.77	652.86				2122.63
11	Distribution mains	1971.82						1971.82	1971.82
12	Meters	357.76					357.76		357.76
13	Services	1302.41					1302.41		1302.41
14	Meter installations	447.05					447.05		447.05
15	Fire hydrants	409.90						409.90	409.90
16	Subtotal	8918.14	104.59	3011.77	1200.47	62.63	2156.95	2381.72	
17	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%	
18	General and other equipment	2092.34	24.54	706.61	281.65	14.69	506.06	558.79	
19	TOTAL	11010.48	129.13	3718.38	1482.11	77.33	2663.01	2940.51	11010.47

Louisville Water Company
Allocation of estimated Louisville Water Company net investment (1998) including work in progress
(Thousand dollars)

Line No.	Item	Net plant investment	Elevated service area	Base	Maximum day	Maximum hour	Customer	Common to only retail	
1	Land	4827.66	133.83	2817.28	889.91	107.15	879.19		
2	Land improvements and buildings	34449.56	448.15	20410.16	6446.36	776.15	6368.74		
3	Basins and ground storage	9866.34		6829.21	3037.13				
4	Standpipes and elevated storage	5457.51	1711.29	2321.79		1424.43			
5	High service pumps and equipment	6127.01	543.55	3864.7197	1718.74				
6	Booster pump equipment	1025.46	733.14	181.17		111.15			
7	Miscellaneous pump equipment	3510.21		2429.67	1080.54				
8	Sludge disposal equipment	1704.07		1704.07					
9	Purification equipment	18576.16		12857.914	5718.246				
10	Transmission mains	148269.67		102628.25	45641.42				
11	Distribution mains	102856.67						102856.7	
12	Meters	2887.58					2887.58		
13	Services	40176.18					40176.18		
14	Meter installations	13588.90					13588.9		
15	Fire hydrants	16854.21						16854.21	
									check
16	Subtotal	410177.19	3569.96	156044.24	64532.34	2418.875	63900.59	119710.9	410176.89
17	Percent	100.00%	0.87%	38.04%	15.73%	0.59%	15.58%	29.19%	
18	Gen plant & unamortized capital charges	10906.02	94.92	4148.99	1715.82	64.31	1699.02	3182.94	
19	Total plant	421083.21	3664.8801	160193.23	66248.17	2483.189	65599.61	122893.8	
20	Other rate base items	9451.20	82.26	3595.53	1486.94	55.74	1472.38	2758.35	
21	Subtotal	430534.41	3747.14	163788.77	67735.10	2538.92	67072.00	125652.17	
22	Contributions and grants	-132149.10		-24183.29			-51538.2	-56427.7	
23	Total plant investment	298385.31	3747.14	139605.5	67735.10	2538.92	15533.85	69224.50	298384.99
24	Annual return at 9.58%	28585.28	358.98	13374.20	6489.02	243.23	1488.14	6631.71	

1997 rate study for year 1998 Extra cost allocation percentages	Average day demand	Maximum day demand	Maximum hour demand
Ten year average(MGD) - 1988-1997	118.5	171.2	191.2
average day/max day	0.6921729		
average day/max hour	0.6197699		

	Base	Max day	Max hour
Base/max day	0.6921729	0.3078271	
Base/max hour	0.6197699		0.3802301

Louisville Water Company
Allocation of Louisville Water Company cost of service to utilities
Year ended December 31, 199_ (in thousand dollars)

Line No.	Item	Total cost of service ($1000)	Elevated service area	Base	Maximum day	Maximum hour	Customer	Common to only retail
	Total LWC system cost of service							
1	Operating exenses	31220.82	1432.56	11882.89	2495.80	479.05	9803.19	5127.33
2	Depreciation expenses	11010.48	129.1285	3718.383	1482.114	77.3268	2663.005	2940.51
3	Return on plant investment (9.58%)	28585.28	358.98	13374.20	6489.02	243.23	1488.14	6631.71
	Total LWC system units of water cons							
4	Number			37000	63.27	173.8		
5	Units			MG	MGD	MGD		
	Utility account units of water consumption							
6	Number			1050	1.24	3.51		
7	Units			MG	MGD	MGD		
8	Ratio to total			0.028378	0.019599	0.020196		
	Utility cost of service - 9.58% rate of return							
9	Operating expenses	395.8059		337.2172	48.91406	9.674648		
10	Depreciation expense	136.1306		105.5217	29.04728	1.561663		
11	Return on plant investment (9.58%)	511.6258		379.5382	127.1754	4.912161		
12	Total	1043.562		822.2771	205.1368	16.14847		
	Cost per thousand gallons	0.993869		0.783121	0.195368	0.015379		

Louisville Water Company
Reserved Capacity Rate (draft)

Line No.	Item Operating cost component	System before	New customer		Total	New customer %/amt.
1	Usage (MG)	37000	1095		38095	2.874%
2	Total operating costs ($1000)	31220.82	273.75	*(1)*	31494.57	
3	less: customer costs	9803.19			9803.19	
4	less: retail costs	5127.33			5127.33	
5	subtotal operating costs ($1000)	16290.30	273.75		16564.05	476.12
	(1) Est. incremental production costs @		250	per MG		
	Depreciation cost component					
6	System capacity (MG)	240				
7	Reserved capacity (MG)		3			1.25%
8	Total depreciation costs ($1000)	11010.48				
9	less: customer costs	2663.01				
10	less: retail costs	2940.51				
11	subtotal depreciation costs ($1000)	5406.96				67.59
	Return on plant investment					
12	Reserved capacity %					1.25%
13	Total return on plant investment ($1000)	28585.28				
14	less: customer costs	1488.14				
15	less: retail costs	6631.71				
16	subtotal return on plant investment ($1000)	20465.43				255.82
17	Total reserved capacity cost					799.52
18	Price per 1000 gallons					0.7302

LOUISVILLE WATER COMPANY

P.O. BOX 32460 • LOUISVILLE, KENTUCKY 40232-2460
TEL 502-569-3600 FAX 502-585-2806

April 30, 1998

Ms. Linda Bridwell
Kentucky American Water Works Company
2300 Richmond Road
Lexington, KY 40502

RE: Bluegrass Water Project
HGL Profiles

Dear Linda:

Enclosed for your use and review please find two hydraulic grade line profiles developed by Louisville Water Company (LWC) staff for the US 60 route. Figure 1 represents the hydraulic grade line and associated static pressures without any additional pumping. The alignment for this route generally follows US 60 to the RR, over to the Jefferson County line then heading over to the natural gas pipeline and following the gas pipeline route to KY 55 just west of Shelbyville. Figure 2 represents the same route with an additional 150 feet of head added at the English Station Reservoir.

As you can see from Figure 1, it appears that the static pressure will drop below 40 psi (LWC's minimum standard) around Lake Forest Parkway and again west of Clark Station Road near the railroad for any size diameter pipe, with no additional head added. The Lake Forest Parkway intersection also drops below the KY Division of Water requirement of 30 psi for any size diameter main, with the second location west of Clark Station Road near the railroad dropping below 30 psi for only the 36-inch diameter main. Once the pipeline reaches a point east of Conner Station Road, approximately a mile and a half into Shelby County, the static pressure drops below 30 psi in all three of the proposed diameters. Other than crossing the Blueline Creek, the static pressure does not recover over the remainder of route being investigated, which would indicate the need for additional head from this point forward.

In Figure 2, an additional 150 feet of head has been added to the system at the English Station Reservoir. The single pipeline steady-state analysis indicates that all three proposed diameters will meet the pressure range of 40-175 psi identified by LWC up to a point just west of State Road 1399. At this point, the 36-inch diameter pipe drops below the 40 psi constraint to approximately 30 psi. From this point forward, the need for additional head would likely be required. However, note that this location is approximately 2.5 miles east of the location identified from Figure 1 and meets all pressure requirements up to this point. In addition, the need for additional head would only be required for a 36-inch diameter pipeline. The static pressure for the 42-inch and

received
5/1/98

48-inch both remain well above the minimum of 40 psi all the way up to KY 55.

With the renewed interest in the I-64 route, hydraulic grade line profiles for this route are being developed and should be available the first part of next week. LWC staff will investigate similar scenarios as presented here in Figures 1 and 2 with the pipeline alignment to follow the I-64 route instead.

Should you have any questions regarding the enclosed information, please feel free to call me at (502) 569-3615, or Mr. Greg Heitzman at (502) 569-3681.

Sincerely,

Karen A. Willis

Karen A. Willis, P.E.
Manager of Planning Infrastructure

Cc: Dave Reves – American Water Works Service Company
Greg Heitzman - Louisville Water Company

Attachment
- Figure 1 – HGL Profile, No pumping added – US 60 Route
- Figure 2 – HGL Profile, 150 feet of head added – US 60 Route

Figure 1: Bluegrass Transmission Main HGL and Ps Profile
23.0 MGD Flowrate, No Pumping Facility
English Station Reservior to Shelbyville (via US 60)

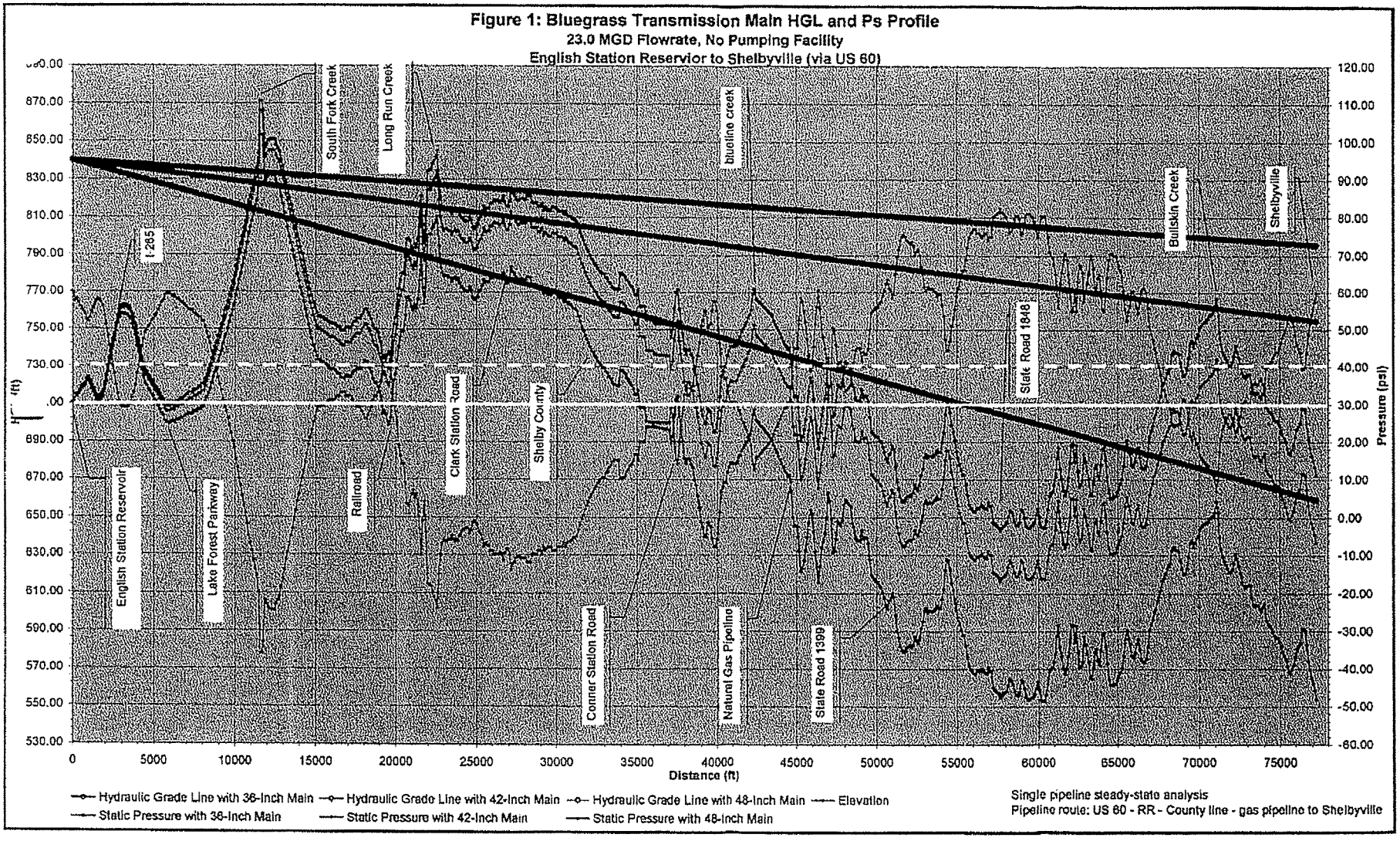
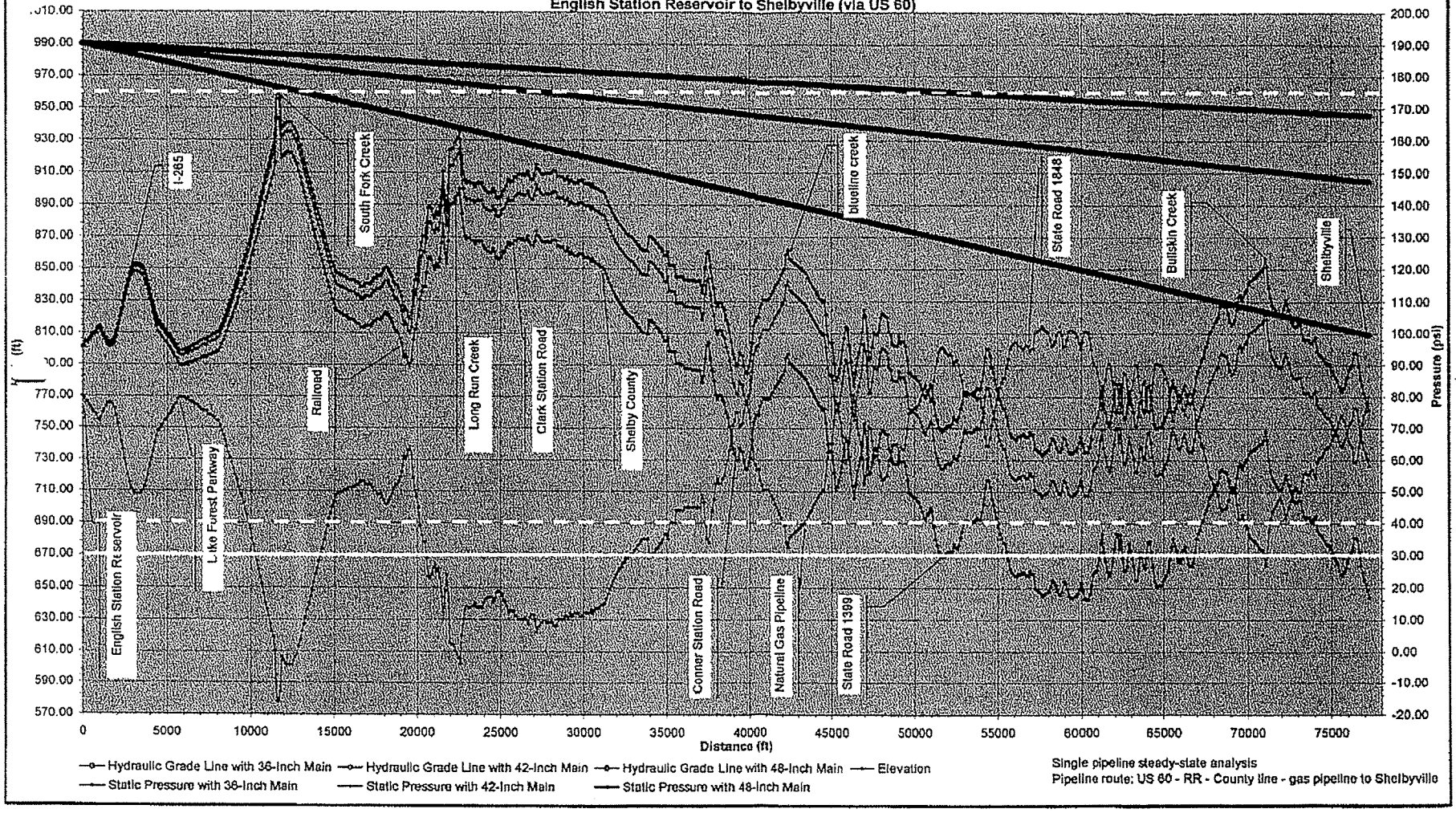


Figure 2: Bluegrass Transmission Main HGL and Ps Profile

23.0 MGD Flowrate, English Station Pumping Facility (+150 feet head)

English Station Reservoir to Shelbyville (via US 60)



File - N
Louisville

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

JOHN L. HUBER
PRESIDENT

Ms. Linda Bridwell
Kentucky American Water Works Company
2300 Richmond Road
Lexington, KY 40502

Dear Ms. Bridwell:

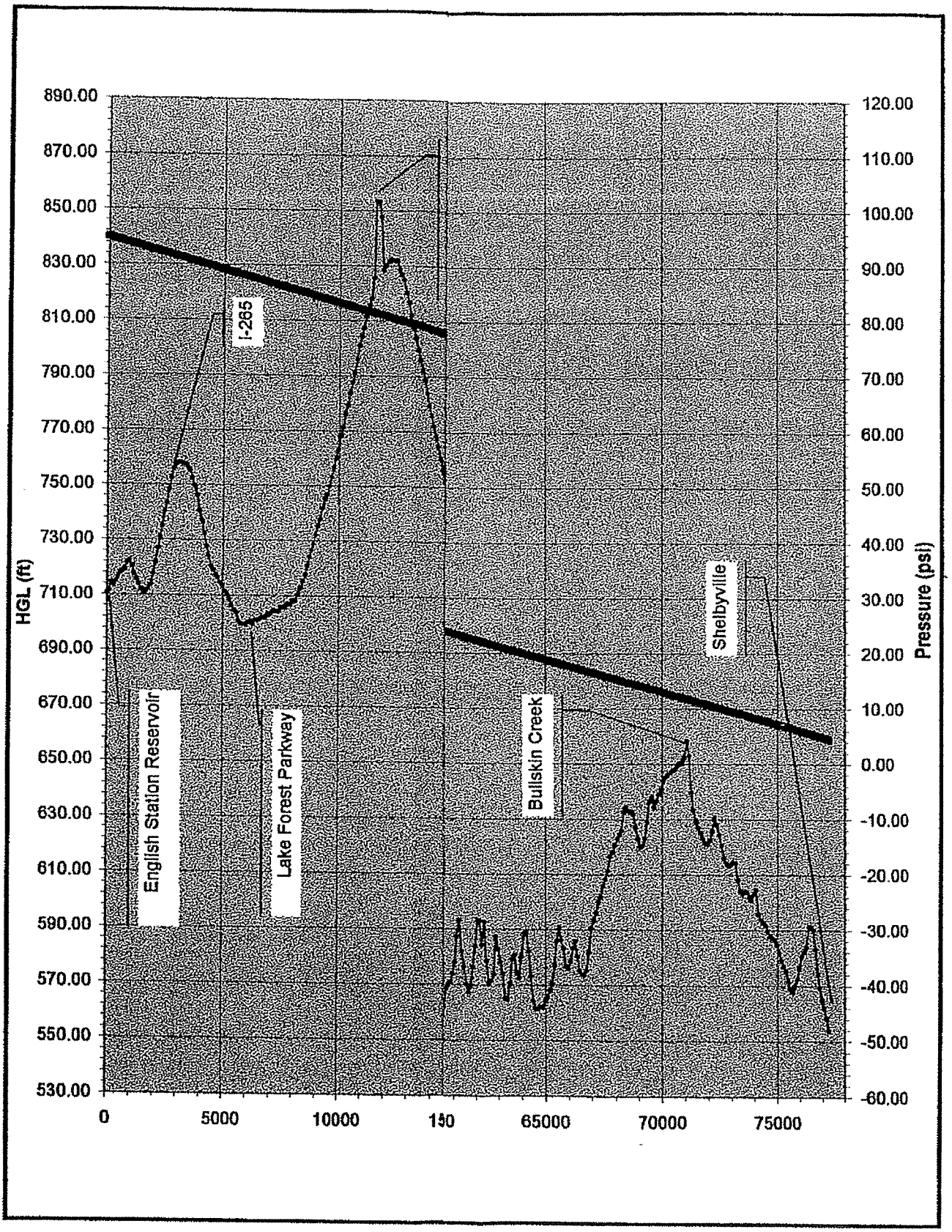
Please find enclosed a graphic showing the estimated static pressure and hydraulic grade line for the proposed transmission main route. The route begins at the LWC's English Station Reservoir and ends at Veechdale, Kentucky. Please forward to Mr. Dave Reeves.

Sincerely,

Alan N. Arbuckle. P.E.
Long Range Planning and Capital Improvements
Enclosure (1)

ana
cc: Ms. Karen Willis

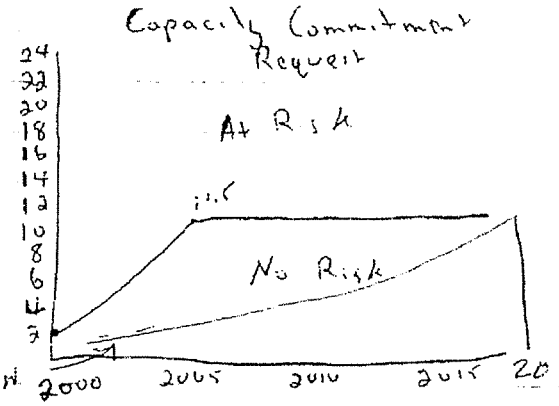
received
4/22/98


HGL (ft)
Pressure (psi)
890.00
870.00
850.00
830.00
810.00
790.00
770.00
750.00
730.00
710.00
690.00
670.00
650.00
630.00
610.00
590.00
570.00
550.00
530.00
120.00
110.00
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
0
5000
10000
150
65000
70000
75000
I-265
English Station Reservoir
Lake Forest Parkway
Bullskin Creek
Shelbyville

PUD => Shelby/Jefferson line or Simpsonville

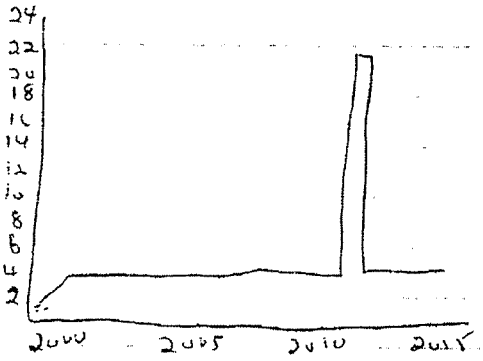
Flexability with a longer contract term. Rate can not be lower than the rate being charged to Wholesale customer.

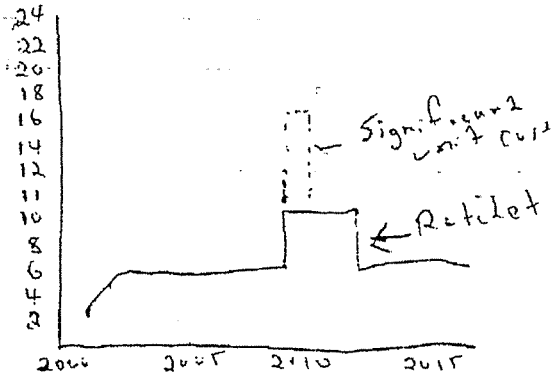
Wholesale Rate $1.35



LWI addition

1-3 year ratchet





Min. Purchase => what it takes to get the water turned over

Buy in Charge => Pre paying for the reserve capacity & finance with line. Form of SDC

LWC ① Reserve full capacity amount
② Reserve portion of capacity with demand ratchet
③ Buy in charge => Prepayment of reserve capacity
④ Reserve portion of capacity with significant unit cost

TRUE-UP => Rate => Forecast

4/27/98 Bob Miller

~~1) POD is not a stake in the ground~~
~~2) Water flows both ways~~
~~3) Years of disc from last day to certain expectations about POD - we are aware of that~~
~~4) LWC is not all of one mind~~
~~5) A 40 years to appeal any gone away of line~~
~~LWC buying line at end of 30~~

~~Longer term Grand~~

~~RELIABILITY / Bob says we need to be mindful~~

~~RAMP up increase by by taking use of plant in steps~~

~~- Financing -~~
~~int only first few years -~~

Pricing recognition that this will be reused to existing wholesale customers.

LWC
drothers

Options

(1) * Reserve full capacity amt
(2A) * " portion of cap + demand ratchet
(3) * Reserve portion + sig unit cost (unreliable cash flow)
(2B) * Prepayment of reserved capacity
↳ Buy on charge (upfront)

Bring Roy in on Thursday

True up - where do we stand?
Do we want to pursue

movement from orig proposal

- 1 year ratchet maybe a little move
  prob not acceptable 1 yr too low

- min purchase of water - what is req'd to turn the water over

- Best case Shelby/Jefferson
- Worst case Simpsonville
  "you would be paying for it all, we would just be financing more for you."

File - N
Louisville
Correspondence

LOUISVILLE WATER COMPANY

P.O BOX 32460 • LOUISVILLE, KENTUCKY 40232-2460

TEL 502-569-3600 FAX 502-585-2806

April 16, 1998

Ms. Linda Bridwell
Kentucky American Water Works Company
2300 Richmond Road
Lexington, KY 40502

received
4-21-98

RE: Bluegrass Water Project

Dear Linda:

This letter is to confirm that the Louisville Water Company (LWC) still considers the alignment along US 60 within Jefferson County to be a viable route for the proposed pipeline. LWC staff has completed a preliminary hydraulic evaluation of the US 60 route with a maximum flowrate of 23 MGD, a pipe diameter of 36-inches and no pump station within Jefferson County. It appears from this preliminary evaluation that there will be three locations along the route within Jefferson County that pressure will drop to below 40 psi (LWC's minimum threshold for pressure), and two locations that the pressure will drop below 30 psi. This evaluation is based on an operating grade of 840 feet at the English Station Road reservoir, which is representative of an average operating grade under normal summer demand scenarios. As your staff begins work with your engineering consultant, LWC would urge that you have the consultant validate these findings before final decisions are made with regard to any capital expenditure.

Again, the general alignment of the proposed pipeline along US 60 is still a viable option for LWC, however, the concern of low pressure in several areas along the pipeline will need to be addressed before any design can be finalized.

Should you have any further questions, please feel free to call me at (502) 569-3615, or Mr. Greg Heitzman at (502) 569-3681.

Sincerely,

Karen A. Willis

Karen A. Willis, P.E.
Manager of Planning Infrastructure

Cc: Dave Reves – American Water Works Service Company
Greg Heitzman - Louisville Water Company

4/9 → CB ~~[illegible]~~

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

any word?

Roy

Coleman D. Bush
Vice President & Treasurer
(606) 268-6324

points to consider
- If we don't reserve 23 MGD now, what happens when plant is expanded?
- Shelby County - If we give, use diff method of upsizing
- model all aspects of LWC fin vs. our own for proj. facilities.

April 6, 1998

Mr. Robert K. Miller, Vice President of Finance and Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Bob:

Your proposed reserved capacity rate has given us the opportunity to explore various rate scenarios. Kentucky-American Water Company ("KAWC") offers the following concepts for your consideration.

As we have discussed, the respective interests of KAWC's customers and the Louisville Water Company's ("LWC") customers must be protected. We are seeking a reliable supply to augment our current sources, which will be unreliable during a recurrence of the drought of record. We are also seeking a reliable source of high quality treated water at a low unit cost to supplement our treatment capacity.

LWC has sufficient capacity available to meet our needs into the foreseeable future and is seeking high volume customers to allow it to recover its plant investment over a larger sales base.

The rate must be fair for all other LWC customers after considering the differentials between KAWC and other utility customers. Those differentials include:

- Guaranteed minimum purchase
- Ability to shift demand to off-peak hours
- Long term contract
- Significant CIAC of transmission line installed in Jefferson County
- Potential to increase KAWC's requested reserved capacity

Note from 4-24: When Nick brought up Roy's comment @ LWC re "we'll build our own plant," Bob responded sharply, "I think he's bluffing." Bob shortly apologized profusely for "his outburst."

- Potential for significant volume of sales while still maintaining the integrity of LWC's facilities

We propose:

- An initial reserved capacity of 2.467 MGD. Attached Schedule 1 shows our proposed method to calculate the rate. The rate is based on your proposed method with some exceptions. Since we will be paying for our own transmission line, costs for existing transmission lines have been excluded. The cost of transmission lines is a significant part of the cost of water. KAWC will be making a major investment in transmission lines in Jefferson County. We have assumed total plant capacity of 300 MGD. Since ESA costs are recovered in the ESA rate, we have removed the ESA component from our calculation. We would like to discuss the development of the ESA charge in more detail to determine if there might be any savings under the reserved capacity method.

Bob showed interest - we didn't talk amt

- Until the LWC maximum day reaches 90% of total plant capacity, for all KAWC demand above the reserved capacity, calculated on a monthly average basis, we propose a rate based on your calculation for utility rate. See attached Schedule 2 for details of the calculation. Operating cost recovery has been removed from this rate since operating costs are recovered under the calculation on Schedule 1. Peaks caused by fires, main breaks, drought demand and other extraordinary uses of water will be excluded in the calculation of maximum day.

"The penalty rate could be another form of ratchet."

Bob showed interest

- We request the "right of first refusal" to reserve additional capacity when any customer with a potential demand of over 2 MGD proposes to connect to the LWC system.

X

- We accept your proposal to base customer charges on actual costs.

"not a proposal" UNTIL ALL IS decided

- We accept your proposal of system financing for the facilities installed to the point of delivery, as defined in the contract, on the basis that KAWC would have exclusive use of these facilities. We would like to discuss terms other than 20 years to see what impact that would have on our customers.

- For each metered connection that LWC makes to this line, or extension thereof, LWC will make a refund to KAWC of three (3) times immediate normal annual revenue. If, during the first twenty years, LWC integrates the Jefferson County facilities into its system, payments by KAWC for the facilities will cease and all transmission main costs (less CIAC), including the project facilities, will be integrated into the reserved capacity rate. Any refunds made to KAWC to that point will be prorated based on LWC's investment in the facilities with the appropriate amount refunded to LWC.

No rev sharing per Bob No ground here

- We request the right to adjust the reserved capacity on an annual basis, but in no case will the amount of reserved capacity be less than 1.5 MGD.

OK on annual adj but Bob says ~~[illegible]~~ daily use will be higher.

- We propose a maximum annual increase based on the rate of inflation or some other mutually agreeable index.

- Attached Schedule 3 shows total costs using the methods mentioned above.

I look forward to meeting with you soon to further discuss this opportunity.

Very truly yours,

Coleman

Coleman Bush
Vice President and Treasurer

Bob
"We are not contemplating ~~[illegible]~~ charging an SDC."
Joe H. "I don't like waiving any charges."
Bob – "KANC has a contract with a termination date." This is WRITTEN AS A TEMP AGREEMENT.

C: Roy W. Mundy II
Nick O. Rowe
Herb A. Miller, Jr.
Linda C. Bridwell
Edward J. Grubb
Mark C. Frost
Lindsey W. Ingram, Jr.
John D. Ober

4/27 Increase in a barely increase to retail customers
Bob thinks this will go better in letter agreement –

Bob "We don't have an agreement on anything UNTIL WE have an agreement on everything."

KENTUCKY-AMERICAN WATER COMPANY
CALCULATION OF RESERVED CAPACITY FOR WATER PURCHASES FROM
LOUISVILLE WATER COMPANY

Reserved Capacity Calculation		CHECK
LWC projected 1998 usage (before KAWC) - (MG)	37,000.000	<
LWC total capacity (MGD)	300.000	
KAWC reserved capacity (MGD)	2.467	
KAWC reserved capacity ratio	0.00822333	<
Operating Cost Component:		
KAWC Annual Usage (MG)	779.728	<
System Annual Usage	37,779.728	<
Ratio KAWC/System	0.020639	<
Total Operating Costs (000)	31,220.80	<
Add: Variable cost due to KAWC	175.85	<
Less:		
customer costs	9,803.20	<
retail costs	5,127.33	<
ESA	1,432.55	<
Transmission mains	712.85	<
Net	14,320.62	<
KAWC share	295.56	<
Operating cost rate	0.379056	<
Depreciation Cost Component:		
Total Depreciation Costs	11,010.48	<
Less:		
customer costs	2,663.01	<
retail costs	2,940.51	<
ESA	129.13	<
Transmission mains	2,122.63	<
Net	3,155.20	<
KAWC share	25.946	<
Return on Plant Investment Component:		
Total Return	28,585.31	<
Less:		
customer costs	1,488.14	<
retail costs	6,631.71	< (Different than LWC)
ESA	358.98	<
Transmission mains	14,204.23	< (1)
Net	5,902.25	<
KAWC share	48.536	<
Total (Depreciation and Return)	74.482	<
Total reserved capacity	900.455	<
Reserved capacity rate	0.082716	<

VARIABLE COSTS:	(000)	
Source of Supply	52.44	<
Power and Pumping	4,294.38	<
Less: ESA	(995.78)	<
Purification	4,993.24	<
Total variable cost	8,344.28	<
Variable cost/MG	0.22552	<

Assumptions:
Usage per day Jan-April and Nov-Dec will be 1800 (1000 gallons) per day.

Usage per day May-Oct will be 2467 per day.

ESA is not what was intended

(1) Transmission mains per return on plant investment schedule 148,269.67
times annual return 0.0958
14,204.23

pm Bobm 3/9/98
1998 X OK

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS				COMMON TO ONLY RETAIL CUSTOMERS
				BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33
2)	Depreciation Expenses	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51
3)	Return on Plant Investment (9.58%)	28,565.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74
	Total Louisville Water Co. System Units of Water Consumption							
4)	Number			37,000.00	63.27	173.80		
5)	Units			M.G.	M.G.D.	M.G.D.		
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.58% Rate of Return							
9)	Operating Expenses	395.683		337.219	48.791	9.673		
10)	Depreciation Expenses	136.058		105.521	28.975	1.562		
11)	Return on Plant Investment (9.58%)	511.351		379.674	126.766	4.911		
12)	Total	1,043.093		822.414	204.533	16.146		
	Cost per 1,000 Gallons (cents)	99.342		78,325.139	19,479.306	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

5/6 ↑
663,170
OK ↑
pm Bobm
3/9/98

Schedule 1
11/25/97

Bob - Does not use demand factors - straight pro rata basis

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	SOURCE OF SUPPLY	52.44		36.31	16.13			
2)	POWER AND PUMPING							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill Station, Power	743.19		743.19				
6)	Crescent Hill Station, Other	434.68		269.42		165.26		
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98				
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91			
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95				
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.86	171.82	9.04				
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76		
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00	
14)	PURIFICATION							
15)	Chemicals, B.E. Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	TRANSMISSION AND DISTRIBUTION							
20)	Transmission Mains	712.95		493.66	219.28			
21)	Distribution Mains	1,769.04						1,769.04 ✓
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26 ✓
26)	Transmission & Distribution Subtotal	4,427.20	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Transmission and Distribution	5,052.32	23.71	565.00	250.25	1.00	1,839.47	2,372.89
29)	Total Transmission and Distribution	9,479.52	44.49	1,060.09	469.53	1.88	3,451.34	4,452.19
30)	CUSTOMER ACCOUNTS AND SERVICE							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,983.47						
34)	Uncollected Accounts	275.00						
35)	Miscellaneous Customer Accounts	96.82						
36)	Total Customer Accounts & Service	5,581.80					5,581.80	
37)	Subtotal	24,401.37	1,040.27	7,819.13	1,812.32	244.33	9,033.14	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	ADMINISTRATIVE AND GENERAL							
40)	Administrative and General	12,610.53						
41)	Labor Related Overhead	8,853.50						
42)	Less: Operating Expenses Applied	(12,262.30)						
43)	Total Administrative and General	9,201.73	392.28	2,948.59	683.42	92.14	3,406.39	1,678.91
44)	Total	33,603.10	1,432.55	10,767.72	2,495.74	336.46	12,439.52	6,131.10
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(80.90)		(80.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.90	1,432.55	11,882.95	2,495.74	479.03	12,814.52	6,131.10
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33

✓ ✓ (3269.47) ✓ (1857.66) ✓

Schedule 2

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATIO EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land							
2)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73	
3)	Basins and Ground Storage	359.24		248.75	110.49			
4)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06		
5)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09			
6)	Booster Pump Equipment	34.93	24.17	6.67		4.09		
7)	Miscellaneous Pump Equipment	48.65		33.69	14.96			
8)	Sludge Disposal Equipment	64.48		64.48				
9)	Purification Equipment	536.44		371.44	165.00			
10)	Transmission Mains	2,122.63		1,469.76	652.87			
11)	Distribution Mains	1,971.82						1,971.82 ✓
12)	Meters	357.76					357.76	
13)	Services	1,302.41					1,302.41	
14)	Meter Installations	447.05					447.05	
15)	Fire Hydrants	409.90						409.90 ✓
16)	Sub-total	8,918.14	104.59	3,011.76	1,200.49	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and Other Equipment	2,092.34	24.54	706.61	281.65	14.69	506.06	558.79
19)	TOTAL	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51

Schedule 3

UTILITY RATE

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	4,827.66	133.83	2,817.58	889.91	107.15	879.19	
2)	Land Improvements and Buildings	34,449.56	448.15	20,410.16	6,446.36	776.15	6,368.74	
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63			
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26		
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33			
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14		
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65			
8)	Sludge Disposal Equipment	1,704.07		1,704.07				
9)	Purification Equipment	18,576.16		12,862.62	5,713.54			
10)	Transmission Mains	148,269.67		102,665.77	45,603.90			
11)	Distribution Mains	102,856.67						102,856.67
12)	Meters	2,887.58					2,887.58	
13)	Services	40,176.18					40,176.18	
14)	Meter Installations	13,588.90					13,588.90	
15)	Fire Hydrants	16,854.21						16,854.21
16)	Sub-total	410,177.19	3,569.96	156,091.75	64,485.33	2,418.69	63,900.59	119,710.88
17)	Percent	100.00%	0.87%	38.05%	15.72%	0.59%	15.58%	29.19%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	4,150.25	1,714.57	64.31	1,699.02	3,182.94
19)	Total Plant	421,083.21	3,664.88	160,242.00	66,199.90	2,483.00	65,599.61	122,893.82
20)	Other Rate Base Items (1)	9,451.20	82.26	3,596.63	1,485.85	55.73	1,472.38	2,758.35
21)	Sub-total	430,534.41	3,747.14	163,838.63	67,685.75	2,538.73	67,071.99	125,652.17
22)	Contributions and Grants (2)	(132,149.10)		(24,183.29)			(51,538.15)	(56,427.67)
23)	Total Net Plant Investment	298,385.31	3,747.14	139,655.35	67,685.75	2,538.73	15,533.84	69,224.50
24)	Annual Return @ 9.58%	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/25/97

Louisville Water Company
Allocation of Louisville Water Company cost of service to utilities less operating costs
Year ended December 31, 1998 (in thousand dollars)

Line No.	Item	Total cost of service ($1000)	Elevated service Area	Base	Maximum Day	Maximum Hour	Customer	Common to Only Retail
	Total LWC system cost of service							
1	Operating expenses							
2	Depreciation expenses	11,010.48	129.13	3,718.38	1,482.11	77.33	2,663.01	2,940.51
3	Return on plant investment (9.58%)	28,585.28	358.98	13,374.20	6,489.02	243.23	1,488.14	6,631.71
		39,595.76						
	Total LWC system units of water cons							
4	Number			37,000	63.27	173.8		
5				MG	MGD	MGD		
	Utility account units of water consumption							
6	Number			1050	1.24	3.51		
7	Units			MG	MGD	MGD		
8	Ratio to total			0.028378	0.019599	0.020196		
	Utility cost of service - 9.58% rate of return							
9	Operating expenses	0.000		0.000	0.000	0.000		
10	Depreciation expense	136.131		105.522	29.047	1.562		
11	Return on plant investment (9.58%)	511.625		379.538	127.175	4.912		
12	Total	647.756		485.060	156.222	6.474		
	Cost per thousand gallons	0.616910		0.461962	0.148783	0.006166		

Kentucky-American Water Company
Bluegrass Water Project

	Amount	Reserved Cap. Rate	Excess Cap. Rate	Oper. Cost Rate	ESA Rate
Reserved Capacity	2,467	0.082716	0.616910	0.379056	0.19

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Average Per Day
# Days	31	28	31	30	31	30	31	31	30	31	30	31	365	
1000 gallons	1,800	1,800	1,800	1,800	2,467	2,467	2,467	2,467	2,467	2,467	1,800	1,800	779,728	2,136.24
1000 gallons per month	55,800	50,400	55,800	54,000	76,477	74,010	76,477	76,477	74,010	76,477	54,000	55,800	779,728	
Times operating cost rate	21,151.30	19,104.40	21,151.30	20,469.00	28,989.03	28,053.90	28,989.03	28,989.03	28,053.90	28,989.03	20,469.00	21,151.30	295,560.22	
Reserved capacity	2,467	2,467	2,467	2,467	2,467	2,467	2,467	2,467	2,467	2,467	2,467	2,467		
Usage (1000 gallons)	76,477	69,076	76,477	74,010	76,477	74,010	76,477	76,477	74,010	76,477	74,010	76,477		
Times rate	6,325.90	5,713.72	6,325.90	6,121.84	6,325.90	6,121.84	6,325.90	6,325.90	6,121.84	6,325.90	6,121.84	6,325.90	74,482.38	
Excess (1000 gallons)	0	0	0	0	0	0	0	0	0	0	0	0	0.00	CHECK
Times excess capacity rate	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
ESA charge (on actual demand)	10,602.00	9,576.00	10,602.00	10,260.00	14,530.63	14,061.90	14,530.63	14,530.63	14,061.90	14,530.63	10,260.00	10,602.00	148,148.32	
TOTAL	38,079.20	34,394.12	38,079.20	36,850.84	49,845.56	48,237.64	49,845.56	49,845.56	48,237.64	49,845.56	36,850.84	38,079.20	518,190.92	518,190.92
Cost per 1000 gallons of demand														0.664579

LOUISVILLE WATER COMPANY

MAR 9

1997 RATE STUDY FOR YEAR 1998

DETERMINATION OF EXTRA COST ALLOCATION PERCENTAGES

YEAR	AVERAGE DAY MGD	MAXIMUM DAY MGD	MAXIMUM HOUR MGD
1988	117.3	198.8	214.0
1989	111.4	152.3	164.7
1990	116.0	171.2	171.2
1991	120.6	172.3	205.4
1992	112.1	150.9	175.0
1993	116.2	155.2	170.0
1994	124.2	190.6	214.5
1995	122.0	173.1	202.0
1996	121.3	169.3	187.6
1997 (F/CST)	124.0	177.8	207.6
Ten Year Total	1,185.1	1,711.5	1,912.0
Average	118.5	171.2	191.2
Ratio	1.0	1.4	1.6

ALLOCATION PERCENTAGES

	BASE	MAXIMUM DAY	MAXIMUM HOUR
BASE/MAXIMUM DAY	69.2	30.8	
BASE/MAXIMUM HOUR	62.0		38.0

SCHEDULE 1

$\frac{116.5}{171.2} = 69.2\%$

$\frac{116.5}{191.2} = 61.96\ (62.0)$

P

00292

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	SOURCE OF SUPPLY	52.44		36.31	16.13		
2)	POWER AND PUMPING						
3)	Zorn Station, Power	866.07		866.07			
4)	Zorn Station, Other	427.14		295.76	131.38		
5)	Crescent Hill Station, Power	743.19		743.19			
6)	Crescent Hill Station, Other	434.68		269.42		165.26	
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98			
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91		
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95			
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43	
11)	Boosting Pumping, Power	180.86	171.82	9.04			
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76	
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00
14)	PURIFICATION						
15)	Chemicals, B.E. Payne	977.05		977.05			
16)	Chemicals, Crescent Hill	308.54		308.54			
17)	Purification, Other	3,707.65		2,567.27	1,140.38		
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00
19)	TRANSMISSION AND DISTRIBUTION						
20)	Transmission Mains	712.95		493.66	219.28		
21)	Distribution Mains	1,789.04		1,108.87		680.16	
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88	
23)	Services	1,126.75					1,126.75
24)	Meters	485.12					485.12
25)	Hydrants	290.26				290.26	
26)	Transmission & Distribution Subtotal	4,427.20	20.78	1,603.97	219.28	971.30	1,611.87
27)	Percent	100.00%	0.47%	36.23%	4.95%	21.94%	36.41%
28)	General Transmission and Distribution	5,052.32	23.71	1,830.44	250.25	1,108.45	1,839.47
29)	Total Transmission and Distribution	9,479.52	44.49	3,434.41	469.53	2,079.75	3,451.34
30)	CUSTOMER ACCOUNTS AND SERVICE						
31)	Supervision	201.12					
32)	Meter Reading	1,025.39					
33)	Customer Records	3,983.47					
34)	Uncollected Accounts	275.00					
35)	Miscellaneous Customer Accounts	96.82					
36)	Total Customer Accounts & Service	5,581.80					5,581.80
37)	Subtotal	24,401.37	1,040.27	10,193.45	1,812.32	2,322.20	9,033.14
38)	Percent	100.00%	4.26%	41.77%	7.43%	9.52%	37.02%
39)	ADMINISTRATIVE AND GENERAL						
40)	Administrative and General	12,610.53					
41)	Labor Related Overhead	8,853.50					
42)	Less: Operating Expenses Applied	(12,262.30)					
43)	Total Administrative and General	9,201.73	392.28	3,843.94	683.42	875.70	3,406.39
44)	Total	33,603.10	1,432.55	14,037.39	2,495.74	3,197.90	12,439.52
45)	Free Water in Lieu of Taxes	963.70		963.70			
46)	Amortization	(80.90)		(80.90)			
47)	Retirement of Assets	750.00		232.43		142.57	375.00
48)	Total Operating Expenses	35,235.90	1,432.55	15,152.62	2,495.74	3,340.47	12,814.52
49)	Other Operating Income	(4,015.10)				(1,003.78)	(3,011.33)
50)	Net Operating Expense	31,220.80	1,432.55	15,152.62	2,495.74	2,336.69	9,803.20

Schedule 2

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATION EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73
2)	Basins and Ground Storage	359.24		248.75	110.49		
3)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06	
4)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09		
5)	Booster Pump Equipment	34.93	24.17	6.67		4.09	
6)	Miscellaneous Pump Equipment	48.65		33.69	14.96		
7)	Sludge Disposal Equipment	64.48		64.48			
8)	Purification Equipment	536.44		371.44	165.00		
9)	Transmission Mains	52% 2,122.63		1,469.76	652.87		
10)	Distribution Mains	48% 1,971.82		1,222.16		749.66	
11)	Meters	357.76					357.76
12)	Services	1,302.41					1,302.41
13)	Meter Installations	447.05					447.05
14)	Fire Hydrants	409.90				409.90	
15)	Sub-total	8,918.14	104.59	4,233.92	1,200.49	1,222.19	2,156.95
16)	Percent	100.00%	1.17%	47.48%	13.46%	13.70%	24.19%
17)	General and Other Equipment	2,092.34	24.54	993.35	281.65	286.75	506.06
18)	1997 Budgeted Depreciation	11,010.50	129.12	5,227.27	1,482.14	1,508.93	2,663.01

Schedule 3

$\frac{11\,010}{410\,177}$ = 2.68% Composite depreciation
accrual rate

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land	4,827.66	133.83	3,286.70	1,069.28	72.05	265.79
2)	Land Improvements and Buildings	34,449.56	448.15	23,808.37	7,745.73	521.96	1,925.36
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63		
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26	
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33		
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14	
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65		
8)	Sludge Disposal Equipment	1,704.07		1,704.07			
9)	Purification Equipment	18,576.16		12,862.62	5,713.54		
10)	Transmission Mains	148,269.67		102,665.77	45,603.90		
11)	Distribution Mains	102,856.67		63,752.15		39,104.52	
12)	Meters	2,887.58					2,887.58
13)	Services	40,176.18					40,176.18
14)	Meter Installations	13,588.90					13,588.90
15)	Fire Hydrants	16,854.21				16,854.21	
16)	Sub-total	410,177.18	3,569.96	223,711.21	65,964.06	58,088.14	58,843.82
17)	Percent	100.00%	0.87%	54.54%	16.08%	14.16%	14.35%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	5,948.16	1,753.89	1,544.48	1,564.57
19)	Total Plant	421,083.20	3,664.88	229,659.37	67,717.95	59,632.62	60,408.39
20)	Other Rate Base Items (1)	9,451.20	82.26	5,154.70	1,519.93	1,338.45	1,355.86
21)	Sub-total	430,534.40	3,747.14	234,814.07	69,237.88	60,971.07	61,764.25
22)	Contributions and Grants (2)	(132,149.10)		(52,890.51)	(12,396.92)	(15,323.52)	(51,538.15)
23)	Total Net Plant Investment	298,385.30	3,747.14	181,923.56	56,840.96	45,647.55	10,226.10
24)	Annual Return @ 9.58%	28,585.31	358.98	17,428.28	5,445.36	4,373.03	979.66

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/26/97

MAXIMUM DAY AND MAXIMUM HOUR DEMAND FACTORS
1996 Rate Study for 1997

		MAXIMUM DAY/ MAXIMUM HOUR DEMAND DATA		
		Ratio Max. Day to Avg. Day	Ratio Max. Hour to Max. Day	Ratio Max. Hour to Avg. Day
		%	%	%
A	Residential			
1	Small 0-3	1.22		1.61
2	Medium 4-6	1.67	1.47	2.10
3	Large Over 6	1.89	1.49	3.07
B	Commercial			
1	Small 0-20	1.77	1.86	3.08
2	Medium 21-1,500	1.47	2.03	3.16
3	Large Over 1,500	1.61	1.67	2.69
C	Industrial			
1	Small 0-1,500	1.58	2.05	2.79
2	Medium 1,500-10,000	1.81	1.57	2.98
3	Large 10,001 - 20,000	1.41	1.30	1.85
D	Utility All	1.43	1.50	2.22

143% 222%

NOTES:

Demand Factors are being revised.

Consumption data to calculate demand factors is bring obtained from representives of all customers classes.

A phase in period of Five (5) years is being used before exclusive use of consumption data to calculate factors

For 1997: Demand Factors were calculated as follows:
60% weight to current factors (1995 and prior)
40% weight to new consumption data.

Schedule 5

ESTIMATED UNITS OF SERVICE BY CUSTOMER CLASS (1997)

	CUSTOMER CLASS	ANNUAL WATER USED (M G.)	AVERAGE DAY (M G D.)	%	MAXIMUM DAY CAPACITY FACTOR %	MAXIMUM DAY TOTAL CAPACITY (M G D.)	MAXIMUM DAY EXTRA CAPACITY (M G D.)	%	MAXIMUM HOUR CAPACITY FACTOR %	MAXIMUM HOUR TOTAL CAPACITY (M G D.)	MAXIMUM HOUR EXTRA CAPACITY (M G D.)	%	DISTRIBUTION MAIN %	ANNUAL E.S.A. USAGE (M G.)	ANNUAL CUSTOMER EQUIVALENT UNITS METER CAPACITY
	RETAIL														
1)	Residential														2,576,406
2)	Small 0-3 T.G.	765.71	2.10	2.07	1.22	2.56	0.46	0.73	1.61	3.38	1.28	0.74	2.66		
3)	Medium 4-6 T.G.	4,402.65	12.06	11.90	1.67	20.14	8.08	12.77	2.10	25.33	13.27	7.63	15.32		
4)	Large over 6 T.G.	9,741.64	26.69	26.33	1.89	50.44	23.75	37.54	3.07	81.94	55.25	31.79	33.90		
		14,910.00													
5)	Commercial														808,312
6)	Small 0-20 T.G.	1,030.44	2.82	2.78	1.77	5.00	2.17	3.44	3.08	8.70	5.87	3.38	3.59		
7)	Medium 21-1,500 T.G.	9,544.71	26.15	25.80	1.47	38.44	12.29	19.42	3.16	82.63	56.48	32.50	33.21		
8)	Large 1,501-5,000 T.G.	1,905.76	5.22	5.15	1.61	8.41	3.18	5.03	2.69	14.05	8.82	5.08	6.63		
9)	Large 5,001-10,000 T.G.	970.78	2.66	2.62	1.61	4.28	1.62	2.56	2.69	7.15	4.49	2.59	0		
10)	Extra Large over 10,000 T.G.	1,398.31	3.83	3.76	1.61	6.17	2.34	3.69	2.69	10.31	6.47	3.73	0		
		14,850.00													
11)	Industrial														89,004
12)	Small 0-1,500 T.G.	474.45	1.30	1.28	1.58	2.05	0.75	1.19	2.79	3.63	2.33	1.34	1.65		
13)	Medium 1,501-5,000 T.G.	873.71	2.39	2.36	1.81	4.33	1.94	3.06	2.98	7.13	4.74	2.73	3.04		
14)	Large 5,001-10,000 T.G.	765.53	2.10	2.07	1.41	2.96	0.86	1.36	1.85	3.88	1.78	1.03	0		
15)	Large 10,001-20,000 T.G.	4,076.31	11.17	11.02	1.41	15.75	4.58	7.24	1.85	20.66	9.49	5.46	0		
		6,190.00													
17)	SUB-TOTAL (RETAIL)	35,950.00	98.49			160.53	62.04			268.78	170.29			9,040.00	3,473,722
18)	UTILITY	1,050.00	2.88	2.84	1.43 ✓	4.11	1.24	1.95	2.22 ✓	6.39	3.51	2.02		725.00	3,660
19)	TOTAL	37,000.00	101.37 ✓			164.64	63.27			275.17	173.80			9,765.00	3,477,382

1) Total water used by customers in that specific class.
2) Consumption shown in 1,000 gallons per month.
3) Commercial includes Municipal.

Schedule 6
11/24/97

00297

CONSUMPTION BY CLASS 1000 Gal.

	CUSTOMER CLASS	Annual Consumption 6/30/97	Percentage	Budgeted Consumption 1998	% of Tota
	RETAIL				
1)	RESIDENTIAL				
2)	Small 0-3 Gals.	755,420.4	5.14%	765,706.6	
3)	Medium 4-6 Gals.	4,343,505.6	29.53%	4,402,649.2	
4)	Large over 6 Gals.	9,610,778.4	65.34%	9,741,644.2	
		14,709,704.4	100.00%	14,910,000.0	41
5)	COMMERCIAL/MUNICIPAL				
6)	Small 0-20 Gals.	1,082,667.6	6.94%	1,030,438.2	
7)	Medium 21-1,500 Gals.	10,028,493.6	64.27%	9,544,705.5	
8)	Large 1,501-5,000 Gals. *	2,002,356.0	12.83%	1,905,759.6	
9)	Large 5,001-10,000 Gals.	1,019,988.0	6.54%	970,782.4	
10)	Extra Large over 10,000 Gals.	1,469,190.0	9.42%	1,398,314.3	
		15,602,695.2	100.00%	14,850,000.0	41
11)	INDUSTRIAL				
12)	Small 0-1,500 Gals.	476,215.2	7.66%	474,450.7	
13)	Medium 1,501-5,000 Gals. *	876,960.0	14.11%	873,710.7	
14)	Large 5,001-10,000 Gals.	768,372.0	12.37%	765,525.0	
15)	Large 10,001-20,000 Gals.	4,091,473.2	65.85%	4,076,313.5	
16)	Heavy Over 20,000 Gals.	0.0	0.00%	0.0	
		6,213,020.4	100.00%	6,190,000.0	17
17)	SUB-TOTAL (RETAIL)	36,525,420.0		35,950,000.0	10(
18)	UTILITY			1,050,000.0	
19)	TOTAL	36,525,420.0		37,000,000.0	

* - Forced Step

Companion to

Schedule 6

COST OF SERVICE ALLOCATION TO CUSTOMER CLASSES (1998)

COST OF SERVICE SUMMARY

		BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	DISTRIBUTION MAIN COSTS	TOTAL COMMODITY COSTS	ELEVATED SERVICE AREA	CUSTOMER COSTS	TOTAL COSTS
		($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)
1)	Net Operating Costs (Sch. 2)	13,801.56	2,495.74	1,507.96	2,179.79	19,985.05	1,432.55	9,803.20	31,220.80
2)	Depreciation Expense (Sch. 3)	3,772.88	1,482.14	616.79	2,346.56	8,218.37	129.12	2,663.01	11,010.50
3)	Return on Plant Invest. (9.58%, Sch. 4)	16,180.85	5,445.36	3,608.07	2,012.39	27,246.68	358.98	979.66	28,585.31
4)	Total Cost of Service	33,755.30	9,423.24	5,732.82	6,538.74	55,450.10	1,920.64	13,445.87	70,816.61

9.2% of Total

COMMODITY COST DISTRIBUTION

	CUSTOMER CLASS	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	TOTAL ($1,000)	WATER USED BY CLASS (M.G.)	COST PER 1,000 GALS.
	Residential Retail											
5)	Small (0-3 T.G.)	2.07	698.56	0.73	68.73	0.74	42.21	2.66	173.93	983.43	765.71	1.2843
6)	Medium (4-6 T.G.)	11.90	4,016.58	12.77	1,203.57	7.63	437.67	15.32	1,001.73	6,659.53	4,402.65	1.5126
7)	Large (Over 6 T.G.)	26.33	8,887.35	37.54	3,537.58	31.79	1,822.38	33.90	2,216.63	16,463.94	9,741.64	1.6901
	Commercial Retail											
8)	Small (0-20 T.G.)	2.78	940.07	3.44	323.74	3.38	193.70	3.59	234.74	1,692.25	1,030.44	1.6423
9)	Medium (21-1,500 T.G.)	25.80	8,707.69	19.42	1,830.39	32.50	1,863.17	33.21	2,171.52	14,572.77	9,544.71	1.5268
10)	Large (1,500-5,000 T.G.)	5.15	1,738.63	5.03	474.33	5.08	291.07	6.63	433.52	2,937.55	1,905.76	1.5414
11)	Large 5,001-10,000 T.G.	2.62	885.65	2.56	241.62	2.59	148.27	0.00	0.00	1,275.54	970.78	1.3139
12)	Extra Large over 10,000 T.G.	3.78	1,275.69	3.69	348.03	3.73	213.56	0.00	0.00	1,837.28	1,398.31	1.3139
	Industrial Retail											
13)	Small (0-1,500 T.G.)	1.28	432.84	1.19	112.28	1.34	76.75	1.65	107.89	729.76	474.45	1.5381
14)	Medium (1,501-5,000 T.G.)	2.36	797.09	3.06	288.76	2.73	156.34	3.04	198.78	1,440.97	873.71	1.6493
15)	Large 5,001-10,000 T.G.	2.07	698.39	1.36	128.06	1.03	58.81	0.00	0.00	885.26	765.53	1.1564
16)	Large Over 10,001 T.G.	11.02	3,718.84	7.24	681.92	5.46	313.13	0.00	0.00	4,713.89	4,076.31	1.1564
17)	Utility	2.84	957.92	1.95	184.22	2.02	115.77	0.00	0.00	1,257.91	1,050.00	1.1980
18)	Total		33,755.30		9,423.24		5,732.82		6,538.74	55,450.10	37,000.00	

1,257,910 / 1,050,000 = 1.1980

STEP RATES (Weighted Average) developed from Cost of Service Study:

Step (Thousand Gallons)	Rate per Thousand
0-3 (First 3)	1.31
4-8 (Next 3)	1.52
7-200 (Next 194)	1.63
201-1,500 (Next 1,300)	1.53
1,501-5,000 (Next 3,500)	1.57
5,001-10,000 (Next 5,000)	1.24
10,001-20,000 (Next 10,000)	1.20

Service Charge developed by Cost of Service Study for Meter Capacity:
$13,445,870 Customer Costs / 3,477,382 Equivalent Residential Meters (E.U.) = $3.87 per E.U.

Elevated Service Area Charge developed by Cost of Service Study:
$1,920,640 ESA Costs / 9,765,000 Thousand Gallons delivered to ESA = $.1967 per Thousand Gallons.

Schedule 7
11/25/97

99299

WEIGHTED AVERAGE - DISTRIBUTION OF COMMODITY COSTS

Usage Category (T.G.)	Type of Customer	Monthly Consumptions From Report of 06/30/97	Actual Consumption (Mo. X 12)	% of Budget to Consumption Report	1998 Budgeted Consumption	Schedule 7 Cost Rates	DF * DD Cost	Composite Rate DF/DD	Current Rates	Rate % Increase From Current
0 - 3	Residential	62,951.7	755.4		743.5	1.2843	954.9			
	Commercial	4,753.8	57.0		56.1	1.6423	92.2			
	Industrial	36.1	0.4		0.4	1.5381	0.7			
	Sub-total	67,741.6	812.9	0.984246	800.1		1,047.8	1.3096	1.26	3.94%
4 - 6	Residential	361,958.8	4,343.5		4,275.1	1.5126	6,466.6			
	Commercial	10,983.7	131.8		129.7	1.6423	213.0			
	Industrial	134.7	1.6		1.6	1.5381	2.4			
	Sub-total	373,077.2	4,476.9	0.984246	4,406.4		6,682.1	1.5164	1.49	1.77%
7 - 200	Res. 7 - 20	748,658.5	8,983.9		8,842.4	1.6901	14,944.1			
	Res. 21 - 200	49,322.4	591.9		582.5	1.6901	984.5			
	Comm. 7 - 20	74,484.8	893.8		879.7	1.6423	1,444.8			
	Comm. 21 - 200	385,815.5	4,629.8		4,556.8	1.5268	6,957.4			
	Ind. 7 - 20	1,056.3	12.7		12.5	1.5381	19.2			
	Ind. 21 - 200	7,258.5	87.1		85.7	1.5381	131.9			
	Sub-total	1,266,596.0	15,199.2	0.984246	14,959.7		24,481.8	1.6265	1.61	1.03%
201 - 1,500	Residential	2,917.3	35.0		34.5	1.6901	58.2			
	Commercial	449,892.3	5,398.7		5,313.7	1.5268	8,112.8			
	Industrial	31,199.0	374.4		368.5	1.5381	566.8			
	Sub-total	484,008.6	5,808.1	0.984246	5,716.6		8,737.9	1.5285	1.51	1.23%
1,501 - 5,000	Commercial	166,863.0	2,002.4		1,970.8	1.5414	3,037.8			
	Industrial	73,080.0	877.0		863.1	1.6493	1,423.5			
	Sub-total	239,943.0	2,879.3	0.984246	2,834.0		4,461.4	1.5743	1.55	1.56%
5,001 - 10,000	Commercial	84,999.0	1,020.0		1,003.9	1.3139	1,319.1			
	Industrial	64,031.0	768.4		756.3	1.1564	874.6			
	Sub-total	149,030.0	1,788.4	0.984246	1,760.2		2,193.6	1.2363	1.23	0.51%
10,001 - 20,000	Commercial	122,432.5	1,469.2		1,446.0	1.3139	1,900.0			
	Industrial	340,956.1	4,091.5		4,027.0	1.1564	4,656.9			
	Sub-total	463,388.6	5,560.7	0.984246	5,473.1		6,556.9	1.1980	1.19	0.67%
Over 20,000	Commercial		0.0		0.0	1.3139	0.0			
	Industrial		0.0		0.0	0.0000	0.0			
	Sub-total	0.0	0.0		0.0		0.0	0.0000		
Total Retail		3,043,785.0	36,525.4	0.984246	35,950.0		54,161.4			
Utility					1,050.00	1.1980	1,257.9	1.1980	1.18	3.28%
TOTAL					37,000.0		55,419.3			

11/25/97
Companion to Schedule 7

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS EXTRA CAPACITY BASE	MAXIMUM DAY	MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33
2)	Depreciation Expenses	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51
3)	Return on Plant Investment (9.58%)	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74
		70 812		28980	10462	799		15[illegible]
	Total Louisville Water Co. System Units of Water Consumption							2[illegible]
4)	Number			37,000.00	63.27	173.80		
5)	Units			M.G.	M.G.D.	M.G.D.		
		same # on Sch. 7						
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.58% Rate of Return							
9)	Operating Expenses	395.683		337.219	48.791	9.673		
10)	Depreciation Expenses	136.058		105.521	28.875	1.562		
11)	Return on Plant Investment (9.58%)	511.351		379.674	126.766	4.911		
12)	Total	1,043.093		822.414	204.533	16.146		
	Cost per 1,000 Gallons (cents)	99.342		78,325.139	19,479.306	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

Schedule 1
11/25/97

00301

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	SOURCE OF SUPPLY	52.44		36.31	16.13			
2)	POWER AND PUMPING							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill Station, Power	743.19		743.19				
6)	Crescent Hill Station, Other	434.68		269.42		165.26		
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98				
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91			
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95				
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.86	171.82	9.04				
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76		
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00	
14)	PURIFICATION							
15)	Chemicals, B.E. Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	TRANSMISSION AND DISTRIBUTION							
20)	Transmission Mains	712.95		493.66	219.28			
21)	Distribution Mains	1,789.04						1,789.04
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26
26)	Transmission & Distribution Subtotal	4,427.20	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Transmission and Distribution	5,052.32	23.71	565.00	250.25	1.00	1,839.47	2,372.89
29)	Total Transmission and Distribution	9,479.52	44.49	1,060.09	469.53	1.88	3,451.34	4,452.19
30)	CUSTOMER ACCOUNTS AND SERVICE							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,963.47						
34)	Uncollected Accounts	275.00						
35)	Miscellaneous Customer Accounts	96.82						
36)	Total Customer Accounts & Service	5,561.80					5,561.80	
37)	Subtotal	24,401.37	1,040.27	7,819.13	1,812.32	244.33	9,033.14	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	ADMINISTRATIVE AND GENERAL							
40)	Administrative and General	12,610.53						
41)	Labor Related Overhead	8,853.50						
42)	Less: Operating Expenses Applied	(12,262.30)						
43)	Total Administrative and General	9,201.73	392.28	2,948.59	683.42	92.14	3,406.39	1,678.91
44)	Total	33,603.10	1,432.55	10,767.72	2,495.74	336.46	12,439.52	6,131.10
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(80.90)		(80.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.90	1,432.55	11,882.95	2,495.74	479.03	12,814.52	6,131.10
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33

Schedule 2

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1996 (IN THOUSAND DOLLARS)

LINE NO	ITEM	TOTAL DEPRECIATIO EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land							
2)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73	
3)	Basins and Ground Storage	359.24		248.75	110.49			
4)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06		
5)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09			
6)	Booster Pump Equipment	34.93	24.17	6.67		4.09		
7)	Miscellaneous Pump Equipment	48.65		33.69	14.96			
8)	Sludge Disposal Equipment	64.48		64.48				
9)	Purification Equipment	536.44		371.44	165.00			
10)	Transmission Mains	2,122.63		1,469.76	652.87			
11)	Distribution Mains	1,971.82						1,971.82
12)	Meters	357.76					357.76	
13)	Services	1,302.41					1,302.41	
14)	Meter Installations	447.05					447.05	
15)	Fire Hydrants	409.90						409.90
16)	Sub-total	8,918.14	104.59	3,011.76	1,200.49	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and Other Equipment	2,092.34	24.54	706.61	281.65	14.69	506.06	558.79
19)	TOTAL	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51

Schedule 3

UTILITY RATE

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	4,827.66	133.83	2,817.58	889.91	107.15	879.19	
2)	Land Improvements and Buildings	34,449.56	448.15	20,410.16	6,446.36	776.15	6,368.74	
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63			
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26		
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33			
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14		
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65			
8)	Sludge Disposal Equipment	1,704.07		1,704.07				
9)	Purification Equipment	18,576.16		12,862.62	5,713.54			
10)	Transmission Mains	148,269.67		102,665.77	45,603.90			
11)	Distribution Mains	102,856.67						102,856.67
12)	Meters	2,887.58					2,887.58	
13)	Services	40,176.18					40,176.18	
14)	Meter Installations	13,588.90					13,588.90	
15)	Fire Hydrants	16,854.21						16,854.21
16)	Sub-total	410,177.19	3,569.96	156,091.75	64,485.33	2,418.69	63,900.59	119,710.88
17)	Percent	100.00%	0.87%	38.05%	15.72%	0.59%	15.58%	29.19%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	4,150.25	1,714.57	64.31	1,699.02	3,182.94
19)	Total Plant	421,083.21	3,664.88	160,242.00	66,199.90	2,483.00	65,599.61	122,893.82
20)	Other Rate Base Items (1)	9,451.20	82.26	3,596.63	1,485.85	55.73	1,472.38	2,758.35
21)	Sub-total	430,534.41	3,747.14	163,838.63	67,685.75	2,538.73	67,071.99	125,652.17
22)	Contributions and Grants (2)	(132,149.10)		(24,183.29)			(51,538.15)	(56,427.67)
23)	Total Net Plant Investment	298,385.31	3,747.14	139,655.35	67,685.75	2,538.73	15,533.84	69,224.50
24)	Annual Return @ 9.58%	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/25/97

3/6/98

ESTIMATED UNITS OF SERVICE BY CUSTOMER CLASS (1997)

	CUSTOMER CLASS	ANNUAL WATER USED (M.G.)	AVERAGE DAY (M.G.D.)	%	MAXIMUM DAY CAPACITY FACTOR %	MAXIMUM DAY TOTAL CAPACITY (M.G.D.)	MAXIMUM DAY EXTRA CAPACITY (M.G.D.)	%	MAXIMUM HOUR CAPACITY FACTOR %	MAXIMUM HOUR TOTAL CAPACITY (M.G.D.)	MAXIMUM HOUR EXTRA CAPACITY (M.G.D.)	%	DISTRIBUTION MAIN %	ANNUAL E.S.A. USAGE (M.G.)	ANNUAL CUSTOMER EQUIVALENT UNITS METER CAPACITY
	RETAIL														
1)	Residential														
2)	Small 0-3 T.G.	765.71	2.10	2.07	1.22	2.56	0.46	0.73	1.61	3.38	1.28	0.74	2.66		2,576,406
3)	Medium 4-6 T.G.	4,402.65	12.06	11.90	1.67	20.14	8.08	12.77	2.10	25.33	13.27	7.63	15.32		
4)	Large over 6 T.G.	9,741.64	26.69	26.33	1.89	50.44	23.75	37.54	3.07	81.94	55.25	31.79	33.90		
		14,910.00													
5)	Commercial														
6)	Small 0-20 T.G.	1,030.44	2.82	2.78	1.77	5.00	2.17	3.44	3.08	8.70	5.87	3.38	3.59		808,312
7)	Medium 21-1,500 T.G.	9,544.71	26.15	25.80	1.47	38.44	12.29	19.42	3.16	82.63	56.48	32.50	33.21		
8)	Large 1,501-5,000 T.G.	1,905.78	5.22	5.15	1.61	8.41	3.18	5.03	2.69	14.05	8.82	5.08	6.63		
9)	Large 5,001-10,000 T.G.	970.78	2.66	2.62	1.61	4.28	1.62	2.56	2.69	7.15	4.49	2.50	0		
0)	Extra Large over 10,000 T.G.	1,398.31	3.83	3.78	1.61	6.17	2.34	3.69	2.69	10.31	6.47	3.73	0		
		14,850.00													
1)	Industrial														
2)	Small 0-1,500 T.G.	474.45	1.30	1.28	1.58	2.05	0.75	1.19	2.79	3.63	2.33	1.34	1.65		89,004
3)	Medium 1,501-5,000 T.G.	873.71	2.39	2.36	1.81	4.33	1.94	3.06	2.98	7.13	4.74	2.73	3.04		
4)	Large 5,001-10,000 T.G.	765.53	2.10	2.07	1.41	2.96	0.86	1.36	1.85	3.86	1.78	1.03	0		
5)	Large 10,001-20,000 T.G.	4,076.31	11.17	11.02	1.41	15.75	4.58	7.24	1.85	20.66	9.49	5.46	0		
		6,190.00													
7)	SUB-TOTAL (RETAIL)	35,950.00	98.49			160.53	62.04			268.78	170.29			9,040.00	3,473,722
8)	UTILITY	1,050.00	2.88	2.84	1.43 ✓	4.11	1.24	1.95	2.22 ✓	6.39	3.51	2.02		725.00	3,660
9)	TOTAL	37,000.00	✓ 101.37			164.64	63.27			275.17	173.80			9,765.00	3,477,382

1) Total water used by customers in that specific class.
2) Consumption shown in 1,000 gallons per month.
3) Commercial includes Municipal.

Schedule 6
11/24/97

Ky - Am	2.14	2.07	1.40		0.86	1.34	1.40		0.86	0.49	
	103.51				64.13				174.66		

00305

3/6/98

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS EXTRA CAPACITY BASE	MAXIMUM DAY	MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.80	1,432.55	11,882.05	2,495.74	479.03	9,803.20	5,127.33
2)	Depreciation Expenses	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51
3)	Return on Plant Investment (9.58%)	28,505.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74
		70 [illegible]		28,980	10462	799		15[illegible]
	Total Louisville Water Co. System Units of Water Consumption							21.7%
4)	Number	same # on Sch. 7		37,000.00	63.27	173.80		
5)	Units			M.G.	M.G.D.	M.G.D.		
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.58% Rate of Return							
9)	Operating Expenses	395.683		337.219	48.791	9.673		
10)	Depreciation Expenses	136.058		105.521	28.975	1.562		
11)	Return on Plant Investment (9.58%)	511.351		379.674	128.766	4.911		
12)	Total	1,043.093		822.414	204.533	16.146		
	Cost per 1,000 Gallons (cents)	99.342		78,325.139	19,479.306	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

Schedule 1
11/25/97

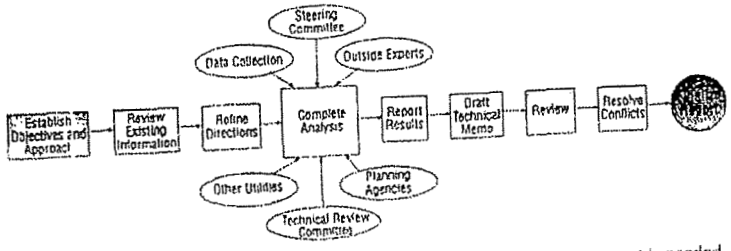
	28,980.			
Ky-Am Pwr/chem $0.25/1000 x 2.14 mgd	196			
	29,176	10462	799	TOTAL
Ky-Am Share (%)	2.07%	1.34%	0.49%	Ky-Am
" " ($1000)	603.943	140.19	3.92	748.053

Ky-Am Rate = $748,053/yr ÷ 2.14 mgd = $0.958/1000 gals.

00306

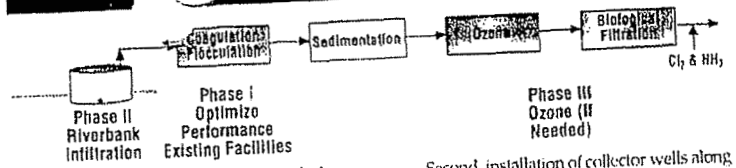
Planning Process

Long-range planning has been an important ingredient in LWC's ability to provide capital improvements to serve customers and comply with regulations, while minimizing rate impacts. In keeping with that tradition, LWC commissioned CH2M HILL, in association with Quest Engineers, to complete a *1995-2015 Facilities Plan*. To assure a wise investment of resources, a highly interactive and broad-based planning process was used in preparing the *Facilities Plan*.



- LWC compares favorably with 18 benchmark utilities
- Objectives of the 1995-2015 *Facilities Plan* are:
  - –Continually enhance water quality
  - –Maintain leadership in the water industry
  - –Plan for and respond to emerging regulations
  - –Rehabilitate and renew aging distribution and treatment facilities
  - –Ensure appropriate levels of reliability
  - –Respond to changing water sales
  - –Address unserved areas within the service area
  - –Contain water rates while earning a reasonable return for the stockholder
- Substantial capital investment is needed to meet objectives
- Planning included many checkpoints to refine direction
- Information was provided to and input sought from:
  - –LWC staff
  - –Technical Review Committee
  - –Steering Committee (Board Members, LWC Executive Managers, City of Louisville, outside engineering)
  - –Other leading utilities
  - –Regional planning agencies
  - –Other studies
- Process focus was to build consensus among varied interests

ional Protection Barriers



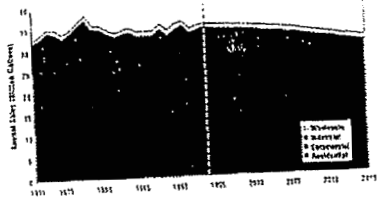
Major capital improvements are needed in water treatment to meet the requirements of the forthcoming Safe Drinking Water Act regulations, and to provide an additional barrier of protection against pathogens such as *Cryptosporidium*.

- A variety of options and combinations were examined
- A phased approach was developed
  - –First, optimizing existing treatment with improvements to filters and adding more coagulant (enhanced coagulation)
  - –Second, installation of collector wells along the Ohio River (riverbank infiltration) to take advantage of natural filtration and provide other treatment benefits
  - –Finally, install ozone and biological treatment only if a higher level of treatment is needed
- Using a phased approach, costs can be spread out over a longer period and, as effectiveness is demonstrated, it may be possible to eliminate the last stage if determined to be unnecessary

Resources to Fund Improvements

Almost all of LWC's revenue comes from the sale of water. Therefore, in formulating a Capital Improvements Program, it is necessary to make projections of the sale of water over the planning period.

- Water sales projections are based upon:
  - –Projections of population characteristics and economic conditions prepared for the Louisville Metropolitan Area as part of Cornerstone 2020
  - –Correlation of this information with water sales projections prepared by the University of Louisville College of Business and Public Administration



- Water sales within the existing service area are expected to be flat over the next 20 years
- Modest growth is forecast for the area
- There is a continuing shift from industrial to commercial/service-based businesses
- Most population growth is expected to be outside the current LWC service area

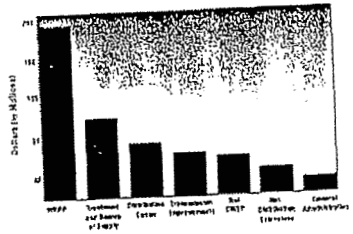
When factoring in the effects of conservation (1% to 2% of existing customers replace water-using fixtures with low-flow devices each year) resulting from the Federal Energy Policy Act of 1995:

- There may be a slight decline from current sales
- Through 2015, the average day water sales will be about 116 mgd
- Treatment capacities needed would be 180 mgd at Crescent Hill Water Treatment Plant and 45 mgd at B.E. Payne Water Treatment Plant

Capital Requirements

Over the planning period it is projected that the gross capital needs of LWC will be $643 million. After reimbursements, the net cost of these improvements to LWC is estimated to be $465 million.

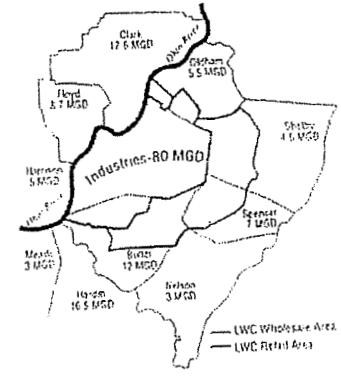
- Largest portion is for Main Replacement and Rehabilitation Program (MRRP - $192 million) to continue commitment to upgrade aging and deteriorating infrastructure
- Major need ($94 million) is for treatment facilities
- Other major capital programs include:
  - –Maintenance of infrastructure (Distribution Service Center)
  - –Extending water to unserved portions of the county (County-wide Extension Program)
  - –Improvements to pumping, storage, and transmission systems to improve reliability and to meet hydraulic needs
  - –Extension of distribution piping to accommodate growth
  - –General administration (mostly for new main office building)



Cost in Millions										
	1995	1996	1997	1998	1999	2000	2001-2005	2006-2010	2011-2015	Total
Gross	$41.3	$52.2	$46.7	$43.7	$33.1	$32.7	$137.8	$141.7	$119.0	$648.1
Net	$27.7	$38.0	$34.6	$34.8	$24.6	$24.3	$97.9	$102.6	$79.9	$464.5

Regionali[illegible]n

LWC desires to be in a position to increase water sales to existing customers and expand service to new customers currently inside and outside its service area when mutually beneficial opportunities arise.



- There is a need for major capital improvements, but projections for water sales are flat or slightly declining
- Abundant water resources and reserve treatment capacity are available
- Within the LWC service area there are a number of large industries using water (80 mgd) from a source other than LWC
- In adjacent counties the average day demand is 50 mgd
- To be in the best position to provide additional water if the opportunity develops, LWC is:
  - –Strengthening communications with existing and potential future customers to better understand needs
  - –Continuing capital improvement programs for coordination with regionalization opportunities

00300



Elements of 1995-2015 Facilities Plan

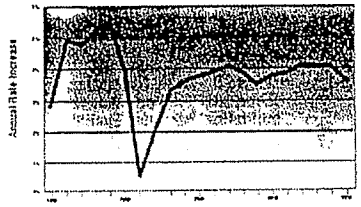
- Population and Water Sales Projections
- Water Supply Evaluation
- Treatment, Major Pumping, Storage Facilities Evaluation
- Transmission and Distribution System Improvements
- Regionalization and Resource Planning
- Financial Review
- Insurance Review
- Benchmarking with Other Major Utilities
- Inventory of Real Property
- Master Plan of Capital Improvements

00308

Financial Plan

Financial analysis projects that over the 20-year planning period capital improvements can be financed through modest annual rate increases and a single bond issue of $28 million in 1999.

