

Rubin & Hays

ATTORNEYS AT LAW

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CHARLES S. MUSSON
W. RANDALL JONES
CHRISTIAN L. JUCKETT

May 20, 2013

RECEIVED

MAY 23 2013

PUBLIC SERVICE
COMMISSION

Mr. Jeff Derouen
Executive Director
Public Service Commission
P.O. Box 615
Frankfort, Kentucky 40602

Re: South Logan Water Association Water Project

Dear Mr. Derouen,

Enclosed please find the original and ten (10) copies of the Application of South Logan Water Association for an Order approving increased rates, construction financing and issuing a Certificate of Public Convenience and Necessity pursuant to KRS 278.023.

Also enclosed are eleven (11) copies of the exhibits required pursuant to 807 KAR 5.069, and **the Preliminary and Final Engineering Reports, of which two copies are enclosed.**

If you need any additional information or documentation, please let us know.

Sincerely,

Rubin & Hays

By 
W. Randall Jones

WRJ:ilm
Enclosures

cc: Chris Wilcutt, P.E.
Ms. Denise Gunderson, South Logan Water Association
Mr. Mark Givens, USDA, Rural Development

RECEIVED

MAY 23 2013

PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF SOUTH LOGAN WATER)
ASSOCIATION, INC., OF LOGAN COUNTY,)
KENTUCKY FOR A CERTIFICATE OF PUBLIC) Case No. 2013-_____
CONVENIENCE AND NECESSITY TO CONSTRUCT,)
FINANCE AND INCREASE RATES PURSUANT)
TO THE PROVISIONS OF KRS 278.023)

APPLICATION

This Application of the South Logan Water Association, Inc., (the "Applicant") of Logan County, Kentucky, respectfully shows:

1. That the Applicant is a non-profit water association of Logan County, Kentucky, created and existing under and by virtue of Chapter 273 of the Kentucky Revised Statutes. A copy of Applicant's Articles of Incorporation and Amendments were previously filed with the Commission in Case No. 97-465.

2. That the post office address of the Applicant is:

South Logan Water Association, Inc.
c/o Mr. Bob Allen, President
114 South Main Street
Adairville, Kentucky 42202
Phone: (270) 539-6730
Email: slwa@logantele.com

3. That the Applicant, pursuant to the provisions of KRS 278.020 and 278.023, seeks (i) a Certificate of Public Convenience and Necessity permitting the Applicant to construct a waterworks construction project, consisting of extensions, additions, and improvements (the "Project") to the existing waterworks system of the Applicant; (ii) approval of the proposed plan of financing said Project; and (iii) an Order approving increased rates.

4. That the proposed Water System Upgrade Project includes the construction and installation of (i) approximately 14 miles of water line on rural roadways; (ii) a new emergency

supply meter with the Logan/Todd Regional Water Commission; (iii) four new master meters; and (iv) upgrades to the telemetry system.

5. That the Applicant proposes to finance the construction of the Project through (i) issuance of a \$1,200,000 Promissory Note; and (ii) a grant from the United States Department of Agriculture, acting through Rural Development ("RD") in the amount of \$460,000. The Applicant has a commitment from RD to purchase said \$1,200,000 Promissory Note maturing over a 40-year period, at an interest rate of not exceeding 3.00% per annum, as set out in the RD Letter of Conditions, as amended, filed herewith as an Exhibit.

6. That the Applicant does not contemplate having the Project constructed with any deviation from minimum construction standards of this Public Service Commission.

7. That the Applicant files herewith the following Exhibits pursuant to 807 KAR 5:069 in support of this Application:

- A. Copy of RD Letter of Conditions, as amended.
- B. Copy of RD Letter of Concurrence in Bid Award.
- C. Copy of Preliminary and Final Engineering Reports.
- D. Certified statement from the President of the Applicant, based upon statements of the Engineers for the Applicant, concerning the following:
 - (1) The proposed plans and specifications for the Project have been designed to meet the minimum construction and operating requirements set out in 807 KAR 5:066, Section 4(3) and (4); Section 5(1); Sections 6 and 7; Section 8(1) through (3); Section 9(1) and Section 10;
 - (2) All other state approvals or permits have already been obtained;
 - (3) The proposed rates of the Applicant shall produce the total revenue requirements set out in the engineering reports; and
 - (4) Setting out the dates when it is anticipated that construction will begin and end.

8. That Applicant has arranged for the publication, prior to or at the same time this Application is filed, of a Notice of Proposed Rate Change pursuant to Section 2 of 807 KAR 5:069, in the News Democrat and Leader, which is the newspaper of general circulation in Applicant's service area and in Logan County, Kentucky. Said Notice sets out the current charges and the proposed charges of Applicant and a short description of the Project. A copy of said Notice is filed herewith as an Exhibit.

9. That the foregoing constitutes the documents necessary to obtain the approval of the Public Service Commission in accordance with Section 278.023 of the Kentucky Revised Statutes and in accordance with the "Filing Requirements" specified in 807 KAR 5:069, Section 1.

WHEREFORE, the Applicant, the South Logan Water Association, Inc., asks that the Public Service Commission of the Commonwealth of Kentucky grant to the Applicant the following:

- a. A Certificate of Public Convenience and Necessity permitting the Applicant to construct a waterworks project consisting of extensions, additions, and improvements to the existing waterworks system of the Applicant.
- b. An Order approving the financing arrangements made by the Applicant, viz., the issuance of a \$1,200,000 Promissory Note at an interest rate of not exceeding 3.00% per annum; and an RD grant in the amount of \$460,000.
- c. An Order approving the proposed rates and charges as set out in Section 27 of the RD Letter of Conditions, as amended, filed herewith as an Exhibit.

SOUTHLOGAN WATER ASSOCIATION, INC.

By: Bob Allen
President
Board of Directors

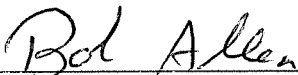
RUBIN & HAYS

By: W. Randall Jones, Esq.
W. Randall Jones, Esq.
Counsel for Applicant
Kentucky Home Trust Building
450 South Third Street
Louisville, Kentucky 40202
(502) 569-7525
Email: wrjones@rubinhays.com

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF LOGAN)

The undersigned, Bob Allen, being duly sworn, deposes and states that he is the President of the Board of Directors of the South Logan Water Association, Inc., the Applicant, in the above proceedings; that he has read the foregoing Application and has noted the contents thereof; that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, he believes same to be true.


IN TESTIMONY WHEREOF, witness the signature of the undersigned on this May 17, 2013.



Bob Allen, President
South Logan Water Association, Inc.

Subscribed, sworn and acknowledged to before me by Bob Allen, President of the Board of Directors of the South Logan Water Association, Inc., on this May 17, 2013.

My Commission expires: April 20, 2015



Notary Public
In and for said County and State
Logan Co. Ky

(Seal of Notary)



United States Department of Agriculture
Rural Development
Kentucky State Office

December 19, 2011

Mr. Bob Allen, President
South Logan Water Association, Inc.
114 South Main Street
Adairville, Kentucky 42202

Dear Mr. Allen:

This letter establishes conditions which must be understood and agreed to by you before further consideration may be given to the application. The loan and grant will be administered on behalf of the Rural Utilities Service (RUS) by the State and Area office staff of USDA Rural Development. Any changes in project cost, source of funds, scope of services or any other significant changes in the project or applicant must be reported to and approved by USDA Rural Development, by written amendment to this letter. Any changes not approved by Rural Development shall be cause for discontinuing processing of the application. It should also be understood that Rural Development is under no obligation to provide additional funds to meet an overrun in construction costs.

This letter is not to be considered as loan and grant approval or as a representation as to the availability of funds. The docket may be completed on the basis of a RUS loan not to exceed \$1,200,000 and a RUS grant not to exceed \$460,000. No applicant cash contribution will be required.

If Rural Development makes the loan, the interest rate will be the lower of the rate in effect at the time of loan approval or the rate in effect at the time of loan closing, unless the applicant otherwise chooses. The loan will be considered approved on the date a signed copy of Form RD 1940-1, "Request for Obligation of Funds," is mailed to you.

Please complete and return the attached Form RD 1942-46, "Letter of Intent to Meet Conditions," if you desire that further consideration be given to your application.

The "Letter of Intent to Meet Conditions" must be executed within three weeks from the date of this letter or it becomes invalid unless a time extension is granted by Rural Development.

If the conditions set forth in this letter are not met within 210 days from the date hereof, Rural Development reserves the right to discontinue the processing of the application.

In signing Form RD 1942-46, "Letter of Intent to Meet Conditions," you are agreeing to complete the following as expeditiously as possible:

771 Corporate Drive • Suite 200 • Lexington, KY 40503
Phone: (859) 224-7336 • Fax: (859) 224-7344 • TDD: (859) 224-7422 • Web: <http://www.rurdev.usda.gov/ky>

Committed to the future of rural communities

"USDA is an equal opportunity provider, employer and lender."
To file a complaint of discrimination write USDA, Director, Office of Civil Rights,
1400 Independence Avenue, SW, Washington, DC 20250-9410
or call (800) 795-3272 (voice) or (202) 720-6382 (TDD)

1. Number of Users and Their Contribution:

There shall be 1,637 water users, of which all are existing users. The Area Director will review and authenticate the number of users prior to advertising for construction bids.

2. Grant Agreement:

Attached is a copy of RUS Bulletin 1780-12, "Water and Waste System Grant Agreement," for your review. You will be required to execute a completed form at the time of grant closing.