- Annual rate increases would range from 3.5% to 5.5%
- Increases are not out of line with the increases being experienced by most major water utilities throughout the nation
- Dividend growth rate is expected to exceed the rate of inflation, and during the 20-year period is expected to be approximately 5% per year



- Available information indicates that LWC has the financial strength to undertake the capital improvements program without incurring substantial debt or major rate increases

Human Resources

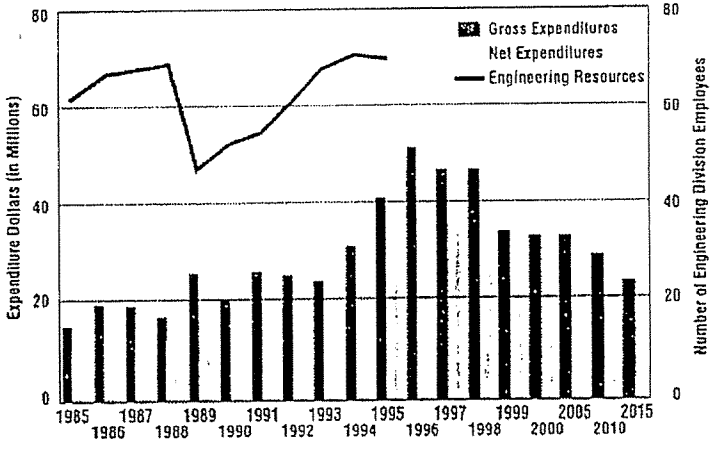
LWC has the financial resources to undertake the program, but will be faced with human resource challenges to properly administer the various projects.

- The number of LWC engineering staff has leveled off over the past few years
- The dollar value of the projects they must administer is projected to increase substantially

LWC is exploring several options for obtaining the resources needed, including a mixture of:

- In-house engineering staff to administer core programs
- Contract employees for peak loads in core programs
- Consultants for large one-time capital projects on a project-by-project basis
- Using annual consultant contracts for multiyear programs such as MRRP and county-wide extensions

A LWC Resource Implementation Plan needs to be developed to program the human resources required to administer the Capital Improvements Program.





3/12/98

John Huber (LWC)	Nick
Bob Miller	CB
Greg Heitzman	Heit
Joe ~~Jeff~~ Helm	Linda

JH: General issues

~~How do we present the promise to pay to the bondholders~~

- Debt Joe questioned; Bob explained LWC could get debt cheaper

- Delivery Point:

John The ? is, we might be interested in delivering the service point further East with Shelby County.

Linda: Booster pumpage

John: So your primary concern is booster pumpage - if we solve that, is that the only issue

KANC: Territory is an issue

John: We both recognize eng issue and geographic issues.

Bob: plant capacity # needs work

CB: We need to take as little as possible to keep costs down

John: How much capacity / how soon?

Reservation capacity - we both need to explain

Term of contract:

JH What is your thought on term of contract?

2030 planning period

John: We need to know but don't have preference one way or another

Joe: 2 25 year options aren't appealing to the seller. I would think it would be longer.

CB Right of first refusal

John: We understand

John: ? about PSC operation

John: ~~Is~~ there anyway we can avoid PSC scrutiny every year.

We are looking at this on a low administrative ~~maintenance~~ cost contract.

Prestonsburg / Auxier set a rate with an COL factor

This is an item we want to ~~pass~~ fall about on we go along.

Prov that buyer can direct seller + make chemical adjustment page 5 6 a.

GH If we want to include a point of reference at some point in time - we should do that.

JH we can add stds that are agreeable + is that ~~are~~ exceed stds.

JH. should we provide that Periodically, we come up with mutually agreeable water quality goals

Joe H: Payment penalties need to be minimized
Herb & Joe will work on

John: ~~page~~ 7 item 11

John questions This - we need to

JM Eng design + cost. challenging but can be done

Easement acquisition cases S/W as done.

GH Meet every Spring before going with Summer demand period.

ISSUES

Project bonding	Bob, Miller / Joe Helen Herb / Colen - / Ed
Delivery Point	Greg / Joe Helen Nick, Linda, Herb
Capacity issue relative to reserved cap (need via time)	Bob, Joe Linda, Colen, Herb
Term of Contract	Bob, JOE Nick, Colemn, Herb

(They will want longer term - 50 yr / option 30
GH how 30 is acceptable - we just understood from Colin - it would be a 50 year contract

00312

PSC	Laurie / Joe / Bob Ed Gath / Hen
WQ at del point	Gregg / Joe Linda / Heth
Late payment waiver	Joe Hen
Easement	Greg Linda
Operations Protocol	Greg Linda
Meeting next Wednesday	— still on?

File - N
Louisville
Correspond

Kentucky-American Water Company
2300 Richmond Road • Lexington, Kentucky 40502 • (606) 268-6332 • Fax (606) 268-6327

Pat Ballard
Executive Assistant
606-268-6326

TO: Joan Malone

DATE: March 9, 1998

SUBJECT: Meeting Schedules

Joan, this will confirm our telephone conversation of today setting up the two meetings as follows:

Conference Call – Thursday, March 12th scheduled for 2:30 pm to 3:30 pm.

Nick Rowe, VP – Operations
Coleman Bush, VP & Treasurer
Herb Miller, Corporate Counsel
Linda Bridwell, Director – Engineering

Meeting @ Louisville Water Company – Wednesday, March 18th 1:30 – 3:30 pm

Roy Mundy & Nick Rowe will meet with Mr. Huber in your conference room.

3/9/98
Bob M
Jack
Linda
CBob

2 board mtgs in next seven working days
Conference call date this week – Thursday

old data { 240 Crescent Hill eff 210 GPD live & bottlenecks
30-60 Payne Plant eff 30 GPD

Key bottlenecks that keep capacity @ 240

— .99 for 07/17y ✓ straight pro rata
— common to retail only ✓
— Net plant investment (Bob will do a spreadsheet on this) ✓
— under wholesale, how would you calc. K-A demand? ✓

"Draft"

Bob walked Jack & Linda through presentation

What % of
40% res
40% comm
20% ind

Bob "we are seeing declining use per hh due to [illegible]
[illegible] hh"

By statute

LWC ~~cannot~~ can serve Jeff & adjoining counties on a retail basis

2-4% of LWC's cust base would rep wholesale cust base

3 dynamics with wholesale cust rates

1) - used to charge higher ret on rate base to w/s
Bob has changed this to equal to all others
2) - This area is growing 10% per year
3) - Demand factors are dated.
Initial data we see indicate this is higher.
Any decision to raise rates must go to PSC

DIST mains 12" <
TRANS mains Larger than 12"

Linda - have you looked @ max to avg recently
Bob - we see them higher - 1.8 to 2
Linda - w/s basically follow res factors
Bob - w/s maybe higher than res customer

MEK @ beg of year

Bob SVC charge will be based on meter in place — not at beg of yr but when meter goes in

Bob exception to SDC —
If we are only using the system over the life of the contract, no buy in fee fixed period contract

I told Bob I didn't want to be disingenuous — make clear with board we will be making suggestion. He said he understood & would make it clear to the board.

So yr drought would be a permanent base line. If they want it set aside — it has to be reflected in price.

* This is key *

Schedule 7 DIST MAIN COSTS column
Jack 7, line 17 no dist main costs
6538.74 compared to
VS
UTILITY rate sch 1 total
common only to retail

Bob: I will get back to you by tomorrow

Bob ultimately wants to use a
5 year average of demand factors so
1 yr doesn't kill a customer.

FOR JACK
Bob's comment that Utility rate
is only pro rata.

Bob's consultant will compile a list
of Utilities who use this.

Jack will call me Tues pm around
3pm for update

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

Burgess & Niple, Limited
5085 Reed Road
Columbus, OH 43220
614 459-2050
614 451-1385 Fax

FAX COVER SHEET

Date: 3/6/98

Job Number: 21375

Re: LWC Rate

TO: Coleman Burk

FAX PHONE NUMBER: 606/ 268-6327

We are sending you 2 additional pages, not counting this cover sheet.
If all pages are not received, please call us as soon as possible.

COMMENTS:

- My rate for Ky-Am = $0.958/1000
- Give me a call & I'll explain what I did. Will put hard copy in overnight mail I am sending you

Signed: Jack Ober

3/6/98

ESTIMATED UNITS OF SERVICE BY CUSTOMER CLASS (1997)

CUSTOMER CLASS	ANNUAL WATER USED (M.G.)	AVERAGE DAY (M.G.D.)	%	MAXIMUM DAY CAPACITY FACTOR %	MAXIMUM DAY TOTAL CAPACITY (M.G.D.)	MAXIMUM DAY EXTRA CAPACITY (M.G.D.)	%	MAXIMUM HOUR CAPACITY FACTOR %	MAXIMUM HOUR TOTAL CAPACITY (M.G.D.)	MAXIMUM HOUR EXTRA CAPACITY (M.G.D.)	%	DISTRIBUTION MAIN %	ANNUAL E.S.A. USAGE (M.G.)	ANNUAL CUSTOMER EQUIVALENT UNITS METER CAPACITY
RETAIL														2,576,406
Residential														
Small 0-3 T.G.	765.71	2.10	2.07	1.22	2.56	0.46	0.73	1.61	3.38	1.28	0.74	2.68		
Medium 4-8 T.G.	4,402.85	12.06	11.90	1.67	20.14	8.08	12.77	2.10	25.33	13.27	7.63	15.32		
Large over 8 T.G.	9,741.64	26.69	26.33	1.89	50.44	23.75	37.54	3.07	81.94	55.25	31.79	33.90		
	14,910.00													
Commercial														800,312
Small 0-20 T.G.	1,030.44	2.82	2.78	1.77	5.00	2.17	3.44	3.08	8.70	5.87	3.38	3.59		
Medium 21-1,500 T.G.	9,544.71	26.15	25.80	1.47	38.44	12.29	19.42	3.16	82.63	56.48	32.50	33.71		
Large 1,501-5,000 T.G.	1,885.78	5.22	5.15	1.61	8.41	3.18	5.03	2.69	14.05	8.82	5.08	6.63		
Large 5,001-10,000 T.G.	976.78	2.68	2.62	1.61	4.28	1.62	2.56	2.69	7.15	4.49	2.59	0		
Extra Large over 10,000 T.G.	1,398.31	3.83	3.78	1.61	6.17	2.34	3.69	2.69	10.31	6.47	3.73	0		
	14,850.00													
Industrial														80,004
Small 0-1,500 T.G.	474.45	1.30	1.28	1.58	2.05	0.75	1.19	2.70	3.63	2.33	1.34	1.65		
Medium 1,501-5,000 T.G.	873.71	2.39	2.36	1.81	4.33	1.94	3.06	2.98	7.13	4.74	2.73	3.04		
Large 5,001-10,000 T.G.	765.53	2.10	2.07	1.41	2.96	0.89	1.36	1.85	3.88	1.78	1.03	0		
Large 10,001-20,000 T.G.	4,076.31	11.17	11.02	1.41	15.75	4.58	7.24	1.85	20.66	9.49	5.46	0		
	6,100.00													
SUB-TOTAL (RETAIL)	35,950.00	98.49			160.53	62.04			266.78	170.28			9,040.00	3,456,722
UTILITY	1,050.00	2.88	2.84	1.43	4.11	1.24	1.96	2.22	6.39	2.51	2.02		725.00	3,660
TOTAL	37,000.00	101.37			164.64	63.27			275.17	173.68			9,765.00	3,477,302

1) Total water used by customers in that specific class.
2) Consumption shown is 1,000 gallons per month.
3) Commercial includes Municipal.

Key - Avg 2.14 2.07 1.40 0.86 1.34 1.40 0.86 0.49

103.51 64.13 174.66

Schedule 6
11/24/97

3/6/98

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS EXTRA CAPACITY BASE	MAXIMUM DAY	MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.00	1,432.55	11,887.95	7,495.74	479.03	9,003.20	5,127.33
2)	Depreciation Expenses	11,010.48	129.13	3,718.37	1,482.14	77.23	2,903.01	2,940.51
3)	Return on Plant Investment (9.56%)	28,585.31	358.98	13,370.98	6,484.30	243.21	1,488.14	7,104.74
		70,816		28,980.	10462.	799.		15,[illegible]
	Total Louisville Water Co. System Units of Water Consumption							21.7%
4)	Number	same # on Sch. 7		37,000.00	63.27	173.60		
5)	Units			M.G.	M.G.D.	M.G.D.		
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.56% Rate of Return							
9)	Operating Expenses	305,683		337,219	48,791	9,673		
10)	Depreciation Expenses	138,056		105,521	29,075	1,562		
11)	Return on Plant Investment (9.56%)	511,351		379,674	126,768	4,911		
12)	Total	1,043,093 ✓		822,414	204,533	16,146		
	Cost per 1,000 Gallons (cents)	89.342		78,325.139	19,479.300	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	09 ✓						

Schedule 1
11/25/97

	28,980.			
Ky-Am Pwr/chem $0.25/1000 x 2.14 mgd	196			
	29,176	10462	799.	TOTAL
Ky-Am Share (%)	2.07%	1.34%	0.49%	Ky-Am
" " ($1000)	603.943	140.19	3.92	748.053

Ky-Am Rate = $748,053/yr ÷ 2.14 mgd = $0.958/1000 gals.

00321

BURGESS & NIPLE, LIMITED – COMPUTATION SHEET

JOB NO. _____ JOB NAME Ky-Am SHEET 1 OF _____ SHEETS

SUBJECT LWC Rate PREPARED BY J. Ober DATE 3/3/92

CHECKED BY _____ DATE _____

Reserved Capacity Rate p. 13 & 14

• O/M Cost Component

37,000,000 (Sch. 6)
1,095,000 3 mgd, Ky-Am

38,095,000

1095 / 38095 = 0.0287439

	$1000	
Total O/M	31,220	Util. Rate, Sch 2
	- 9,803	" "
	- 5127	" "
Bal.	16,290	
	× 0.0287439	

• O/M Cost → 468.238 ($1000)

• Deprec. Cost Component

	$1000	
Total Deprec	11,010.48	Util. Rate, Sch. 3
	- 2,663.01	"
	- 2,940.51	"
Bal.	5,406.96	
	- 6/240 (0.025)	6 MGD / 240 "

Deprec. Cost Comp → 135.174 ($1000)

P

00322

BURGESS & NIPLE, LIMITED – COMPUTATION SHEET

JOB NO. _____ JOB NAME Ky-Am SHEET 2 OF _____ SHEETS

SUBJECT LWL Rate PREPARED BY J. Oker DATE _____

CHECKED BY _____ DATE _____

• Return on Plant Investment Component

	$1000	
Return on total Plant	28,585.31	Util. Rate, Sh. 4
	- 1,488.14	" "
	- 7,164.74	" "
Balance	19,932.43	
	x 6/240	
Plant Invest. Comp.	498.31	($1000)

P

00323

BURGESS & NIPLE
ENGINEERS
ARCHITECTS

Burgess & Niple, Limited
5085 Reed Road
Columbus, OH 43220
614 459-2050
614 451-1385 Fax

FAX COVER SHEET

Date: 3/4/98

Job Number: 2

Re: LWC Rate

TO: Coleman Bush
Ky-Am Water Co

FAX PHONE NUMBER: 606/268-6327

We are sending you 21 ~~additional~~ pages, not counting this cover sheet.
If all pages are not received, please call us as soon as possible.

COMMENTS:

Data you requested on LWC proposed rates

apps/coleman/TREASURY/DEPTFILES/BNP/LWC1998COSS

Signed: Jack Ober P

BURGESS & NIPLE, LIMITED - COMPUTATION SHEET

JOB NO. _____ JOB NAME Ky-Am SHEET 1 OF 2 SHEETS

SUBJECT LWC Rate Review PREPARED BY J. Ober DATE 3/4/98

CHECKED BY _____ DATE _____

Util. Rate Sch's

Total Cost of Service

	Sch. 7	Common to only Retail Costs
O/M Cost	$31,221	$5127
Deprec. Exp.	11,011	2941
Return on Invest.	28,585	7165
	70,817	15,233
	- 15,233	
Balance	55,584	
Less EAA	- 1921	
" Cust. Cost	- 13446	
Balance	40217 *	

* Portion of Cost that should be shared by utility costs (wholesale rate)

• Portion that is shared (Sch 7)

Base Cost	33755
Max Day	9423
Max Hour	5733
	48911

Util. rate appears to be 18% high

40217 / 48911 = 82.2 %

BURGESS & NIPLE, LIMITED - COMPUTATION SHEET

JOB NO. ____ JOB NAME Ky-Am SHEET 2 OF 2 SHEETS

SUBJECT LWC Rate Review PREPARED BY J. Oker DATE 3/4/98

CHECKED BY ____ DATE ____

Util. Rate Sch. 1 Sch. 6

		Utility Share		$1000
Base	$28980	2.84%	=	823.0
Max Day	10462	1.95	=	204.0
Max Hour	799	2.02	=	16.1
				1043.1

Utility Commodity Rate

$$\frac{\$1043100}{1050000} = 0.993/1000 \text{ gals.}$$

0.993/1.198 = 82.9%

LOUISVILLE WATER COMPANY

1997 RATE STUDY FOR YEAR 1998

DETERMINATION OF EXTRA COST ALLOCATION PERCENTAGES

YEAR	AVERAGE DAY MGD	MAXIMUM DAY MGD	MAXIMUM HOUR MGD
1988	117.3	198.8	214.0
1989	111.4	152.3	164.7
1990	116.0	171.2	171.2
1991	120.6	172.3	205.4
1992	112.1	150.9	175.0
1993	116.2	155.2	170.0
1994	124.2	190.6	214.5
1995	122.0	173.1	202.0
1996	121.3	169.3	187.6
1997 (F/CST)	124.0	177.8	207.6
Ten Year Total	1,185.1	1,711.5	1,912.0
Average	118.5	171.2	191.2
Ratio	1.0	1.4	1.6

ALLOCATION PERCENTAGES

	BASE	MAXIMUM DAY	MAXIMUM HOUR
BASE/MAXIMUM DAY	69.2	30.8	
BASE/MAXIMUM HOUR	62.0		38.0

SCHEDULE 1

$\frac{118.5}{171.2} = 69.2\%$

$\frac{118.5}{191.2} = 61.98\ (62.0)$

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	SOURCE OF SUPPLY	52.44 ✓		36.31	16.13		
2)	POWER AND PUMPING						
3)	Zorn Station, Power	856.07		856.07			
4)	Zorn Station, Other	427.14		295.76	131.38		
5)	Crescent Hill Station, Power	743.18		743.18			
6)	Crescent Hill Station, Other	434.68		269.42		165.26	
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98			
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91		
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95			
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43	
11)	Boosting Pumping, Power	180.86	171.82	9.04			
12)	Boosting Pumping, Other	496.64	397.31	81.56		37.76	
13)	Total Power and Pumping	4,284.38 ✓	995.78	2,869.87	186.28	242.45	0.00
14)	PURIFICATION						
15)	Chemicals, B.E. Payne	977.05		877.05			
16)	Chemicals, Crescent Hill	308.54		308.54			
17)	Purification, Other	3,707.65		2,567.27	1,140.38		
18)	Total Purification	4,993.24 ✓	0.00	3,852.86	1,140.38	0.00	0.00
19)	TRANSMISSION AND DISTRIBUTION						
20)	Transmission Mains 28%	712.95		493.66	219.28		
21)	Distribution Mains 72%	1,769.04		1,108.87		660.16	
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88	
23)	Services	1,126.75					1,126.75
24)	Meters	485.12					485.12
25)	Hydrants	290.26				290.26	
26)	Transmission & Distribution Subtotal	4,427.20	20.78	1,603.97	219.28	971.30	1,611.87
27)	Percent	100.00%	0.47%	36.23%	4.95%	21.94%	36.41%
28)	General Transmission and Distribution	5,052.32	23.71	1,830.44	250.25	1,108.45	1,839.47
29)	Total Transmission and Distribution	9,479.52 ✓	44.49	3,434.41	469.53	2,079.75	3,451.34
30)	CUSTOMER ACCOUNTS AND SERVICE						
31)	Supervision	201.12					
32)	Meter Reading	1,025.39					
33)	Customer Records	3,983.47					
34)	Uncollected Accounts	275.00					
35)	Miscellaneous Customer Accounts	96.82					
36)	Total Customer Accounts & Service	5,581.80 ✓					5,581.80
37)	Subtotal	24,401.37	1,040.27	10,193.45	1,812.32	2,322.20	9,033.14
38)	Percent	100.00%	4.26%	41.77%	7.43%	9.52%	37.02%
39)	ADMINISTRATIVE AND GENERAL						
40)	Administrative and General	12,810.53					
41)	Labor Related Overhead	8,853.50					
42)	Less: Operating Expenses Applied	(12,262.30)					
43)	Total Administrative and General	9,201.73 ✓	392.28	3,843.94	883.42	875.70	3,406.39
44)	Total	33,603.10	1,432.55	14,037.39	2,695.74	3,197.90	12,439.52
45)	Free Water in Lieu of Taxes	983.70		983.70			
46)	Amortization	(60.90)		(60.90)			
47)	Retirement of Assets	758.60		232.43		142.57	375.00
48)	Total Operating Expenses	35,235.90	1,432.55	15,152.62	2,695.74	3,340.47	12,814.52
49)	Other Operating Income	(4,015.10)				(1,003.78)	(3,011.33)
50)	Net Operating Expense	31,220.80	1,432.55	15,152.62	2,695.74	2,336.69	9,803.20
		✓	✓	✓			✓

Schedule 2

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATION EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73
2)	Basins and Ground Storage	359.24		248.75	110.49		
3)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06	
4)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09		
5)	Booster Pump Equipment	34.93	24.17	6.67		4.09	
6)	Miscellaneous Pump Equipment	48.65		33.69	14.96		
7)	Sludge Disposal Equipment	64.48		64.48			
8)	Purification Equipment	536.44		371.44	165.00		
9)	Transmission Mains	52% 2,122.63		1,469.76	652.87		
10)	Distribution Mains	48% 1,971.82		1,222.16		749.66	
11)	Meters	357.76					357.76
12)	Services	1,302.41					1,302.41
13)	Meter Installations	447.05					447.05
14)	Fire Hydrants	409.90				409.90	
15)	Sub-total	8,918.14	104.59	4,233.92	1,200.49	1,222.19	2,156.95
16)	Percent	100.00%	1.17%	47.48%	13.46%	13.70%	24.19%
17)	General and Other Equipment	2,092.34	24.54	993.35	281.65	288.75	506.06
18)	1997 Budgeted Depreciation	11,010.50	129.12	5,227.27	1,482.14	1,508.93	2,663.01

Schedule 3

$\frac{11,010}{410,177} = 2.68\%$ composite depreciation accrual rate

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land	4,827.66	133.63	3,286.70	1,069.28	72.05	265.7
2)	Land Improvements and Buildings	34,449.56	448.15	23,808.37	7,745.73	521.96	1,925.3
3)	Basins and Ground Storage	9,868.34		6,831.71	3,034.63		
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26	
5)	High Service Pumps and Equipment	6,127.01	543.55	3,868.13	1,717.33		
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14	
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65		
8)	Sludge Disposal Equipment	1,704.07		1,704.07			
9)	Purification Equipment	18,575.16		12,862.62	5,713.54		
10)	Transmission Mains 57%	148,269.67		102,665.77	45,603.90		
11)	Distribution Mains 43%	102,856.67		63,752.15		39,104.52	
12)	Meters	2,887.58					2,887.5
13)	Services	40,176.18					40,176.1
14)	Meter Installations	13,588.90					13,588.9
15)	Fire Hydrants	16,854.21				16,854.21	
16)	Sub-total	410,177.18	3,569.96	223,711.21	65,964.06	58,088.14	58,843.8
17)	Percent	100.00%	0.87%	54.54%	16.08%	14.16%	14.35
18)	Gen. Plant & Unamortized Capital Charges	10,906.69	94.92	5,948.16	1,753.89	1,544.48	1,564.5
19)	Total Plant	421,083.20	3,664.88	229,659.37	67,717.95	59,632.62	60,408.3
20)	Other Rate Base Items (1)	9,451.20	82.26	5,154.70	1,519.93	1,338.45	1,355.8
21)	Sub-total	430,534.40	3,747.14	234,814.07	69,237.88	60,971.07	61,764.2
22)	Contributions and Grants (2)	(132,149.10)		(52,890.51)	(12,396.92)	(15,323.52)	(51,538.1
23)	Total Net Plant Investment	298,385.30	3,747.14	181,923.56	56,840.96	45,647.55	10,226.1
24)	Annual Return @ 9.58%	28,585.31	358.98	17,428.28	5,445.36	4,373.03	979.8

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/25/97

MAXIMUM DAY AND MAXIMUM HOUR DEMAND FACTORS
1996 Rate Study for 1997

		MAXIMUM DAY/ MAXIMUM HOUR DEMAND DATA		
		Ratio Max. Day to Avg. Day	Ratio Max. Hour to Max. Day	Ratio Max. Hour to Avg. Day
		%	%	%
A	Residential			
1	Small 0-3	1.22		1.61
2	Medium 4-6	1.67	1.47	2.10
3	Large Over 6	1.89	1.49	3.07
B	Commercial			
1	Small 0-20	1.77	1.86	3.08
2	Medium 21-1,500	1.47	2.03	3.16
3	Large Over 1,500	1.61	1.67	2.69
C	Industrial			
1	Small 0-1,500	1.58	2.05	2.79
2	Medium 1,500-10,000	1.81	1.57	2.98
3	Large 10,001 - 20,000	1.41	1.30	1.85
D	Utility All ' Same	1.43	1.50	2.22
	Wholesale?	143%		222%

NOTES:

Demand Factors are being revised.

Consumption data to calculate demand factors is bring obtained from representives of all customers classes.

A phase in period of Five (5) years is being used before exclusive use of consumption data to calculate factors

For 1997: Demand Factors were calculated as follows:
60% weight to current factors (1995 and prior)
40% weight to new consumption data.

Schedule 5

ESTIMATED UNITS OF SERVICE BY CUSTOMER CLASS (1997)

	CUSTOMER CLASS	ANNUAL WATER USED (M.G.)	AVERAGE DAY (M.G.D.)	%	MAXIMUM DAY CAPACITY FACTOR %	MAXIMUM DAY TOTAL CAPACITY (M.G.D.)	MAXIMUM DAY EXTRA CAPACITY (M.G.D.)	%	MAXIMUM HOUR CAPACITY FACTOR %	MAXIMUM HOUR TOTAL CAPACITY (M.G.D.)	MAXIMUM HOUR EXTRA CAPACITY (M.G.D.)	%	DISTRIBUTION MAIN %	ANNUAL E.S.A. USAGE (M.G.)	ANNUAL CUSTOMER EQUIVALENT UNITS METER CAPACITY
	RETAIL														
1)	Residential														2,576,406
2)	Small 0-3 T.G.	765.71	2.10	2.07	1.22	2.56	0.46	0.73	1.61	3.38	1.28	0.74	2.66		
3)	Medium 4-6 T.G.	4,402.65	12.06	11.90	1.67	20.14	8.08	12.77	2.10	25.33	13.27	7.63	15.32		
4)	Large over 6 T.G.	9,741.64	26.69	26.33	1.89	50.44	23.75	37.54	3.07	81.94	55.25	31.79	33.90		
		14,910.00													
5)	Commercial														606,312
6)	Small 0-20 T.G.	1,030.44	2.82	2.78	1.77	5.00	2.17	3.44	3.08	8.70	5.87	3.38	3.59		
7)	Medium 21-1,500 T.G.	9,544.71	26.15	25.80	1.47	38.44	12.29	19.42	3.16	82.63	56.48	32.50	33.21		
8)	Large 1,501-5,000 T.G.	1,905.76	5.22	5.15	1.61	8.41	3.18	5.03	2.69	14.05	8.82	5.08	6.63		
9)	Large 5,001-10,000 T.G.	970.78	2.66	2.62	1.61	4.28	1.62	2.56	2.69	7.15	4.49	2.59	0		
10)	Extra Large over 10,000 T.G.	1,398.31	3.83	3.78	1.61	6.17	2.34	3.69	2.69	10.31	6.47	3.73	0		
		14,850.00													
11)	Industrial														89,004
12)	Small 0-1,500 T.G.	474.45	1.30	1.28	1.58	2.05	0.75	1.19	2.79	3.63	2.33	1.34	1.65		
13)	Medium 1,501-5,000 T.G.	873.71	2.39	2.36	1.81	4.33	1.94	3.06	2.98	7.13	4.74	2.73	3.04		
14)	Large 5,001-10,000 T.G.	765.53	2.10	2.07	1.41	2.96	0.88	1.36	1.85	3.88	1.78	1.03	0		
15)	Large 10,001-20,000 T.G.	4,076.31	11.17	11.02	1.41	15.75	4.58	7.24	1.85	20.66	9.49	5.46	0		
		6,190.00													
17)	SUB-TOTAL (RETAIL)	35,950.00	98.49			160.53	62.04			268.78	170.29			9,040.00	3,473,722
18)	UTILITY	1,050.00	2.88	2.84	1.43 ✓	4.11	1.24	1.95	2.22 ✓	6.39	3.51	2.02		725.00	3,660
19)	TOTAL	37,000.00	101.37			164.64	63.27			275.17	173.80			9,765.00	3,477,382

1) Total water used by customers in that specific class.
2) Consumption shown in 1,000 gallons per month.
3) Commercial includes Municipal.

Schedule 6
11/24/97

$\frac{2.88}{101.37} = 2.84$

$\frac{1.24}{63.27} = 1.95$

$\frac{3.51}{173.8} = 2.02$

- with Ky-Nat

$\frac{2.88}{101.37} = 2.84\%$ (Ky-Nat %)

- with Ky-Nat (150% max day demand)

$\frac{1.5 \text{ high}}{63.27 \times (3 \times 0.60)} = 2.72\%$ (Ky-Nat %)

(64.77)

- with Ky-Nat (175% max hr. DMD)

$\frac{2.25}{175.8 + 3 \times .75} = 1.28\%$ (Ky-Nat %)

(176.05)

MAR 04 '98 11:39AM BURGESS & NIPLE LTD COLUMBUS P.9/22

CONSUMPTION BY CLASS 1,000 Gals.

	CUSTOMER CLASS	Annual Consumption 6/30/97	Percentage	Budgeted Consumption 1998	% of Tot
	RETAIL				
1)	RESIDENTIAL				
2)	Small 0-3 Gals.	755,420.4	5.14%	765,706.6	
3)	Medium 4-6 Gals.	4,343,505.6	29.53%	4,402,649.2	
4)	Large over 6 Gals.	9,610,778.4	65.34%	9,741,644.2	
		14,709,704.4	100.00%	14,910,000.0	41
5)	COMMERCIAL/MUNICIPAL				
6)	Small 0-20 Gals.	1,082,667.6	6.94%	1,030,438.2	
7)	Medium 21-1,500 Gals.	10,028,493.6	64.27%	9,544,705.5	
8)	Large 1,501-5,000 Gals. *	2,002,356.0	12.83%	1,905,759.6	
9)	Large 5,001-10,000 Gals.	1,019,988.0	6.54%	970,782.4	
10)	Extra Large over 10,000 Gals.	1,469,190.0	9.42%	1,398,314.3	
		15,602,695.2	100.00%	14,850,000.0	4
11)	INDUSTRIAL				
12)	Small 0-1,500 Gals.	476,215.2	7.66%	474,450.7	
13)	Medium 1,501-5,000 Gals. *	876,960.0	14.11%	873,710.7	
14)	Large 5,001-10,000 Gals.	768,372.0	12.37%	765,525.0	
15)	Large 10,001-20,000 Gals.	4,091,473.2	65.85%	4,076,313.5	
16)	Heavy Over 20,000 Gals.	0.0	0.00%	0.0	
		6,213,020.4	100.00%	6,190,000.0	1
17)	SUB-TOTAL (RETAIL)	36,525,420.0		35,950,000.0	10
18)	UTILITY			1,050,000.0	
19)	TOTAL	36,525,420.0		37,000,000.0	

* - Forced Step

Companion to

Schedule 6

COST OF SERVICE ALLOCATION TO CUSTOMER CLASSES (1998)

		BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	DISTRIBUTION MAIN COSTS	TOTAL COMMODITY COSTS	ELEVATED SERVICE AREA	CUSTOMER COSTS	TOTAL COSTS
	COST OF SERVICE SUMMARY	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)
1)	Net Operating Costs (Sch. 2)	13,801.56	2,495.74 ✓	1,507.98	2,179.79	19,985.05	1,432.66 ✓	9,803.20 ✓	31,220.90 ✓
2)	Depreciation Expenses (Sch. 3)	3,772.86	1,462.14	886.79	2,346.56	8,218.37	179.13 ✓	2,683.01	11,010.50 ✓
3)	Return on Plant Investt. (9.56%, Sch. 4)	16,180.85	5,445.36	3,608.07	2,012.39 ✓	27,246.66	358.85 ✓	979.66	28,585.21 ✓
4)	Total Cost of Service	33,755.30	9,423.24	5,732.82	6,538.74	55,450.10	1,920.64	13,445.87	70,816.61

9.2% of total

	COMMODITY COST DISTRIBUTION — CUSTOMER CLASS	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	TOTAL ($1,000)	WATER USED BY CLASS (M.G.)	COST PER 1,000 GALS.
	Residential Retail											
5)	Small (0-3 T.G.)	2.07	698.58	0.73	58.73	0.74	4:2.21	2.66	173.83	983.43	785.71	1.2843
6)	Medium (4-6 T.G.))	11.90	4,016.56	12.77	1,203.57	7.63	437.67	15.32	1,001.73	6,659.53	4,402.65	1.5126
7)	Large (Over 6 T.G.))	26.33	8,887.35	37.54	3,537.58	31.79	1,872.36	33.90	2,216.63	16,463.94	8,741.84	1.8901
	Commercial Retail											
8)	Small (0-20 T.G.)	2.78	940.07	3.44	323.74	3.38	193.70	3.59	234.74	1,692.25	1,000.44	1.6423
9)	Medium (21-1,500 T.G.)	25.80	8,707.69	19.42	1,830.39	32.50	1,863.17	33.21	2,171.52	14,572.77	9,544.71	1.5268
10)	Large (1,500-5,000 T.G.)	5.15	1,738.83	5.03	474.33	5.06	291.07	6.63	433.52	2,937.55	1,905.76	1.5414
11)	Large 5,001-10,000 T.G.	2.82	695.65	2.56	241.62	2.59	148.27	0.00	0.00	1,275.54	970.78	1.3139
12)	Extra Large over 10,0000 T.G.	3.78	1,275.69	3.69	348.03	3.73	213.56	0.00	0.00	1,837.28	1,398.31	1.3139
	Industrial Retail											
13)	Small (0-1,500 T.G.)	1.28	432.84	1.19	112.28	1.34	76.75	1.85	107.89	729.76	474.45	1.5381
14)	Medium (1,501-5,0000 T.G.)	2.36	797.09	3.06	288.76	2.73	156.34	3.04	198.78	1,440.97	813.71	1.8493
15)	Large 5,001-10,000 T.G.	2.07	698.39	1.36	128.06	1.03	58.81	0.00	0.00	885.26	765.53	1.1564
16)	Large Over 10,001 T.G.	11.02	3,718.64	7.24	681.92	5.46	313.13	0.00	0.00	4,713.69	4,076.31	1.1564
17)	Utility	2.84 ✓	957.92	1.95 ✓	184.22	2.02 ✓	115.77	0.00	0.00	1,257.91	1,050.00	1.1980
18)	Total		33,755.30		8,423.24		5,732.82		6,538.74	55,450.10	37,000.00	

1,257,910 / 1050 MG = 1.198/1G

TEP RATES (Weighted Averages) developed from Cost of Service Study:

Step (Thousand Gallons)	Rate per Thousand
0-3 (First 3)	1.31
4-6 (Next 3)	1.52
7-200 (Next 194)	1.63
201-1,500 (Next 1,300)	1.63
1,501-5,000 (Next 3,1500)	1.57
5,001-10,000 (Next 05,000)	1.24
10,001-20,1000 (Next 110,000)	1.20

Service Charge developed by Cost of Service Study for Meter Capacity:
$13,445,870 Customer Costs / 3,477,382 Equivalent Residential Meters (E.U.) = $3.87 per E.U.

Elevated Service Area Charge developed by Cost of Service Study:
$1,920,640 ESA Costs / 9,765,000 Thousand Gallons delivered to ESA = $.1967 per Thousand Gallons.

Sch. C

Schedule 7
11/25/97

WEIGHTED AVERAGE - DISTRIBUTION OF COMMODITY COSTS

Proposed Rates

Prop. Rate

Usage Category (T.G.)	Type of Customer	Monthly Consumptions From Report of 06/30/97	Actual Consumption (Mo. X 12)	% of Budget to Consumption Report	1996 Budgeted Consumption	Schedule 7 Cost Rates	DF * DD Cost	Composite Rate DH/DD	Current Rates	Rate % Increase From Current
0 - 3	Residential	62,951.7	755.4		743.5	1.2843	954.9			
	Commercial	4,753.8	57.0		56.1	1.6423	92.2			
	Industrial	36.1	0.4		0.4	1.5381	0.7			
	Sub-total	67,741.6	812.9	0.984246	800.1		1,047.8	1.3096	1.26	3.94%
4 - 6	Residential	361,958.8	4,343.5		4,275.1	1.5126	6,466.6			
	Commercial	10,983.7	131.8		129.7	1.6423	213.0			
	Industrial	134.7	1.6		1.6	1.5381	2.4			
	Sub-total	373,077.2	4,476.9	0.984246	4,406.4		6,682.1	1.5164	1.49	1.77%
7 - 200	Res. 7 - 20	746,658.5	8,983.9		8,842.4	1.6901	14,944.1			
	Res. 21 - 200	49,322.4	591.9		582.5	1.6901	984.5			
	Comm. 7 - 20	74,484.8	893.8		879.7	1.6423	1,444.8			
	Comm. 21 - 200	385,815.5	4,629.8		4,556.8	1.5268	6,957.4			
	Ind. 7 - 20	1,056.3	12.7		12.5	1.5381	19.2			
	Ind. 21 - 200	7,258.5	87.1		85.7	1.5381	131.9			
	Sub-total	1,266,596.0	15,199.2	0.984246	14,959.7		24,481.8	1.6265	1.61	1.03%
201 - 1,500	Residential	2,917.3	35.0		34.5	1.6901	58.2			
	Commercial	449,892.3	5,398.7		5,313.7	1.5268	8,112.6			
	Industrial	31,199.0	374.4		368.5	1.5381	568.8			
	Sub-total	484,008.6	5,808.1	0.984246	5,716.6		8,737.9	1.5285	1.51	1.23%
1,501 - 5,000	Commercial	166,863.0	2,002.4		1,970.8	1.5414	3,037.8			
	Industrial	73,080.0	877.0		863.1	1.6493	1,423.5			
	Sub-total	239,943.0	2,879.3	0.984246	2,834.0		4,461.4	1.5743	1.55	1.56%
5,001 - 10,000	Commercial	84,999.0	1,020.0		1,003.9	1.3139	1,319.1			
	Industrial	64,031.0	768.4		756.3	1.1564	874.6			
	Sub-total	149,030.0	1,788.4	0.984246	1,760.2		2,193.6	1.2363	1.23	0.51%
10,001 - 20,000	Commercial	122,432.5	1,469.2		1,446.0	1.3139	1,900.0			
	Industrial	340,956.1	4,091.5		4,027.0	1.1564	4,656.9			
	Sub-total	463,388.6	5,560.7	0.984246	5,473.1		6,556.9	1.1980	1.19	0.67%
Over 20,000	Commercial		0.0		0.0	1.3139	0.0			
	Industrial		0.0		0.0	0.0000	0.0			
	Sub-total	0.0	0.0		0.0		0.0	0.0000		
Total Retail		3,043,785.0	36,525.4	0.984246	35,950.0		54,161.4			
Utility					1,050.00	1.1980	1,257.9	1.1980	1.16	3.28%
TOTAL					37,000.0		55,419.3			11/25/97

Companion to Schedule 7

1050
x 1.198
1257.9

P

00335

Sch's 2, 3, & 4

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS EXTRA CAPACITY BASE	MAXIMUM DAY	MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33
2)	Depreciation Expenses	11,010.46	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51
3)	Return on Plant Investment (9.58%)	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74
		70816		28989	10462	799		15232
	Total Louisville Water Co. System Units of Water Consumption							21.7%
4)	Number			37,000.00	63.27	173.80		
5)	Units			M.G.	M.G.D.	M.G.D.		
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.58% Rate of Return							
9)	Operating Expenses	395,683		337,219	48,791	9,673		
10)	Depreciation Expenses	136,058		105,521	28,975	1,562		
11)	Return on Plant Investment (9.58%)	511,351		379,674	126,766	4,911		
12)	Total	1,043,093		822,414	204,533	16,146		
	Cost per 1,000 Gallons (cents)	99.342		78,325.139	19,479.306	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

Schedule 1
11/25/97

1043093
1,050.00

2,145.00

P

11/

00336

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	SOURCE OF SUPPLY	52.44		36.31	16.13			
2)	POWER AND PUMPING							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill Station, Power	743.18		743.18				
6)	Crescent Hill Station, Other	434.68		269.42		165.26		
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98				
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91			
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95				
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.88	171.82	9.04				
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.78		
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00	
14)	PURIFICATION							
15)	Chemicals, B.E. Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	TRANSMISSION AND DISTRIBUTION							
20)	Transmission Mains	712.95		493.66	219.28			1,789.04 ✓
21)	Distribution Mains	1,789.04						
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26 ✓
26)	Transmission & Distribution Subtotal	4,427.20	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Transmission and Distribution	5,057.32	73.71	585.00	250.25	1.00	1,839.47	2,372.89
29)	Total Transmission and Distribution	9,479.52	44.49	1,080.09	469.53	1.88	3,451.34	4,452.19
30)	CUSTOMER ACCOUNTS AND SERVICE							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,983.47						
34)	Uncollected Accounts	275.00						
35)	Miscellaneous Customer Accounts	96.82						
36)	Total Customer Accounts & Service	5,581.80					5,581.80	
37)	Subtotal	24,401.37	1,040.27	7,819.13	1,812.32	244.33	9,033.14	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	ADMINISTRATIVE AND GENERAL							
40)	Administrative and General	12,610.53						
41)	Labor Related Overhead	8,653.50						
42)	Less: Operating Expenses Applied	(12,262.30)						
43)	Total Administrative and General	9,201.73	392.28	2,948.59	683.42	92.14	3,406.39	1,678.91
44)	Total	33,603.10	1,432.55	10,767.72	2,495.74	336.46	12,439.52	6,131.10
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(80.90)		(80.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.90	1,432.55	11,882.95	2,495.74	479.03	12,814.52	6,131.10
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33

Schedule 2

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATIO EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	895.57	17.31	814.97	200.07	13.48	49.73	
2)	Land Improvements and Buildings	359.24		248.75	110.49			
3)	Basins and Ground Storage	162.42	43.90	73.48		45.06		
4)	Standpipes and Elevated Storage	204.84	19.21	128.54	57.09			
5)	High Service Pumps and Equipment	34.93	24.17	6.67		4.09		
6)	Booster Pump Equipment	48.65		33.69	14.96			
7)	Miscellaneous Pump Equipment	64.48		64.48				
8)	Sludge Disposal Equipment	536.44		371.44	165.00			
9)	Purification Equipment	2,122.63		1,469.76	652.87			
10)	Transmission Mains	1,971.82						1,971.82 ✓
11)	Distribution Mains	357.76					357.76	
12)	Meters	1,302.41					1,302.41	
13)	Services	447.05					447.05	
14)	Meter Installations	409.90						409.90 ✓
15)	Fire Hydrants							
16)	Sub-total	8,916.14	104.59	3,011.76	1,200.49	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and Other Equipment	2,093.34	24.54	706.61	281.65	14.69	506.05	558.79
19)	TOTAL	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51

Schedule 3

UTILITY RATE

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	4,827.66	133.63	2,617.58	859.91	107.15	679.19	
2)	Land Improvements and Buildings	34,449.56	448.15	20,410.16	6,448.36	776.15	6,366.74	
3)	Basins and Ground Storage	9,886.34		6,831.71	3,054.63			
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26		
5)	High Service Pumps and Equipment	5,127.01	543.55	3,868.13	1,717.33			
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14		
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65			
8)	Sludge Disposal Equipment	1,704.07		1,704.07				
9)	Purification Equipment	18,576.16		12,662.62	5,713.54			
10)	Transmission Mains	148,269.67		102,685.77	45,603.90			102,856.67
11)	Distribution Mains	102,856.67						
12)	Meters	2,887.58					2,887.58	
13)	Services	40,176.18					40,176.18	
14)	Meter Installations	13,588.90					13,588.90	
15)	Fire Hydrants	16,854.21						16,854.21
16)	Sub-total	410,177.19	3,569.96	156,091.75	64,485.33	2,418.69	63,900.59	119,710.88
17)	Percent	100.00%	0.87%	38.05%	15.72%	0.59%	15.58%	29.19%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	4,150.25	1,714.57	64.31	1,698.02	3,182.94
19)	Total Plant	421,083.21	3,664.88	160,242.00	66,199.90	2,483.00	65,599.61	122,893.82
20)	Other Rate Base Items (1)	9,451.20	82.26	3,596.63	1,485.85	55.73	1,472.35	2,758.35
21)	Sub-total	430,534.41	3,747.14	163,838.63	67,685.75	2,538.73	67,071.99	125,652.17
22)	Contributions and Grants (2)	(132,149.10)		(24,183.29)			(51,538.15)	(56,427.67)
23)	Total Net Plant Investment	298,385.31	3,747.14	139,655.35	67,685.75	2,538.73	15,533.84	69,224.50
24)	Annual Return @ 9.50%	28,365.31	356.86	13,378.98	6,484.30	243.21	1,488.14	7,164.74

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,800.

Schedule 4
11/25/97

BURGESS & NIPLE, LIMITED = COMPUTATION SHEET

JOB NO. _____ JOB NAME Ky-Am SHEET 1 OF _____ SHEETS

SUBJECT LWC Rate PREPARED BY J. Oler DATE 3/3/98

CHECKED BY _____ DATE _____

Reserved Capacity Rate p. 13 & 14

• O/M Cost Component

37,000,000 (Sch. 6)
1,095,000 3 mgd, Ky-Am

38,095,000

1095 / 38095 = 0.0287439

	$1000	
Total O/M	31,220	Util. Rate, Sch 2
	- 9,803	" "
	- 5,127	" "
Bal.	16,290	
	× 0.0287439	

O/M Cost → 468.238 ($1000)

• Deprec. Cost Component

	$1000	
Total Deprec	11,010.48	Util Rate, Sch. 3
	- 2,663.01	"
	- 2,940.51	"
Bal.	5,406.96	

6/240 (0.025) 6 MGD / 240 "

Deprec Cost Comp → 135.174 ($1000)

BURGESS & NIPLE, LIMITED - COMPUTATION SHEET

JOB NO. _____ JOB NAME Ky-Am SHEET 2 OF _____ SHEETS

SUBJECT Load Rate PREPARED BY J. Ober DATE _____

CHECKED BY _____ DATE _____

- Return on Plant / Investment Component

	#1000	
Return on Total Plant	28,988.31	Util. Rate, Sch. 4
	+ 1,488.14	" " "
	+ 2,164.74	" " "
Balance	19,932.43	
	x 6/240	
Mont. Invest. Comp.	498.31	(@1000)

DRAFT

Reserved Capacity Rate

- Premise - Service to Meet Wholesale Customer Needs as Established in Advanced Through Capacity Request
- Cost Components:
  - Operating Cost Component = (Customer Usage / System Usage) * (Total Operating Costs - Customer Costs - Retail Costs)
  - Depreciation Cost Component = (Reserved Capacity / System Capacity) * (Total Depreciation Costs - Customer Costs - Retail Costs)
  - Return on Plant Investment Component = (Reserved Capacity / System Capacity) * (Total Return on Plant Investment - Customer Costs - Retail Costs)
  - Customer Charge Based on Actual Charges from Metering, Billing, Collection, and Customer Specific Assets
  - Extension of System Financing Available

3 MGD X365 1095
37000+1095 38095 .02874
16290.27 468.18
3/240 .0125
5436.96 67.96
.0125 x 19932.13 249.16
785300 ÷ 1095000 .717

MAR 04 '98 11:46AM BURGESS & NIPLE LTD COLUMBUS P.19/22
00342

DRAFT

Reserved Capacity Rate Sample Bill

Operating Cost Component	$468,246 ✓
Depreciation Cost Component	136,417
Return on Plant Investment Component	528,516
Total Annual Commodity Charge	$1,133,180
Customer Charge	$48,300
Total Annual Water Bill	$1,181,480 = 1,079

Assumptions:
Usage 3MGD (1,095,000 TG per year)
Customer Charge $48,300
LWC System Capacity 240MGD
KAWC Reserved Capacity Request 6MGD ✓

Principal Amount $11,000,000 @ 6% for 20 Years	$959,030

MAR 04 '98 11:47AM BURGESS & NIPLE LTD COLUMBUS P.20/22
00343

3/3/98

Ky-Am

- ~~Deduct all costs associated with 12" & smaller mains, Assume 80% of T&D mains - They do deduct distb. main exp.~~

How is split made?

- Check customer cost

- Prepare C/S alloc. that includes Ky-Am. Util. users consum. would double

200 Gals

3000 x 365 = 1,095,000 Ky-Am

present usage = 1,050,000

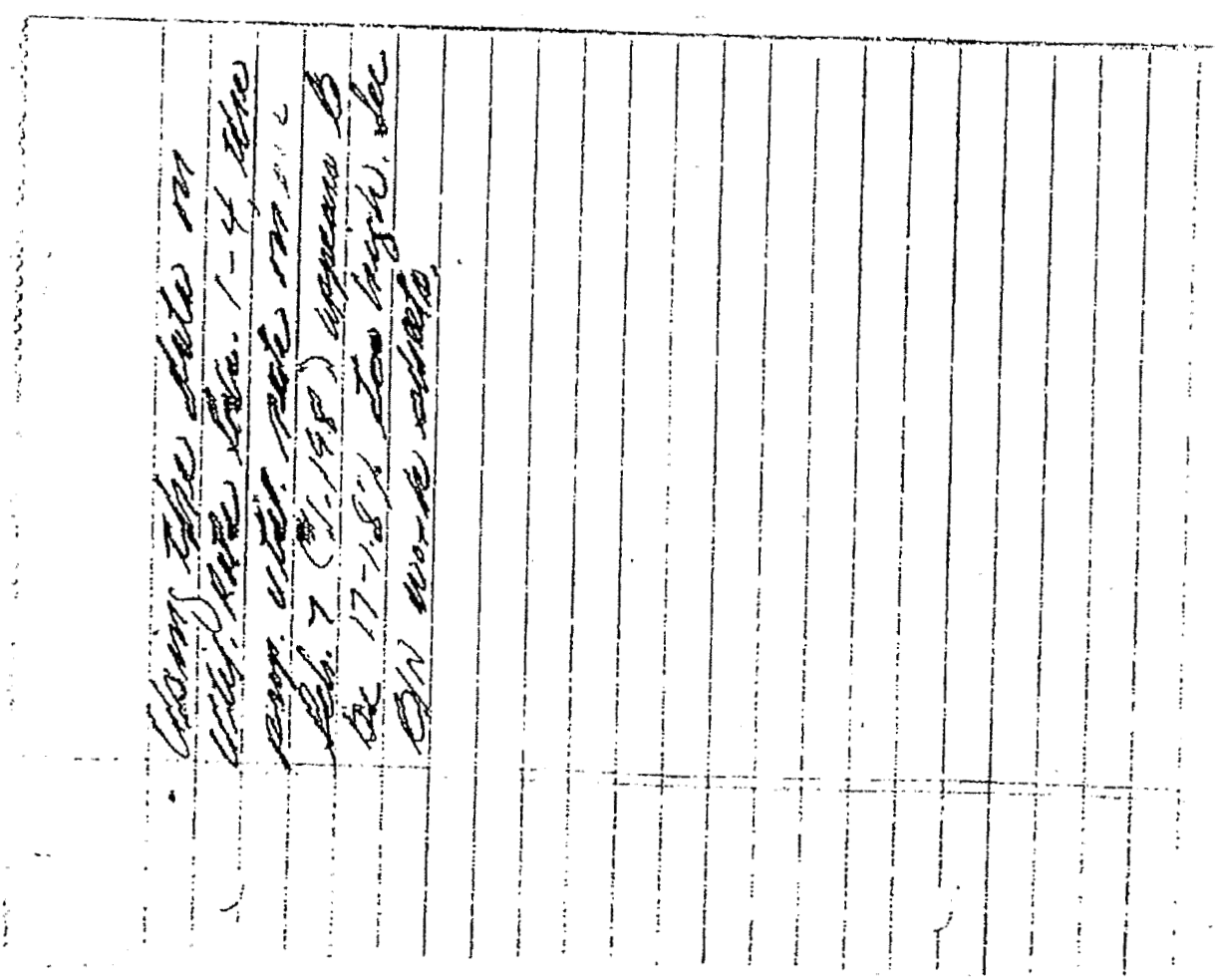
- Max Iron Demand for Util. 222% is too high for Ky-Am

- ~~Can't find distb. main C/S $(653.874) on Sch. 7~~

- Should Ky-Am pay any T/D expense since they are building their own trans. mains in the LWL service area?

- Return on investment should be based on O.C. depreciated. Ky PSC may agree with this.

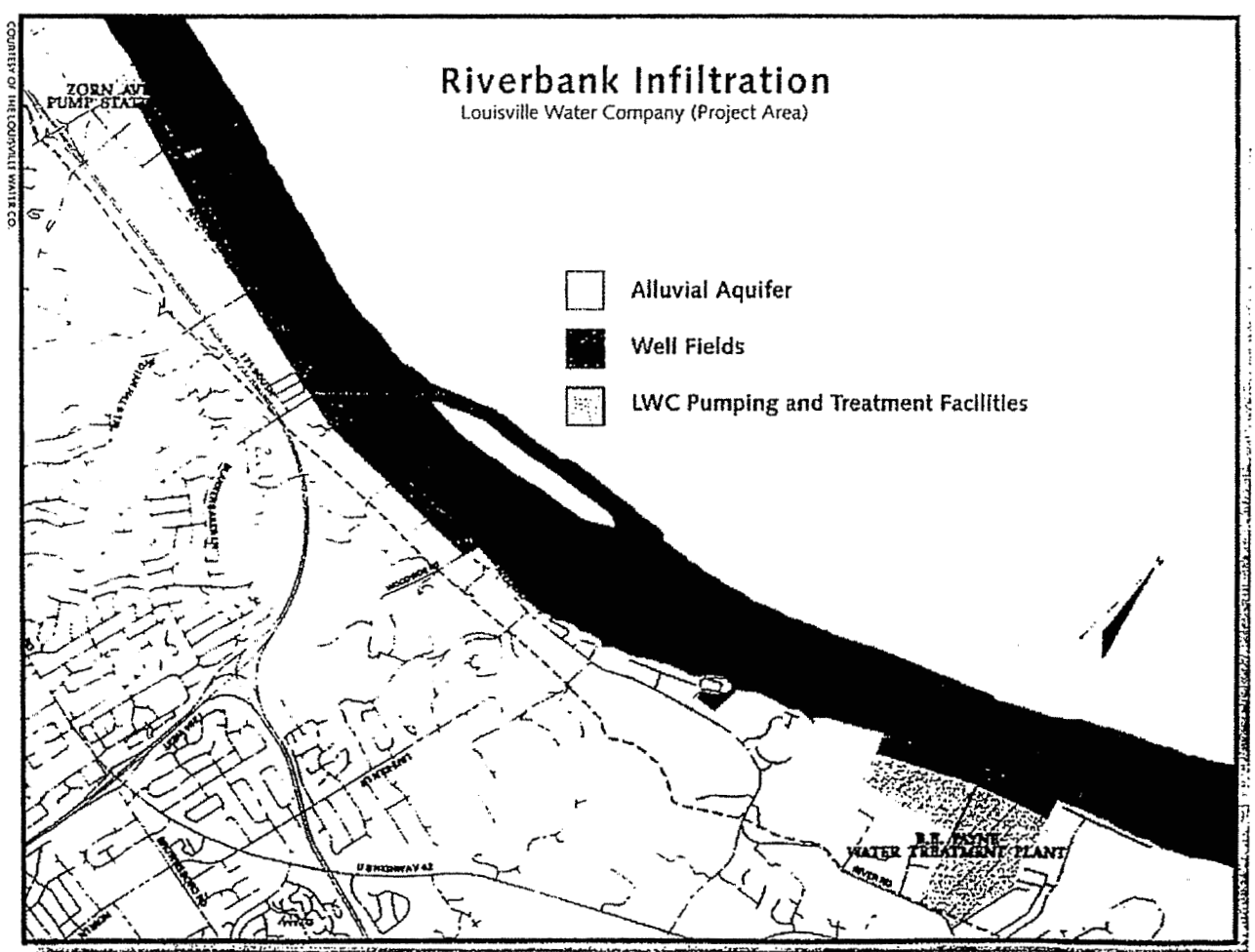
- Distb. mains are 24% of utility plant but only 7% of the total return on the plant investment.



Battlements
ALONG THE OHIO

By Henry Hoenig

The Louisville Water Company's proposal to build a string of five-story wells along the scenic eastern shoreline promises to stir up a flood of opposition.



COURTESY OF THE LOUISVILLE WATER CO.

THERE IS ANOTHER FIGHT BREWING OVER the East End riverfront, and it has the potential to be as divisive and long-winded as the battle over where to put the new Ohio River bridge. And just as in the bridge debate, there will be no easy answers, no clear villains or heroes — just an honest conflict between progress and preservation.

On one side, you have the Louisville Water Company, which is planning a massive project to completely change the way the city's water is collected. Water Company officials say this new method, called Riverbank Infiltration, or RBI, will allow them to more easily and efficiently meet the stricter drinking-water standards of the future.

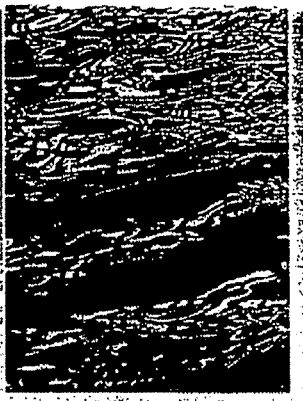
But progress never comes without a price, and this case is no exception. RBI will require the construction of at least a dozen wells — each with pump houses elevated almost five stories above ground and measuring 36 feet across — within the two-and-one-half-mile piece of shoreline stretching east from Zorn Avenue to Woodside Road; that is, through Cox Park and along Upper River Road, an official state scenic byway and one of the most beautiful and unspoiled stretches of riverfront in Jefferson County. Also, three or four more wells would be built at the B.E. Payne Treatment Plant a couple miles farther upriver near Harrods Creek.

Naturally, on the other side of the coming debate will be River Fields, a non-profit Ohio River watchdog group that has been the most outspoken opponent of an East End bridge. River Fields does not officially oppose the Water Company's plans just yet. But it is asking hard questions and gathering information, and executive director Meme Sweets Runyon says every possible alternative to Riverbank Infiltration must be explored and proven inferior before River Fields will concede that it is the best option. Until then, she says, River Fields will fight RBI with all of its considerable resources and influence.

"What one has to do is try to visualize what the land-use impact is going to be," Runyon said. "This is not just a scenic question. This is a question of turning a major portion of the river corridor to industrial land use. If we need to do that — if that is the only alternative for improving our drinking water — then I believe River Fields will support it and we need to do it. But we have to address so many unanswered questions."

Though used extensively in Europe's Rhine Valley, which is heavily polluted by industry, RBI is relatively new to the United States, with only a handful of metropolitan areas using it for a substantial portion of their water supplies. Louisville would be the first American city to rely on RBI for virtually all of its water supply — about 95 percent.

RBI utilizes a fairly simple process. Instead of drawing water straight from the polluted Ohio River, then treating it heavily with chemicals, the water company instead would draw water through wells drilled into the underground aquifer along the river's edge. When that water is withdrawn, the aquifer will naturally be refilled — or recharged — with water from the river. As that water moves from the river bottom into the aquifer, it must pass through sand and gravel, which act as filters and remove many contaminants. Hence, the name Riverbank Infiltration.



The professed advantages of RBI are considerable. The natural filtering process would reduce initial levels of herbicides, pesticides, bacteria and disease-causing parasites, including cryptosporidium, which is immune to chlorine treatment. Because these contaminants are reduced, the amount of chemical treatment and its cancer-causing by-products also are reduced — though not eliminated. Among other advantages, the drinking-water supply would be less vulnerable to river pollution and toxic spills. Use of the wells would eliminate the current problems with Zebra mussels and Asiatic clams clogging the water intakes at river level. And the water temperature would be more consistent, minimizing problems with water-main breaks during extremely cold weather.

But Louisville residents probably will notice only the more consistent temperature in their drinking water, said Steve Hubbs, the company's director of water quality. "Our guess is the water consumer won't notice the change in water quality at all," he said.

After running tests on a small well at the Zorn Pump Station No. 1, water company officials are sold on RBI's effectiveness in producing cleaner water. Construction of a full-scale test well at the Payne plant will begin this spring. It will test for the same results in water quality and cost of operation, but this time at full volume, said Kay Ball, RBI project manager.

Construction and testing should take about 15 months. Then the decision will be made whether or not to proceed with more fully operational wells at Payne and, ultimately, the dozen or so along Upper River Road. The total cost — if carried to full scale — is expected to be at least $60 million. All of the wells would be completed by 2006.

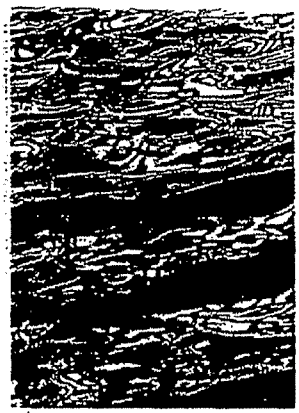
So far, the Upper River Road corridor has mostly been protected from the grasp of 20th-century industrialists and developers. From Zorn Avenue to Prospect, the two-lane road runs under a canopy of trees, past parks and open fields, over boat docks and under river bluffs from which historic homes preside over the river. Along the way it passes three national landmarks — including Locust Grove just up Blankenbaker Lane — and three residential districts listed on the National Register of Historic Places.

In Louisville's earliest days, the area consisted of several large plantations owned by wealthy transplanted Virginians. Locust Grove dates to 1790, and many of the original houses from the early 1800s remain, as do many others built after the introduction of the commuter railroad to the area in the 1870s.

Many residents were nationally and even internationally prominent business leaders and politicians, and their homes were designed by some of the most prominent architects and landscape architects of the time.

Still, the area's value as a historic and cultural treasure is greatly underestimated, and should be recognized and preserved, according to Carolyn Brooks, a professional historic-preservation consultant. Brooks was hired by Jefferson County and River Fields in

Barring any problems with the full-scale test well, slated to be constructed this spring, the Louisville Water Company plans to build three or four five-story wells at its B.E. Payne Treatment Plant and a dozen more along the riverbank between Zorn Avenue and Woodside Road.



1994 to study the corridor during the formation of the Ohio River Corridor Master Plan, and she currently is under contract with the state to prepare an even more detailed analysis of the corridor for the Kentucky Heritage Council, the state environmental preservation office.

Brooks believes her work will lead to even more properties and residential districts being listed on the National Register. But she also believes that RBI wells would dramatically alter the character and quality of the area.

"Obviously, water quality is a very important issue for us all but at the same time the aesthetics of a community are important too," Brooks said. "I think many people would agree it's an area we want to try to preserve as much as possible."

Richard Jett, a state historic preservation officer with the Kentucky Heritage Council, said the issue is not simply one of aesthetics — but one of economics as well.

Jett said the area provides Louisville residents and visitors with an opportunity to experience a rare combination of a beautiful natural landscape dotted with historic and architecturally significant homes, estates and farmlands. The possible benefits of the RBI wells must be weighed carefully against the possible aesthetic damage — and its impact on the economic values of the corridor, namely tourism and its use as a community selling point, Jett said.

"Preserving these sites is making a significant contribution to the local economy," he said. "People are attracted to communities that have a distinct identity and character."

Runyon compared the Upper River Road corridor to West Main Street, which has the second-highest concentration of cast-iron building facades in the country, and which for many years went unrecognized as the attraction that it is today. "We have taken (River Road) totally for granted," she said. "We just assume that every city has one of these. The experience of this road is unusual in the United States."

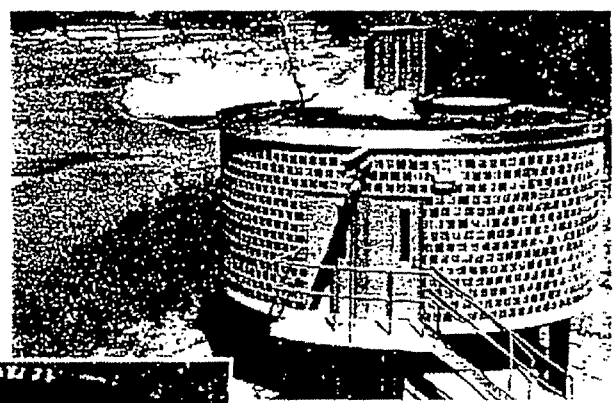
President John Huber said the Water Company is keenly aware of the value of this stretch of riverfront, both as a scenic area and a community treasure. "Whatever we do here, whatever this project might be if it comes to full fruition, has to fully recognize that," he said. The well towers "can look like anything we want them to," including lighthouses or silos, for example, and public involvement will be solicited in the planning and design process. He has suggested that the towers might be linked by a walking path, even the RiverWalk.

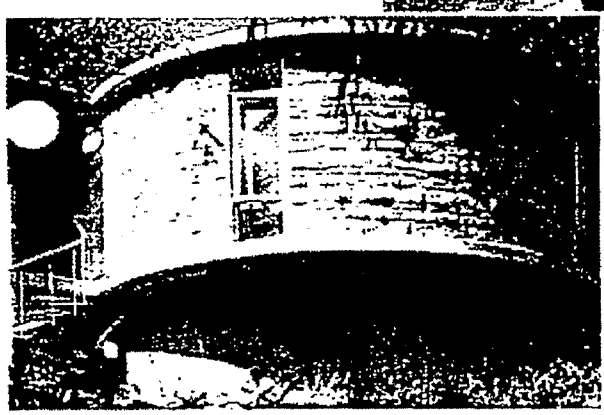
Huber said there are several reasons that the wells can't be placed elsewhere along the river, such as in an industrial area, closer to downtown or farther out in the country. RBI requires a combination of geological conditions that are not easily met, which is one reason it has not been used more in other cities. It requires a low-lying river valley instead of a high bluff, so that the water can be easily reached without excessive digging; uniform deposits of sand and gravel for effective filtering; and a great enough distance from ground level to bedrock to allow a high volume of water to be withdrawn.

"This is the stretch of Louisville riverfront where we can do this," he said.

There also is little choice in the height of the pump houses or their proximity to the riverbank, Huber said. The pump houses must be elevated above the 100-year flood level to assure a working water supply in case of flood; and placing the wells right next to the bank greatly increases the volume of water available, which may not be high enough if placed farther away.

Of course, Huber's suggestion that the well towers might be designed and landscaped as something other than an eyesore is not without precedent. Among Louisville's most recognizable landmarks is the original 1860 Water Works — now known simply as the Zorn Pump Station No. 1. It was designed in a Classical Revival architectural style, and it and the Water Tower, now the oldest structure of its kind in America, are national landmarks listed on the National Register of Historic Places. The site now houses the Louisville Visual Arts Association, and the grounds are used often for athletic events, outdoor concerts and other public events.





COURTESY OF THE LOUISVILLE WATER CO.

Shown here are well pump houses in other cities. Water Company officials say they will design and landscape the wells to be as atttractive as possible, and may use some of them to anchor part of the planned eastern segment of the RiverWalk.

The Crescent Hill Reservoir also is a highly valued public space. From its inception a decade before the creation of Cherokee Park, the reservoir was designed and landscaped to provide a place of outdoor recreation for residents, and the gatehouse and other features of the reservoir were finished in the Gothic style of the Victorian era. The reservoir remains a popular spot for walkers and runners today. The water company also built the first Crescent Hill swimming pool on the grounds in 1919, though the city later built the current pool nearby after the company closed the first one to

P 00348

make room for a coagulation facility.

But the most cherished of Louisville Water Company architecture was designed more than a century ago. We no longer live in the Victorian Age, or even simply an age when public works projects are conceived as the grand monuments to human achievement and style that they once were. More often than not, they are now monolithic testaments to cost-cutting. Concrete slabs take precedence over columns, intricate ironwork and statuary.

Another option is linking the wells with the RiverWalk, which will be extended along this corridor. But the wells wouldn't be completed until 2006, and RiverWalk planning and construction is proceeding already.

Anita Solomon, director of the planning and design department of the Metro Parks Department, said construction of the RiverWalk from the Zorn pump station to the Caperton Swamp at Indian Hills Trail is scheduled to start this spring, and planning of the next phase will begin shortly after construction starts. "It's not too late," Solomon said. "But what's crucial is we need to know where their infiltration wells are going to be."

Runyon, for one, is skeptical that the Water Company will act on its own to create the most aesthetically pleasing towers possible, and says only public pressure will ensure that it does. But long before the planning and design stages begin, Runyon says, River Fields will be soliciting expert opinions from around the country and from Europe about alternatives to RBI. She wants to be sure that RBI is Louisville's absolute best alternative, and she wants an open, public debate about what constitutes "best" — including an informed discussion of the value of the riverfront to the community, and what it might cost the city to pursue other water treatment options.

"They're moving down the track really very quickly, and in our view there needs to be a public dialogue," she said. "The public has a right to understand why this technological road is being traveled. What are the choices for citizens in this community in terms of safeguarding and protecting their drinking water and in terms of safeguarding and protecting their river corridor? Are infiltration wells the only way to go?"

Actually, not only are RBI wells not the only option, they aren't even necessary, strictly speaking, Huber said. In fact, the Water Company's current treatment system probably will meet the coming water quality standards, but only by an uncomfortably narrow margin, he said.

With that in mind, the water company conducted its own in-depth study of various technological options, including a comparison of water-quality tests and corresponding cost analyses. It concluded that RBI's effectiveness in water treatment, combined with its relative cost-effectiveness, make it the "best" choice, Huber said.

RBI's $60 million price tag and $800,000 annual operating cost make it far cheaper than other treatment options, many of which aren't as effective to begin with and have capital and operating costs as much as two to three times higher, Huber said.

But not calculated into the charts and tables — because it is, of course, so difficult to calculate — was the value of the riverscape and the "cost" of degrading it and the entire corridor.

Ann Breen, executive director of Waterfront Center, a non-profit Washington, D.C., agency that studies waterfront planning and development issues, said converting recreational waterfront space to industrial use runs contrary to the prevailing municipal development philosophy of the past several decades. More and more, cities are returning once-industrial riverfronts to recreational use, as is the case with Louisville's new Waterfront Park, because city leaders recognize the value inherent in that space, she said.

"There is a cost of ruining the aesthetics of the riverfront," Breen said. "It's a really important issue for generations of Louisvillians. You're not talking about something that's just going to go away."

In the coming months the Water Company plans to begin holding public information sessions to explain RBI and hear from residents, said Barbara Crow, manager of public information. Along the way some type of compromise or consensus can be reached, she said.

"You're talking about the health and welfare of the community," Crow said. "Those things are important: the scenic value, the cultural value, the historical value. But community health is a very important issue too. They're all quality-of-life issues. There's got to be some give-and-take and some balance with those issues." ■

NEED HOME REPAIR HELP?

• Interior & Exterior Repair Work
• In-house Craftsmen
• Fully Insured

Handyman-Plus!
583-HMAN
PAINLESS HOME MAINTENANCE

A subsidiary of Ben Tyler Building and Remodeling, Inc.



AZALEA
RESTAURANT

3612 Brownsboro Road

Louisville, Ky 40207

Telephone (502) 895-5493

Facsimile (502) 895-4822

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

February 13, 1998

Ms. Linda C. Bridwell, P.E.
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Re: Pipeline-Lexington to Louisville

Dear Ms. Bridwell:

This letter is to confirm the Louisville Water Company's general concurrence with the general pipeline route identified in the Request for Proposal (RFP) for the Bluegrass Water Project. As discussed during the February 6 conference call, the U.S. 60 route within Jefferson County may present challenges with respect to easement acquisition, constructability, pump station accessibility and power supply. This route, however, does appear feasible at this time.

The U.S. 60 route will allow the first booster pump station to be located in Shelby County near the Jefferson County line. As discussed, the Louisville Water Company desires to own, operate, and maintain the transmission main through the County line to the first pump station. This will provide an ideal location for master meter and construction of potential storage on the suction supply of the pump station.

We have also reviewed the RFP and provide the following responses to your inquires. The enclosed table contains water quality data for those parameters requested in Section I , Part 4 including minimum, average, and maximum values. The water quality supplied will meet all applicable Kentucky drinking water regulations. In reference to Section I, Part 6, preliminary calculations indicate that the Louisville Water Company can provide 23.0 mgd while maintaining a minimum suction pressure of 40 psi at the Jefferson County boundary.

In addition, clarifications to the Request for Proposal should include:

- Section 1, Part 10 RRS SCADA System should require suction, discharge, and flow signals from the pump station to the English Station Reservoir site.

- Section II, Part 1.A should require a surge analysis of the Louisville Water Company distribution system from the English Station Reservoir site to the Jefferson County boundary.

- Section II, Part C.1 clarification on the specification of 19.0 mgd when 23.0 mgd is referenced in other sections of the document.

As requested during the conference call of February 6, the Louisville Water Company will forward confirmation of the proposal by March 15, 1998. If you have any further questions, please contact me at 502 569-3681 or Karen Willis at 502 569-3615.

Sincerely,

Gregory C. Heitzman, P.E.
Vice President-Chief Engineer

cc: Karen Willis-LWC; Dave Reeves-AWWSC
enclosures

received
2/17/98

An Equal Opportunity Employer

Louisville Water Company Water Quality Information

January 1, 1997 to December 31, 1997

Parameter	Units	Parameter Value		
		Minimum	Average	Maximum
pH	units	6.9	8.4	8.9
Alkalinity	mg/l	36	84	100
Hardness	mg/l	94	163	220
Orthophosphate	mg/l	<0.1	<0.1	<0.1
Total Chlorine Residual	mg/l	2.1	2.6	3.4
Free Chlorine Residual	mg/l	<0.05	<0.05	<0.05
Free Ammonia	mg/l	0.04	0.43	0.56
Nitrite	mg/l	<0.1	<0.1	<0.1
Zinc	mg/l	0.2	0.2	0.2

Linda B
File - N
Louisville
Correspd

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502
(606) 268-6320 • Fax (606) 268-6327

Roy W. Mundy II
President

February 20, 1998

Mr. John Huber, President
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

RE: Kentucky-American Water Company
Louisville Water Company Agreement

Dear John:

The purpose of this letter is to memorialize an agreement between Kentucky-American Water Company ("Kentucky-American") and Louisville Water Company with respect to potential reimbursement by Kentucky-American of costs incurred by Louisville Water Company in the design of facilities necessary to supply potable water for Kentucky-American's Bluegrass Water Supply Project.

We are in the final stages of completing a proposed agreement between Kentucky-American and Louisville Water Company wherein Louisville Water Company will supply potable water to Kentucky-American at a point near I-60 just east of the intersection of the Jefferson County - Shelby County line. In order to supply this volume of water it will be necessary for Louisville Water Company to design facilities that will be necessary for delivery of potable water in sufficient quantity and quality to that point.

We anticipate that by April 1, 1998, Kentucky-American will enter into a Water Purchase Agreement with Louisville Water Company and that Kentucky-American will have selected a contractor for the design of its facilities which are a part of the Bluegrass Water Supply Project. It will be necessary for the Water Purchase Agreement to contain a provision that it will be binding only when Kentucky-American has obtained a final, non-appealable Order from the Public Service Commission in the form of a Certificate of Convenience and Necessity authorizing the construction of the Bluegrass Water Supply Pipeline.

As a part of the application for the Certificate of Convenience and Necessity, Kentucky-American is required to include a description of the manner in which the facilities will be constructed. Kentucky-American would be unable to meet this regulatory requirement if Louisville Water Company was not willing to design its necessary facilities before the application is made to the Public Service Commission. Therefore, we would ask that the Louisville Water Company design be completed by October 1, 1998 as will be noted in the Water Purchase Agreement.

We understand that the design of your facilities would not have value to Louisville Water Company in the absence of the Water Purchase Agreement becoming a binding contract. We therefore agree, in the event the Water Purchase Agreement does not become binding, to reimburse Louisville Water Company for external costs incurred by it in the design of its facilities and for the reasonable internal costs to be incurred.

We hope that Louisville Water Company will use Kentucky-American's consultant for the design of its facilities. We believe efficiencies can be achieved by the utilization of the same design consultant; however, this agreement is not contingent upon Louisville Water using our selected consultant.

Prior to the beginning of the expenditure of money, we need an estimate of the external and internal costs to be incurred by Louisville Water Company. Any change in scope of the design, from that contemplated in the Water Purchase Agreement, which causes a deviation in the estimate from either external or internal costs must be approved by Kentucky-American in advance, which approval shall not unreasonably be withheld. Kentucky-American will provide a member of our company to serve on the design/review team to insure the above. I assume you would have no objection to our internal auditors verifying the compilation of your internal costs.

In the rare event Kentucky-American's design contractor is unacceptable to Louisville Water Company, Kentucky-American must approve your selection of a design contractor for your facilities, and that approval shall not be unreasonably withheld.

I want to personally thank you for the cooperation which has existed between the representatives of Louisville Water Company and Kentucky-American. Any questions, concerns or issues about our future relationship should be directed to Herb Miller (legal), Coleman Bush (finance), Nick Rowe (operations), or Linda Bridwell (engineering). I envision that you and I will have a fairly constant exchange of information and ideas, and please feel free to call me personally on any issue at any time.

If this Agreement meets with your approval, I would appreciate receiving your estimate of the external and internal costs to be incurred by Louisville Water Company. Upon our approval thereof, I will ask you by additional correspondence to sign a copy of this letter which shall then be considered as the agreement between Kentucky-American and Louisville Water Company as detailed herein.

On behalf of Kentucky-American's customers, I look forward to a long-term, mutually satisfactory relationship.

Very truly yours,

Roy W. Mundy II
President

312kC:\Work\LWIKAWC\bluegrassOO3huber.ltr

D:LWC.Doc

Conference Call
File N
Louisville Corr
1997

Linda C. Bridwell, P.E.
Director of Engineering

MEMORANDUM

TO: Karen Willis

FROM: Linda Bridwell

RE: Agenda – February 6, 1998 meeting

DATE: February 5, 1998

Dave and I have agreed on particular issues which we would like to discuss with you. I have attached a suggested agenda for our meeting. We look forward to meeting with you tomorrow!

C: N.O. Rowe
D.M. Reves

AGENDA
MEETING
KAWC & LWC
FEBRUARY 6, 1998

I. Feasibility of pipeline route along US 60 in Jefferson County – More expensive easements
Does have distribution – trade-off vs. pumping costs

II. Ownership of Storage tank at County Line
May not feasible – > Use usage analysis to English Station tank

III. Size of Storage tank

IV. Water Quality ranges at point of delivery

V. Coordination of Design Work

VI. Schedule of Completion of work relative to Application of Certificate of Convenience and Necessity

VII. Water Purchase Contract issues as they relate to design

VIII. Controls at Booster Station

IX. Review of RFP

X. Other Issues

Karen Willis
Alan Arbuckle
Greg Wietzman

File - N
S of S Design

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Director of Engineering

COPY

MEMORANDUM

TO: Dave Reves

FROM: Linda C. Bridwell

DATE: February 3, 1998

SUBJECT: **Bluegrass Water Project**

As a follow-up to our January 21 meeting and our review of the RFP:

1. The addresses for the other consultants are:

Mr. Louis Dixon
CDP Engineers, Inc.
616 Wellington Way, Suite C
Lexington, KY 40503

Mr. Doug Ralston
PDR Engineers, Inc.
800 Corporate Drive
Lexington, KY 40503

Mr. Mark Meade
PhotoScience, Inc.
2670 Wilhite Drive
Lexington, KY 40503

2. The issues that will need to be resolved prior to filing an application for a Certificate of Convenience and Necessity:

- Hydraulic design complete
- Booster station layout complete
- Plan and profile drawings of route (as we have identified in the RFP)
- Specifications complete
- Easements identified, the majority of options for easements obtained
- Identification of permits to be sought after receiving Certificate (building permits, stream crossing permits, railroad permits, etc.)
- DOW approval of plans and specifications (takes 45 days)
- 404 Permit for navigable stream crossings (if any)
- LWC design complete

I would like to have hydraulic design complete by October 1 along with plans and specifications so we can seek DOW approval and file the application for a Certificate by December 1. I spoke with Bob Arnett of the DOW to see if they will need full electric control design complete and he agreed that they will need to understand the level of controls but will not need wire diagrams or I/O listings. I don't anticipate the DOW will focus on this aspect but we will need a form of electrical specifications to be submitted.

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 346-8360

January 30, 1998
BP 92-12

MEMORANDUM

To: L.C. Bridwell

From: D.M. Reves

Re: Bluegrass Water Project
Meeting with LWC on February 6

Linda: Here are the items I will need to discuss with LWC at the meeting next week:

1. The feasibility of the northern pipeline route in the LWC system (along US 60 then following the railroad tracks). This route would allow the first booster station to be located outside of Jefferson County.

2. Ownership of a storage tank at the county line. Since the tank is required by LWC, it is preferred that the tank be owned and operated by LWC. The range of operation of the tank would need to be specified by LWC to allow for proper selection of the pumps at the first booster station. It is also assumed that LWC would provide, own, and maintain metering facilities on the discharge side of the tank.

3. LWC expected water quality ranges at the county line per the table on page DC-4 of the Design Concept. Although they may not be able to provide us with guarantees at this time, they should be able to develop reasonable estimates. The previous information they provided was limited and was taken from the English Station tank.

4. Coordination of LWC and KAWC design work. If the northern pipeline route is feasible, there really doesn't need to be much coordination. We need to make sure that LWC understands that the work required in their system does not need to be part of our design scope of work. I also still prefer that we discourage them from using the same consultant that we will retain to avoid schedule conflicts. Coordination with one consultant would only be necessary if one booster is owned by LWC and the other is owned by KAWC.

5. Schedule for completion of the LWC work as it relates to the Certificate Case as well as ultimate completion of the project. If you're meeting with Lindsay Ingram before the LWC meeting, this should be a topic of discussion with him.