3. Drug-Free Work Place:

Prior to grant closing, the Association will be required to execute Form AD-1049, "Certification Regarding Drug-Free Workplace Requirements (Grants) Alternative I - For Grantees Other Than Individuals."

4. Repayment Period:

The loan will be scheduled for repayment over a period not to exceed 40 years from the date of the Promissory Note. Principal payment will not be deferred for a period in excess of two years from the date of the Promissory Note. The Association may be required to adopt a supplemental payment agreement providing for monthly payments of principal and interest so long as the Promissory Note is held or insured by RUS. Monthly payments will be approximate amortized installments.

5. Recommended Repayment Method:

Payments on this loan shall be made using the Preauthorized Debit (PAD) payment method. This procedure eliminates the need for paper checks and ensures timely receipt of RD loan payments. To initiate PAD payments, Form RD 3550-28, "Authorization Agreement for Preauthorized Payments," should be signed by the Association to authorize the electronic withdrawal of funds from your designated bank account on the exact installment payment due date. The Area Director will furnish the necessary forms and further guidance on the PAD procedure.

6. Reserve Accounts:

Reserves must be properly budgeted to maintain the financial viability of any operation. Reserves are important to fund unanticipated emergency maintenance, pay for repairs, and assist with debt service should the need arise.

The Association will be required to deposit \$450 per month into a "Funded Debt Reserve Account" until the account reaches \$54,000. The deposits are to be resumed any time the account falls below the \$54,000.

The required monthly deposits to the Reserve Account and required Reserve Account levels are in addition to the requirements of the Association's prior loan resolutions.

The monthly deposits to the Reserve Account are required to commence with the first month of the first full fiscal year after the facility becomes operational.

The Association also needs to fund an account for short-lived assets by depositing a sum of \$500 monthly to the account. The funds in the short-lived asset account may be used by the Association as needed to replace or add short-lived assets in the Association's water system.

7. Security Requirements:

The loan will be secured by a real estate mortgage, a financing statement, and a pledge of gross water revenue, in the Loan Resolution and Financing Statement.

8. Land Rights and Real Property:

The Association will be required to furnish satisfactory title, easements, etc., necessary to install, maintain and operate the facility to serve the intended users. The pipelines will be on private rights-of-way where feasible. Easements and options are to be secured prior to advertising for construction bids.

9. Organization:

The Association will be legally organized under applicable KRS, which will permit them to perform this service, borrow and repay money.

10. Business Operations:

The Association will be required to operate the system under a well-established set of resolutions, rules and regulations. A budget must be established annually and adopted by the Association after review by Rural Development. At no later than loan pre-closing, the Association will be required to furnish a prior approved management plan to include, as a minimum, provisions for management, maintenance, meter reading, miscellaneous services, billing, collecting, delayed payment penalties, disconnect/reconnect fees, bookkeeping, making and delivering required reports and audits.

11. Accounts, Records and Audits:

The Association will be required to maintain adequate records and accounts and submit annual budgets and year-end reports (annual audits)/statistical and financial reports, quarterly and annually, in accordance with subsection 1780.47 of RUS Instruction 1780.

The enclosed audit booklet will be used as a guide for preparation of audits. The Association shall be required to submit a copy of its audit agreement for review and concurrence by Rural Development prior to pre-closing the loan.

12. Accomplish Audits for Years in Which Federal Financial Assistance is Received:

The Association will accomplish audits in accordance with OMB Circular A-133, during the years in which federal funds are received. The Association will provide copies of the audits to the Area Office and the appropriate Federal cognizant agency as designated by OMB Circular A-133.

13. Insurance and Bonding:

The following insurance and bonding will be required:

- A. Adequate Liability and Property Damage Insurance including vehicular coverage, if applicable, must be obtained and maintained by the Association. The Association should obtain amounts of coverage as recommended by its attorney, consulting engineer and/or insurance provider.
- B. Worker's Compensation - The Association will carry worker's compensation insurance for employees in accordance with applicable state laws.
- C. Fidelity Bond - The Association will provide Fidelity Bond Coverage for all persons who have access to funds. Coverage may be provided either for all individual positions or persons, or through "blanket" coverage providing protection for all appropriate employees and/or officials. The amount of coverage required for all RUS loans is \$158,000.
- D. Real Property Insurance - The Association will obtain and maintain adequate fire and extended coverage on all structures including major items of equipment or machinery located in the structures. The amounts of coverage should be based on recommendations obtained by the Association from its attorney, consulting engineer and/or insurance provider. Subsurface lift stations do not have to be covered except for the value of electrical and pumping equipment therein.
- E. Flood Insurance - The Association will obtain and maintain adequate coverage on any facilities located in special flood and mudslide prone areas.

14. Planning and Performing Development:

- A. The engineer should not be authorized to commence work on final plans and specifications until a determination has been made that the project can be planned and constructed within the estimated cost shown in paragraph "24" of this letter. The engineer may then proceed to develop final plans and specifications to be completed no later than 180 days from this date, and prepare bid documents. The Area Director is prepared to furnish the necessary guide to follow so as to keep the project plans and documents within our guidelines and requirements. The project should not be advertised for construction bids until all easements and enforceable options have been obtained, and total funds are committed or available for the project.

B. The following documents will be submitted to Rural Development for review and must be concurred in by Rural Development prior to advertisement for construction bids:

1. Final plans, specifications and bid documents.
2. Applicant's letter on efforts to encourage small business and minority - owned business participation.
3. Legal Service Agreements.
4. Engineering Agreements.

Revision in these documents will be subject to Rural Development concurrence. Any agreements, contracts, etc. not reviewed and approved by Rural Development will not be eligible for payment from project funds or revenues from facilities financed by this Agency.

15. Civil Rights & Equal Opportunity:

You should be aware of and will be required to comply with other federal statute requirements including but not limited to:

A. Section 504 of the Rehabilitation Act of 1973:

Under Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), no handicapped individual in the United States shall, solely by reason of their handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Rural Development financial assistance.

B. Civil Rights Act of 1964:

All borrowers are subject to, and facilities must be operated in accordance with, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and Subpart E of Part 1901 of this Title, particularly as it relates to conducting and reporting of compliance reviews. Instruments of conveyance for loans and/or grants subject to the Act must contain the covenant required by paragraph 1901.202(e) of this Title.

C. The Americans with Disabilities Act (ADA) of 1990:

This Act (42 U.S.C. 12101 et seq.) prohibits discrimination on the basis of disability in employment, state and local government services, public transportation, public accommodations, facilities, and telecommunications. Title II of the Act applies to facilities operated by state and local public entities that provide services, programs, and activities. Title III of the Act applies to facilities owned, leased, or operated by private entities that accommodate the public.

D. Age Discrimination Act of 1975:

This Act (42 U.S.C. 6101 et seq.) provides that no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits

of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Rural Development financial programs must be extended without regard to race, color, religion, sex, national origin, marital status, age, or physical or mental handicap.

16. Closing Instructions:

The Office of General Counsel, our Regional Attorney, will be required to write closing instructions in connection with this loan. Conditions listed therein must be met by the Association.

17. Compliance with Special Laws and Regulations:

The Association will be required to conform to any and all state and local laws and regulations affecting this type project.

18. System Operator:

The Association is reminded that the system operator must have an Operator's Certificate issued by the State.

19. Prior to Pre-Closing the Loan, the Association Will Be Required to Adopt:

- A. Form RD 1942-8, "Resolution of Members or Stockholders."
- B. Form RUS Bulletin 1780-28, "Loan Resolution Security Agreement."
- C. Form RD 400-1, "Equal Opportunity Agreement."
- D. Form RD 400-4, "Assurance Agreement."
- E. Form AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction."
- F. Form RD 1910-11, "Applicant Certification Federal Collection Policies for Consumer or Commercial Debts."
- G. RD Instruction 1940-Q, Exhibit A-1, "Certification for Contracts, Grants and Loans."
- H. RUS Bulletin 1780-22, "Eligibility Certification."

20. Refinancing and Graduation Requirements:

The Association is reminded that if at any time it shall appear to the Government that the Association is able to refinance the amount of the RUS indebtedness then outstanding, in whole or in part, by obtaining a loan from commercial sources at reasonable rates and terms, upon the

request of the Government, the Association will apply for and accept such loan in sufficient amount to repay the Government.

21. Commercial Interim Financing:

The Association will be required to use commercial interim financing for the project during construction for the RUS loan portion of the financing, if available at reasonable rates and terms.

Before the loan is closed, the Association will be required to provide Rural Development with statements from the contractor, engineer and attorneys that they have been paid to date in accordance with their contract or other agreements and, in the case of the contractor, that he has paid his suppliers and sub-contractors.

22. Disbursement of Project Funds:

A construction account for the purpose of disbursement of project funds (RUS) will be established by the Association prior to start of construction. The position of officials entrusted with the receipt and disbursement of RUS project funds will be covered by a "Fidelity Bond," with USDA Rural Development as Co-Obligee, in the amount of construction funds on hand at any one time during the construction phase.

For each "construction account" as established, if the amount of RUS loan and grant funds plus any applicant contributions or funds from other sources to be deposited into the account are expected to exceed \$250,000 at any time, the financial institution will secure the amount in excess of \$250,000 by pledging collateral with the Federal Reserve Bank in an amount not less than the excess in accordance with 7 CFR, 1902.7(a).