You might also want to consider discussing a contract with LWC (which they've indicated they will need before they can begin any design work) and possibly the issue of their existing customers in Shelby County. Negotiation of a water sales agreement is the other critical issue on this project, however, I don't believe this meeting is the appropriate forum for that discussion. Please note that resolution of the first two items above are absolutely critical to sending out the RFP to consultants.

I'll be staying at the Doubletree the night of Thursday, February 5. Assuming our meeting is still scheduled for 9:30 am, I'll be waiting at the front door of the hotel at 8:00 am on the 6th. Please advise if the meeting time is changed.

c: T.A. Friley - KAWC
N.O. Rowe - KAWC

Copy to Mark Frost

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 346-8229

Thomas G. McKitrick
Vice President Investor Relations
609-346-8207
tmckitri@amwater.com

MEMORANDUM

DATE: December 29, 1997

TO: Coleman Bush

RE: My Review of the Louisville Water Company 1996 Rate Study

I have several comments as a result of my review. They are as follows:

1. The ESA (Elevated Service Area) charge includes elements of return and depreciation associated with storage tank investment. My understanding of the operational pattern of the pipeline is that it will be operated at a constant rate, and that rate will be known by the Louisville operators. That being true, Kentucky-American will not be utilizing any storage tank volume. Thus, those elements of the ESA charge can be reduced.

2. On Schedule 2, line 12 of the appendix, $357,950 is assigned to the ESA for booster pumping, others. It would be beneficial to find out what that account is for and what the expenditures are.

3. The current demand profile for the utility group of customers indicates a maximum day to average day ratio of 1.43, and a maximum hour ratio to average day of 2.22. I can't disagree with the maximum day to average day ratio, but if my understanding of the pipeline operating pattern stated in item 1 is correct, then costs should <u>not</u> be allocated to Kentucky-American utilizing the standard utility maximum hour to average day ratio.

4. It should be noted that on Schedule 4, the net investment/return calculation, there are no credits for contributions applied to the ESA. There should be some valid reason for that.

I also reviewed Louisville's SDC (System Development Charge) study. The elements of the basic charge related to the following are inappropriate for Kentucky-American:

Future Transmission	$355.92
Total Distribution	121.25
Total Storage	163.09
Total Meters and Services	19.25
Total Valves and Fire Hydrants	0.24
Total	$659.75

Kentucky-American will be providing their own facilities for the future from English Station out to the Jefferson County Line. The only portion of the SDC appropriate for Kentucky-American is the $724.37 for production facilities.

Therefore, Kentucky-American's SDC charge should be reduced proportionately from $1384.12 to $724.37, or 48%, in the larger meter size that is appropriate.

I am enclosing the paperwork I have on this project with this memo. Feel free to call if you want to discuss this further.

cld
Enc.
122397.001

c: Linda Bridwell
Roy Mundy

Copy to Mark Frost 8/14

WATER RATES

LOUISVILLE WATER COMPANY
LOUISVILLE, KENTUCKY

BOARD OF WATER WORKS RULES AND REGULATIONS

c: LCB 12/23/97 DC

6.00 Rates

6.01 For the purpose of classifying revenues, and to provide for different classes of rates, there shall be established seven (7) classes of customers and four (4) areas of service.

The classes of customers shall be identified as:

Residential
Commercial
Industrial
Fire Service
Fire Hydrants
Municipal
Wholesale

The areas of service shall be identified as:

Retail Service Area
OC District formerly served by West Oldham Utilities
BC District formerly served by Bullitt Water Company
KT District served by the Company through leased facilities

6.02 The rate charge for metered water service shall be comprised of three components except for municipal customers as defined in KRS 96.270 who shall be served as provided therein at no cost to the customer and publicly owned fire hydrants:

(1) A service charge based on the size of the meter through which the customer receives such service, and

(2) A commodity charge based on the amount of water consumed, and

(3) An elevated service area surcharge if applicable in Rule 6.02.3.

6.02.1 **Service Charge**

The service charge for classes of customers taking metered service and situated within the *Retail Service Area or the BC District or the KT District* shall be charged in accordance with the following schedule:

Meter Size	Service Charge Monthly Bill
5/8" x 3/4"	$ 3.70
1"	$ 9.25
1 1/2"	$ 18.50
2"	$ 29.60
3"	$ 64.75
4"	$ 111.00
6"	$ 259.00
8"	$ 462.50
10"	$ 703.00
12"	$ 1,073.00
16"	$ 2,127.50

6.02.2 **Commodity Charge**

The commodity charge for monthly usage for customers within the *Retail Service Area or the KT District* shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month	
First	3	at $1.36 Per 1,000 Gallons
Next	3	at $1.50 Per 1,000 Gallons
Next	194	at $1.72 Per 1,000 Gallons
Next	1,300	at $1.60 Per 1,000 Gallons
Next	3,500	at $1.43 Per 1,000 Gallons
Next	5,000	at $1.08 Per 1,000 Gallons
All Over	10,000	at $1.03 Per 1,000 Gallons

The commodity charge for monthly usage for customers within the *BC District* shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month	
First	200	at $2.00 Per 1,000 Gallons
Next	1,300	at $1.60 Per 1,000 Gallons
All Over	1,500	at $1.43 Per 1,000 Gallons

The commodity charge for bi-monthly usage for customers within the *OC District* shall be computed in accordance with the following schedule:

Minimum Bi-Monthly Bill and Allowable Usage

Meter Size	Allowable Usage Thousand Gallons	Amount
5/8" x 3/4"	0	$ 10.00
1"	0	$ 20.00
1 1/2"	0	$ 30.00
2"	30	$ 142.35
3"	70	$ 332.15
4"	130	$ 596.85

Bi-Monthly Rate for Water Used in Excess of Allowable Usage

	Thousand Gallons Per Month	
First	400	at $2.91 Per 1,000 Gallons
Next	2,600	at $2.91 Per 1,000 Gallons
All Over	3,000	at $2.91 Per 1,000 Gallons

6.02.3 Elevated Service Area Surcharge

All customers in the Retail Service Area or BC District or KT District shall pay a surcharge of $0.19 per thousand gallons if water must be delivered at a higher elevation that the general pressure plane served by the Crescent Hill/Cardinal Hill System.

6.03 **Wholesale Customers**

Wholesale customers which purchase water for resale wherever situated shall be charged: $1.16 per thousand gallons for all water purchased, the elevated service area surcharge specified in Rule 6.02.3, if applicable, and the service charge specified in Rule 6.02.1.

6.04 **Fire Service Charges**

The charge for fire service, where water may be taken for fire protection only, shall be in accordance with the following schedule. This charge will also be applicable to such fire hydrants as may be provided by private agencies.

Size	Monthly Charge
4"	$ 10.25
6"	$ 21.00
8"	$ 40.75
10"	$ 80.25
12"	$ 161.25

6.05 At the Company's option, bills may be rendered monthly or bimonthly.

6.06 In the event that payment for any charge is not made within twenty (20) days from the billing date, the net amount of the bill shall be increased by 5% and the gross amount thus determined must be paid. One late payment will be accepted every twelve (12) billing periods at net amount if the bill is paid before the next billing date.

6.07 Where water is used without proper authorization, the estimated quantity of unmetered water used shall be paid for at the rate of $3.00 per thousand gallons.

6.08 Water taken from a Louisville Water Company public fill station shall be paid for at the rate of $2.50 per thousand gallons plus such deposits as may be established from time to time.

Upon adoption, these rates shall become effective and apply to statements mailed on and after January 1, 1998.

COMPARISON OF REVENUE UNDER EXISTING RATES, AND PROPOSED RATES

	UNITS		PRESENT RATES RATES $	PRESENT RATES REVENUE ($1,000)	PROPOSED RATES $	PROPOSED REVENUE ($1,000)	INCREASE OVER EXISTING RATE %
RESIDENTIAL: Service Charge	2,576,406	E U	3 60	9,275.06	3.70	9,532.70	
Water Sold 0 - 3	7,149,345	T.G.	1.33	9,508 63	1.36	9,723.11	
4 - 6	4,571,406	T.G.	1.47	6,719 97	1.50	6,857 11	
7 - 200	3,171,357	T.G.	1 69	5,359 59	1.72	5,454 73	
201 - 1,500	17,892	T.G.	1.54	27.55	1.60	28.63	
Total Residential	14,910,000	T.G.		30,890 80		31,596 28	2.28%
COMMERCIAL: Service Charge	808,312	E.U.	3.60	2,909.92	3 70	2,990 75	
Water Sold 0 - 3	675,675	T.G.	1.33	898.65	1.36	918 92	
4 - 6	553,905	T.G.	1.47	814.24	1.50	830 86	
7 - 200	7,194,825	T.G.	1.69	12,159.25	1.72	12,375 10	
201 - 1,500	4,198,095	T.G	1.54	6,465.07	1.60	6,716.95	
1,501 - 5,000	1,348,380	T.G	1.37	1,847.28	1 43	1,928 18	
5,001 - 10,000	442,530	T.G	1 05	464 66	1.08	477 93	
Over 10,000	436,590	T.G	0 99	432.22	1 03	449.69	
Total Commercial	14,650,000	T G		25,991.29		26,688.38	2 68%
INDUSTRIAL: Service Charge	89,004	E U.	3 60	320 41	3 70	329 31	
Water Sold 0 - 3	12,380	T.G.	1.33	16 47	1.36	16 84	
4 - 6	11,142	T.G.	1 47	16.38	1.50	16.71	
7 - 200	319,404	T.G	1 69	539.79	1 72	549 37	
201 - 1,500	992,257	T G.	1 54	1,528.08	1 60	1,587 61	
1,501 - 5,000	1,327,755	T G	1 37	1,819 02	1 43	1,898.69	
5,001 - 10,000	1,004,637	T.G.	1.05	1,054 87	1.08	1,085 01	
Over 10,000	2,522,425	T.G	0 99	2,497.20	1.03	2,598.10	
Total Industrial	6,190,000	T G		7,792 22		8,081 65	3.71%
TOTAL RETAIL: Service Charge	3,473,722	E.U	3.60	12,505.40	3 70	12,852 77	
Water Sold 0 - 3	7,837,400	T.G.	1.33	10,423.74	1.36	10,658.86	
4 - 6	5,136,453	T.G	1.47	7,550.59	1.50	7,704 68	
7 - 200	10,685,586	T.G.	1.69	18,058.64	1.72	18,379.21	
201 - 1,500	5,208,244	T G	1 54	8,020.70	1.60	8,333.19	
1,501 - 5,000	2,676,135	T G	1.37	3,666.30	1.43	3,826 87	
5,001 - 10,000	1,447,167	T.G	1.05	1,519.53	1 08	1,562 94	
Over 10,000	2,959,015	T.G.	0 99	2,929.42	1 03	3,047 79	
Total General Pres. Retail	35,950,000	T G		64,674.32		66,366.31	2.62%
Elev. Serv. Area Surcharge	9,765,000	T G	0.19	1,855.35	0 19	1,855.35	0.00%
Private Fire Services				1,115.00		1,142.65	
Public Fire Services				4,085.00		4,186.30	
Total Retail Sales				71,729.67		73,550.61	2.54%
UTILITY SALES:							
Service Charge	3,660	E.U.	3.50	12.81	3.50	12.81	
General Pressure Charge	1,050,000	T.G.	1.16	1,218.00	1.16	1,218.00	0.00%
Elevated Service Area	725,000	T.G.	0.19	137.75	0 19	137.75	0.00%
Total Utility Sales				1,368.56		1,368.56	0.00%
GRAND TOTAL SALES	37,000,000	T.G		73,098.23		74,919.17	2.49%
						74,911.06	
						(8.11)	

E U. is 5/8" meter equivalent units; water sold units are in thousands of gallons. (T.G.)

ENCLOSURE 1
01-Dec-97 03:12 PM

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(GENERAL PRESSURE AREA)
(METER CAPACITY)

CONSUMPTION (Thousand Gallons)		METER SIZE	1997 PRESENT RATES	1998 PROPOSED RATES	PROPOSED INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	$ 3.60	$ 3.70	$ 0.10	2.78
3		5/8 x 3/4"	7.59	7.78	0.19	2.50
6	(Average Bill) *	5/8 x 3/4"	12.00	12.28	0.28	2.33
10		5/8 x 3/4"	18.76	19.16	0.40	2.13
20		5/8 x 3/4"	35.66	36.36	0.70	1.96
40		1"	74.86	76.31	1.45	1.94
100		1"	176.26	179.51	3.25	1.84
200		2"	365.06	371.86	6.80	1.86
500		2"	827.06	851.86	24.80	3.00
1,000		3"	1,631.26	1,687.01	55.75	3.42
1,500		3"	2,401.26	2,487.01	85.75	3.57
5,000		6"	7,385.26	7,686.26	301.00	4.08
10,000		6"	12,635.26	13,086.26	451.00	3.57
50,907	(General Electric)	Various	55,041.19	57,181.47	2,140.28	3.89
17,100	(Salt River Water Dist)	Various	19,944.00	19,944.00	0.00	0.00
9,600	(Shepherdsville)	Various	11,388.00	11,388.00	0.00	0.00

* Residential Customer

ENCLOSURE 2

20 LARGEST CUSTOMERS OF
THE LOUISVILLE WATER COMPANY

COMPANY	AVG MONTHLY CONSUMPTION (T.G.)	PRESENT RATES	PROPOSED RATES	DIFFERENCE AMOUNT	DIFFERENCE %
B. F. Goodrich	87,156	$ 89,524	$ 93,075	$ 3,551	3.97
General Electric	50,907	55,041	57,181	2,140	3.89
E.I. Dupont	28,704	31,152	32,351	1,199	3.85
Ford Motors (W'Port)*	34,083	43,709	45,145	1,435	3.28
American Synthetic Rubber	25,982	28,457	29,548	1,090	3.83
Metro Sewer District	20,743	28,141	29,047	907	3.22
Protein Technologies	21,063	23,840	24,740	901	3.78
Ford Motors (F'Vly)	21,044	23,767	24,665	898	3.78
Philip Morris	15,952	18,663	19,356	693	3.71
American Synthetic Rubber	12,459	15,268	15,823	555	3.63
Harshaw - Filtrol	17,272	20,087	20,835	749	3.73
United Catalysts (12 ST)	17,128	20,228	20,896	668	3.30
Fischer Packing	9,357	11,963	12,387	424	3.55
Lou Gas & Electric	12,352	15,162	15,712	551	3.63
United Catalysts (Critt)	11,962	14,893	15,409	515	3.46
Frito Lay Inc	10,756	13,384	13,865	481	3.60
Carbide/Graphite	8,826	11,403	11,818	416	3.65
AC Distributing Co	8,273	10,678	11,073	395	3.70
U.S. Naval Ord. Plant	6,063	9,257	9,611	354	3.82
Brown Forman	9,573	12,187	12,625	438	3.60

* ELEVATED SERVICE AREA

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(ELEVATED PRESSURE AREA)
(METER CAPACITY)

	CONSUMPTION (Thousand Gallons)	METER SIZE	1997 PRESENT RATES	1998 PROPOSED RATES	PROPOSED INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	$ 3.60	$ 3.70	$ 0.10	2.7
3		5/8 x 3/4"	8.16	8.35	0.19	2.3
6	(Average Bill) *	5/8 x 3/4"	13.14	13.42	0.28	2.1
10		5/8 x 3/4"	20.66	21.06	0.40	1.9
20		5/8 x 3/4"	39.46	40.16	0.70	1.7
40		1"	82.46	83.91	1.45	1.7
100		1"	195.26	198.51	3.25	1.6
200		2"	403.06	409.86	6.80	1.6
500		2"	922.06	946.86	24.80	2.6
1,000		3"	1,821.26	1,877.01	55.75	3.0
1,500		3"	2,686.26	2,772.01	85.75	3.1
34,083	(Ford Motor Company)	Various	43,709.20	45,144.52	1,435.32	3.2
35,500	(Mt. Washington)	Various	48,429.00	48,429.00	0.00	0.0
8,600	(North Shelby)	Various	11,673.00	11,673.00	0.00	0.0
14,100	(Taylorville)	Various	19,098.00	19,098.00	0.00	0.0
6,150	(West Shelby)	Various	8,410.50	8,410.50	0.00	0.0

ENCLOSURE 3

COMPARISON OF MONTHLY WATER BILLS AMONG CITIES SIMILAR TO LOUISVILLE
(CUSTOMERS SERVED BY GENERAL PRESSURE) *

CITY	PROPOSED INCREASE FOR 1998 INSIDE CITY	PROPOSED INCREASE FOR 1998 OUTSIDE CITY	DATE OF LAST INCREASE (DECREASE)	5/8" METER 6,000 GALLONS INSIDE CITY RANK	5/8" METER 6,000 GALLONS INSIDE CITY	5/8" METER 6,000 GALLONS OUTSIDE CITY RANK	5/8" METER 6,000 GALLONS OUTSIDE CITY	3" METER 2,250,000 GALLONS INSIDE CITY RANK	3" METER 2,250,000 GALLONS INSIDE CITY	3" METER 2,250,000 GALLONS OUTSIDE CITY RANK	3" METER 2,250,000 GALLONS OUTSIDE CITY	4" METER 4,500,000 GALLONS INSIDE CITY RANK	4" METER 4,500,000 GALLONS INSIDE CITY	4" METER 4,500,000 GALLONS OUTSIDE CITY RANK	4" METER 4,500,000 GALLONS OUTSIDE CITY	6" METER 10,000,000 GALLONS INSIDE CITY RANK	6" METER 10,000,000 GALLONS INSIDE CITY	6" METER 10,000,000 GALLONS OUTSIDE CITY RANK	6" METER 10,000,000 GALLONS OUTSIDE CITY
LOUISVILLE (502) 569-3600	2.48%	2.48%	Jan '98	3	12.28	1	12.28	5	3,559.51	5	3,559.51	6	6,823.26	4	6,823.26	6	12,827.26	4	12,827.26
ATLANTA (404) 658-6568	None	None	Mar '95	5	13.20	7	17.68	7	4,160.00	10	5,563.36	8	7,920.00	10	10,586.72	8	17,112.50	10	22,867.90
CINCINNATI (513) 352-4655	6.00%	6.00%	Jan '96	2	11.91	3	14.72	4	2,616.71	4	3,488.01	4	5,301.20	5	6,882.01	4	11,696.87	6	15,165.21
COLUMBUS (614) 645-8838	3.00%	3.00%	Jan '96	4	12.42	5	16.16	2	2,263.52	3	2,943.48	3	4,390.57	3	5,708.96	3	9,373.35	3	12,191.33
INDIANAPOLIS (317) 263-6391	None	None	May '95	6	15.90	4	15.90	3	2,455.30	1	2,455.30	2	4,321.56	1	4,321.56	2	7,873.84	1	7,873.84
KNOXVILLE (615) 621-8514	None	None	Jan '95	7	17.44	10	20.82	6	3,600.70	7	4,306.73	5	6,579.95	7	7,876.36	5	12,085.00	5	14,484.44
LEXINGTON (606) 268-6308	7.00%	7.00%	Sep '97	8	19.50	8	19.50	8	4,591.88	8	4,591.88	7	7,391.33	6	7,391.33	7	16,387.27	7	16,387.27
MILWAUKEE (414) 278-2927	None	None	Sep '94	1	10.92	2	13.63	1	2,167.10	2	2,683.83	1	3,819.91	2	4,738.33	1	7,507.94	2	9,313.42
NASHVILLE (615) 259-7217	None	None	Jan '92	9	20.38	9	20.38	9	5,497.28	9	5,497.28	9	10,454.60	9	10,454.60	9	22,550.90	9	22,550.90
ST. LOUIS (CO) (314) 991-3404	3.80%	3.80%	Jan '97		-	6	16.65		-	6	4,216.53		-	8	8,421.21		-	8	18,699.93

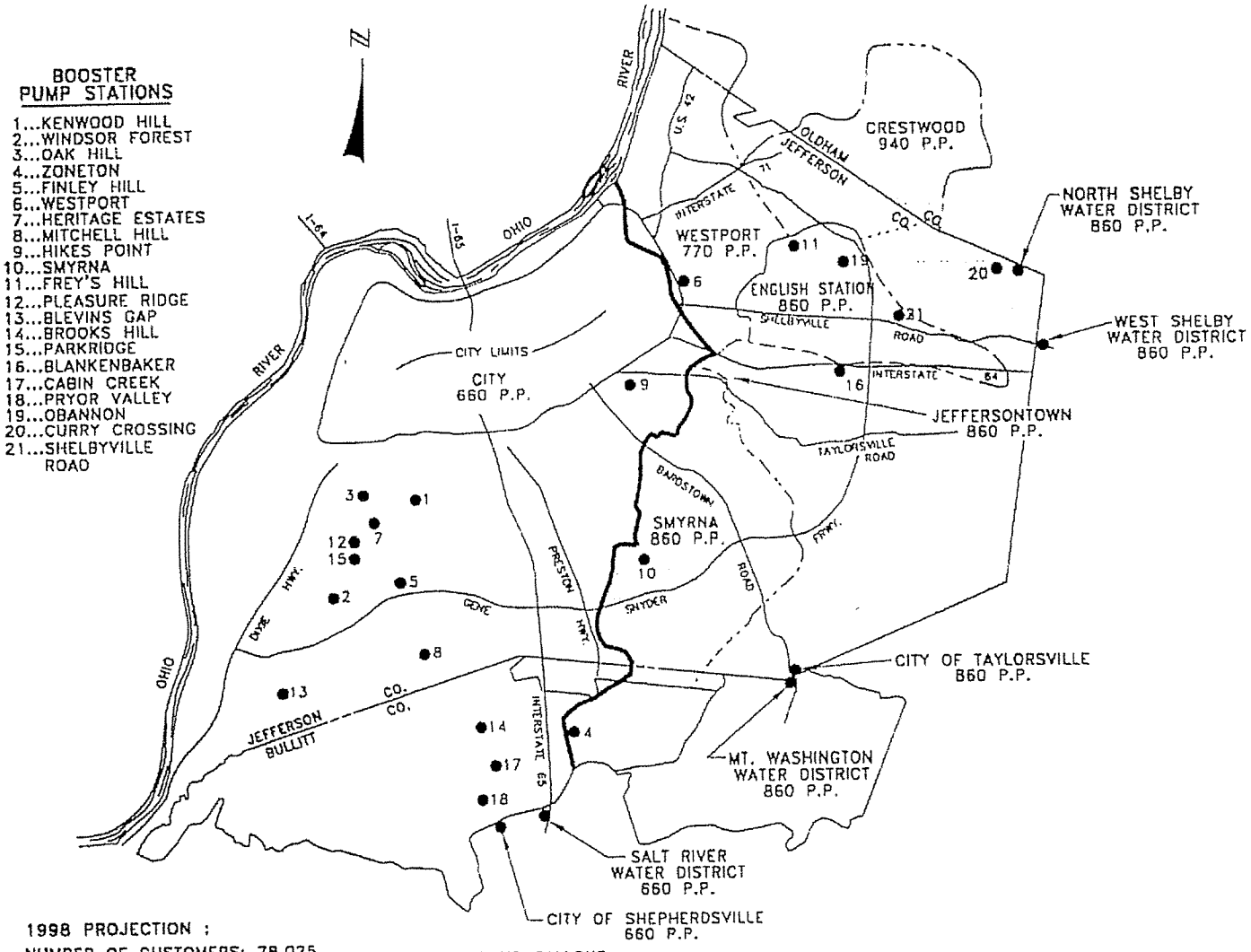
Notes:
The bills shown are computed using basic rates only and do not include special charges such as the elevated area surcharge, public fire protection charges, sales, franchises, or other taxes. Water bills for LWC include 2.48% rate increase for 1998; water bills for other utilities do not include any proposed 1998 increase.

Rank #1 is lowest charge.

Indianapolis, Lexington, and St. Louis (County) are investor owned water utilities.

Milwaukee has separate rate schedule for West Milwaukee, not considered in above table.

00369



1998 PROJECTION :

NUMBER OF CUSTOMERS: 78,025

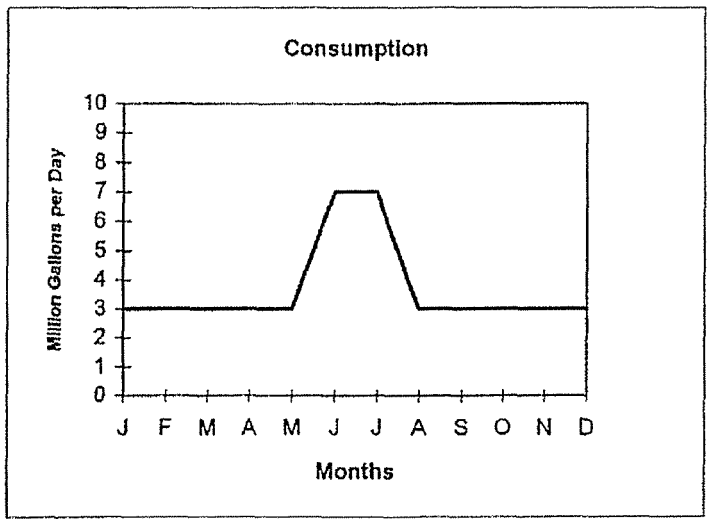
ANNUAL WATER USAGE: 1998	THOUSAND GALLONS
RESIDENTIAL	5,125,000 GALLONS
COMMERCIAL	3,510,000 GALLONS
INDUSTRIAL	400,000 GALLONS
PURCHASED FOR RESALE	725,000 GALLONS
PRIVATE FIRE PROTECTION	5,000 GALLONS
TOTAL	9,765,000 GALLONS

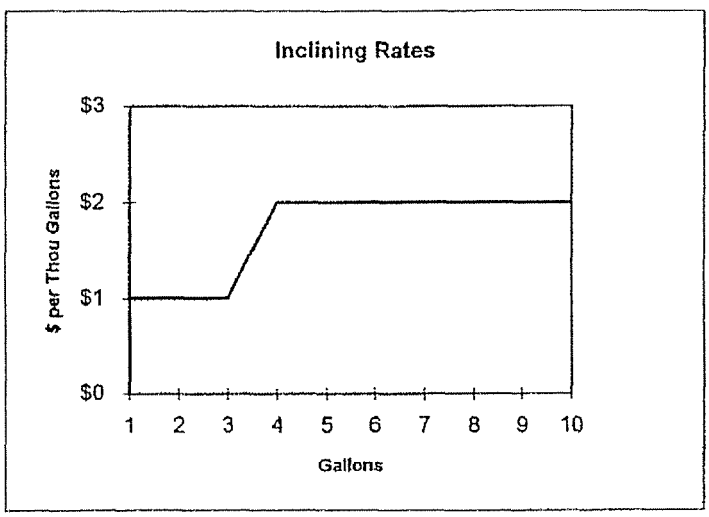
ELEVATED SERVICE AREAS

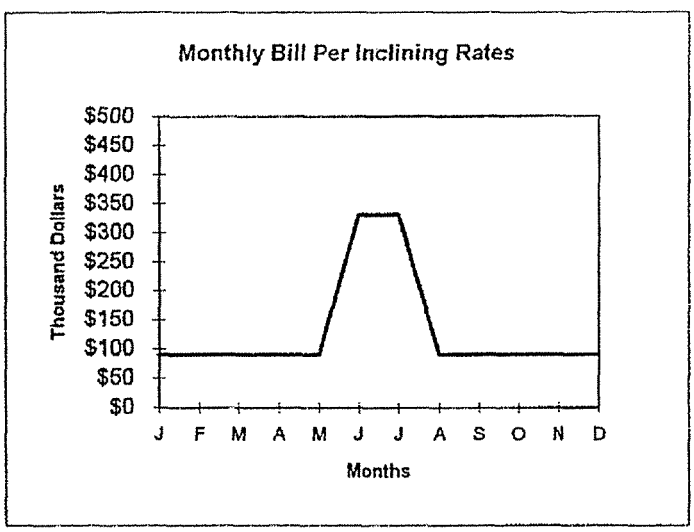
ENCLOSURE 6
10-22-97

FILE NAME: ELEVSERV

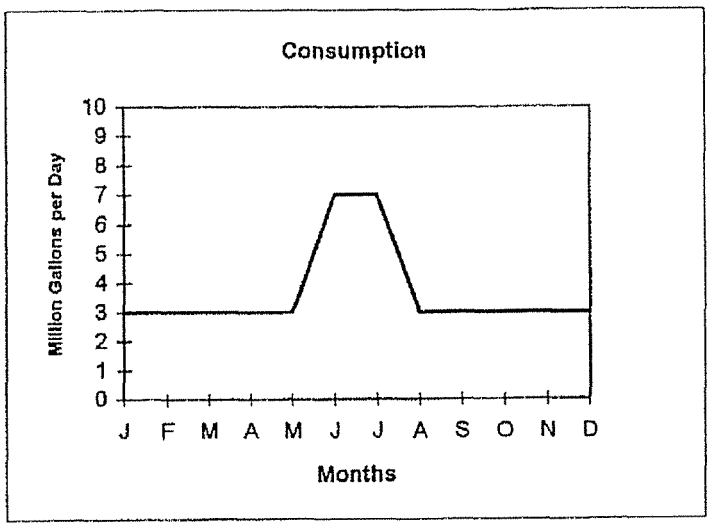
Inclining Rate Structure

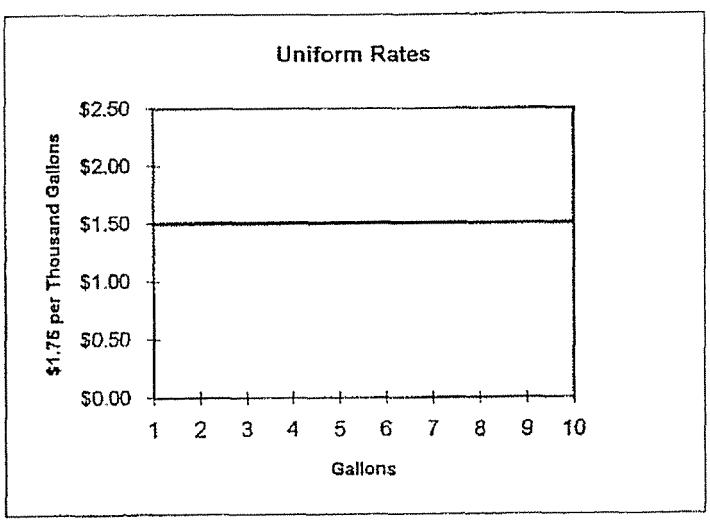


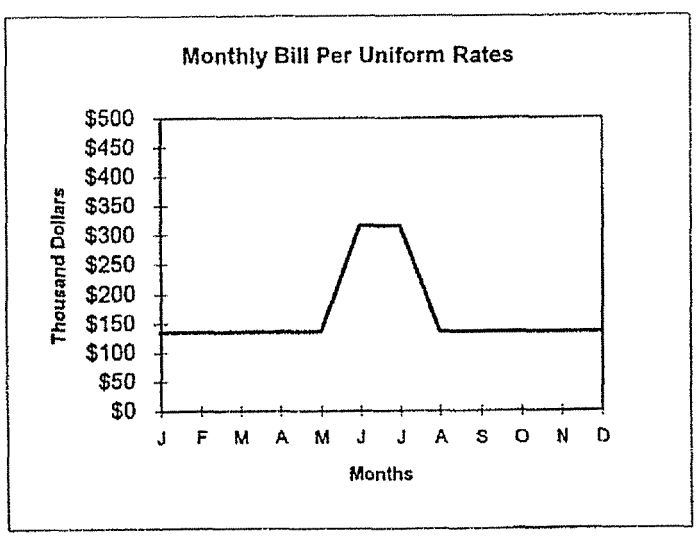




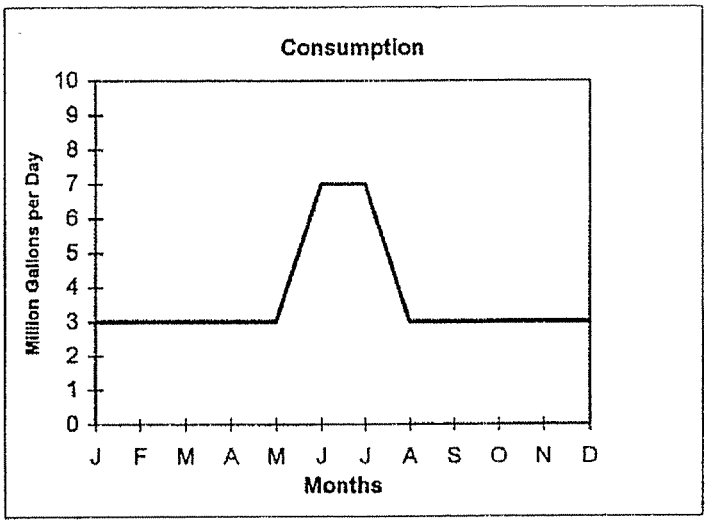
Uniform Rate Structure

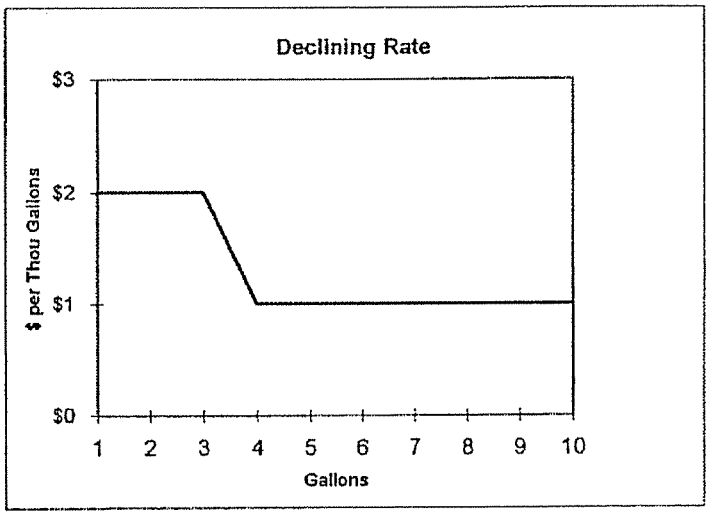


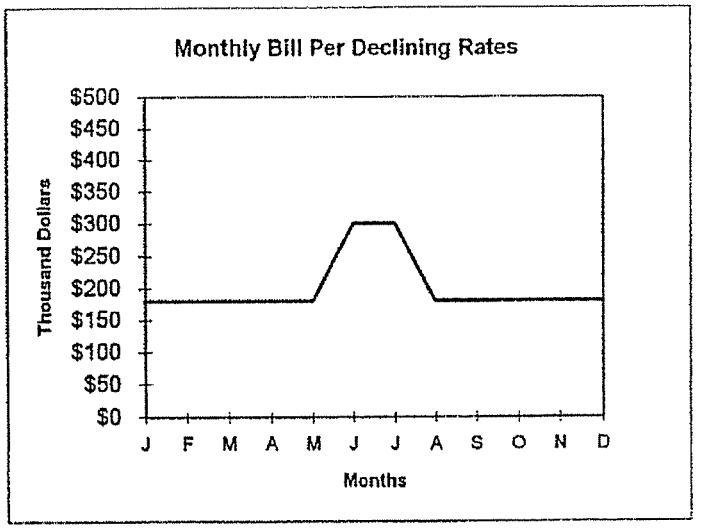




Declining Rate Structure







LOUISVILLE WATER COMPANY

1997 RATE STUDY FOR YEAR 1998

DETERMINATION OF EXTRA COST ALLOCATION PERCENTAGES

YEAR	AVERAGE DAY MGD	MAXIMUM DAY MGD	MAXIMUM HOUR MGD
1988	117.3	198.8	214.0
1989	111.4	152.3	164.7
1990	116.0	171.2	171.2
1991	120.6	172.3	205.4
1992	112.1	150.9	175.0
1993	116.2	155.2	170.0
1994	124.2	190.6	214.5
1995	122.0	173.1	202.0
1996	121.3	169.3	187.6
1997 (F/CST)	124.0	177.8	207.6
Ten Year Total	1,185.1	1,711.5	1,912.0
Average	118.5	171.2	191.2
Ratio	1.0	1.4	1.6

ALLOCATION PERCENTAGES

	BASE	MAXIMUM DAY	MAXIMUM HOUR
BASE/MAXIMUM DAY	69.2	30.8	
BASE/MAXIMUM HOUR	62.0		38.0

SCHEDULE 1

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	SOURCE OF SUPPLY	52.44		36.31	16.13		
2)	POWER AND PUMPING						
3)	Zorn Station, Power	866.07		866.07			
4)	Zorn Station, Other	427.14		295.76	131.38		
5)	Crescent Hill Station, Power	743.19		743.19			
6)	Crescent Hill Station, Other	434.68		269.42		165.26	
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98			
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91		
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95			
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43	
11)	Boosting Pumping, Power	180.86	171.82	9.04			
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76	
13)	Total Power and Pumping	4,294.38	995.78	2,869.87	186.28	242.45	0.00
14)	PURIFICATION						
15)	Chemicals, B.E. Payne	977.05		977.05			
16)	Chemicals, Crescent Hill	308.54		308.54			
17)	Purification, Other	3,707.65		2,567.27	1,140.38		
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00
19)	TRANSMISSION AND DISTRIBUTION						
20)	Transmission Mains	712.95		493.66	219.28		
21)	Distribution Mains	1,789.04		1,108.87		680.16	
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88	
23)	Services	1,126.75					1,126.75
24)	Meters	485.12					485.12
25)	Hydrants	290.26				290.26	
26)	Transmission & Distribution Subtotal	4,427.20	20.78	1,603.97	219.28	971.30	1,611.87
27)	Percent	100.00%	0.47%	36.23%	4.95%	21.94%	36.41%
28)	General Transmission and Distribution	5,052.32	23.71	1,830.44	250.25	1,108.45	1,839.47
29)	Total Transmission and Distribution	9,479.52	44.49	3,434.41	469.53	2,079.75	3,451.34
30)	CUSTOMER ACCOUNTS AND SERVICE						
31)	Supervision	201.12					
32)	Meter Reading	1,025.39					
33)	Customer Records	3,983.47					
34)	Uncollected Accounts	275.00					
35)	Miscellaneous Customer Accounts	96.82					
36)	Total Customer Accounts & Service	5,581.80					5,581.80
37)	Subtotal	24,401.37	1,040.27	10,193.45	1,812.32	2,322.20	9,033.14
38)	Percent	100.00%	4.26%	41.77%	7.43%	9.52%	37.02%
39)	ADMINISTRATIVE AND GENERAL						
40)	Administrative and General	12,610.53					
41)	Labor Related Overhead	8,853.50					
42)	Less: Operating Expenses Applied	(12,262.30)					
43)	Total Administrative and General	9,201.73	392.28	3,843.94	683.42	875.70	3,406.39
44)	Total	33,603.10	1,432.55	14,037.39	2,495.74	3,197.90	12,439.52
45)	Free Water in Lieu of Taxes	963.70		963.70			
46)	Amortization	(80.90)		(80.90)			
47)	Retirement of Assets	750.00		232.43		142.57	375.00
48)	Total Operating Expenses	35,235.90	1,432.55	15,152.62	2,495.74	3,340.47	12,814.52
49)	Other Operating Income	(4,015.10)				(1,003.78)	(3,011.33)
50)	Net Operating Expense	31,220.80	1,432.55	15,152.62	2,495.74	2,336.69	9,803.20

Schedule 2

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATION EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73
2)	Basins and Ground Storage	359.24		248.75	110.49		
3)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06	
4)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09		
5)	Booster Pump Equipment	34.93	24.17	6.67		4.09	
6)	Miscellaneous Pump Equipment	48.65		33.69	14.96		
7)	Sludge Disposal Equipment	64.48		64.48			
8)	Purification Equipment	536.44		371.44	165.00		
9)	Transmission Mains	2,122.63		1,469.76	652.87		
10)	Distribution Mains	1,971.82		1,222.16		749.66	
11)	Meters	357.76					357.76
12)	Services	1,302.41					1,302.41
13)	Meter Installations	447.05					447.05
14)	Fire Hydrants	409.90				409.90	
15)	Sub-total	8,918.14	104.59	4,233.92	1,200.49	1,222.19	2,156.95
16)	Percent	100.00%	1.17%	47.48%	13.46%	13.70%	24.19%
17)	General and Other Equipment	2,092.34	24.54	993.35	281.65	286.75	506.06
18)	1997 Budgeted Depreciation	11,010.50	129.12	5,227.27	1,482.14	1,508.93	2,663.01

Schedule 3

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER
1)	Land	4,827.66	133.83	3,286.70	1,069.28	72.05	265.79
2)	Land Improvements and Buildings	34,449.56	448.15	23,808.37	7,745.73	521.96	1,925.36
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63		
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26	
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33		
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14	
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65		
8)	Sludge Disposal Equipment	1,704.07		1,704.07			
9)	Purification Equipment	18,576.16		12,862.62	5,713.54		
10)	Transmission Mains	148,269.67		102,665.77	45,603.90		
11)	Distribution Mains	102,856.67		63,752.15		39,104.52	
12)	Meters	2,887.58					2,887.58
13)	Services	40,176.18					40,176.18
14)	Meter Installations	13,588.90					13,588.90
15)	Fire Hydrants	16,854.21				16,854.21	
16)	Sub-total	410,177.18	3,569.96	223,711.21	65,964.06	58,088.14	58,843.82
17)	Percent	100.00%	0.87%	54.54%	16.08%	14.16%	14.35%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	5,948.16	1,753.89	1,544.48	1,564.57
19)	Total Plant	421,083.20	3,664.88	229,659.37	67,717.95	59,632.62	60,408.39
20)	Other Rate Base Items (1)	9,451.20	82.26	5,154.70	1,519.93	1,338.45	1,355.86
21)	Sub-total	430,534.40	3,747.14	234,814.07	69,237.88	60,971.07	61,764.25
22)	Contributions and Grants (2)	(132,149.10)		(52,890.51)	(12,396.92)	(15,323.52)	(51,538.15
23)	Total Net Plant Investment	298,385.30	3,747.14	181,923.56	56,840.96	45,647.55	10,226.10
24)	Annual Return @ 9.58%	28,585.31	358.98	17,428.28	5,445.36	4,373.03	979.66

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/26/97

MAXIMUM DAY AND MAXIMUM HOUR DEMAND FACTORS
1996 Rate Study for 1997

		MAXIMUM DAY/ MAXIMUM HOUR DEMAND DATA		
		Ratio Max. Day to Avg. Day	Ratio Max. Hour to Max. Day	Ratio Max. Hour to Avg. Day
		%	%	%
A	Residential			
1	Small 0-3	1.22		1.61
2	Medium 4-6	1.67	1.47	2.10
3	Large Over 6	1.89	1.49	3.07
B	Commercial			
1	Small 0-20	1.77	1.86	3.08
2	Medium 21-1,500	1.47	2.03	3.16
3	Large Over 1,500	1.61	1.67	2.69
C	Industrial			
1	Small 0-1,500	1.58	2.05	2.79
2	Medium 1,500-10,000	1.81	1.57	2.98
3	Large 10,001 - 20,000	1.41	1.30	1.85
D	Utility All	1.43	1.56	2.22

NOTES:

Demand Factors are being revised.

Consumption data to calculate demand factors is bring obtained from representives of all customers classes.

A phase in period of Five (5) years is being used before exclusive use of consumption data to calculate factors

For 1997: Demand Factors were calculated as follows:
60% weight to current factors (1995 and prior)
40% weight to new consumption data.

Schedule 5

ESTIMATED UNITS OF SERVICE BY CUSTOMER CLASS (1997)

	CUSTOMER CLASS	ANNUAL WATER USED (M.G.)	AVERAGE DAY (M.G.D.)	%	MAXIMUM DAY CAPACITY FACTOR %	MAXIMUM DAY TOTAL CAPACITY (M.G.D.)	MAXIMUM DAY EXTRA CAPACITY (M.G.D.)	%	MAXIMUM HOUR CAPACITY FACTOR %	MAXIMUM HOUR TOTAL CAPACITY (M.G.D.)	MAXIMUM HOUR EXTRA CAPACITY (M.G.D.)	%	DISTRIBUTION MAIN %	ANNUAL E.S.A. USAGE (M.G.)	ANNUAL CUSTOMER EQUIVALENT UNITS METER CAPACITY
	RETAIL														2,576,406
1)	Residential														
2)	Small 0-3 T.G.	765.71	2.10	2.07	1.22	2.56	0.46	0.73	1.61	3.38	1.28	0.74	2.66		
3)	Medium 4-6 T.G.	4,402.65	12.06	11.90	1.67	20.14	8.08	12.77	2.10	25.33	13.27	7.63	15.32		
4)	Large over 6 T.G.	9,741.64	26.69	26.33	1.89	50.44	23.75	37.54	3.07	81.94	55.25	31.79	33.90		
		14,910.00													808,312
5)	Commercial														
6)	Small 0-20 T.G.	1,030.44	2.82	2.78	1.77	5.00	2.17	3.44	3.08	8.70	5.87	3.38	3.59		
7)	Medium 21-1,500 T.G.	9,544.71	26.15	25.80	1.47	38.44	12.29	19.42	3.16	82.63	56.48	32.50	33.21		
8)	Large 1,501-5,000 T.G.	1,905.76	5.22	5.15	1.61	8.41	3.18	5.03	2.69	14.05	8.82	5.08	6.63		
9)	Large 5,001-10,000 T.G.	970.78	2.66	2.62	1.61	4.28	1.62	2.56	2.69	7.15	4.49	2.59	0		
10)	Extra Large over 10,000 T.G.	1,398.31	3.83	3.78	1.61	6.17	2.34	3.69	2.69	10.31	6.47	3.73	0		
		14,850.00													89,004
11)	Industrial														
12)	Small 0-1,500 T.G.	474.45	1.30	1.28	1.58	2.05	0.75	1.19	2.79	3.63	2.33	1.34	1.65		
13)	Medium 1,501-5,000 T.G.	873.71	2.39	2.36	1.81	4.33	1.94	3.06	2.98	7.13	4.74	2.73	3.04		
14)	Large 5,001-10,000 T.G.	765.53	2.10	2.07	1.41	2.96	0.86	1.36	1.85	3.88	1.78	1.03	0		
15)	Large 10,001-20,000 T.G.	4,076.31	11.17	11.02	1.41	15.75	4.58	7.24	1.85	20.66	9.49	5.46	0		
		6,190.00													
17)	SUB-TOTAL (RETAIL)	35,950.00	98.49			160.53	62.04			268.78	170.29			9,040.00	3,473,722
18)	UTILITY	1,050.00	2.88	2.84	1.43	4.11	1.24	1.95	2.22	6.39	3.51	2.02		725.00	3,660
19)	TOTAL	37,000.00	101.37			164.64	63.27			275.17	173.80			9,765.00	3,477,382

1) Total water used by customers in that specific class.
2) Consumption shown in 1,000 gallons per month.
3) Commercial includes Municipal.

Schedule 6
11/24/97

CONSUMPTION BY CLASS

	CUSTOMER CLASS	Annual Consumption 6/30/97	Percentage	Budgeted Consumption 1998	% of Tota
	RETAIL				
1)	RESIDENTIAL				
2)	Small 0-3 Gals.	755,420.4	5.14%	765,706.6	
3)	Medium 4-6 Gals.	4,343,505.6	29.53%	4,402,649.2	
4)	Large over 6 Gals.	9,610,778.4	65.34%	9,741,644.2	
		14,709,704.4	100.00%	14,910,000.0	41.
5)	COMMERCIAL/MUNICIPAL				
6)	Small 0-20 Gals.	1,082,667.6	6.94%	1,030,438.2	
7)	Medium 21-1,500 Gals.	10,028,493.6	64.27%	9,544,705.5	
8)	Large 1,501-5,000 Gals. *	2,002,356.0	12.83%	1,905,759.6	
9)	Large 5,001-10,000 Gals.	1,019,988.0	6.54%	970,782.4	
10)	Extra Large over 10,000 Gals.	1,469,190.0	9.42%	1,398,314.3	
		15,602,695.2	100.00%	14,850,000.0	41.
11)	INDUSTRIAL				
12)	Small 0-1,500 Gals.	476,215.2	7.66%	474,450.7	
13)	Medium 1,501-5,000 Gals. *	876,960.0	14.11%	873,710.7	
14)	Large 5,001-10,000 Gals.	768,372.0	12.37%	765,525.0	
15)	Large 10,001-20,000 Gals.	4,091,473.2	65.85%	4,076,313.5	
16)	Heavy Over 20,000 Gals.	0.0	0.00%	0.0	
		6,213,020.4	100.00%	6,190,000.0	17
17)	SUB-TOTAL (RETAIL)	36,525,420.0		35,950,000.0	100
18)	UTILITY			1,050,000.0	
19)	TOTAL	36,525,420.0		37,000,000.0	

* - Forced Step

Companion to

Schedule 6

COST OF SERVICE ALLOCATION TO CUSTOMER CLASSES (1998)

COST OF SERVICE SUMMARY

		BASE ($1,000)	EXTRA CAPACITY: MAXIMUM DAY ($1,000)	EXTRA CAPACITY: MAXIMUM HOUR ($1,000)	DISTRIBUTION MAIN COSTS ($1,000)	TOTAL COMMODITY COSTS ($1,000)	ELEVATED SERVICE AREA ($1,000)	CUSTOMER COSTS ($1,000)	TOTAL COSTS ($1,000)
1)	Net Operating Costs (Sch. 2)	13,801.56	2,495.74	1,507.95	2,179.79	19,985.05	1,432.55	9,803.20	31,220.80
2)	Depreciation Expense (Sch. 3)	3,772.88	1,482.14	616.79	2,346.56	8,218.37	129.12	2,663.01	11,010.50
3)	Return on Plant Invest. (9.58%, Sch. 4)	16,180.86	5,445.36	3,608.07	2,012.39	27,246.68	358.98	979.66	28,585.31
4)	Total Cost of Service	33,755.30	9,423.24	5,732.82	6,538.74	55,450.10	1,920.64	13,445.87	70,816.61

COMMODITY COST DISTRIBUTION

	CUSTOMER CLASS	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	% OF COST	($1,000)	TOTAL ($1,000)	WATER USED BY CLASS (M.G.)	COST PER 1,000 GALS.
	Residential Retail											
5)	Small (0-3 T.G.)	2.07	698.56	0.73	68.73	0.74	42.21	2.66	173.93	983.43	765.71	1.2843
6)	Medium (4-6 T.G.)	11.90	4,016.56	12.77	1,203.57	7.63	437.67	15.32	1,001.73	6,659.53	4,402.65	1.5126
7)	Large (Over 6 T.G.)	26.33	8,887.35	37.54	3,537.58	31.79	1,822.38	33.90	2,216.63	16,463.94	9,741.64	1.6901
	Commercial Retail											
8)	Small (0-20 T.G.)	2.78	940.07	3.44	323.74	3.38	193.70	3.59	234.74	1,692.25	1,030.44	1.6423
9)	Medium (21-1,500 T.G.)	25.80	8,707.59	19.42	1,830.39	32.50	1,863.17	33.21	2,171.52	14,572.77	9,544.71	1.5268
10)	Large (1,500-5,000 T.G.)	5.15	1,738.63	5.03	474.33	5.08	291.07	6.63	433.52	2,937.55	1,905.76	1.5414
11)	Large 5,001-10,000 T.G.	2.62	885.65	2.56	241.62	2.59	148.27	0.00	0.00	1,275.54	970.78	1.3139
12)	Extra Large over 10,000 T.G.	3.78	1,275.69	3.69	348.03	3.73	213.56	0.00	0.00	1,837.28	1,398.31	1.3139
	Industrial Retail											
13)	Small (0-1,500 T.G.)	1.28	432.84	1.19	112.28	1.34	76.75	1.65	107.89	729.76	474.45	1.5381
14)	Medium (1,501-5,000 T.G.)	2.36	797.09	3.06	288.76	2.73	156.34	3.04	198.78	1,440.97	873.71	1.6493
15)	Large 5,001-10,000 T.G.	2.07	698.39	1.36	128.06	1.03	58.81	0.00	0.00	985.26	765.53	1.1564
16)	Large Over 10,001 T.G.	11.02	3,718.84	7.24	681.92	5.46	313.13	0.00	0.00	4,713.89	4,076.31	1.1564
17)	Utility	2.84	957.92	1.95	184.22	2.02	115.77	0.00	0.00	1,257.91	1,050.00	1.1980
18)	Total		33,755.30		9,423.24		5,732.82		6,538.74	55,450.10	37,000.00	

STEP RATES (Weighted Average) developed from Cost of Service Study:

Step (Thousand Gallons)	Rate per Thousand
0-3 (First 3)	1.31
4-6 (Next 3)	1.52
7-200 (Next 194)	1.63
201-1,500 (Next 1,300)	1.53
1,501-5,000 (Next 3,500)	1.57
5,001-10,000 (Next 5,000)	1.24
10,001-20,000 (Next 10,000)	1.20

Service Charge developed by Cost of Service Study for Meter Capacity:
$13,445,870 Customer Costs / 3,477,382 Equivalent Residential Meters (E.U.) = $3.87 per E.U.

Elevated Service Area Charge developed by Cost of Service Study.
$1,920,640 ESA Costs / 9,765,000 Thousand Gallons delivered to ESA = $.1967 per Thousand Gallons.

Schedule 7
11/25/97

WEIGHTED AVERAGE - DISTRIBUTION OF COMMODITY COSTS

Usage Category (T.G.)	Type of Customer	Monthly Consumptions From Report of 06/30/97	Actual Consumption (Mo. X 12)	% of Budget to Consumption Report	1998 Budgeted Consumption	Schedule 7 Cost Rates	DF * DD Cost	Composite Rate DH/DD	Current Rates	Rate % Increase From Current
0 - 3	Residential	62,951.7	755.4		743.5	1.2843	954.9			
	Commercial	4,753.8	57.0		56.1	1.6423	92.2			
	Industrial	36.1	0.4		0.4	1.5381	0.7			
	Sub-total	67,741.6	812.9	0.984246	800.1		1,047.8	1.3096	1.26	3.94%
4 - 6	Residential	361,958.8	4,343.5		4,275.1	1.5126	6,466.6			
	Commercial	10,983.7	131.8		129.7	1.6423	213.0			
	Industrial	134.7	1.6		1.6	1.5381	2.4			
	Sub-total	373,077.2	4,476.9	0.984246	4,406.4		6,682.1	1.5164	1.49	1.77%
7 - 200	Res. 7 - 20	748,658.5	8,983.9		8,842.4	1.6901	14,944.1			
	Res. 21 - 200	49,322.4	591.9		582.5	1.6901	984.5			
	Comm. 7 - 20	74,484.8	893.8		879.7	1.6423	1,444.8			
	Comm. 21 - 200	385,815.5	4,629.8		4,556.8	1.5268	6,957.4			
	Ind. 7 - 20	1,056.3	12.7		12.5	1.5381	19.2			
	Ind. 21 - 200	7,258.5	87.1		85.7	1.5381	131.9			
	Sub-total	1,266,596.0	15,199.2	0.984246	14,959.7		24,481.8	1.6265	1.61	1.03%
201 - 1,500	Residential	2,917.3	35.0		34.5	1.6901	58.2			
	Commercial	449,892.3	5,398.7		5,313.7	1.5268	8,112.8			
	Industrial	31,199.0	374.4		368.5	1.5381	566.8			
	Sub-total	484,008.6	5,808.1	0.984246	5,716.6		8,737.9	1.5285	1.51	1.23%
1,501 - 5,000	Commercial	166,863.0	2,002.4		1,970.8	1.5414	3,037.8			
	Industrial	73,080.0	877.0		863.1	1.6493	1,423.5			
	Sub-total	239,943.0	2,879.3	0.984246	2,834.0		4,461.4	1.5743	1.55	1.56%
5,001 - 10,000	Commercial	84,999.0	1,020.0		1,003.9	1.3139	1,319.1			
	Industrial	64,031.0	768.4		756.3	1.1564	874.6			
	Sub-total	149,030.0	1,788.4	0.984246	1,760.2		2,193.6	1.2363	1.23	0.51%
10,001 - 20,000	Commercial	122,432.5	1,469.2		1,446.0	1.3139	1,900.0			
	Industrial	340,956.1	4,091.5		4,027.0	1.1564	4,656.9			
	Sub-total	463,388.6	5,560.7	0.984246	5,473.1		6,556.9	1.1980	1.19	0.67%
Over 20,000	Commercial		0.0		0.0	1.3139	0.0			
	Industrial		0.0		0.0	0.0000	0.0			
	Sub-total	0.0	0.0		0.0		0.0	0.0000		
Total Retail		3,043,785.0	36,525.4	0.984246	35,950.0		54,161.4			
Utility					1,050.00	1.1980	1,257.9	1.1980	1.16	3.28%
TOTAL					37,000.0		55,419.3			

11/25/97
Companion to Schedule 7

00382

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1997 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS				COMMON TO ONLY RETAIL CUSTOMERS
				BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33
2)	Depreciation Expenses	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51
3)	Return on Plant Investment (9.58%)	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74
	Total Louisville Water Co. System Units of Water Consumption							
4)	Number			37,000.00	63.27	173.80		
5)	Units			M.G.	M.G.D.	M.G.D.		
	Utility Account Units of Water Consumption							
6)	Number			1,050.00	1.24	3.51		
7)	Units			M.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.028378	0.01955	0.02019		
	Utility Cost of Service - 9.58% Rate of Return							
9)	Operating Expenses	395.683		337.219	48.791	9.673		
10)	Depreciation Expenses	136.058		105.521	28.975	1.562		
11)	Return on Plant Investment (9.58%)	511.351		379.674	126.766	4.911		
12)	Total	1,043.093		822.414	204.533	16.146		
	Cost per 1,000 Gallons (cents)	99.342		78,325.139	19,479.306	1,537.747		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

Schedule 1
11/25/97

00383

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED NET OPERATING EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	NET OPERATING EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	SOURCE OF SUPPLY	52.44		36.31	16.13			
2)	POWER AND PUMPING							
3)	Zorn Station, Power	866.07		866.07				
4)	Zorn Station, Other	427.14		295.76	131.38			
5)	Crescent Hill Station, Power	743.19		743.19				
6)	Crescent Hill Station, Other	434.68		269.42		165.26		
7)	B.E. Payne Station, Raw Water, Power	113.98		113.98				
8)	B.E. Payne Station, Raw Water, Other	178.51		123.61	54.91			
9)	B.E. Payne Sta., Finished Water, Power	645.90	322.95	322.95				
10)	B.E. Payne Sta., Finished Water, Other	207.41	103.70	64.28		39.43		
11)	Boosting Pumping, Power	180.86	171.82	9.04				
12)	Boosting Pumping, Other	496.64	397.31	61.56		37.76		
13)	Total Power and Pumping	4,294.38	995.78	2,869.67	186.28	242.45	0.00	
14)	PURIFICATION							
15)	Chemicals, B.E. Payne	977.05		977.05				
16)	Chemicals, Crescent Hill	308.54		308.54				
17)	Purification, Other	3,707.65		2,567.27	1,140.38			
18)	Total Purification	4,993.24	0.00	3,852.86	1,140.38	0.00	0.00	
19)	TRANSMISSION AND DISTRIBUTION							
20)	Transmission Mains	712.95		493.66	219.28			
21)	Distribution Mains	1,789.04						1,789.04
22)	Distribution Storage, Res. & Tanks	23.09	20.78	1.43		0.88		
23)	Services	1,126.75					1,126.75	
24)	Meters	485.12					485.12	
25)	Hydrants	290.26						290.26
26)	Transmission & Distribution Subtotal	4,427.20	20.78	495.09	219.28	0.88	1,611.87	2,079.30
27)	Percent	100.00%	0.47%	11.18%	4.95%	0.02%	36.41%	46.97%
28)	General Transmission and Distribution	5,052.32	23.71	565.00	250.25	1.00	1,839.47	2,372.89
29)	Total Transmission and Distribution	9,479.52	44.49	1,060.09	469.53	1.88	3,451.34	4,452.19
30)	CUSTOMER ACCOUNTS AND SERVICE							
31)	Supervision	201.12						
32)	Meter Reading	1,025.39						
33)	Customer Records	3,983.47						
34)	Uncollected Accounts	275.00						
35)	Miscellaneous Customer Accounts	96.62						
36)	Total Customer Accounts & Service	5,581.60					5,581.60	
37)	Subtotal	24,401.37	1,040.27	7,819.13	1,812.32	244.33	9,033.14	4,452.19
38)	Percent	100.00%	4.26%	32.04%	7.43%	1.00%	37.02%	18.25%
39)	ADMINISTRATIVE AND GENERAL							
40)	Administrative and General	12,610.53						
41)	Labor Related Overhead	8,653.50						
42)	Less: Operating Expenses Applied	(12,262.30)						
43)	Total Administrative and General	9,201.73	392.28	2,948.59	663.42	92.14	3,406.39	1,678.91
44)	Total	33,603.10	1,432.55	10,767.72	2,495.74	336.46	12,439.52	6,131.10
45)	Free Water in Lieu of Taxes	963.70		963.70				
46)	Amortization	(60.90)		(60.90)				
47)	Retirement of Assets	750.00		232.43		142.57	375.00	
48)	Total Operating Expenses	35,235.90	1,432.55	11,882.95	2,495.74	479.03	12,814.52	6,131.10
49)	Other Operating Income	(4,015.10)					(3,011.33)	(1,003.78)
50)	Net Operating Expense	31,220.80	1,432.55	11,882.95	2,495.74	479.03	9,803.20	5,127.33

Schedule 2

UTILITY RATE

ALLOCATION OF LOUISVILLE WATER COMPANY ESTIMATED DEPRECIATION EXPENSE TO FUNCTIONAL COST COMPONENTS
YEAR ENDED DECEMBER 31, 1998 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL DEPRECIATIO EXPENSE	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM DAY	COMMON TO ALL CUSTOMERS EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land							
2)	Land Improvements and Buildings	895.57	17.31	614.97	200.07	13.48	49.73	
3)	Basins and Ground Storage	359.24		248.75	110.49			
4)	Standpipes and Elevated Storage	162.42	43.90	73.46		45.06		
5)	High Service Pumps and Equipment	204.84	19.21	128.54	57.09			
6)	Booster Pump Equipment	34.93	24.17	6.67		4.09		
7)	Miscellaneous Pump Equipment	48.65		33.69	14.96			
8)	Sludge Disposal Equipment	64.48		64.48				
9)	Purification Equipment	536.44		371.44	165.00			
10)	Transmission Mains	2,122.63		1,469.76	652.87			
11)	Distribution Mains	1,971.82						1,971.82
12)	Meters	357.76					357.76	
13)	Services	1,302.41					1,302.41	
14)	Meter Installations	447.05					447.05	
15)	Fire Hydrants	409.90						409.90
16)	Sub-total	8,918.14	104.59	3,011.76	1,200.49	62.63	2,156.95	2,381.72
17)	Percent	100.00%	1.17%	33.77%	13.46%	0.70%	24.19%	26.71%
18)	General and Other Equipment	2,092.34	24.54	706.61	281.65	14.69	506.06	558.79
19)	TOTAL	11,010.48	129.13	3,718.37	1,482.14	77.33	2,663.01	2,940.51

Schedule 3

UTILITY RATE

ALLOCATION OF ESTIMATED LOUISVILLE WATER COMPANY NET INVESTMENT (1998)
INCLUDING WORK-IN-PROGRESS
(THOUSAND DOLLARS)

LINE NO.	ITEM	NET PLANT INVESTMENT	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	COMMON TO ONLY RETAIL CUSTOMERS
1)	Land	4,827.66	133.83	2,817.58	889.91	107.15	879.19	
2)	Land Improvements and Buildings	34,449.56	448.15	20,410.16	6,446.36	776.15	6,368.74	
3)	Basins and Ground Storage	9,866.34		6,831.71	3,034.63			
4)	Standpipes and Elevated Storage	5,457.51	1,711.29	2,321.96		1,424.26		
5)	High Service Pumps and Equipment	6,127.01	543.55	3,866.13	1,717.33			
6)	Booster Pump Equipment	1,025.46	733.14	181.18		111.14		
7)	Miscellaneous Pump Equipment	3,510.21		2,430.56	1,079.65			
8)	Sludge Disposal Equipment	1,704.07		1,704.07				
9)	Purification Equipment	18,576.16		12,862.62	5,713.54			
10)	Transmission Mains	148,269.67		102,665.77	45,603.90			
11)	Distribution Mains	102,856.67						102,856.67
12)	Meters	2,887.58					2,887.58	
13)	Services	40,176.18					40,176.18	
14)	Meter Installations	13,588.90					13,588.90	
15)	Fire Hydrants	16,854.21						16,854.21
16)	Sub-total	410,177.19	3,569.96	156,091.75	64,485.33	2,418.69	63,900.59	119,710.88
17)	Percent	100.00%	0.87%	38.05%	15.72%	0.59%	15.58%	29.19%
18)	Gen. Plant & Unamortized Capital Charges	10,906.02	94.92	4,150.25	1,714.57	64.31	1,699.02	3,182.94
19)	Total Plant	421,083.21	3,664.88	160,242.00	66,199.90	2,483.00	65,599.61	122,893.82
20)	Other Rate Base Items (1)	9,451.20	82.26	3,596.63	1,485.85	55.73	1,472.38	2,758.35
21)	Sub-total	430,534.41	3,747.14	163,838.63	67,685.75	2,538.73	67,071.99	125,652.17
22)	Contributions and Grants (2)	(132,149.10)		(24,183.29)			(51,538.15)	(56,427.67)
23)	Total Net Plant Investment	298,385.31	3,747.14	139,655.35	67,685.75	2,538.73	15,533.84	69,224.50
24)	Annual Return @ 9.58%	28,585.31	358.98	13,378.98	6,484.30	243.21	1,488.14	7,164.74

1. Line 20, "Other Rate Base Items", includes: Materials - $3,500,000, Prepayments - $250,000, and Working Capital - $5,701,200 for a total of $9,451,200.

2. Line 22, "Contributions and Grants", excludes federal government grants of $3,550,900.

Schedule 4
11/25/97

File - N
Louisville Corresp.
1997-

Louisville Water Company Update

December 11, 1997 – Thursday – Bob Miller called from Portland, Oregon. He wanted me to know that he was progressing on the pricing model. He wants to have a conference call with Jack and me on Friday, December 19, 1997 in the afternoon.

I am faxing this to Jack Ober seeking his confirmation. Burgess & Niple fax: 614.451.1385

C: Roy
Linda
Nick

12/19/97

Meeting with Bob Miller of Louisville Water Company

Bob said a draft of his revised cost of service study should be ready by the end of the year.

We explored three aspects of cost allocation:
1. Update schedule 7 of his standard cost of service study.
2. Consider the cost allocation from the perspective of Kentucky-American connecting to one transmission corridor.
3. View the allocation as if Kentucky-American leases an increment of plant. Bob said in this case, it should be viewed as the holistic approach. We would not be able to pick and choose different parts.

Regarding rate design, Bob suggested we explore a flat rate and also an inclining block rate.

An aside: I told Jack Ober I would start feeding him information related to the demand study.

Bob and I talked first and then got Jack on the phone.

Bob said he made the assumption that there would be no max hour peak.

Jack asked for a map of the transmission system.

Jack reiterated that the rate should not include distribution mains, hydrants, services, meters, etc.

We talked again about schedule 4 being based on gross plant without consideration for depreciation. This would increase the rate base. Bob said he would reconcile the numbers to our satisfaction.

After Jack gets the draft, he will study it for a week or so and then we will meet again.

lwccont

Another aside: Bob chairs the finance, accounting and management controls subcommittee of the financial management committee of the management division of AWWA. He wanted to know if I would like a place on that. I told him I would talk to Joe Hartnett to see how that fit into our corporate strategy.

He said American could probably have a couple of spots on this subcommittee.

Bob and I set up tentative plans for me to go to Louisville and shadow him for a day. He wanted to know if I wanted to be there for a hair on fire day or a day when we could spend more time together. His board meets the second Tuesday of each month. He suggested a day after that.

He suggested that when we consider what we want in the contract, we should focus on the interests we are trying to protect.

Also, in the recital part of the contract, he suggested we try to spell out the intent for our successors.

January 21, 1998 – Wednesday – Bob Miller called at about 7:30p. He wanted to make sure I had received his e-mail. I told him I had and that I had responded.

Note: When the project starts, if it is done under traditional rate making practices, we will be accumulating a significant amount of AFUDC. Seeking incremental rate increases would ease the strain on cash. Minimizing construction in other areas, if feasible and practical, would also ease this strain.

LWC Contract Update

February 26, 1998 – Thursday – Ed, Mark, Stacy and I met with Bob Miller. He walked us through a 17-page "draft" presentation explaining wholesale rate alternatives.

The plant capacity of LWC is 240 MGD. In 1997, LWC sold 38 billion gallons.

Bob's proposal is based on the fact that LWC has available reserve capacity.

He mentioned Tom Taylor as someone who is excellent in demand studies.

Bob mentioned that LWC is sales tax exempt and could purchase the material for Jefferson County without sales tax.

He said that under this proposal, they would be looking for a reserve capacity that accurately reflects the expected usage.

He advised us to determine under what conditions we would want LWC to waive the establishment of a peak – conditions such as major main breaks, fires, but obviously not extremely dry weather.

He advised that George Raftellis is the chair of the rates and finance committee of AWWA (or a position something like that) and that he has recently published a document we could use to benchmark wholesale rates.

March 4, 1998 – Wednesday – Ed, Mark and I spent about two hours with Jack reviewing his notes on the cost of service study. Some of the questions Jack has are:

Is accumulated depreciation being removed from the utility plant in the calculation for return on net plant investment?

What is the reason for the system development charge?

If the main is up-sized, how will the cost allocation be handled?

There is a set of numbers identified as "common only to retail." We are not sure how these fit into the calculations. Have they been removed for the rate that is proposed for us?

Jack asked about the customer cost. He feels this is too high on Bob's analysis. I explained to Jack that Bob's numbers are estimates and I told him I felt certain that the actual cost would be based on the actual number of meters. Linda said we would likely have 4-5 8" meters and probably 2 6' meters of the compound type. She suggested we could put in only the minimum number of meters at first and then add in increments as needed.

We need to evaluate the standard utility customer rate vs. the reserve capacity rate.

Bob's proposal regarding the reserve capacity rate includes what amounts to a penalty when we establish a new max day. We should look at a penalty rate as an alternative or we could operate with a 5-year rolling average or some similar mechanism. How we would establish the penalty rate is an issue.

We need to see what LWC is projecting long term for system growth. What do Linda's population numbers show?

March 5, 1998 – Thursday – I called Jack at home at around 8:30p to review some of his calculations. We reviewed some of the numbers and discussed alternatives. Jack was hampered because he did not have the schedules with him.

At about 9:30p, I called Bob Miller at home to discuss some of the questions with him. I asked him about the "common to retail only," and the net plant investment (does this include depreciation?) and he told me we could have a conference call Monday where he would have someone available to discuss these issues. Bob said he was 99% sure the figure was net plant with depreciation deducted.

By Monday or Tuesday he said he would have a worksheet for us to use to run various usage scenarios under the reserve capacity method. This would include the range of rates from $.75-$1.03 that he showed us in our meeting on February 26. He said he would also have a benchmark calculation, which would show our consumption in their wholesale rate.

Bob told me that his board was having a special meeting on Tuesday, March 10 to discuss the contract. They are going to talk about rates and all issues. It will be a closed session since it involves a negotiation. Bob, John Huber and Greg will be there along with the board.

Bob will be leaving for Portland on Thursday, March 12 and will be back on Sunday evening.

March 6, 1998 – Friday – Jack called this morning to discuss the issues with the schedules in his hand. We also got Linda on the phone.

Regarding the reserve capacity method, Jack questioned whether Bob had included too much for return on plant. Do some items need to be removed that will not be used by wholesale customers? Jack mentioned that this is where we are allocated 6/240 of the plant. This raises the issue of what the true plant capacity is. Jack said supply and WTP should be included.

We thought of language that could say, "As long as there is ____% of available capacity, there will be no penalty rate."

Jack is going to recalculate the rate looking at KAWC as a customer class. Linda advised that the average demand is projected to be 2.136 MGD. Jack questioned the max day and max hour rates used by LWC as to their applicability to KAWC. Linda said that the max day ratio would be 1.4%, except for a 20-year event. We should consider some language that would exclude a 20year event, etc.

File - N
Louisville Corr.

Louisville Water Company News

November 14, 1997 – Friday – Bob Miller called at 5:55p. He apologized for not getting back to me sooner but he said he had been busy with budgets. He said he would send a copy of his completed budget. Also, he told me he had been working on a response to Tom's letter.

Prior to meeting next week I told Bob I would like to have a teleconference involving Jack Ober. We set Monday, November 17 at 2:30p or Tuesday, November 18 at 1:00p.

For a meeting, we chose either Thursday, November 20 in Louisville or Friday, November 21 in Lexington.

Bob told me that he had good news regarding the river bank filtration project. It appears that this is very feasible and will not cause a large rate increase.

C:
Roy
Linda
Jack Ober (fax)

Collins

File - N
Louisville Com

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

BB
Barbara
Tom
Ron

November 12, 1997

Ms. Linda Bridwell
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Ms. Bridwell:

The enclosed article appeared in the November 4 edition of *The Courier Journal*. I thought it might be of some interest to you.

Sincerely,

Gregory C. Heitzman

Gregory C. Heitzman
Vice President-Chief Engineer

/gh

enclosure

received
11-17-97

Louisville tests wells as new water source

Officials believe riverside source is cleaner than stream

By ANDREW MELNYKOVYCH
The Courier-Journal

It seems like a lot of extra work: You have the mighty Ohio River flowing past Louisville, so why go to the trouble of drilling wells next to it to draw your water?

The answer is that a pilot project showed that water from such wells is is much cleaner than water from the river itself. So now the Louisville Water Co. is planning a full-scale test of the idea.

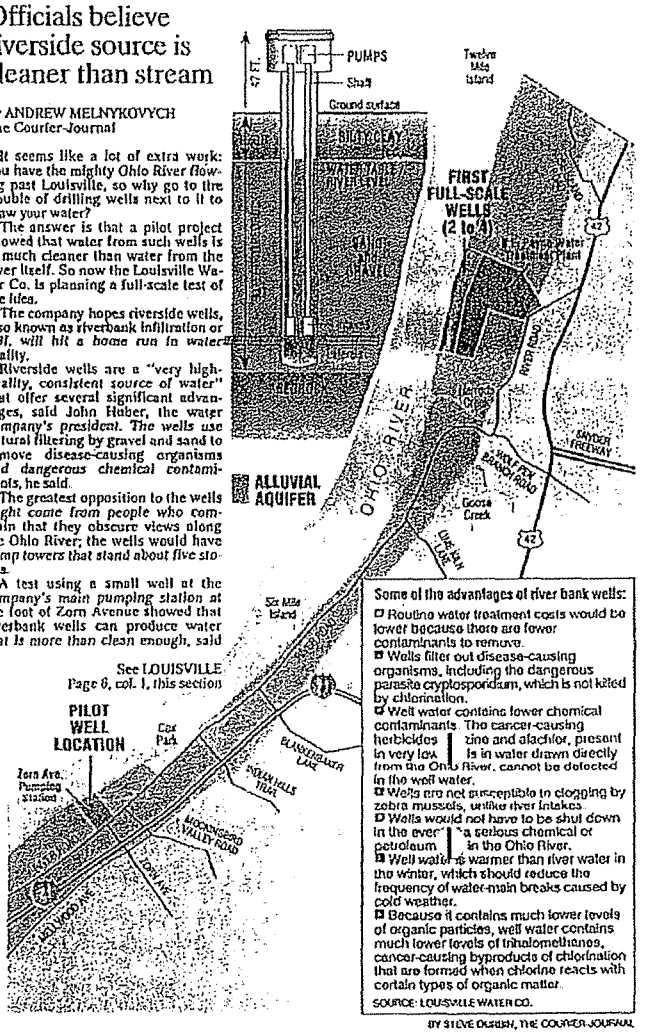
The company hopes riverside wells, also known as riverbank infiltration or *RBI, will hit a home run in water* quality.

Riverside wells are a "very high-quality, consistent source of water" that offer several significant advantages, said John Huber, the water company's president. The wells use natural filtering by gravel and sand to remove disease-causing organisms and dangerous chemical contaminants, he said.

The greatest opposition to the wells might come from people who complain that they obscure views along the Ohio River; the wells would have pump towers that stand about five stories.

A test using a small well at the company's main pumping station at the foot of Zorn Avenue showed that riverbank wells can produce water that is more than clean enough, said

See LOUISVILLE
Page 6, col. 1, this section



BY STEVE DUSSAU, THE COURIER-JOURNAL

THE COURIER-JOURNAL
TUESDAY,
NOVEMBER 4, 1997

Louisville tests going to the well for water

Continued from Page B1

Steve Hubbs, the company's water-quality chief.

But that well yielded only about a million gallons per day, while RBI wells would need to produce at least 15 million gallons a day. The next step will be a full-scale test well, which will be drilled at the water company's B.E. Payne Plant in Prospect, Huber said.

"We're looking to switch over completely to RBI in a staged approach," he said. The water company board will vote next Tuesday on whether to award a contract for the well, which would cost about $4 million.

Drilling would begin in December, with the well going into production in early 1999, said project manager Ray Ball. It would take six months to determine whether the well is a success, she said.

If it is, another two or three wells would be drilled at the Payne plant, Huber said. The company then would drill as many as a dozen wells to supply the Zorn Avenue pump station, he said.

The wells would tap the riverside aquifer upstream of Zorn Avenue and would require the company to obtain land for the wells and easements for a pipeline, Huber said.

The project would be completed by 2006 at a cost of about $60 million, he said. The water company's goal is to get the job done while continuing to hold water-rate increases within the rate of inflation, which has run at 2 percent to 3 percent in recent years, he said.

While the project is expensive, it will reduce the cost of treating water before sending it to customers, Hubbs said. Stricter federal regulations on contaminants, particularly for agricultural pesticides, waterborne parasites and chlorination byproducts, will make it more expensive to treat water drawn directly from the Ohio, he said.

Louisville's water meets all federal standards and probably could meet the stricter rules, Hubbs said. But using well water would provide a much cleaner raw material, he said.

Tests showed the well water had less than one-tenth the level of agricultural herbicides found in the Ohio; levels of the chlorination byproduct trihalomethane would be cut by half or more, he said.

Fifteen wells, each producing 15 million gallons daily, could easily meet peak demand, which is about 200 million gallons a day, Huber said. Average daily consumption is about 120 million gallons.

Riverbank infiltration is not a novel concept. It's been used extensively in Europe, particularly in the Rhine Valley in Germany, where industrial pollution has rendered river water unusable.

A few U.S. cities, including Terre Haute, Ind.; Columbus, Ohio; and Kansas City, Kan., are using RBI, though not on the scale being considered by the Louisville Water Co. A few cities along the Ohio, such as Madison, Ind., and Owensboro, Ky., draw water from aquifers along the river, but don't use wells specifically as a filtering mechanism.

The Louisville Water Co. would maintain its Ohio River intakes for a while after switching to well water, but could eventually remove them, Huber said.

Huber said the well project is not tied to the proposed construction of a pipeline to serve the Lexington area. The pipeline would carry only about 2 million gallons a day on average, and 10 million gallons a day during peak demand, he said.

Because the wells would be tapping an aquifer that lies at least 20 feet below the surface in most areas, they would not affect soil moisture near the surface, Hubbs said. Nor would they harm other wells nearby, because they generally are deep enough not to be affected by the slight lowering of the water table, he said.

More of a concern is public reaction of people to the wells themselves, which would have pump towers elevated from the flood plain.

"One of the things that's apparent to us is that this is a river viewscape that's highly prized," Huber said of the potential well field between the Zorn Avenue pump station and the Payne plant in Prospect.

The water company will work closely with property owners to make the project as unobtrusive as possible, Huber said. Well buildings could be designed to blend with the landscape or could even be built to serve as observation towers in park-like settings.

Another possibility — one that has been discussed with Jefferson County officials — is to use the well sites and pipeline right-of-way as a long, narrow park paralleling the river, with trails for walking or bicycling, Huber said. "That would certainly be a compatible use," he said.

File-N
Louisville
Comp.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

November 11, 1997

Mr. Robert K. Miller, Vice President of Finance and Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Bob:

Tom McKitrick has been promoted to another position in the Company and will no longer be available to work on the project with us. We have retained the services of Jack Ober of Burgess & Niple Limited, 5085 Reed Road, Columbus, Ohio 43220 to assist us in future contract negotiations.

Tom, Jack and I discussed the project by phone today and established a broad schedule for going forward. Our objective is to have an agreement by the end of this year. Obviously, all of the numbers will not be available to arrive at a final rate but we should be able to agree on the method of allocation to arrive at the rate for Kentucky-American.

Jack and I would like to come to Louisville the week of November 17 to meet with you for the purpose of acclimating Jack to the project and to discuss in detail your proposed basis for setting the rate.

We would like to begin our final negotiations the week of December 8.

Please let me know when you can be available and also let me know what other approvals are needed on behalf of Louisville Water Company and the time frame for such approvals.

I look forward to hearing from you.

Very Truly Yours,

Coleman

Coleman Bush
Business Manager

C: Roy Mundy II
Linda Bridwell
Tom McKitrick
Jack Ober
Lindsey W. Ingram, Jr.

lwccont

American Water Works

To: Bob Miller

FROM: Coleman Bush

Bob, can you please provide items 2+3

Thanks

Colem
10/28/97
(this got lost in the shuffle)

To Linda Bridwell, Coleman Bush

From Tom McKitrick TMc

Date/Time 9/24/97 at 10:05AM

Subject Review of Louisville Water Company's (LWC) 1996 Cost of Service Study

I have made a preliminary review of LWC's Cost of Service Study. In order to formulate comments I would like to have some additional information, as follows:

1) Plant Description of existing plant, similar to our own Plant Description Book

2) Detailed statement of O & M Expenses

3) Copy of most recent Depreciation Study, including detailed schedules showing vintage plant balances by Utility Plant Account

I am formulating some suggestions for adjusting the Cost of Service Study as well as the System Development Charge Study to make them more reflective of KAWC's unique characteristics as a Wholesale customer.

File - N
Louisville
Correspondence

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Engineering Manager

COPY

September 19, 1997

Mr. Greg Heitzman
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

RE: Water Supply Project

Dear Greg:

Obviously there are a number of details we will need to work out over the next few weeks as design gets under way. Some of the items that I would like to discuss next week at our meeting include:

- First booster station site, ownership and operation;
- Maximum, minimum and average pressures at the ranges of flow rates in my May 5 letter at the point of the meter;
- The Louisville distribution system from the English Station booster to the metering point; and
- Concurrent design work, possibly by the same team.

I imagine this will be enough to keep us busy. I was hoping we could get a map of your system from English Station out and some water quality data, including the maximum, average and minimum values of pH, alkalinity hardness and total and free chlorine residuals. Also, we would like to know how frequently your system is flushed, if free chlorine is used during flushing, which corrosion inhibitor you are using, typical maintenance and passivation dosages and the corrosion rates (maximum, average and minimum).

Tom Friley, our project engineer, and Dave Reves, a senior design engineer from our corporate engineering group, will be coming with me next week. We are looking forward to meeting with you.

Sincerely,

Linda C. Bridwell /dm

Linda C. Bridwell, P.E.
Engineering Manager

LCB/dm

c: T. A. Friley
D. M. Reves

N:\APPS\OLIVER\LBHEITZMAN.DOC

Linda re LWC

File N Louisville

September 12, 1997 – Left a message for Tom at 11:50a. I want to follow up with him on the items he as to work on.

September 18, 1997 – I talked to Tom. He is starting on this project today and should have something in a couple of days. He asked that Linda think about the sensitivity criteria in terms of mode of operation. He also suggested that we start to flesh out some of the contract issues, get our comments down and then have Lindsey review.

lwccont

Rls-N
Louisville
Corresp

Meet with LWC - 8/22/97

Tom H., Celena, Bob, me

Knowing/understanding demand factors
Updated factors to review cost analysis
Open-data/sharing information

Rate classification
Base load - reduced load during peak periods?
Infrastructure replacement - phase out of rates in 3 yrs ~.

Pipe evaluation model
35 miles - reline or replace - 8 1/2 million per year
Bulk of water - Payne Plant
Louisville - will treat us like any other customer

Local property taxes vs no water charges for City
System Development charge - cost of transmission & storage
Mid-1998 Application
Begin design - End of October
Rates - contract language for rate increases
"non-discrimanatory"

Karen Willis - Principal Planning Engineer

Linda Bridwell

To: ~~Tom McKitrick~~

File - N
Louisville Correspond
CORRECTIONS Please
Colema

August 22, 1997 Friday Linda, Tom McKitrick and I met with Bob Miller of LWC to talk strategy. Bob said LWC had done a lot of work re knowing and understanding demand factors. They started really digging into this 2-3 years ago using an in house concept with certain sample sites. They are now phasing these demand factors in and will do so over the next five years.

Eric Rothstein with CH2Mhill is providing guidance.

They will constantly update and roll into rates. They are capturing data from 200-300 residential sites. They have done this by metering neighborhoods.

They will have this up to its full potential by the time the contract goes on line.

Bob said, "You can get very attractive rates when you manage demand. You will only be on our base load and not on our peak load. You will more than likely have a rate class unto yourselves which will probably be our lowest rate."

6-7 years ago when Bob became CFO, he talked to engineering and they told him that they needed funds to meet WQ regulations and to replace infrastructure. He built in a 1.1-1.2% factor to accomplish this. This infrastructure component of rates will phase out over the next 3-4 years.

Bob said that in dealing with KAWC, his board is committed to the idea of, "This is another customer" rather than, "We've go to take care of our customers first."

Bob said that we could be involved in building the booster stations, even if LWC owns.

Bob said they are interested in recovering costs and also earning a profit. They watch 14 investor owned water utilities, uses a 5-year moving average and pegs the return at 1% less. American makes up 35-37% of the mix. They only use net income from ordinary operations. They pay out 60% in dividends.

Bob said the M1 methodology suits their long-term strategy very well. He indicated that they could be pretty flexible in setting rates.

Tom asked, "Some fixed cost component plus a commodity charge?"

For the LWC side of the piping, Bob said they could float a special bond issue and on this part they could set a cost with no profit component.

Bob wanted to know if we would pay sales tax on the water. I told him we would not since it is for resale.

They do have SDC's but the larger size is negotiable.

We need to provide and end point for Bob for his schedule. We agreed that we would try to be finished in December 1997.

We are flexible on the term. Tom suggested from 40-75 years.

Bob said predictability would be high regarding rate increases because they would have a strong communication plan.

Bob said they were firm in that they wanted to keep their customers. "We have to be approached first by a wholesale customer before we serve them."

Next steps:

Bob:

Timeline
Language changes
Workable copy of the rate study

Tom:

Review rate study
Review SDC's
Provide contract comments
Supply sensitivity criteria for changing the model

File - N
Louisville
Correspondence

MEETING WITH LOUISVILLE WATER COMPANY
August 22, 1997

1. INTRODUCTIONS

2. UPDATES
   a) PSC
   b) Easements
   c) Design

3. FACILITY REQUIREMENTS
   a) Demands
   b) Booster Station
   c) Meter Location
   d) Louisville Side Pipeline

Meet w/Greg

4. COST ANALYSIS CONSIDERATIONS
   a) Commodity Rate
   b) Meter Charge
   c) Elevated Surcharge
   d) Preliminary Fees
   e) Rate Considerations

5. FINANCING CAPITAL IMPROVEMENTS

6. GENERAL CONTRACT PROVISIONS
   a) Term – Any length 40-75 yrs.
   b) Commodity Rate Increases
   c) Future Capital Improvements

7. SCHEDULE
   a) Pipeline Construction
   b) Finalize Agreement

8. FOLLOW-UP ACTIVITIES

Adopt rates @ December Board meeting. Budget adopted in November

File - N
Sof S Re hear
Louisville

Memorandum

To: Tom McKitrick

CC: Roy Mundy, Linda Bridwell, Tom Friley and Bob Miller (Louisville Water Company)

From: Coleman Bush Coleman

Date: 08/15/97

Re: Meeting with Louisville Water Company regarding wholesale rate

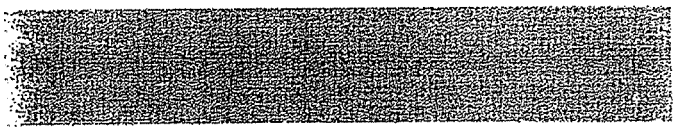
---

Tom, this memorandum is to confirm our meeting in Lexington on Friday August 22, 1997 to discuss the development of a wholesale water rate for water purchased from Louisville Water Company. The meeting will start at 11:00 a.m.

Mr. Robert K. Miller, Vice President of Finance and Treasurer of Louisville Water Company will be at the meeting. Greg Heitzman, Vice President and Chief Engineer of Louisville Water Company has also been invited to attend.

Linda Bridwell and Tom Friley will also be representing Kentucky-American Water Company.

Thank you for your assistance.



Ltr - N
Louisville

Roy W. Mundy II
Vice President & Manager

TO: Linda Bridwell
Tom Friley
David Whitehouse

DATE: July 25, 1997

SUBJECT: Contract with Louisville Water Company and Right-of-Way Issues Concerning Water Supply Project

---

During our recent Board of Directors Meeting, several questions were asked by board members relating to the status of both the water purchase contract with LWC and right-of-way issues concerning our water supply project.

Linda, it is my understanding we are currently working with LWC in formulating a draft contract for water purchase as well as the associated facilities which will need to be installed to provide that water supply to us, and this draft contract should be forthcoming within the next month or so. Also, I know Coleman is planning to meet with LWC rate department personnel and with Tom McKitrick in order to develop the best tariff scenario for Kentucky-American Water Company per the unique demand scenario of this pipeline. Obviously both the contract and the specific purchase tariff need to be completed as soon as possible as these will be main components in our certificate case which will hopefully begin in the very near future.

Another issue which was discussed is the alignment of the pipeline. I understand Tom Friley is more or less "refreshing" our initial pipeline alignment, verifying the gas line easement and assuring that the basic parameters that were initially recommended by Alvord Burdick & Howsen for this alignment are still in place. David Whitehouse and Jerry Anglin, the consultant we have hired to help us facilitate the right-of-way issues for the pipeline, should be meeting with county judge officials during the month of July, not only to acquaint them with the proposed alignment of the pipeline but also to receive their input regarding that alignment, etc.

If David, Jerry and Tom Friley have not met regarding the specifics of the alignment of the pipeline in order that they may discuss the issue with county judge executives along the route – this needs to be done as soon as possible.

I would appreciate your informing me respectively of any issues which I have defined in this memorandum where the status is different from what I have described. Again, I cannot overemphasize that we must move forward expeditiously with "nailing down" so to speak these parameters in order to include them succinctly in our water supply certificate case.

Roy

c: C. Bush
S. Stockton
B. Brown

n:patt/WSP-memo.doc

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 346-8372

3

John S. Young, Jr., P.E.
Vice President – Engineering
609-346-8250

MEMORANDUM

	MUNDY	
	ALLEN	
	BALLAR	
	BRAXTO	
	BRIDW	
✓	BROWN	KB
	BURNS	
✓	BUSH	CS
	GRIFFIN	
	HAMMACK	
	HORN	
	McCONATHY	
	PROCTOR	
	SIMPSON	
	SINGLETON	
✓	STOCKTON	SW
	TAYLOR	
	TRIMBLE	
✓	WHITEHOUSE	
	WILKINS	
	FILE	
	COPY TO LCB,	
	RETURN TO	

copy to CS John
6/19/97

TO: Roy Mundy
Kentucky-American Water Company

FROM: J. S. Young, Jr. JSY

DATE: June 12, 1997

RE: Ohio River Supply Project

Per our telephone conversation, the engineering tasks we would like to be authorized to accomplish for the Ohio River Supply project by the end of September are:

1. Solicit and evaluate qualifications from design consultants.
2. Finalize pipeline route.
3. Identify the firm(s) to be used for easement acquisition.
4. Develop the design scope and criteria for the pipeline, pumping station(s) and tank(s) - (System Engineering). This will require defining the facilities to be built by Louisville Water Company.
5. Finalize request for engineering proposals (RFP).

Please notify me when we can begin these tasks.

/sdb
7young\kawc2.lwp

xc: R. J. Gallo - Region
W. D. Morgan - Region

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502 • (606) 269-2386 • Fax (606) 268-6327

Linda C. Bridwell, P.E.
Engineering Manager

May 5, 1997

Mr. Greg Heitzman, PE
Vice President-Chief Engineer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

RE: Water Supply Project

Dear Greg:

As a follow-up to our March 20 meeting, I have reviewed our demand projection model and projected available supply. Based on our preliminary pipeline design and latest demand projections, we anticipate the following purchased water needs from the Louisville Water Company:

Year	Average Day Demand (MGD)	Peak Day Demand Deficit (MGD)	Drought Average Day Demand Deficit (MGD)
2000	2.136	7.73	14
2005	2.136	11.24	16
2010	2.136	14.76	19
2015	2.136	18.02	21
2020	2.136	21.28	23

The average day demand is a projected base flow for water quality purposes. It assumes a six-day detention time in the 277,000 feet of 36" pipe from the Jeffferson County line to the connection point with Kentucky-American's distribution system during the warmest six months of the year to prevent nitrification. An eight-day detention time during the rest of the year is assumed. Obviously there will need to be some operational adjustments once the pipeline is installed, and we would like to see the agreement allow for those adjustments.

The maximum capacity needed will be the larger of either the drought average day demand deficit or the peak day demand deficit. In our current projection, this happens to be the drought average day demand deficit for all years. This would be a six month average need during a drought of record. The peak day demand deficit is a projection of the treatment capacity deficit based on a peak day demand with a 95% confidence factor during any given year.

Kentucky-American is projecting to design its construction based on the 2020 demand deficit, however, we understand that there could be some cost savings if the facilities that Louisville needs to construct can be phased in based on the increasing demands.

LOUISVILLE WATER COMPANY
1996 RATE STUDY
FOR FY 1997

BOARD OF WATER WORKS
RULES AND REGULATIONS

RATE SCHEDULE

JANUARY 1, 1997

WATER RATES

LOUISVILLE WATER COMPANY
LOUISVILLE, KENTUCKY

BOARD OF WATER WORKS RULES AND REGULATIONS

6.00 **Rates**

6.01 For the purpose of classifying revenues, and to provide for different classes of rates, there shall be established seven (7) classes of customers and four (4) areas of service.

The classes of customers shall be identified as:

Residential
Commercial
Industrial
Fire Service
Fire Hydrants
Municipal
Wholesale

The areas of service shall be identified as:

Retail Service Area
OC District formerly served by West Oldham Utilities
BC District formerly served by Bullitt Water Company
KT District served by the Company through leased facilities

6.02 The rate charge for metered water service shall be comprised of three components except for municipal customers as defined in KRS 96.270 who shall be served as provided therein at no cost to the customer and publicly owned fire hydrants:

(1) A service charge based on the size of the meter through which the customer receives such service, and

(2) A commodity charge based on the amount of water consumed, and

(3) An elevated service area surcharge if applicable in Rule 6.02.3.

6.02.1 Service Charge

The service charge for classes of customers taking metered service and situated within the ***Retail Service Area or the BC District or the KT District*** shall be charged in accordance with the following schedule:

Meter Size	Service Charge Monthly Bill
5/8" x 3/4"	$ 3.60
1"	$ 9.00
1 1/2"	$ 18.00
2"	$ 28.80
3"	$ 63.00
4"	$ 108.00
6"	$ 252.00
8"	$ 450.00
10"	$ 684.00
12"	$ 1,044.00
16"	$ 2,070.00

6.02.2 Commodity Charge

The commodity charge for monthly usage for customers within the ***Retail Service Area or the KT District*** shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month	
First	3	at $1.33 Per 1,000 Gallons
Next	3	at $1.47 Per 1,000 Gallons
Next	194	at $1.69 Per 1,000 Gallons
Next	1,300	at $1.54 Per 1,000 Gallons
Next	3,500	at $1.37 Per 1,000 Gallons
Next	5,000	at $1.05 Per 1,000 Gallons
All Over	10,000	at $0.99 Per 1,000 Gallons

The commodity charge for monthly usage for customers within the ***BC District*** shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month	
First	200	at $2.25 Per 1,000 Gallons
Next	1,300	at $1.55 Per 1,000 Gallons
All Over	1,500	at $1.18 Per 1,000 Gallons

The commodity charge for bi-monthly usage for customers within the ***OC District*** shall be computed in accordance with the following schedule:

Minimum Bi-Monthly Bill and Allowable Usage

Meter Size	Allowable Usage Thousand Gallons	Amount
5/8" x 3/4"	0	$ 10.00
1"	0	$ 20.00
1 1/2"	0	$ 30.00
2"	30	$ 142.35
3"	70	$ 332.15
4"	130	$ 596.85

Bi-Monthly Rate for Water Used in Excess of Allowable Usage

	Thousand Gallons Per Month	
First	400	at $2.91 Per 1,000 Gallons
Next	2,600	at $2.91 Per 1,000 Gallons
All Over	3,000	at $2.91 Per 1,000 Gallons

6.02.3 Elevated Service Area Surcharge

All customers in the Retail Service Area or BC District or KT District shall pay a surcharge of $0.19 per thousand gallons if water must be delivered at a higher elevation that the general pressure plane served by the Crescent Hill/Cardinal Hill System.

6.03 Wholesale Customers

COMPARISON OF REVENUE UNDER EXISTING RATES, AND PROPOSED RATES

	UNITS		PRESENT RATES RATES $	PRESENT RATES REVENUE ($1,000)	PROPOSED RATES $	PROPOSED REVENUE ($1,000)	INCREASE OVER EXISTING RATE %
RESIDENTIAL: Service Charge	2,552,634	E.U.	3.50	8,934.22	3.60	9,189.48	
Water Sold 0 - 3	6,889,986	T.G.	1.29	8,888.08	1.33	9,163.68	
4 - 6	4,532,038	T.G.	1.43	6,481.27	1.47	6,662.10	
7 - 200	3,442,612	T.G.	1.64	5,645.88	1.69	5,818.01	
201 - 1,500	35,365	T.G.	1.48	52.50	1.54	54.46	
Total Residential	14,900,000	T.G.		30,001.95		30,887.73	2.95%
COMMERCIAL: Service Charge	788,646	E.U.	3.50	2,760.26	3.60	2,839.13	
Water Sold 0 - 3	644,235	T.G.	1.29	831.06	1.33	856.83	
4 - 6	526,860	T.G.	1.43	753.46	1.47	774.48	
7 - 200	6,926,765	T.G.	1.64	11,359.89	1.69	11,706.23	
201 - 1,500	4,141,565	T.G.	1.48	6,148.53	1.54	6,378.01	
1,501 - 5,000	678,854	T.G.	1.31	891.34	1.37	930.03	
5,001 - 10,000	1,033,280	T.G.	1.02	1,053.95	1.05	1,084.94	
Over 10,000	473,441	T.G.	0.96	454.50	0.99	468.71	
Total Commercial	14,425,000	T.G.		24,252.99		25,038.37	3.24%
INDUSTRIAL: Service Charge	91,344	E.U.	3.50	319.70	3.60	328.84	
Water Sold 0 - 3	12,226	T.G.	1.29	15.77	1.33	16.26	
4 - 6	10,971	T.G.	1.43	15.69	1.47	16.13	
7 - 200	336,586	T.G.	1.64	552.00	1.69	568.83	
201 - 1,500	1,026,574	T.G.	1.48	1,524.04	1.54	1,580.92	
1,501 - 5,000	1,496,851	T.G.	1.31	1,965.37	1.37	2,050.69	
5,001 - 10,000	872,462	T.G.	1.02	889.91	1.05	916.09	
Over 10,000	2,534,330	T.G.	0.96	2,432.96	0.99	2,508.99	
Total Industrial	6,290,000	T.G.		7,715.44		7,986.74	3.52%
TOTAL RETAIL: Service Charge	3,432,624	E.U.	3.50	12,014.18	3.60	12,357.45	
Water Sold 0 - 3	7,546,447	T.G.	1.29	9,734.92	1.33	10,036.77	
4 - 6	5,069,869	T.G.	1.43	7,250.42	1.47	7,452.71	
7 - 200	10,705,963	T.G.	1.64	17,557.78	1.69	18,093.08	
201 - 1,500	5,203,504	T.G.	1.48	7,725.07	1.54	8,013.40	
1,501 - 5,000	2,175,705	T.G.	1.31	2,856.70	1.37	2,980.72	
5,001 - 10,000	1,905,742	T.G.	1.02	1,943.86	1.05	2,001.03	
Over 10,000	3,007,771	T.G.	0.96	2,887.46	0.99	2,977.69	
Total General Pres. Retail	35,615,000	T.G.		61,970.39		63,912.84	3.13%
Elev. Serv. Area Surcharge	8,945,000	T.G.	0.19	1,699.55	0.19	1,699.55	0.00%
Private Fire Services				1,159.70		1,194.40	
Public Fire Services				3,919.90		4,037.50	
Total Retail Sales				68,749.54		70,844.29	3.05%
UTILITY SALES:							
Service Charge	3,660	E.U.	3.50	12.81	3.50	12.81	-
General Pressure Charge	1,025,000	T.G.	1.16	1,189.00	1.16	1,189.00	0.00%
Elevated Service Area	685,000	T.G.	0.19	130.15	0.19	130.15	0.00%
Total Utility Sales				1,331.96		1,331.96	0.00%
GRAND TOTAL SALES	36,640,000	T.G.		70,081.50		72,176.25	2.99%

E.U. is 5/8" meter equivalent units; water sold units are in thousands of gallons. (T.G.)

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(GENERAL PRESSURE AREA)
(METER CAPACITY)

	CONSUMPTION (Thousand Gallons)	METER SIZE	1996 PRESENT RATES	1997 PROPOSED INCREASE PROPOSED RATES	INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	3.50	3.60	0.10	2.86
3		5/8 x 3/4"	7.37	7.59	0.22	2.99
6	(Average Bill) *	5/8 x 3/4"	11.66	12.00	0.34	2.91
10		5/8 x 3/4"	18.22	18.76	0.54	2.96
20		5/8 x 3/4"	34.62	35.66	1.04	3.00
40		1"	72.67	74.86	2.19	3.01
100		1"	171.07	176.26	5.19	3.03
200		2"	354.32	365.06	10.74	3.03
500		2"	799.70	827.06	27.36	3.42
1,000		3"	1,575.24	1,631.26	56.02	3.56
1,500		3"	2,317.54	2,401.26	83.72	3.61
5,000		6"	7,096.79	7,385.26	288.47	4.06
10,000		6"	12,196.79	12,635.26	438.47	3.59
50,226	(General Electric)	Various	52,669.15	54,367.41	1,698.27	3.22
15,547	(Salt River Water Dist)	Various	18,139.52	18,139.52	0.00	0.00
0	(Shepherdsville)	Various	245.00	245.00	0.00	0.00

* Residential Customer

ENCLOSURE 2

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(ELEVATED PRESSURE AREA)
(METER CAPACITY)

	CONSUMPTION (Thousand Gallons)	METER SIZE	1996 PRESENT RATES	1997 PROPOSED INCREASE		
				PROPOSED RATES	INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	3.50	3.60	0.10	2.86
3		5/8 x 3/4"	7.94	8.16	0.22	2.77
6	(Average Bill) *	5/8 x 3/4"	12.80	13.14	0.34	2.65
10		5/8 x 3/4"	20.12	20.66	0.54	2.68
20		5/8 x 3/4"	38.42	39.46	1.04	2.71
40		1"	80.27	82.46	2.19	2.73
100		1"	190.07	195.26	5.19	2.73
200		2"	392.32	403.06	10.74	2.74
500		2"	894.70	922.06	27.36	3.06
1,000		3"	1,765.24	1,821.26	56.02	3.17
1,500		3"	2,602.54	2,686.26	83.72	3.22
33,754	(Ford Motor Company)	Various	42,148.98	43,321.08	1,172.10	2.78
29,031	(Mt. Washington)	Various	39,681.40	39,681.40	0.00	0.00
7,413	(North Shelby)	Various	10,069.25	10,069.25	0.00	0.00
11,901	(Taylorville)	Various	16,126.93	16,126.93	0.00	0.00
0	(West Shelby)	Various	105.00	105.00	0.00	0.00

* Residential Customer

ENCLOSURE 3

20 LARGEST CUSTOMERS OF
THE LOUISVILLE WATER COMPANY

COMPANY	AVG MONTHLY CONSUMPTION (T.G.)	PRESENT RATES	PROPOSED RATES	DIFFERENCE AMOUNT	%
B. F. Goodrich	77,467	$ 77,455	$ 79,931	$ 2,476	3.20
General Electric	50,226	52,669	54,367	1,698	3.22
E.I. Dupont	33,915	35,155	36,311	1,156	3.29
Ford Motors (W'Port)*	33,754	42,149	43,321	1,172	2.78
American Synthetic Rubber	28,236	29,703	30,689	986	3.32
Metro Sewer District	28,144	35,865	36,873	1,009	2.81
Protein Technologies	25,076	26,914	27,812	898	3.34
Ford Motors (F'Vly)	22,678	24,560	25,384	824	3.36
Philip Morris	19,361	21,315	22,038	723	3.39
American Synthetic Rubber	15,803	17,960	18,578	618	3.44
Marshaw - Filtrol	15,440	17,664	18,273	609	3.45
United Catalysts (12 ST)	14,297	16,685	17,255	570	3.42
Fischer Packing	13,246	15,278	15,812	535	3.50
Lou Gas & Electric	11,846	14,161	14,661	499	3.53
United Catalysts (Critt)	10,473	12,872	13,330	458	3.56
Frito Lay Inc	9,650	11,861	12,289	428	3.61
Carbide/Graphite	9,533	11,720	12,145	424	3.62
AC Distributing Co	8,757	10,789	11,186	397	3.68
U.S. Naval Ord. Plant	7,201	10,077	10,453	376	3.73
Brown Forman	6,483	8,610	8,943	333	3.87

*ELEVATED SERVICE AREA

ENCLOSURE 4

COMPARISON OF MONTHLY BILLS AMONG CITIES SIMILAR TO LOUISVILLE
(CUSTOMERS SERVED BY GENERAL PRESSURE)

CITY	PROPOSED INCREASE FOR 1997		DATE OF LATEST INCREASE (DECREASE)	5/8" METER 6,000 GALLONS				3" METER 2,250,000 GALLONS				4" METER 4,500,000 GALLONS				6" METER 10,000,000 GALLONS			
	INSIDE CITY	OUTSIDE CITY		RANK	INSIDE CITY	RANK	OUTSIDE CITY	RANK	INSIDE CITY	RANK	OUTSIDE CITY	RANK	INSIDE CITY	RANK	OUTSIDE CITY	RANK	INSIDE CITY	RANK	OUTSIDE CITY
LOUISVILLE (502) 569-3600	3.0%	3.0%	JAN. 97	3	12.00	1	12.00	5	3,428.76	4	3,428.76	5	6,556.25	4	6,556.25	6	12,635.26	5	12,635.26
ATLANTA (404) 330-6080	N/A	N/A	MAR. 95	5	13.20	7	17.68	7	4,160.00	10	5,563.36	8	7,920.00	10	10,586.72	8	16,987.50	10	22,867.90
CINCINNATI (513) 591-7951	None	None	JAN. 96	2	11.91	3	14.72	4	2,616.71	5	3,488.01	4	5,301.20	5	6,882.01	4	11,696.87	7	15,165.21
COLUMBUS (614) 645-8838	3.0%	3.0%	JAN. 96	4	12.06	5	15.69	2	2,198.70	3	2,857.07	2	4,263.86	3	5,539.08	3	9,104.03	4	11,830.05
INDIANAPOLIS (317) 263-6391	None	None	MAY 95	6	15.90	6	15.90	3	2,455.30	1	2,455.30	3	4,321.56	1	4,321.56	2	7,873.84	1	7,873.84
KNOXVILLE (423) 594-7311	None	None	JAN. 95	7	17.44	10	20.82	6	3,600.98	7	4,306.73	6	6,579.95	8	7,876.36	5	12,085.00	6	14,484.44
LEXINGTON (606) 268-6308	4.27%	4.27%	SEP. 96	8	18.68	8	18.68	8	4,370.00	8	4,370.00	7	7,005.32	6	7,005.32	7	15,530.60	8	15,530.60
MILWAUKEE (414) 286-2820	None	None	SEPT. 94	1	10.92	2	13.63	1	2,167.10	2	2,683.83	1	3,819.91	2	4,738.33	1	7,507.94	3	9,313.42
NASHVILLE (615) 862-4646	None	None	JAN. 92	9	20.38	9	20.38	9	5,497.28	9	5,497.28	9	10,454.60	9	10,454.60	9	22,550.90	9	22,550.90
ST. LOUIS CO. (314) 991-3404	None	None	OCT. 95	—	—	4	15.31	—	—	6	3,933.80	—	—	7	7,857.08	—	—	2	8,908.31

Notes:

The bills shown are computed using basic rates only and do not include special charges such as the elevated area surcharge, public fire protection charges, sales, franchise or other taxes. Water bills for LWC include 3% rate increase for 1997, water bills for other utilities do not.

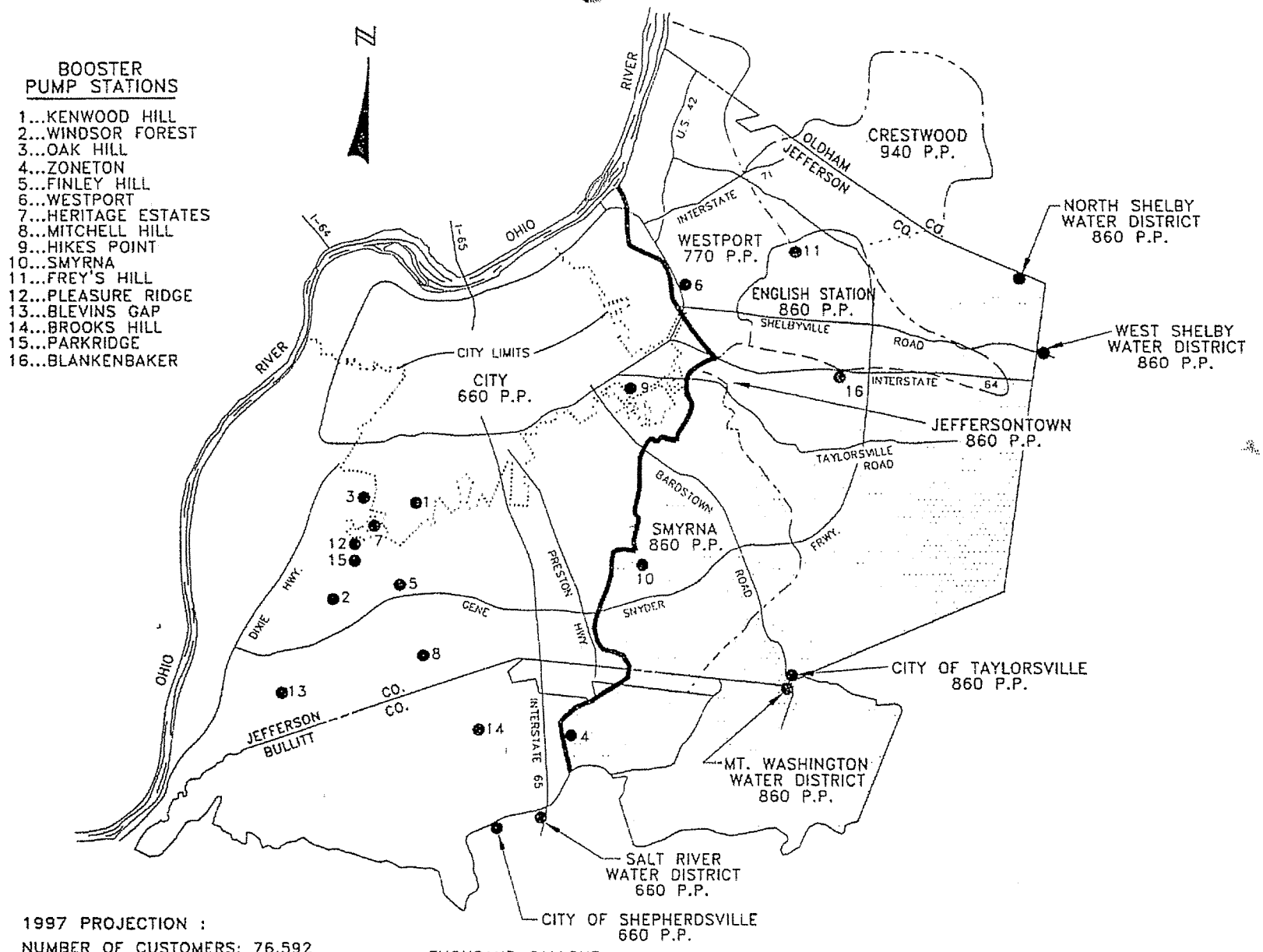
Rank 1 is lowest charge.

Indianapolis, Lexington, and St. Louis (County) are investor owned water utilities.

Milwaukee has separate rate schedule for West Milwaukee, not considered in above table.

Atlanta is reviewing rates, but any increase for 1997 is uncertain.

Enclosure 5



1997 PROJECTION :

NUMBER OF CUSTOMERS: 76,592

ANNUAL WATER USAGE: 1997	THOUSAND GALLONS
RESIDENTIAL	5,050,000 GALLONS
COMMERCIAL	3,490,000 GALLONS
INDUSTRIAL	400,000 GALLONS
PURCHASED FOR RESALE	685,000 GALLONS
PRIVATE FIRE PROTECTION	5,000 GALLONS
TOTAL	9,630,000 GALLONS

ELEVATED SERVICE AREAS

ENCLOSURE 6
11-6-96

FILE NAME: ELEVSERV

P

00416

Linda

April 20, 1997 I found these notes from our meeting with LWC on March 20, 1997 that I had not recorded. my notes were recorded on my copy of the agenda.

Agenda for meeting-Kentucky-American Water Company and Louisville Water Company
March 20, 1997 8:30a-noon

Purpose: Discuss contract for sale of water by LWC to KAWC

1. Overview of status of PSC Case No. 93-434 "An investigation of the sources of supply and future demand of Kentucky-American Water Company." (KAWC)
May 21.

2. Report of LWC's treatment capacity, average day, maximum day, maximum hour. (LWC)
270 MGD, up to 300 MGD. Two plants: Crescent Hill and B. E. Payne. Average day is 120 MGD with an all time max day of 194 MG. Average day is 120 MGD. They now have 230,000 customers and average customer growth is 1% per year. They have 55 MG storage, about one half of average day.

3. Water Quality.

4. LWC's improvements necessary to serve pipeline. KA's share of these costs.
Per John Huber, the Board perspective is: "We have water to sell, we have abundant capacity but we want to stay out if issues." Bob Miller said there would be tax free debt on the construction required in Jefferson County to bring water to the county line.

5. Simpson County Water District v. City of Franklin, Ky.

6. Review March 3, 1993 letter from John Huber to Bob Edens.

7. Discuss approach to setting wholesale rates.
Bob Miller said LWC was looking for a "long term viable contract." Bob asked if the rate would be subject to sales tax. Greg Heitzman mentioned a timeline for expectations. We agreed it should take us about two weeks to get the latest data for them regarding size of line, expected construction date, quantity of water needed, etc.

Bob mentioned that they increase rates on January 1 each year. The board doesn't' want any rate increase above CPI. They are in constant communication with their customers about rate increases.

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

Linda LCB
Ret to CB –

~~Mail copy of letter and the 2 books attached to Tom McKITRICK-Voorhees Ret orig letter to CB~~

March 26, 1997

Mr. Coleman D. Bush
Business Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Coleman:

Enclosed are two copies each of the Louisville Water Company 1995 Annual Report and 1996 Rate Study as requested at our meeting on March 20th. Please feel free to call me at 502-569-3663 if I can be of any further assistance.

Sincerely,

Robert K. Miller

Robert K. Miller
Vice President - Treasurer
and Acting Secretary

enclosures 4

MAR

Agenda for meeting-Kentucky-American Water Company and Louisville Water Company
March 20, 1997 8:30a-noon

Greg Heitzman, Bob Miller, John Huber, T.M. CDB RWM

Purpose: Discuss contract for sale of water by LWC to KAWC

1. Overview of status of PSC Case No. 93-434 "An investigation of the sources of supply and future demand of Kentucky-American Water Company." (KAWC)

2. Report of LWC's treatment capacity, average day, maximum day, maximum hour. (LWC)

CH_2M Hill - advise on rates

1995 - Facility plan report 270 MG - could go to 300 MG

Crescent Hill, Payne - 120 MG (192 MG) 230,000 accts - 1%

1908, 3rd reversibility 1976 peak day in 1995?

Transfer station - 45 MGD (Payne to Westport) - 48" - 55 MG - elevated

few standpipes - not all utilized, riverbank infiltration well project - $55M

$30 million, 40-45 million gross

3. Water Quality.

.1 NTU goal

2 bacteriological samples - external contamination

Have joined EPA partnership

4. LWC's improvements necessary to serve pipeline. KA's share of these costs.

5. Simpson County Water District v. City of Franklin, Ky.

6. Review March 3, 1993 letter from John Huber to Bob Edens.

7. Discuss approach to setting wholesale rates.

8. Review draft contract.

File - N

LWC

3/19/97

Roy, TM, CDB, Bob Miller

~~expedition~~

$450 - 3/4 inch service installation
$700 - 3/4 inch service system development (mains after 1990)

Plan to serve unserved areas of Jefferson County
(2% of population in 1/3 of geography)
Jefferson County - $5450 assessment to property for water lines extension (can be financed) Jefferson Co. pays some -
LWC transmission grid
Greg - everyone served by 2002
Patty Kaelin -

Utility Plant Investment - $200 million equity
$340 total, depreciation - $9 million
Private Company - no taxes (free water service)
only for Louisville - $4 million - $800,000 water sales)
~~Same rate structure,~~
.06 NTU average
Not picking up iron & manganese but is expecting to see some
Trace atrazine & alachlor
Begin PAC treatment at 1.15 ppb atrazine

BE Payne - 60" - 55-60 MGD -
goes to English Station, pick up at that point
South of I-64, (Over planning period) -
tax exempt debt rate

P

00422

Storage reservoirs pump station @ Countyline -
@ LJC - operate & maintain

distance from English Station to County line - 8 miles
(Payne plant to English Station plant) 840-860
Storage facility & booster @ County line
Over the planning period - average day, max day, max hour.

Max hour, max day, average day,
Rate blocks - @ inclining, then declining
"We will participate in upsizing)
Wholesale rates - 7 wholesale customers
Colonia - ca we get a copy
Fire service costs only in lower blocks)

Flow restriction,

Full cost of service study every year
Five year strategic plan updated annually
20 yr facilities plan updated every 5 yrs.
Rate increase annually - Va /
No @ increase in wholesale rates —

Subject to sales tax (sale for resale)
A timeline of service - critical path
draft contract, sample bill P

meter charge - $25k/yr.
System dev 700/meter unit - $280,000 one time charge
Swr. Recovery for New Facilities w/in Jefferson County
(cash basis) $11,000,000 - $890,000 annual debt service
+ depreciation (reallocation of some of debt service as growth)
Luk will look at basis
We could defer part of this with incremental demands

Maps of route—
Contact suppliers along the route

Agreement - at least length of life of bonds - 25 yrs.

The customer's bill for the billing period shall be the total of the service and commodity charge for that period.

6.03 General Rate Inside the County of Jefferson and Leased Facilities Outside the County of Jefferson.

All classes of customers taking metered service directly from the Company and situated (1) within the County of Jefferson or (2) outside the County of Jefferson and served through facilities owned by others but leased by the Company, and where a surcharge is imposed by the lessor, excepting the utilities purchasing water for resale, and excepting the municipal customers who shall be served as provided in KRS 96.270 (3024a-6) at no cost to the customer, and excepting publicly owned fire hydrants per se, shall be charged in accordance with the following schedule:

SERVICE CHARGE MINIMUM MONTHLY BILL

METER SIZE	SERVICE CHARGE MINIMUM MONTHLY BILL
5/8"x3/4"	$3.50
1"	8.75
1 1/2"	17.00
2"	28.00
3"	61.25
4"	105.00
6"	245.00
8"	437.50
10"	665.00
12"	1,015.00
16"	2,012.50

COMMODITY CHARGE

The charge for monthly usage shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month			
First	3	at	$1.19	Per 1,000 gallons
Next	3	at	1.31	Per 1,000 gallons
Next	194	at	1.51	Per 1,000 gallons
Next	1,300	at	1.38	Per 1,000 gallons
Next	3,500	at	1.23	Per 1,000 gallons
Next	5,000	at	.99	Per 1,000 gallons
All consumptions in excess of	10,000	at	.92	Per 1,000 gallons

2-17

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201 • Fax (609) 566-4046

MEMORANDUM

Bruce E. Tillotson
Manager Finance
609-566-4039

TO: Coleman Bush

FROM: B. E. Tillotson

DATE: February 10, 1997

RE: **Purchase Water Agreement**

Attached is an agreement we just recently negotiated with the City of St. Louis to purchase water in Missouri-American's St. Charles District.

Obviously, there has to be some modification to it for your purposes, but we think it is perhaps a good one to consider and build upon for Kentucky.

ls

Attachment

c: R. J. Gallo
W. D. Morgan
K. L. Pape

Missouri-American Water Company

1003 E. St. Maartens Drive • P.O. Box 6276 • St. Joseph, Missouri 64506-6276

Phone (816) 233-8844 • Fax (816) 232-7853

William F. L'Ecuyer
Vice President and Manager

July 7, 1995
File No. 628

TO: Kathy Pape

FROM: W. F. L'Ecuyer

SUBJECT: City of St. Louis Contracts

Enclosed are six (6) contracts between the City of St. Louis and Missouri-American Water Company which I have executed. Please attest the documents and return to me as soon as possible. Upon return, I will forward directly to the City of St. Louis for execution.

Thank you.

WFL

Enclosure

CONTRACT

This Contract made and entered into this _____ day of _____, 1995, by and between the City of St. Louis, Missouri, a municipal corporation, also referred to as "CITY", and the Missouri-American Water Company, a Missouri Corporation, also referred to herein as "COMPANY", witnesseth:

WHEREAS, the CITY is a municipal corporation of the State of Missouri and is authorized by its charter to maintain waterworks for the furnishing of water to the CITY, its property, its inhabitants and the places and people along or in the vicinity of the pipes, conduits and aqueducts constructed or used for that purposes, and

WHEREAS, Company is a Missouri Corporation and authorized by the Missouri Public Service Commission to provide water service, and

WHEREAS, in the spirit of regional cooperation, coordination between the City of St. Louis and the Missouri-American Water Company will be mutually beneficial to all parties, while improving the viability of the St. Louis Region.

NOW THEREFORE, it is mutually agreed:

ITEM 1. NATURE OF SERVICE

CITY agrees to furnish and sell and COMPANY agrees to purchase water as needed at an interconnecting point as defined in Item 4.

00428

P

CITY agrees to exercise reasonable diligence and foresight to repair, replace and maintain its water system so as to provide the flow of water as defined in Item 5 herein at the point of the COMPANY'S interconnection during the life of this Contract. CITY also agrees that supply of water to COMPANY shall be reduced only in proportion to the extent water supply to CITY customers is, at that time, inadequate and curtailed. COMPANY further recognizes and agrees that no liability for damages are attached to the CITY hereunder on account of an actual failure of supply due to Acts of God or other occurrences beyond the reasonable control of the CITY.

ITEM 2. PRICING

COMPANY agrees to pay for water at a rate based on the CITY'S annual cost of production, as defined in Appendix A, attached hereto and made a part of this CONTRACT, at the CITY of St. Louis' Howard Bend Water Treatment Plant, plus the cost of operation and maintenance of the Stacy Park Reservoir, and interconnecting conduits, as verified by the CITY'S independent audit. In addition, the rate shall include a component for depreciation of existing Plant and future capital investments, when made by the CITY on these facilities, plus eighteen percent (18%) for margin above cost. All audits shall be in accordance with the accounting principles set forth in Appendix A, attached hereto and made a part of this Contract. Costs shall be determined in accordance with Appendix B each fiscal year by the CITY'S Water Division, based on the number of gallons of water actually produced and the expenses incurred at Howard Bend during that given year. In calculating

these costs, should the percent of pumping for the year at Howard Bend be less than thirty-three percent (33%) of the total pumpage from the CITY'S two treatment facilities, then the value of thirty-three percent (33%) of the total CITY pumpage shall be used in lieu of actual Howard Bend filtered water pumpage in Appendix B, Paragraph VIII, "Total Cost for Howard Bend Water Sales." These costs shall be the basis for determining the rate COMPANY will pay during the following calendar year. The applicable rate to be paid by COMPANY shall be $0.4168 per 1,000 gallons through December 31, 1995.

COMPANY shall have the right to conduct its own independent audit of the above costs at its own expense. In the event of a dispute between CITY and COMPANY, concerning audit results and/or the development of water pricing as described herein, the adjudication of such dispute shall be as defined in ITEM 9.

Change in State or Federal law, or State or Federal regulatory action, may be grounds for renegotiation of factors shown in Appendices A and B. Failure to agree upon impacts of such changes shall be adjudicated as defined in ITEM 9.

ITEM 3. PAYMENT

COMPANY agrees to pay the CITY on a monthly basis (i.e., Billing Month) for all purchases of water under this CONTRACT. All purchases shall be billed monthly, within fifteen (15) days after rendition of service, and all such bills shall be due and payable without discount within thirty (30) days after date of bill. Should any bill remain unpaid for a period of thirty (30) days

after written notice by the CITY to COMPANY that the same is past due, and failure of COMPANY to make such payment within the period of such notice, then the CITY may, at its option and upon ten (10) days written notice to COMPANY discontinue all service to COMPANY and all bills then delinquent shall carry interest at the rate of ten percent (10%) per annum from the date due. Should a billing dispute arise between COMPANY and CITY, CITY agrees that it will not discontinue service during the period of good faith discussions and during any period in which COMPANY disputes said billing before an administrative or judicial body.

ITEM 4. CONNECTIONS AND METERING

A. Point of Interconnection - Water to be supplied hereunder by the CITY to COMPANY shall be supplied on CITY'S land, at a point of connection on the CITY'S Howard Bend Plant property or on the CITY's treated water conduits between the Howard Bend Water Treatment Plant and the Stacy Park Reservoir. In order to permit said delivery:

1. CITY agrees at its own cost and expense to furnish, install and maintain all necessary meters to be located in facilities to be constructed by COMPANY at COMPANY's sole cost and expense. COMPANY has the right at all times to test the meter which registers the amount of water for which the CITY will bill COMPANY. Should said meter test show that said meter is recording with less than 98 percent accuracy (higher or lower), an adjustment

shall be made to the billings to the COMPANY for the prior one-year period to either credit or debit the next billing to the COMPANY by the amount of the over or underbilling.

2. CITY shall grant to COMPANY such easements on City property as COMPANY and CITY mutually agree are necessary to construct the facilities required for interconnection. Granting of said easement by CITY shall not be unreasonably withheld.

3. COMPANY agrees, at its own cost and expense, to furnish and install all pipe, valves, fittings, meter pits, pump station and appurtenances necessary to connect its water distribution system with said connection point on the CITY'S system.

All pipe, valves, fittings, meter pit, pump station and appurtenances which are paid for and installed by the COMPANY shall be owned and maintained by the COMPANY. CITY shall have the right to operate such valves as necessary to maintain meters and will assume operating and improvement responsibility for the isolation valves at the point of interconnection with the CITY conduits. CITY may install such equipment as needed to obtain continuous information on flows and pressures.

All pipe, valves, fittings and appurtenances installed on CITY property shall be designed and constructed in accordance with recognized water works industry standards. CITY shall have the right to review and approve all plans and specifications of the

pipe, valves, fittings, meter pit, pump station and appurtenances which COMPANY proposes to install on CITY property. In addition, all work or construction performed or undertaken by COMPANY on CITY property shall be subject to the supervision and approval of the Water Commissioner of the CITY.

ITEM 5. QUANTITY AND QUALITY OF WATER

1. The CITY agrees to sell water to COMPANY as COMPANY desires to purchase up to a supply rate not to exceed 35 million gallons per day without approval of the Water Commissioner.

2. Water supplied by the CITY to COMPANY shall meet the treated water quality standards of the Missouri Department of Natural Resources and/or United States Environmental Protection Agency, or such other successor agency.

3. Water will be supplied by CITY to COMPANY at the pressure residual at the point of interconnection to the CITY's metering. Pressure at the point of interconnection shall be maintained at 109 psi, minimum, as measured in the discharge headers at the Howard Bend Plant.

ITEM 6. COMMUNICATION BETWEEN CITY AND COMPANY

In order to assure the COMPANY has adequate information relative to the operation of the CITY'S Water Division, as a minimum the following documents shall be provided to the COMPANY.

1. A portion of the Annual Audit concerning Howard Bend and Stacy Park operations;

2. monthly operating reports consisting of all reports submitted to the State of Missouri Department of Natural Resources and which relate to finished water quality; and

3. other pertinent documents as mutually agreed.

ITEM 7. EFFECTIVE DATE OF CONTRACT

This Contract for the sale of water, subject to ITEM 8, shall be in full force and effect for a period of twenty (20) years from and after its date of execution. COMPANY, in the event the CITY does not give notice as provided in ITEM 8.1 to terminate this Contract, shall have the option of extending this Contract for ten (10) years from the end of the above period, upon six (6) months prior notice to the CITY.

This contract shall be subject to the approval of the Missouri Public Service Commission to the extent required by law.

ITEM 8. TERMINATION

1. CITY has the right and option to cancel and terminate this Contract upon expiration and thereafter all rights and obligations hereunder shall cease, provided, CITY provides COMPANY three (3) or more years notice of such decision to cancel and terminate upon expiration.

2. COMPANY has the right and option, upon one (1) or more years written notice to the CITY, to cancel and terminate this Contract, and thereafter all rights and obligations hereunder, other than easement rights conveyed by separate instruments, shall cease.

ITEM 9. THIRD PARTY AUDIT

In the event of disagreement concerning audit results, and/or the calculations necessary for ITEM 2, the parties agree to submit the matter to binding determination to a mutually agreed upon "Big Six" accounting firm not previously engaged in the audit. In the event of inability to mutually agree on any such firm, said firm shall be selected by lot from each party's single nominee.

ITEM 10. DISPUTES OR CLAIMS

It is expressly understood between the parties that any disputes or claims arising out of this Contract, other than described in ITEM 9, resulting in a cause or causes of action, shall only be brought in the Missouri Circuit Court, Twenty-Second Judicial Circuit, the City of St. Louis.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

IN WITNESS WHEREOF, the parties hereunto have executed this Agreement as of the day and year first above written.

CITY OF ST. LOUIS, MISSOURI

By: _____
Mayor

By: _____
Comptroller

Approved as to form:

_____
City Counselor

ATTEST:

_____
City Register

MISSOURI-AMERICAN WATER CO.

By: _____
William F. L'Ecuyer
Vice President & Manager

ATTEST:

_____
Secretary

APPENDIX A

SUMMARY OF ACCOUNTING POLICES

I. Revenues and expenses of the St. Louis City Water Division must be reported in accordance with generally accepted accounting principles.

II. Direct costs to be included:

A. Direct costs of Supply and Purification at the Howard Bend Plant to be summarized as follows:

1. Labor - Actual wages and fringes associated with employees working full-time at the Howard Bend Plant.

2. Support Services - Actual Water Division costs for services provided directly to Supply and Purification at the Howard Bend Plant.

3. Chemicals - Actual costs of chemicals utilized at the Howard Bend Plant.

4. Other Materials and Services - Actual cost of materials and services utilized at the Howard Bend Plant.

B. Direct costs of Power and Pumping Section at the Howard Bend Plant to be summarized as follows:

1. Labor - Actual wages and fringes associated with employees working full-time at the Howard Bend Plant.

2. Support Services - Actual Water Division costs for services provided directly to power and pumping at

the Howard Bend Plant.

3. Power - Cost of power for actual pumping at the Howard Bend Plant.

4. Other Materials and Services - Actual cost for materials and services utilized at the Howard Bend Plant.

C. Depreciation of Howard Bend Facilities and Stacy Reservoir Facilities - Amount should be equal to the actual amounts recorded in the accounting records of the Water Division for these facilities. Depreciation will be calculated under the straight line method utilizing the following useful lives:

1. Building and Improvements - Fifty (50) years.

2. Pumping equipment - Thirty-three (33) years.

III. Allocated Costs to be included:

A. General Office Expenses:

1. One third Supply and Purification general office expense. Charges to this expense category are wages and fringes for the staff that oversees the Supply and Purification function at the Howard Bend Plant and Chain of Rocks Plant and related miscellaneous expenses.

2. One third of Power and Pumping general office expense. Charges to this expense category are wages and fringes for this staff that oversees the Power and Pumping function at Howard Bend and Chain

of Rocks and related miscellaneous expense.

B. Administration and Finance Expense:

1. Costs will be allocated by taking one third of the ratio of the budgeted positions in Supply and Purification (including construction and maintenance) and Power and Pumping to the budgeted positions in Supply and Purification (including construction and maintenance), Power and Pumping, Transmission and Distribution and Customer Accounting and applying this factor to certain Administration and Finance expenses.

2. Certain Administration and Finance expenses in (1) above include the following:

   a. Labor - Actual wages and fringes for employees working in the Administration and Finance Departments of the Water Division.

   b. Worker's Compensation - Worker's Compensation insurance for all employees of the Water Division.

   c. Support Services - Only those support services directly for the operation of the Administration and Finance Section of the Water Division.

   d. City Services - City of St. Louis costs allocated to the Water Division according to the "Central Service Cost Allocation Plan".

This plan allocates City of St. Louis expenses to various City departments, including the Water Division, based upon each department's relative use of that city service. This allocation must be deemed fair by the Water Division's Certified Public Accountant.

e. Other Services and Miscellaneous - Charges for utilities, telephone, supplies and other miscellaneous expenses of operating the Administration and Finance Section.

3. Administration and Finance expenses specifically excluded from the costs in (2) above are charges for judgements, Bad Debt Expense and Support Services not directly for the operation of the Administration and Finance Section of the Water Division.

C. Stacy Reservoir Costs:

1. The City of St. Louis has two reservoirs, Compton and Stacy. The Missouri-American Water Company will be served by the Stacy Reservoir. The costs of maintenance of the above reservoirs are not recorded separately by specific reservoir in the City's accounting records.

2. As a result of the situation in (1) above, one half of these costs will be included in the formula.

IV. Return on Investment - Calculated by taking the sum of costs

in II and III above, times 18%. This amount includes any and all taxes to be paid to both the Water Division and the City of St. Louis.

V. The Missouri-American Water Company's cost per 1,000 gallons - Calculated by totaling Items II, III, and IV above and dividing this total cost by the actual total gallons of filtered water pumped at Howard Bend including water pumped to the Missouri-American Water Company, except as set forth in Item 2, Pricing.

VI. Specifically excluded costs included the following:

A. Transmission and Distribution costs.

B. Customer Accounting costs.

C. Debt Service.

D. Any other cost item not specifically included in II, III or IV above.

VII. See Appendix B as an example of the above formula for Fiscal year 1993 - 94.

VIII. The costs per 1,000 gallons purchased should be calculated on expenses for years ending June 30, and audited by the Water Division's Certified Public Accountant. The cost so calculated will become effective for the subsequent calendar year.

IX. The Audit Report of the Water Division for the years ending June 30 should separately state the following (as previously defined):

A. Direct costs of Supply and Purification - Howard Bend.

B. Direct costs of Power and Pumping - Howard Bend.

C. General Office Expenses - Power and Pumping.

D. General Office Expenses - Supply and Purification.

E. Reservoir Maintenance Expenses.

F. Support services charged to Administration and Finance that are directly related to the operation of the Administration and Finance Section of the Water Division.

G. Labor Cost used to calculate percent allocation in III, B. 1. above.

X. Water Division personnel will furnish interim Financial Statement information equivalent to that included as Appendix B of this agreement on a quarterly basis.

XI. Missouri-American Water Company reserves the right to audit the Water Division at its own expense.

00443

DETERMINATION OF COST PER M.G. FOR
FILTERED WATER PUMPED AT HOWARD BEND

	1993-94 EXPENSES	PERCENTAGE CALCULATION OF EXPENSES	ACTUAL COST COLUMN 1 X COLUMN 2
I. PLANT OPERATING EXPENSE - SUPPLY & PURIFYING			
a) Howard Bend Plant Labor (Exhibit B-5 & B-6)			
1. Laboratory	$126,032.42	100.00%	$126,032.42
2. Support Services (Service Building)	$706,142.50	100.00%	$706,142.50
3. Coagulant House	$461,727.12	100.00%	$461,727.12
4. Filter Plant	$381,949.16	100.00%	$381,949.16
5. Plant Office (Personal Services)	$113,195.15	100.00%	$113,195.15
b) Chemicals	$949,038.50	100.00%	$949,038.50
c) Miscellaneous Supplies, Materials & Services	$218,852.97	100.00%	$218,852.97
Total	$2,956,937.82		$2,956,937.82
II. PLANT OPERATING EXPENSE - POWER & PUMPING SECTION			
a) Howard Bend Plant Labor			
1. Primary Pumping	$154,506.14	100.00%	$154,506.14
2. High Service Pumping	$197,410.66	100.00%	$197,410.66
b) Power Cost			
1. Primary Pumping (Exhibit B-10)	$105,236.50	100.00%	$105,236.50
2. High Service Pumping (Exhibit B-11)	$780,366.90	100.00%	$780,366.90
c) Miscellaneous Supplies, Materials & Services	$370,655.82	100.00%	$370,655.82
Total	$1,608,176.02		$1,608,176.02

Appendix B

DETERMINATION OF COST PER M.G. FOR
FILTERED WATER PUMPED AT HOWARD BEND

	1993-94 EXPENSES	PERCENTAGE CALCULATION OF EXPENSES	ACTUAL COST COLUMN 1 X COLUMN 2
III. GENERAL OFFICE ALLOCATION			
a) Supply & Purifying Section allocated management. These personnel have offices at the Chain of Rocks Plant. From Exhibit B-4: Total General Office = Based on the Howard Bend Plant being 1/3 of the Total Capasity of Howard Bend and Chain of Rocks allocate 1/3 of the General Office cost to Howard Bend:	$1,068,715.96	33.00%	$352,676.27
b) Power and Pumping allocated management cost. These personal have offices at the Chain of Rocks Plant. From Exhibit B-9: Total General Office =	$420,424.78	33.00%	$138,740.18
Total	$1,489,140.74		$491,416.44
IV. ADMINISTRATIVE AND FINANCE COST			
Total Administrative and Finance Cost Exhibit B-2 allocate a portion for Supply and Purification and Power and Pumping sections. See Exhibit B-1 (Operating Expenses)			
a) Personal Services	$921,216.86	17.12%	$157,706.26
b) Workers Compensation (Expenses with Human Resources Section)	$0.00	0.00%	$0.00
c) Supplies, Materials, Other Services & Other Charges	$129,023.55	17.12%	$22,087.98
d) City Services	$706,537.00	17.12%	$120,954.48
e) Judgements	$131,731.75	0.00%	$0.00
f) Bad Debts	$19,720.32	0.00%	$0.00
g) Support Services-Directly Related To A & F	$90,808.90	17.12%	$15,545.89
Total	$1,999,038.38		$316,294.61
S & P Plus P & P			
S & P + P & P + T & D + C & A			

DETERMINATION OF COST PER M.G. FOR
FILTERED WATER PUMPED AT HOWARD BEND

	1993-94 EXPENSES	PERCENTAGE CALCULATION OF EXPENSES	ACTUAL COST COLUMN 1 X COLUMN 2
Therefore allocate cost of the Administrative & Finance Sections Cost to the Supply & Purifying and Power and Pumping Sections. Based on Total Budgeted payroll Positions for Fiscal Year 93-94. Allocate 1/3 of this 51.36% amount to the Howard Bend Plant.			
V. DEPRECIATION EXPENSES			
a) Howard Bend Plant			
1. Buildings & Structures	$81,630.28	100.00%	$81,630.28
2. Heating Boiler	$3,168.99	100.00%	$3,168.99
3. Pumping Equipment - Part of Building	$24,620.54	100.00%	$24,620.54
4. Pumping Equipment - Pumps Valves Switch Gear	$117,271.01	100.00%	$117,271.01
5. Purification Equipment - Basins	$42,617.64	100.00%	$42,617.64
6. Laboratory Equipment	$86,581.99	33.00%	$28,572.06
b) Stacy Park Reservoir			
1. All Structures in Service other than below	$533.04	100.00%	$533.04
3. New Roof on North Half	$59,415.94	100.00%	$59,415.94
4. New Roof on South Half	$60,548.16	100.00%	$60,548.16
Total	$476,387.59		$418,377.66
VI. STACY PARK RESERVOIR EXPENSES			
Maintenance and Operation cost (See Exhibit B-4) take Indicated Percentage of Reservior Cost.			
a) Supplies, Materials, Other Services & Support Services	$6,085.90	100.00%	$6,085.90
b) City Services (Reservoir Cost Centers now Split)	$51,521.00	0.00%	$0.00
Total	$57,606.90		$6,085.90
Sub Total			$5,797,288.45

Appendix B

DETERMINATION OF COST PER M.G. FOR
FILTERED WATER PUMPED AT HOWARD BEND

	1993-94 EXPENSES	PERCENTAGE CALCULATION OF EXPENSES	ACTUAL COST COLUMN 1 X COLUMN 2
VII. RETURN ON INVESTMENT			
Return on equity of the City of St. Louis:			
a) Calculated by taking the subtotal of costs above times 18%. This amount includes any and all taxes to be paid to both the Water Division and the City of St. Louis.		18.00%	$1,043,511.92
VIII. TOTAL COST FOR HOWARD BEND WATER SALES			$6,840,800.37
Filtered Water Pumped in Million Gallon Units	16,411.89		
Cost Per 1000 Gallon Units			$416.8198
Cost Per 100 Cubic Foot Units			$0.4168
			$0.3118

Filtered Water Pumped Howard Bend Plant	16,411.89	33.00%
Filtered Water Pumped Chain of Rocks Plant	33,321.11	Percent of Pumping for Howard Bend
Total Pumping in M. Gallon Units	49,733.00	

Louisville Water Co.

- GET Contract Team together now?
- What improvements made to serve pipeline?
- How many MGD can they supply @ 940 ted rates?
- Where did they get addn. $/gal. for capital imprvmt?

2768774

Regionalization
- Team to survey route now?
(use of consultants / ?)

5.3 Attachment
Commission Regulation of Municipal Wholesale Service (Kentucky)

Administrative Case No. 351
In the Matter of:
SUBMISSION OF CONTRACTS AND RATES OF MUNICIPAL UTILITIES PROVIDING WHOLESALE UTILITY SERVICE TO PUBLIC UTILITIES

ORDER

On January 31, 1994, the Kentucky Supreme Court in Simpson County Water District v. City of Franklin, Ky., 872 S.W.2d 460, held that this Commission has jurisdiction over the wholesale rates and service to any public utility.

The Court's holding reverses a long-standing interpretation of public utility laws. Since 1936, municipal utilities have been exempted from the statutory definition of "utility." 1936 Kentucky Acts, Chap. 2, S1. In a long series of cases beginning in 1961, Kentucky's highest court had previously held that this exemption "extends to all operations of a municipally owned utility. . . ." McClellan v. Louisville Water Co., Ky., 351 S.W.2d 197, 199 (1961); See also City of Flemingsburg, Kentucky v. Pub. Serv. Comm'n, Ky., 411 S.W.2d 920 (1966); City of Georgetown, Kentucky v. Pub. Serv. Comm'n, Ky., 516 S.W.2d 842 (1974).

As its first step to implementing the Simpson County decision and to exercising jurisdiction over the wholesale rates and services of municipal utilities, the Commission finds that all municipal utilities providing wholesale utility service to a public utility should, within 30 days from the date of this Order, file with the Commission a copy of their contracts with the public utility and a schedule of their rates for wholesale service.

The Commission further finds that, 30 days prior to placing into effect any change in these contracts or in the rates or service provided to a public utility, a municipal utility should file the revised contract or rate revision with the Commission. Failure to make such filing will render the revision void.

IT IS THEREFORE ORDERED that:

1. Within 30 days of the date of this Order, each municipal utility providing wholesale utility service to a public utility shall submit to the Commission a copy of its contact for such service and a schedule of its wholesale rates.
2. All rate schedules submitted shall conform to Commission Regulation 807 KAR 5:011.
3. Any municipal utility wishing to change or revise a contract or rate for wholesale utility service to a public utility shall, no later than 30 days prior to the effective date of the revision, file with the Commission the revised contract and rate schedule.

Done at Franfort, Kentucky, this 10th day of August, 1994.
By the Commission.

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

November 5, 1996

Mr. Eric Thornburg
Vice President, Operations
Indiana-American Water Company, Inc.
401 Camby Court
Post Office Box 570
Greenwood, Indiana 46142-0570

Sent Via Fax (317) 885-2406

Dear Eric:

Thank you for your telephone call earlier today. As discussed, we are excited about the prospect of doing business with your firm. We have carefully considered a new rate approach based on the water demands identified in the Southern Indiana Regional Water Supply Plan dated October 18, 1996. We believe that this new approach will meet the needs of Indiana-American Water Company as well as Louisville Water Company.

Following our meeting of a week ago, we attempted to identify the interests of each of our firms in this endeavor. In summary, we understand these to be the key interests:

Indiana-American Water Company	Louisville Water Company
• High Quality Water	• Increased Water Sales
• Reliable Source	• Recovery of Costs
• Minimized Capital Investment	• Equity Among Rate Classes
• Minimized Operating Costs	• Acceptable Demand Factors
• Controlled Future Cost Increases	• Acceptable Precedents for Other Future Wholesale Contracts

With these considered as the key interests, we began to develop a concept for a new rate approach. We believe that the elements of this new approach are:

- Establishment of a customer class for large wholesale contract customers
- Twenty-five year contract term
- Provision for minimum consumption
- Provision for maximum flow rate

Incorporating these elements for a new rate approach into a specific proposal for Indiana-American, we ask your consideration of these provisions:

First Ten Years

- Based on rate for existing wholesale customers
- Minimum consumption of 1 mgd per each ninety day period
- Maximum flow rate of 4 times the average flow rate

After Ten Years

- Option to establish second rate block
  First rate block at average day consumption at rate for existing wholesale customers
  Second rate block for consumption above average day at not more than 1.25 times rate for existing wholesale customers
- Minimum consumption of 4 mgd per each ninety day period
- Maximum flow rate of 2.5 times the average flow rate

By using the rate for existing wholesale customers, Indiana-American is assured of receiving a rate that has met the approval of the Kentucky Public Service Commission for similarly situated wholesale customers in Kentucky. It is our understanding, though, that this contemplated contract will not be subject to the approval of the Kentucky PSC. Also, we are in receipt of an opinion by our General Counsel that these sales will not be subject to the Kentucky sales and use tax.

We hope that this proposal meets your expectations and that we can proceed in our discussions with this as the basis of establishing water service to Indiana-American Water Company. If we can provide any additional information, please feel free to call me at (502) 569-3663 or Greg Heitzman at (502) 569-3681. We look forward to the opportunity to further discuss our potential wholesale water relationship.

Best Regards,

Robert K. Miller

Robert K. Miller
Vice President-Treasurer

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

TELECOPY TRANSMITTAL SHEET

FAX No. (606) 268-6327
We have a Sharp Model FO-800 Facsimile

DATE: 4-13-94

COMPANY: LOUISVILLE WATER COMPANY

HAND TO: JOHN HUBER

FROM: RON MUNDY

Number of pages, including cover: 6

If you have any problems with receiving, please call:

Phone: 606-268 6321 Ask for: LEEANN

Hard copy mailed: yes _____ no ✓

PLEASE DELIVER TO THE ABOVE NAMED PERSON IMMEDIATELY.

The information contained in this transmission is privileged, confidential and intended only for the use of the individual or entity named above. If you have received this communication in error, please notify Kentucky-American Water Company immediately by telephone, collect and return the original message to us at the address shown via the U.S. Postal Service. You will be reimbursed for the required postage. Thank you.

MESSAGE:

JOHN -

PLEASE LET ME KNOW IF THERE ARE ANY CONCERNS WITH THE ATTACHED RESPONSE. THE 5 MEMOS WILL BE INCLUDED IN A SEPARATE RESPONSE. AS I INDICATED, WE WILL BE FILING WITH THE PSC ON FRIDAY MORNING. MY NUMBER IS 606-268-6329.

RON

Equal Opportunity Employer

Printed on Recycled Paper

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-585-2806

COPY: J. SIMPSON
R. MUNDY
S. STOCKTON
P. BALLARD

	EDENS
	ALLEN
	BALLARD
	BLANTON
	BRAXTON
	BURNS
	BUSH
	DAVIE
	GRIFFIN
	HAMMACK
	McCONATHY
	PROCTOR
	SIMPSON
	SINGLETON
	SMITH
	STAGGS
✓	STOCKTON
	TRIMBLE
	WILKINS
	Bidwell
	FILE
✓	COPY TO
✓	RETURN TO

March 21, 1994

Mr. Chetan Talwalkar
581 Stratford Drive
Lexington, KY 40503

Dear Mr. Talwalkar:

The following is in response to your information request:

1. There has not been a report generated at the Louisville Water Company entitled "Cryptosporidium in the Ohio River Basin". An oral presentation on this topic was given at the Ohio River Basin Research Consortium Annual Meeting, and a copy of the slide presentation is enclosed. All routine data on pathogens levels in the Ohio River are found in the data compilation requested in Question 8. We do have preliminary data collection compiled over the last 8 months on the occurrence of cryptosporidium in the Ohio River. We would like to invite you to meet with our research scientist to discuss any questions that you may have regarding this preliminary data collection.

2. Data on the occurrence of Atrazine and Alachlor is available in the computer summary reports provided as a result of this request.

3. The Louisville Water Company (LWCo.) has investigated the use of wells as an alternate source of supply in 1945, 1980, and has initiated an additional project in 1994. The Louisville Water Company has one active pumping well just north of the River Pump Station #1 at Zorn Avenue and River Road. This well has a capacity of 1 MGD, and is connected to our raw water supply via a 16" main. The well is a 30" by 42" gravel pack well, screened at the bottom 30 feet, ending at the alluvium/bedrock interface. Detailed geologic description of the aquifer in this area is available from the USGS Louisville office. (Contact Thomas Mesko, 502 582-5241)

4. The B.E. Payne Water Treatment Plant (BEPWTP) was put into operation in 1978, and has not been expanded in capacity since that time. The only significant change in treatment in recent years has been the conversion from liquid alum to ferric chloride as the coagulant.

Below and attached is the information requested for BEPWTP. Please note the attached plant schematic for BEPWTP (Exhibit 1).

RECEIVED
MAR 28 1994

5.a Pre-mix Facilities

Low Lift Statistics
Capacity - 60 MGD
Average Flow (1993) - 23.9 MGD

LWCo. maintains capabilities to feed potassium permanganate and copper sulfate at the low lift station. Feed capacities for these chemicals are 50 pounds per hour (PPH, see Exhibit 1) and 1993 usages were 800 lbs. for copper sulfate and 110 pounds for potassium permanganate. Normal feed rates for those chemicals, when used, are 0.5 to 1.0 ppm. Additionally, powdered activated carbon (PAC) feed capabilities exist at the influent to the coagulation system. PAC feed capacities are 505 PPH at carbon slurry densities of 1 pound per gallon. PAC usage for 1993 was 23,154 pounds (Exhibit 2). PAC generally is utilized for taste and odor control, and organics removal.

5.b Coagulation and Sedimentation Facilities

LWCo. operates and maintains three flocculation basins and three clarification basins. Flocculators are four speed horizontal turbine flocculators with three drive trains per flocculation unit. Clarifiers are square 2.9 million gallon (MG) units with surface overflow rates of 890 gallons per day per square foot. Primary coagulants - currently, ferric chloride, and coagulant aid polymer (cat Floc T), are added to the influent chamber to the flocculation units. Flash mixing is accomplished by a hydraulic jet mixer at the chemical addition point. Respective feed capacities and feed rate ranges utilized for these chemicals are noted below.

	Ferric Chloride	Polymer
Feed rate:		
Capacity	588 PPH	100 PPH
Maximum	275 lbs/MG	8 lbs/MG
Average (1993)	143 lbs/MG	2.5 lbs/MG
Minimum	40 lbs/MG	0 lbs/MG

LWC maintains continuous turbidity monitoring of raw and coagulated water. Control of coagulant feed rates is accomplished by automatic, combined feed-forward and feed-back control to produce a coagulated water with turbidity levels of 1.0 to 1.5 NTU. Automatic control is augmented by bench scale jar tests, routine checks of feed equipment and routine performance assessments of continuous turbidity monitoring equipment.

5.c Filtration Facilities

LWC operates eight dual media, rapid sand filters. Filters are normally operated 2 gallon per minute per square foot range (6 MGD per filter) but are designed for 3 gallon per minute per square foot operation. Filtered turbidity is measured continuously and the turbidity of each operating filter is measured on a daily basis. Operating goals are to produce a filtered water turbidity of 0.15 NTU or less and polymer is applied as a filtration aid if turbidities exceed 0.20 NTU. Backwash criteria are 100 hours maximum run time, six foot maximum head loss or filter turbidities greater than 0.25 NTU. Backwash rates are 40 MGD (22 inches per minute) and surface wash is accomplished by above bed S-sweeps.

5.d Clearwell facilities

LWC operates and maintains a 6 MG underground clearwell. Chemical feed capabilities include fluoride, chlorine and ammonia. Maximum feed capacities for fluoride are 50 PPH and dosages are relatively constant at an average of 30.8 lbs/MG (as liquid hydrofluosilicic acid) due to constant fluoride levels in the Ohio River. Fluoride is generally fed at the influent to the filter influent duct. Chlorine and ammonia feeds are discussed in section 5.e.

5.e Disinfection Procedures

Primary disinfection at LWCo. is accomplished by breakpoint chlorination followed by ammoniation to produce a chloramine residual in finished land distribution water. Free chlorine is added at the influent to the filter influent duct at a sufficient dosage rate to produce a 2.5 mg/L free chlorine residual after filtration. Ammonia is added at the influent to the clearwell at a 4 to 1, residual chlorine to ammonia weight ratio to produce a predominantly monochloramine finished water total chlorine residual. LWC continuously monitors free chlorine residuals of filtered water and total chlorine residuals of finished water. Chlorine dosage control can be accomplished by automatic feed-back control or manual control. Control set points are 2.5 mg/L free chlorine residual for filtered water and 2.5 mg/L total chlorine residual for finished water. Chlorine may be added to influent of the clearwell, prior to ammonia addition, to augment chlorine residuals.

Chlorine feed capacities are 1,000 pounds per day (PPD) and feed rates, averaging 36.4 lbs/MG (1993 average, Exhibit 2), vary from 30 lbs/MG to 50 lbs/MG, depending on chlorine demand levels. ammonia feed capacities are 30 pph with feed rates averaging 6.0 lbs/mg.

5.f Finished water parameters - see water quality result summaries.

5.g Organics Removal

As one of ORSANCO's organic detection stations (ODS) LWC monitors Ohio River water daily. Other organics monitoring and frequency of monitoring is detailed in LWC's water quality results summaries. Control of organics is accomplished by PAC and potassium permanganate.

Feed capacities for those chemicals are 505 PPH for PAC, at PAC slurry densities of 1 lb/gallon, and 50 PPH for potassium permanganate. Maximum, minimum and average feed rates for PAC are 400 lbs/MG, 20 lbs/MG and 60 lbs/MG, respectively. PAC for 1993 was 23,154 pounds. PAC is fed as a slurry at the influent to the coagulation flocculation units. Potassium permanganate feed statistics were discussed in section 5.a.

6. A schematic for of LWCo.'s distribution system is enclosed.

7. LWCo. has been involved in research since 1974 dealing with compliance issues with the SDWA. LWCo. is currently researching riverbank infiltration and enhanced coagulation as methods of dealing with the latest requirements of the SDWA. LWC has previously researched the processes of ozonation, GAC adsorption, chlorine dioxide, and biological treatment in response to various requirements of the SDWA. At this time, it is anticipated that LWC will be able to meet all requirements of the Enhanced SWTR and the D\DBP rules without modification to the current treatment process. LWC maintains a strong research program to allow quick response to developing regulations. No definite plans exist at this time for a modification to the existing treatment process.

8. Raw water quality parameters are provided in the printouts accompanying this response.

9. LWCo.'s rate history is attached to this response.

10. A copy of LWCo.'s annual report is enclosed.

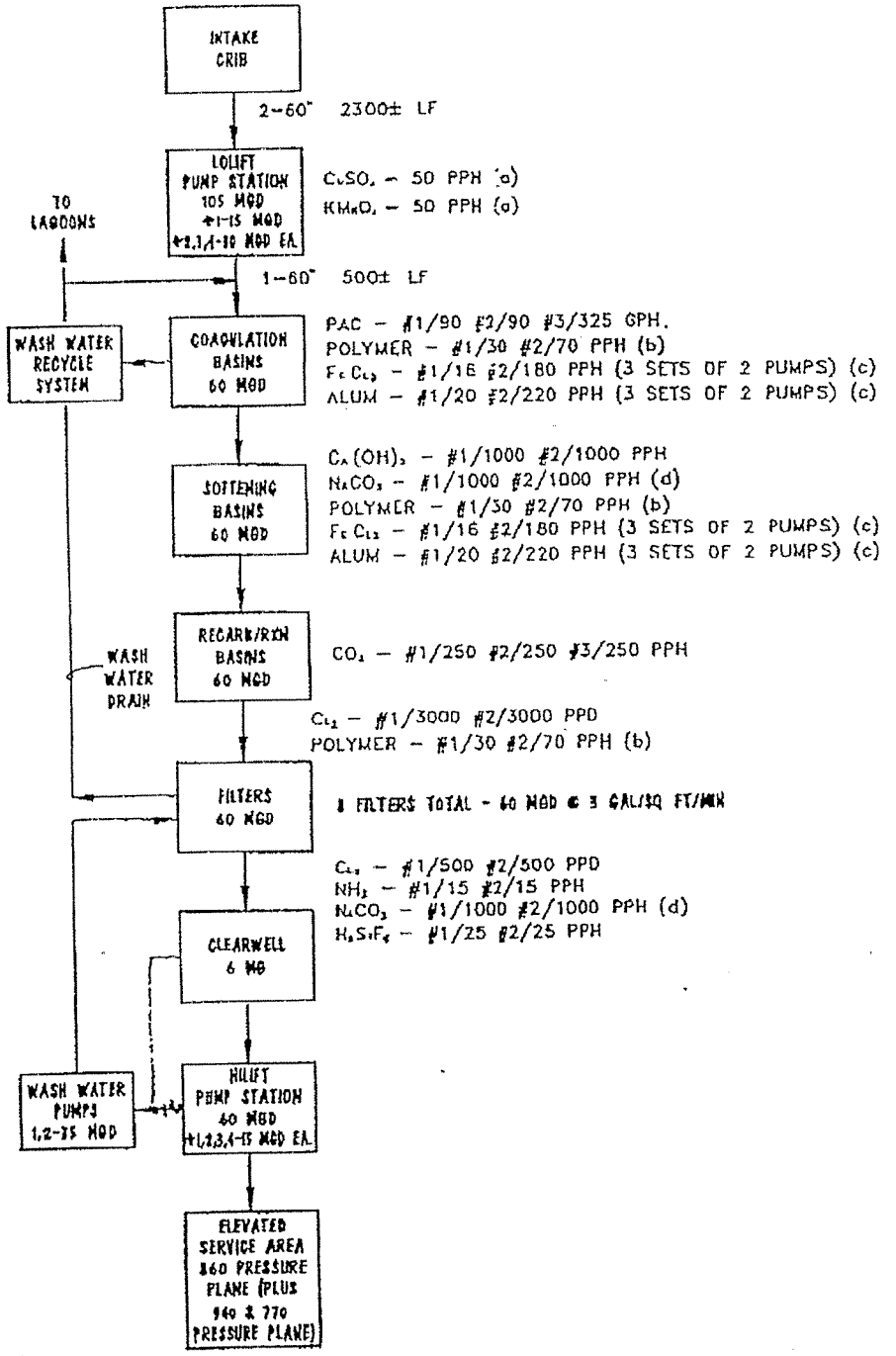
11 LWCo.'s short and long demand projections are provided in the enclosed report entitled Analysis and Projections for Water Sales.

Once you have had an opportunity to review the packet, please give me a call at (502) 569-3640 if you have any questions or comments.