During construction, the Association shall disburse project funds in a manner consistent with subsection 1780.76 (e) of RUS Instruction 1780. Form RD 1924-18, "Partial Payment Estimate," or similar form approved by Rural Development, shall be used for the purpose of documenting periodic construction estimates, and shall be submitted to Rural Development for review and acceptance. Prior to disbursement of funds by the Association, the Board of Directors shall review and approve each payment estimate. All bills and vouchers must be approved by Rural Development prior to payment by the Association.

Form RD 440-11, "Estimate of Funds Needed for 30-Day Period Commencing _____," will be prepared by the Association and submitted to Rural Development in order that a periodic advance of federal cash may be requested.

Borrowers receiving federal loan and/or grant funds by EFT will have funds directly deposited to a specified account at a financial institution with funds being available to the recipient on the date of payment. The borrower should complete Form SF-3881, "Electronic Funds Transfer Payment Enrollment Form," for each account where funds will be electronically received. The completed form(s) must be received by Rural Development at least thirty (30) days prior to the first advance of funds.

Monthly audits of the Association's construction account records shall be made by Rural Development.

23. Disbursement of Grant Funds:

The RUS funds will be advanced as they are needed in the amount(s) necessary to cover the RUS proportionate share of obligations due and payable by the Association. Grant funds, upon receipt, must be deposited in an interest bearing account in accordance with 7 CFR part 3019 (as applicable). Interest earned on grant funds in excess of \$250 (as applicable) per year will be submitted to RUS at least quarterly.

24. Cost of Facility:

Breakdown of Costs:

Development	\$ 1,300,000
Land and Rights	10,000
Legal and Administrative	22,000
Engineering	179,300
Interest	20,000
Contingencies	<u>128,700</u>
TOTAL	\$ 1,660,000

Financing:

RUS Loan	\$ 1,200,000
RUS Grant	<u>460,000</u>
TOTAL	\$ 1,660,000

25. Use of Remaining Project Funds:

After providing for all authorized costs, any remaining project funds will be considered to be RUS grant funds and refunded in proportion to participation in the project. If the amount of unused project funds exceeds the grants, that part would be RUS loan funds.

26. Proposed Operating Budget:

You will be required to submit to Rural Development a copy of your proposed annual operating budget that supports the proposed loan repayment prior to this agency giving you written authorization to proceed with the bidding phase. The operating budget should be based on a typical year cash flow, subject to completion of this project in the first full year of operation. Form RD 442-7, Operating Budget, or similar form may be utilized for this purpose.

27. Rates and Charges:

Rates and charges for facilities and services rendered by the Association must be at least adequate to meet cost of maintaining, repairing and operating the water system and meeting required principal and interest payments and the required deposits to debt service and/or depreciation reserve.

Water rates will be at least:

Meter Size 5/8 X 3/4 Inch:

First	2,000	gallons @ \$	23.45. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

Meter Size 1 Inch:

First	2,000	gallons @ \$	43.46. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

Meter Size 1 1/2 Inch:

First	2,000	gallons @ \$	61.44. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

Meter Size 2 Inch:

First	2,000	gallons @ \$	93.97. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

Meter Size 3 Inch:

First	2,000	gallons @ \$	126.07. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

Meter Size 4 Inch:

First	2,000	gallons @ \$	162.77. - Minimum Bill.
Next	8,000	gallons @ \$	8.30. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.03. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.75. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.48. - per 1,000 gallons.

28. Water Purchase Contract:

The Association will submit a Water Purchase Contract for approval by Rural Development before advertising for construction bids. If the contract is not on Form RD 442-30, "Water Purchase Contract," the contract will require approval by our Regional Attorney. The contract must meet the requirements of subsection 1780.62 of RUS Instruction 1780.

29. Compliance with the Bioterrorism Act:

Prior to pre-closing the loan, the Association will provide a certification they have completed a Vulnerability Assessment (VA) and prepared an emergency response plan (ERP) as required by the Safe Drinking Water Act (SDWA).

30. Floodplain Construction:

The Association will be required to pass and adopt a Resolution or amend its By-Laws whereby the Association will deny any water service to any future customer wishing to build on or develop property located within a designated floodplain. If a customer or developer requests service for construction in a designated floodplain, the customer or developer must provide evidence and a justification for approval by the Association and Rural Development officials that there are no other alternatives to construction or development within the designated floodplain. The community must be a participant in the National Flood Insurance Program (NFIP) and the customer or developer must obtain the required permits prior to the tap on restrictions being waived.

31. Mitigation Measures:

- A. The project shall be in compliance with all requirements noted in the Governor's Office for Local Development letter dated December 27, 2010, from Ms. Lee Nalley.
- B. The design and construction shall be in compliance with the requirements of the U.S. Fish and Wildlife Service as requested by letter dated March 9, 2011, and signed by James Gruhala, Fish and Wildlife Biologist.
- C. The line design and construction shall be accomplished in a way that will leave flood plains and farmland without effect after construction is complete. The Army Corps of Engineers Nationwide Permit No. 12 applies to all floodplain and wetland utility line construction.
- D. Any excavation by Contractor that uncovers a historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
- E. The design and construction shall be in compliance with all local, state and federal environmental statutes, regulations and executive orders applicable to the project.

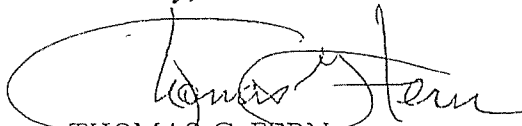
F. Best Management Practices shall be incorporated into the project design, construction, and maintenance.

32. Final Approval Conditions:

Final approval of this assistance will depend on your willingness, with the assistance of all your co-workers, to meet the conditions of this letter in an orderly and systematic manner. Then too, final approval will depend on funds being available.

If you desire to proceed with your application, the Area Director will allot a reasonable portion of time to provide guidance in application processing.

Sincerely,



THOMAS G. FERN
State Director

Enclosures

- cc: Area Director - Columbia, Kentucky
- Area Manager – Bowling Green, Kentucky
- Barren River ADD – Bowling Green, Kentucky
- Fred Greene - Russellville, Kentucky
- McGhee Engineering - Guthrie, Kentucky
- PSC - ATTN: Dennis Jones - Frankfort, Kentucky



Rural Development

May 9, 2013

Kentucky State Office

771 Corporate Drive,
Suite 200
Lexington, KY
40503

Mr. Bob Allen, President
South Logan Water Association, Inc.
114 S Main Street
Adairville, Kentucky 42202

Voice 859 224.7300
Fax 859 224 7425
TTY 859 224 7422

Re: Letter of Conditions Dated December 19, 2011

Dear Mr. Allen:

This letter shall serve as Amendment No. 1 to the Letter of Conditions dated December 19, 2011. The purpose of this amendment is to revise the requested/required rates to reflect adjustments needed as a result of a wholesale water rate increase from Logan/Todd Regional Water Commission.

Paragraph numbered "27" is revised to read as follows:

" 27. Rates and Charges:

Rates and charges for facilities and services rendered by the Association must be at least adequate to meet cost of maintaining, repairing and operating the water system and meeting required principal and interest payments and the required deposits to debt service and/or depreciation reserve.

Water rates will be at least:

5/8 x 3/4 Inch:

First	2,000	gallons @ \$	23.67. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons.

1 Inch:

First	2,000	gallons @ \$	43.68. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons.

1 1/2 Inch:

First	2,000	gallons @ \$	61.66. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.

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Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons.

2 Inch:

First	2,000	gallons @ \$	94.19. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons.

3 Inch:

First	2,000	gallons @ \$	126.29. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons.

4 Inch:

First	2,000	gallons @ \$	162.99. - Minimum Bill.
Next	8,000	gallons @ \$	8.41. - per 1,000 gallons.
Next	40,000	gallons @ \$	8.14. - per 1,000 gallons.
Next	50,000	gallons @ \$	7.86. - per 1,000 gallons.
All Over	100,000	gallons @ \$	7.59. - per 1,000 gallons."

All other provisions of the referenced Letter of Conditions remain in full force and unchanged.

Sincerely,



THOMAS G. FERN
State Director

cc: Area Director - Columbia, Kentucky
Barren River ADD - Bowling Green, Kentucky
Fred Greene - Russellville, Kentucky
McGhee Engineering - Guthrie, Kentucky
PSC - ATTN: Dennis Jones - Frankfort, Kentucky



**United States Department of Agriculture
Rural Development**
Kentucky State Office

May 16, 2013

SUBJECT: South Logan Water Association
Water System Upgrade Project
Contract Award Concurrence

TO: Area Director
Columbia, Kentucky

Based on the bids received and the recommendation of the consulting engineer, Rural Development concurs in the award of subject contract to the low bidder, Bobby Luttrell and Sons, LLC., in the amount of \$1,400,386.65.

If you have any questions, please contact Julie Anderson, State Engineer, at (859) 224-7348.