Sincerely,

J. Vincent Guenthner
Manager
Government Affairs

EXHIBIT 1



SOR = 870 gpd/ft²

NOTE:

1. (a),(b),(c),(d),(e) COMMON CHEMICAL FEED EQUIPMENT, FIGURES REPRESENT TOTAL FEED CAPACITY
2. PPH - POUNDS PER HOUR LF - LINEAR FEET
   PPD - POUNDS PER DAY GPH - GALLONS PER HOUR
   MG - MILLION GALLONS MGD - MILLION GALLONS PER DAY

LOUISVILLE WATER COMPANY

B.E. PAYNE PUMPAGE/TREATMENT FLOWCHART

P-600 | 1 of 1

00456

EXHIBIT 2

OPERATION OF B. E. PAYNE FILTERS FOR THE MONTH AND PERIOD ENDED DECEMBER 31, 1993

PAGE 05

FILTER PLANT

8932606

03/16/1994 11:34

00457

WATER PUMPING ANALYSIS

CHNG FROM LAST YEAR	YR-TO-DT LAST YEAR	YR-TO-DT THIS YEAR	DESCRIPTION	CURR MONTH THIS YEAR	SAME MONTH LAST YEAR	CHNG FROM LAST YEAR
420.5	8,309.9	8,730.4	TOTAL WATER TREATED (MG)	438.3	560.6	122.3-
52.4-	468.9	416.5	SLUDGE (MG)	24.0	46.5	22.5-
472.9	7,840.9	8,313.9	CLEARWELL DELIVERY (MG)	414.3	514.1	99.8-
78.7-	220.1	141.4	WASH WATER USED (MG)	7.7	14.1	6.5-
108.5	7,219.9	7,328.4	NET SYSTEM DELIVERY (MG)	327.9	484.0	156.1-
0.4	19.7	20.1	AVERAGE DAILY OUTPUT (MG)	10.6	15.6	5.0-
1.1-	2.8	1.7	PERCENTAGE WASH WATER USED	1.8	2.7	0.9-

PURIFICATION STATISTICS THIS MONTH DECEMBER 31, 1993

12 MONTHS TO DATE

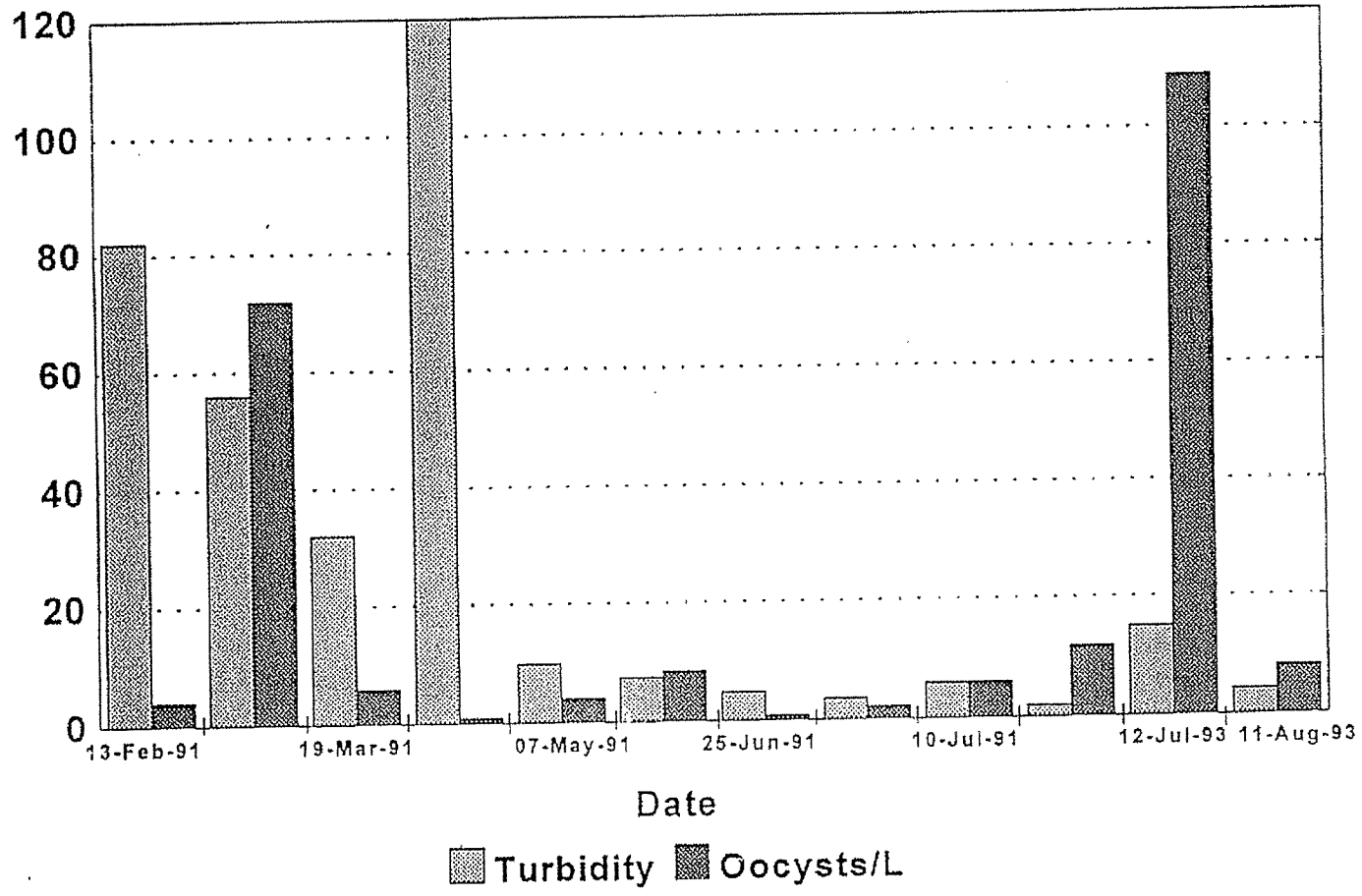
	POUNDS USED	TOTAL COST	COST (MG)		CHEMICAL	POUNDS USED	TOTAL COST	COST (MG)	AVG. COST	
(1)	975,684	$ 63,010.37	$ 8.60	(1)	ALUM (DRY)	10,927	$ 702.21	$ 2.14	.06426	(1)
(2)	928,772	26,938.69	3.68	(2)	LIME	34,920	1,093.78	3.34	.03132	(2)
(3)	317,805	32,643.87	4.45	(3)	CHLORINE	14,599	2,164.22	6.60	.14824	(3)
(4)	19,885	1,400.90	.19	(4)	SODA ASH	0	.00	.00	.07045	(4)
(5)	23,154	7,701.02	1.05	(5)	CARBON (T&O)	0	.00	.00	.33260	(5)
(6)	21,588	4,470.90	.61	(6)	POLYMER	953	197.37	.60	.20710	(6)
(7)	2,600	156.24	.02	(7)	CARBON DIOXIDE	600	36.06	.11	.06009	(7)
(8)	268,690	16,819.12	2.30	(8)	FLUOSILICIC ACID	14,379	1,165.97	3.56	.08109	(8)
(9)	52,230	5,943.03	.81	(9)	AMM	2,684	285.68	.87	.10644	(9)
(10)	800	325.77	.04	(10)	COPPER SULFATE	0	.00	.00	.40722	(10)
(11)	110	224.91	.03	(11)	POTASSIUM PRMGNATE	0	.00	.00	2.04464	(11)
(12)	0	.00	.00	(12)	ACT. CARBON(D)	0	.00	.00	.00000	(12)
(13)	0	.00	.00	(13)	ALUM (LIQUID)	0	.00	.00	.00000	(13)
(14)	288,477	28,960.11	3.95	(14)	FERRIC CHLORIDE	79,778	8,299.70	25.31	.10404	(14)
(15)	0	.00	.00	(15)	FERRIC SULFATE	0	.00	.00	.00000	(15)
		$ 188,594.93	$ 25.73		TOTAL COST		$ 13,944.99	$ 42.53		

SAME PERIOD LAST YEAR

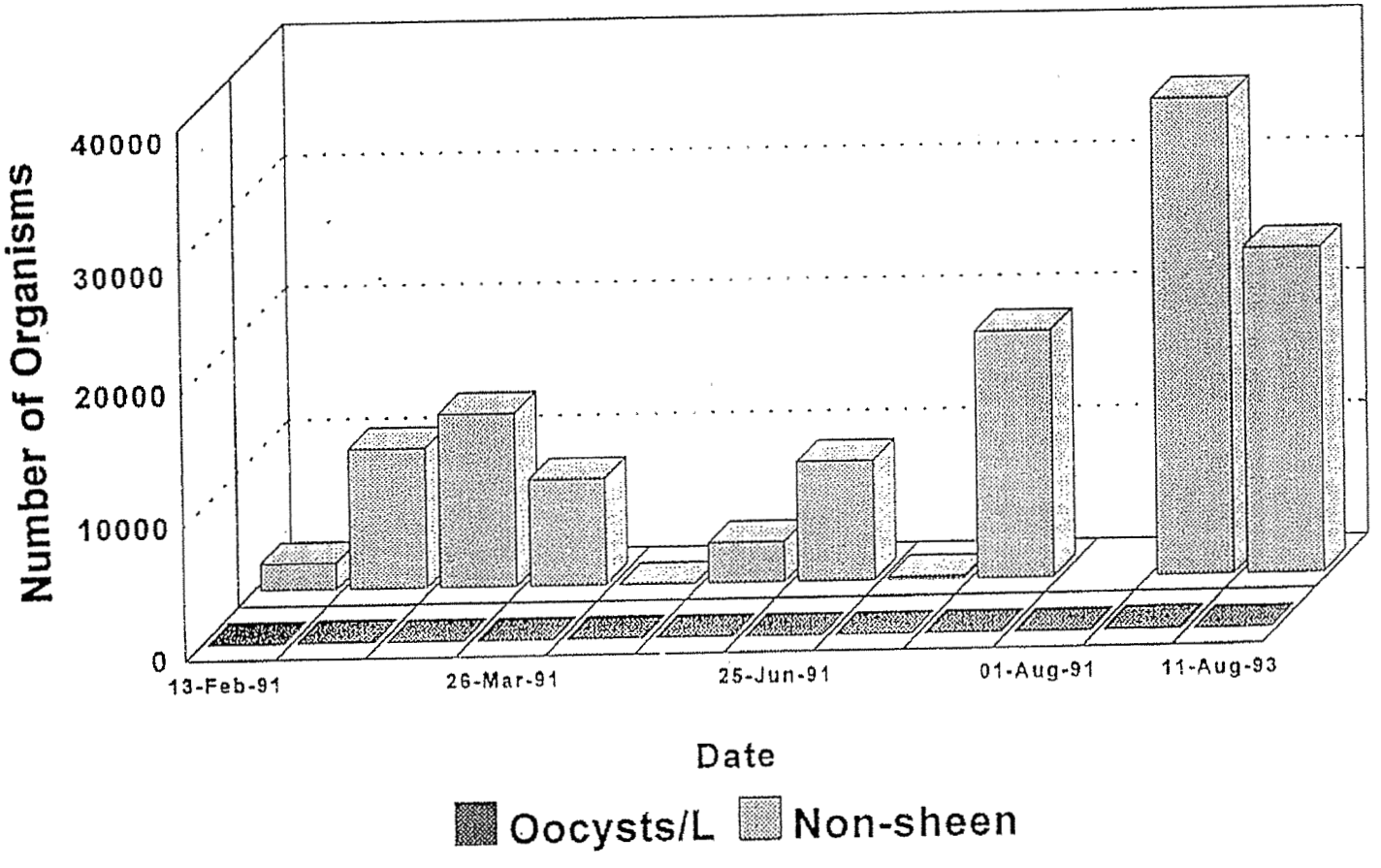
	POUNDS USED	TOTAL COST	COST (MG)		CHEMICAL	POUNDS USED	TOTAL COST	COST (MG)	AVG. COST	
(1)	1,427,517	$ 91,038.72	$ 12.61	(1)	ALUM (DRY)	131,880	$ 8,942.34	$ 18.48	.06781	(1)
(2)	938,616	18,247.07	2.53	(2)	LIME	91,343	2,349.86	4.86	.02573	(2)
(3)	313,709	18,215.55	2.52	(3)	CHLORINE	21,809	1,926.31	3.98	.08833	(3)
(4)	236,993	18,932.37	2.62	(4)	SODA ASH	0	.01	.00	.07045	(4)
(5)	10,214	3,569.19	.49	(5)	CARBON (T&O)	2,050	716.35	1.48	.34944	(5)
(6)	44,631	10,677.00	1.48	(6)	POLYMER					

SAME MONTH LAST YEAR

Cryptosporidium/Liter vs Turbidity



Cryptosporidia/Liter vs Non-Sheen/ml



Louisville Water Company

Year	Water Rate % Increase
1985	7.2%
1986	6.5%
1987	5.9%
1988	2.4%
1989	5.5%
1990	2.6%
1991	3.7%
1992	3.0%
1993	2.8%
1994	2.5%

BOARD OF WATER WORKS
RULES AND REGULATIONS

RATE SCHEDULE

JANUARY 1, 1994

WATER RATES

LOUISVILLE WATER COMPANY, LOUISVILLE, KENTUCKY

BOARD OF WATER WORKS RULES AND REGULATIONS

RATES 6.00

6.01 For the purpose of classifying revenues, and to provide for different classes of rates, there shall be established seven (7) classes of customers and three (3) areas of service. The classes of customers shall be identified as Residential, Commercial, Industrial, Fire Service, Fire Hydrants, Municipal, and Utilities Purchasing Water for Resale. The areas of service shall be identified as the area served by the Company and lying within the County of Jefferson, the area served directly by the Company through Company-owned facilities and lying outside the County of Jefferson and the area lying outside the County of Jefferson and served directly by the Company through leased facilities and where a surcharge is imposed by the lessor.

6.02 The rate charge for metered water service shall be comprised of two components which will represent:

(1) the physical service provided and the potential demand of the customer as determined by the capacity or capacities of the meter(s) installed. The charge for each meter shall be the product of the service charge for 5/8" x 3/4" meter and the service charge factor listed herein.

MONTHLY SERVICE CHARGE FACTOR

METER SIZE	SERVICE CHARGE FACTOR
5/8" X 3/4"	1.00
1"	2.50
1 1/2"	5.00
2"	8.00
3"	17.50
4"	30.00
6"	70.00
8"	125.00
10"	190.00
12"	290.00
16"	575.00

(2) the water consumption of the customer as registered on the meter(s) being used in the billing period.

The customer's bill for the billing period shall be the total of the service and commodity charge for that period.

6.03 General Rate Inside the County of Jefferson and Leased Facilities Outside the County of Jefferson.

All classes of customers taking metered service directly from the Company and situated (1) within the County of Jefferson or (2) outside the County of Jefferson and served through facilities owned by others but leased by the Company, and where a surcharge is imposed by the lessor, excepting the utilities purchasing water for resale, and excepting the municipal customers who shall be served as provided in KRS 96.270 (3024a-6) at no cost to the customer, and excepting publicly owned fire hydrants per se, shall be charged in accordance with the following schedule.

SERVICE CHARGE MINIMUM MONTHLY BILL

METER SIZE	SERVICE CHARGE MINIMUM MONTHLY BILL
5/8"x3/4"	$3.50
1"	8.75
1 1/2"	17.00
2"	28.00
3"	61.25
4"	105.00
6"	245.00
8"	437.50
10"	665.00
12"	1,015.00
16"	2,012.50

COMMODITY CHARGE

The charge for monthly usage shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month			
First	3	at	$1.19	Per 1,000 gallons
Next	3	at	1.31	Per 1,000 gallons
Next	194	at	1.51	Per 1,000 gallons
Next	1,300	at	1.38	Per 1,000 gallons
Next	3,500	at	1.23	Per 1,000 gallons
Next	5,000	at	.99	Per 1,000 gallons
All consumptions in excess of	10,000	at	.92	Per 1,000 gallons

SCHEDULE OF FIRE SERVICE CHARGES

The charge for fire service, where water may be taken for fire protection only, shall be in accordance with the following schedule. This charge will also be applicable to such fire hydrants as may be provided by private agencies.

Size:	4"	6"	8"	10"	12"
Monthly Charge:	$9.25	$19.00	$36.25	$71.75	$144.00

General Rate Outside the County of Jefferson

6.04 All classes of customers taking metered services directly from the Company and situated outside the County of Jefferson, and served through facilities owned by the Company, excepting utilities purchasing water for resale, and excepting publicly owned fire hydrants, shall be charged in accordance with the following schedule:

SERVICE CHARGE MINIMUM MONTHLY BILL

METER SIZE	SERVICE CHARGE MINIMUM MONTHLY BILL
5/8" X 3/4"	$3.50
1"	8.75
1 1/2"	17.50
2"	28.00
3"	61.25
4"	105.00
6"	245.00
8"	437.50
10"	665.00
12"	1,015.00
16"	2,012.50

COMMODITY CHARGE

The charge for monthly usage shall be computed in accordance with the following schedule:

	Thousand Gallons Per Month			
First	200	at	$2.25	Per 1,000 gallons
Next	1,300	at	1.55	Per 1,000 gallons
Next	1,500	at	1.18	Per 1,000 gallons

SCHEDULE OF FIRE SERVICE CHARGES

The charge for fire service, where water may be taken for fire protection only, shall be in accordance with the following schedule. This charge will also be applicable to such fire hydrants as my be provided by private agencies.

Size:	4"	6"	8"	10"	12"
Monthly Charge:	$9.25	$19.00	$36.25	$71.75	$144.00

6.05 Utilities Purchasing Water for Resale

Public utilities which purchase water for resale wherever situated shall be charged $1.16 per thousand gallons for all water purchased, the elevated service area surcharge specified in Rule 6.06, and the service charge specified in Rule 6.02, if applicable, to the point at which water is taken through the master meter.

6.06 Elevated Service Area Surcharge

All customers shall pay a surcharge of $.19 per thousand gallons if water must be delivered at a higher elevation that the general pressure plane served by the Crescent Hill/Cardinal Hill system.

6.07 At the Company's option, bills may be rendered monthly or bimonthly. If the bills are rendered on a bimonthly basis, the minimum monthly charge shown on the Schedule of Minimum Monthly Bill, and the gallons of water shown in the Schedule of Commodity Charges, and the monthly charge in the Schedule of Fire Service Charges, shall be multiplied by two.

6.08 In the event that payment for any charge is not made within twenty (20) days from the billing date, the net amount of the bill shall be increased by 5% and the gross amount thus determined must be paid. One late payment will be accepted every twelve (12) billing periods at net amount if the bill is paid before the next billing date.

6.09 Where water is used without proper authorization, the estimated quantity of unmetered water used shall be paid for at the rate of $3.00 per thousand gallons.

6.10 Water taken form a Louisville Water Company public fill station shall be paid for at the rate of $2.50 per thousand gallons plus such deposits as may be established from time to time.

6.11 The Company shall have the right to required that all customers filing Bankruptcy under Chapter 7, 11, or 13 of the Bankruptcy Code, post a deposit equal to one and one-half times an average bill based on usage during the past twelve months.

****

Upon adoption, these rates shall become effective and apply to statements mailed on and after January 1, 1994.

COMPARISON OF REVENUE UNDER EXISTING RATES AND PROPOSED RATES

	UNITS		PRESENT RATES RATES $	PRESENT RATES REVENUE ($1,000)	PROPOSED RATES $	PROPOSED REVENUE ($1,000)	INCREASE OVER EXISTING RATE %
SIDENTIAL: Service Charge	2,485,662	E.U.	3.49	8,674.96	3.50	8,699.82	
Water Sold 0 - 3	6,869,621	T.G.	1.13	7,762.67	1.19	8,174.85	
4 - 6	4,434,357	T.G.	1.28	5,675.98	1.31	5,809.01	
7 - 200	2,962,577	T.G.	1.46	4,325.36	1.51	4,473.49	
201 - 1,500	33,445	T.G.	1.35	45.15	1.38	46.15	
Total Residential	14,300,000	T.G.		26,484.12		27,203	2.7
COMMERCIAL: Service Charge	709,656	E.U.	3.49	2,476.70	3.50	2,483.80	
Water Sold 0 - 3	672,511	T.G.	1.13	759.94	1.19	800.29	
4 - 6	542,267	T.G.	1.28	694.10	1.31	710.37	
7 - 200	6,915,223	T.G.	1.46	10,096.23	1.51	10,441.99	
201 - 1,500	3,915,269	T.G.	1.35	5,285.61	1.38	5,403.07	
1,501 - 5,000	109,125	T.G.	1.20	130.95	1.23	134.22	
5,001 - 10,000	1,459,203	T.G.	0.98	1,430.02	0.99	1,444.61	
Over 10,000	316,402	T.G.	0.90	284.76	0.92	291.09	
Total Commercial	13,930,000	T.G.		21,158.31		21,709.44	2.6
INDUSTRIAL: Service Charge	99,096	E.U.	3.49	345.85	3.50	346.84	
Water Sold 0 - 3	12,540	T.G.	1.13	14.17	1.19	14.92	
4 - 6	11,185	T.G.	1.28	14.32	1.31	14.65	
7 - 200	356,070	T.G.	1.46	519.86	1.51	537.67	
201 - 1,500	1,191,952	T.G.	1.35	1,609.14	1.38	1,644.89	
1,501 - 5,000	1,528,674	T.G.	1.20	1,834.41	1.23	1,880.27	
5,001 - 10,000	1,150,708	T.G.	0.98	1,127.69	0.99	1,139.20	
Over 10,000	1,973,871	T.G.	0.90	1,776.48	0.92	1,815.96	
Total Industrial	6,225,000	T.G.		7,241.92		7,394.40	2.1
TOTAL RETAIL: Service Charge	3,294,414	E.U.	3.49	11,497.50	3.50	11,530.45	
Water Sold 0 - 3	7,554,672	T.G.	1.13	8,536.78	1.19	8,990.06	
4 - 6	4,987,809	T.G.	1.28	6,384.40	1.31	6,534.03	
7 - 200	10,233,870	T.G.	1.46	14,941.45	1.51	15,453.14	
201 - 1,500	5,140,666	T.G.	1.35	6,939.90	1.38	7,094.12	
1,501 - 5,000	1,637,799	T.G.	1.20	1,965.36	1.23	2,014.49	
5,001 - 10,000	2,609,911	T.G.	0.98	2,557.71	0.99	2,583.81	
Over 10,000	2,290,273	T.G.	0.90	2,061.25	0.92	2,107.05	
Total General Pres. Retail	34,455,000	T.G.		54,884.35		56,307.16	2.59
Elev. Serv. Area Surcharge	7,233,500	T.G.	0.19	1,374.37	0.19	1,374.37	0.00
Private Fire Services				956.00		980.19	
Public Fire Services				3,366.00		3,451.16	
Total Retail Sales				60,580.71		62,112.87	2.53
UTILITY SALES:							
Service Charge	4,596	E.U.	3.48	16.04	3.50	16.09	
General Pressure Charge	795,000	T.G.	1.13	898.35	1.16	922.20	2.7
Elevated Service Area	550,000	T.G.	0.19	104.50	0.19	104.50	0.0
Total Utility Sales				1,018.89		1,042.79	2.3
GRAND TOTAL SALES	35,250,000	T.G.		61,599.60		63,155.65	2.53

E.U. is 5/8" meter equivalent units; water sold units are in thousands of gallons. (T.G.)

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(GENERAL PRESSURE AREA)
(METER CAPACITY)

	CONSUMPTION (Thousand Gallons)	METER SIZE	PRESENT RATES	PROPOSED INCREASE		
				PROPOSED RATES	INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	3.49	3.50	0.01	0.29
3		5/8 x 3/4"	6.88	7.07	0.19	2.76
6	(Average Bill) *	5/8 x 3/4"	10.72	11.00	0.28	2.61
10		5/8 x 3/4"	16.56	17.04	0.48	2.90
20		5/8 x 3/4"	31.16	32.14	0.98	3.15
40		1"	65.60	67.59	2.00	3.04
100		1"	153.20	158.19	5.00	3.26
200		2"	318.39	328.44	10.05	3.16
500		2"	723.39	742.44	19.05	2.63
1,000		3"	1,431.55	1,465.69	34.14	2.39
1,500		3"	2,106.55	2,155.69	49.14	2.33
5,000		6"	6,489.77	6,644.44	154.67	2.38
10,000		8"	11,581.72	11,786.94	205.22	1.77
76,430	(General Electric)	Various	73,026.40	74,564.96	1,538.57	2.11
10,591	(Salt River Water Dist)	Various	12,072.72	12,390.75	318.03	2.63
9,810	(Shepherdsville)	Various	11,329.32	11,624.31	294.99	2.60

* Residential Customer

ENCLOSURE 2

COMPARISON OF MONTHLY BILLS AT VARIOUS CONSUMPTION LEVELS
(ELEVATED SERVICE AREA)
(METER CAPACITY)

	CONSUMPTION (Thousand Gallons)	METER SIZE	PRESENT RATES	PROPOSED INCREASE		
				PROPOSED RATES	INCREASE AMOUNT	%
0	(Minimum Bill)	5/8 x 3/4"	3.49	3.50	0.01	0.29
3		5/8 x 3/4"	7.45	7.64	0.19	2.55
6	(Average Bill) *	5/8 x 3/4"	11.86	12.14	0.28	2.36
10		5/8 x 3/4"	18.46	18.94	0.48	2.60
20		5/8 x 3/4"	34.96	35.94	0.98	2.80
40		1"	73.20	75.19	2.00	2.73
100		1"	172.20	177.19	5.00	2.90
200		2"	356.39	366.44	10.05	2.82
500		2"	818.39	837.44	19.05	2.33
1,000		3"	1,621.55	1,655.69	34.14	2.11
1,500		3"	2,391.55	2,440.69	49.14	2.05
9,143	(Ford Motor Company)	Various	23,988.99	24,378.63	389.64	1.62
25,840	(Mt. Washington)	Various	34,597.18	35,373.78	776.60	2.24
4,188	(West Oldham)	Various	5,800.71	5,927.14	126.43	2.18
4,007	(North Shelby)	Various	5,350.20	5,470.59	120.38	2.25
3,742	(West Shelby)	Various	5,044.58	5,157.15	112.57	2.23
5,487	(Taylorville)	Various	7,304.47	7,469.26	164.80	2.26

* Residential Customer

ENCLOSURE 3

20 LARGEST CUSTOMERS OF
THE LOUISVILLE WATER COMPANY

COMPANY	AVG MONTHLY CONSUMPTION (T.G.)	PRESENT RATES	PROPOSED RATES	DIFFERENCE AMOUNT	%
B. F. Goodrich	68,997	64,976	$ 66,362	$ 1,386	2.13
General Electric	59,178	57,500	58,693	1,194	2.08
M S D	30,026	30,314	30,921	608	2.00
Protein Technologies	26,697	26,661	27,201	539	2.02
Ford Motors	22,429	22,768	23,222	454	1.99
Ford Motors *	17,758	22,479	22,841	362	1.61
E.I. Dupont	17,384	18,035	18,388	352	1.95
U.S. Naval Ord. Plant	13,501	15,108	15,384	276	1.83
Philip Morris	13,322	14,572	14,843	272	1.86
Harshaw - Filtrol	13,117	14,387	14,655	268	1.86
American Synthetic Rubber	12,496	13,828	14,033	205	1.48
United Catalysts, Inc.	12,110	13,420	13,667	247	1.84
Lou EOP Oil Products	11,184	12,455	12,684	228	1.83
Fischer Packing	10,962	12,256	12,479	224	1.83
American Synthetic Rubber	10,742	12,058	12,277	220	1.82
Universal Uniforms	10,657	11,841	12,059	217	1.84
Brown Forman	9,870	11,262	11,466	203	1.81
Rhone-Poulenc Inc	9,381	11,551	11,795	244	2.11
Frito Lay Inc	8,125	9,552	9,738	186	1.95
Lou Gas & Electric	8,054	9,675	9,860	186	1.92

* ELEVATED SERVICE AREA

00471

COMPARISON OF MONTHLY BILLS AMONG CITIES SIMILAR TO LOUISVILLE
(CUSTOMERS SERVED BY GENERAL PRESSURE)

CITY	PROPOSED INCREASE FOR 1994 INSIDE CITY	PROPOSED INCREASE FOR 1994 OUTSIDE CITY	DATE OF LAST INCREASE (DECREASE)	5/8" METER 6,000 GALLONS INSIDE CITY RANK	5/8" METER 6,000 GALLONS OUTSIDE CITY RANK	3" METER 2,250,000 GALLONS INSIDE CITY RANK	3" METER 2,250,000 GALLONS OUTSIDE CITY RANK	4" METER 4,500,000 GALLONS INSIDE CITY RANK	4" METER 4,500,000 GALLONS OUTSIDE CITY RANK	6" METER 10,000,000 GALLONS INSIDE CITY RANK	6" METER 10,000,000 GALLONS OUTSIDE CITY
LOUISVILLE 502-569-3600	2.53%	2.53%	Jan. 93	4 11.00	1 11.00	6 3,078.19	5 3,078.19	6 5,889.44	5 5,889.44	6 11,594.44	5 11,594.44
ATLANTA 404-658-6568	11%	11%	Mar. 93	5 12.15	7 16.18	5 3,074.85	8 3,587.87	5 5,782.05	8 7,597.28	7 12,400.65	9 16,275.00
CINCINNATI 513-352-4655	4.00%	4.00%	Jan. 93	2 9.90	6 13.17	4 2,484.88	6 3,293.04	4 4,909.48	6 6,505.78	4 10,826.78	6 14,346 36
COLUMBUS 614-645-8838	9.9%	9.9%	Jan. 93	3 10.03	5 13.05	1 1,827.11	4 2,375.13	2 3,545.69	4 4,608.08	3 7,570.84	4 9,837.84
INDIANAPOLIS 317-263-6391	None	None	Jul. 92	6 13.02	4 13.02	3 2,157.25	2 2,157.25	3 3,768.70	2 3,768.70	2 6,869.31	1 6,869.31
KNOXVILLE 615-621-8514	None	None	Dec. 92	8 16.22	10 22.34	7 3,426.96	9 4,633.82	7 6,270.96	9 8,473.82	5 11,535.06	8 15,542.84
LEXINGTON 606-268-6308	None	None	Nov. 93	7 16.75 16.22	8 16.22	8 3,501.47	7 3,501.47	8 6,740.39	7 6,740.39	8 14,661.92	7 14,661.92
MILWAUKEE 414-278-2927	12%	12%	Dec. 90	1 9.27	2 11.42	2 1,864.06	3 2,305.85	1 3,297.82	3 4,087.43	1 6,373.10	3 7,896.18
NASHVILLE 615-259-7217	None	None	Jan. 92	9 20.38	9 20.38	9 5,497.28	10 5,497.28	9 10,454.60	10 10,454.60	9 22,549.26	10 22,549.26
ST. LOUIS CO. 314-991-3404	———	17.81%	Sep. 93	——	3 12.22	— ———	1 1,738.62	———	1 3,477.83	— ———	2 7,727.86

Notes:

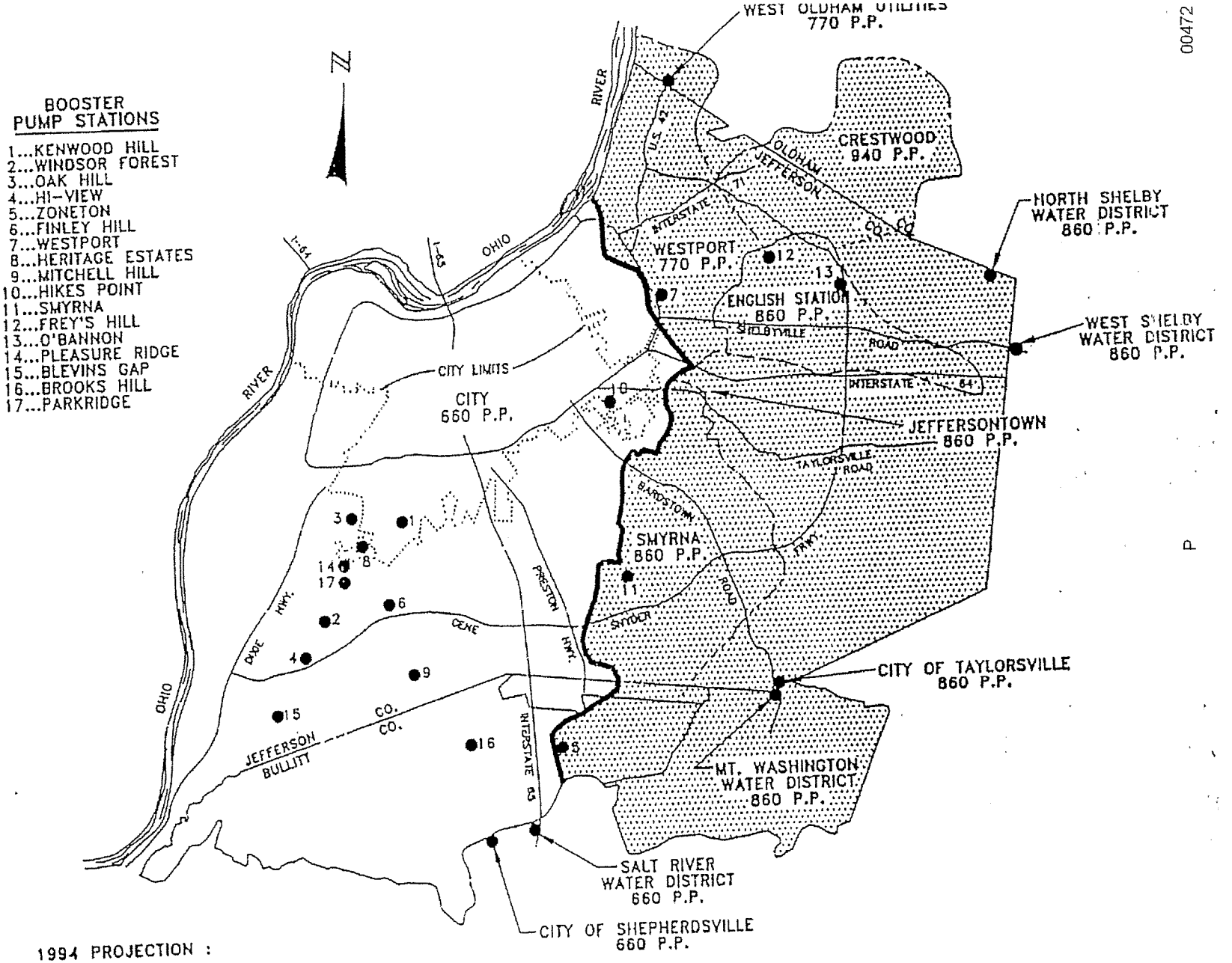
The bills shown are computed using basic rates only and do not include special charges such as the elevated area surcharge, public fire protection charges, sales, franchises, or other taxes. Water bills for LWC includ rate increase for 1994, water bills for other utilities do not.

Rank 1 is lowest charge.

Indianapolis, Lexington, and St. Louis (County) are investor owned water utilities. Rate structure for Lexington's November 19, 1993 rate increase is not yet available. Indianapolis imposes a monthly surcharge o suburban customers for public fire protection. This charge is based on customer meter size and is not included in the above comparison. St. Louis County has separate rate structure for large users.

ure 5

00472



1994 PROJECTION :

NUMBER OF CUSTOMERS: 62,916

ANNUAL WATER USAGE: 1994

RESIDENTIAL	4,365,000,000	GALLONS
COMMERCIAL	2,645,000,000	GALLONS
INDUSTRIAL	220,000,000	GALLONS
PURCHASED FOR RESALE	550,00[illegible]	[illegible] GALLONS
PRIVATE FIRE PROTECTION	3,5[illegible]	[illegible] GALLONS
TOTAL	7,783,[illegible]	[illegible].0 GALLONS

ELEVATED SERVICE AREAS

ENCLOSURE 6

11-18

FILE NAME: [illegible]

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

February 25, 1994

Mr. Chetan Talwalkar
581 Stratford Drive
Lexington, Kentucky 40503

Re: Information Request

Dear Mr. Talwalkar:

This is to acknowledge receipt of your letter of February 14, 1994, requesting information and documents from the Louisville Water Company. We are treating this request as an open records request and not in response to Case Number 93-434 currently before the Kentucky Public Service Commission.

It is our intent to respond professionally to your request, however, please understand that the company is not in a position to prepare or create reports, studies or other documents which are not in existence. Although your request will require significant time and work from several Louisville Water Company employees, it is not anticipated that you will be charged for the information that we provide.

With the above in mind, we will make every attempt to respond to you by your deadline of March 18, 1994.

Sincerely,

J. Vincent Guenthner
Manager
Government Affairs

cc: John L. Huber
Greg Heitzman
Stephen A. Hubbs

bcc: Joe Helm
Lindsey Ingram

found. doc.
as it will be Δ'd
5/22/97

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-585-2806

April 5, 1993

Mr. Robert A. Edens
Vice President & General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Bob:

Subject: Computation of Sample Water Bill

Louisville Water Company staff has extensively reviewed and revised our rate study model to reflect the ratemaking methodology described in my letter to you dated March 3, 1993. I have enclosed an abbreviated version of this rate model including a sample billing assuming an average day of 3 MGD, maximum day of 4 MGD and maximum hour of 5 MGD. This model is easily adaptable for computation of bills under a variety of average day, maximum day and maximum hour scenarios.

Please note that the distribution of costs is based on existing demand factors which are somewhat dated. These demand factors are currently being reviewed and may change as a result of demand studies in the future, thereby changing the allocation of costs among average day, maximum day and maximum hour.

Operating Costs and Depreciation Costs to be allocated are from Schedule 2U and Schedule 3U respectively of our 1992 Rate Study. Return on Plant Investment is from Schedule 4U of the 1992 Rate Study, except that the annual return is based on our retail rate of 9.35% rather than our wholesale rate of 11.35%.

The computation of the Kentucky-American Water Company share of these costs is based on total estimated units of service for all customer classes on Schedule 6 of the 1992 Rate Study.

Please feel free to call Bob Miller at 502/569-3663 if you have any further questions.

John Huber
President

TOTAL KAWC WATER CHARGES

VOLUMETRIC CHARGES		
COMMODITY COST RATE	$0.3640	
ELEVATED SERVICE AREA SURCHARGE	$0.1789	
TOTAL VOLUMETRIC CHARGES	$0.5429	/ THOUSAND GALLONS
ANNUALIZED VOLUMETRIC CHARGES	$594,514	/ YEAR
FIXED CHARGES FOR SYSTEM INVESTMENT		
DEPRECIATION	$110,217	
RETURN ON PLANT INVESTMENT	$432,220	
TOTAL CHARGES SYSTEM INVESTMENT	$542,437	/ YEAR
SERVICE CHARGE	$26,175	/ YEAR
DEBT SERVICE RECOVERY	$886,450	/ YEAR
TOTAL ANNUAL KAWC WATER CHARGES	$2,049,576	

P

00475

KAWC RATE MODEL VARIABLES

	AVERAGE DAY	MAXIMUM DAY	MAXIMUM HOUR
KAWC CAPACITY COMMITMENT REQUEST MGD	3	4	5
SYSTEM ANNUAL WATER CONSUMPTION	95.96	145.14	219.28
SYSTEM ANNUAL WATER CONSUMPTION + KAWC	98.96	149.14	224.28
RETURN ON PLANT INVESTMENT PERCENT		9.35%	
SERVICE CHARGE FACTOR		625	
ANNUAL SERVICE CHARGE		$26,175	
CAPITAL CONSTRUCTION COST FOR TRANSMISSION FACILITIES		$11,000,000	
ANNUAL DEBT SERVICE FOR TRANSMISSION FACILITIES		$886,450	
SYSTEM DEVELOPMENT CHARGE		$280,000	

ANALYSIS OF COMMODITY COST ALLOCATION

	BASE	MAXIMUM DAY	MAXIMUM HOUR	TOTAL
OPERATING EXPENSES	$11,391,710	$2,165,590	$631,730	$14,189,030
KAWC CONSUMPTION TG	1,095,000	1,460,000	1,825,000	
KAWC COST SHARE PCT	3.03%	1.99%	1.60%	
KAWC COST SHARE	$345,347	$43,155	$10,082	$398,584
KAWC COMMODITY RATE				$0.3640

ANALYSIS OF EFFECT OF KAWC SALES ON ESA SURCHARGE

KAWC SALES MGD	ANNUAL SALES TG	PERCENT OF ESA	ADDITIONAL OPERATING EXP	REVISED ESA SURCHARGE
3	1,095,000	14.22%	$101,899	$0.1789

P

ANALYSIS OF DEPRECIATION ALLOCATION

	BASE	MAXIMUM DAY	MAXIMUM HOUR	TOTAL
DEPRECIATION EXPENSE	$2,867,530	$1,122,430	$57,530	$4,047,490
KAWC COST SHARE PCT	3.03%	1.99%	1.60%	
KAWC COST SHARE	$86,931	$22,368	$918	$110,217

P

ANALYSIS OF RETURN ON PLANT INVESTMENT ALLOCATION 9.35%

	BASE	MAXIMUM DAY	MAXIMUM HOUR	TOTAL
RETURN ON PLANT	$10,875,168	$5,004,765	$175,368	$16,055,301
KAWC COST SHARE PCT	3.03%	1.99%	1.60%	
KAWC COST SHARE	$329,687	$99,734	$2,799	$432,220

P

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

March 3, 1993

Mr. Robert A. Edens
Vice President & General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Bob:

Subject: Water Sales Agreement Ratemaking Issues

Louisville Water Company staff has evaluated a number of ratemaking methodologies as part of the contemplated wholesale water sales agreement. This letter is intended to serve as an outline of a methodology that we believe gives each participant a way of managing long-term risks. I have enclosed a copy of our 1992 Rate Study which is used as a reference in the following outline.

I. Investment Recovery For Existing Facilities Within Jefferson County (Demand Charge)

A. KAWC provides long range consumption levels for planning purposes only.

B. KAWC provides capacity commitment request for next year by October 1st of each year in terms of:

1. Average Day Consumption
2. Maximum Day Consumption
3. Maximum Hour Consumption

C. KAWC capacity commitment request must be at least equal to previous year request.

D. If actual Average Day Consumption, Maximum Day Consumption or Maximum Hour Consumption exceeds commitment request, then actual consumption level replaces commitment request.

E. Utility Rate Schedule 1 Depreciation Expenses (line 2) and Return on Plant Investment (line 3) then allocated to KAWC based on ratio of capacity commitment request / ten-year system averages.

1. (Average Day Commitment / System Ten-Year Average Day Consumption) * (Base Depreciation Expenses + Base Return on Plant Investment)

2. (Maximum Day Commitment / System Ten-Year Average Maximum Day Consumption) * (Maximum Day Depreciation Expenses + Maximum Day Return on Plant Investment)

3. (Maximum Hour Commitment / System Ten-Year Average Maximum Hour Consumption) * (Maximum Hour Depreciation Expenses + Maximum Hour Return on Plant Investment)

F. Water sold to KAWC would no longer be considered surplus, and restrictions on use would be similar to retail customers.

G. Methodology eliminates KAWC retail risk for allocation of depreciation and return on plant investment.

H. Important to identify those assets common to only retail customers.

II. Recovery of Operating Expenses (Commodity Charge)

A. Based on KAWC current year actual consumption or specified contract minimum, whichever is higher.

B. Utility Rate Schedule 1 Operating Expenses (line 1) allocated to KAWC similar to methodology in I.E.1-3 above, except charged as consumption based item instead of fixed cost item:

1. (Next Year KAWC Average Day Consumption / Next Year Budgeted System Consumption) * Base Operating Expenses

2. (Next Year KAWC Maximum Day Consumption - Next Year KAWC Average Day Consumption) / (Previous System Maximum Day Consumption - Previous System Average Consumption) * Maximum Day Operating Expenses

3. (Next Year KAWC Maximum Hour Consumption - Next Year KAWC Average Hour Consumption) / (Previous System Maximum Hour Consumption - Previous System Average Consumption)

C. Elevated Service Area Surcharge charged as actual consumption based item. ESA Surcharge may reduce as a result of increased consumption.

III. Service Charge

A. Utility Rate Schedule 1 Customer Costs allocated based on sum of equivalent meter capacities * service charge per equivalent meter unit (see service charge specified in rule 6.02.

IV. System Development Charge

A. System Development Charge will be charged for the purpose of recovering past and future growth related capital expenditures for transmission and storage.

B. Based on sum of equivalent meter capacities * System Development Charge.

C. System Development Charge applied on one-time basis each time additional meter capacity is added.

V. Investment Recovery For New Facilities Within Jefferson County

A. New facilities will be financed through borrowed funds.

B. Investment will be recovered through collection of debt service payments from KAWC.

C. Additional payment to reflect resulting lowered LWC borrowing capacity may be determined.

D. Contract termination provisions exclude recovery of debt service from KAWC.

E. Cost of replacing or extending life of new facilities will be recovered from KAWC.

Conclusion

I look forward to discussing this matter with you in more detail on Monday, March 8th. Please feel free to contact me before then at 569-3680 if you have any questions or comments. Again, while there are a number of possible ratemaking alternatives, we believe that the above outline offers an optimal way for Kentucky-American Water Company and Louisville Water Company to manage their long-term risks.

Best regards,

John L. Huber
President

Exhibit "A" to be provided

DRAFT

WATER PURCHASE AGREEMENT

THIS WATER PURCHASE AGREEMENT dated as of the ___ day of _____, 199___, is between

LOUISVILLE WATER COMPANY,
a municipal corporation
435 South Third Street
Louisville, Kentucky 40202 ("SELLER")

and

KENTUCKY-AMERICAN WATER COMPANY,
a Delaware corporation
2300 Richmond Road
Lexington, Kentucky 40502 ("PURCHASER")

RECITALS

A. Seller, a municipal corporation, all of the stock of which is owned by the City of Louisville governed by the Board of Water Works pursuant to Sections 96.230 through 96.315 of the Kentucky Revised Statutes, is engaged in the treatment, transmission and distribution of water to customers within the City of Louisville and the County of Jefferson and beyond.

B. Purchaser, a profit-making corporation, is engaged in the treatment, transmission and distribution of water in the Lexington-Fayette County area and beyond.

C. Seller presently has surplus capacity in its treatment system and is agreeable to selling water to Purchaser to the extent such sale will not jeopardize Seller's service obligation to its Jefferson County customers.

D. Purchaser, in turn, has determined that it will be in need of additional water sources during the term of this Agreement and, therefore, is desirous of purchasing treated water from Seller on the terms hereinafter set forth.

WITNESS

In consideration of the premises set forth below the parties agree as follows:

1. Extension of Main. Seller agrees, subject to cost reimbursement set forth hereinafter, to construct at its cost a water main, having a diameter of thirty-six inches or more, extending from its English Station Road storage facility in Jefferson County, Kentucky to a point in the Jefferson-Shelby County line where such line intersects, more or less, with _____, the contemplated point of delivery of water to the Purchaser (the "Point of Delivery"). Design of the main by Seller will commence upon notification of the Purchaser that it has

obtained the necessary approvals to proceed with its construction of a main extending from the Point of Delivery to its system in Lexington-Fayette County. The main being installed by the Seller shall be owned and maintained by it.

2. Reimbursement to Seller of its Main Construction and Debt Service Costs Relating Thereto. Purchaser agrees to reimburse Seller for the cost of such main extension and for the debt service cost incurred by Seller, relating thereto, by reimbursing to the Seller its debt service cost, as incurred, in borrowing the funds for the design and construction of the main and the cost of issuance of the debt instruments relating thereto. In the event Seller elects to install a main extension from its English Station Road storage facility to the point of delivery in excess of 36 inch in diameter, Seller, not Purchaser, will pay all costs, including debt service cost and borrowing expenses incurred because of the increased sizing of the main. In the event Seller elects to build a larger main, it will so notify Purchaser and will provide Purchaser with estimates of the difference between the cost of the 36 inch main installation and borrowing charges and the cost of the main actually being installed.

3. Completion of Construction. Seller shall cause the main extension from its English Station Road storage facility to the Point of Delivery to be completed within thirty-six months of the day Purchaser gave its approval to the financing arrangements or the initial construction contract, whichever came later, delays caused by weather, labor disputes or acts of God operating to extend Seller's completion deadline.

4. Purchaser's Prepayment Privilege. Assuming that the financing arrangements permit prepayment of the portion of the financing to be reimbursed by Purchaser, and so long as Purchaser is not in default in any of its payments with respect thereto, Purchaser may, at its option and at any time a prepayment privilege is available, instruct Seller to exercise the prepayment privilege provided in the financing, Purchaser paying over to Seller or its fiscal agent at the time such instructions are given the funds necessary to effect the prepayment and all reasonable costs relating thereto.

5. Purchase of Water - Quality and Quantity. Seller agrees to furnish to Purchaser at the Point of Delivery during the term of this Agreement, and any renewal or extension thereof, treated water at a flow rate not to exceed twelve thousand (12,000) gallons per minute. Purchaser agrees to purchase and Seller agrees to sell during the months of October through April of each year (the "Non-irrigation Season") of the term no less than 3,000,000 gallons of Seller's water, a day, and no less than 5,000,000 gallons, a day, during the months of May through September of each year (the "Irrigation Season") of the term. Purchaser understands and agrees that should it wish to be supplied with more than _____ million gallons a month during the Irrigation Season or _____ million gallons a month during the Non-irrigation Season, the sale

of such surplus will first be subject to the Agreement of the Seller who, prior to consenting thereto first must assess other requirements upon its system.

6. Pressure at Point of Delivery. The water pressure at the point of delivery will be furnished at a reasonably constant pressure, calculated at elevation p.p. ____ msl. If greater pressure than normally available at the Point of Delivery is required by Purchaser, the cost of providing such greater pressure shall be borne by it. Emergency failures of pressure or supply due to main breaks, power failure, flood, fire and use of water to fight fire, labor unrest, earthquake, tornado or other extraordinary circumstances shall excuse Seller from this provision for such reasonable period of time as may be necessary to resolve the situation.

7. Metering Arrangements. Seller agrees to furnish and install at the Point of Delivery a service meter or battery of meters, including meter house or vault, for properly measuring the quantity of water being delivered to Purchaser and to calibrate such metering equipment whenever requested by Purchaser but no more frequently than once every six months. A meter registering not more than two percent (2%) above or below the test result shall be deemed to be accurate. Previous readings of any meter disclosed by test to be inaccurate shall be corrected for three months previous to such test in accordance with the percentage of inaccuracy found by such test. If any meter fails to register for any period the amount of water furnished during such period shall be deemed to be the amount of water delivered in the corresponding period immediately prior to the failure, unless Seller and Purchaser shall agree otherwise. An appropriate official of the Purchaser shall have access to the meter at reasonable times for the purpose of verifying its readings.

8. Rates and Payment. Purchaser shall pay to Seller for water delivered under this Agreement in accordance with the rates determined in accordance with the provisions set forth in Schedule A, attached hereto and made a part hereof by reference, such rate to be adjusted annually, effective with the first day of January of each year, based on determinations made as of the previous calendar year and computations resulting therefrom. Recognizing that Purchaser's system will not be ready to accept Seller's water at the Point of Delivery until some time in 199__, the parties understand and agree that it will not be until shortly prior to the start of water delivery that the initial rate obligations can be determined. Seller shall invoice Purchaser on a monthly basis for water for the previous month, Purchaser to remit payment therefore within _____ days of receipt of Seller's billing. Failure to pay within such time will result in a penalty of _____ percent (%) per month for such delinquency in addition to any other remedies and options available to Seller as set forth hereinafter.

9. Purchaser Warranties and Agreements. Purchaser warrants, covenants and agrees as follows:

(a) That it will not sell water provided under this Agreement to serve areas within the geographical boundaries of Jefferson County, to serve areas then being served by wholesale customers of Seller or to serve retail systems then being leased or managed by Seller.

(b) That its demand for water under this Agreement shall not exceed the gallons per minute set forth in paragraph 5, above, and that the total gallons taken per month will meet the minimum but will not exceed the monthly maximum set forth in paragraph 5, except to the extent increased by subsequent agreement.

(c) That it shall be responsible for the maintenance of water quality and purity at any point beyond the Point of Delivery, and Purchaser assumes all liability for any and all damages of any kind including but not limited to injuries to property or persons which occur directly or indirectly as a result of impure or substandard water emanating beyond the Point of Delivery.

(d) That Seller shall not be liable or accountable for any bursting, breakage or accident of any kind that may occur within Purchaser's water system, or any damages of any kind or nature including, but not limited to, injuries to persons or damage to property resulting from such bursting, breakage or accident of water mains or pipes located beyond the Point of Delivery.

(e) The Seller shall notify immediately the Purchaser of any emergency or condition which may affect the quality of water in the Purchaser's system. That Seller will provide Purchaser with the same discount it provides its other larger customers.

(f) Subject to the provisions of paragraph 10(b), below, Seller will not be considered in breach of this Agreement if it fails to deliver sufficient water to the Point of Delivery pursuant to paragraph 5, above, due to reasons beyond Seller's control.

10. Seller Warranties and Agreement. Seller warrants, covenants and agrees as follows:

(a) That the water delivered to the Point of Delivery shall meet applicable purification standards of the Kentucky Natural Resources and Environmental Protection Cabinet and, or such successor regulatory agency as may be appropriate as such changes are modified from time to time during the term hereof.

(b) That in the event of an extended shortage of water, or the supply of water available to Seller is diminished for reasons beyond its control, the supply of water to Purchaser shall be reduced or diminished in the same ratio or proportion as the supply to Seller's retail customers is reduced or diminished.

(c) The Purchaser shall notify immediately the Seller of any emergency or condition which may affect the quality of water in the Seller's system.

11. Duration of Agreement. This Agreement commences with the effective date hereof, and shall expire seventy-five (75) years thereafter.

12. Rights to Terminate Agreement.

(a) This Agreement may be terminated by Purchaser prior to its expiration upon six months' advance notice in the event of any of the following occurrences:

(i) Repeated failure of Seller to meet its water delivery requirements

(ii) Repeated failure of Seller to meet water purification standards, recited hereinabove.

(b) This Agreement may be terminated by Seller prior to expiration upon six months' advance written notice in the event of any of the following occurrences:

(i) Failure of Purchaser to pay its monthly obligation within ____ days of the due date for monthly water service.

(ii) Revocation of Purchaser's authority to operate a water distribution system by one or more governmental authorities having jurisdiction thereof.

(iii) Failure to abide by one or more of the warranties set forth in paragraph 9 or to purchase the minimum quantities specified in paragraph 5 hereinabove.

(c) Provided, however, termination of this Agreement by expiration or otherwise shall not operate to relieve Purchaser of any financial obligations to Seller, as set forth herein or otherwise, nor shall termination operate to relieve Seller of any then existing obligations to Purchaser arising hereunder.

13. Miscellaneous.

28:cjf:15
UT1.B8571
15:KYAM.agm

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

JOHN L. HUBER
PRESIDENT

March 1, 1993

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Bob:

RE: April 15, 1993 Reception and Dinner

Attached is a list of members of the Board of Water Works and others who may be invited to the April 15 reception and dinner.

Also enclosed is an opinion I asked Joe Helm, our General Counsel, to provide regarding whether this reception and dinner might involve the Open Meetings Law. Joe's opinion is that as long as the dinner is a social event with no planned agenda for discussing public business and no action, either formal or informal, is taken, the dinner does not come under the Open Meetings Law.

Sincerely,

John L. Huber
President

JLH/pj
Attachment

Distribution List:

The Honorable Jerry E. Abramson
Mayor of the City of Louisville
City Hall
601 West Jefferson Street
Louisville, KY 40202

Mr. Stewart E. Conner
Wyatt, Tarrant & Combs
2800 Citizens Plaza
Louisville, KY 40202

Mr. Phillip D. Bond
Metro United Way
334 E. Broadway
P.O. Box 4488
Louisville, KY 40202

Mr. Owen C. Hammons
7307 Nottoway Circle
Louisville, KY 40214-3211

Ms. Christine A. Hansen
2765 Casselberry Road
Louisville, KY 40205

Mr. John S. Moremen
Sulgrave Press
2005 Longest Avenue
Louisville, KY 40204

Mr. Irvin W. Quesenberry
Managing Director
National Asset Management Corp.
First National Tower, 6th Floor
Louisville, KY 40202

Mr. John L. Huber
President
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Mr. Joseph B. Helm
Brown Todd & Heyburn
1600 Citizens Plaza
Louisville, KY 40202

Ms. Joan Riehm
Deputy Mayor, Development
601 West Jefferson Street
Louisville, KY 40202

Alternates:

Mr. Gregory C. Heitzman
Vice President & Chief Engineer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Mr. Robert K. Miller
Vice Pres. of Finance & Treasurer
Louisville Water Company
435 South Third Street
Louisville, KY 40202

BROWN, TODD & HEYBURN

JOSEPH B. HELM
MARK B. DAVIS
W.C. FISHER, JR.
JAMES PARK, JR.*
JOHN T. BONDURANT
CHARLES S. CASSIS
MARSHALL P. ELDRED, JR.
CARL ARTHUR HENLEIN
DAVID W. CROMBO*
JOHN R. McCALL
D. PATTON PELFREY
KENNETH J. TUGGLE
C. EDWARD GLASSCOCK
WINSTON E. MILLER
WILLIAM L. SKEES, JR.†
PAUL E. SULLIVAN*
IRVIN ABELL III
TIMOTHY W. MARTIN
R. JAMES STRAUS
STEPHEN R. SCHMIDT
CHARLES R. KELTON
HAL NANCE BOGARD
F. GERALD GREENWELL
JOSEPH L. ARDERY
CHARLES E. ALLEN III
DALE E. AHEARN
JOHN G. HEYBURN II
KATHERINE RANDALL*
MICHAEL R. MERCER
FREDERIC H. DAVIS
KEITH G. HAILEY
E. LAMBERT FARMER, JR.*
STEPHEN E. EMBRY
MARK R. FEATHERT
RICHARD E. PLYNALE*

DEBBIE F. REISS
ROBERT Y. GWIN
VICTOR B. HADDOX
JAY MIDDLETON TANNON
SCOTT W. DOLSON
DAVID B. TACHAU
RICHARD H. HOPGOOD*
MICHAEL A. LUVISI
DAN L. OWENS
CHARLES M. PRITCHETT, JR.
JAMES A. HUGUENARD
DONALD L. MILLER III
KEITH MOORMAN*
WARREN J. HOFFMANN*
SCOTT T. DICKENS
JAMES A. DIESEL
CYNTHIA L. STEWART
H. LAWSON WALKER II*††
ROBERT S. WALKER III*
DONALD H. VISH
THOMAS C. WALKER*
SUSAN B. WETTLE
RICHARD L. WOOD
HELEN LUCIER
MARY ROSE TERRY
MARY ANN QUENTHER*†
JOEL B. TURNER
MARC E. MURPHY†
JO ANN ALEXANDER*
ROBERT W. DIBERT
ALAN K. MACDONALD
DAVID G. KLINESTIVER†
JOHN B. DOWDS
ROBERT L. TREADWAY*
KATHY P. HOLDER†

ALICE B. HERRINGTON
JEFFREY P. STODGHILL
R. GREGG HOVIOUS
KIRK C. JENKINS
W. BRUCE BAIRD
JUDITH K. BARTHOLOMEW
WILLIAM O. FLOWERS II
JAMES D. COCKRUM
ELIZABETH J. TURLEY*
DARTON T. ROGERS*
JOHN DAVID DYCHE
ROBERT L. HADDOX III
H. POWELL STARKS
THOMAS H. QUINN
JOHN W. HAYS*
COLIN HUGH LINDSAY
DAVID L. BECKHAM, JR.
JOHN B. NELSON III
ROBERT C. WEBB
KATHRYN K. WALLACE
DOUGLAS W. LANDDON†
MAUREEN P. TAYLOR
LOUANNE B. LOVE*
SUSAN J. MOHLER*
DONNA KING PERRY
ALAN B. KEEK*
CHRISTOPHER S. BURNSIDE
TWYLA K. SCUDDERT
PATRICK W. HADDEN*
JAMES F. ROSE*
ALISON H. STEMLER
JOHN E. KUHN, JR.
PAULA D. WALKER
JANA AULT PHILLIPS†
JOHN R. CROCKETT III

KATHRYN B. KENDRICK*
J. LEE MURRAY*†
LESLIE W. MOORE*
MICHAEL O. MURRAY†
MICHAEL W. OYLER†
RONALD C. LAZAS, JR.
CYV H. JARRETT
DUSTIN E. MEEK
CHARLES F. HOFFMAN

RUCKER TODD
PHILIP P. ARDERY
MARSHALL P. ELDRED
RANDOLPH A. BROWN
GEORGE E. DUDLEY
EDWARD S. DONNIE
MARK D. WILSON
OF COUNSEL

ELI H. BROWN III (1906-1974)
HENRY R. HEYBURN (1920-1991)
SAMUEL R. WELLS (1911-1986)

† ADMITTED TO BAR
KENTUCKY AND INDIANA
†† ADMITTED TO BAR
KENTUCKY AND OHIO

SIXTEENTH FLOOR
CITIZENS PLAZA
LOUISVILLE, KENTUCKY 40202-2870
(502) 580-5400
TELEX: 662050
TELECOPIER (502) 581-1087
(502) 580-0475

*LEXINGTON OFFICE
2700 LEXINGTON FINANCIAL CENTER
LEXINGTON, KENTUCKY 40507-1746
(606) 231-0000
TELECOPIER (606) 231-0011

**INDIANA OFFICE
SUITE 204
ELSBY EAST
400 PEARL STREET
P.O. BOX 868
NEW ALBANY, INDIANA 47151-0558
(812) 948-2800
TELECOPIER (812) 948-7994

*NORTHERN KENTUCKY OFFICE
50 EAST RIVERCENTER BOULEVARD
COVINGTON, KENTUCKY 41011
(606) 431-5550
TELECOPIER (606) 292-2578

February 26, 1993

Mr. John L. Huber, President
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Re: American Waterworks Company Board Invitation

Dear John:

Enclosed is a memorandum prepared for Chuck Allen and me by one of our fine young associates, Michael Green who, fortunately, found a good Attorney General's opinion and who has been able to distinguish our facts from the facts in several cases that hold against a claimed exemption from the open meeting law requirements.

Please call me, Chuck or Michael if you have any questions in this regard.

Sincerely,

Joseph B. Helm

Enclosure

28:cjf:15
UT1.C0854
15:hbr5.ltr

Copy for Marshall R. Mains, V Governor of Kentucky
2/27/93

M E M O R A N D U M

TO: Joseph B. Helm
Charles E. Allen III
FROM: Michael Z. Green
DATE: February 26, 1993
RE: Board of Water Works Dinner Invitation

Facts: The Board of Water Works ("BWW"), a Kentucky public agency, expects that it will be invited to a dinner held by the Board of Directors of the American Water Works Company, Inc. ("AWW"), a private entity and parent corporation of the Kentucky-American Water Company. The intent of the dinner will be a social gathering to get acquainted with each other and there will be no agenda for the discussion of any public business.

Issue: Will this dinner be subject to the requirements of the Kentucky Open Meetings Act (the "Act"), KRS §§ 61.805 - 61.850, assuming a quorum of BWW's members attend?

Brief Conclusion: No, as long as the dinner is limited to a social event at which BWW takes no board action, formal or informal.

Discussion & Analysis: The Act defines a meeting as "all gatherings of every kind, regardless of where the meeting is held, and whether regular or special and information or casual gatherings held in anticipation of or in conjunction with a regular or special meetings." KRS § 61.805. "All meetings of a quorum of the members of any public agency at which any public business is discussed or at which any action is taken by the agency, shall be public meetings, open to the public at all times...." KRS § 61.810. There are twelve exceptions to the Act that primarily pertain to meetings held by specific agencies or on specific topics. Id. None of the facts given would apply to any of these exceptions.

The intention of the Act is to prevent "secret" meetings where any public business is discussed or at which official action is taken. See Courier Journal v. University of Louisville, 596 S.W.2d 374, 376 (1980) ("it is the policy of the Commonwealth that the formation of public policy is public business and may not be conducted in secret" and a gathering is subject to public scrutiny when held "in conjunction with a meeting at which any public business is discussed."). However, a quorum of a public board may discuss a public matter at a gathering other than a regular meeting without violating the Act, if no "secret" meeting is held and no official action on that matter is taken until the matter is publicly aired in the press and broadcast media. Beckham v. City of Bowling Green, 743 S.W.2d 858, 861 (Ky. App. 1988).

If a quorum of BWW attends a social gathering which is not convened or hosted by it, the Act would not come into play because no meeting under KRS 61.810 has occurred. OAG-78-634. Also, when a quorum of the members of a board attend a social event hosted by an entity other than the public agency, there is no need to notify the news media of such attendance. Id.

It appears from these opinions that if the dinner remains a social event held by AWW with no organized discussion of public business, it is not subject to the Act. However, if any business is discussed at the dinner that is used in formulating BWW's public policy or taking an official action by BWW, a violation of the Act may ensue. This violation would be based on having a "secret" meeting by not following the "special meeting" requirements in KRS § 61.823, i.e., posting notice, notifying the media, and allowing public access.

Conclusion: Because the dinner is a social event hosted and convened by AWW, the Act should not apply to BWW even if a quorum of BWW's members attend. As long as the dinner does not have a planned agenda with discussion of public business or public policy of BWW, the dinner is not a secret meeting. If, at the dinner, the discussion of public matters by a quorum of BWW's members occurs by happenstance, there should not be a violation of the Act if no board action is taken or formulation of public policy is developed. However, if any public business matter is discussed by happenstance, BWW should ensure that it takes no later board action on this matter until it has been publicly aired.

MZG:450:\HELM4.MEM
UT1.C0854

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

February 23, 1993

Mr. Greg Heitzman, P.E.
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

+ 681

RE: KENTUCKY-AMERICAN WATER COMPANY
WATER SUPPLY PROJECT

Dear Greg:

Please find attached the following information concerning the above referenced project:

1) Meeting notes from February 17, 1993 meeting at LWC offices.

2) Preliminary cost estimate 1990 edition.

3) Copy of sample KAWC easement.

Also, note that the length of main from the Jefferson County Line to the connection to Kentucky-American's system is 51 miles (269,280 LF).

If additional information is required or if you wish to discuss this project, please contact me at (606) 268-6352.

Very truly yours,

Thomas A. Friley, P.E.
Operations Engineer

c: S.M. Stockton

TF:so

KENTUCKY-AMERICAN WATER COMPANY AT LOUISVILLE WATER COMPANY WATER SUPPLY PROJECT MEETING

The meeting began at 10:00 a.m. on Wednesday, February 17, 1993. Those in attendance from KAWC were Stan Stockton and Tom Friley. Greg Heitzman, Tony Elpers, Bill Rhoades and Debra Vaughn represented LWC.

Mr. Stockton explained that we needed to clarify exactly what LWC planned to provide in terms of pumping facilities. He requested that rate impacts be developed for three scenario's:

1) No pump station in Jefferson County, only transmission main improvements.

2) One pump station in Jefferson County (approximately 250 feet head) along with necessary transmission main improvements.

3) One "mega" pump station in Jefferson County to pump to KAWC gradient along with necessary transmission main improvements.

LWC agreed to provide preliminary rate impacts for these three scenario's.

The following miscellaneous items were also discussed:

- The possibility of KAWC requiring 30 MGD by the year 2020 - LWC is considering this possibility.

- LWC may consider using the same consultant for their facilities as KAWC.

- LWC has many reservations concerning a "mega" station in Jefferson County to pump to KAWC gradient. This will greatly effect the price we pay for water. LWC does not currently operate high head stations and they are very concerned about taking on this added risk. They also expressed concern over the additional costs associated with high pressure pipe at the river crossing.

- LWC mentioned that a suction tank would probably be necessary at the pump station on the Jefferson County line to insure adequate suction pressures at all times. Overflow would likely be around 850 feet. A suction tank is probably a good idea for all the pump stations on this project.

- The main size we choose to lay from Jefferson County to the KAWC system connection will dictate what size main LWC lays from the Gene Snyder Freeway to the Jefferson County line.

- LWC is willing to build and operate a pump station at the Jefferson County line with a head range of approximately 250 feet.

- Area in Jefferson County bounded by Floyds Fork Creek and the county line is designated a "limited growth area" (similar to green space).

- LWC would request that either a large metering unit be used (venturi) or a group of small meters but not both. This is to eliminate inconsistent readings.

- LWC requests that all work on easements that concerns LG&E be coordinated with Debra Vaughn of LWC.

- LWC does all programming for their telemetry system with in-house people. This may effect the type of "SCADA" controls in the pump station at Jefferson County.

The following information is being gathered to send to LWC:

1) System Engineering's requirements for LWC built and operated pump station.

2) Length of main from Jefferson County to connect to KAWC system.

3) Pricing breakdown on total project costs.

4) Sample KAWC easement.

The meeting adjourned at 12:45 p.m.

c: S.M. Stockton
L.C. Bridwell
R.A. Edens

TF:so

Kentucky-American Water Company
Alternate I - Louisville Purchased Water (Existing Conservation)

	Source (mgd)	Production (mgd)
Existing (1992)	35.0	63.4 (to distribution)
Needed (2005)	49.4	70.6
Projected Deficit	-14.4	- 7.2 (not including in plant use)
Provided by this option	15.0	15.0

Pipeline Item	By	Units	Qty	Unit Cost	Acct	Cost
Easements (50.8 mi)	KAWC	ft	268,224	$5	340	$1,341,000
36-Inch Pipeline (50.8 mi)	KAWC	ft	268,224	$98	343	$26,286,000
Kentucky River Crossing	ABH	ea	1	$1,250,000	343	$1,250,000
Stream Crossings	ABH	ft	675	$122	343	$82,000
60-Inch Rock Tunnel	ABH	ft	1,475	$508	343	$749,000
				Sub-Total		$29,708,000
				Engineering (2.5%)		$743,000
				Construction Administration (2.5%)		$743,000
				Ommissions & Contingencies (5%)		$1,485,000
					Acct 340	$1,341,000
					Acct 343	$28,367,000
				Total Pipeline w/o Eng		$31,936,000
				Total Pipeline		$32,679,000

Booster Station Item	By	Units	Qty	Unit Cost	Acct	Cost
Land Purchase	ABH	ea	3	$35,000	320	$105,000
Structure (30' x 95')	ABH	ea	3	$690,000	321	$2,070,000
Piping (inside)	ABH	lump	3	$320,000	321	$960,000
Yard Piping	ABH	lump	3	$200,000	321	$600,000
Chemical Facilities	SE	lump	3	$50,000	321	$150,000
Site Work	ABH	lump	3	$15,000	321	$45,000
Pumping Equipment	ABH	lump	3	$320,000	325	$960,000
Electrical Equipment	ABH	lump	3	$220,000	325	$660,000
Emergency Generator	ABH	ea	3	$375,000	326	$1,125,000
Standpipe	ABH	ea	3	$185,000	342	$555,000
				Sub-Total		$7,230,000
				Engineering (1/3 of 5%)		$120,000
				Construction Administration (5%)		$362,000
				Ommissions & Contingencies (5%)		$362,000
					Acct 320	$105,000
					Acct 321	$3,825,000
					Acct 325	$1,620,000
					Acct 326	$1,125,000
					Acct 342	$555,000
				Total Booster Station w/o Eng		$7,954,000
				Total Booster Station		$8,074,000

Louisville Purchased Water
Total Project Capital Cost (Existing Conservation) $40,753,000

THIS EASEMENT AGREEMENT, made and entered into by and between FARMERS BANK AND CAPITAL TRUST COMPANY, ADMINISTRATOR WITH WILL ANNEXED, OF THE ESTATE OF LUCILLE D. HOUSTON, whose mailing address is P. O. Box 309, Frankfort, Kentucky 40602, hereinafter called "GRANTORS" (whether one or more), and KENTUCKY-AMERICAN WATER COMPANY, a Kentucky Corporation having its principal offices at 2300 Richmond Road, Lexington, Fayette County, Kentucky, 40502, hereinafter called "COMPANY",

W I T N E S S E T H:

THAT for and in consideration of the sum of One Dollar ($1.00) and other good and valuable considerations, receipt of all of which is hereby acknowledged by Grantors, including the benefits to be derived by Grantors from the installation of water lines by Company as hereinafter provided, Grantors have bargained and sold and do by these presents grant and convey unto Company, its successors and assigns forever, an easement and permanent right-of-way over and across lands of Grantors for the purposes of constructing, inspecting, maintaining, operating, removing, rebuilding and repairing a water transmission and distribution line or lines thereon, and for adding to and from time to time installing pipe or pipes, with necessary fittings and attached facilities, including laterals which may run from said easement to the center of the adjacent public highway, together with full right and authority to enter upon the remaining lands of Grantors by using the most direct feasible route and utilizing existing driveways and gates, in the exercise of the rights herein granted, said easement and permanent right of-way being more particularly described as follows:

2851 PARKERS MILL ROAD

All that tract or parcel of land situated on the northwesterly side of Parkers Mill Road and the northeasterly side of Man O' War Boulevard in Lexington-Fayette County, Kentucky, and more fully described and bounded as follows, to-wit:

Beginning at a point where the northeasterly right-of-way of Man O' War Boulevard intersects the northwesterly right-of-way of Parkers Mill Road; thence with the northeasterly right-of-way of Man O' War Boulevard for two calls, N 41° 06' 03" W 850.00 feet and N 26° 10' 10" W 277.82 feet to a corner with Man O' War Golf Learning Center (Deed Book 1634, page 511); thence with the line of Man O' War Golf Learning Center N 70° 35' 38" E 30.21 feet; thence through the lands of the Estate of Lucille D. Houston for five calls, S 26° 10' 10" E 270.33 feet, S 41° 06' 03" E 833.35 feet, S 87° 03' 52" E 78.64 feet, N 52° 10' 35" E 138.86 feet and S 37° 49' 25" E 30.00 feet to a point in the northwest right-of-way of Parkers Mill Road; thence with the northwest right-of-way of Parkers Mill Road for two calls, S 52° 10' 35" W 150.00 feet and N 87° 03' 52" W 102.51 feet to the beginning.

Being a portion of the same property conveyed to Carl T. Houston and Lucille D. Houston, his wife, for their joint lives with the remainder in fee simple to the survivor, by deed dated April 17, 1945, of record in Deed Book 371, page 250, in the Fayette County

9J914182

Ky American Water Co.
2300 Richmond Rd
Lex, Ky 40502

P 1969

Clerk's office. Carl T. Houston died testate, a resident of Fayette County, Kentucky, on September 5, 1987, his will is of record in Will Book 119, page 765, in the aforesaid Clerk's office. Lucille D. Houston died testate, a resident of Fayette County, Kentucky, on June 5, 1989, her will is of record in Will Book 129, page 573, in said Clerk's office. Farmers Bank and Capital Trust Company was appointed as Administrator, with will annexed, of the Estate of Lucille D. Houston, by order of the Fayette District Court dated August 7, 1989 (89-P-1019).

TO HAVE AND TO HOLD said easement and permanent right-of-way, together with rights of ingress and egress over and across the remaining lands of Grantors for the purpose of exercising the rights herein granted, unto the Company, its successors and assigns forever. Grantors further covenant to WARRANT GENERALLY the title to the easement herein granted.

Company shall have the right to remove trees, brush and other obstructions or obstacles located upon the right-of-way which might interfere with Company's line or lines thereon or with the full exercise of its rights herein granted (but only when necessary for construction or maintenance of facilities) and Grantors, their successors and assigns, are specifically restricted from building, causing or permitting to be built any building or other structure upon the permanent right-of-way herein described. Company is, however, granted only an easement in said lands and Grantors shall continue to own, use, occupy and enjoy the lands not actually occupied by the lines or facilities of Company, and it shall be Grantors' right to make every use of said lands which will not interfere with the rights herein granted to Company, including the right to construct streets or roadways across said easement; provided, however, that Grantors shall not cause the grade or ground cover over Company's facilities to be altered.

For the considerations herein mentioned, Grantors further grant to Company a temporary easement for the purpose of constructing its lines and facilities, which temporary easement shall extend an additional thirty (30) feet on each side of the permanent easement herein granted (to the extent Grantor's lands extend such distance from said permanent easement), said temporary easement to terminate and revert to Grantors upon completion of construction of such lines and facilities.

In constructing its lines and facilities and in exercising its rights under this easement, Company shall use due care to prevent damage to the lands of Grantors, and in event the lands of Grantors are excavated, Company shall cause any ditch so excavated to be filled so that the surface of the ground will be returned to substantially the same level as before excavation. All surplus rock and dirt will be removed from the premises and disturbed area will be reseeded. Company will, upon completion of such construction, pay to Grantors such damage as may be caused by it, if any, to fences, growing crops, animals or roads of Grantors by reason of such construction and in exercising the rights herein granted.

IN WITNESS WHEREOF, Grantors have hereunto set their hands, this the 24th day of August, 19 92.

Lucille Hawkins Estate - Farmers Bank & Capital Trust Co.
Adm. W.W.A. by: [signature], Trust Officer

BOOK 1644 PAGE 338

STATE OF KENTUCKY)
FRANKLIN
COUNTY OF ~~FAYETTE~~)

I, Sally L Bell, a Notary Public in and for the State and County aforesaid, do hereby certify that the foregoing Easement was this day produced before me and that the same was thereupon acknowledged before me by Bobby K. Hall, Trust Officer, Farmers Bank & Capital Trust Co to be their free and voluntary act and deed, all of which is hereby certified to the proper office for record.

My Commission expires: 9-16-95.

WITNESS my hand and notarial seal on this the 24th day of August, 1992.

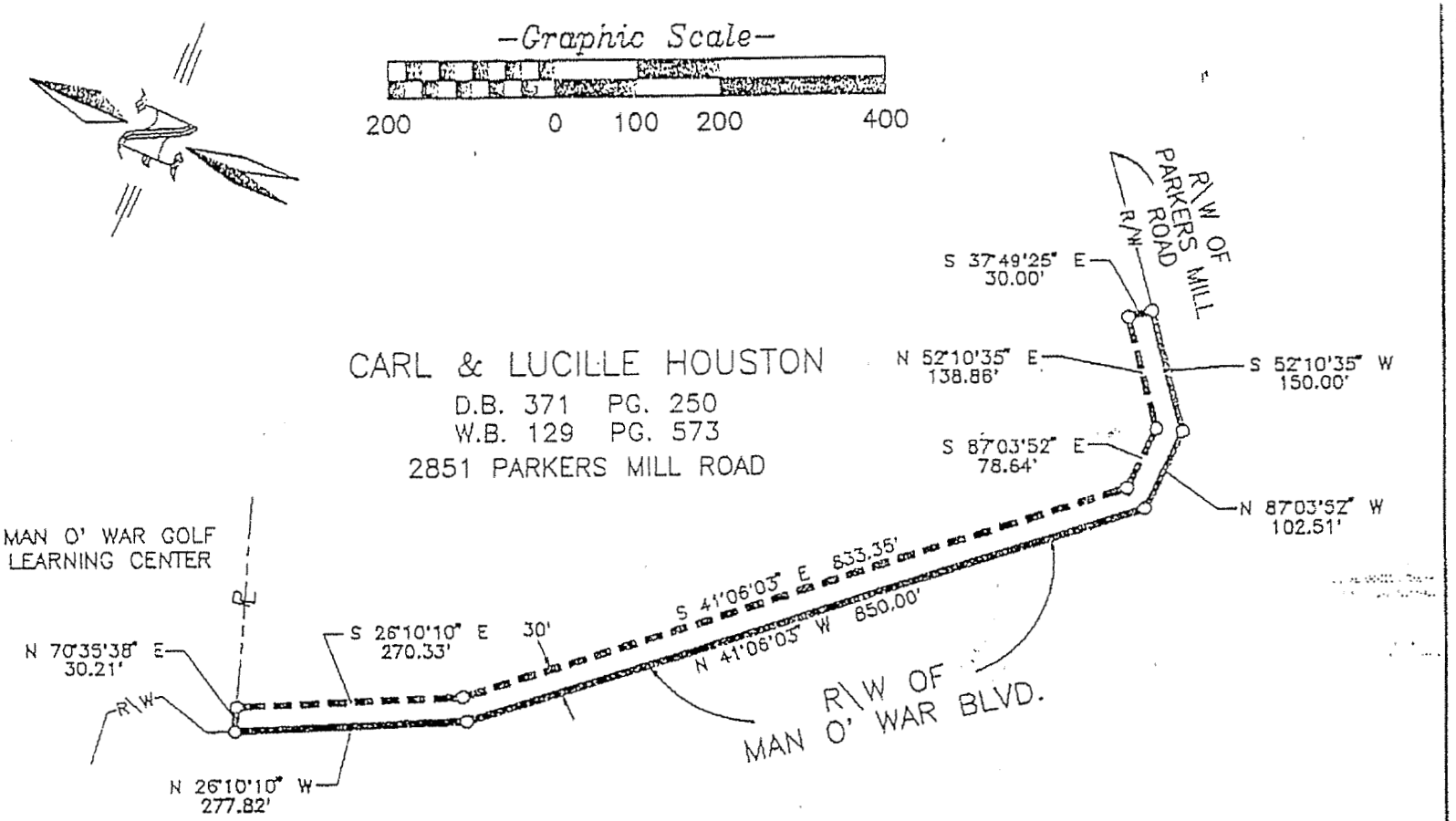
SALLY L BELL NOTARY PUBLIC

Sally L Bell
NOTARY PUBLIC, STATE AT LARGE, KENTUCKY

This Instrument Was
Prepared By:

Lindsey Ingram
First Security Plaza
Lexington, Kentucky 40507

BOOK 1644 PAGE 339



-PROPOSED EASEMENT-
TO THE
KENTUCKY-AMERICAN WATER COMPANY
THROUGH THE PROPERTY OF
ESTATE OF LUCILLE D. HOUSTON
DEED BOOK 371 PAGE 250
WILL BOOK 129 PAGE 573
2851 PARKERS MILL ROAD
IN LEXINGTON-FAYETTE CO., KY.
AUG. 1992 SCALE: 1"=200'

STATE OF KENTUCKY
William H. Finnie
67
REGISTERED
LAND SURVEYOR

William H. Finnie

WILLIAM H. FINNIE & ASSOCIATES
180 MARKET STREET
LEXINGTON, KENTUCKY
AUG. 1992
Scale: 1" = 200'
00503
P

2-0804

BOOK 1644 PAGE 340

ORDERED TO RECORD

PAID $ 11.50 TAX

SEP 14 2 07 PM '92

DONALD W. BLEVINS
FAYETTE COUNTY CLERK

BY _____ D.C.

STATE OF KENTUCKY
COUNTY OF FAYETTE SCT.

I, DONALD W. BLEVINS, CLERK OF SAID COUNTY COURT HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT HAS BEEN DULY RECORDED IN DEED BOOK 1644 PAGE 335. IN MY SAID OFFICE.

DONALD W. BLEVINS, CLERK

BY Gwyn M. Wood D.C.

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-585-2806

January 27, 1993

Mr. Robert A. Edens
Vice President & General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Via Fax: (606) 268-6327

Dear Bob:

This letter is intended as an update of recent Louisville Water Company activities in ratemaking planning.

Proposed Contract Language

We are currently reviewing the first draft of proposed contract language as prepared by our general counsel, Mr. Joseph B. Helm of Brown Todd & Heyburn. This draft is based on my correspondence to you regarding water sales agreement issues dated October 15, 1992 and December 16, 1992. After Louisville Water Company staff have completed their revisions, I intend to provide you a copy of this proposed contract language in the near future.

Recomputation of Demand Factors

The demand factors used in Louisville Water Company rate studies are based on a study performed by Pitometer Associates several years ago. Since the time of that study, industrial sales in the Louisville service area have decreased, while residential, commercial and utility sales have increased. A new study will be performed this summer by Louisville Water Company staff with assistance from Mr. David S. Hasson from our consulting engineers, CH2M Hill. I expect that the results of this recomputation of demand factors will be favorable to those customers with relatively constant demand.

Financing of Extension to Jefferson / Shelby County Line

As I mentioned in my letter to you dated December 16th, Louisville Water Company continues to consider the issuance of tax-exempt bonds to finance the extension of service to the Jefferson/ Shelby County line. Initial contacts have been re-established with several members of the financing team that handled the Louisville Water Company Series 1992 bond issue to discuss tax related matters while not disclosing Kentucky-American plans. It has not yet been resolved as to whether the issue will be straight tax-exempt or a private activity issue falling under the state cap.

Also, rate options for recovering this investment are still under consideration, and we plan to communicate with you further on this matter in the near future.

An Equal Opportunity Employer

Elevated Service Area Surcharge

Staff from our Engineering Planning Department are currently in the process of reviewing those assets within the elevated service area of Jefferson County to serve Lexington. Each element is being reviewed to evaluate its applicability to the Elevated Service Area Surcharge for sales to Kentucky-American. This surcharge is currently nineteen cents per thousand gallons.

Computation of System Development Charge

Again, as I mentioned in my letter to you dated December 16th, a System Development Charge will be assessed for the purpose of recovering past and programmed growth related capital expenditures. This charge will be based on the size of meters installed at the metering station. When additional meter capacity is added, then an additional System Development Charge would be collected based on the added capacity. The establishment of a System Development Charge, currently at seven hundred dollars per three quarter inch equivalent service, was a key component of the Jefferson County Water Extension Program implementation plan. However, because not all growth related capital expenditures in Jefferson County are affected by providing service to Lexington, I expect the System Development Charge for Kentucky-American to be a modification of the figure above.

Computation of Bill Format

The items to be included in the computation of the monthly water bill are being assembled and will be forwarded to you in future correspondence. However, this bill format may vary based on how the issues detailed above are finalized.

Please feel free to contact me with any issues that you would like to discuss next as we proceed on the development of this water sales agreement.

Sincerely,

John L. Huber
President

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

January 19, 1993

Mr. David M. Reves, P.E.
Senior Design Engineer
American Water Works Service Company, Inc.
1025 Laurel Oak Road
P.O. Box 1770
Voorhees, New Jersey 08043

RE: LWC Transmission and Distribution System Map

Dear Mr. Reves:

In response to your recent request I have enclosed two copies of the LWC Transmission and Distribution System Map.

Please feel free to contact my office if you have any questions or need further information.

Sincerely,

Alan S. Ferguson

for Gregory C. Heitzman
Vice President-Chief Engineer

attachments

/asf:0119gch1

LOUISVILLE WATER COMPANY

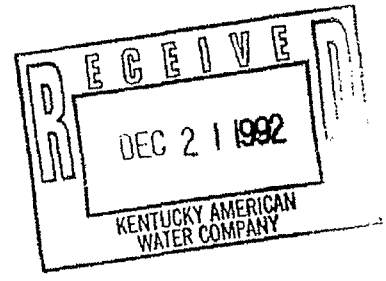
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

EDENS
ALLEN
BALLARD
BLANTON
BRAXTON
BURNS
BUSH
DAVIS
GRIFFITH
HAYMACK
McCONATHY
PROCTOR
SIMPSON
SINGLETON
SMITH
STARKS
STOCKTON
TRIMBLE
WILKINS
FILE
COPY TO
RETURN TO

December 16, 1992

Mr. Robert A. Edens
Vice President & General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502



Via Fax: (606) 268-6327

Dear Bob:

Re: Water Sales Agreement

This letter is intended as a follow up to our meeting held in Louisville on November 23, 1992, using letter dated October 15, 1992 regarding water sales agreement issues as reference.

Initial Sizing of Water Main Providing Service to Jefferson County-Shelby County Line (reference Section I.B.)

Based on a 15 million gallon per day requirement, a minimum 36" water main will be necessary at the Jefferson-Shelby County line. Louisville Water Company engineering staff is evaluating the possible upsizing of this main to serve currently unserved customers within Jefferson County. If this main is sized larger than 36" (i.e. 42" or 48"), then the excess cost of upsizing this main will be borne by Louisville Water Company until such time that additional capacity is deemed necessary and requested by Kentucky-American Water Company.

Dual Access to Supervisory Control Systems at Pumping Station (reference Section I.C.)

We concur with your request for dual access to supervisory control systems at the pumping station. Louisville Water Company will be responsible for maintenance activities at the metering and pumping stations.

Specific Identification of Costs (reference Section II.A.)

As part of developing an agreement that will serve Louisville Water Company and Kentucky-American Water Company interests both initially and into the long term future, one of the next steps to be taken in the development of this water sales agreement is the specific identification of costs attributable to providing service. By specifically identifying these costs, it should be possible to explain this agreement to our constituent groups initially as well as maintain clear understandings over the life of the agreement.

This process of specific identification should commence in early January 1993.

Recovery of Investment for Service to County Line (reference Section II.B.)

Louisville Water Company continues to consider the issuance of tax-exempt bonds to finance the extension of service to the Jefferson-Shelby County line. Rate options for recovering this investment are still under consideration, and we plan to communicate with you further on this matter in the near future.

System Development Charge Implementation (reference Section II.C.)

A System Development Charge will be charged for the purpose of recovering past and future growth related capital expenditures. This charge would be based on the size of meters installed at the metering station. When additional meter capacity is added, then an additional System Development Charge would be collected based on the added capacity.

Length of Contract (reference Section II.D.)

The minimum length of contract discussed was fifty years, with a notification of termination period of at least seven years. For discussion purposes, it was understood that the life of the contract would be seventy-five years.

Return on Equity Target (reference Section III.E.)

Louisville Water Company uses a return on equity target based on the five-year moving average of returns for a selected group of investor owned utilities. The Louisville Water Company target is 1% less than this five-year average. Attached is historical return on equity target data. We plan to review the companies that make up this target next year, so as to determine if more appropriate benchmark companies might replace existing companies in the target computation. Note that American Water Works Company is represented in the group of benchmark companies.

Surplus Water and Catastrophic Occurrences (reference Section IV.C.)

Water sold to Kentucky American, in excess of the minimum purchase amount, would be considered as surplus water sold only when surplus water is available in the Louisville Water Company system.

ANALYSIS OF RETURN ON EQUITY

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
INVESTOR OWNED WATER COMPANIES RETURN	12.32%	9.98%	11.38%	12.48%	13.40%	12.39%	13.05%	12.94%	11.79%	9.81%	10.75%	10.32%		
FIVE YEAR MOVING AVERAGE RETURN ON EQUITY				11.58%	11.99%	12.02%	12.59%	12.86%	12.67%	11.92%	11.59%	11.06%		
LWC TARGET RETURN ON EQUITY										11.86%	11.67%	10.92%	10.59%	10.06%

P

00510

Fmlen
KAWC WSP

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

M E M O R A N D U M

TO: R. A. Edens

FROM: C. D. Bush

DATE: December 1, 1992

SUBJECT: Notes Of Our Meeting With Louisville Water Company On November 23, 1992

In attendance for Louisville Water were Bob Miller, Vice-President of Finance, John Huber, President, Greg Heitzman, Engineer.

Mr. Huber agreed that this is not an event, but part of the process. In other words, this should not receive undue media attention.

You clarified in response to Huber's question that 15,000,000 gallons per day is what we are currently looking at for Kentucky-American in terms of pipe sizing.

There was discussion by Greg that consideration should be given to Shelby County versus Jefferson County for the booster station. He also mentioned that there is the possibility that they may not have to build a tank.

Options for the pipeline include pre-stressed concrete and steel pipe.

Bob Miller agreed that Kentucky-American would not have to absorb an additional part of plant if a current major customer or customers leave Louisville Water Company.

Kentucky-American representatives would be invited to attend the annual rate meeting.

Bob Miller said that the target return will be something that we will want to spend some time on.

Mr. Huber agreed with you that it would be an excellent idea to have an annual review between the two of you and your successors. He mentioned that on April 15, 1993, we would attempt to have a board meeting in Louisville to meet the board at Louisville Water Company.

CDB:kb

Equal Opportunity Employer

Printed on Recycled Paper

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

M E M O R A N D U M

TO: R. A. Edens

FROM: Stan Stockton

DATE: November 19, 1992

SUBJECT: KAWC Water Supply Project

Today Vince Guenthner of Louisville Water Company called me and asked for an estimated total cost of the overall above-referenced project. John Huber is meeting with Mayor Abramson tomorrow and had requested Vince obtain this information. He may or may not use this information. The estimated total capital cost is $50 million. This cost includes an estimated 55 miles of pipeline (from Jefferson County to KAWC's distribution system).

Please let me know if you wish to discuss.

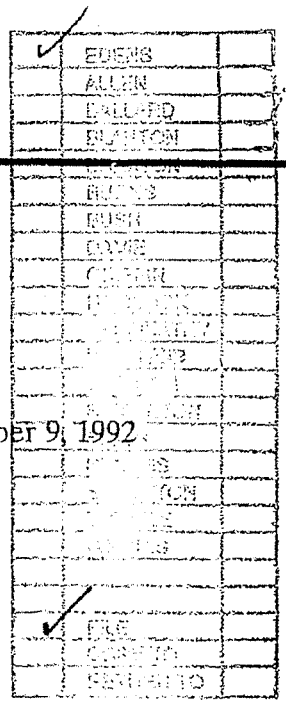
SS/ds

STAN

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386



November 9, 1992

Mr. John Huber
President
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Dear Mr. Huber:

Thank you for the informative meeting last Friday with Barbara and Vince. I appreciate the opportunity to discuss and coordinate the public relations plans for the KAWC Supply Project with the Louisville Water Company.

As you requested and I promised, enclosed is a copy of Kentucky-American's "working" plan. As we discussed on Friday, there are a few areas yet to be revised. However, these areas only concern the verbage, not the proposed activities.

We are happy to share this information with you. I only ask that Louisville Water Company respect the confidentiality of this document throughout the life of the project. I look forward to meeting with Vince and Barbara next week and hope I will also be given a copy of Louisville Water Company's work plan.

I have also enclosed lists of our American Water Works Company & Service Company, Southern Region and Kentucky-American Board of Directors. Their meeting schedule is indicated on each list.

Please do not hesitate to call me if you have any questions or if I can provide you with additional information.

Sincerely,

Jan A. Davie, APR
Community Relations Manager

JAD/ds

Enclosures

Board meets first Thursday of each month

DIRECTORS AND OFFICERS

AMERICAN WATER WORKS COMPANY, INC.

DIRECTORS

William O. Albertini
Rhoda W. Cobb
Elizabeth H. Gemmill
Henry G. Hager
Nelson G. Harris
William F. Hyland
George W. Johnstone
Marilyn W. Lewis
Nancy W. Pascal
Paul W. Ware
Ross A. Webber

OFFICERS

Marilyn W. Lewis ..... Chairman of the Board
Nelson G. Harris ..... Vice Chairman of the Board

George W. Johnstone ..... President and CEO
J. James Barr ..... Vice President and Treasurer
Edward W. Limbach ..... Vice President
Gerald C. Smith ..... Vice President
W. Timothy Pohl ..... General Counsel and Secretary
Robert D. Sievers ..... Comptroller

EXECUTIVE COMMITTEE

Marilyn W. Lewis (Chairman)
Rhoda W. Cobb (Vice Chairman)
Elizabeth H. Gemmill
Nelson G. Harris
George W. Johnstone
Paul W. Ware

AUDIT COMMITTEE

Nelson G. Harris (Chairman)
William O. Albertini
Elizabeth H. Gemmill
Henry G. Hager
Marilyn W. Lewis
Nancy W. Pascal
Paul W. Ware

COMPENSATION AND MANAGEMENT DEVELOPMENT COMMITTEE

Ross A. Webber (Chairman)
William O. Albertini
Rhoda W. Cobb
Elizabeth H. Gemmill
William F. Hyland
Marilyn W. Lewis
Nancy W. Pascal

NOMINATING COMMITTEE

Henry G. Hager (Chairman)
Rhoda W. Cobb
Nelson G. Harris
William F. Hyland
Marilyn W. Lewis
Ross A. Webber

RETIREMENT PLAN COMMITTEE

George W. Johnstone (Chairman)
Richard Strahlman (Secretary)
J. James Barr
Edward W. Limbach
W. Timothy Pohl
Gerald C. Smith

EMPLOYEES' STOCK OWNERSHIP PLAN COMMITTEE

George W. Johnstone (Chairman)
W. Timothy Pohl (Secretary)
J. James Barr
Edward W. Limbach
Robert D. Sievers
Gerald C. Smith
Richard Strahlman

May 7, 1992

DIRECTORS AND OFFICERS

AMERICAN WATER WORKS SERVICE COMPANY, INC.

DIRECTORS

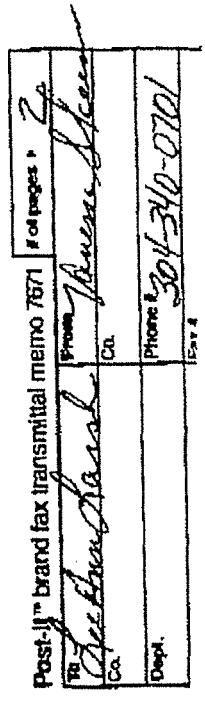
J. James Barr
Dillard L. Edgemon
George W. Johnstone
Theodore Jones, Jr.
Daniel L. Kelleher
Edward W. Limbach
W. Timothy Pohl
Robert M. Ross
Robert D. Sievers
Gerald C. Smith
Glen W. Thornburg

EXECUTIVE COMMITTEE

George W. Johnstone (Chairman)
W. Timothy Pohl (Secretary)
J. James Barr
Edward W. Limbach
Robert D. Sievers
Gerald C. Smith

OFFICERS

Chairman of the Board and President	George W. Johnstone
Senior Vice President-Financial Services	J. James Barr
Senior Vice President-Corporate Development and Governmental Affairs	Edward W. Limbach
Senior Vice President-Operations	Gerald C. Smith
Vice President and Treasurer	Joseph F. Hartnett, Jr.
General Counsel and Secretary	W. Timothy Pohl
Comptroller	Robert D. Sievers
Assistant Treasurer	Bruce E. Tillotson
Regional Vice President-Eastern	Daniel L. Kelleher
Regional Vice President-Mid-America	Glen W. Thornburg
Regional Vice President-Pennsylvania	Robert M. Ross
Regional Vice President-Southern	Dillard L. Edgemon
Regional Vice President-Western	Theodore Jones, Jr.
Vice President-Accounting	Robert D. Sievers
Vice President-Corporate Communications	T. Ward Welsh
Vice President-Corporate Services	W. Timothy Pohl
Vice President-Engineering	John S. Young
Vice President-Human Resources	Richard Strahlman
Vice President-Information Systems	Akiva F. Pipe
Vice President-Operations	Michael J. Caponigro
Vice President-Rates and Revenue	Bruce E. Tillotson
Vice President-Risk Management	Michael J. Kowalsky
Vice President-Water Quality	Richard H. Moser



Directors and Officers of other subsidiary companies are listed on Page 2(a).

September 8, 1992

AMERICAN WATER WORKS SERVICE COMPANY, INC.
(SOUTHERN REGION)
BOARD OF DIRECTORS **

Mr. George W. Johnstone, President
American Water Works Co., Inc.
1025 Laurel Oak Road
P.O. Box 1770
Voorhees, NJ 08043

J. James Barr, Vice President & Treasurer
Same address as above

Edward W. Limbach, Senior VP
Corporate Development & Governmental Affairs
Same address as above

Gerald C. Smith, Senior VP, Operations
Same address as above

Dillard L. Edgemon, Regional VP
American Water Works Service Co., Inc.
P.O. Box 593
Charleston, WV 25322

John H. Ware IV
P.O. 341
Oxford, PA 19363

Marilyn W. Lewis
550 Bunker Hill Road
Strasburg, PA 17579

Paul W. Ware
Penn Fuel & Gas, Inc.
2 East Main Street
Strasburg, PA 17579

** 1993 Meetings: April 15-16 (in Lexington)
July 27 (in Voorhees)
October 28 (in Voorhees)

KENTUCKY-AMERICAN WATER COMPANY
BOARD OF DIRECTORS **

Mr. George W. Johnstone, President
American Water Works Co., Inc.
1025 Laurel Oak Road
P.O. Box 1770
Voorhees, NJ 08043

J. James Barr, Vice President & Treasurer
Same address as above

Edward W. Limbach, Senior VP
Corporate Development & Governmental Affairs
Same address as above

Gerald C. Smith, Senior VP, Operations
Same address as above

Dillard L. Edgemon, Regional VP
American Water Works Service Co., Inc.
P.O. Box 593
Charleston, WV 25322

John H. Ware IV
P.O. 341
Oxford, PA 19363

Marilyn W. Lewis
550 Bunker Hill Road
Strasburg, PA 17579

Alex G. Campbell, Jr.
Industrial Development Company
P.O. Box 223
Lexington, KY 40501

William T. Young
W.T. Young Storage, Inc.
P.O. Box 1110
Lexington, KY 40589

William L. Rouse, Jr.
2201 Regency Road
Suite 602
Lexington, KY 40503

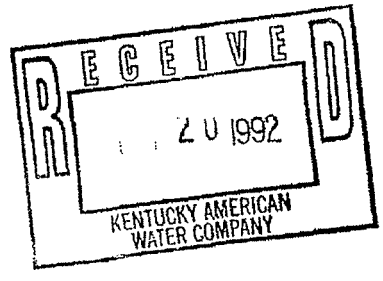
Paul W. Ware
Penn Fuel & Gas, Inc.
2 East Main Street
Strasburg, PA 17579

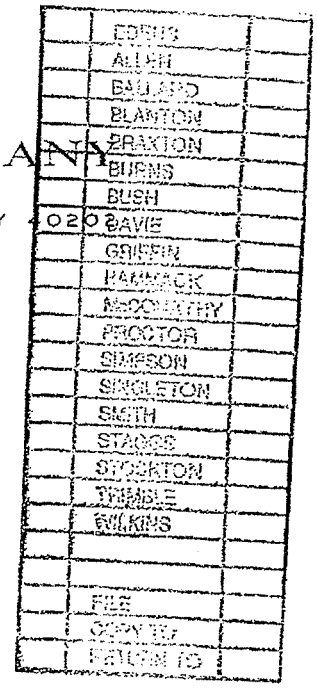
** 1993 Meetings: April 15-16 (in Lexington)
July 27 (in Voorhees)
October 28 (in Voorhees)

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-585-2806

October 15, 1992

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502





Dear Bob:

RE: Water Sales Agreement

We are making progress in exploring engineering and construction issues involved with Louisville Water Company providing water to Kentucky-American Water Company. As we recently discussed, we should also begin definition of issues to be covered in a water sales agreement. The following summarizes those issues which Louisville Water Company would like to see included in such an agreement.

I. Physical Plant Issues

A. Service would be provided at a metering station near the Jefferson/Shelby County Line at either Interstate 64 or US Highway 60. The metering station would be equipped to monitor both consumption and peak demand rates.

B. Service sizing would be based on projected flow schedules. It is contemplated that either a 36 inch main (capable of providing up to 15 million gallons per day) or a 48 inch main (capable of providing up to 30 million gallons per day) would be installed in Jefferson County from English Station Road to the Shelby County Line.

C. A storage facility (5 million gallons) and a pumping station (15 to 30 million gallons per day) would be built at the metering station. The pumping and metering stations would be fully automated, including telemetry feeds to both Louisville and Lexington. The pumping station would be sized to provide adequate lift to the Shelby/Franklin County Line.

II. Financing Issues

A. The existing and proposed assets used to provide service to Kentucky-American would be specifically identified so that the cost recovery for those items would not be double-counted.

II. Financing Issues continued

B. Louisville Water Company would consider issuing tax-exempt bonds to finance those assets in Jefferson County which would be for the exclusive purpose of providing service to Kentucky-American. Debt service payments on these facilities would be included as a line item on the monthly bill.

C. Louisville Water Company has established a System Development Charge for the purpose of recovering past and future growth related capital expenditures. A System Development Charge for those growth related assets attributable to providing service to Kentucky-American would be computed. Future added capacity would also be subject to the System Development Charge.

D. The length of the contract would be approximately 25 years, with provision for renewal based on mutual agreement.

III. Ratemaking Issues

A. Water rates would be reviewed and updated annually.

B. Louisville Water Company rates are established based on Cost of Service methodology as described in American Water Works Association Manual M1 (Water Rates).

C. Kentucky-American would be provided Louisville Water Company financial statements, annual budget, and rate study. Also, Kentucky-American would be notified of all meetings of the Louisville Board of Water Works.

D. Louisville Water Company would compute the estimated annual consumption by Kentucky-American for budget purposes. Kentucky-American would be allowed to provide information and estimates for consideration when the estimated annual consumption is computed.

E. The Return on Equity target to be included in the water rates would be based on an average of returns for a group of investor owned utilities.

F. Kentucky-American would be considered as a separate rate class, with a single rate block based on their own maximum day and maximum hour peaking factors. The peaking factors for the first year of the contract would be estimated.

III. Ratemaking Issues continued

G. There would be a fixed monthly charge for those customer costs directly attributable to providing service to Kentucky-American to recover customer account expenses.

H. There would be a single commodity rate to recover general pressure plane production costs plus a return on rate base. Production costs would be based on average system costs (Crescent Hill and Payne Treatment Plants) rather than plant specific costs (Payne Plant only).

I. An Elevated Service Area Surcharge would be added to the per thousand gallon commodity rate to recover boosted pumping and storage costs plus a return on rate base.

J. The billing schedule would be on a monthly basis.

IV. Water Quantity and Quality Issues

A. Kentucky-American would purchase at least 3 million gallons per day during October through April and at least 5 million gallons per day during May through September.

B. The maximum rate of flow for water to be taken under this contract would be defined. Existing facilities are capable of providing up to 15 million gallons per day, with potential expansion providing up to 30 million gallons per day.

C. Water sold to Kentucky-American would be considered as surplus water, sold only when surplus water is available in the Louisville Water Company system. We anticipate this provision would be invoked only in the event of a catastrophic occurrence.

D. Louisville Water Company would keep Kentucky-American Water Company continual apprised of water quality goals and water treatment strategy.

I look forward to hearing your thoughts on these issues.

Sincerely,

John L. Huber
President

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
TEL 502-569-3600 FAX 502-585-2806

Pricing must be well define Suitable to P.S.C.

October 16, 1992

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Mr. Edens:

Attached is the current draft of Water Sales Agreement issues as developed by telephone with John Huber. It is my understanding that John plans to call you on Monday morning to discuss these issues further.

Robert K. Miller

Robert K. Miller
Vice President of Finance
and Treasurer

bjm

attachment

Need section to review annually for success &/or problems or potential modifications

Taxes - Mfg ?

Meters En route ?

Rates Review Procedure ?

DRAFT

October 15, 1992

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Bob:

RE: Water Sales Agreement

We are making progress in exploring engineering and construction issues involved with Louisville Water Company providing water to Kentucky-American Water Company. As we recently discussed, we should also begin definition of issues to be covered in a water sales agreement. The following summarizes those issues which Louisville Water Company would like to see included in such an agreement.

I. Physical Plant Issues

A. Service would be provided at a metering station near the Jefferson/Shelby County Line at either Interstate 64 or US Highway 60. The metering station would be equipped to monitor both consumption and peak demand rates.

B. Service sizing would be based on projected flow schedules. It is contemplated that either a 36 inch main (capable of providing up to 15 million gallons per day) or a 48 inch main (capable of providing up to 30 million gallons per day) would be installed in Jefferson County from English Station Road to the Shelby County Line.

C. A storage facility (5 million gallons) and a pumping station (15 to 30 million gallons per day) would be built at the metering station. The pumping and metering stations would be fully automated, including telemetry feeds to both Louisville and Lexington. The pumping station would be sized to provide adequate lift to the Shelby/Franklin County Line.

D. LWC would keep KAW informed regarding any operating changes which would impact the availability of the supply contracted herein.

II. Financing Issues

A. The existing and proposed assets used to provide service to Kentucky-American would be specifically identified so that the cost recovery for those items would not be double-counted.

DRAFT

II. Financing Issues continued

B. Louisville Water Company would consider issuing tax-exempt bonds to finance those assets in Jefferson County which would be for the exclusive purpose of providing service to Kentucky-American. Debt service payments on these facilities would be included as a line item on the monthly bill.

C. Louisville Water Company has established a System Development Charge for the purpose of recovering past and future growth related capital expenditures. A System Development Charge for those growth related assets attributable to providing service to Kentucky-American would be computed. Future added capacity would also be subject to the System Development Charge.

D. The length of the contract would be approximately 25 years, with provision for renewal based on mutual agreement.

III. Ratemaking Issues

A. Water rates would be reviewed and updated annually.

B. Louisville Water Company rates are established based on Cost of Service methodology as described in American Water Works Association Manual M1 (Water Rates).

C. Kentucky-American would be provided Louisville Water Company financial statements, annual budget, and rate study. Also, Kentucky-American would be notified of all meetings of the Louisville Board of Water Works.

D. Louisville Water Company would compute the estimated annual consumption by Kentucky-American for budget purposes. Kentucky-American would be allowed to provide information and estimates for consideration when the estimated annual consumption is computed.

E. The Return on Equity target to be included in the water rates would be based on an average of returns for a group of investor owned utilities.

F. Kentucky-American would be considered as a separate rate class, with a single rate block based on their own maximum day and maximum hour peaking factors. The peaking factors for the first year of the contract would be estimated.

DRAFT

III. Ratemaking Issues continued

G. There would be a fixed monthly charge for those customer costs directly attributable to providing service to Kentucky-American to recover customer account expenses.

H. There would be a single commodity rate to recover general pressure plane production costs plus a return on rate base. Production costs would be based on average system costs (Crescent Hill and Payne Treatment Plants) rather than plant specific costs (Payne Plant only).

I. An Elevated Service Area Surcharge would be added to the per thousand gallon commodity rate to recover boosted pumping and storage costs plus a return on rate base.

J. The billing schedule would be on a monthly basis.

IV. Water Quantity and Quality Issues

A. Kentucky-American would purchase at least 3 million gallons per day during October through April and at least 5 million gallons per day during May through September.

B. The maximum rate of flow for water to be taken under this contract would be defined. Existing facilities are capable of providing up to 15 million gallons per day, with potential expansion providing up to 30 million gallons per day.

C. Water sold to Kentucky-American would be considered as surplus water, sold only when surplus water is available in the Louisville Water Company system. We anticipate this provision would be invoked only in the event of a catastrophic occurrence.

D. Louisville Water Company would keep Kentucky-American Water Company continual apprised of water quality goals and water treatment strategy.

I look forward to hearing your thoughts on these issues.

Sincerely,

John L. Huber
President

P

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P. O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8201

October 2, 1992

BP 92-12

Mr. Gregory C. Heitzman
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Re: Kentucky-American Water Company
KAWC Supply Line

Greg:

Enclosed is a copy of the March 1990 Alvord, Burdick, & Howson report entitled "Evaluation of Source of Supply Alternatives" which we are forwarding for your general information. Please note that the information in this report was used selectively in conjunction with other information internally generated, and that our final recommendations and cost estimates for developing additional source of supply and production improvements may differ from that contained within. We are also enclosing a copy of the American Water Works Company, Inc. 1991 Annual Report for your general information.

We are presently finalizing administrative and staffing issues for this project, and will be in contact with you again in the near future. If you need anything else at this time, please contact me at (609) 346-8278.

David M. Reves

DMR/d

c: T. A. Friley - KAWC
S. M. Stockton - KAWC

(92KAWC)

R42

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

	EDENS
	ALLEN
	BLANTON
	BRAXTON
	BURNS
	BUSH
	DAVIE
	GRIFFIN
	HAMMACK
	McCONATHY
	SINGLETON
	SLADE
	SMITH
	STAGGS
✓	STOCKTON
	TRIMBLE
	WILKINS
✓	FILE
✓	COPY TO RAE

MEMORANDUM

TO: D. L. Edgemon

FROM: R. A. Edens

DATE: September 17, 1992

SUBJECT: **Louisville Water Company - 92-12**

On 9/16/92, Dave Reves met with us regarding the above project to discuss the preliminary schedule which was attached to his 9/8/92 letter. There are a few areas that I would like to call to your attention. They are as follows:

1. We agreed that it would be appropriate to meet with some of the New Jersey-American folks involved in the Tri-County project to learn from some of their experiences. At this time, I'm planning on having Stan Stockton, Ben Hammack and Tom Friley attend. This meeting will be held in New Jersey.

2. Regionalization is an issue that I would like to have a clear company position on prior to making a public announcement of this program. As we have discussed this previously, I'll not expand on this subject at this time.

3. Permit requirements is another subject that was discussed. I believed a legal review is necessary because of the large number of political entities involved. When we were contemplating the building of KRSII, we had Stoll, Keenon and Park conduct such a review.

4. Easement acquisition is an enormous undertaking, especially assuming we are not successful in obtaining permission to utilize the federal highway right-of-way that we are actively pursuing. Regarding of the route utilized, this work will require a consultant of some type to acquire the necessary easements. We hired Stoll, Keenon and Park to obtain a portion of the easements for the Toyota pipeline and this worked well.

5. Location and/or ownership of booster pumping station at or near the Jefferson County line is another issue that appears to have differing opinions. You may recall that I advised you that Louisville Water Company was suggesting that they own and operate such a facility just within the county line. During our discussion, concerns were expressed about Kentucky-American not having ownership of this station. This will also require further discussion and input.

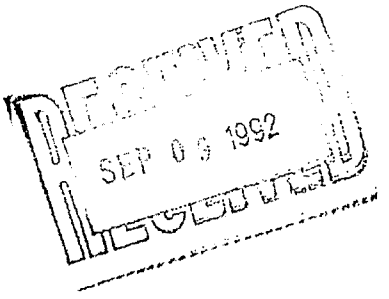
6. An item that also requires discussion is the staffing levels at Kentucky-American. If we are to be involved in this project in the manner that Dave's preliminary schedule provides - and I agree that we should - we are simply not staffed to accommodate a project of this size. Our current staffing level is inadequate to undertake a project of this size. Accordingly, this needs serious consideration.

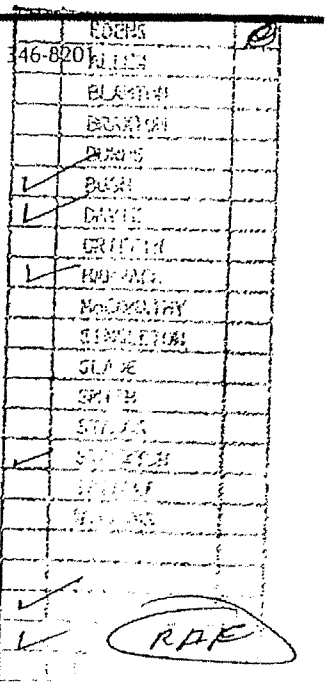
Dillard, I have specifically not offered solutions for each of the above because I think it's appropriate for them to be addressed by all appropriate parties. As you would suspect, I have some thoughts and ideas on each one of them, which I would appreciate the opportunity to discuss with you at your convenience. I will make myself available as required to discuss all of these issues. I also feel that there is a degree of urgency to resolving all of them.

RAE/ll

American Water Works Service Company, Inc.

1025 Laurel Oak Road • P.O. Box 1770 • Voorhees, New Jersey 08043 • (609) 346-8200





September 8, 1992

BP 92-12

Mr. Robert A. Edens
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Re: **Develop Ohio River Supply**

Dear Bob:

Attached is a preliminary schedule for the referenced project for your review prior to our meeting on Wednesday, September 16th at 10:00 a.m. We would like to finalize the schedule on the 16th and ultimately develop more specific scope for each of the line items. All Kentucky-American personnel who will be involved in this project should be present at this meeting.

This will also confirm our meeting with the engineers from the Louisville Water Company at 10:00 a.m. on Thursday, September 17th. This meeting should allow us to familiarize the Louisville engineers with the general scope of the project, and how it will effect the need for engineering improvements within their system.

Please call me if you have any questions or need any other information.

Sincerely,

David M. Reves

DMR/b
Att.

c: D. L. Edgemon - Southern Region (w/att.)

Lee Ann
Copy to Jon
Please ck ex

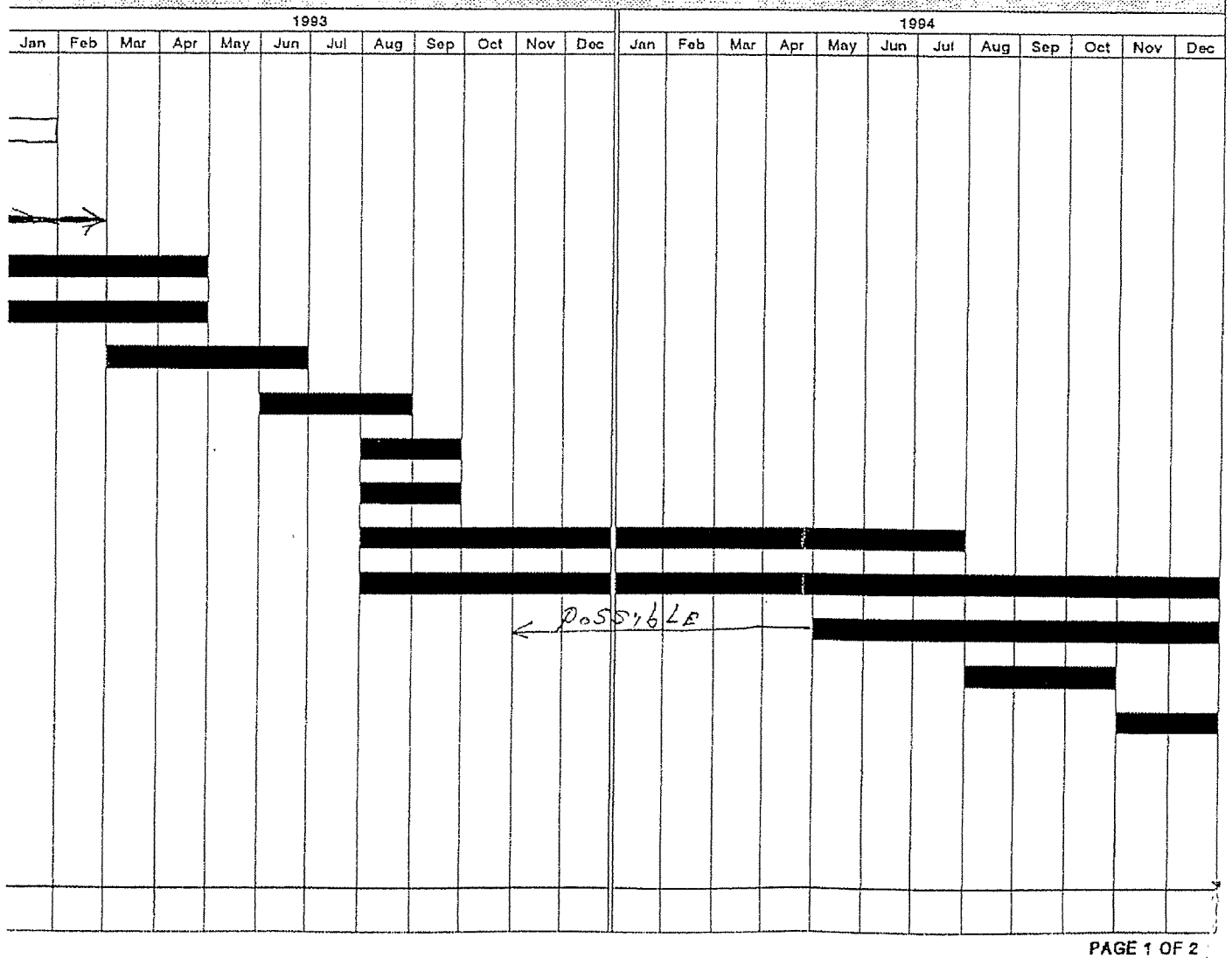
KENTUCKY–AMERICAN WATE
DEVELOP OHIO RIVER S
CAPITAL BUDGET PROJECT
DESIGN/CONSTRUCT SC

DESCRI OF ACTI	...Y RESP.	1995 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Preliminary discussions w/ Louisvill... Company	KAWC/SE											
Public announcement of the project	KAWC											
Meet w/NJAWC to discuss Tri–County project	KAWC/SE											
Finalize pipeline route and investigate booster station sites	KAWC/SE											
Regionalization efforts – Define finished water sales	KAWC											
Preliminary permit investigation including local permits	KAWC/SE											
Develop design concept	SE											
Public Service Commission preliminary review	KAWC/SE											
Negotiate final agreement w/Louisville Water Company	KAWC											
Options on booster station land	KAWC											
Initiate detailed design	SE											
Easement acquisition	KAWC											
Permitting	KAWC/SE											
Advertise for construction bids	SE											
Certificate of Convenience and Necessity	KAWC/SE											
Construct pipeline	SE											
Construct booster stations Inspection ??	SE											
Place facilities in service	KAWC/SE											
CASH FORECAST (1000's)												

00529

P

UCKY–AMERICAN WATER COMPANY
DEVELOP OHIO RIVER SUPPLY
PITAL BUDGET PROJECT BP 92–12
DESIGN/CONSTRUCT SCHEDULE



P

00530

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

RAE

M E M O R A N D U M

TO: D. L. Edgemon

FROM: Jan Davie, APR

DATE: June 16, 1992

SUBJECT: Meeting With Louisville Water Company

Enclosed you will find minutes from the meeting Bob and I had with Louisville Water Company on Thursday, June 11. Bob asked that I forward these minutes to you.

Please do not hesitate to call me should you have questions.

JD/ds

Enclosure

Equal Opportunity Employer

Printed on Recycled Paper

Kentucky-American Water Company
Meeting with Louisville Water Company

June 11, 1992

The following individuals were in attendance:

John Huber
President
Louisville Water Company

Vincent Guenthner
Government Affairs Manager
Louisville Water Company

Bob Edens
Vice President and Manager
Kentucky-American Water Company

Jan Davie,APR
Community Relations Manager
Kentucky-American Water Company

Mr. Huber began the meeting by identifying the key political groups of concern to the Louisville Water Company and the Mayor of Louisville. He addressed the following four: 1) elected officials in Jefferson County, 2) elected officials in Fayette County, 3) elected officials in the areas along the Kentucky River (Of particular concern were the key questions - Can the Louisville Pipeline also be their solution? Where does this alternative leave them?) and 4) constituents along the pipeline route - particularly water suppliers who might fear loosing their customer base.

Mr. Guenthner then addressed two of the their primary political concerns. First, the possibility of being regulated by the Public Service Commission as a result of the pipeline, which they do not want. Secondly, the possibility of the Kentucky legislature empowering fiscal courts with the ability to regulate rates that municipal utilities charge so that city and county residents are not charged differently.

Mr. Guenthner explained that Representatives Rocky Adkins of Sandy Hook, Richard Turner of Tompkinsville, and Jim Maggard of Jackson recently presented the fiscal court regulation idea at a joint interim meeting of the Economic Development, Tourism and Energy Committee. Louisville Water Company is concerned about this proposal because counties along the pipeline route might be able to set rates for any water Kentucky-American resales to them. This would be by virtue of the fact that Louisville Water Company could be supplying water to a lot of counties through Kentucky-American's resale along the route. (In a follow-up conversation that Ms. Davie had with Mr. Guenthner on Friday, Mr. Guenthner expressed a desire for Kentucky-American to join with Louisville Water Company in presenting opposition to any such legislation.)

Mr. Huber then asked Mr. Edens about Kentucky-American's plans to present the Louisville pipeline alternative to the PSC and the public. Mr. Edens explained the following timeline: June 26 - file the Least-Cost Comprehensive Planning Study chapter on Source of Supply with the PSC; mid-July (around 7/13-14 or 7/20-22) meet with the PSC to discuss the LCCPS, and after the PSC's reaction to the study meet with the local key groups. Mr. Edens stressed it is our hope to delay these meetings until after the November election.

Mr. Edens went on to inform Mr. Huber of his recent conversation with Lexington Mayor Scotty Baesler in which he also expressed a desire to delay any public discussion until after the election. Mr. Edens said Mayor Baesler also reiterated his support of the Louisville Pipeline alternative and his plans to call Mayor Abramson to express this support.

Edens then discussed the decision tree approach to the pipeline alternative contained in the Least-Cost Comprehensive Planning Study. Mr. Huber was pleased with this approach stating he favors that we "soft sell" the pipeline alternative to the PSC. Mr. Huber said he perceives our key message as being "We must have an alternative source of supply decision by 1994 so we may have adequate supply in time for our peak demands in 1997."

At this point, Mr. Edens expressed our concern about Louisville Water Company's open meeting requirement for the company's board meetings. He inquired about the possibility of Louisville Water Company claiming an exemption under Kentucky Revised Statutes 61.810. Mr. Huber said they are sensitive to this concern and have discussed exemption with their attorney. According to him, the only exemptions allowed are for economic development and personnel matters.

Mr. Edens then asked Ms. Davie to give Mr. Huber and Mr. Guenthner an overview of the governmental materials we had developed for the meeting. A copy of the materials were given to Mr. Huber by Mr. Edens. They included lists of federal, state and local officials in the counties of Anderson, Fayette, Franklin, Shelby and Woodford - those affected directly by the pipeline route. The materials also identified committees the state officials serve on and how the November election and the redistricted federal and state congressional districts would affect these contacts. Additionally, Ms. Davie addressed how Kentucky-American interfaces with the four key political groups identified by Mr. Huber. She briefly discussed the Kentucky River Basin Steering Committee, the Kentucky River Task Force, the Water Supply Planning Councils, and Bluegrass Tomorrow.

Mr. Edens then asked Mr. Huber to further explain what Mayor Abramson considers to be "political liabilities." Mr. Huber then addressed the Mayor's plans to run for a third term as Mayor in 1993 and interest in a statewide race - possibly for governor or U.S. senator in 1995 or 1996. Mayor Abramson does not want Louisville Water Company to take the position that they are "selling" water to Lexington. Rather he prefers the position that Lexington is "buying" from Louisville. The Mayor's position will be that Louisville has an abundant resource with available reserve capacity to supply Lexington. The Mayor wants the pipeline support to grow from <u>outside</u> Jefferson County.

Mr. Huber then addressed another political concern of Louisville Water Company's - how will it appear to Jefferson Countians when Louisville sells water to Lexington while some areas inside Jefferson County do not have drinking water? He went on to explain the company is mandated by state law to supply outlying areas in Jefferson County. The framework is being developed to have this accomplished by 1996 or 1997.

Mr. Huber then briefly gave Mr. Edens and Ms. Davie the history on this mandate, which included background on the formation of Louisville Water Company. In doing so, he mentioned that Louisville Water Company has 220,000 customers and sells water wholesale to several surrounding counties, one of which is Shelby County.

Since there were no further questions or comments, Mr. Huber thanked Mr. Edens and Ms. Davie for meeting with he and Mr. Guenthner. Both expressed that the meeting was very informative. In conclusion, Mr. Edens promised to share a copy of the Least-Cost Comprehensive Planning Study with Mr. Huber when it is complete.

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

✓	[illegible]	
	ALLEN	
	[illegible]	
	BRAXTON	
	BURNS	
	BUSH	
	DAVIE	
	GRIFFIN	
	HANSACK	
	McCONATHY	
	SINGLETON	
	SLAGE	
	SMITH	
	STAGGS	
	STOCKTON	
	TRIMBLE	
	WILKINS	
✓	FILE	
	COPY TO	
	RETURN TO	

June 15, 1992

Mr. Vincent Guenthner
Government Affairs Manager
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Dear Vincent:

It was a pleasure meeting with you and Mr. Huber last Thursday. We certainly enjoyed a very informative meeting.

Thank you for calling me on Friday to share with me the names of the state representatives I had requested during Thursday's meeting. I have enclosed the two newspaper articles we discussed during our telephone conversation.

Vincent, I look forward to giving you a tour of our facilities sometime in the near future. Please be sure to give me a call when you are planning to be in the Lexington area.

In the meantime, if there is anything I can do for you, please do not hesitate to call me at 606-268-6332.

Sincerely,

Jan A. Davie, APR
Community Relations Manager

JAD/ds

Enclosures

Equal Opportunity Employer

Printed on Recycled Paper

80535

RAE

Kentucky-American Water Company

2300 Richmond Road • Lexington, Kentucky 40502

606-269-2386

	EDENS
	ALLEN
	BLANTON
	BRAXTON
	BURNS
	BUSH
	DAVIE
	GRIFFIN
	HANMACK
	McCONATHY
	SINGLETON
	SLADE
	SMITH
	STAGGS
	STOCKTON
	TRIMBLE
	WILKINS
✓	FILE
✓	COPY TO RAE

PERSONAL

May 29, 1992

John Huber, President
Louisville Water Company
433 South Third Street
Louisville, Kentucky 40202

Dear John:

I appreciate the opportunity to visit over the phone with you today. While I may appear to be a little over cautious, my desire is to make the process go as smoothly as possible. I think that if the schedule we discussed is followed, we should be able to minimize the opportunity for undesirable results.

As I indicated, I plan on writing the Public Service Commission on or about June 10, 1992 to advise that the final chapter of the Least Cost/Comprehensive Planning Study (Source of Supply) will be sent to them on June 15, 1992. At the same time, I will request a meeting to discuss the entire Least Cost/Comprehensive Planning Study document with them on or close to July 14, 1992. They, of course, will determine the precise date. As we further discussed, you will plan on a more detailed discussion with your Board at their July 14, 1992 meeting. I believe this will work well in view of your understanding of your Board's current position. If you should become aware of any information that would affect this matter in the future, please let me know about it. Assuming that all of this works as planned, we will plan on advising Kentucky-American's Board at its July 24, 1992 meeting of the posture of the matter at that time.

John, I firmly believe that, if we can take the position that we have discussed that this issue is in a planning mode and nothing is finalized at present, we should be able to operate and work out the details without various entities becoming unnecessarily and prematurely involved. Please feel free to contact me at your convenience.

Sincerely,

Robert A. Edens
Vice President and Manager

RAE/ll

c: D. L. Edgemon

Louisville-Kentucky American Waterworks Service Company (KAWWSC)
Water Supply Proposal for Lexington, Kentucky

May 14, 1992

This fact sheet provides data relating to primary transmission supply to Kentucky American Water Works Service Company at the Jefferson/Shelby County line near Interstate 64, including hydraulics, sizing, cost estimates, and water rates.

I. Hydraulic Boundary Conditions

A. B.E. Payne pumping capacity 45 mgd (expandable to 60 mgd)

B. English Station Road 60-inch PCCP transmission supply
(maximum capacity 50-75 mgd, assuming expansion of BEP)

C. Westport BPS capacity 21 mgd
(plans for expansion to 45 mgd 1994-1997)

D. Westport Road 48-inch PCCP transmission supply
(maximum capacity 30-45 mgd, assuming expansion at Westport BPS)

E. English Station 10 mg Standpipe
1. 864 ft msl overflow
2. 840-850 ft msl hydraulic grade
3. 770 ft msl ground elevation

F. Jefferson/Shelby County line
1. 810 ft msl hydraulic grade (minimum)
2. 760 ft msl ground elevation

II. Projected Flow Schedule

	Schedule "A"	Schedule "B"
1995	4.0 mgd	6.0 mgd
2000	5.0 mgd	8.0 mgd
2005	7.5 mgd	8.0 mgd
2010	8.0 mgd	12.5 mgd
2020	10.0 mgd	15.0 mgd
2030	12.0 mgd	20.0 mgd
2040	14.0 mgd	25.0 mgd
2050	15.0 mgd	30.0 mgd

00537

III. Transmission Main Route and Sizing

A. Route Length (35,000 lf)

1. English Station Standpipe to I-64 at Freeway (12,000 lf)
2. I-64 at Freeway to Jefferson/Shelby County line (23,000 lf)

B. Schedule "A" (15 mgd) requires 36-inch main *(minimum)*

C. Schedule "B" (30 mgd) requires 48-inch main *(minimum)*

IV. Storage and Pumping

A. Schedule "A"

1. Initially 5 mg storage at Jefferson/Shelby County line
2. 15 mgd pumping station
   a. (1) 10 mgd, (2) 5 mgd, (2) 2.5 mgd pumps
   b. TDH of 250 ft will lift to Shelby/Franklin County line

B. Schedule "B"

Storage and pumping can be expanded to meet 30 mgd demand

V. Schedule "A" Cost Estimate

35,000 lf 36-inch water main @ $140/lf	$4,900,000
35,000 lf x 1.2* cu/lf @ $40/cy	$1,680,000
(2) 60-inch interstate tunnels (rock: 800 lf @ $500/lf)	$400,000
(2) stream crossings (400 lf @ $200/lf)	$80,000
35,000 lf easement (50 ft wide @ $5/lf)	$175,000
subtotal *(transmission only)*	**$7,235,000**
Property for pump station and storage	$100,000
(1) 5mg standpipe *(initial)*	$1,200,000
(1) 15 mgd pump station, metering, and telemetry	$500,000
subtotal *(transmission, storage, pumping)*	**$9,035,000**
engineering @10%	$900,000
contingency @ 15%	$1,300,000
Total	**$11,235,000**

(say $11,000,000)

* assumes average 3 ft depth to rock

P

00538

VI. Capital Recovery

Annual debt service on initial investment of $11.0 million to recover cost of main extension from English Station to I-64 at the Jefferson/Shelby county line.

	6%	7%	8%
20 years	$959,000	$1,038,300	$1,120,400
30 years	$799,100	$886,500	$977,100
40 years	$731,100	$825,100	$922,500

VII. 1992 Water Rates

A. Annual Service Charge $25,275

1. To recover customer account expenses
2. Assumes (5) 8-inch meters (5 x $421.25 x 12)

B. Commodity Charge

To recover general pressure plane production costs, plus return on rate base

1. Existing Rate Blocks
   a. < 10 mg per month $1.09/tg
   b. 10 - 20 mg per month $0.88/tg
2. New Rate Block
   a. > 20 mg per month $0.80/tg
   b. Assumptions
      (1) Production costs based on average systems costs (CH and BEP) rather than plant-specific costs (BEP only)
      (2) Return on rate base of 9.4%
      (3) Peaking Factors
         (a) Maximum Day 1.2
         (b) Maximum Hour 1.4

C. Elevated Service Area Surcharge $0.19/tg

To recover booster pumping and storage costs, plus return on rate base

VIII. System Development Charge

A.	5 mgd capacity	$280,000
B.	10 mgd capacity	$560,000
C.	15 mgd capacity	$840,000

5 mgd = 3,500 gpm and requires (5) 8-inch meters

(1) 8-inch meter = 80 equivalent units (e.u.)

1992 SDC of $700 for 3/4-inch service at 20 gpm or 1 equivalent unit (e.u.)

SDC = 5 meters x 80 equivalent units x $700/e.u. = $280,000

IX. Contractual Issues

A. Long Term Contract (30-50 years)

B. Demand Contract (take or pay)

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

TEL 502-569-3600 FAX 502-585-2806

JOHN L. HUBER
PRESIDENT

April 6, 1992

CONFIDENTIAL

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Bob:

RE: Water Resource Alternatives

As we have discussed, the Louisville Water Company has available capacity which could be used to supply the Kentucky-American Water Company. The Ohio River provides an abundant and reliable resource for the Louisville Water Company. Even during a drought as severe as experienced in 1988, the Louisville Water Company only withdrew approximately one percent of the Ohio River flow at Louisville. Water intake, treatment and pumping facilities are rated at 270 million gallons per day (MGD) by the State of Kentucky. This 270 MGD capacity compares with a historical peak consumption of approximately 195 MGD, which occurred during the summer of 1988.

Since Kentucky-American must develop additional supply capacity and the Louisville Water Company has significant additional supply capacity, exploring a mutually advantageous solution is warranted. This letter is to confirm that we are interested in pursuing a possible water sales agreement with you.

Since our evaluations are preliminary at this time, we concur that discussions should be confidential until the feasibility and desirability of a water sales agreement are more fully explored.

We are currently evaluating key issues that must be defined and quantified in proposals which might lead to a water sales agreement.

Sincerely,

John L. Huber
President

jcm

KENTUCKY AMERICAN WATER COMPANY
AN AMERICAN WATER WORKS SYSTEM COMPANY

1325 Virginia Street, East
Box 593
Charleston, West Virginia 25322

Dillard L. Edgemon,
President

Telephone
(304) 340-0700

January 9, 1992

Mr. John Huber, President
Louisville Water Company
435 South 3rd Street
Louisville, Kentucky 40202

Dear John:

I want to express my appreciation to you for the time you devoted to Bob Edens and me on Tuesday, and again, thanks very much for lunch. It is always a pleasure to visit Louisville and the folks at Louisville Water Company.

As I promised during our conversation, I am enclosing a copy of the conservation policy, along with a background paper explaining the rationale, which was recently adopted by the National Association of Water Companies. You will note that the policy statement urges consideration of local need, local water demand characteristics, and regional hydrologic factors rather than uniform national criteria when establishing conservation goals. It also stresses that benefits should exceed implementation costs. This policy will serve as the basis for the Association's efforts to influence conservation legislation that will undoubtedly be included as part of the Clean Water Act reauthorization.

Again, thanks very much. We look forward to hearing from you soon regarding whether there is an interest on the part of Louisville Water Company to sell water to Kentucky-American.

Sincerely,

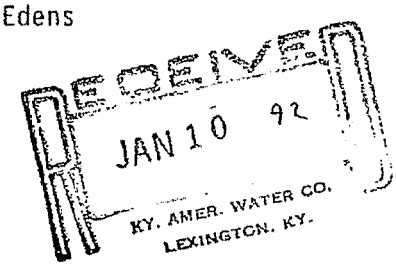
Dillard

Dillard L. Edgemon

DLE:vs

Enclosures

cc: R. A. Edens



	EDENS	✓
	ALLEN	
	BLANTON	
	BRAXTON	
	BURNS	
	BUSH	
	DAVIE	
	GRIFFIN	
	HANHACK	
	McCONATHY	
	STINGLETON	
✓	SLADE	AR
	SMITH	
	STAGGS	
	STOCKTON	
	TRIMBLE	
	WILKINS	
✓	FILE	
✓	COPY TO RAE	

NAWC
NATIONAL ASSOCIATION OF WATER COMPANIES

JAMES B. GROFF, EXECUTIVE DIRECTOR

National Association of Water Companies

Policy Statements Regarding Water Conservation

Water conservation is the application of prudent demand management strategies to reduce the inefficient use of water. It includes measures that maximize the useful life of a source of supply, to the extent that the benefits of the measures exceed the costs to implement the actions.

Water is a renewable resource. However, specific geographical regions of the United States have limited water supplies. In addition, dissimilar water demand patterns exist between regions. These factors require that water conservation strategies be applied on a distinct, regional basis by all users. Water conservation goals must be established based on local need, local water demand characteristics and regional hydrologic factors, rather than uniform national criteria.

The Federal government should complement, but not duplicate local water conservation efforts. The Federal government should enact a national plumbing code and provide continuing support for research to develop efficient water use techniques. A federal clearinghouse should be established to distribute water demand management information and promote public education programs for water conservation.

NAWC endorses the execution of management initiatives under the control of water utilities which are aimed at reducing the loss or inefficient use of water.

The process of meeting water demand requirements in an economical and efficient manner requires a mix of supply and demand side planning and management strategies.

Water conservation strategies must be technically and economically feasible, socially acceptable, and must not jeopardize the financial integrity of the utility.

#

SUITE 1212, 1725 K STREET N.W. • WASHINGTON, D.C. 20006 • (202) 833-8383

National Association of Water Companies
Policy Statements Regarding Water Conservation
Background Paper

Policy Statement: Water conservation is the application of prudent demand management strategies to reduce the inefficient use of water. It includes measures that maximize the useful life of a source of supply to the extent that the benefits of the measures exceed the costs to implement the actions.

Background: Water conservation measures may be enacted to overcome a broad variety of operating problems such as extraordinary peak demands, excessive average usage, inadequate storage or pipe capacity, supply contamination, or drought. The cause(s) for such problems typically establish the water conservation goal. Based on the diversity of causes for such events, the corresponding water conservation goals may vary broadly from reducing peak use, to reducing average use, to limiting water use to essential purposes only.

A policy statement regarding water conservation must include a concise definition of the term "water conservation" that may be applied in a universal fashion. Based on this criterion and the above considerations, the common purpose for all water conservation measures is not the mere reduction of all water use, but rather the reduction of inefficient water use.

The extent to which water conservation measures are included in the operations of a water utility must be based on local water use patterns and a net accrual of benefits to its customers. Therefore, the beneficial effects and costs of water conservation programs must be quantifiable.

Policy Statement: Water is a renewable resource. However, specific geographical regions of the United States have limited water supplies. In addition, dissimilar water demand patterns exist between regions. These factors require that water conservation strategies be applied on a distinct, regional basis by all users. Water conservation goals must be established based on local need, local water demand characteristics and regional hydrologic factors, rather than uniform national criteria.

Background: The importance of designing a water conservation strategy based on local needs is necessary since water use across the country is not uniform. Similarly, the manner in which water is used plays an important role in determining which conservation measure(s) should be implemented, if any. These considerations

00544

support the need to fit water conservation measures to the specific water supply and demand characteristics of a hydrologic region.

In addition, efforts at water conservation cannot be targeted solely at public water supply customers who generally account for a small percentage of water used. To be effective, water conservation must be practiced by all users, including industry and agriculture.

Policy Statement: The Federal government should complement, but not duplicate local water conservation efforts. The Federal government should enact a national plumbing code and provide continuing support for research to develop efficient water use techniques. A Federal clearinghouse should be established to distribute water demand management information and promote public education programs for water conservation.

Background: It is in the interest of the Federal government to promote consideration for water conservation in the management of the nation's water resources. In view of the need to design water conservation programs based on local water supply and demand conditions, the efforts of the Federal government should focus on those water conservation strategies which lend themselves to common application to all regions of the country.

For example, a national plumbing code can provide a uniform means to improve the efficiency of end-use water consumption. Water efficient fixtures achieve reliable water savings since their performance is largely unaffected by the behavioral factors which contribute to discretionary water use. Similar legislation enacted in at least 10 states has provided a predictable strategy for reducing indoor water demand. A national plumbing code would avoid a piecemeal approach for water demand management by centralizing uniform performance standards for plumbing fixtures.

Continuing research to improve water conservation techniques would provide a mechanism to maintain the plumbing code at a level that coincides with available technology. In addition, the Federal government should support research that expands innovative water supply management strategies such as water reuse and reclamation.

Public education is a common element for water conservation programs that is largely unaffected by regional variation in water supply and demand. Water customers welcome information about how they can save money on water bills. Therefore, public education is an important tool for water conservation programs to show consumers how and why to use water efficiently, even in

"water rich" areas. Public education programs can focus on inducing favorable user habit changes or provide information to help customers make sound capital investments that improve water efficiency. Many entities, including governmental agencies, schools and public water suppliers, can play a role in disseminating information to end-users regarding the benefits of water conservation.

Policy Statement: NAWC endorses the execution of management initiatives under the control of water utilities which are aimed at reducing the loss or inefficient use of water.

Background: Water system management practices such as metering, leak detection and repair, the performance of water audits, and water rate structures that discourage the inefficient use of water are considered to be good operating procedures for water utilities. Therefore, these practices should be the initial components for any water conservation program. Such measures are particularly desirable since they are usually under the direct control of the utility. In contrast, end-use demand management programs are less reliable and more complex since reliance is placed on the behavior and practices of water consumers to use water efficiently.

Policy Statement: The process of meeting water demand requirements in an economical and efficient manner requires a mix of supply and demand side planning and management strategies.

Background: The need for additional water supply for a given service area is commonly expressed as the difference between water demand and available supply, which is measured and forecast over time. A gap between water supply and demand may be reduced by expanding the water supply, implementing demand management measures, or a combination of both strategies. This latter, holistic approach for water resource management recognizes that water conservation does not create additional supply and by itself cannot eliminate long-term water resource demands. However, integration of demand and supply management measures can provide an efficient means to satisfy water demand deficits.

Least-cost planning is one method of integrating demand and supply management strategies. Least-cost planning is an evaluation of the growth and operation of a public water system to determine the best mix of supply and demand management strategies to meet safe, adequate and reliable levels of service. The resultant least-cost plan provides for economic stability and a reasonable return on investment for the utility, environmental protection, and equity among ratepayers, all at the lowest costs to the utility and the customer.

Policy Statement: Water conservation strategies must be technically and economically feasible, socially acceptable, and must not jeopardize the financial integrity of the utility.

Background: There are numerous examples of successful water conservation programs throughout the country. However, the results of such programs rarely translate directly to other geographic areas due to variation in end use, climatic conditions, per capita water consumption, and socioeconomic effects. Based on these considerations, the elements of a water conservation program must first relate to the actual patterns of water use for a given area. Second, the selected strategies should be capable of causing a measurable reduction in water use or loss. Third, there must be a likelihood that the selected conservation measures will be adopted by the community, since the ultimate responsibility for water conservation lies with the water user.

The application of water conservation measures may adversely impact the financial position of a water utility. First, as a result of decreased consumption, a utility may experience lower sales and must therefore be authorized to replace that portion of its revenue stream that is lost due to lower usage. Second, traditional ratemaking formulas for water utilities have allowed an entity to earn a return on investment on plant. In order to avoid disincentives for enacting water conservation programs, a utility must likewise be able to earn a return on its investment for demand side management practices.

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: *Dillard Edgemon*

FROM: *R. A. Edens*

SUBJECT: *Source of Supply - Louisville Water Company*

DATE: *February 5, 1990*

Dillard, now may not be the time to pursue this matter additionally, but having reviewed the file on this subject and picking up on our discussion in our office on January 16, it appears there may be some discrepancy regarding the base price per 1,000 gallons. In a letter dated January 17 from Foster Burba (copy attached), I have underlined in paragraph 5, information which certainly could be construed to say the cost would be $.73 per 1,000 gallons and that there would be no demand charge. I realize this conflicts with the handwritten memo you received from Ed Limbach and is contrary to what I heard Foster say on January 4.

As I indicated previously, this may not be the time to further discuss this in view of the current situation. However, I thought it would be appropriate for me to share our thoughts following additional review of the matter.

If we should need to discuss this, I would appreciate the opportunity to do so.

RAE:kb

Attachment

C: *S. Slade* ✓

Memo
To Dillard
Subject: Louisville Negotiations

When our last negotiating session ended this is what Louisville wanted for cost of water:

.99¢ base price / 1,000 gallons
? — .19¢ high service pumping charge per thousand
* .40¢ per thousand to finance distribution improvements to supply us water at county line
#1.58 / 1,000 gallons

There might be some give on the numbers but not much.

* capital costs will vary on the basis of utilization of pipeline ie:

Assume line cost # 1,000,000
Louisville Capital Cost 9.66%
Assume 12 month ave day 3.83mg
Assume facilities designed for 8.0mgd

2

3.83 mgd is 12.8% of 30 mgd or we would be utilizing 87.21% of pipeline.

Revenue requirement =

9.66% × 1,000,000 = 96,600 ×
87.21% = $84,244.86

Cost per 1,000 gallons =
$84,244.86 ÷ 1,397,950,000 or .06¢/1,000 gal

Cost goes down as utilization increases

What gets me is Louisville cost to produce is .23¢/1,000 - if they sell to us at 40-50¢ they are making out - but they haven't been willing to wheel & deal.

For example if we take a base load of 3.83 mgd & they sold water to us at .50¢ they could reduce rates by $230,515 & this number grows with time -

3

At 30 mgd it would be $1,861,500 / yr.

I even agreed to let them raise base cost every year to their average cost to produce.

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: File

FROM: Susan Slade

DATE: November 27, 1989

SUBJECT: Louisville Water Company

Attached is a copy of Louisville Water Company's evaluation of the facilities within Jefferson County necessary to supply a potential connection with Kentucky-American.

The information was provided with the understanding that it would be used for our internal planning purposes only and will not be distributed or discussed with outside parties without Louisville Water Company's permission.

SRS/ll

Attachment

LOUISVILLE WATER COMPANY

435 South Third Street
Louisville, Kentucky 40202
FAX Number: (502) 585-2806

FAX Transmission Cover Sheet

Date: 11-22-89

Time: 2:00 pm.

Please deliver the following page(s) to:

Name: Susan Slade

Company: Kentucky American Water Company

FAX Number: (606) 268-6327

From: Bill Egart

Phone Number: (502) 569-3600

LWC (Third Street) is transmitting 9 page(s) including cover sheet.

If you need to have a resend of any page, please call the above number. If we do not hear from you, we will assume that you have received the page(s) satisfactorily.

Thank you.

FAX'd By: LYNN HUMPHREY

INTEROFFICE MEMORANDUM
LOUISVILLE WATER COMPANY

TO: Distribution September 7, 1989

FROM: Frank C. Campbell

Subject: Kentucky-American Waterworks Service Co.
Attach: G. Heitzman 8-31-89

Planning proposals for a transmission main extension to the Shelby County line at I-64 have been examined with the following conclusions:

(a) Minimum size for 15 MGD is 36" diameter
(b) Optimum size for 30 MGD is 48" diameter
(c) Cost estimates (1990 dollars)
36" = $6,070,000
48" = $7,740,000
(d) Neglecting inflation, an economic evaluation favors building a 36" main as first increment, even if it's capacity were exhausted as early as year 2020.
(e) Assuming inflation, the economic evaluation would favor the larger main as the first increment, but only on Schedule B; i.e. at the parameters assumed any economic advantage disappears about the 2036 if the need for 15 MGD transmission is deferred beyond that date.
(f) Should Jefferson County and surrounding areas become growth oriented it is likely that other through routes will suggest transmission feeders to the East. Any such construction would reinforce the point of delivery to KAWWSC. One such potential reinforcing route is Taylorsville Road.

Recommendation:
LWCo should seek a guarantee from KAWWSC for Schedule B and, if obtained, proceed to build the 48" main. Lacking guarantee, however, LWCo should insist on a contract which does not specify size of main, but rather a statement of ambient pressure at point-of-delivery at a given rate of flow not to exceed 15 MGD.

iu

xc: F. Burba
J. Huber
E. Richey
B. Egart
S. Hubbs
B. Rhodes
J. Ford

INTEROFFICE MEMORANDUM
LOUISVILLE WATER COMPANY

TO: Frank C. Campbell August 31, 1989

FROM: Greg Heitzman

RE: Transmission Main Schedule
English Station to 6 Mile East

As requested, a short report in memo form is presented for preliminary evaluation of a 36-inch/48-inch transmission main extension from the English Station standpipe near Shelbyville Road to a point identified as Interstate 64 and the Jefferson-Shelby county line. Preliminary routes are attached.

I. The following assumptions are used for this evaluation:

A. Projected Flow Schedules

	Schedule A	Schedule B
1992	3.Ø MGD	5.Ø MGD
1995	4.Ø MGD	6.Ø MGD
2000	5.Ø MGD	8.Ø MGD
2005	7.5 MGD	10.Ø MGD
2010	8.Ø MGD	12.5 MGD
2020	10.Ø MGD	15.Ø MGD
2030	12.Ø MGD	20.Ø MGD
2040	14.Ø MGD	25.Ø MGD
2050	15.Ø MGD	30.Ø MGD

B. Hydraulic Boundary Conditions

1. English Station Hydraulic Grade: 840 to 860 feet msl
2. I-64/Jefferson County Line Hydraulic Grade 790 to 860 feet msl
3. English Station Ground Elevation: 770 feet msl
4. I-65/Jefferson County Line Elevation: 730 feet msl
5. Design Maximum Headloss: 50 feet head (840-790 feet msl)
6. Pressure Range along route: 17 to 125 psi (570 to 750 feet msl)

II. Transmission Main Sizing:

A. Headloss at 15 MGD:
33,000 feet 30" Main: 74 feet (32 PSI) inadequate
33,000 feet 36" Main: 31 feet (13 PSI) adequate
33,000 feet 42" Main: 14 feet (6 PSI) adequate
33,000 feet 48" Main: 7.5 feet (3 PSI) adequate

B. Headloss at 30 MGD:
33,000 feet 30" Main: 267 feet (116 PSI) inadequate
33,000 feet 36" Main: 110 feet (48 PSI) inadequate
33,000 feet 42" Main: 52 feet (23 PSI) marginal
33,000 feet 48" Main: 27 feet (12 PSI) adequate

C. Conclusion
15 MGD Design Flow requires minimum 36-inch main
30 MGD Design Flow requires minimum 42-inch main (48-inch main recommended)

III. Cost Estimate:

A. Schedule A - 15 MGD Design Flow - 36-inch main

30,000 l.f. 36-inch in dirt @ $120.00/l.f.	$3,600,000
3,000 l.f. 36-inch in paving @ $180.00/l.f.	540,000
6,500 c.u. rock @ $60.00/c.y.	390,000
2 - 60" Interstate Tunnels 800 l.f. @ $500.00/l.f.	400,000
2 - Stream Crossings 200 l.f. @ $100.00/l.f.	20,000
30,000 l.f. easement acquisition @ $2.00/l.f.	60,000
Master Meter and Vault at County Line	20,000
Subtotal	$5,030,000
Engineering 5%	$ 250,000
Subtotal	$5,280,000
Contingency 15%	$ 790,000
36-Inch Main Total Estimate	$6,070,000

B. Schedule B - 30 MGD Design Flow - 48-Inch Main

30,000 l.f. 48-inch in dirt @ $160.00/l.f.	$4,800,000
3,000 l.f. 48-inch in paving @ $240.000/l.f.	720,000
6,500 c.y. rock @ $60.00/c.y.	390,000
2 - 72" Interstate Tunnels 800 l.f. @ $500.00/l.f.	400,000
2 - Stream Crossings 200 l.f. @ 100.00/l.f.	20,000
30,000 l.f. easement acquisition @ $2.00/l.f.	60,000
Master Meter and Vault at County Line	20,000
Subtotal	$6,410,000
Engineering 5%	$ 320,000
Subtotal	$6,730,000
Contingency 15%	$1,010,000
48-Inch Main Total Estimate	$7,740,000

IV Present Day Value of Constructing 30 MGD 48-Inch main in 1992 rather than year 2020 when schedule B projected flow rate exceeds 15 MGD:

Alternative 1: Construct two 36-inch mains in 1992 and 2020 to meet 30 MGD demand on Schedule B.

Alternative 2: Construct one 48-inch main in 1992 to meet 30 MGD on Schedule B.

Future Value (cost of construction) Table Schedule A & B
(assume 5.5% inflation)

	1990	1992	2020
Schedule A	$6,070,000	$6,756,000	$30,252,000
Schedule B	$7,740,000	$8,615,000	——

Providing 30 MGD capacity by year 2020 (Alt 1) on Schedule B will require two 36-inch mains built in years 1992 and 2020, yielding total cost of $13,512,000 in 1992 dollars. Providing 30 MGD capacity in 1992 (Alt 2) using Schedule B requires an investment of $8,615,000 in 1992 dollars. Economic analysis compares these two alternatives using present value (PV) analysis, assuming an interest rate of 8.66% (taxable bond rate per ELR, 8/31/89).

$$PV_{1\ 1992} = \$6,756,000 + \frac{1}{(1+0.0866)^{28}}(\$30,252,000)$$

$$PV_{1\ 1992} = \$6,756,000 + \$2,957,000 = \$9,713,000$$

$$PV_{2\ 1992} = \$8,615,000$$

Alternative 2 (one 48-inch main in 1992) calculates to the preferred investment by $1,098,000 (1992 dollars) over Alternative 1 (two - 36-inch mains, 1992 and 2020). This evaluation inflates at 5.5% the cost of constructing a second 30-inch main in 2020 to $30,252,000 and discounts this value at 8.66% to a present value (1992) of $9,713,000 for Alternative 1 scenario. Alternative 2 has a 1992 construction value of $8,615,000.

Conclusion: Based on the assumption of 5.5% inflation and 8.66% interest, a 48-inch main built in 1992 to serve a 30 MGD capacity (Alternative 2) is more cost effective than construction of two 30-inch facilities in years 1992 and 2020 (Alternative 1). Present value savings in 1992 dollars is $1,098,000.

[Note that if inflation is neglected or assumed to be zero, the present value of Alternative 1 (PV_1) Becomes $7,416,000. The result is that two 36-inch mains built in 1992 and 2020 are more cost effective than construction of one 48-inch main in 1992. this yields a present value savings of $1,199,000. ($8,615,000 less $7,416,000).]

iu

xc: Elba Richey

INTEROFFICE MEMORANDUM
LOUISVILLE WATER COMPANY

TO: Greg Heitzman

FROM: Frank C. Campbell

Subject: Transmission Main Schedule(s)
English Station to 6 Miles East.

Discussions with a prospective customer suggest an increasing sale of metered water at a point adjacent to the south R/W of I-64 at the Jefferson/ Shelby County boundary line.

Two schedule of prospective daily flow rates are as follows:

	Schedule A	Schedule B
1992	3 MGD	5 MGD
95	4.0 "	6 "
2000	5.0 "	8 "
2005	7.5 "	10 "
2010	8.0 "	12.5 "
2020	10.0 "	15 "
2030	12 "	20 "
2040	14 "	25 "
2050	15 "	30 "

Beginning assumptions are:

Minimum pipe size 36"
Distance to pt. of use 33,000 l.f.
C-factor = 130
Assured p.p. Eng. Sta. = 840.0 msl
Assured p.p. pt. of del. 790.0 msl (26 psl @ 730)

Q. Minimum pipe size to deliver 15 MGD

Q. Minimum pipe size to deliver 30 MGD

Q. Cost estimate each pipe size:
(a) 6,500 c.y. rock
(b) 3 - stream x-ings (50 ea)
(c) 2 - Interstate tunnels (500' rock)
(D) easement expense $2/ft.

Q. For Schedule B, present day value of constructing 30 MGD capacity in 1992 rather than year 2020. (inflation rate 5.5%).

Please produce a short report before September 5, 1989.

iu
XC: B. Rhodes
J. Huber

INTEROFFICE MEMORANDUM
LOUISVILLE WATER COMPANY

TO: Frank C. Campbell September 8, 1989

FROM: Greg C. Heitzman

Re: Follow Up Memo
Transmission Main Scheudule
English Station to 6 Mile East

An additional inquiry was made to determine the year at which the economic advantage of constructing 48-inch transmission capacity to support 30 MGD disappears; i.e. determine the breakeven year of investing $6,756,000 in 1992 for 15 MGD - 36 inch main capacity and a second 15 MGD 36-inch main in year n to provide a total 30 MGD capacity, versus initial 1992 construction of a 30 MGD - 48-inch main.

Assumptions:
- inflation = 5.5%
- discount rate = 8.66%
- PV_1 = 36-inch 1992 value = $6,756,000
- PV_2 = 48-inch 1992 value = $8,615,000
- n = breakeven year

$$PV_1 + \left[\frac{1}{(1.0866)^n}\right] (1.055)^n PV_1 = PV_2$$

$$\$6,756,000 + \left[\frac{1}{(1.0866)^n}\right] (1.055)^n \$6,756,000 = \$8,615,000$$

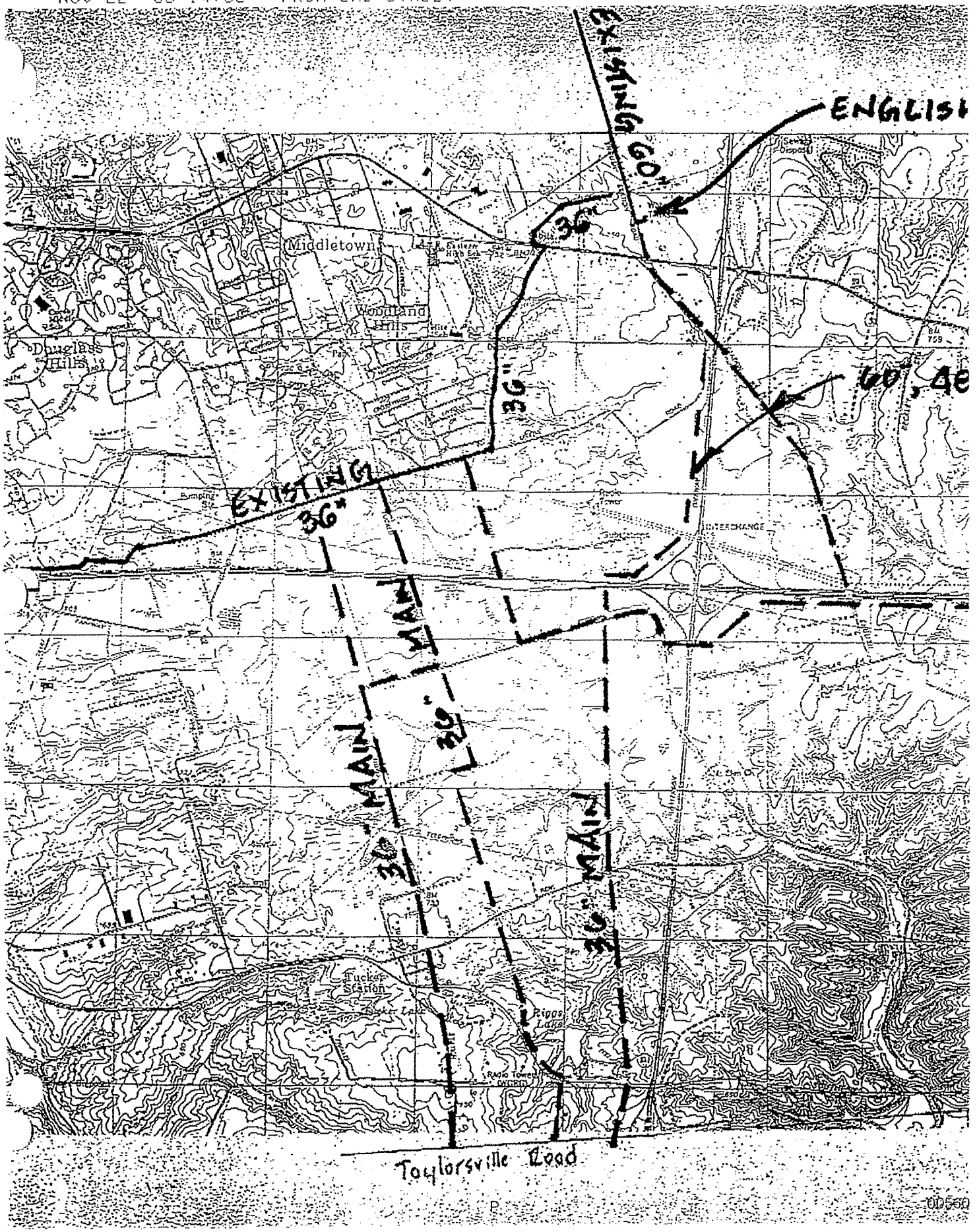
Solve for n

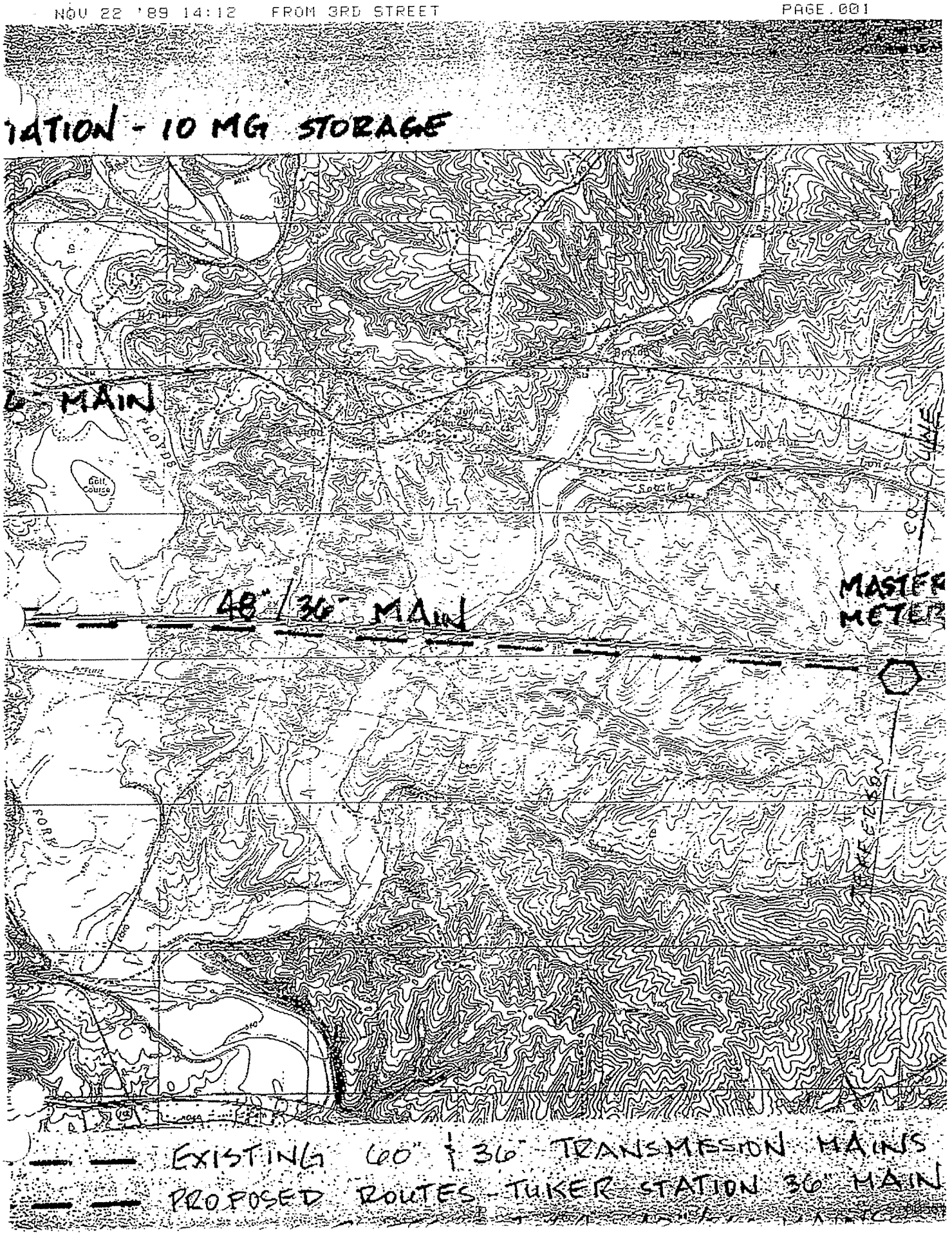
n = 43.7 years

Year = 1992 + 44 = 2036

Conclusion: In year 2036 the construction costs of 30 MGD 48-inch transmission capacity equals that of construction of two 36-inch mains in 1992 and year 2036, both of which supply 30 MGD capacity; i.e., the economic advantage of constructing a 30 MGD 48-inch transmission capacity disappears in 2036. This means if demand does not exceed 15 MGD until after 2036, Alternative 1 of constructing a single 15 MGD 36-inch supply in 1992, and a second after 2036 is the preferred alternative. If demand exceeds 15 MGD prior to 2036, Alternative 2 of constructing a single 48-inch is the preferred alternative.

xc: Elba Richey
John Huber


EXISTING 60"
ENGLISH
60"
Middletown
Woodland Hills
Douglass Hills
36"
EXISTING
36"
30" MAIN
24"
36" MAIN
Tucker Station
Riggs Lake
Taylorsville Road


ATION - 10 MG STORAGE
MAIN
48" / 36" MAIN
MASTER METER
EXISTING 60" & 36" TRANSMISSION MAINS
PROPOSED ROUTES - TUKER STATION 36" MAIN

KENTUCKY-AMERICAN WATER COMPANY
TELEPHONE CALL RECORD

DATE: 9/20/89 TIME: 9:45 A

PROJECT/SUBJECT: Louisville

CONVERSATION WITH: Bill Egart

COMPANY: Louisville Water Company

PHONE NUMBER:

SIGNATURE: Susan R. Slade

✓	Edens	
	Blanton	
	Braxton	
	Burns	
	Bush	
	Davie	
	Griffin	
	McConathy	
	Singleton	
	Slade	
	Smith	
	Stockton	
	Trimble	
	Wilkins	
	File	
	Copy To	
✓	Return To Slade	

NOTES: Bill called to check in — wanted copy of list of Ky River Basin Steering Committee members — sold him we had and could fax to him — he could get same info. by calling city. He says they want to know making fr. Committee to discuss with Mayor Abramson (and board) — part of [illegible] effort to sell board [illegible] something out w/ [illegible] (promoting making friends outside of Louisville.)