THOMAS G. FERN
State Director
Rural Development

cc: McGhee Engineering
Guthrie, Kentucky

Rubin and Hays
Louisville, Kentucky

771 Corporate Drive • Suite 200 • Lexington, KY 40503
Phone: (859) 224-7300 • Fax: (859) 224-7425 • TDD: (859) 224-7422 • Web: <http://www.rurdev.usda.gov/ky>

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CERTIFICATE OF PRESIDENT OF SOUTH LOGAN WATER ASSOCIATION, INC., AS TO STATEMENT REQUIRED BY SECTION 1(5) OF 807 KAR 5:069

I, Bob Allen, hereby certify that I am the duly qualified and acting President of the South Logan Water Association, Inc., of Logan County, Kentucky, and that said Association is in the process of arranging to finance the construction of extensions, additions and improvements to the existing waterworks system of the Association (the "Project"), in cooperation with the Engineers for the Association, McGhee Engineering, Inc., Guthrie, Kentucky.

Based on information furnished to me by said Engineers for the Association, I hereby certify as follows:

1. That the proposed plans and specifications for the Project have been designed to meet the minimum construction and operating requirements set out in 807 KAR 5:066 Section 4(3) and (4); Section 5(1); Sections 6 and 7; Section 8(1) through (3); Section 9(1) and Section 10.
2. That all other state approvals and/or permits have already been obtained.
3. That the proposed rates of the Association shall produce the total revenue requirements set out in the engineering reports.
4. That it is now contemplated that construction of the Project will begin on or about July 1, 2013, and will end on or about December 28, 2013.

IN TESTIMONY WHEREOF, witness my signature this May 17, 2013.



President
South Logan Water Association, Inc.

STATE OF KENTUCKY)
) SS
COUNTY OF LOGAN)

Subscribed and sworn to before me by Bob Allen, President of the Board of Directors of the South Logan Water Association, Inc., on this May 17, 2013.



Notary Public
In and For Said State and County

(Seal of Notary)

Logan Co Ky

NOTICE OF PROPOSED RATE CHANGE

In accordance with the requirements of the Public Service Commission of the Commonwealth of Kentucky as set out in 807 KAR 5:069, Section 2, notice is hereby given to the customers of the South Logan Water Association of an proposed change in the Association's water rates as set forth herein. The proposed change is required by USDA, Rural Development in connection with a loan by RD to the Association in the amount of \$1,200,000 to be evidenced by the issuance by the Association of its Promissory Note in such amount, which RD has agreed to purchase provided the Association meets certain conditions of RD, including revising the water rates as set forth below:

Current Monthly Rates

5/8" x 3/4" Meters:

First 2,000 gallons	\$21.92 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

1" Meters:

First 2,000 gallons	\$40.62 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

1-1/2" Meters:

First 2,000 gallons	\$57.42 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

2" Meter:

First 2,000 gallons	\$87.82 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

3" Meters:

First 2,000 gallons	\$117.82 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

4" Meters:

First 2,000 gallons	\$152.12 minimum bill
Next 8,000 gallons	7.76 per 1,000 gallons
Next 40,000 gallons	7.50 per 1,000 gallons
Next 50,000 gallons	7.24 per 1,000 gallons
All over 100,000 gallons	6.99 per 1,000 gallons

Proposed Monthly Rates

5/8" x 3/4" Meters:

First 2,000 gallons	\$23.67 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons
Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

1" Meters:

First 2,000 gallons	\$43.68 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons
Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

1-1/2" Meters:

First 2,000 gallons	\$61.66 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons
Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

2" Meter:

First 2,000 gallons	\$94.19 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons

Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

3" Meters:

First 2,000 gallons	\$126.29 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons
Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

4" Meters:

First 2,000 gallons	\$162.99 minimum bill
Next 8,000 gallons	8.41 per 1,000 gallons
Next 40,000 gallons	8.14 per 1,000 gallons
Next 50,000 gallons	7.86 per 1,000 gallons
All over 100,000 gallons	7.59 per 1,000 gallons

The RD loan proceeds will be used in conjunction with an RD Grant in the amount of \$460,000 to finance the cost of improvements to the waterworks system of the Association, consisting of the construction and installation of (i) approximately 14 miles of water line on rural roadways; (ii) a new emergency supply meter with the Logan/Todd Regional Water Commission; (iii) four new master meters; and (iv) upgrades to the telemetry system. Signed: Bob Allen, President, South Logan Water Association.

PRELIMINARY ENGINEERING REPORT

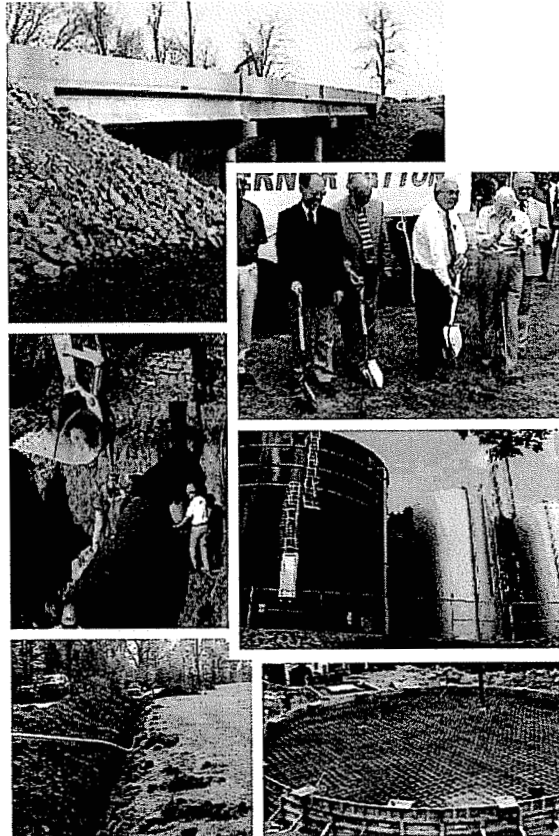
SOUTH LOGAN WATER ASSOCIATION 2011 SYSTEM UPGRADE PROJECT

December 2010

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PUBLIC SERVICE
COMMISSION



MCGHEE ENGINEERING, INC.

202 South Ewing Street
Guthrie, Kentucky 42234

(270) 483-9985
www.mcgheeengineering.com

**PRELIMINARY ENGINEERING REPORT
SOUTH LOGAN WATER ASSOCIATION
2011 SYSTEM UPGRADE PROJECT**

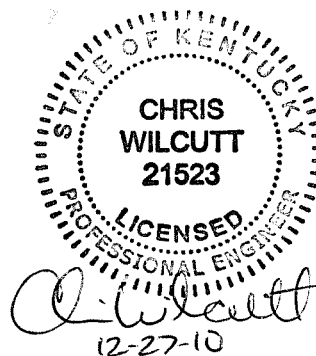
Logan County, Kentucky

prepared for the:

South Logan Water Association
P.O. Box 277
Adairville, KY 42202

prepared by:

MCGHEE ENGINEERING, INC.
EIN# 61-1338167
202 Ewing Street
P.O. Box 267
Guthrie, KY 42234
(270) 483-9985



December 2010

Preliminary Engineering Report
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1.0 INTRODUCTION

The South Logan Water Association (SLWA) was chartered in 1971 to supply potable water to residents of southern Logan County, Kentucky. The Association consists of six board members, and it is regulated by the Kentucky Public Service Commission. South Logan has authority to plan, design, finance, construct, operate, replace and maintain the distribution facilities within its service area.

The South Logan water system is comprised of over 260 miles of water distribution lines and three water storage tanks with a total capacity of 736,000 gallons, all of which serves approximately 1,649 customers in southern Logan County. As of the end of March 2003, the South Logan Water Association began to purchase all of their treated water from the recently completed water system of the Logan Todd Regional Water Commission (LTRWC). The Commission's water treatment facility is rated at 10 million gallons per day, and their distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. The 2009 average daily LTRWC usage within the South Logan system was approximately 390,000 gallons per day. South Logan has two meter stations with the Commission, one located in Russellville and the other near the Mortimer community.

The Association is a relatively large water system covering nearly a third of the Logan County area. Almost all roads within the Association boundary have water service, with only short extensions needed from time to time to accommodate new development.

The main problems that have plagued the Association were its long-term supply of treated water, low pressure in certain areas of the system, extending water service to unserved areas, and installing lines for improved hydraulic performance. Going online with the Logan Todd Regional system and recent USDA extension projects have resolved the majority of these problems. However, there are many original areas that are now strained due to the dramatic growth of the Association. To initiate a solution to alleviating these "growing pains", the South Logan Water Association has requested funding assistance to undertake their 2011 System Upgrade Project.

The proposed project includes construction of a new emergency supply meter with LTRWC in the Olmstead community, construction of four new master meter stations to assist with water loss and leak detection, addition of additional telemetry equipment for monitoring of master meter locations, and water line Extensions & Upgrades along 12 miles of the following roads. The total cost of the proposed project is estimated to be \$1,660,000.

2.0 PROJECT PLANNING AREA

2.1 Location

The waterline construction of the South Logan Water Association's project will be spread out along various rural and urban roadways. Over 12 miles of new

waterline construction or upgrades are proposed for 4 different roadways or urban areas. The affected areas are listed in Table 1.