Says intention not to lobby [illegible] members — I mentioned they hadn't sold us on a deal [illegible]

Sent him attached list.

FOLLOW UP:

00562

KAWC - LWC
MEETING - AUGUST 24, 1989

The above referenced meeting was held beginning at 9:30 a.m. at Louisville Water Company's offices for the purpose of discussing the potential sale of water by LWC to KAWC. Those in attendance representing Louisville Water Company were Mr. Foster Burba, Elba Ritchie, Frank Campbell, John Huber, Bill Egert and Joe Helm (legal counsel). Representing Kentucky-American Water Company were Ed Limbach, Bob Edens, Lindsey Ingram and Susan Slade.

Foster Burba opened the meeting by indicating that the potential agreement between Kentucky-American Water Company and Louisville Water Company was a new concept for Louisville Water Company and that they have attempted to explore various options which could be mutually beneficial.

Ed Limbach indicated that he would like to have, as an outcome of this meeting, a draft agreement. It was agreed that Lindsey Ingram would work with Joe Helm to develop such a draft. Ed Limbach indicated that there is a lot of interest in the community for a potential project between Louisville and Lexington and he also indicated that he had Board authority to proceed and negotiate an agreement to purchase water from Louisville Water Company.

Ed Limbach indicated that we had additional information from the Public Service Commission regarding their interest and authority to regulate LWC and Lindsey Ingram discussed the response from Susan Mastin, general counsel of the PSC. Copies of this response were provided to Louisville Water Company. Mr. Helm indicated that LWC's Board concern is not that there is present authority to regulate but that future legislative sessions may result in PSC jurisdictional authority. He indicated that the further LWC extends beyond Jefferson County, the greater the risk is of being regulated. Bob Edens inquired whether the LWC's arrangement with other bulk water sales customers extending beyond Jefferson County line had caused LWC any particular problems. Mr. Helm indicated that there had been no such problems in the past 30 years.

Mr. Burba indicated that their greatest concern is with Jefferson County legislators from the remote areas who are trying to require LWC to extend rural water lines into unserved areas. He indicated that information regarding how various communities and counties are getting development grants in order to extend rural water lines would be helpful. Mr. Helm emphasized that the PSC concern is not something that KAWC can address, but rather its just an internal concern of LWC that they want us to be well aware of.

Ed Limbach emphasized that if this PSC concern will result in an inability of LWC to reach an agreement with KAWC, we need to know about it so we can get on with our business. He indicated we have spent $40,000 on this study already. Mr. Burba indicated that they would try to get us an answer from the Board as quickly as they can.

Joe Helm asked how the PSC approval would work. Lindsey Ingram indicated that we would probably file a generic tariff such that subsequent purchased water adjustments will be "semi-automatic." PSC approval would be limited to approval of the contract which would require full cost pass through to customers.

Bob Edens mentioned his discussion with Bill Chambliss and that Mr. Chambliss was quick to say that he was in agreement with the PSC opinion regarding PSC authority over LWC.

Ed Limbach proceeded to discuss individual items from the agenda.

- Duration - It was agreed that the duration will be tied to the depreciation rate of the pipeline (88 years).

- Point of Delivery - LWC will take pipeline where we need it at the county line.

- Date of Initation - The date of initiation will be subsequent to PSC approval, financing, the estimated 18 month to 2 year construction period, i.e. when all things are lined out, KAWC will start to take water.

- Water Quality - Water quality will meet state and federal regulations. Additionally, adequate notification of treatment process changes will be provided to KAWC by LWC. Water quality analysis printouts will be provided to KAWC on a monthly basis. Joe Helm wants liability for blending water to be ours and the quality of water will be that delivered at the county line. LWC will also provide notice and coordination regarding flushing process or other such operational problems that may affect KAWC operations.

- Delivery Pressure - KAWC will design around LWC's specified delivery pressure.

- Metering - LWC owns and furnishes meter. LWC will test and calibrate meter every six months. PSC or KAWC may witness testing. KAWC may also bring in an independent testing agency to field test the metering facility accuracy. John Huber indicated that the initial thought by LWC is to use turbine meters and test in-field. They have the equipment to do this now. Bob Edens indicated that we may meter at each booster station. It was agreed that LWC would design the metering facility and arrangments, KAWC would pay for these facilities, but KAWC would have concurrence on the design of the facility. LWC's initial thought is that they would construct a meter house for this particular arrangement. Provisions will be made for backflow prevention devices in this house.

- Billing and Payment - LWC's standard billing and payment requirements for monthly billing will be used.

- Communication of Future Projections - Every June, KAWC will provide LWC with a five-year forecast update.

Pipeline Design

Ed Limbach discussed KAWC's demand forecast. He indicated that the lines are being sized such that it will be designed for a 15 mgd capacity initially, but will have an ultimate capacity of 30 mgd. This relates to a 36-inch main. KAWC envisions a Phase I and Phase II approach, i.e. Phase I would require 15 mgd be available over time. Phase II would require that the availability be increased to 30 mgd. KAWC's concern is that we try to minimize rate shock on our customers and also that we are conservative from the regulators standpoint.

Ed Limbach discussed a two level baseload concept. He indicated that we envision two baseloads, say a May 1 through September 30 "summer" load of 3 to 5 mgd initially and a "winter" load of 1 to 3 mgd initially. Ed Limbach memtioned that it was estimated that it would take 21 days for the water to reach Lexington at a 1 mgd rate. He also indicated that we think our forecast is conservative. According to projections, 15 mgd would be adequate through the year 2050 but we believe that the year 2020 is a more realistic period for this. John Huber indicated that LWC is sound up to 15 mgd to English Station and then 6 to 7 miles of pipeline construction would be required to the county line. He indicated that there is no need to go to the plant with Phase I.

Bob Edens inquired whether the line from English Station would be dedicated to KAWC and whether LWC would upsize if necessary for their anticipated growth. LWC indicated that the line would be an integral part of their transmission system. LWC would take care of the anticipated growth in sizing the line. John Huber indicated that a 36-inch design at 15 mgd to go to 30 mgd would be pressing capacity.

There was a discussion regarding what size line LWC should put in place to provide the quantity at the Jefferson County line. Question regarding whether the same analysis would hold true for that portion of the line as for KAWC portion. Lindsey Ingram indicated that LWC needs to keep in mind that we are regulated and as such must hold our design much closer and much more conservatively, i.e. "smaller" from a capacity standpoint than LWC is probably used to. Lindsey Ingram encouraged LWC to use an analysis to demonstate that appropriate size consideration has been given to whatever line would be constructed in Jefferson County.

LWC appears to be agreeable to the dual base demand proposal. Under this scenario there was discussion regarding how KAWC would pay for the main extension required in Jefferson County. The concept is that KAWC will be paying for the unused portion and the used portion would be KAWC's usage. For example, at an initial average of 3.8 mgd (relative to 30 mgd capacity), KAWC would only be paying for the apportioned 87 percent of the financing cost of the water line. The used portion would be included in the price spread over all customers. Lindsey Ingram made the proposal to charge KAWC directly for actual costs, but give KAWC credit for what others are using. For example, if 20 percent is being used by other customers on the water line. Under this concept, the initial capacity would be assumed at 30 mgd (or 15 mgd), but a portion of this 30 mgd would be available to other customers. It was indicated that it would be tough to identify how much usage is by the other customers on line.

There was a discussion regarding production costs and marginal costs. LWC indicated that we would be receiving benefit of the weighted cost between both plants. Mr. Burba indicated that LWC does not utilize incremental costs, and have serious problems with doing this, i.e. making an exception, they anticipate serious political problems associated with this type of approach, for example, from existing large customers such as G.E. who always desire to negotiate individual rates for themselves. Foster Burba says that we are getting an advantage by taking water from the network in that the marginal cost of both plants weighted by capacity is lower than if we were looking at the Payne plant individually. Ed Limbach emphasized that we will be a unique customer on the LWC system in that we will be making a commitment to take x quantity of water on out to infinity whereas no other customer does this, i.e. G.E. could close next month.

Ed Limbach inquired whether LWC would be interested in investigating whether they could reduce the cost to KAWC by looking at the reserve capacity for KAWC. It was indicated that the cost for the BE Payne plant were much higher than those for Cresent Hill but they indicated that they would be receptive to any other approach.

Foster Burba indicated that they are open to any other suggestions or approaches. They have tried to develop similar approach to this rate relative to how other rate structures are developed. Ed Limbach indicated that we were concerned and disappointed that the proposed rates are so high and he indicated that we need to go back, digest the information, and rethink our approach to this alternative. KAWC received copies of the current tariff and service rules and regulations for LWC.

The meeting adjourned at about 1:00 p.m.

KAWC - LWC
AUGUST 24, 1989
AGENDA

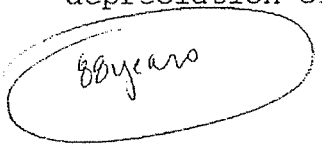
I. CONCEPTS

- KAWC desires to purchase treated water from LWC at agreed upon rates to meet current and anticipated needs within stipulated limits.
- KAWC desires a reasonably constant supply of water and will make the specified supply rates a part of the agreement but wants some flexibility.

II. ANTICIPATED DURATION OF RELATIONSHIP

(Based on Lindsey's assessment, should be specified duration versus perpetuity)

- 99 years renewable, or
- Tied to depreciation schedule for facilities (anticipated life), or
- Renewable increments of time contemporaneous with depreciation of facilities



III. POINT OF DELIVERY OF WATER

- Mutually agreed upon point at Jefferson County line.

IV. DATE OF INITIATION OF SERVICE

- Unknown/negotiable.

V. QUALITY OF WATER TO BE DELIVERED

- State and Federal regulations.
- LWC advises KAWC prior to making significant treatment changes; supply water quality data on regular basis(?)

– coordination of flushing
– should not have to pay for any water received that does not meet Stress notification, compliance
- Copies of water analysis to be provided on a monthly basis

VI. QUANTITY - DEMAND VARIATION - LOAD FACTOR

- Consider winter/summer rates of delivery.
  e.g. winter delivery at 1-3 mgd initially...up to 5 mgd in future; summer delivery at 4-5 mgd initially (see schedule)
- Currently anticipated summer delivery rate required:
  initially: 4-5 mgd; 2000: 6-7 mgd; 2010: 9-10 mgd)
- KAWC endeavors to keep constant hourly demands (no hourly peaking).
- KAWC may increase steady daily delivery rate given ____ days notice to LWC in the event of an emergency, etc., but not to exceed 30 mgd. Such adjusted rate could continue at least through the end of summer period but may continue into winter period. KAWC would give LWC ____ days notice prior to reducing delivery rate back to previous levels. Such an upward adjustment will not impinge upon agreed future summer rates but should be considered temporary adjustment only.
- Provision to adjust agreed upon delivery upward if desired - review annually.

VII. DETERMINATION OF RATE - FACTORS - MINIMUM CHARGE

- ▸ Need explanation of proposal
  - What's bottom line
  - How much of 72 cents is transmission/distribution/ storage facilities
- ▸ Simple as possible
- ▸ Minimum charge = take or pay (do we want this as such/format in agreement [PSC]).
- ▸ Service charge - okay
- ▸ Establish initial rate...set up indexing mechanism
  - Relate to KAWC/LWC increased production cost
  - Arbitration

  (increase in rate should be < inflation)

how about actual

Fuel & Power
Chemicals
Waste Disposal
$.23 / 1000 gal.
25 / 1000 gal. capital

VIII. CAPITAL CONSTRUCTION REQUIREMENTS BY LWC

- ▸ They design and build to provide 30 mgd at county line.
- ▸ Require to be complete and in service by negotiated date.
- ◦ Actual Cost

IX. FINANCING

- ▸ LWC finance and own Jefferson County portion.
- ▸ Discuss LWC proposal for handling (caution compare to 30 mgd capacity)
- ▸ Alternative: 20 year payback
- ▸ Credit to KAWC for water purchased

X. PUBLIC SERVICE COMMISSION PARTICIPATION

- Limited to approval of contract. ✓ auth. full cost pass through for all cost
- Discuss additional information received.

XI. MISCELLANEOUS MATTERS

A. Delivery Pressure

- They define, we'll design around it. Minimum and maximum

B. Service connection, maintenance and cost

- KAWC pays for service connection, meter, piping facilities and facilities for telemetering flow, volume and pressure
- LWC furnishes meter
- LWC tests and calibrates meter once every six months - provision for adjustment also witness test provision
- Who designs and builds facility? KAWC has ability to bring in independent testing agency Louisville designs & builds – we pay for

C. Billing and Payment

- Payable monthly ____ days from date of billing. LWC reg. practice

D. Communication of future projections

- KAWC will provide revised five-year forecast annually by ~~April~~ June
- Planning guide only.
- Agree upon winter/summer supply rates for next year by _____ of preceding year.

XII. WHERE DO WE GO FROM HERE?

8/1989

KENTUCKY-AMERICAN DEMAND FORECAST

YEAR	95 % PEAK (MGD)	REQ'D ABOVE EXSTNG(58.5) (MGD)
1992	62.5	4
1993	63	4.5
1994	63.3	4.8
1995	63.6	5.1
1996	63.8	5.3
1997	64	5.5
1998	64.2	5.7
1999	64.4	5.9
2000	64.7	6.2
2001	65	6.5
2002	65.3	6.8
2003	65.7	7.2
2004	66	7.5
2005	66.3	7.8
2006	66.6	8.1
2007	66.8	8.3
2008	67.1	8.6
2009	67.4	8.9
2010	67.7	9.2
2011	67.9	9.4
2012	68.1	9.6
2013	68.3	9.8
2014	68.6	10.1
2015	68.8	10.3
2016	69	10.5
2017	69.1	10.6
2018	69.3	10.8
2019	69.4	10.9
2020	69.6	11.1
2025	70.3	11.8
2030	71.1	12.6
2040	72.7	14.2
2050	74.3	15.8
2060	76	17.5
2070	77.7	19.2

8/24/89 meeting: Louisville Water Co.

LWC Elba Richey, Frank Campbell, John Huber
Foster Burba, Joe Helm, Bill Egart

KAWC Ed Limbach Lindsey Ingram, Bob Edens, Susan Sloden

~~F Burba~~ - new concepts explored for LWC

Ed Limbach wants draft agreement basis as outcome of meeting

There is interest in community & board authority to proceed and negotiate

- PSC involvement question

mention Fairfax Co. [illegible]

Lindsey - solicited response to concerns from PSC

... PSC response

Joe Helm - Broads concern is not that there is ~~no~~ present ~~[illegible]~~ authority to regulate but that future legislative sessions may result in PSC jurisdiction & authority,

- further LWC extends beyond Jefferson County. greater risk is of being regulated

RAE.

Helm - with other bulk sales customers have never had any bad problems arise (30 yrs)

LWI - what's going on? Burba concern that legislators from Jefferson remote areas will continue to try to get PSC ~~[illegible]~~ in to make LWC stand rural lines - doesn't work that way, But Sounds P

00572

Barbara - needs examples of ways that various counties are getting development grants, etc
- Counties should be getting problem [illegible] of.

J. Helan → This is not something that KAWC can address
- just internal concerns - want us to be aware of

J. - How would PSC approval work?

We would prob. file a generic tariff → subsequent purchase water adjustment arrangement ....

EWL → we've spent $40K on this we need to know if PSC concerns going to keep us from getting an agreement → [illegible]
Barbara - Then, will try to get us answer ASAP [illegible]

ROE → mentioned discussion w/ Bill Chan Dies
→ He was quick to say that he was in agreement with PSC approval

Joe Helan; LWE will work up draft agreement

Duration — need exp. date with Ky Statutes

life 88 years → Haley — dont have problem with

Point of Delivery —

— LWC will take pipeline where we need it → County line
I-64 / vicinity

Date of initiation

PSC approval, Financing, 18 mo – 2 yr constr period.
→ when all things lined out, start to take

Quality

Stat. & Fed Reg.
Adequate notif. of treatment process changes.
→ need time to get any facilities...
~~[illegible]~~ construction taken care of

— monthly basis — W.Q. analysis printout

→ mixing with other ~~[illegible]~~ systems also possible.

→ Jefferson wants liability for blending to be ours
Quality of water will be that delivered at the county line

LWC – Flushing Process ... → we need notice/coordination.
So that don't have problems
→ adversion metering situat
OK to provide f...

~~[illegible]~~

Financing → LWC [illegible] can of their arrangements.

PSC – limited to approval

Pressure – well design around.
Metering, – LWC owns furnishes.
– six months vs. once/year
– PSC & KAWC can ~~[illegible]~~ witness
– field testing = independent can bring in
– ~~[illegible]~~
– initial ideas – use turbines...
test in field. – they
do this now

We may
meter at each booster station...

LWC designs but KAWC concurrence
– thinking about a meter house.

backflow prevention incl also.

Billing and Payment -
monthly - will use LWC scan and billing/
payment requirement

Communication of future projection
- every June we will provide LWC
with 5 year up date forecast.

Demand forecast
- we are sizing [illegible] such that it
will have an ultimate capacity
of 30 mgd

Phase I, Phase II approach.
↓
Phase I 15 mgd available over time

- trying to minimize rate shock.

Base load concepts
- 2 base loads & say may - sept 30
Summer load = 3-5 mgd
winter load = 1-3 mgd
- 1 mgd ... 21 days to get to lex

- we think forecast conservative: 15 mgd [illegible] accord
to projections [illegible]
say 2020 [illegible]

John Hurley
Sound up 15 mgd to English Station.

6-7 miles to county line

we're considering on 30", 36", 42"

no need to go to Plant with Phase I

RAE → would line from English Station be dedicated to KANC
... will hypsize ~~at~~ necessary for their anticipated growth
- yes - LWC would take care of that.

ENC → we can put at 36" in and design at 15 mgd then will be able to expand to 30 mgd

Hulsen - pressing
LWI - need to keep in mind that we are regulated, must hold design much closer - more conservatively

Capacity ↓
LWI encouraged them to use ~~analogy~~ analysis to demonstrate the appropriate size consideration has been given.

→ LWI easy to deal with

< miles for 15 or 30

→ LWC agreeable to demand proposal.

~~Pipeline costs $1 million~~

Whats revenue req

1,399,000,000

1.4 Billion gallons / year

3.83 mgd / 30 = 12 %

.872 x annual finance charge

96 → pay int. + 1% depreciation.

→ Depreciation calculated on a monthly or annual basis.

anticipate

$5-60/year

per customer

Basis of example → 7 ¢/1000 gallon for every $1 million spent on pipeline....

→ How much will waterline cost... then

F.B. 2 approaches → can size for 15 mgd.
... increase to 30 mgd. later.

LWII If we are paying for other unused portion (87%), ~~what~~
how are we paying for used portion →
— this is included in price spread over
all customers.

indirect approach

Proposal Why not charge in directly for actual
costs but give KSWC credit for ~~what~~
what others are using.)

"Start at plant

If say 20% are being used

leave on % basis

year 1 $96,000

→ company 3mgd /day → 10% of capacity of
pipeline
→ we thereof only pay for

15mgd.

the option — LWC pays for upsizing for growth

$.99 / 100 at County, WC

+ ¢35

~~$.07 X 0.05~~

14. 8.4 to English Station
6.25 to Co. Line

- Whats the capacity of the line? → is it really 30 or 50 mgd

-

→ EWL - discussion of Appomatox scenario.

if we could establish prod. costs... what's marginal cost

Production Costs:

F&P, Chem, Sludge disposal — say $0.23 / 1000 gal.

Say year 2 - 25¢

this assumes back to clearwell.

...

- LWC does not utilize incremental cost.
- problems with doing this - exception

Say 40¢ if

Political Problem

EWL → we will be making a commitment whereas no other cost, does...

17,000,000

FR says advantage from taking it from network

8.4 mi to English Sta.
6.25 to co. line

9,600,000
7,400,000
17,000,000

10 million
7.4

70 ¢ for pipeline to
51.8 ¢ for plant
35

¢40 at plant

$1.19 to go from
co. line to plant

$40
$1.59 to co. line

English Station option
99 + 51.8 = 1.51 to co. line

88

1.40.

and will decline

→ 36 mg. - Fairfax co. →

would LWC be interested in investigating whether could ~~[illegible]~~ reduce cost by looking at reserve cap. for KPNC ... than just small part of

Rideoff
Alexandria District
Cap of purchase water

to

How much of 72 ¢ is treatment plant

~ 41.6 ¢ is treatment plant includes econ of scale

15 / 300 →

FB → are open to any other suggestions or approaches

- have tried to develop similar approaches to this rate ~~[illegible]~~ related to how other rate question is developed.

we need to go back & rethink

- got copies of current tariff

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

502-569-3600

FOSTER S. BURBA
PRESIDENT

August 17, 1989

VIA FAX (606-268-6327)

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
P. O. Box 7500
Lexington, KY 40522

Dear Bob:

RE: My August 8, 1989 Letter Transmitting Items for Discussion at August 24, 1989 Meeting--Contract Draft for Bulk Water Sales to KAWC by LWCo.

Hopefully, this letter will help clarify some of the items in my August 8 letter to you regarding discussion items at our August 24, 1989 meeting. This deals specifically with items 8, 9, and 10 regarding rates, charges, and financing.

ITEM 8--RATES:

For about twelve years, LWCo. staff has performed rate study and developed rate charges for LWCo. utilizing NARUC system of accounts and concepts suggested in AWWA Manual #M1, Water Rates. While we have a specific rate for utility sales (bulk water sales to other utilities), such existing rate does not appear appropriate for the tentative KAWC plan in view of KAWC's special features; i.e., low demand factors and long-term commitment for service by virtue of the major pipeline required.

After studying the matter, we believe our present utility rate can be expanded/modified to meet requirements of KAWC and similar customers. For discussion purposes, let's label our existing Utility Rate Schedule UR-1 and the tentative rate UR-2. UR-2 would have a Service Charge, a Production Charge, and a Demand Charge as suggested in my August 8 letter, but there also would be an Elevated Service Area (ESA) Surcharge which in retrospect should be maintained as a separate charge rather than included in the Demand Charge and/or Production Charge as contemplated in my earlier letter. Therefore, the rates in Item 8 would be as follows based upon LWCo. 1989 allocation of costs and rate study.

Service Charge. This is LWCo.'s standard monthly charge with no water allowance. (Please refer to Attachment #1 entitled Service Charge Minimum Monthly Bill.) For example, the SC for an 8-inch meter is $393.75; and for a 12-inch meter, it is $913.50.

Production Charge. In our present utility rate cost allocation, this is the base cost for water which is 72.934 cents per thousand gallons. That is, this is the portion of cost allocation based upon a demand factor of 1 at our so-called general pressure plane. Presently, the Production Charge (or base charge as shown in our 1989 Rate Study) is not a separate part of any rate structure but is included in the established rate of $0.99 per thousand gallons for utility customers served in the general pressure plane (Attachment #2).

Demand Charge. Because KAWC maximum day and maximum hour demands (based upon average day useage) are expected to be more uniform than such demands of our other utility customers, a separate "ratchet" type Demand Charge would be developed (in UR-2) for maximum day and maximum hour demands.

In UR-1, these extra capacity (or demand factor charges), along with base charges, comprise the established rate of $0.99 per thousand gallons.

In order to be equitable as well as compatible and uniform with UR-1, the Demand Charges under UR-2 will apply to consumption and maximum demands for 12-month period ending with each monthly useage/billing. I know this sounds complicated, but we have tested this against our present UR-1 cost allocation and determined that the two rates (UR-1 and UR-2) are consistent. That is, if we applied the maximum day and maximum hour demand factors to UR-2 that we used in establishing UR-1, the equivalent cost would be that which has been established for utility customers--i.e., $0.99 per thousand gallons for water delivered in the general pressure plane.

Based upon information available at this time, we would expect KAWC's average cost for water charges (Production and Demand) to be less than if it were served under our UR-1 rate. For example, if KAWC had been served in 1989 with demand factors of 1.0 for maximum day and maximum hour, it would have paid the Production Charge of 72.934 cents per thousand gallons and there would have been no Demand Charge. Again, if during 1989 it had been served with the same demand factors as used for utility customers (1.56 maximum day and 2.48 maximum hour), the resultant average cost for the 12-month period would have been $0.99 per thousand gallons at the general pressure plane. The ESA Surcharge must be added to this as described below.

Elevated Service Area Surcharge. In accordance with our rate schedule, all customers receiving delivery at a higher elevation than the general pressure plane served by the Crescent Hill-Cardinal Hill system, in addition to established charges, pay an ESA Surcharge which presently is $0.19 per thousand gallons. (This is comparable to what certain water utilities describe as a "booster" surcharge.) KAWC would receive delivery from the ESA and would be subject to the Surcharge which is to be reevaluated in our next rate study. In view of the growth which has

occurred in the ESA, we contemplate that this Surcharge will decrease a bit in the next rate study. Certainly, if a large customer such as KAWC is added to the ESA system, such addition would tend to lower or stabilize the ESA Surcharge.

ITEM 9--MINIMUM CHARGES:

The minimum monthly charge shall be based upon maximum of __ mgd. or daily average of water deliveries in the preceding five calendar years, whichever is greater. (NOTE: During the first five full calendar years of the contract, the minimum charge will be based upon __ mgd.) This minimum monthly charge shall consist of:

- Monthly Service Charge (based upon meter size).
- Production Charge.
- Demand Charge.
- ESA Surcharge.

ITEM 10--FINANCING OF PIPELINE FROM ENGLISH STATION FACILITIES TO COUNTY LINE:

It is proposed that LWCo. finance and own this line which presently is unsized and for which no estimated cost is available. There would be an annual charge. Such charge would reimburse LWCo. for constructing this water main larger than would be required otherwise and earlier than planned to service this area. It is suggested that this annual charge be at the rate of 9.66% X pipeline cost (8.66% finance and 1% depreciation charge). This (annual) finance charge would be reduced in equal percentage increments each year that the average daily delivery to KAWC exceeds zero delivery. Such cost would be zero at such time as the firm daily delivery rate equals 30 mgd. (This assumes the pipeline is to be sized for 30 mgd. delivery.) The annual charge would begin upon completion of the pipeline. Rather than lump sum payment annually, we would prefer that it be on a monthly basis as determined by the daily/monthly average over the most recent 12-month period. (Simple illustration: If the pipeline is sized for 30 mgd. and average delivery for a year is 15 mgd., KAWC would pay one-half of the annual finance charge.)

Bob, I trust this is not too confusing. Hopefully, it will aid in our discussion of certain key considerations in tentative plan to purchase bulk water from LWCo. (After all, $$$ are very important to both buyer and seller!)

Again, I must emphasize that my Board is concerned and very apprehensive of any arrangement which might increase the likelihood of PSC jurisdiction of any of LWCo.'s operations.

Please call me if you have any questions or comments.

Sincerely,

Foster

Foster S. Burba
President

FSB:jcm
attachment

cc: Mr. Joseph B. Helm, Brown Todd & Heyburn, legal counsel
Mr. John L. Huber, Senior Vice President-Operations, LWCo.
Mr. Elba L. Richey, Senior Vice President, Secretary-Treasurer, LWCo.
Mr. Frank C. Campbell, Senior Vice President, Chief Engineer, LWCo.
Mr. William V. Egart, Vice President, Chief of Plant Operation and System Planning, LWCo.

6.03 General Rate Inside the County of Jefferson and Leased Facilities Outside the County of Jefferson.

All classes of customers taking metered service directly from the Company and situated (1) within the County of Jefferson or (2) outside the County of Jefferson and served through facilities owned by others but leased by the Company, and where a surcharge is imposed by the lessor, excepting the utilities purchasing water for resale, and excepting the municipal customers who shall be served as provided in KRS 96.270 (3024a-6) at no cost to the customer, and excepting publicly owned fire hydrants per se, shall be charged in accordance with the following schedule.

SERVICE CHARGE MINIMUM MONTHLY BILL

METER SIZE	SERVICE CHARGE MINIMUM MONTHLY BILL
5/8"x3/4"	3.15
1"	7.88
1 1/2"	15.75
2"	25.20
3"	55.13
4"	94.50
6"	220.50
8"	393.75
10"	598.50
12"	913.50
16"	1,811.25

COMMODITY CHARGE

The charge for monthly usage shall be computed in accordance with the following schedule (thousand gallons per month).

First	3	at	$ 1.00	per 1000 gal. per month
Next	3	at	1.12	
Next	194	at	1.25	
Next	1,300	at	1.17	
Next	3,500	at	1.04	
Next	5,000	at	.98	
All consumptions in excess of	10,000	at	.88	

SCHEDULE OF FIRE SERVICE CHARGES

The charge for fire service, where water may be taken for fire protection only, shall be in accordance with the following schedule. This charge will also be applicable to such fire hydrants as may be provided by private agencies.

Size:	4"	6"	8"	10"	12"
Monthly Charge:	$8.00	$16.25	$31.25	$62.00	$124.75

UTILITY RATE (UR-11)

ALLOCATION OF LOUISVILLE WATER COMPANY COST OF SERVICE TO UTILITIES
YEAR ENDED DECEMBER 31, 1989 (IN THOUSAND DOLLARS)

LINE NO.	ITEM	TOTAL COST OF SERVICE ($1,000)	ELEVATED SERVICE AREA	COMMON TO ALL CUSTOMERS				COMMON TO ONLY RETAIL CUSTOMERS
				BASE	EXTRA CAPACITY MAXIMUM DAY	EXTRA CAPACITY MAXIMUM HOUR	CUSTOMER	
	Total Louisville Water Co. System Cost Of Service ($1,000)							
1)	Operating Expenses	24,485.60	820.97	10,900.83	1,801.81	341.11	6,771.25	3,849.63
2)	Depreciation Expenses	6,658.90	65.18	2,649.29	912.79	57.25	1,661.54	1,312.85
3)	Return on Plant Investment (12.20%)	22,495.12	262.09	12,394.00	4,954.66	235.60	834.06	3,814.71
	Total Louisville Water Co. System Units of Meter Capacity							
4)	Number			35,572,000	50.07	123.34		
5)	Units			T.G.	M.G.D.	M.G.D.		
	Utility Account Units of Meter Capacity							
6)	Number			1,028,000	1.60	4.23		
7)	Units			T.G.	M.G.D.	M.G.D.		
8)	Ratio to Total			0.02890	0.03194	0.03427		
	Utility Cost of Service - 12.20% Rate of Return							
9)	Operating Expenses	384.263		315.025	57.550	11.688		
10)	Depreciation Expenses	107.679		76.562	29.154	1.962		
11)	Return on Plant Investment (12.20%)	524.500		358.176	158.251	8.073		
12)	Total	1,016.441		749.763	244.955	21.723		
13)	Cost per 1,000 Gallons (cents)	98.876		72.934	23.828	2.113		
14)	Units Charge Recommended (Per 1,000 Gallons in cents)	99						

R.A.R.
11/23/88
Schedule 1

AUG 17 '89 10:48 FROM 3RD STREET
PAGE.007
ATTACHMENT #2
00589

Slade

	EDENS
	ALLEN
	BLANTON
	BRAXTON
	BURNS
	BUSH
	DAVIE
	GRIFFIN
	HAMMONS
	McCONNELL
	SIMPSON
✓	SLADE
	SMITH
	STAGGS
	STOCKTON
	TRIMBLE
	WILKINS
	FILE
	COPY TO
	RETURN TO

RECEIVED
AUG 18 1989
KY. AMER. WATER CO.
LEXINGTON, KY.

COMMONWEALTH OF KENTUCKY
PUBLIC SERVICE COMMISSION
730 SCHENKEL LANE
POST OFFICE BOX 615
FRANKFORT, KY. 40602
(502) 564-3940

August 16, 1989

Hon. Lindsey Ingram
Stoll, Keenon & Park
1000 First Security Plaza
Lexington, Kentucky 40507-1380

Jarrett
Ingram
Linhart
Feamster
Young

Dear Lindsey:

This letter is written in response to your letter dated July 31, 1989 requesting an opinion as to whether or not the Public Service Commission would have any jurisdiction over the rates and/or services of Louisville Water Company in the proposed contract whereby Louisville Water Company would sell potable water to Kentucky-American Water Company under a very long term contract. You also state in your letter that the transportation facilities for the water would be constructed from treatment and/or storage facilities owned by Louisville Water Company to the Kentucky-American system in Fayette County, Kentucky. Additionally, that portion of the pipeline to be constructed in Jefferson County, Kentucky, would be owned, financed, and maintained by Louisville Water Company. The point of purchase and sell of the water would be at Jefferson-Shelby County line and from that point eastward the facilities would be constructed, financed, and owned by Kentucky-American Water Company. It is the opinion of the Public Service Commission Staff that there is no statutory jurisdiction for the Public Service Commission to regulate the rates and/or services of Louisville Water Company in the proposed contract with Kentucky-American Water Company.

Under the provisions of KRS Chapter 278, the Public Service Commission does not have any jurisdiction over any city that owns, controls or operates or manages its own water plant. KRS 278.010(3). Therefore, the Kentucky Public Service Commission does not have jurisdiction over Louisville Water Company. KRS 278.200 states as follows:

> The Commission may, under the provisions of this chapter, originate, establish, change, promulgate and enforce any rate or service standard of any utility that has been or may be fixed by contract, franchise or agreement

> between the utility and any city and all rights, privileges, and obligations arising out of such contract, franchise or agreement, regulating any such rate or service standard, shall be subject to the jurisdiction and supervision of the Commission. . . . (emphasis added)

The Commission Staff's interpretation of KRS 278.200 is that when the PSC otherwise has jurisdiction over a utility under the provisions of Chapter 278 (as defined in KRS 278.010), jurisdiction is not lost when the utility is contracting with a city. It is Commission Staff's opinion that KRS 278.200 is not applicable when a nonjurisdictional utility is contracting to sell water to a jurisdictional utility. There are currently many city-owned water utilities that sell wholesale to jurisdictional utilities and the Public Service Commission has never asserted jurisdiction over the rates and service provided by those city utilities. As you point out in your letter, People Gas Company of Kentucky v. City of Barbourville, 165 S.W.2d 567 (1942) and OAG 81-44 seems to confirm this interpretation of KRS 278.200.

Lastly, your letter correctly expresses the opinion that the Public Service Commission has the right to decide whether or not the price to be paid by Kentucky-American Water Company for the purchase of potable water is fair and reasonable to the extent that it will be passed along in its entirety as a cost of operation by Kentucky-American Water Company in the development of its rates. Furthermore, the Public Service Commission may request that the contract be made part of the record when and if Kentucky-American files a certificate case to construct the water line necessary to implement the proposed contract.

In conclusion, the Public Service Commission, under existing law, would not have jurisdiction over the rates and/or service of Louisville Water Company under the proposed contract. We look forward to being kept advised of these negotiations as they proceed. If you need any further clarification on this matter, please do not hesitate to contact me at the number below.

Sincerely,

Susan Mastin

Susan N. Mastin
General Counsel
(502) 564-7347

cc: Forest M. Skaggs, Executive Director

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: John Young

FROM: Susan Slade

DATE: August 9, 1989

SUBJECT: Lexington/Louisville Pipeline

Attached is a copy of Louisville Water Company's proposed agenda and contract discussion items for the August 24th meeting. Please review and provide comments and any suggestions by August 17th. Thanks.

SRS/ll

Attachment

cc: R. Edens

	EDENS	
	ALLE	
	BLA N	
	BRA N	
	BURNS	
	BUSH	
	DAVIE	
	GRIFFIN	
	HAMMACK	
	M CONATHY	
	SINGLETON	
	SLADE	
	SMITH	
	STAGGS	
	STOCKTON	
	TRIMBLE	
	WILKINS	
	FILE	
	COPY TO	
	RETURN TO	

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

502-569-3600

FOSTER S. BURBA
PRESIDENT

August 8, 1989

(VIA FAX 606/268-6327)
Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
P. O. Box 7500
Lexington, KY 40522

Dear Bob:

RE: Items for Discussion at our August 24, 1989 Meeting to Discuss Contract Draft for Bulk Water Sales to KAWC by LWCo.

Enclosed are:

- Agenda.
- Discussion of items covered by the agenda.

As discussed with you in our recent phone conversation, this approach might serve our purposes better than working with a draft contract. That is, we would discuss the major basic items along engineering and management lines prior to formulating a contract document.

Would appreciate your comments on these prior to the meeting.

As mentioned, this is merely a beginning point. Our staff may have changes or fill-ins, and you may have some thoughts which you and I might explore prior to the meeting.

Sincerely,

Foster S. Burba

Foster S. Burba
President

FSB:jcm
enclosures

cc: Mr. Joseph B. Helm, Brown Todd & Heyburn, legal counsel
Mr. John L. Huber, Sr. V.P.-Operations, LWCo.
Mr. William V. Egart, V.P., Chief of Plant Operations & System Planning, LWCo.
Mr. Frank C. Campbell, Sr. V.P., Chief Engineer, LWCo.
Mr. Elba L. Richey, Sr. V.P., Secretary-Treasurer, LWCo.

KENTUCKY-AMERICAN WATER COMPANY - LOUISVILLE WATER COMPANY

AUGUST 24, 1989

AGENDA

I. Concepts: Basis for entering into relationship

II. Anticipated duration of relationship perpetuity (or 99 yrs. renewal

III. Point of delivery of water Jeff Co. line

IV. Date of initiation of service negotiable

V. Quality of water to be delivered State/Fed. regulations

VI. Quantity - demand variation - load factor

VII. Determination of rate - factors - minimum charge simpler better

VIII. Capital construction requirements by LWC their prob.

IX. Financing Louisville pays Jeff Co portion

X. Public Service Commission participation limited to approval of contr.

XI. Miscellaneous matters

A. Delivery pressure take what they have design accom.

B. Service connection, maintenance and cost
metering - every six months test meters.

C. Billing and payment mo.

D. Communication of future projections

XII. Where do we go from here?

8/8/89

KENTUCKY-AMERICAN WATER COMPANY--LOUISVILLE WATER COMPANY

Items for Tentative Contract Providing for LWCo.'s Bulk Water Sales to Kentucky-American Water Company:

1. BASIC: LWCo. to provide and deliver treated water to KAWC to meet current and anticipated needs within stipulated limitations. It is the intent for LWCo. to provide a firm, constant supply of water. It is not the intent to serve peaking requirements of KAWC. → we want flexibility here

2. POINT OF DELIVERY: At a mutually agreed-upon point at the Jefferson County line in the vicinity of I-64.

3. LENGTH OF CONTRACT: For a specific period such as forty, sixty, or ninety-nine years with provision for extension or renewal. Alternatively, it might be in perpetuity.

4. DATE FOR INITIATION OF SERVICE: Unknown. Assumed to be within two to four years from date of contract.

5. QUALITY AND QUANTITY OF WATER TO BE DELIVERED: At point of delivery, agree to furnish potable, treated water meeting applicable purity standards of the KDNR&EP. Initially, the requirements are ____ mgd. Ultimate, maximum requirements are ____ mgd.

workon this

5, 15, 30

6. DEMAND VARIATION (LOAD FACTOR): Delivery is to be at a constant rate--i.e., load factor of one. Beginning in year 2000, instantaneous delivery rate shall not exceed 30% of the average daily delivery of the prior year without prior written approval of LWCo. ?

chart what does this mean

X don't want this - too restrictive. - we want access to quantity "reserved" emergency

→ projections

P

ITEMS FOR CONTRACT WITH KAWC--Page 2

7. DELIVERY PRESSURE: Delivery presssure at a reasonably constant pressure, calculate to 810.0 msl. In the event of an extended shortage of water, or the supply of water available to LWCo. is otherwise diminished over an extended period of time, the supply of water to KAWC shall be reduced in the same ratio or proporation as the supply to LWCo.'s other customers is reduced. Emergency failures of pressure or supply due to main supply line breaks, power failure, flood, fire and the use of water to fight fire, labor unrest, earthquake, tornado or other extraordinary circumstances shall excuse LWCo. from this provision for such reasonable period of time as may be necessary to resolve the situation.

8. RATES: The Company shall develop a separate utility rate structure which would be applicable to this and similar purchases of bulk water. As a matter of present Board policy, rates are developed in accordance with cost of service study based generally upon the methods suggested in AWWA Manual No. M1, Water Rates, and provide for recovery of operating, maintenance and depreciation costs plus return on plant deemed appropriate by Board. (NOTE: By Board policy, return on utility sales shall not exceed the return on retail sales by more than 2%. Example: If return on retail sales is 10%, max. return on utility sales is 12%).

The rate would consist of a monthly charge consisting of:

- Service Charge.
- Demand Charge.
- Production Charge.

we need to know how developed. capital, o&m, special asses. - misc. contr.

long term agreement.

ITEMS FOR CONTRACT WITH KAWC--Page 3

The Service Charge would be LWCo.'s standard service charge which is applicable to all metered customers. It is based upon meter size.

The Demand Charge would be comprised of depreciation and return on plant. It would be based upon the highest demand in thousand gallons per day (twenty-four hour period) recorded during any fifteen-minute period during the monthly billing period; but not less than the maximum demand similarly determined during the preceding eleven-month billing period.

The Production Charge would be the applicable O&M charges per thousand gallons of water delivered.

9. MINIMUM CHARGES: The minimum monthly charge shall be based upon maximum of ___ mgd or daily average of water deliveries in the preceding five calendar years, whichever is the greater. (NOTE: During the first five full calendar years of the contract, the minimum charge will be based upon ___ mgd.) This minimum monthly payment shall consist of LWCo.'s standard monthly Service Charge and a Demand Charge for supply, treatment, pumping, transmission and storage facilities (includes elevated service).

10. FINANCING OF PIPELINE FROM ENGLISH STATION FACILITIES TO COUNTY LI
LWCo. would advance the cost of, and construct the required pipeline. Preliminary calculations are that this would be a __-inch water main and would cost $ (1989 cost). In addition to payment for water under 8 and 9 above, KAWC would be subject to payment

ITEMS FOR CONTRACT WITH KAWC--Page 4

of an annual charge in the amount of ___% of cost of constructing main (___% finance and 1% depreciation charge). Such charge would reimburse LWCo. for constructing a water main larger than would be required otherwise and earlier than planned to service this area. This annual pipeline finance cost would be reduced in equal percentage increments each year that the annual delivery to KAWC exceeded zero delivery. Such cost would be eliminated at such time as the firm daily delivery rate equals __ mgd. Annual charge would begin upon completion of the pipeline and would be payable on or before _____.

11. SERVICE CONNECTION AND METERING COSTS: KAWC would pay for constructir service connection and meter piping facilities and facilities for telemetering and recording of instantaneous flows and volume delivered. At its cost, LWCo. would furnish meter. It would test and calibrate meters once every twelve months--provision for adjustment either way in event meter is determined to vary more than 2% from 100% accuracy.

once every 6 months. multiple meters

County line

12. BILLING AND PAYMENT: Payable monthly __ days from date of billing.

OK

13. ANTICIPATION OF FUTURE REQUIREMENTS: In order that LWCo. may anticipate and provide for future delivery requirements each year, KAWC shall provide projected average daily and maximum daily deliveries to be provided under this contract for the ensuing five-year period. Such data are not to be a firm commitment but are to be a planning guide for LWCo. These data are to be provided by (date) of the year preceding the five-year period.

OK

each?

14. PUBLIC SERVICE COMMISSION: The PSC would be required to approve the contract. LWCo.'s concern about possible PSC partial jurisdiction must be resolved to the satisfaction of its Board of Water Works. One possibility is for contract to provide for some appropriate remedy if, as a result of this contract, the PSC exercises jurisdiction over LWCo. rates. In such case, KAWC would pay out of its unregulated return (or profit) the difference in revenues between that allowed by PSC and that determined proper by the Board of Water Works. Such reimbursement would be for this agreement only and would not apply to water sales to others.

15. OTHER: Provide illustration of application of payments in 8, 9, and 10 above. (Not included. To be provided subsequently.)

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Slade

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: File

FROM: R. A. Edens

DATE: July 31, 1989

At the July Board Meeting, Mark Schubert advised of certain investigative work that he had performed regarding flows in the Ohio River. Following is the result of this investigation:

Ohio River at Louisville Below Louisville Intake:

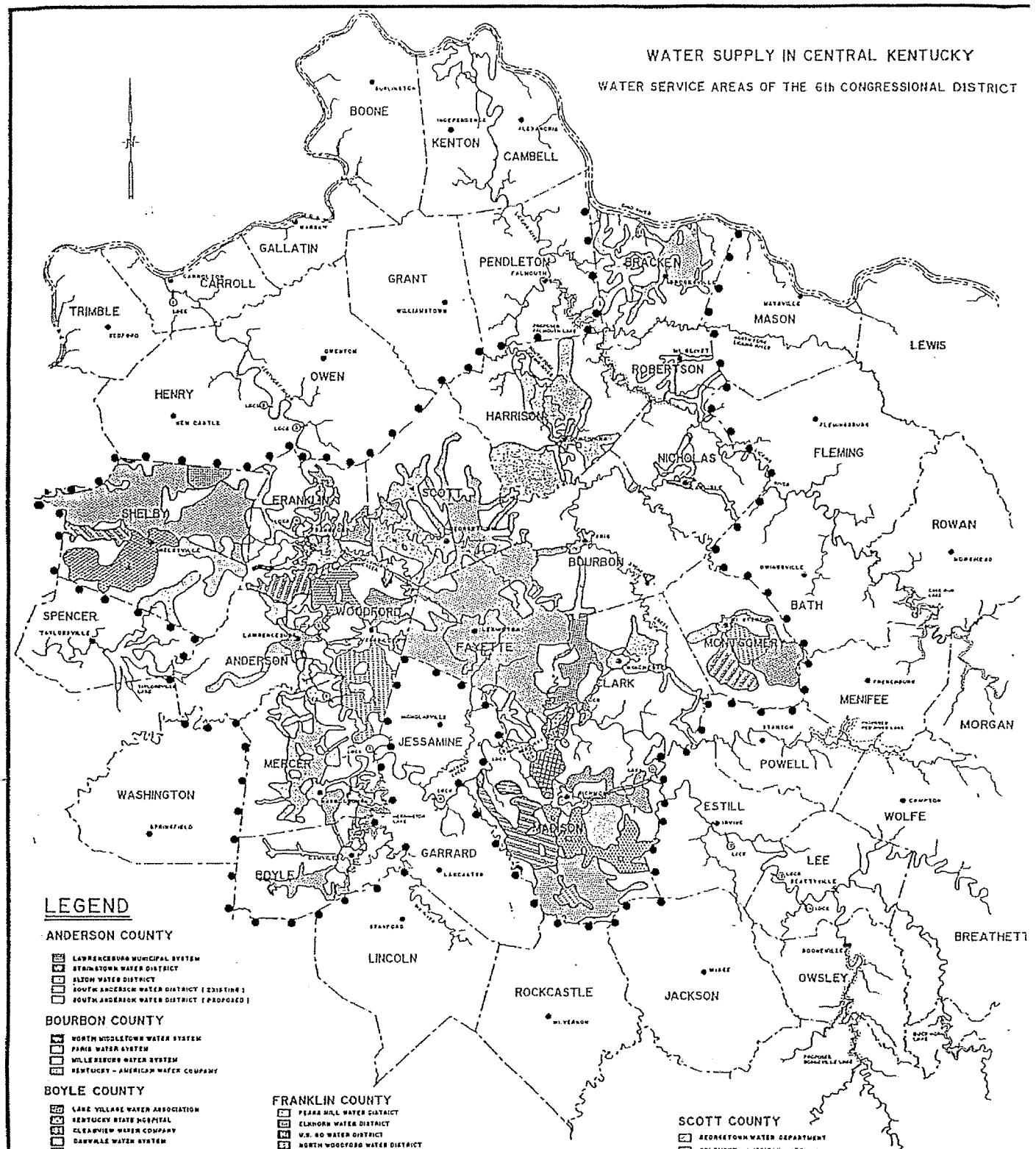
Average Daily Flow	74.0 B.G.D.
Maximum Day Flow	717.0 B.G.D.
Minimum Day Flow	1.4 B.G.D.
1987 - 1988 (10/1 - 9/30):	
Minimum Daily Flow	4.7 B.G.D.

RAE/ll

Rae

WATER SUPPLY IN CENTRAL KENTUCKY

WATER SERVICE AREAS OF THE 6th CONGRESSIONAL DISTRICT



LEGEND

ANDERSON COUNTY

- LAWRENCEBURG MUNICIPAL SYSTEM
- STANTON WATER DISTRICT
- ELTON WATER DISTRICT
- SOUTH ANDERSON WATER DISTRICT [EXISTING]
- SOUTH ANDERSON WATER DISTRICT [PROPOSED]

BOURBON COUNTY

- NORTH MIDDLETOWN WATER SYSTEM
- PARIS WATER SYSTEM
- MILLERSBURG WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMPANY

BOYLE COUNTY

- LAKE VILLAGE WATER ASSOCIATION
- KENTUCKY STATE HOSPITAL
- CLEARVIEW WATER COMPANY
- DANVILLE WATER SYSTEM
- PERRYVILLE WATER SYSTEM
- PARKSVILLE WATER DISTRICT
- HILLTOP WATER COMPANY
- JUNCTION CITY WATER SYSTEM

BRACKEN COUNTY

- WESTERN BRACKEN WATER DISTRICT
- BRACKEN COUNTY WATER DISTRICT No. 1

CLARK COUNTY

- WOODWARD WATER ASSOCIATION
- WINCHESTER WATER SYSTEM
- EAST CLARK COUNTY WATER DISTRICT

FAYETTE COUNTY

- KENTUCKY - AMERICAN WATER COMPANY
- SPEARS WATER DISTRICT

FRANKLIN COUNTY

- PEARS HILL WATER DISTRICT
- ELKHORN WATER DISTRICT
- U.S. 60 WATER DISTRICT
- NORTH WOODFORD WATER DISTRICT
- FARMDALE WATER DISTRICT
- FRANKFORT WATER SERVICE
- NORTH SHELBY COUNTY WATER COMPANY

HARRISON COUNTY

- HARRISON COUNTY WATER ASSOCIATION
- CYNTHIANA WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMPANY

MADISON COUNTY

- BEREA COLLEGE WATER SYSTEM
- GARRARD COUNTY WATER ASSOCIATION
- KINGSTON - SEMINEL WATER DISTRICT
- KIRKSVILLE WATER ASSOCIATION INC.
- MILFORD WATER DISTRICT
- RICHMOND WATER SYSTEM
- SOUTH MADISON WATER DISTRICT
- WEST WATER DISTRICT
- WHITE HALL WATER DISTRICT
- PROPOSED EXTENSION TO WHITE HALL
- PROPOSED EXTENSION TO KIRKSVILLE
- LEXINGTON BLUE GRASS ARMY DEPOT

MERCER COUNTY

- NORTH MERCER WATER DISTRICT [PROPOSED]
- NORTH MERCER WATER DISTRICT
- CITY OF BURGIN
- CITY OF HARRODSBURG
- LAKE VILLAGE WATER ASSOCIATION (HARRODSBURG - SUPPLIED WATER)
- LAKE VILLAGE WATER ASSOCIATION (DANVILLE - SUPPLIED WATER)

MONTGOMERY COUNTY

- REED VILLAGE WATER DISTRICT
- MONTGOMERY WATER DISTRICT NO. 1
- JEFFERSONVILLE WATER DISTRICT
- LEVEE WATER DISTRICT
- MT. STERLING

NICHOLAS COUNTY

- NICHOLAS COUNTY WATER ASSOCIATION
- CARLISLE WATER SYSTEM
- SHARPSBURG WATER DISTRICT
- WESTERN FLEMING WATER DISTRICT.

ROBERTSON COUNTY

- BUFFALO TRAIL WATER DISTRICT

SCOTT COUNTY

- GEORGETOWN WATER DEPARTMENT
- KENTUCKY - AMERICAN WATER CO.
- STAMPING GROUND WATER DEPT.

SHELBY COUNTY

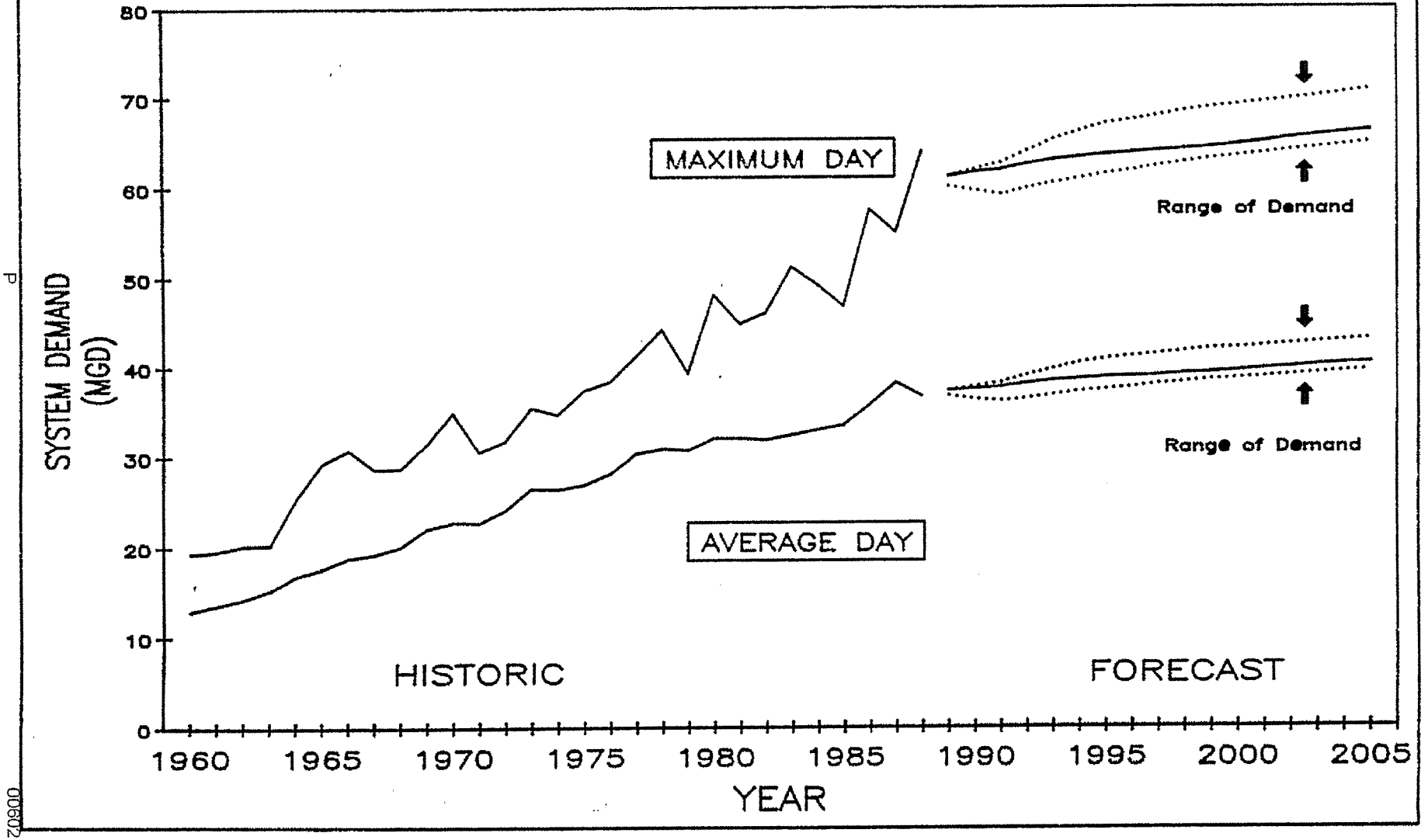
- HENRY COUNTY WATER DIST. No. 1
- HENRY COUNTY WATER DIST. No. 2
- NORTH SHELBY WATER COMPANY
- WEST SHELBY WATER DISTRICT
- KENTUCKY CORRECTIONAL INSTITUTE FOR WOMEN
- SHELBYVILLE WATER & SEWER COMM.
- CITY OF TAYLORSVILLE WATER CO.
- U.S. 60 WATER DISTRICT

WOODFORD COUNTY

- NORTH WOODFORD WATER DISTRICT
- NORTHEAST WOODFORD WATER DIST.
- SOUTH WOODFORD WATER DISTRICT
- MIDWAY WATER SYSTEM
- VERSAILLES WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMP
- GEORGETOWN WATER SYSTEM

00601

KENTUCKY-AMERICAN WATER COMPANY
DEMAND FORECAST
FEBRUARY, 1989



P

00802

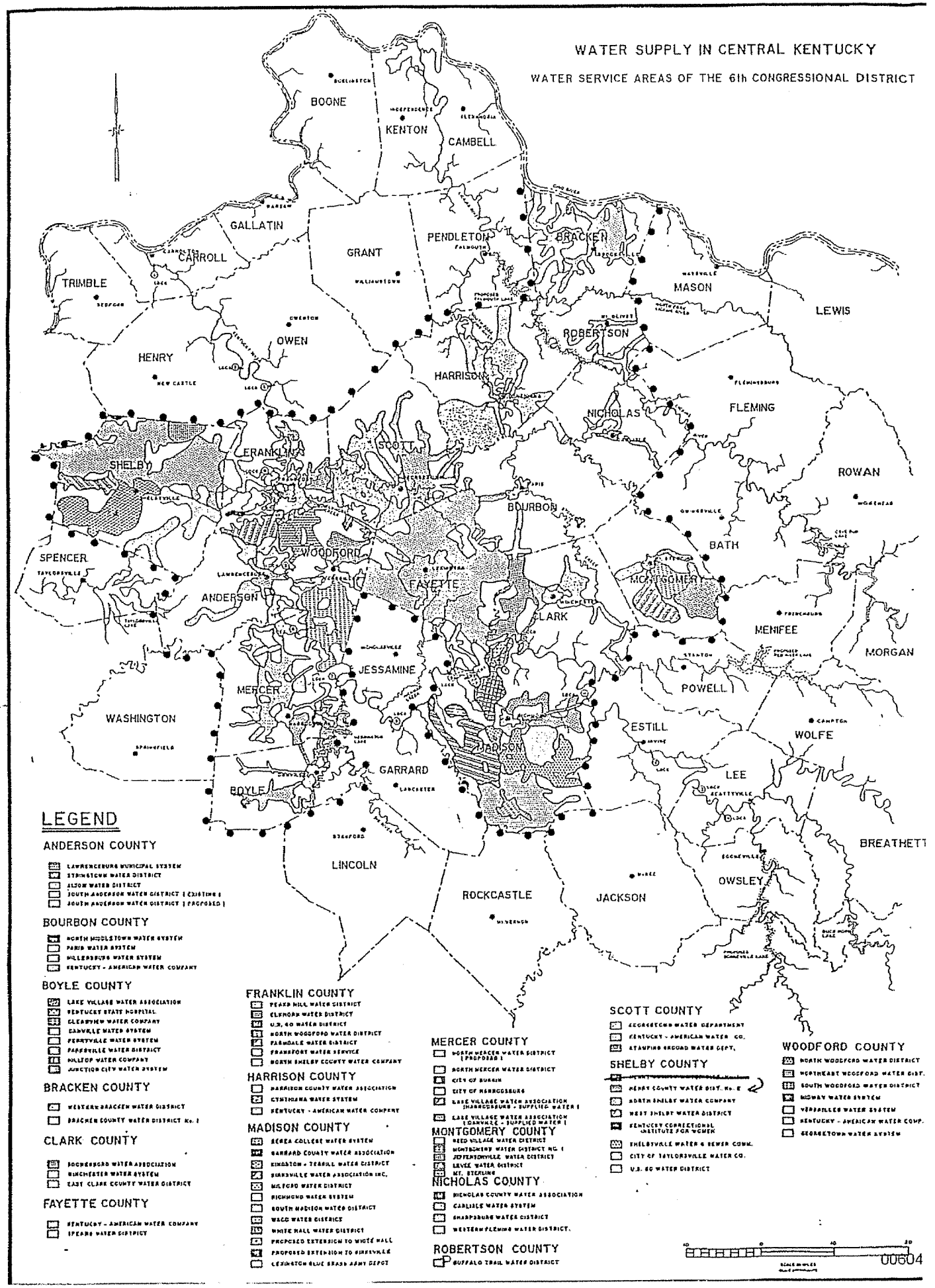
EXHIBIT IV
KENTUCKY-AMERICAN WATER COMPANY
SUMMARY OF DEMAND PROJECTION SENSITIVITY ANALYSES
FEBRUARY, 1989

PROJECTED DEMANDS (MGD)

Usage Category	1990			1995			2000			2005		
	Low	Probable	High	Low	Probable	High	Low	Probable	High	Low	Probable	High
Single Family Residential Use	11.5	11.7	11.7	11.9	12.2	12.6	12.2	12.5	13.8	12.5	12.8	13.3
Apartment (Multi-family) Use	5.7	5.8	5.8	6.0	6.1	6.3	6.1	6.3	6.5	6.3	6.4	6.6
Outside Counties:												
Individual Customer Use	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Bulk Sales Use	0.9	0.9	0.9	1.1	1.1	1.1	1.3	1.3	1.3	1.4	1.4	1.4
Commercial Use	8.0	8.1	8.1	8.3	8.5	8.8	8.6	8.8	9.1	8.8	9.0	9.3
Industrial Use	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.7
U of K Main Campus Use	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Other Public Use	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.2	1.2
Losses and Non-Revenue Use	4.7	5.4	5.6	4.4	5.0	6.0	4.6	4.7	6.2	4.7	4.8	6.4
Total Average Day Demand (MGD)	36.3	37.5	37.7	37.4	38.8	40.8	38.6	39.5	42.1	39.6	40.4	43.1
Maximum Day Demand (at 95% Exceedance Level) (MGD)	59.6	61.6	61.9	61.4	63.6	67.0	63.4	64.7	69.1	64.9	66.3	70.8

WATER SUPPLY IN CENTRAL KENTUCKY

WATER SERVICE AREAS OF THE 6th CONGRESSIONAL DISTRICT



LEGEND

ANDERSON COUNTY

- LAWRENCEBURG MUNICIPAL SYSTEM
- STRINGTOWN WATER DISTRICT
- ALTON WATER DISTRICT
- SOUTH ANDERSON WATER DISTRICT (EXISTING)
- SOUTH ANDERSON WATER DISTRICT (PROPOSED)

BOURBON COUNTY

- NORTH MIDDLETOWN WATER SYSTEM
- PARIS WATER SYSTEM
- MILLERSBURG WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMPANY

BOYLE COUNTY

- LAKE VILLAGE WATER ASSOCIATION
- KENTUCKY STATE HOSPITAL
- CLEARVIEW WATER COMPANY
- DANVILLE WATER SYSTEM
- PERRYVILLE WATER SYSTEM
- PARKSVILLE WATER DISTRICT
- MILLTOP WATER COMPANY
- JUNCTION CITY WATER SYSTEM

BRACKEN COUNTY

- WESTERN BRACKEN WATER DISTRICT
- BRACKEN COUNTY WATER DISTRICT No. 1

CLARK COUNTY

- BOONESBORO WATER ASSOCIATION
- WINCHESTER WATER SYSTEM
- EAST CLARK COUNTY WATER DISTRICT

FAYETTE COUNTY

- KENTUCKY - AMERICAN WATER COMPANY
- SPEARS WATER DISTRICT

FRANKLIN COUNTY

- PEAKS MILL WATER DISTRICT
- ELKHORN WATER DISTRICT
- U.S. 60 WATER DISTRICT
- NORTH WOODFORD WATER DISTRICT
- FARMDALE WATER DISTRICT
- FRANKFORT WATER SERVICE
- NORTH SHELBY COUNTY WATER COMPANY

HARRISON COUNTY

- HARRISON COUNTY WATER ASSOCIATION
- CYNTHIANA WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMPANY

MADISON COUNTY

- BEREA COLLEGE WATER SYSTEM
- GARRARD COUNTY WATER ASSOCIATION
- KINGSTON - TERRILL WATER DISTRICT
- RICHMOND WATER ASSOCIATION INC.
- MILFORD WATER DISTRICT
- RICHMOND WATER SYSTEM
- SOUTH MADISON WATER DISTRICT
- WACO WATER DISTRICT
- WHITE HALL WATER DISTRICT
- PROPOSED EXTENSION TO WHITE HALL
- PROPOSED EXTENSION TO SIMPSONVILLE
- LEXINGTON BLUE GRASS ARMY DEPOT

MERCER COUNTY

- NORTH MERCER WATER DISTRICT (PROPOSED)
- NORTH MERCER WATER DISTRICT
- CITY OF BURGIN
- CITY OF HARRODSBURG
- LAKE VILLAGE WATER ASSOCIATION (HARRODSBURG - SUPPLIED WATER)
- LAKE VILLAGE WATER ASSOCIATION (DANVILLE - SUPPLIED WATER)

MONTGOMERY COUNTY

- REED VILLAGE WATER DISTRICT
- MONTGOMERY WATER DISTRICT NO. 1
- JEFFERSONVILLE WATER DISTRICT
- LEWIS WATER DISTRICT
- MT. STERLING

NICHOLAS COUNTY

- NICHOLAS COUNTY WATER ASSOCIATION
- CARLISLE WATER SYSTEM
- SHARPSBURG WATER DISTRICT
- WESTERN FLEMING WATER DISTRICT.

ROBERTSON COUNTY

- BUFFALO TRAIL WATER DISTRICT

SCOTT COUNTY

- GEORGETOWN WATER DEPARTMENT
- KENTUCKY - AMERICAN WATER CO.
- STAMPING GROUND WATER DEPT.

SHELBY COUNTY

- HENRY COUNTY WATER DIST. No. 2
- NORTH SHELBY WATER COMPANY
- WEST SHELBY WATER DISTRICT
- KENTUCKY CORRECTIONAL INSTITUTE FOR WOMEN
- SHELBYVILLE WATER & SEWER COMM.
- CITY OF TAYLORSVILLE WATER CO.
- U.S. 60 WATER DISTRICT

WOODFORD COUNTY

- NORTH WOODFORD WATER DISTRICT
- NORTHEAST WOODFORD WATER DIST.
- SOUTH WOODFORD WATER DISTRICT
- MIDWAY WATER SYSTEM
- VERSAILLES WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMP.
- GEORGETOWN WATER SYSTEM

40 0 40 80

SCALE IN MILES

00604

Assumed cost / 1000 gal assumed

DETAILED COST COMPARISON OF KENTUCKY RIVER STATION #2 AND PIPELINE TO LOUISVILLE INCREMENTAL REVENUE REQUIREMENTS ANALYSIS

A. Introduction

As a final step in comparing the costs of the Kentucky River Station #2 (KRS2) and the Louisville pipeline option Economic and Engineering Services, Inc. (EES) and John Young and Mark Shubert from AWWSC discussed conducting an incremental revenue requirement comparison between the Louisville pipeline and KRS2 options. This analysis would compare the revenue requirements associated with options over a 40 year planning horizon, the useful life of KRS2. This paper presents both the demand forecast used to conduct the analysis over 40 years and the results of the revenue requirements comparison.

B. Peak Day Demand Forecast

The peak day capacity is the limiting factor on the Kentucky American (KA) system. In all previous analysis we have used peak day forecasted demands at a 95% confidence level for capacity requirement projections. Kentucky American Water Company (KA) has made peak day projections on their system out to the year 2020 of 69.6 mgd. Using the growth rate in KA's forecast from 2015 to 2020 the projection was extended to the year 2031 (40 years from 1992 on-line date) for a peak day demand of 71.3 mgd in the year 2031. Based on current capacity of 58.5 mgd, peak day growth through the year 2031 is forecasted to be 12.8 mgd above current capacity. Peak day demand projections are shown on Figure 1.

does not consider in plant use. ⇒ 14.63 mgd.

The projected peak day demand increase over 40 years (the life of KRS2) is less than the 15 mgd capacity of KRS2. This means that within a 40 year planning horizon either plant, KRS2 or Louisville pipeline, adequately serves KA's future requirements. Therefore, an analysis of the two options over 40 years consists of a straight comparison between the two options and does not involve a question of the economic phasing of resources.

Demand Above Capacity

In conjunction with the peak day projections an analysis was conducted to estimate the volume of water required to meet demand during the peak summer period (May 1 to Sept 30.). This analysis utilized weather normalized daily demand projections to estimate the demands in excess of plant capacity. The steps of this analysis are more thoroughly described in EES' May 9th letter to Ed Limbach.

The current analysis added two steps to the previous estimates of demand in excess of capacity. The first step was to extend the analysis out to 2031 for a 40 year planning horizon from a 1992 on-line date. The second step was to compute volumes required in excess of capacity of both 58.5 mgd and 63.5 mgd. The calculations based on a capacity of 63.5 mgd assume that minimum daily purchases under a Louisville pipeline option would be 5 mgd, which increases minimum system capacity to 63.5 mgd (58.5 mgd current and 5 mgd minimum purchases).

The estimates of volumes required above 58.5 mgd show that by 2031 the average water required above capacity during the summer period is less than 4 mgd (annual average = total/365). If the 5 mgd minimum purchases from Louisville could be seasonally shaped it would be sufficient to meet future requirements. For water quality reasons, however, 5 mgd is the minimum daily requirements on the pipeline. This increases minimum system capacity to 63.5 mgd. By 1996 summer peaks will exceed this capacity and additional water purchases will be required in excess of the minimum 5 mgd. This additional volume has been computed and is shown on Figure 1.

Results of the water demand forecast shown on Figure 1 are used to calculate the revenue requirements resulting from the construction and operation of either KRS2 or the Louisville pipeline options.

Show 2 columns

Figure 1

KENTUCKY-AMERICAN WATER DEMAND FORECAST

Required above existing 58.5 mgd capacity (MGP)

Year	(1) 95% Peak (mgd)	(2) Average Daily Volumes Required Above Capacity of 58.5 mgd (mgd)	63.5 mgd (mgd)
1988	63.9	1.037	0.004
1989	62.1	0.549	0.000
1990	61.6	0.433	0.000
1991	61.9	0.494	0.000
1992	62.5 – 4 mgd	0.661	0.000
1993	63.0 4.5	0.768	0.000
1994	63.3 4.8	0.871	0.000
1995	63.6 5.1	0.946	0.000
1996	63.8 5.3	1.003	0.002
1997	64.0 5.5	1.076	0.007
1998	64.2 5.7	1.142	0.027
1999	64.4 5.9	1.204	0.048
2000	64.7 6.2	1.286	0.080
2001	65.0 6.5	1.385	0.123
2002	65.3 6.8	1.487	0.171
2003	65.7 7.2	1.590	0.226
2004	66.0 7.5	1.696	0.285
2005	66.3 7.8	1.803	0.347
2006	66.6 8.1	1.900	0.404
2007	66.8 8.3	1.998	0.465
2008	67.1 8.6	2.097	0.527
2009	67.4 8.9	2.197	0.593
2010	67.7 9.2	2.298	0.662
2011	67.9 9.4	2.363	0.706
2012	68.1 9.6	2.428	0.753
2013	68.3 9.8	2.494	0.799
2014	68.6 10.1	2.560	0.847
2015	68.8 10.3	2.627	0.896
2016	69.0 10.5	2.695	0.946
2017	69.1 10.6	2.755	0.997
2018	69.3 10.8 #	2.835	1.049
2019	69.4 10.9	2.905	1.101
2020	69.6 ↓	2.975	1.155
2021	69.7	3.046	1.210
2022	69.9 ↓	3.117	1.265
2023	70.0 continue	3.189	1.321
2024	70.2	3.261	1.378
2025	70.3	3.334	1.435
2026	70.5	3.406	1.493
2027	70.7	3.479	1.552
2028	70.8	3.552	1.612
2029	71.0	3.625	1.673
2030	71.1	3.699	1.734
2031	71.3	3.773	1.797

1) Peak day demand past 2020 assumed to grow at 2015 to 2020 growth rate.

2) Plant capacity is assumed to be exceeded only during the period May 1 to Sept. 30. Average volumes in excess of capacity based on weather normalized daily consumption

SENT BY:AMERICAN WATER SYSTEM ; 7-25-89 ; 8:13AM ; 6093468360→ 304 340 0757:# 5
RCV BY:AMERICAN WATER SYSTEM ; 7-24-89 ; 4:27PM ; 208 451 8088→ 6093468860:# 5

Figure 1
(continued)

KENTUCKY-AMERICAN WATER DEMAND FORECAST
(continued)

Year	(1) 95% Peak (mgd)	(2) Average Daily Volumes Required Above Capacity of 58.5 mgd (mgd)	63.5 mgd (mgd)
2032	71.4	3.755	1.782
2033	71.6	3.818	1.835
2034	71.8	3.880	1.889
2035	71.9	3.943	1.943
2036	72.1	4.006	1.998
2037	72.2	4.069	2.054
2038	72.4	4.132	2.110
2039	72.5	4.196	2.167
2040	72.7	4.259	2.224
2041	72.9	4.323	2.282
2042	73.0	4.387	2.340
2043	73.2	4.451	2.398
2044	73.4	4.515	2.457
2045	73.5	4.579	2.517
2046	73.7	4.643	2.576
2047	73.8	4.708	2.636
2048	74.0	4.772	2.697
2049	74.2	4.837	2.758
2050	74.3	4.902	2.819
2051	74.5	4.967	2.881
2052	74.7	5.032	2.945
2053	74.8	5.098	3.009
2054	75.0	5.163	3.073
2055	75.2	5.229	3.137
2056	75.3	5.295	3.202
2057	75.5	5.361	3.267
2058	75.7	5.427	3.332
2059	75.8	5.493	3.397
2060	76.0	5.559	3.464
2061	76.2	5.626	3.530
2062	76.3	5.693	3.597
2063	76.5	5.759	3.664
2064	76.7	5.826	3.731
2065	76.8	5.894	3.798
2066	77.0	5.961	3.865
2067	77.2	6.028	3.932
2068	77.3	6.096	4.000
2069	77.5	6.163	4.068
2070	77.7	6.231	4.135
2071	77.9	6.299	4.203
2072	78.0	6.367	4.272
2073	78.2	6.436	4.340
2074	78.4	6.504	4.408
2075	78.6	6.573	4.477
2076	78.7	6.642	4.546
2077	78.9	6.711	4.615
2078	79.1	6.780	4.684
2079	79.3	6.849	4.753

P

Incremental Revenue Requirement Comparison

The incremental revenue requirement analysis compares the additional revenue requirement related to the construction and operation of KRS2 or the Louisville pipeline. Revenue requirements include return on rate base, taxes, depreciation, and operation costs. The stream of revenue requirement over a 10, 20, 30 and 40 year planning horizon was discounted back to the on-line date of 1992. In addition, the Louisville pipeline options was credited with a salvage value at the end of the 40 year analysis since large components of that options have useful lives greater than 40 years. The salvage value was assumed equal to the percent of plant not depreciated multiplied by the replacement value of the plant in future inflated dollars.

Several assumptions were made to conduct the revenue requirement analysis and are shown below:

o	Rate of Return	10.74%
o	Incremental Taxes	34%
o	Inflation Rate	5%
o	Real Discount Rate	7%
o	Period of Analysis	1992 - 2031

Results

The results of the incremental revenue requirement comparison are shown on Figure 2. Based on the analysis, the revenue requirement of the Louisville pipeline option are significantly higher than revenue requirement for KRS2. The present value difference in revenue requirements between the two options ranges from $27.5 million over 10 years to $37 million over 40 years.

Figure 2

Present Value of Revenue Requirement
($1989)

Period	Kentucky River Station #2	Louisville Pipeline
10 years	$30,587,520	$58,099,340
20 years	$41,317,156	$76,269,637
30 years	$44,835,921	$82,362,570
40 years	$46,023,748	$83,254,215

The stream of annual revenue requirements from which the above values were computed is presented on Figure 3.

Figure 1

Revenue Requirement Comparison
($1989 Millions)

Year	Kentucky River Station #2	Louisville Pipeline
1992	5,330	10,123
1993	5,039	9,584
1994	4,765	9,075
1995	4,506	8,594
1996	4,260	8,139
1997	4,031	7,713
1998	3,894	7,314
1999	3,686	6,939
2000	3,493	6,589
2001	3,313	6,264
2002	3,144	5,960
2003	2,985	6,399
2004	3,499	5,412
2005	3,315	5,164
2006	3,143	4,931
2007	2,981	4,712
2008	2,829	4,508
2009	2,687	4,311
2010	2,554	4,127
2011	2,428	3,952
2012	2,311	3,789
2013	2,201	4,358
2014	2,099	3,493
2015	2,003	3,360
2016	1,911	3,230
2017	1,826	3,110
2018	1,746	2,997
2019	1,672	2,891
2020	1,602	2,793
2021	1,537	2,701
2022	1,477	2,616
2023	1,421	3,258
2024	1,368	2,462
2025	1,320	2,386
2026	1,274	2,324
2027	1,232	2,266
2028	1,193	2,213
2029	1,157	2,164
2030	1,106	2,117
2031	1,079	2,076
Salvage Value		(21,773)

8/1989

KENTUCKY-AMERICAN DEMAND FORECAST

YEAR	95 % PEAK (MGD)	REQ'D ABOVE EXSTNG(58.5) (MGD)
1992	62.5	4
1993	63	4.5
1994	63.3	4.8
1995	63.6	5.1
1996	63.8	5.3
1997	64	5.5
1998	64.2	5.7
1999	64.4	5.9
2000	64.7	6.2
2001	65	6.5
2002	65.3	6.8
2003	65.7	7.2
2004	66	7.5
2005	66.3	7.8
2006	66.6	8.1
2007	66.8	8.3
2008	67.1	8.6
2009	67.4	8.9
2010	67.7	9.2
2011	67.9	9.4
2012	68.1	9.6
2013	68.3	9.8
2014	68.6	10.1
2015	68.8	10.3
2016	69	10.5
2017	69.1	10.6
2018	69.3	10.8
2019	69.4	10.9
2020	69.6	11.1
2025	70.3	11.8
2030	71.1	12.6
2040	72.7	14.2
2050	74.3	15.8
2060	76	17.5
2070	77.7	19.2

8/1989

KENTUCKY-AMERICAN DEMAND FORECAST

YEAR	95 % PEAK (MGD)	REQ'D ABOVE EXSTNG(58.5) (MGD)
1992	62.5	4
1993	63	4.5
1994	63.3	4.8
1995	63.6	5.1
1996	63.8	5.3
1997	64	5.5
1998	64.2	5.7
1999	64.4	5.9
2000	64.7	6.2
2001	65	6.5
2002	65.3	6.8
2003	65.7	7.2
2004	66	7.5
2005	66.3	7.8
2006	66.6	8.1
2007	66.8	8.3
2008	67.1	8.6
2009	67.4	8.9
2010	67.7	9.2
2011	67.9	9.4
2012	68.1	9.6
2013	68.3	9.8
2014	68.6	10.1
2015	68.8	10.3
2016	69	10.5
2017	69.1	10.6
2018	69.3	10.8
2019	69.4	10.9
2020	69.6	11.1
2025	70.3	11.8
2030	71.1	12.6
2040	72.7	14.2
2050	74.3	15.8
2060	76	17.5
2070	77.7	19.2

8/1989

KENTUCKY-AMERICAN DEMAND FORECAST

YEAR	95 % PEAK (MGD)	REQ'D ABOVE EXSTNG(58.5) (MGD)
1992	62.5	4
1993	63	4.5
1994	63.3	4.8
1995	63.6	5.1
1996	63.8	5.3
1997	64	5.5
1998	64.2	5.7
1999	64.4	5.9
2000	64.7	6.2
2001	65	6.5
2002	65.3	6.8
2003	65.7	7.2
2004	66	7.5
2005	66.3	7.8
2006	66.6	8.1
2007	66.8	8.3
2008	67.1	8.6
2009	67.4	8.9
2010	67.7	9.2
2011	67.9	9.4
2012	68.1	9.6
2013	68.3	9.8
2014	68.6	10.1
2015	68.8	10.3
2016	69	10.5
2017	69.1	10.6
2018	69.3	10.8
2019	69.4	10.9
2020	69.6	11.1
2025	70.3	11.8
2030	71.1	12.6
2040	72.7	14.2
2050	74.3	15.8
2060	76	17.5
2070	77.7	19.2

Slade

STOLL, KEENON & PARK

1000 FIRST SECURITY PLAZA

LEXINGTON, KENTUCKY 40507-1380

(606) 231-3000

CABLE ADDRESS: "STOKE"

TELEX: 213-479

FAX: (606) 253-1093

* FRANKFORT OFFICE

326 W. MAIN STREET

FRANKFORT, KY 40601

(502) 875-6000

FAX: (502) 875-6008

ROBERT F. HOULIHAN
WILLIAM E. JOHNSON *
LESLIE W. MORRIS, II
JACKSON W. WHITE
LINDSEY W. INGRAM, JR.
WILLIAM L. MONTAGUE
BENNETT CLARK
LAWRENCE E. FORDY, JR.
SPENCER D. KOE
WILLIAM T. BISHOP, III
JOSEPH H. SCOTT, JR.
MICHAEL L. JUDY *
RICHARD C. STEPHENSON
CHARLES E. SNIVELY, JR.
ROBERT M. WATT, III
J. PETER CASSIDY, JR.
MAXWELL A. BARRETT, JR.
R. DAVID LESTER, II
ROBERT F. HOULIHAN, JR.
WILLIAM M. LEAR, JR.
GARY L. STAGG
GARY W. BARR
DONALD R. WAGNER
DOUGLAS R. ROMAINE
FRANK L. WILFORD
HARVIE B. WILKINSON
ROBERT W. KELLERMAN *
J. DAVID SMITH, JR.
EILEEN O'BRIEN
DAVID SCHWETSCHENAU
ANITA M. BRITTON
RENA GARDNER WISEMAN
CALVIN R. FULKERSON
DENISE KIRK ASH
BONNIE J. HOSKINS

O. JOSEPH BEAVIN
DIANE N. CARLTON
KENDALL SINGLETARY CREEK
LARRY A. SYKES
R. DOUGLAS BARR
LAURANCE B. VANMETER
PERRY HACK BENTLEY
MARY BETH GRIFFITH
DAN ROSE
J. GUTHRIE TRUE *
ALBERT F. GRAESER, JR.
GREGORY D. PAVEY
J. MEL CAMENISCH, JR.
LAURA DAY CARRUTHERS
RICHARD M. GUARNIERI *
JOHN W. WALTERS, JR.
JONATHAN R. NORRIS
JAMES L. THOMERSON
DAVID E. FLEENOR
PAMELA J. LESTER

WALLACE MUIR - (1876-1947)
RICHARD C. STOLL - (1876-1949)
WILLIAM H. TOWNSEND - (1890-1964)
RODMAN W. KEENON - (1882-1966)
JAMES PARK - (1902-1970)
JOHN L. DAVIS - (1915-1970)
GLADNEY HARVILLE - (1921-1978)
GAYLE A. MOHNEY - (1908-1980)
C. WILLIAM SWINFORD - (1921-1980)

RECEIVED
JUL 31 1989
KY. AMER. WATER CO.
LEXINGTON, KY.