Table 1
Waterline Information

Exhibit	Map I.D.	PRIMARY ROUTES ROAD NAME	Length (miles)	Line Size (inches)
1	A	Old Russellville District No. 1	3.2	4, 6 & 8
1	B	US Highway 79	4.5	8
1	C	Riverview/E. Adairville Connector	1.1	4 & 6
1	D	Loy Moore & Trimble Road Area	3.3	6
		SUBTOTAL	12.1	
		ALTERNATE ROUTES		
2	E	KY Highway 96	3.2	6
2	F	Smith Grove Road	2.9	4
2	G	Bores Road	1.8	4
2	H	Conn Road	2.7	6
2	I	Tillett Lane	0.6	4
2	J	Kenny Stratton Road	0.8	4
2	K	Beauchamp Road	1.0	4
2	L	Clay Dockins Road	1.4	4
		SUBTOTAL	14.4	
		TOTAL	26.5	

The planned emergency Logan Todd supply meter is proposed to be located at the intersection of KY Highway 775 and the RJ Corman Railroad, which is centrally located to the Olmstead community and elementary school. Four master meter vaults with SCADA will be located at various location in the system, with final site selection coordinated by the Association operator.

The proposed project is illustrated on a county highway map and labeled as Exhibit 1.

2.2 Land Use and Environmental Resources Present

As stated earlier, the line portion of the project is spread out along over 12 miles of roadway, mostly within rural areas of southern Logan County. The line work is proposed to be constructed within utility easements previously acquired or to be acquired by the South Logan Water Association. The project will affect five main resources during construction: flood plains, residential, agriculture, grazing and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. No long-term impact is expected to any environmental resource.

An archeological investigation is not anticipated for the affected line routes due to the fact these areas have been previously disturbed. However, if such an investigation is warranted, Dr. Jack Schock of Arrow Enterprises will conduct any

necessary reviews with a report submitted to the State Historical Preservation Officer. Regardless, it is expected that no historical resource will be affected by the proposed project.

The following exhibits indicate the environmental resources present within the project planning area:

- A topographic map of each proposed water line (excluding alternates), indicating the areas to be affected and the surrounding area, are attached as Exhibits 3 thru 6. The base maps are USGS 7.5' quadrangles images.
- Waterlines that are near or traverse through defined FEMA floodplain zones are illustrated in Exhibits 7 and 8.
- Soil survey data from the Soil Conservation Service is shown as Exhibit 9.

2.3 Growth Areas and Population Trends

The population history of Logan County is an important element in determining the growth patterns over the last 50 years. Analysis of the population history will assist in forming a reliable estimate of the future water needs of the project area.

According to historical records, Logan County's population was 20,896 in 1960, which represents its lowest census year during the last 60 years. Steady growth has been the trend in Logan County since the 1960's. Table 2 provides the population history and projections of the county based on data obtained from the U.S. Bureau of the Census.

Table 2
Population History and Projections

YEAR	Historical							Projections						
	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	
L Adairville	784	800	848	973	1,105	906	920	930	943	956	970	976	988	
O Auburn	955	994	1,013	1,160	1,467	1,273	1,444	1,489	1,535	1,578	1,622	1,612	1,651	
G Lewisburg	524	496	512	651	972	772	903	918	931	945	959	965	976	
A Russellville	3,986	4,529	5,861	6,456	7,520	7,454	7,149	7,271	7,418	7,565	7,711	7,726	7,850	
N Rural Areas	17,096	15,516	12,662	12,553	13,074	14,011	16,157	16,230	16,440	16,553	16,642	16,906	16,943	
N Logan County	23,345	22,335	20,896	21,793	24,138	24,416	26,573	26,838	27,267	27,597	27,904	28,185	28,408	
% Change		-4.3%	-6.4%	4.3%	10.8%	1.2%	8.8%	1.0%	1.6%	1.2%	1.1%	1.0%	0.8%	
Notes to Table 1:	1. Shaded areas have been calculated based on census and projection data.													
Sources to Table 1:	1. Historical & Projections provided by the KY State Data Center and Census Bureau University of Louisville, State Data Center (http://cbpa.louisville.edu/ksdc/)													

Analyzing Table 2 from 1940 to 2000 shows that the cities in Logan County have grown overall with some fluctuations. Most of the cities' gains came at the expense of the rural populations in Logan County. However, based on census data,

the rural population should continue to grow and approach the 1940 population figures. Therefore, the population of the South Logan Water Association should experience similar growth based upon these projections.

Several factors influence the growth of a community, some of which include accessibility, technology, education, water infrastructure, sewer facilities, and jobs. Over the past ten years, the community has experienced the benefit of a new four-lane highway, which has increased the areas access to larger Kentucky cities such as Hopkinsville and Bowling Green plus improved access to Interstates 24 and 65. High speed internet and wireless technology has gradually entered the communities, creating greater and easier contact to the rest of the world. The local school system is strong and provides a quality education. Recent census figures reveal that over two thirds of the county's population are high school graduates, which is near the state average. Over the last ten years, the Association and other communities within the county have worked together to secure a reliable source of potable water for the next thirty years as the county goes online with the recently completed Logan Todd Regional Water Commission.

Further analysis of these projections indicates Logan County's population is projected to grow approximately 7% or add 1,835 persons by 2030. It should be noted that population would be impacted by the availability or unavailability of water supply. An ample supply of water will promote growth while the lack thereof will limit growth. These factors must be considered when reviewing this report since many assumptions are dependent on these projections.

3.0 EXISTING FACILITIES

3.1 History and Assets

The South Logan Water Association (SLWA) was formed by Logan County Court order in the early 1970's to supply potable water to residents within the southern portions of Logan County, Kentucky, between the cities of Adairville and Russellville. The water system is comprised of approximately 260 miles of water line and a total water storage capacity of 736,000 gallons. The existing distribution system consists of 8", 6", 4", 3" and 2" PVC lines. The general service area is depicted in Exhibit 1, which illustrates the general distribution layout. The existing transmission and distribution lines generally radiate from Adairville, its former water supplier, and from the Association's water storage tanks south of Russellville. The system is well laid out with many loops. However, there are some dead end and low-flow lines within the system that require frequent flushing.

SLWA has three water storage structures to serve the water system. The primary storage structure is a ground level tank, located just south of Russellville, and the tank has a total capacity of 436,000 gallons and an overflow elevation of 842 feet. The other tanks are elevated storage tanks, located in the Mortimer and Schochoh communities. The Mortimer tank is a leg-style water storage tank, and it has a capacity of 100,000 gallons and an overflow elevation of 746 feet. The Schochoh tank is also a leg-style water storage tank, and it has a capacity of 200,000 gallons and an overflow elevation of 800 feet.

The Logan Todd Regional system initially supplies water to the SLWA system in two locations. The larger feed point is located at the base of the Association's ground level tanks in Russellville, and the other is located north of Adairville near the Red River along US Highway 431 to serve the Mortimer tank. A small pump station is utilized within the system to serve and fill the Schochoh tank. Flow through each of these metering points and pump station is controlled by the LTRWC SCADA system, and pressure is regulated as flow enters to match the existing tank overflows. System pressures are normally maintained by the level in the respective storage tanks.

3.2 Regulatory Compliance

According to the recent Public Service Commission inspections plus Division of Water's remarks within the Clearinghouse Comments, the South Logan water system is currently in compliance with appropriate regulatory agencies. No other remarks were given to suggest that the water system was in or near a noncompliance status. The comments of the Division of Water and other agencies are included in Appendix A.

3.3 Existing Financial Charges and Status

3.3.1 Existing Rate Schedule (Effective March 1, 2010)

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 21.92</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 40.62</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 57.42</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 87.82</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 3-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 117.82</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 152.12</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

3.3.2 O&M Costs (FYE 12/31/09)

Item No.	Expense Item	Amount
1	Purchased Water	\$ 462,324.00
2	Salaries and wages	\$ 140,975.00
3	Directors Fees	\$ 2,300.00
4	Transmission & Distribution	\$ 36,581.00
5	Repairs & maintenance	\$ 16,976.00
6	Contractual Services	\$ 6,348.00
7	Utilities & Telephone	\$ 13,913.00
8	Professional Fees	\$ 6,267.00
9	Insurance	\$ 26,087.00
10	Taxes & licenses	\$ 420.00
11	Office Supplies	\$ 24,329.00
12	Water Tests	\$ 3,726.00
13	Bad Debt	\$ 3,169.00
14	Miscellaneous Expense	\$ 8,651.00
Total Utility Expense		\$ 752,066.00

3.3.3 Long Term Debts (as of 12/31/09)

Date of Issue	Bond/Note Holder	Principal Balance	Payment Date	Bond Type	Amount on Deposit in Reserve *
1993 Issue	FmHA	\$ 338,987.00	2033	Water	\$ 83,563.00
1998 Issue	FmHA	\$ 513,024.00	2038	Water	
2005 Issue	USDA-RD	\$ 756,616.00	2045	Water	

3.3.4 Short Term Debts (as of 12/31/09)

Lender or Lessor	Date of Issue (Mo. & Year)	Principal Balance	Purpose	Payment Date	Principal & Interest Payment (P&I)	Date to Be Paid In Full
Not Applicable						

4.0 NEED FOR PROJECT

4.1 Health and Safety

Portions of the South Logan Water Association are currently strained due to growth and recent expansion projects to serve unserved areas. The strain limits the Association's ability to deliver drinking water to all its customers at proper pressure and quantity as set forth by the Kentucky Division of Water (KDOW). The Ten State Standards require a minimum working pressure of 35 psi. However, during peak times, some isolated fringe areas, which also contain large number of users, experience pressures dipping to 30 psi.

The Association constantly battles line breaks of older pipelines as well as water loss within the system. Due to the vast area served, South Logan has methodically broken its system into mini zones to better monitor and locate leaks as they arise. Unfortunately, the attempts to solve the water loss problems also creates pressure problems as more flow is forced into fewer pipelines rather than multiple loops. Thus, the Association constantly has to balance its effort to minimize water loss with its requirement to deliver proper pressure.

4.2 System O&M

There are two primary reasons for the Association's proposed project. The first is to reduce interruptions of service from older line breaks and improve its ability to supply stable pressures above the Ten States Standard threshold. The second reason is to improve and assist South Logan's ability to monitor water flow and locate leaks to minimize water loss. The water system has experienced the majority of its growth in some of the original constructed areas of the water system. During pipeline breaks on the primary distribution lines, the secondary feeder lines are incapable of providing adequate flows resulting in unacceptable pressures. Also, these problems have shown not only to be a nuisance to the maintenance crews in non-ideal conditions but also very costly to the Association's finances due to material needs, overtime pay, and equipment costs.

The project will also include the addition of master meter stations with additional telemetry equipment. These components will improve South Logan's ability to monitor water flow and make timely locations of water leaks. With the added master meters and the recent conversion to radio-read meters, management of purchased water costs should be greatly improved with the new equipment's potential to assist and locate waterloss.

4.3 Growth

As mentioned earlier, the population of Logan County and the rural areas should grow by an average of 5 to 7% over the next 30 years based upon reliable census records and expected growth. The proposed project is necessary to provide continued and reliable water service to all its nearly 1,650 customers. The new infrastructure will insure the Association's ability to properly serve the existing customer base plus future growth in the area.

5.0 ALTERNATIVES CONSIDERED

A resolution to the problems faced by the South Logan Water Association is a relatively simple project with two alternatives.

5.1 Alternative 1

The first obvious alternative is to do nothing or a smaller variation of the project. However, the Association would continue their current endurance of operation, maintenance and water flow problems. Therefore, the 'do nothing' alternative is not a viable option as it would only prolong the inevitable.

5.2 Alternative 2

The second alternative is one that offers several advantages and resolves the three critical deficiencies in the water system. The alternative eliminates dead end lines that suffer with water quality problems and require frequent flushing; replaces system-plaguing pipeline sections known for leaks; and provides additional system monitoring equipment for quick identification of water leaks and other problems. The project adheres with the Commonwealth's drive to provide a reliable and potable water source to all families by the year 2020. Also, the project provides a solution to South Logan's inability to provide at least 30-psi pressure during all demand times.

5.2.1 Description

The project involves construction of 12.1 miles of water line in four areas of the system in southern Logan County. All of these lines are being built to improve the hydraulic performance of the existing distribution system. Some of the low-pressure areas will be corrected by the up-sizing and looping of interconnecting lines. These loops will also improve the water quality by cutting down on the stagnant water in dead-end lines.

In a further attempt to improve service to customers, South Logan is also proposing to install a number of additional master metering stations and upgrades to their existing telemetry system to allow the operators to monitor the performance of the system in greater detail, and to identify problems earlier. The alternative is illustrated in Exhibit 1.

5.2.2 *Environmental Impacts and Land Requirements*

The alternative has little to no impact upon the environment and land resources because the proposed construction will be done along existing easements and highways. The line extensions and upgrades are proposed for construction in existing pipeline easements where possible or in county/state right-of-way and easements as necessary. As mentioned earlier, the project will affect five main resources during construction: flood plains, residential, agriculture, grazing and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. No other effect to the resources is expected after construction of the facilities is complete.

5.2.3 *Construction Problems*

There are no severe construction problems foreseen for the project. The South Logan area is known for its ideal soil conditions with only sporadic instances of rock outcrops. The entire pipeline routes are very accessible, and there is little to no evidence of a high water table. However, mobilization will be significant during the project since all of the proposed water lines are spread out throughout the vast service area. Also, several of the waterline extensions will require stream crossings, but none of which should be unmanageable or costly.

5.2.4 *Cost Estimates*

The South Logan Water Association's 2011 System Upgrade Project is estimated to have a total cost of \$1,660,000. The project cost consists of construction, non-construction and contingency costs, which are \$1,300,000, \$231,300 and \$128,700 respectively. The project is anticipated to be funded in part by a \$498,000 grant and \$1,162,000 loan from Rural Development

6.0 PROPOSED PROJECT

6.1 Project Design

6.1.1 *Water Supply*

The Logan Todd Regional Water Commission's plant will serve the proposed project. Based upon figures from LTRWC, the fairly new plant is producing approximately 4,000,000 gallons per day, which is approximately 40% of the design capacity. Therefore, sufficient capacity exists to serve the South Logan project since no new customers are expected.

6.1.2 *Storage*

The proposed project will not include any additions to or modifications of the Association's water storage facilities. Adequate

storage volume exists at their Russellville, Mortimer and Schoch sites to serve the project.

6.1.3 *Distribution Layout*

The waterline construction of the South Logan Water Association's system extension project will be spread out along nearly 12 miles of rural roadways. The affected roadways are not clustered together as typical in most system upgrades. The upgrades consist of approximately 17,000 LF of new 8-inch 6-inch and 4-inch piping sections in the Old Russellville District No. 1 area, originally built in the 1960's. Also, the project includes 23,500 LF of 8-inch upgrade along US Highway 79 South, 17,300 LF of 6-inch upgrade between KY Highway 663 and KY Highway 591 along Loy Moore Road and Trimble Road, and 5,700 LF of 6-inch piping to provide a connector from East Adairville to South Adairville. Also, in an attempt to improve service to customers, South Logan is proposing to install additional master metering stations with telemetry capability to allow operators to better monitor the performance of the entire system in greater detail, and to identify problems earlier.

The proposed line extension and proposed booster pump station is illustrated in Exhibit 1.

6.1.4 *Regulatory Compliance*

The proposed project has been submitted to the Kentucky State Clearinghouse for their comments. The clearinghouse comments are included in Appendix A. The clearinghouse review of the proposal indicates there are no identifiable conflicts with any state or local plan, goal, or objective. Furthermore, no notices have been received and none are expected to suggest that the water system is in or near a noncompliance status.

6.1.5 *Hydraulic Calculations*

For preliminary planning purposes, the computer hydraulic simulator, KYPIPE 2000, has been used to construct a system wide model to determine the hydraulic characteristics of the South Logan water system as it currently exists. The model includes all of the existing lines from the water supply connection with Logan Todd, plus the proposed line upgrades and other features of the project. The modeling indicates all four of the waterlines may be constructed as proposed.

6.2 Cost Estimate

The proposed itemized cost estimate of the South Logan Water Association's 2011 System Extension Project is shown in Table 3.

Table 3
Project Cost Estimate

Construction		
No.	Item	Total
1	Old Russellville District No. 1 Waterline Upgrades	\$ 490,300
2	US Highway 79 Waterline Upgrade	\$ 399,800
3	Riverview & East Adairville Waterline Connector	\$ 64,700
4	Loy Moore Road & Trimble Road Waterline Upgrades	\$ 263,550
5	Interconnection Meter Zone Pits & SCADA Upgrades	\$ 81,650
	Subtotal - Construction	\$1,300,000
Non-Construction		
1	Administrative Expenses	\$ 5,000
2	Legal Costs	\$ 17,000
3	Land & R.O.W.	\$ 10,000
4	Preliminary Engineering & Environmental Services	\$ 20,000
5	Design Engineering	\$ 77,300
6	Construction Phase Engineering Services	\$ 33,100
7	Construction Inspection	\$ 68,900
	Subtotal - Nonconstruction	\$ 231,300
	Contingency	\$ 128,700
	TOTAL ESTIMATED PROJECT COST	\$ 1,660,000

6.3 Annual Operating Budget

The proposed annual operating budget for the South Logan Water Association's 2011 System Extension Project is shown in Table 4.

Table 4
Proposed Operating Budget

Operating Income	Existing ⁽¹⁾	Extension Only	Future
Water Sales (2009 Rates)	\$1,020,506.00	\$0.00 ⁽²⁾	\$0.00
Water Sales (Approx w/ 2010 Rates)	\$0.00	\$0.00 ⁽²⁾	\$1,158,007.50 ⁽⁸⁾
Other Charges	\$26,223.00	\$0.00 ⁽²⁾	\$26,223.00
Total Operating Income	\$1,046,729.00	\$0.00	\$1,184,230.50
Operating and Maintenance Expense			
Purchased Water	\$462,324.00	\$0.00 ⁽²⁾	\$523,781.00 ⁽⁴⁾
Management	\$143,275.00	\$4,298.00 ⁽³⁾	\$147,573.00
Transmission & O&M Expense	\$57,283.00	\$1,718.00 ⁽³⁾	\$59,001.00
Insurance	\$26,087.00	\$783.00 ⁽³⁾	\$26,870.00
Utilities	\$13,913.00	\$417.00 ⁽³⁾	\$14,330.00
Professional & Contracted Fees	\$12,615.00	\$378.00 ⁽³⁾	\$12,993.00
Office Supplies & Collection Expense	\$27,918.00	\$838.00 ⁽³⁾	\$28,756.00
Miscellaneous Expense	\$8,651.00	\$260.00 ⁽³⁾	\$8,911.00
Total Operating Expenses	\$752,066.00	\$8,692.00	\$822,215.00
Net Operating Income	\$294,663.00	(\$8,692.00)	\$362,015.50
Non-Operating Income (Expense)			
Interest Income	\$2,720.00	\$0.00	\$2,720.00
Other	(\$1,685.00)	\$0.00	(\$1,685.00)
RUS Interest (Bonds pre-2010)	(\$73,621.00) ⁽⁷⁾	\$0.00	(\$72,393.00) ⁽⁷⁾
RUS Principal (Bonds pre-2010)	(\$25,286.00) ⁽⁷⁾	\$0.00	(\$26,897.00) ⁽⁷⁾
RUS Interest (2011 Project)	\$0.00	(\$46,480.00) ⁽⁵⁾	(\$46,480.00) ⁽⁵⁾
RUS Principal (2011 Project)	\$0.00	(\$13,520.00) ⁽⁵⁾	(\$13,520.00) ⁽⁵⁾
Non-RUS Interest	\$0.00	\$0.00	\$0.00
Non-RUS Principal	\$0.00	\$0.00	\$0.00
Total Non-Operating Income	(\$97,872.00)	(\$60,000.00)	(\$158,255.00)
Net for Coverage & Depreciation	\$196,791.00	(\$68,692.00)	\$203,760.50
10% Debt Service Coverage	(\$9,891.00) ⁽⁶⁾	(\$6,000.00) ⁽⁶⁾	(\$15,929.00)
Net for Depreciation	\$186,900.00	(\$74,692.00)	\$187,831.50