	EDENS	
	ALLEN	
	BLANTON	
	BRAXTON	
	BURNS	
	BUSH	
	DAVIE	
	GRIFFIN	
	HAMMACK	
	McCONNATHY	
	SINGLETON	
✓	SLADE	
	SMITH	
	STAGGS	
	STOCKTON	
	TRIMBLE	
	WILKINS	
✓		
✓	FILE	
✓	COPY TO SRS	
✓	RETURN TO RLR	

July 31, 1989

Hon. Susan Mastin
General Counsel
Public Service Commission
730 Schenkel Lane
P. O. Box 615
Frankfort, Kentucky 40602

Dear Susan:

Kentucky-American Water Company and Louisville Water Company have entered into discussions about the purchase and sale of potable water. Louisville Water Company would sell potable water to Kentucky-American Water Company under a very long-term contract. The transportation facilities for the water would be constructed from treatment and/or storage facilities owned by Louisville Water Company to the Kentucky-American system in Fayette County, Kentucky. That portion of the pipeline to be constructed in Jefferson County, Kentucky, would be owned, financed and maintained by Louisville Water Company. The point of purchase and sale of the water would be at the Jefferson-Shelby County line. From that point on east the facilities would be constructed, financed and owned by Kentucky-American Water Company.

As you are aware KRS 278.200 is as follows:

> "278.200. Power To Regulate Rates and Service Standards Fixed by Agreement with City - The commission may, under the provisions of this chapter, originate, establish, change, promulgate and enforce any rate or service standard of any utility that has been or may be fixed by contract, franchise or agreement between the utility and any city, and all rights,

> privileges and obligations arising out of any such contract, franchise or agreement, regulating any such rate or service standard, shall be subject to the jurisdiction and supervision of the commission, but no such rate or service standard shall be changed, nor any contract, franchise or agreement affecting it abrogated or changed, until a hearing has been had before the commission in the manner prescribed by this chapter."

Louisville Water Company has expressed concern about the potential, under the above statute, for the Public Service Commission of the Commonwealth of Kentucky to regulate it (Louisville Water Company) with respect to the rates involved in the contemplated contract, service rendered by it pursuant to the contemplated contract, or its rates and/or services generally.

We have expressed the opinion to Kentucky-American Water Company that since Kentucky-American Water Company is a "utility" as defined in KRS 278.010(3) and regulated with respect to its rates and services, and since Louisville Water Company would not be a "utility" because of its ownership, the Public Service Commission would not have the statutory authority to regulate the price Louisville Water Company would charge Kentucky-American Water Company under the contemplated contract.

Our opinion was based upon our analysis of the statute, that there is no case law to support the concept that Louisville Water Company could be regulated under the contemplated contract, and that such regulation would seem to contravene KRS 278.040(2) which states:

> "The jurisdiction of the commission shall extend to all utilities in this state. The commission shall have exclusive jurisdiction over the regulation of rates and service of utilities, but with that exception nothing in this chapter is intended to limit or restrict the police jurisdiction, contract rights or powers of cities or political subdivisions."

We are of the opinion that the qualifying phrase in the second sentence in this statute has an error in it and it should read - "but with the exception that nothing in this chapter is intended to limit or restrict the police jurisdiction, contract rights or powers of cities or political subdivisions."

We have expressed the opinion that this statute was specifically designed to express the intention of the Commonwealth to retain for itself, and direct the Public Service Commission to exercise, its innate police power to control the rates and services of public utilities who may contract with cities for the furnishing of services. Our opinion is based upon such examples as exist in Peoples Gas Company of Kentucky v. City of Barbourville, 165 S.W.2d 567 (1942). The conclusion of this case seems to be that a municipality has the right to set the initial rates for the furnishing of service to its inhabitants by any utility in its franchises or by separate contract, but the Public Service Commission has the right to thereafter adjust those rates as may be charged by the utility. OAG 81-44 seems to confirm our opinion with respect to the interpretation of the statute.

We have also expressed the opinion that the Public Service Commission has the right to decide whether or not the price to be paid by Kentucky-American Water Company for the purchase of potable water is fair and reasonable to the extent that it will be passed along entirety as a cost of operation by Kentucky-American Water Company in the development of its rates. The situation is no different for Kentucky-American Water Company than exists for the purchase of any other service or product by it at the present time.

Obviously Kentucky-American Water Company will keep the Commission and its staff advised as these negotiations proceed. To that extent we are confident that any price that may be negotiated will meet the approval of the Commission. Kentucky-American Water Company will not enter into a contract with Louisville Water Company unless it contains an express provision that the contract is subject to the approval of the Public Service Commission of the Commonwealth of Kentucky in its entirety.

Based upon the foregoing would you please render an opinion as to whether or not the Public Service Commission of the Commonwealth of Kentucky would have any jurisdiction over the rates and/or services of Louisville Water Company under existing law in the proposed contract?

Thanking you in advance for your attention to this matter and cooperation, I am

Very truly yours,

STOLL, KEENON & PARK

By_____
Lindsey Ingram

/sl

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: C. E. Jarrett

FROM: R. A. Edens

DATE: July 21, 1989

SUBJECT: Louisville Water Company Pipeline

Chris, I am attaching a memo addressed to me from Coleman Bush. This letter resulted from a discussion I had with a senior account executive at Hilliard Lyons in Louisville regarding a possible connection for the City of Georgetown to our existing distribution system. He has done work for the Louisville Water Company and was familiar with the proposed pipeline concept. He remarked that he was confident that Kentucky-American could obtain tax exempt bonds for such a project. I thanked him for the advice and asked Coleman to contact Gary Stage, who is one of the tax folks at Stoll, Keenon and Park.

I submit this to you at this time for informational purposes only, however, it may well be worth pursuing if we are able to successfully negotiate a deal with the City of Louisville. No response is required at this time, but I thought it was worth calling to your attention.

RAE/ll

Attachment

cc: Susan Slade

2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American Water Company
An American Water Works System Company

MEMORANDUM

TO: R. A. Edens

FROM: C. D. Bush

DATE: July 19, 1989

SUBJECT: Tax Exempt Bonds for the Line to Louisville

Gary Stage called on Wednesday, July 19th. He did say that the tax exempt bonds seem to be a viable alternative for financing the line to Louisville. He said that the Kentucky Development Finance Authority would issue bonds on behalf of Kentucky-American. He said that you could probably get a twenty year fixed rate at between 7 and 7-1/4 percent with call protection for at least ten years. He felt that the full amount could be financed.

He said that in order to start the process, we would need to decide on an underwriter and involve the people that we probably normally involve in financings. He said it would probably be a good idea to have a local firm involved like Hilliard Lyons to make the issue a little more attractive. He felt also that there would be some political aspects to this due to the location of the line in several counties.

It does appear that there are substantial savings here and that it is something that, after you and I review, could be turned over to Tim Snyder for further review.

CDB/ll

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

502-569-3600

FOSTER S. BURBA
PRESIDENT

July 14, 1989

Mr. Robert A. Edens
Vice President and General Manager
Kentucky-American Water Company
Box 7500
Lexington, KY 40502

Dear Bob:

This will confirm a meeting scheduled for August 24, 1989, at 9:30 A.M. at the Louisville Water Company office, 435 South Third Street, Louisville, KY. Purpose of the meeting is to discuss possible extension of water service to Lexington and environs.

Sincerely,

Foster S. Burba
President

FSB:jcm

cc: Mr. Joseph B. Helm, BT&H
Mr. John L. Huber, LWCo.
Mr. William V. Egart, LWCo.

✓	EDENS	
	BRAXTON	
	BUSH	
	STOCKTON	
	SNOW	
	McCONATHY	
	ALLEN	
	BURNS	
	GRIFFIN	
	SINGLETON	
✓	SLADY	
	STAGGS	
	HAMMACK	
	STEWART	
	BLANTON	
	PERKINS	
	BUGGLES	
	FILE	
	COPY TO	
	RET. TO	

RECEIVED
JUL 20 1989
KY. AMER. WATER CO.
LEXINGTON, KY.

ALVORD, BURDICK & HOWSON

ENGINEERS

20 NORTH WACKER DRIVE · SUITE 1401
CHICAGO, IL 60606
TEL (312) 236-8147 TELEX: 936010 ABH ENGRS.
FAX: 312-236-0692

JOHN W. ALVORD 1861-1943 · CHARLES B. BURDICK 1874-1955 · LOUIS R. HOWSON 1887-1985

WM. H. RICHARDSON · D. THOMAS LUNDY
DONALD E. ECKMANN · GEORGE E. NEHER
DR. YA TAI LIN · ROY J. PALETA · ROBERT F. ROBERTSON

SERVICES
WATER WORKS, WATER PURIFICATION
WASTE WATER COLLECTION
WATER POLLUTION CONTROL
FLOOD RELIEF
POWER GENERATION
INVESTIGATIONS, REPORTS AND PLANS
CONSTRUCTION AND OPERATION SERVICES
APPRAISALS AND RATE REPORTS

MEMBERS
AMERICAN SOCIETY OF CIVIL ENGINEERS
WESTERN SOCIETY OF ENGINEERS
AMERICAN WATER WORKS ASSOCIATION
CHICAGO ASSOCIATION OF COMMERCE AND INDUSTRY
AMERICAN NATIONAL STANDARDS INSTITUTE
WATER POLLUTION CONTROL FEDERATION
AMERICAN PUBLIC WORKS ASSOCIATION

EDENS
BRAXTON
RUSH
STOCKTON
SNOW
McCORMICK
ALLEN
BURNS
GRIFFIN
SINGLETON
SLADE
STAGGS
HAMMACK
STEWART
BLANKE
PERKINS
RUGGLES
FILE
COPY TO
RET. TO

RECEIVED
JUL 10 1989
KY. AMER. WATER CO.
LEXINGTON, KY.

July 7, 1989

Ms. Susan R. Slade
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Re: Cost Estimates
Lexington/Louisville Transmission Main

Dear Ms. Slade:

At your request, we have completed cost estimates for the facilities to be located in Jefferson County for Cases PIV-30, PIV-36, PIV-42, EIV-30, EIV-36, and EIV-42. The results of these estimates are shown in the attached tables. Table 24 shows the conservative cost estimates for facilities to be situated within Jefferson County, including pipeline installation, reservoir and pumping station (if any), standpipes and pumping stations (if any) for the selected Route IV with 2 connections and 3 pipe sizes. The results are compared with the total project costs as follows:

CASE	COST WITHIN JEFFERSON COUNTY		TOTAL PROJECT COST		% OF TOTAL PROJECT COST	in Jeff. Co.
PIV-30	$16,841,000	18.7 mi	$43,848,000	69.5 mi	38.41	(18.7 mi.)
PIV-36	$17,040,000		$52,368,000		32.54	
PIV-42	$19,757,000		$62,564,000		31.58	
EIV-30	$6,559,000	6.7 mi	$37,208,000	57.5 mi	17.63	(6.7 mi.)
EIV-36	$7,398,000		$44,285,000		16.71	
EIV-42	$6,327,000		$52,905,000		11.96	

The sensitivity analysis of the project costs within Jefferson County for the six cases considered has also been made and the results are summarized as follows:

00620

SUMMARY OF SENSITIVITY ANALYSIS
FOR
FACILITIES LOCATED IN JEFFERSON COUNTY

CASE	CONSERVATIVE COST	PIPE COST	REDUCED COST ROCK EXCAVATION	REDUCED COST UNIT COSTS	REDUCED COST COMBINATION OF ALL
PIV-30	$16,841	$16,318	$16,219	$15,756	$14,847
PIV-36	$17,040	$16,359	$16,423	$16,029	$14,915
PIV-42	$19,757	$18,954	$19,088	$18,141	$16,827
EIV-30	$6,559	$6,370	$6,361	$6,161	$5,833
EIV-36	$7,398	$7,156	$7,175	$7,027	$6,628
EIV-42	$6,327	$6,040	$6,086	$5,695	$5,239

It is noted that all costs shown above are in thousands of dollars.

If you have any questions concerning these tables, please feel free to call us.

Yours very truly,

ALVORD, BURDICK & HOWSON

By Mike Lin
Mike C. Lin

ML:kg

cc: Mr. Edward W. Limbach (11 copies)
Mr. Roy L. Ferrell
Mr. Robert A. Edens
Mr. Dan Kelleher
Mr. Mark Schubert
Mr. John Young

Louisville Water —

(1) getting topo maps assembled

(2) RFP Drafted → Are we doing this or is Syst. Engineering

(3) Louisville owes us

(a) What will PSC concerns do to decision ~~yay~~ nay

(b) Can/will Louis Water participate in financing

(c) bottom line cost / 1000 gal and methodology (~~$0.40 - 0.55~~) ← min take etc.

4/13/89 - Louisville Water Co.

O. Jarrett, R. Ferrell, S. Slad
w/ Bill Egart

BEPayne plant builds mid 70's - easily expand to 120 MGD from 60

by 1906 - - - city of Louisville had bought up all of the stock.
pay dividend to city

Projecting 5.5% rate increase projected for 1990.

Jeffersontown Quadrangle - upper rt. corner. at
English Station.

Anchorage quadrangle

FAX ⇒ KANC TARIFF TO Bill

(1) Sell at County line or tank for $1.19/1000 gallons.

(2) Go to English sta. & across to Plant
— moving target $.55 - .65 ≤ $.60/1000 gall

(3) KAWC builds storage systems between Louisville & Lex.
→ off peak/our pumpage.

(4) Buy at English station tank dir. of

Elbo ?

will get us copy of updated cost/mgd info from annual report.

contracts - max & min capacity ⇒ Take or pay standard.
escape clause ⇒ will need to come up with

probably operate as base load if we can get pricing
where we can do this

Louisville is concerned about PSC's involvement

use 1.65 factor for max day

Ky - $30 million cap.

State revenue bonds.

① Possible Low. financing < 4% ... facilities ~~std~~ we pay back.
B.E Payne + 1st Pumping ⇒ + waterlines in Jeff. County.

Send copy of tariff

460 → 440 floor of Clearwell

Hoosier utilities may tap into Louisville Water Co.

By RON COOPER
and ERIC BENMOUR

Within the next few years, Southern Indiana businesses may turn on the tap to get water from Louisville.

Two Hoosier utilities are considering the possibility of connecting into the Louisville Water Co. via a pipe or pipes constructed across the Ohio River.

That proposal is among others under review by Clark County REMC and Indiana Cities Water Corp. It's a simple matter of supply and demand. Southern Indiana has a growing demand it cannot meet; Louisville has a plentiful supply it wants to sell.

"We're evaluating our future needs for water service in Jeffersonville, New Albany and Clarksville," said Larry Hensley, chief operating officer for Indiana Cities Water, the investor-owned utility that serves 28,000 customers in the three cities.

"We could buy water from Louisville, expand our wells or make improvements to our water-treatment plant."

Wayne Johnson, the REMC's executive vice president, said his electric membership cooperative in Hamburg launched subsidiary North Clark Water Corp. to help expand water service in rural parts of Clark and four nearby counties. The five counties encompass about 20 water companies.

"To make it economically feasible to deal with Louisville, we'd have to move several millions of gallons a day across the river, and we don't have that need yet," he said.

Other options open to Clark County REMC, he said, are tapping into wells on the property of the now-closed Marble Hill nuclear generating plant at Madison or the wells on the site of the Indiana Army Ammunition Plant near Charlestown.

"Rural water corporations in our area were built for residential customers and can't handle large industrial or commercial users," he said. "We've lost (prospective industries) because of the unavailability of water. We need a regionalized approach to providing water service."

Indiana Cities and Clark County REMC are conducting what officials described as preliminary discussions with Louisville Water Co. Neither Johnson nor Hensley could estimate how much it would cost to construct a water line across the river, or what rates they would have to pay.

They also said the timetable for such construction, if it ever occurs, could be years away.

But both men cited a need for additional water supplies. As the Southern Indiana population grows and more industries move in, those needs must be addressed, they said.

In short, Southern Indiana wells near the Ohio River—a primary source for water in both cities and countryside—are going dry. And it may be cheaper to import water from Louisville, as opposed to clearing out those wells or digging new ones; or building new or improving existing water-treatment plants on the north side of the Ohio River.

Johnson and Hensley said that in their separately held discussions with Louisville Water, they are getting positive feedback from their northern neighbors.

"Louisville Water makes no secret of the fact they have a substantial excess capacity and are looking around for any possible wholesale customers," Johnson said.

Jerry Ford, Louisville Water's manager of administrative services, seconded that notion.

"It is probably doable," Ford said. "We've got extra water to serve (new customers)." During November, Louisville utility pumped an average of 103 million gallons of water daily. The capacity is 270 million gallons a day.

Because of excess capacity, Louisville Water has been rapidly expanding its territory outside the city in recent years. This year, the utility began service to the West Shelby Water District in Shelby County and is working on plans to provide water to Shepherdsville via the Kentucky Turnpike Water District, Ford said.

"We're always willing to talk to anyone within a reasonable distance from us about the possibility of serving them with water," he said. Ford said at a certain distance, its equipment would not be powerful enough to deliver water.

"Our only concern is we don't get over our head, that we don't make commitments so that in 2020 everybody's going to use more than what we can produce."

Ford said it is too early to determine what rates it might charge to send water across the river. That would depend on how much the customers would use and what equipment would be necessary to deliver it.

To date, the discussions between the utilities in Southern Indiana and Louisville have centered on the engineering feasibility of laying a line on the floor of the river. All believe it can be done, but not without first getting a permit from the U.S. Army Corps of Engineers.

Frank Degott, a Corps project manager, said the permit application would focus on the potential impact of a river pipe on water quality, fish and archaeological sites.

"They're going to have to contact us," he said. "We'd have to sit down with them and see what they want to do."

Johnson said serious negotiations with Louisville Water about an Ohio River line may be years off or "could start tomorrow." It all depends, he said, on the level of interest shown in Southern Indiana by industrial prospects.

Some prospects are currently looking at sites in areas that have a minimal amount of water. If it came to attracting them to the area or turning them away due to inadequate water supplies, the talks with Louisville Water would take on some urgency.

He said most prime industrial sites in Clark County are in the area of the new loop of Interstate 265 that will connect Interstate 65 north of Jeffersonville to Indiana 62 east of that city. The loop will be finished in 1992.

His challenge is to persuade rural water corporations of the need to expand supplies for the up-and-coming industries eyeing the area. Those water corporations not only have limited supplies, he said, but also often cannot afford the expense of extending lines to new customers.

"Many rural water corporations were built to handle a capacity of only 300,000 to 700,000 gallons of water a day," Johnson said. "That's not enough, when to be competitive, you need to have available several millions of gallons a day."

Robert Stoner, manager of the Watson Rural Water Co. Inc., acknowledged the need for additional capacity. His service area between Jeffersonville and Charlestown near the Clark Maritime Center is ripe for business development, he said, but Watson Rural Water may be hard pressed to connect all new customers.

"Our system was primarily built for domestic (residential) use," he said. "We have 1,990 residential customers and about eight to 10 commercial users."

Stoner said his system pumps 750,000 to 800,000 gallons a day and has storage for an additional 600,000 gallons. To boost capacity, he said, the company would need to increase the size of its lines and develop more well sites off Utica Pike in Jeffersonville—its water source near the Ohio.

Robert Belles, general manager of Silver Creek Rural Water Corp., said his company pumps 500,000 gallons of water a day to a largely residential-customer base in Clark and Floyd counties. There is capacity to store an additional 800,000

Please see next page

TRY IT BEFORE YOU BUY IT!



Have you ever wanted to lease a vehicle for 4 months to find out if it suits your specific needs and wants. Call Toyota of Louisville today and ask for details about our V.I.P. Evaluation Drive Plan.

TOYOTA of LOUISVILLE, Inc.
4770 Dixie Highway • P.O. Box 58100
Louisville, Kentucky 40258 (502) 935-1453

Tailor-made Classes to Suit Your Company's Needs

Sullivan College has been tailoring courses to meet the community's needs — the needs of business, industry, and society — for decades, with a rich history dating back to 1864. More recently, Sullivan has become a personal tailor for some of Louisville's most progressive companies, creating classes to train employees in specific areas.

In addition to the more-than-100 Evening Classes offered at Sullivan College, you can arrange to have a special class custom tailored to fit your specific needs. From Lotus 1-2-3 to Micro-computer accounting . . . from Management to Marketing, Sullivan can train an entire department or a selected group of employees with a unique curriculum designed for the perfect fit.

For more information on how the custom-tailored approach can benefit you and your employees, call Jim Klein, Evening Division Director at 456-6504.

Outside the Louisville area, in Kentucky call 1-800-292-1676; in Indiana call 1-800-841-4597.

Sullivan College

The New Kid On The Block

Low Temperature Warehouse Space -15
6,000 Sq. Feet Available -15°

- Lowest Price
- Efficient Service
- No Waiting For Inbound or Outbounds
- Can Pick Up and Deliver

Call For Rates
589-0378 or 589-6035
Hours 7:00 a.m.-5:00 p.m.

Floyd, Clark, Scott, Washington, Orange, Crawford and Harrison counties.

Carl Malysz, director of the New Albany City Plan Commission, said the SBA requires a Certified Development Co. to serve a multi-county district.

Neal said a qualifying business may receive up to 40 percent of its funding, or a maximum of $500,000, from the CDC.

Water . . .

Continued from preceding page

gallons, he said, but that wouldn't be enough to handle a big onslaught of business development.

"We would need to upgrade our system with larger lines to get more flow and more capacity," he said.

Johnson said two factors could soon force rural water companies to make some tough decisions, he said.

One is the possibility of more stringent environmental regulations that would require well water to be more extensively treated—much the same as the strict government standards that apply to surface water. That would require the construction of new or expansion of existing treatment facilities.

The second factor, Johnson said, is that many rural water corporations are paying off their U.S. Farmers Home Administration loans, forcing them to refinance their operations at a higher interest rate through conventional lenders.

But Belles said Silver Creek's refinancing last year was a wash. The Farmers Home Administration permitted the water company to "buy out" of its 5-percent $800,000 government loan for $438,000 to help pay off the federal budget deficit.

Silver Creek refinanced at a 10-percent bank loan, but the savings through the buyout kept the water company from going further in debt, he said.

A long-range master plan for adequate water service is essential to attract industries to the area, said Brian de St. Croix, executive director of the Southern Indiana Economic Development Council.

"Water and sewer service are basic requirements for successful industrial locations," he said. "Having a location without that kind of infrastructure is like having no road built to an industrial site."

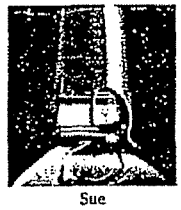
The Clark County REMC is also trying to regionalize sewer service in Southern Indiana. It serves more than 10,000 electric customers in not only Clark, but also Floyd, Jefferson, Scott and Washington counties.

Silver Creek's Belles said heightened water service will follow suit when new sewers are installed in rural areas. "We do not want to deny industry" the opportunity to open in rural locations, he said.

Hensley of Indiana Cities Water said Clarksville, Jeffersonville and New Albany also are taking aim at new industry. His utility's projections call for a 7 percent to 8 percent growth in customers, both business and residential, over the next 20 years.

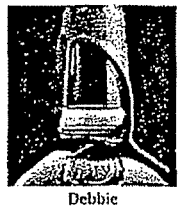
equipment purchases. not be earmarked for inventory.


Anna


Sue


Shirley


Marie


Debbie


Betty Lou

Like snow
no two ar

It's been said tha
patterns that run
of our bottles aft
dipped have the i
snowflakes.

And while we'd b
to explain what's
differences in snc
easy to explain t
of our wax patter

It's the six ladies y
on the right.

They, too, are as
snowflakes. Each
her own special
adding her own s
each bottle of Ma
hand dips.

Bill Sa

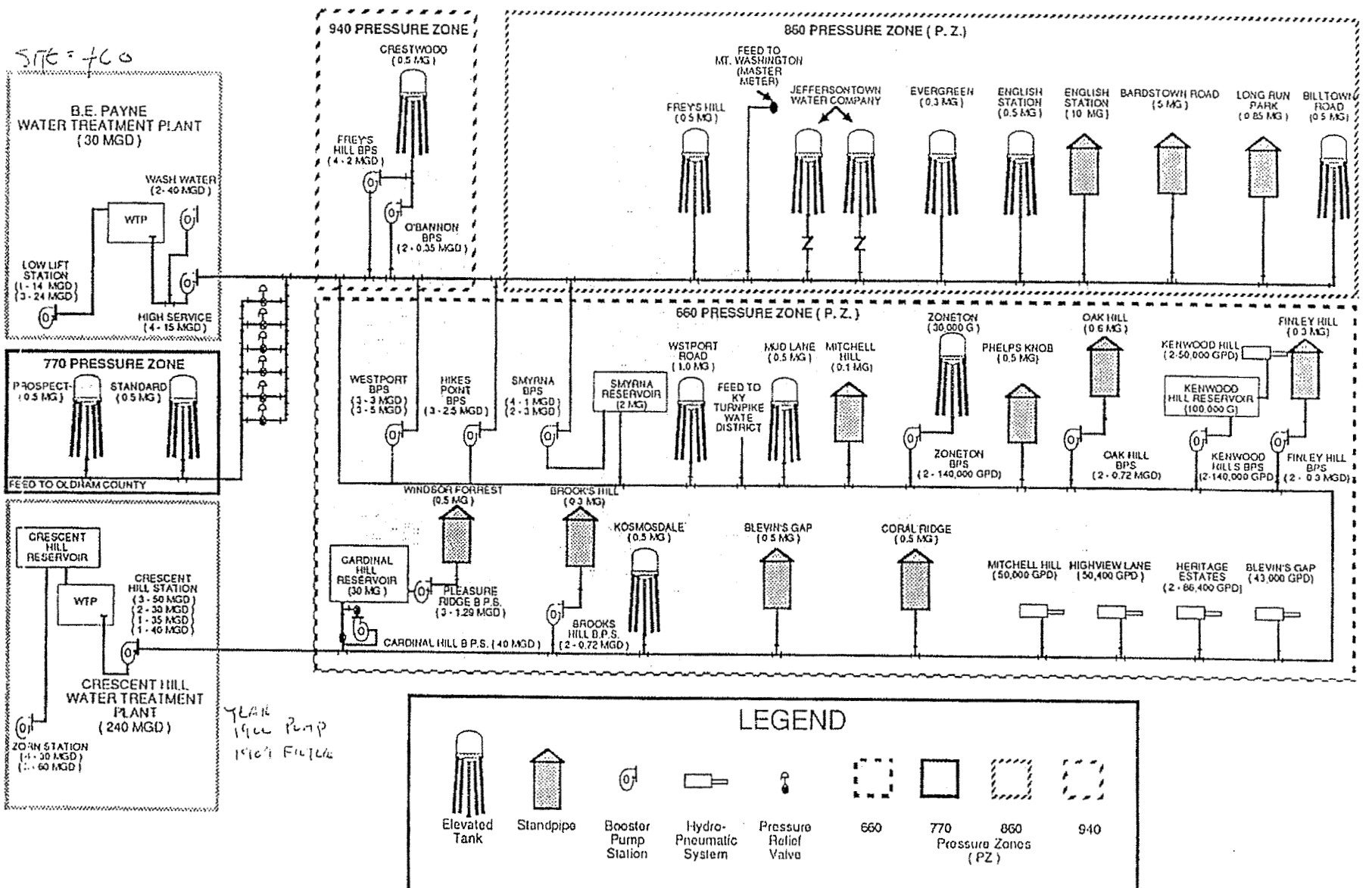
Bill Samuels,
President
Maker's Mark

Mak
Ma

Maker's Mark Distillery, Loretto, KY 40037

FIGURE 1-1

SCHEMATIC OF LOUISVILLE WATER COMPANY DISTRIBUTION PRESSURE SYSTEM



→ will fax outline 4/4/89

Notes of Conversation w/ Bill Egart 4/3/89 — 1/3

→ Louisville's concerns → $'s figures

as recently as this AM.
Looking at as if thing could work.

Originally English Station tank. →
~2 miles

coming up 60 rather than 64 →

Original concept:

#1 $1.19/1000 gallons. => minimum bill / peaking

could buy water off rate structure

→ do not want to disrupt rate structure

{ could deal with minimum bill... }

#2 30" waterline => English station area. -
along 60' WL (plenty of room
B.E. Payne Clearwell .. B.E Payne plant. -
pump up 30 ft. → drop treated into

how many miles fr. →

$[redacted] 0.60 → $0.55 - 0.65

PKING ONLY → concerns (40 MGD last summer)
Louisville concerns
(PKNG LOAD ONLY)

~13 miles

→ Brings closer to expand (to 120 MGD)

00629

2/3

#3 Centralization... positive...
BAT (best alternative treatment)
→ Cooke w/ EPA ⇒ drive small utilities out of business & let lgr... utilities.
(envision: Louisville / Lex. (KAWC) / KENTON COUNTY)
Water service triangle.

[If just go by costs and current markups
($0.40 just plain costs + mark up)]

#4 Still willing to work on negotiations

Exception: built reservoirs ⇒ storage tanks...

if we bought water off peak ⇒ 10PM–6AM
⇓
can give rate at other than
$1.19 — cheaper

[#4 Off peak consumption... → can look at fact that coming directly off of major transm. line...
< $1.19 → don't know how much less but will explore]

— just serv. costs/grounds/etc.

3/3

#5 Buy water at cost on alt 1,3,4....
we go to PSC → pass peak business
30 million waterline cost

(eg. selling water at $1/1000 gall.
→ if get into trouble → pass onto our peak users

#6

#6 Louisville would consider
they make the water main investment →
bring to us → sell back to us.

(If Revenue bonds exceed $10 million...
must pay taxes ....) checking this out.

They think that they can work out something ⇒
also share in any water sold between Lex. & Louisville.

don't want to disrupt rate structure.

surcharge

inside Jeff. County
Louis. owns
outside Jeff. County
KAWC.

pay annual... →
→ surcharge X 1st 10 yrs.

flexibility here

00631

PER Bo Williams Louisville Water Company 4/4/89 BBL

Floor, Clearwell Elev. at B.E. Payne Plant
Louisville Water Co. ≐ 442± U.S.G.S.

Notes of conversation w/ Bill Egatt (Louisville Water)

11/89

→ WANT TO WORK w/ KANC / BUYER'S MARKET !!

→ Currently negotiating (Ind. Co.) ≈ $0.60/1000 gall. 0.70

IN HOUSE USE ONLY

Louis. Water: Private Company - all stock

↓

Jefferson Co. & service area only

Oper. manage
lg. water districts
↓
get around tax

Bullit Co. Oldham Co.

↓

stay inside Jeff. co.
meter at co. line
↓
selling water on
big scale outside
Jeff Co. service area

Sell water to & oper. many
districts in & around Jeff. Co.

Board
↓
45% of capacity
→ Peak → not close - 65%

year 2000
very flex. → long range water sales

00633

~~imm~~ imaginative →

traditional wholesale rates
uneconomical.

Limited growth potential = Louisville

∞ growth potential = Central Ky. + Lex.

whats its cost to treat water
what to deliver.

treat at fixed cost / labor / power
transmission.

⇓

lg. customers.
GE → doesn't see grid costs.

→ $

$1 mil / yr to ppl → not in picture

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

502-569-3600

FOSTER S. BURBA
PRESIDENT

July 7, 1989

VIA FAX

Mr. Edward Limbach (FAX 304-340--0757)
Regional Vice President
Kentucky-American Water Company
1325 Virginia St., E.
Charleston, WV 25322

Mr. Robert A. Edens (FAX 606-268-6327)
Vice President
Kentucky-American Water Company
2300 Richmond Road
Lexington, KY 40502

Dear Ed and Bob:

This letter is being sent to each of you since Bill Egart is out of pocket and I am unsure as to whom should be contacted.

First, Bob, I appreciate your sending me a copy of the tabloid entitled Water Supply (from the June 20, 1989 Lexington Herald-Leader). It is nice, and the statement regarding proposed plans is very good.

Enclosed is a copy of July 3, 1989 letter from Joseph B. Helm, general counsel, providing his findings on possible jurisdiction of LWCo. by the Public Service Commission which is a matter of concern to our Board of Water Works. Does either of you have any suggestion(s) on how this concern might be addressed to assure that LWCo. would be unaffected in the future if it entered into a water supply contract with Kentucky-American?

Sincerely,

Foster S Burba

Foster S. Burba
President

FSB:jcm
enclosure

cc: Mr. Joseph B. Helm, General Counsel, Brown Todd & Heyburn
(FAX 502-581-1087)
Mr. John L. Huber, LWCo.
Mr. William V. Egart, LWCo.

K7 Comm wtr

BROWN, TODD & HEYBURN

RUCKER TODD
GEORGE E. DUDLEY
EDWARD S. BONNIE
JOSEPH B. HELM
MARK B. DAVIS
W. C. FISHER, JR.
JAMES PARK, JR.
JOHN T. SONDURANT
CHARLES S. CASSIS
MARSHALL P. ELDRED, JR.
CARL ARTHUR HENLEIN
DAVID W. CRUMBO
JOHN R. MCCALL
D. PATTON PELFREY
KENNETH J. TUGGLE
C. EDWARD GLASSCOCK
WINSTON E. MILLER
WILLIAM L. SKEES, JR.†
PAUL E. SULLIVAN
IRVIN ABELL III
TIMOTHY W. MARTIN
R. JAMES STRAUS
STEPHEN R. SCHMIDT
CHARLES R. KEETON
HAL NANCE BOGARD
F. GERALD GREENWELL
JOSEPH L. ARDERY
CHARLES E. ALLEN III
DALE C. AHLMANN
KATHERINE RANDALL*
MICHAEL R. MERCER
FREDERIC H. DAVIS

D. DUANE COOK
KEITH G. HANLEY
E. LAMBERT FARMER, JR.*
STEPHEN E. EMBRY*
MARK H. FEATHERT
HARRY R. PERKINS
RICHARD E. PLYMALE*
DEBBIE F. REISS
ROBERT Y. GWIN
VICTOR B. MADDOX
JAY MIDDLETON TANNON
SCOTT W. DOLSON*
DAVID B. TACHAU
RICHARD H. KOPGOOD*
MICHAEL A. LUVISI
THOMAS C. WALKER*
DAN L. OWENS
CHARLES M. PRITCHETT, JR.
SUSAN S. WETTLE
RICHARD L. WOOD
HELEN LUCIER
KATHERINE K. TUNKER*
PAUL B. WHITTY
JAMES A. HUGUENARD
KEITH MOORMAN*
MARY ROSS TERRY
MARY ANN OLDENTHER**†
JOEL B. TURNER
DAVID R. RHEIN
WARREN J. HOFFMANN*
DONALD L. MILLER III†
JOHN G. HUNDLEY

JO ANN ALEXANDER*
ROBERT W. DIBERT
CHRISTOPHER B. FITZPATRICK**†
ALAN K. MACDONALD
ROBERTA J. LICHTENSTEIN
DAVID S. KLINESTIVER†
JOHN S. DOWDS
ROBERT L. TREADWAY*
SCOTT T. DICKENS
JEFFREY M. KOLTUN
JAMES A. GIESEL
CYNTHIA L. STEWART
KATHY P. HOLDER†
V. MICHELE HULSEY
ALICE B. HERRINGTON
TERESA P. JOHNSON
JEFFREY P. STODGHILL
R. GREGG HOVIOUS
W. BRUCE BAIRD
LINDA J. THOMAS
LINDA S. SPEED
WILLIAM O. FLOWERS II
JAMES D. COCKRUM
ELIZABETH J. TURLEY*
DONNA JO JENKINS
ROBERT J. DEANGELIS, JR.
JOHN L. DOTSON
DEBRA HAYS EUCKER*
BARTON T. ROGERS
FRANCES B. JONES BERRY
TIMOTHY MAZE HARTLEY
TERESA C. BUCHHEIT

JOHN DAVID DYCHE
ROBERT L. MADDOX III
LUCINDA C. SHIROONI
GARY W. NAPIER*
H. POWELL STARKS
THOMAS M. QUINN
THOMAS J. BIRCHFIELD†
JOHN W. HAYS*
COLIN HUGH LINDSAY
DAVID L. BECKMAN, JR.
BRENT W. YESSIN
MICHAEL S. HAYS
R. KYLE WOODS*

†ADMITTED TO BAR KENTUCKY AND INDIANA

HENRY R. HEYBURN
PHILIP P. ARDERY
MARSHALL P. ELDRED
RANDOLPH A. BROWN
KENT P. HOLLINGSWORTH*
OF COUNSEL

ELI H. BROWN III (1906-1974)
SAMUEL R. WELLS (1911-1988)

SIXTEENTH FLOOR
CITIZENS PLAZA
LOUISVILLE, KENTUCKY 40202-2873
(502) 589-5400
TELEX: 852958
TELECOPIER (502) 581-1087
(502) 589-0475

*LEXINGTON OFFICE
2300 LEXINGTON FINANCIAL CENTER
LEXINGTON, KENTUCKY 40507-1742
(606) 233-4068
TELEX: 852961
TELECOPIER (606) 252-5108

**INDIANA OFFICE
SUITE 204
ELSBY EAST
400 PEARL STREET
P.O. BOX 558
NEW ALBANY, INDIANA 47150-0558
(812) 948-2800

D-2075
329:lac

July 3, 1989

RECEIVED
1989 JUL -5 AM 9:23
OFFICE OF THE PRESIDENT
LOUISVILLE WATER CO.

Mr. Foster S. Burba
President,
Louisville Water Company
435 South Third Street
Louisville, Kentucky 40202

Dear Foster:

The following is in response to your letter of May 31, 1989 requesting information with respect to the history and legal status of the types of water and sewer utilities subject to or exempt from the jurisdiction of the Public Service Commission. Also you are concerned as to what past actions have and what future actions might place the Louisville Water Company under the jurisdiction of the Public Service Commission.

The Kentucky statutes authorize several forms of public water works systems. Chapter 74 of the Kentucky Revised Statutes ("KRS") provides that a "water district", governed by water commissioners may be established after approval by the Public Service Commission upon application to a county judge/executive. A "water association" may also be formed for the same purpose in the form of a nonprofit corporation, association or a cooperative corporation. Both entities require PSC approval for their formation as provided in KRS 74.012 and, along with privately-owned entities selling water to the public, are explicitly subject to regulation by the Public Service Commission.

Copy Jim. J. Hulen, E. Lichty
7.7.89
P

KRS Chapter 96 specifically authorizes cities of the first to fourth class to own and operate their own utility works or facilities. KRS 96.230 to 96.315 deal with water works in cities of the first class (i.e. Louisville). As you know, in 1988 the Kentucky legislature enacted KRS 96.315 which relates primarily to the financing of main extensions. However, the legislation also provides that the Board of Water Works may extend the Water Company facilites "into counties adjoining its county of origin."

Water utilities, governmentally or privately owned, were not regulated until 1934 when the General Assembly conferred jurisdiction over utilities "distributing or furnishing water to or for the public for compensation." In 1936, however, the legislature modified the definition of "utility" to be "any person except a city, who owns controls or operates or manages...a non-energy facility" (emphasis added).

From the beginning, the definitional exemption was interpreted as precluding Public Service Commission regulation of the Louisville Water Company operations inside the City of Louisville. However, it was not until a Kentucky Court of Appeals decision rendered in 1961 that it was determined that water company operations outside of the city limits were also exempt from Public Service Commission regulation, McClellan v. Louisville Water Company, Ky., 351 S.W. 2d 197 (1961). The McClellan case held that the definitional exemption extended to "all operations of a municipally owned utility whether within or without the territorial boundaries of the city." In dicta the court suggests the only avenue for bringing a city-owned utility within the regulatory control of the Public Service Commission. "While we recognize that this decision deprives non-resident utility customers of the protection afforded by the Public Service Commission against excessive rates or inadequate service, nevertheless matters of this character are of legislative, rather than judicial concern." 351 S.W. 2d 199.

However, the statutory exemption and the McClellan case notwithstanding, the Louisville Water Company appears to be vulnerable under existing law to Public Service Commission regulation in one aspect of its operations, in cases where it contracts with a regulated utility to supply water and/or service. Under KRS 278.200 the Public Service Commission has authority to review certain contracts (to be distinguished from the power to regulate generally). The statute, entitled "Power to regulate rates and service standards fixed by agreement with city", provides:

> The Commission having jurisdiction over the affected utility may, under the provisions of this chapter, originate, establish, change, promulgate and enforce any rate or service standard of any utility that has been or may be fixed by any contract, franchise or agreement between the utility and any city, and all rights, privileges and obligations arising out of any such contract, franchise or agreement, regulating any such rate or service standard, shall be subject to the jurisdiction and supervision of the commission, but no such rate or service standard shall be changed, nor any contract, franchise or agreement affecting it abrogated or changed, until a hearing has been had before the Commission in the manner prescribed in this chapter.

In light of the above statute, the Louisville Water Company is vulnerable to limited Public Service Commission regulation anytime it enters into a contract with a regulated utility, noting that we have at least four such contracts in existence at this time. On the other hand, it should be pointed out that to date the Public Service Commission has not undertaken to exercise any authority over such contracts, i.e., it has not undertaken to examine our wholesale or retail rate schedule as applied to a regulated utility or its customers.

After you have had the opportunity to review the above comments, please give me a call if you have any further questions or are in need of further written explanation.

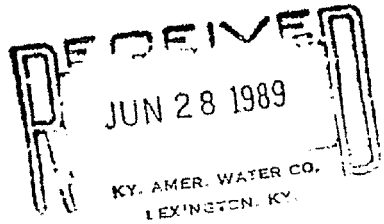
This letter is tendered with the understanding that copies may be supplied to the Board of Water Works.

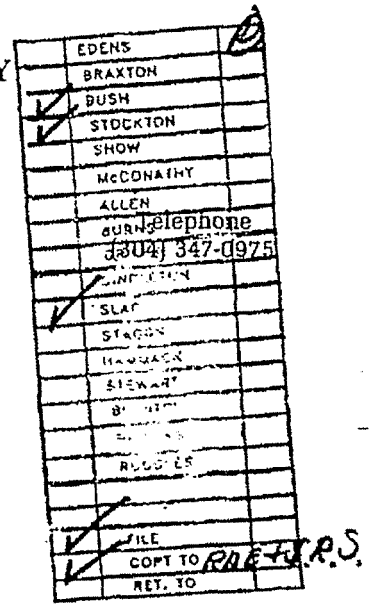
Sincerely,

Joseph B. Helm

SRS

KENTUCKY AMERICAN WATER COMPANY
AN AMERICAN WATER WORKS SYSTEM COMPANY
1325 Virginia Street, East
Box 593
Charleston, West Virginia 25322
Telephone
(304) 347-0975





June 26, 1989

VIA FAX (502) 585-2806

Mr. William V. Egart, P.E.
Louisville Water Company
435 South Third Street
Louisville, KY 40202

SUBJECT: Potential Agreement Between
Kentucky-American Water Company
and Louisville Water Company

Dear Bill:

As a result of discussions within our organization relative to the comparison of Kentucky-American Water Company (KAWC) to a large industrial customer, we have developed what we feel are items that make the proposed agreement between our organizations very different and unique. I will attempt to provide you with sound justification as to why KAWC is in fact unique and should not be viewed as just another large customer:

(1) Volume of Sales to Kentucky-American Water Company

The potential volume of sales to KAWC, projected to be 30 MGD, has to make us several times larger than any existing customer of Louisville Water Company (LWC). While this quantity will not be taken in the beginning, it is our intention to have a phase-in plan whereby we ultimately will be taking 30 MGD sometime in the future. We have discussed the possibility of taking as much as 5 MGD initially. This, in and of itself, should make us one of your larger customers, if not the largest. The method by which we take the water can be done in such a fashion as to minimally impact your existing customers, i.e. even flows over a 24-hour period or draw down at non-peak periods. I am sure you will agree that typically industrial customers cannot operate in this fashion.

(2) Term of the Contract

In effect, we are proposing to enter into a contract in perpetuity. We will agree to purchase water in fixed quantities, in effect, forever! As you are well aware, existing industrial customers of your system cannot make this type of commitment. In fact, General Electric could close its Louisville operation tomorrow.

00639

(3) Ownership of Facilities

While you retain ownership of all production facilities, KAWC will own the transmission main and booster stations and therefore will pay the entire cost and accept all liability associated with the operation and maintenance of the mains and boosters.

(4) Future Commitment

If, as part of the agreement KAWC pays for facilities inside Jefferson County, KAWC will be willing to entertain the idea of permitting LWC to utilize our facilities that are located in Jefferson County. We would, however, require that any use by LWC would not impede our ability to take the amount of water contracted for at the time. We would also be willing to commit to the construction of a future main from the English Road Tank to the plant facility, if it should be required.

Bill, last but not least, by any means, is the fact that a customer the size of KAWC would have a tremendous impact on your present level of revenues. Existing customers would benefit greatly by not being required to absorb the full impact of future rate increases. It is certainly possible that any proposed future increases could actually be postponed as a result of acquiring a customer the size of KAWC.

If we can be of any assistance in developing these ideas further, please do not hesitate to give me a call.

Very truly yours,

Chris E. Jarrett
Vice President & Treasurer

CEJ:jgj

cc R. A. Edens
R. L. Ferrell
E. W. Limbach

AMERICAN WATER WORKS SERVICE CO., INC.
1325 Virginia Street, East • Box 593 • Charleston, West Virginia 25322

Chris E. Jarrett, Manager-Finance
(304) 340-0703

EDENS	
BRAXTON	
BUSH	
STOCKTON	
SNOW	
McCONATHY	
ALLEN	
FILE	
COPY TO	
RET. TO	

April 18, 1989

TRIP REPORT

TO: Edward W. Limbach

FROM: Chris E. Jarrett

SUBJECT: Meeting with Louisville Water Company

On April 13, 1989, Roy Ferrell, Susan Slade and myself met with Mr. William V. Egart, P.E., and Steve Hubbs, Planning & Research Manager, to discuss the possibility of extending a finished water line from Louisville to Lexington with a capacity of 15 MGD. Mr. Egart put forth several proposals but essentially only two were viable options:

Option 1. Extend a finished water line from Lexington to a 10 MGD storage tank located at Engligh Station Road and Shelbyville Road U.S. 60, a distance of approximately 55 to 60 miles. The cost per MG to be calculated to include their costs to deliver water to the tank.

Option 2. Extend a finished water line from Lexington to their 60 MGD plant, a distance of approximately 70 to 75 miles. The cost per MG would be less in that we would not require the use of their distribution facilities. Water would be taken directly from a 10 MGD reservoir.

The financing of the finished water line was also discussed. A possibility exists under Option 2 for the Louisville Water Company to install and pay for all water line requirements within their county boundaries and sell the facilities to us over a 25 or 30 year period, i.e. a surcharge type of arrangement similar to the one we worked out for Prince William County with FCWA.

We also discussed their concerns relating to PSC jurisdiction over Louisville Water Company as a result of the proposed agreement with KAWC - see attached correspondence from Foster Burba dated April 12, 1989, and subsequent response for information prepared and submitted by Roy Ferrell in a letter dated April 14, 1989. Also is attached a letter by Lindsey Ingram addressing Mr. Burba's concerns.

APR 20 1989
KY. AMER. WATER CO.
LEXINGTON, KY.

Three primary questions remain to be addressed by Louisville Water Company before we can proceed further.

1. Resolution of their concern regarding PSC involvement.

2. Commitment to long-term supply of water.

3. The price of the water to be refined if not a definitive number. Initial quote was in the range of 55¢-65¢ per 1,000 gallons. Our counter of a "reasonable" price was 40¢ to 45¢ per 1,000 gallons.

Upon receipt of their responses we will need to determine if this alternative is viable.

At lunch we were joined by Foster Burba. I believe it is safe to say that he expressed real interest in working out some kind of arrangement that would be satisfactory to us both.

CEJ:jgj

cc R. Edens
R. Ferrell
S. Slade

American Water Works Service Company, Inc.
1325 Virginia Street, East • Box 593 • Charleston, West Virginia 25322

Southern Regional Office
(304) 347-0975

April 14, 1989

Mr. William V. Egart, P.E.
Louisville Water Company
435 South Third Street
Louisville, KY 40202

Dear Mr. Egart:

On behalf of Chris Jarrett, Susan Slade and myself, we would like to offer our thanks for the opportunity to discuss purchasing water from Louisville Water Company.

Enclosed are the following items you requested during our meeting:

1. American Water Works Co., Inc.'s Annual Report for 1988 (12 copies).

2. A copy of a letter from our legal counsel, Mr. Lindsey Ingram, relative to a concern of your Board expressed in Mr. Burba's letter dated April 12, 1989.

3. Kentucky-American Water Company's tariffs for metered sales and private fire protection.

The remaining item requested, a list of other American System Companies purchasing water from the public sector will be provided the first of next week.

If we can be of additional assistance, please advise. We look forward to working with you in the future.

Very truly yours,

Roy L. Ferrell
Director
Rates and Revenues

RLF:sc
Enclosures
cc w/o enclosures:
Chris Jarrett
Susan Slade

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202

502-569-3600

FOSTER S. BURBA
PRESIDENT

April 12, 1989

VIA FAX (304-340-0757)

Mr. Edward W. Limbach, Regional Vice President
American Water Works Service Co., Inc.
Box 593
Charleston, WV 25322

Dear Ed:

This will confirm yesterday's phone conversation about LWCo.'s possibly wholesaleing water to Kentucky-American Water Company, Lexington, Kentucky. Our conversation followed our Board's informal discussion of the matter. The matter was not discussed at a regular public meeting.

As related to you, for several years our Board has been endeavoring to expand its sales base with emphasis upon wholesaling water to utilities outside of Jefferson County. The Board is committed to such philosophy still; but is concerned about the "state politics" of serving an area as far away as Lexington. The concern is for any action which might ultimately result in LWCo.'s being placed under the jurisdiction of the Public Service Commission (PSC). Such potential exists during each session of the General Assembly; there is concern that Lexington's political clout might be exercised at some future date to place LWCo. under the PSC in order to regulate rates.

As a result of this concern, the Board did not make any firm commitment that it would enter into a contract for wholesale service to Kentucky-American Water Company for Lexington. On the other hand, it certainly would not discourage Kentucky-American from making a preliminary study of the matter while LWCo. legal counsel and staff evaluate this concern about PSC involvement.

I wish I could provide a stronger position in favor of the tentative study for LWCo.'s providing wholesale water service to Kentucky-American. Certainly, the LWCo. staff will do everything it can to fairly and properly evaluate the situation so as to placate our Board's fears on the matters. Your thoughts on this would be appreciated. Best regards.

Sincerely,

Foster S. Burba

Foster S. Burba
President

FSB:jcm

cc: Mr. Frank C. Campbell, Sr. V.P., Chief Engineer, LWCo.
Mr. Wm.V. Egart, V.P., Chief of Plant Operation/System Planning, LWCo.
Mr. Jos. B. Helm (General Counsel), Brown, Todd & Heyburn (via FAX)

LWCo. - 12C01
REV: 01/85

MEMORANDUM
LOUISVILLE WATER COMPANY

To File

From William V. Egart

April 4, 1989

Re: Sale of Water To Kentucky-American Water Company

We have had discussions for some time with the Kentucky-American Water Company in Lexington, Kentucky about the feasibility of selling water to them on a long term basis. Based on present considerations, this sale of water would be on a peak consumption period basis, whereby their water requirements would obviously coincide with ours. While we have excess production capacity, this peaking aspect concerns us as we apply this potential customer to our existing rate schedule. We do see real potential in sales in the future, and have an objective view in investigating innovative alternatives. Listed below are several alternatives:

1. We could sell water to Kentucky-American at the Jefferson County line or at the English Station Tank Site at our existing applicable utility rate of $1.19 per thousand gallons.

2. This alternative would be the same as alternative #1 with the exception that Kentucky-American utilizing storage reservoirs would take water in the Off Peak Consumption Hours, an example being from 10:00 p.m. to 6:00 a.m.

3. Same as alternative #1. The Louisville Water Company would supply water to Kentucky-American directly off the 60-inch transmission system at the English Station Tank Site. This would have the aspect of making this customer unique (as would alternative #2), and a water rate lower than the published utility rate would be appropriate.

4. Kentucky-American would take water from the B.E. Payne Plant Clearwell. This arrangement would enable the Louisville Water Company to price the water in the 55-65 cents per thousand gallons range.

5. In the spirit of innovative marketing, the Louisville Water Company would consider appropriate participation in required Capital Expansion in operating with the Kentucky-American Water Company on a long term lease of facilities or a facility sale arrangement.

These alternatives were discussed with Susan Slade of the Kentucky - American Water Company yesterday, April 3, 1989.

/gh

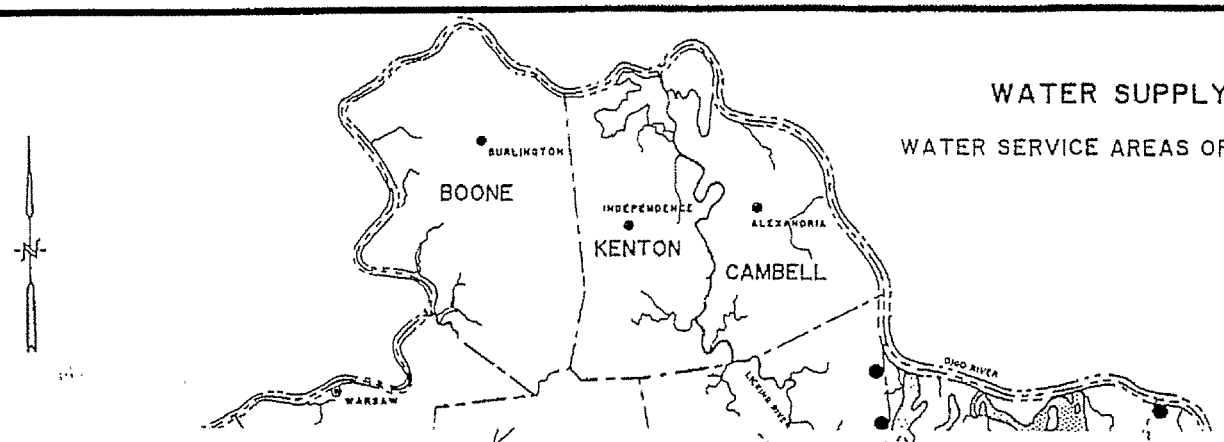
2300 Richmond Road
Lexington, Kentucky 40502
606-269-2386

Kentucky-American
Water Company
An American Water Works System Company

✓	EDENS
	BRAXTON
	BUSH
	STOCKTON
	SNOW
	McCONNELL
	ALLEN
	[illegible]
	[illegible]
	[illegible]

WATER SUPPLY IN CENTRAL KENTUCKY

WATER SERVICE AREAS OF THE 6th CONGRESSIONAL DISTRICT



BOYLE COUNTY

- LAKE VILLAGE WATER ASSOCIATION
- KENTUCKY STATE HOSPITAL
- CLEARVIEW WATER COMPANY
- DANVILLE WATER SYSTEM
- PERRYVILLE WATER SYSTEM
- PARKSVILLE WATER DISTRICT
- HILLTOP WATER COMPANY
- JUNCTION CITY WATER SYSTEM

BRACKEN COUNTY

- WESTERN BRACKEN WATER DISTRICT
- BRACKEN COUNTY WATER DISTRICT No. 1

CLARK COUNTY

- BOONESBORO WATER ASSOCIATION
- WINCHESTER WATER SYSTEM
- EAST CLARK COUNTY WATER DISTRICT

FAYETTE COUNTY

- KENTUCKY - AMERICAN WATER COMPANY
- SPEARS WATER DISTRICT

FRANKLIN COUNTY

- PEAKS MILL WATER DISTRICT
- ELKHORN WATER DISTRICT
- U.S. 60 WATER DISTRICT
- NORTH WOODFORD WATER DISTRICT
- FARMDALE WATER DISTRICT
- FRANKFORT WATER SERVICE
- NORTH SHELBY COUNTY WATER COMPANY

HARRISON COUNTY

- HARRISON COUNTY WATER ASSOCIATION
- CYNTHIANA WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMPANY

MADISON COUNTY

- BEREA COLLEGE WATER SYSTEM
- GARRARD COUNTY WATER ASSOCIATION
- KINGSTON - TERRILL WATER DISTRICT
- KIRKSVILLE WATER ASSOCIATION INC.
- MILFORD WATER DISTRICT
- RICHMOND WATER SYSTEM
- SOUTH MADISON WATER DISTRICT
- WACO WATER DISTRICT
- WHITE HALL WATER DISTRICT
- PROPOSED EXTENSION TO WHITE HALL
- PROPOSED EXTENSION TO KIRKSVILLE
- LEXINGTON BLUE GRASS ARMY DEPOT

MERCER COUNTY

- NORTH MERCER WATER DISTRICT (PROPOSED)
- NORTH MERCER WATER DISTRICT
- CITY OF BURGIN
- CITY OF HARRODSBURG
- LAKE VILLAGE WATER ASSOCIATION (HARRODSBURG - SUPPLIED WATER)
- LAKE VILLAGE WATER ASSOCIATION (DANVILLE - SUPPLIED WATER)

MONTGOMERY COUNTY

- REED VILLAGE WATER DISTRICT
- MONTGOMERY WATER DISTRICT NO. 1
- JEFFERSONVILLE WATER DISTRICT
- LEVEE WATER DISTRICT
- MT. STERLING

NICHOLAS COUNTY

- NICHOLAS COUNTY WATER ASSOCIATION
- CARLISLE WATER SYSTEM
- SHARPSBURG WATER DISTRICT
- WESTERN FLEMING WATER DISTRICT.

ROBERTSON COUNTY

- BUFFALO TRAIL WATER DISTRICT

SCOTT COUNTY

- GEORGETOWN WATER DEPARTMENT
- KENTUCKY - AMERICAN WATER CO.
- STAMPING GROUND WATER DEPT.

SHELBY COUNTY

- HENRY COUNTY WATER DIST. No. 1
- HENRY COUNTY WATER DIST. No. 2
- NORTH SHELBY WATER COMPANY
- WEST SHELBY WATER DISTRICT
- KENTUCKY CORRECTIONAL INSTITUTE FOR WOMEN
- SHELBYVILLE WATER & SEWER COMM.
- CITY OF TAYLORSVILLE WATER CO.
- U.S. 60 WATER DISTRICT

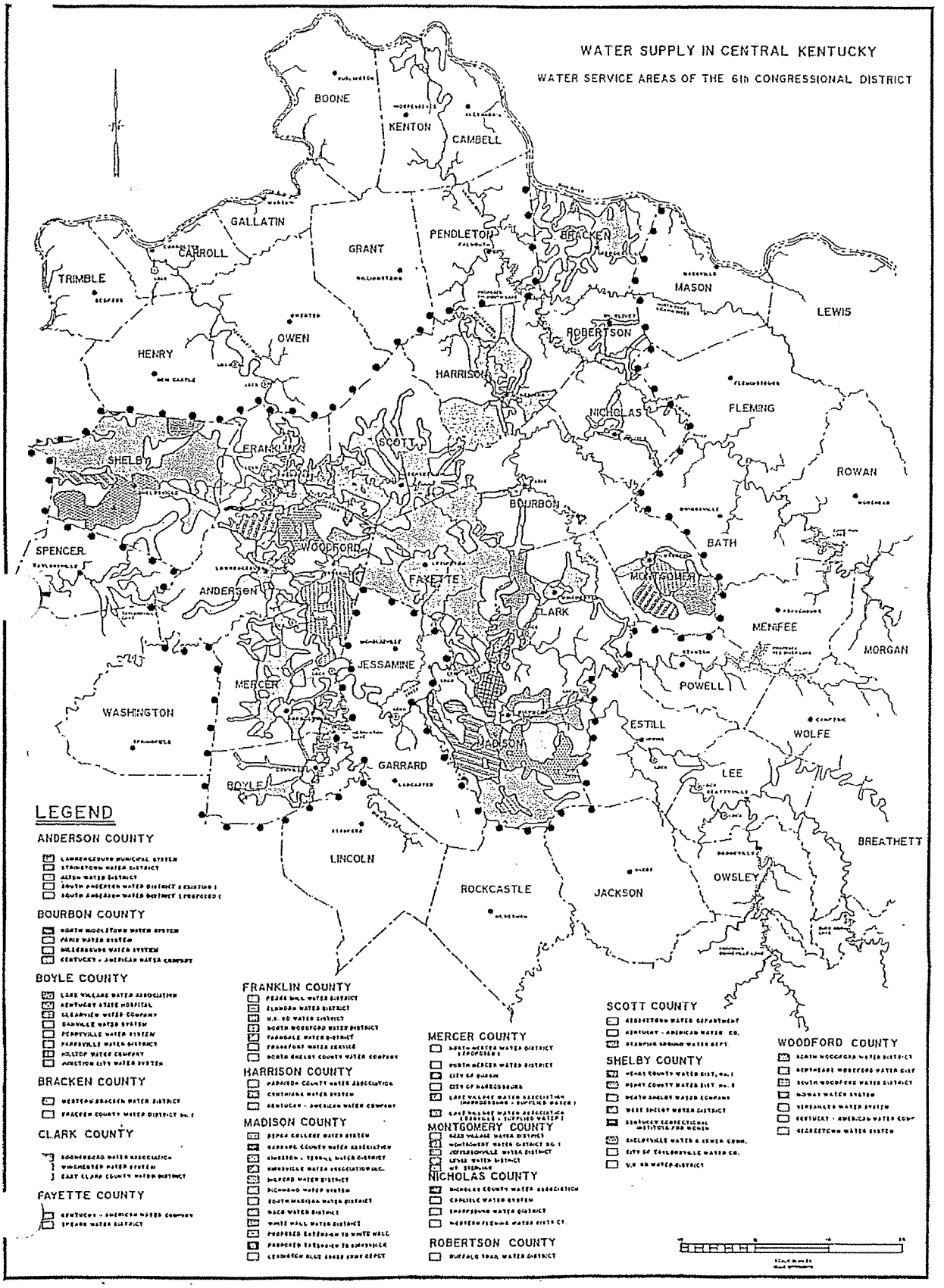
WOODFORD COUNTY

- NORTH WOODFORD WATER DISTRICT
- NORTHEAST WOODFORD WATER DIST.
- SOUTH WOODFORD WATER DISTRICT
- MIDWAY WATER SYSTEM
- VERSAILLES WATER SYSTEM
- KENTUCKY - AMERICAN WATER COMP.
- GEORGETOWN WATER SYSTEM

10 0 10 20

SCALE IN MILES
SCALE APPROXIMATE

00648


WATER SUPPLY IN CENTRAL KENTUCKY
WATER SERVICE AREAS OF THE 6th CONGRESSIONAL DISTRICT
BOONE
KENTON
CAMBELL
GALLATIN
CARROLL
GRANT
PENDLETON
BRACKEN
TRIMBLE
MASON
LEWIS
OWEN
HENRY
ROBERTSON
HARRISON
NICHOLAS
FLEMING
SHELBY
FRANKLIN
SCOTT
ROWAN
BOURBON
SPENCER
WOODFORD
BATH
FAYETTE
MONTGOMERY
ANDERSON
CLARK
MENIFEE
MORGAN
JESSAMINE
MERCER
POWELL
WASHINGTON
ESTILL
WOLFE
MADISON
GARRARD
LEE
BOYLE
BREATHETT
LINCOLN
ROCKCASTLE
JACKSON
OWSLEY
LEGEND
ANDERSON COUNTY
BOURBON COUNTY
BOYLE COUNTY
BRACKEN COUNTY
CLARK COUNTY
FAYETTE COUNTY
FRANKLIN COUNTY
HARRISON COUNTY
MADISON COUNTY
MERCER COUNTY
MONTGOMERY COUNTY
NICHOLAS COUNTY
ROBERTSON COUNTY
SCOTT COUNTY
SHELBY COUNTY
WOODFORD COUNTY

00649

FORM 33
(REV. 2/1/66)

NEWSPAPER CLIPPINGS

380-803

PLANT NAME Kentucky-American Water Company

CLIPPING FROM Louisville Courier-Journal DATED 4 / 12 / 89 PAGE NO. B3

Louisville Water Co. to require deposits, tests for lead

The Louisville Water Co. will start requiring a minimum security deposit of $30 from new customers beginning July 1 as a way of reducing bad debt it has been writing off.

Deposits will vary from $30 for residential customers to $8,400 for large industrial customers, depending on the size of the water line serving the property. The deposit will be kept for two years unless a customer moves before then. If a customer has a good payment record after two years, the deposit will be returned. Simple interest of 6 percent will be paid.

The company also said it began a program of sampling water for lead in drinking fountains in 156 Jefferson County schools on Feb. 1.

Two samples are taken from the least-used fountain at each school, because lead tends to build up most in water with a low circulation level. The first sample is taken early in the day after the water has been sitting for awhile, and the second after the water has circulated.

Sixty samples have been taken so far and 40 processed, all with negative results, the company said.

Fountains in private schools will be tested later.

INSTRUCTIONS: PASTE CLIPPINGS NEATLY, USING AS MUCH OF THIS SHEET AS POSSIBLE; OVERRUNS SHOULD BE CONTINUED ON A NEW SHEET. DO NOT USE THE BACK FOR PASTING PURPOSES. PLEASE INDICATE NAME AND DATE OF PUBLICATION OVER EACH ARTICLE. NEWS STORIES SHOULD BE FORWARDED TO GENERAL AND DIVISION REPORTS AS FILED.

Louisville Water Company

(502) 569-3600

~~Frank Campbell~~

Steve Hudds → Engineering Dept.

- Available Capacity
- Hydraulic Gradient(s) for system.
- Schedule of Rates
- "Std" Bulk Sales for resale Agreements

Capacity – B.E. Pain Plant – Water to Shelbyville Rd connection →
Historic Maximum

design capacity 60 mgd
avg. day 20 mgd
(may produce another 60 mg

Crescent Hill System → Capacity 240 mgd
avg. 100-110 mgd/day

PK HR. 214 mgd bottleneck

Overflow elev. 860
Crest Hill System 660

Max day 185 mgd

Shelbyville Rd. / Jefferson Freeway
10 mg Standpipe →
860 ft. overflow
60 inch transmission main

~~Steve Hudson — Clovis~~

Stated policy — sell at wholesale rate at County line. ⇒ negotiate w/ purchaser.

↓ ~ $ 1.00/1000 gallons bulk rates.

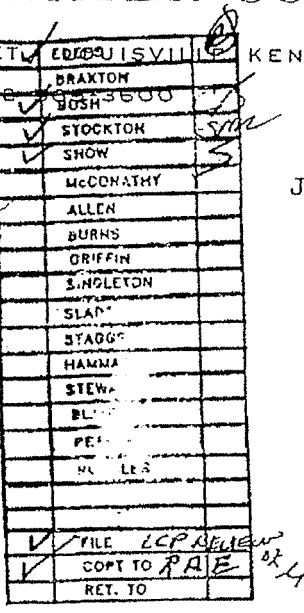
0.89 / 1000 gall → lower

Lex/ Louisville/ Frankfort/ ⇒

OHIO River — at Louisville → 6:12mi upstream — O

LOUISVILLE WATER COMPANY

435 SOUTH THIRD STREET LOUISVILLE KENTUCKY 40202
502 [illegible]3600



RECEIVED
JAN 16 1989
KY-AMER. WATER CO.
LEXINGTON, KY.

copy to Donna Blanton 1/16

January 11, 1988

Ms. Susan Slade
Kentucky-American Water Company
2300 Richmond Road
Box 7500
Lexington, Kentucky

Dear Ms. Slade:

As promised, I have enclosed some typical water purchase agreements currently in effect between the Louisville Water Company and some outlying water systems. As you can see all of these documents generally follow the same format, but are somewhat customized to the particular situations through negotiations. It appears that in most cases there is an annual minimum quantity of water to be purchased and a specific maximum quantity that would necessitate the utility receiving our approval before exceeding. Hopefully, these agreements can give you some guidance.

I have also enclosed a current rate structure and our most recent Annual Report and Technical Addendum.

After you receive this information, please feel free to contact me for further clarifications. We will be happy to meet with you at any time to discuss your situation as it relates to the Louisville Water Company.

The Louisville Water Company currently has an ample supply of water to meet your needs, and we welcome the opportunity to work closely with you and your organization in investigating future possibilities with regard to our selling water to the Kentucky-American Water Company. You would be a most

prestigious customer as your operation has long been admired in the water works industry.

Thank you.

Sincerely,

William V. Egart, Vice President
Plant Operations and System Planning

/gh

enclosures

cc: Frank Campbell
Foster Burba

LOUISVILLE WATER COMPANY, INC.

(Rates shall become effective and apply to all statements mailed on and after January 1, 1989)

BI-MONTHLY CHARGES INSIDE JEFFERSON COUNTY
and
LEASED FACILITIES OUTSIDE JEFFERSON COUNTY

Service Charge - Minimum Bi-monthly Bill

5/8-3/4" Meter	$ 6.30	6" Meter	$ 441.00
1" Meter	15.76	8" Meter	787.50
1 1/2" Meter	31.50	10" Meter	1,197.00
2" Meter	50.40	12" Meter	1,827.00
3" Meter	110.26	16" Meter	3,622.50
4" Meter	189.00		

Multiple meter customers - Add service charge - minimum bill for each meter installed.

Commodity Charge

The charge for bi-monthly usage shall be computed in accordance with the following schedule.

	General Pressure Area*	Elevated Service Area*
First 6,000 Gallons	$1.00 per 1,000 Gallons	$1.19 per 1,000 Gallons
Next 6,000 Gallons	1.12 per 1,000 Gallons	1.31 per 1,000 Gallons
Next 388,000 Gallons	1.25 per 1,000 Gallons	1.44 per 1,000 Gallons
Next 2,600,000 Gallons	1.17 per 1,000 Gallons	1.36 per 1,000 Gallons
Next 7,000,000 Gallons	1.04 per 1,000 Gallons	1.23 per 1,000 Gallons
Next 10,000,000 Gallons	.98 per 1,000 Gallons	1.17 per 1,000 Gallons
In excess of 20,000,000	.88 per 1,000 Gallons	1.07 per 1,000 Gallons

---

Fire Service Charges

Size	4"	6"	8"	10"	12"
Bi-Monthly	$16.00	$32.50	$62.50	$124.00	$249.50

*General Pressure Area is defined as an area which can be served from the Crescent Hill/Cardinal Hill Water System without additional pumping storage facilities.

*Elevated Service Area is defined as that area which cannot be served from the Crescent Hill/Cardinal Hill Water System without additional pumping and storage facilities. All customers in this area shall pay a sur-charge of $.19 per thousand gallons of water.

All charges are subject to a 5% penalty if delinquent 20 days after billing date.

Kentucky Sales Tax applied if applicable.

The Company shall have the right to require that all customers filing Bankruptcy under Chapter 7, 11, or 13 of the Bankruptcy Code, post a deposit equal to one and one-half times an average bill based on usage during the past twelve months.

Public utilities which purchase water for resale wherever situated; shall be charged $.99 per thousand for all water purchased, the elevated area surcharge of $.19 and a service charge.

LOUISVILLE WATER COMPANY, INC.

(Rates shall become effective and apply to all statements mailed on and after January 1, 1989)

BI-MONTHLY CHARGES OUTSIDE JEFFERSON COUNTY

Service Charge-Minimum Bi-Monthly Bill

5/8-3/4" Meter	$ 6.30	6" Meter	$ 441.00
1" Meter	15.76	8" Meter	787.50
1 1/2 Meter	31.50	10" Meter	1,197.00
2" Meter	50.40	12" Meter	1,827.00
3" Meter	110.26	16" Meter	3,622.50
4" Meter	189.00		

Multiple meter customers - Add service charge - minimum bill for each meter installed.

Commodity Charge

The charge for bi-monthly usage shall be computed in accordance with the following schedule.

	General Pressure Area*	Elevated Pressure Area*
First 400,000 Gallons	$1.95 per 1,000 Gallons	$2.14 per 1,000 Gallons
Next 2,600,000 Gallons	1.46 per 1,000 Gallons	1.65 per 1,000 Gallons
In excess of 3,000,000 Gallons	1.10 per 1,000 Gallons	1.29 per 1,000 Gallons

---

Fire Service Charges

Size	4"	6"	8"	10"	12"
Bi-Monthly	$17.00	$34.50	$68.00	$138.00	$275.00

*General Pressure Area is defined as an area which can be served from the Crescent Hill/Cardinal Hill Water System without additional pumping and storage facilities.

*Elevated Service Area is defined as that area which cannot be served from the Crescent Hill/Cardinal Hill Water System without additional pumping and storage facilities. All customers in this area shall pay a sur-charge of $.19 per thousand gallons of water.

All charges are subject to a 5% penalty if delinquent 20 days after billing date.

Kentucky Sales Tax applied if applicable.

The Company shall have the right to require that all customers filing Bankruptcy under Chapter 7, 11, or 13 of the Bankruptcy Code, post a deposit equal to one and one-half times an average bill based on usage during the past twelve months.

Public utilities which purchase water for resale wherever situated; shall be charged $.99 per thousand for all water purchased, the elevated area surcharge of $.19 and a service charge.

LOUISVILLE WATER COMPANY, INC.

(Rates shall become effective and apply to all statements mailed on and after January 1, 1989)

MONTHLY CHARGES INSIDE JEFFERSON COUNTY
and
LEASED FACILITIES OUTSIDE JEFFERSON COUNTY

Service Charge - Minimum Monthly Bill

5/8-3/4" Meter	$ 3.15	6" Meter	$ 220.50
1" Meter	7.88	8" Meter	393.75
1 1/2" Meter	15.75	10" Meter	598.50
2" Meter	25.20	12" Meter	913.50
3" Meter	55.13	16" Meter	1,811.25
4" Meter	94.50		

Multiple meter customers-Add service charge-minimum bill for each meter installed.

Commodity Charge

The charge for monthly usage shall be computed in accordance with the following schedule.

	General Pressure Area*	Elevated Service Area*
First 3,000 Gallons	$1.00 per 1,000 Gallons	$1.19 per 1,000 Gallons
Next 3,000 Gallons	1.12 per 1,000 Gallons	1.31 per 1,000 Gallons
Next 194,000 Gallons	1.25 per 1,000 Gallons	1.44 per 1,000 Gallons
Next 1,300,000 Gallons	1.17 per 1,000 Gallons	1.36 per 1,000 Gallons
Next 3,500,000 Gallons	1.04 per 1,000 Gallons	1.23 per 1,000 Gallons
Next 5,000,000 Gallons	.98 per 1,000 Gallons	1.17 per 1,000 Gallons
In excess of 10,000,000	.88 per 1,000 Gallons	1.07 per 1,000 Gallons

---

Fire Service Charges

Size	4"	6"	8"	10"	12"
Monthly	$8.00	$16.25	$31.25	$62.00	$124.75

*General Pressure Area is defined as an area which can be served from the Crescent Hill/Cardinal Hill Water System without additional pumping and storage facilities.

*Elevated Service Area is defined as that area which cannot be served from the Crescent Hill/Cardinal Hill Water System without additional pumping and storage facilities. All customers in this area shall pay a sur-charge of $.19 per thousand gallons of water.

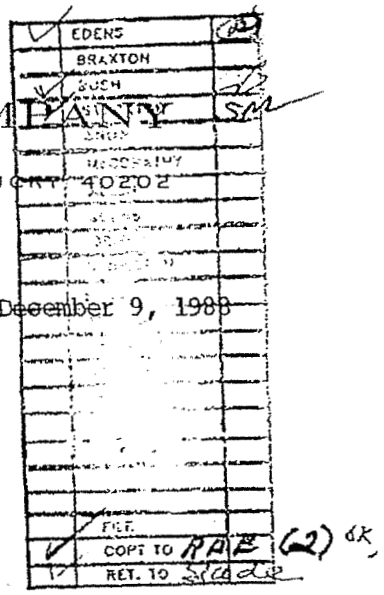
All charges are subject to a 5% penalty if delinquent 20 days after billing date.

Kentucky Sales Tax applied if applicable.

The Company shall have the right to require that all customers filing Bankruptcy under Chapter 7, 11, or 13 of the Bankruptcy Code, post a deposit equal to one and one-half times an average bill based on usage during the past twelve months.

Public utilities which purchase water for resale wherever situated shall be charged $.99 per thousand for all water purchased, the elevated area surcharge of $.19 and a service charge.

LOUISVILLE WATER COMPANY
435 SOUTH THIRD STREET · LOUISVILLE, KENTUCKY 40202
502-569-3600



December 9, 1988

Ms. Susan Slade
Kentucky-American Water Company
2300 Richmond Road
Lexington, Kentucky 40502

Dear Ms. Slade:

In response to your telephone call of December 8, 1988, I am glad to provide you with information regarding the potential sale of water to Kentucky-American. The Louisville Water Company treats water from the Ohio River at two plants. Each plant utilizes conventional coagulation treatment, has the capability of softening, utilizes rapid sand filtration, and distributes a fluoridated water with a chloramine residual. Our typical pH levels in the distribution system range between 8.5 and 9.0. Our alkalinities are moderately low, in the 50mg/l range. A summary of our previous 12 months finished and distributed water quality data is enclosed for your review.

The likely connection point for a transmission main to serve areas east of Jefferson County would be at the 10 million gallon English Station Standpipe, near the intersection of the Gene Snyder Freeway and Shelbyville Road. This facility has an overflow elevation of approximately 865 feet msl, and is connected to our 60 MGD capacity B.E. Payne Water Treatment Plant via a 60-inch transmission main. These facilities are the primary components of the "860 pressure plane," which is also supported by our 240 MGD Crescent Hill Filter Plant and the 660 feet msl pressure plane. The 660 feet pressure plane and the 860 feet pressure plane are connected via three

booster pump stations with a combined capacity of approximately 30 MGD.

Our maximum day pumpage occurred in July, 1988 at approximately 195 MGD. Our combined plant capacity and transmission system could likely accommodate an additional 15 MGD draw on the system during maximum day taken from the English Station Standpipe, although this would need to be verified by hydraulic analysis.

If I can provide additional information, please do not hesitate to call. The Louisville Water Company is interested in pursuing potential customers, and would entertain creative options for obtaining the mutual goals of both Kentucky-American and Louisville Water Company. Our current rate schedule is enclosed for your information.

Sincerely,

William V. Egart, Vice President
Plant Operations and Systems Planning

WVE/SAH/gh

cc: F. Burba
F. Campbell
J. Huber

enclosures

LWC Rate Schedule
1989

6.05 Utilities Purchasing Water for Resale

Public utilities which purchase water for resale wherever situated shall be charged $.99 per thousand gallons for all water purchased, the elevated service area surcharge specified in Rule 6.06, and the service charge specified in Rule 6.02, if applicable, to the point at which water is taken through the master meter.

6.06 Elevated Service Area Surcharges

All customers shall pay a surcharge of $.19 per thousand gallons if water must be delivered at a higher elevation than the general pressure plane served by the Crescent Hill/Cardinal Hill system.

6.07 At the Company's option, bills may be rendered monthly or bimonthly. If the bills are rendered on a bimonthly basis, the minimum monthly charge shown on the Schedule of Minimum Monthly Bill, and the gallons of water shown in the Schedule of Commodity Charges, and the monthly charge in the Schedule of Fire Service Charges, shall be multiplied by two.

6.08 In the event that payment for any charge is not made within twenty (20 days from the billing date, the net amount of the bill shall be increased by 5% and the gross amount thus determined must be paid. One late payment will be accepted every twelve (12) billing periods at net amount if the bill is paid before the next billing date.

6.09 Where water is used without proper authorization, the estimated quantity of unmetered water used shall be paid for at the rate of $2.00 per thousand gallons.

6.10 The Company shall have the right to require that all customers filing Bankruptcy under Chapter 7, 11 or 13 of the Bankruptcy Code, post a deposit equal to one and one-half times an average bill based on usage during the past twelve months.

****

Upon adoption, these rates shall become effective and apply to statements mailed on and after January 1, 1989.

11/28/88