Notes:

1. Based on the December 31, 2009 Audit & PSC Report
2. Based on 0 new customers.
3. Based on 3% nominal increase due to anticipated annual cost increases.
4. Reflects \$0.44/1,000 gallon increase from LTRWC passed in 2010.
5. Estimated Project Debt Service: Based on a \$1,162,000 RUS loan at 4.0% and 38 payments
6. Estimated Project Debt Service Reserve Requirement (10%).
7. Debt Service per Amortization Schedules. 2011 Figures used for Future.
8. Reflects an added \$0.53/1,000 gallon increase from recent LTRWC increase (116,798,000 gallons sold) + 7% rate increase.

Based on the projections and assumptions outlined above, the commitment of a \$498,000 Rural Development Grant and added revenues from the increased water

rates (+7%) are expected to produce an equivalent to the present Net for Depreciation. Without securing the referenced grants, it is estimated that an additional 2.25% increase to the proposed water rates would be required to offset the increase in debt service and maintain the equivalent fund for depreciation.

Table 5 illustrates the project's rate schedule with the requested RUS Grant, and Table 6 shows the necessary rate schedule if the project is undertaken without the requested RUS Grant and funded entirely with RUS loan and other monies.

Table 5
Project Rate Schedule with RUS Grant

Meter Size <u>5/8x3/4 Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 23.45</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>1-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 43.46</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>1 1/2-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 61.44</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>2-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 93.97</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>3-Inch</u> :				
First	<u>2,000</u>	Gallons @	<u>\$ 126.07</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 162.77</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons

Table 6
Project Rate Schedule without RUS Grant

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 23.95</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 44.38</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 62.73</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 95.94</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 3-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 128.72</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 166.19</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

7.0 RECOMMENDED SOLUTION

In order to address the problems and needs of the water system, the South Logan Water Association should do the following:

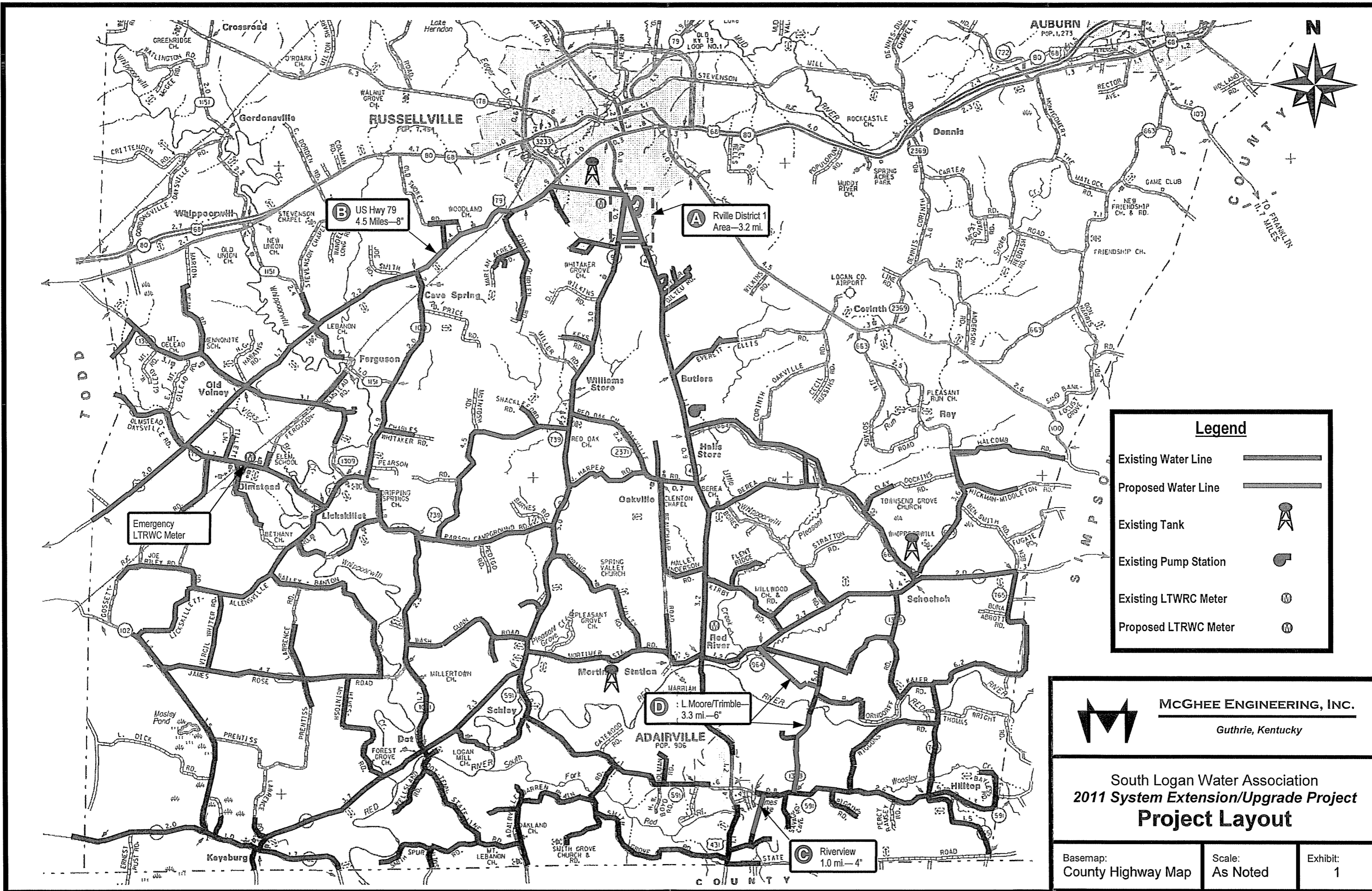
- Construct approximately 12 miles of waterline to replace troublesome areas of pipeline plus improve flow and pressure conditions throughout the system.
- Construct additional master meter vaults with SCADA capability for better monitoring of the system and quicker identification of problems and leaks.
- Continue the application process for \$498,000 in grant and \$1,162,000 in loan from Rural Development.
- Initiate discussion among the District's Board of Directors concerning public awareness and implementation of raising water rates to fund the project if grant funds are unavailable.
- Continue pursuing different means of financing through other available agencies and methods.

FINAL ENGINEERING REPORT - PROJECT BUDGET				
Construction				
No.	Item	Spent-to-Date	Letter of Conditions	Revised Cost
1	Line & Master Meter Contract - Bobby Luttrell & Sons (<i>Base Bid Items</i>)	\$0.00		\$1,400,386.65
	Subtotal - Development	\$0.00	\$1,300,000.00	\$1,400,386.65
Non-Construction				
1	Legal Costs	\$0.00	\$17,000.00	\$8,500.00
2	Administrative Expense	\$0.00	\$5,000.00	\$0.00
3	Land & Right-of-way	\$0.00	\$10,000.00	\$1,500.00
4	Preliminary Engineering & Environmental	\$0.00	\$20,000.00	\$20,000.00
5	Engineering Design (8.37%) - %Fee Based on Base Bid Line Contract	\$0.00	\$77,300.00	\$82,000.00
6	Construction Phase Engineering	\$0.00	\$33,100.00	\$35,200.00
7	Construction Inspection (5.20%) - %Fee Based on Baes Bid Line Contract	\$0.00	\$68,900.00	\$72,800.00
8	Interest during Construction	\$0.00	\$20,000.00	\$20,000.00
	Subtotal - Nonconstruction	\$0.00	\$251,300.00	\$240,000.00
Total Project Cost				
	Contingency (~5%)	\$0.00	\$108,700.00	\$74,613.35
	TOTAL ESTIMATED PROJECT COST	\$0.00	\$1,660,000.00	\$1,715,000.00
Project Funding Sources				
Rural Development Grant			\$460,000.00	\$460,000.00
Rural Development Loan			\$1,200,000.00	\$1,200,000.00
South Logan Water Association Reserves			\$0.00	\$133,475.00
South Logan Water Association Reserves (USDA Project Shortfall)		\$55,000.00		
South Logan Water Association Reserves (SCADA-HTI)		\$72,475.00		
South Logan Water Association Reserves (SCADA-Electric est.)		\$6,000.00		
Total Estimated Project Financing			\$1,660,000.00	\$1,793,475.00

STATE OF KENTUCKY
CHRIS WILCUTT
21523
LICENSED PROFESSIONAL ENGINEER
Chris Wilcutt
5/8/13

FINAL ENGINEERING REPORT - PROJECT BUDGET				
Construction				
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Total Estimated Project Financing			\$1,660,000.00	\$1,793,475.00

STATE OF KENTUCKY
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5/8/13



B US Hwy 79
4.5 Miles—8"







A Rville District 1
Area—3.2 mi.

Emergency
LTRWC Meter

D : L. Moore/Trimble—
3.3 mi—6"

C Riverview
1.0 mi.—4"

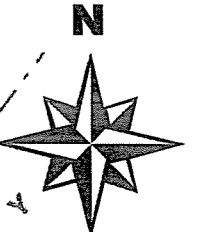
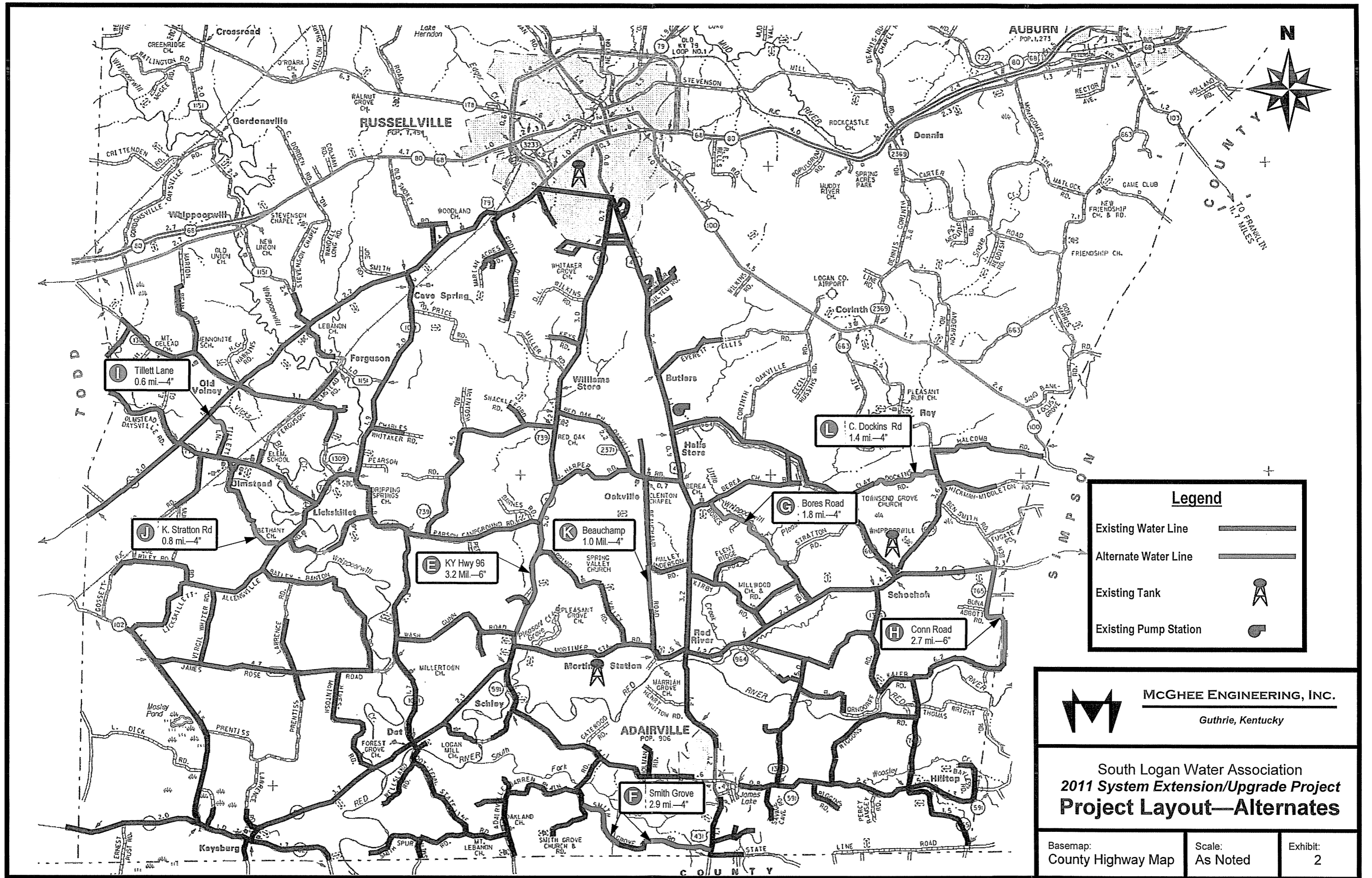
Legend

- Existing Water Line 
- Proposed Water Line 
- Existing Tank 
- Existing Pump Station 
- Existing LTRWC Meter 
- Proposed LTRWC Meter 

MCGHEE ENGINEERING, INC.
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Project Layout

Basemap: County Highway Map	Scale: As Noted	Exhibit: 1
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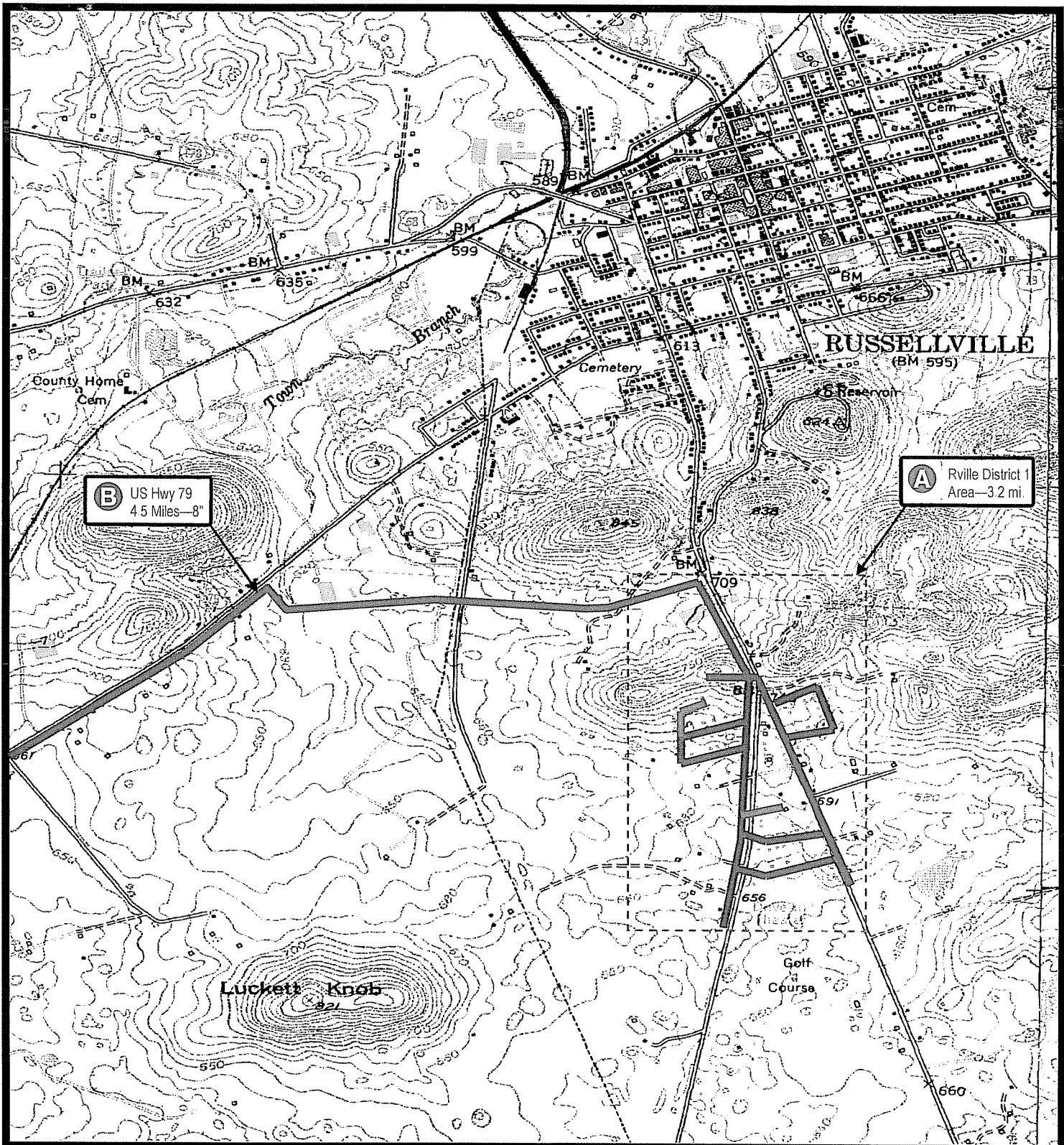
Legend

- Existing Water Line
- Alternate Water Line
- Existing Tank
- Existing Pump Station

MCGHEE ENGINEERING, INC.
Guthrie, Kentucky

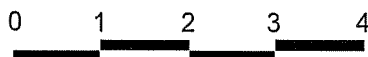
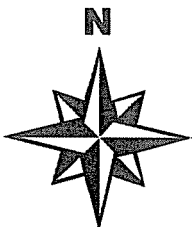
South Logan Water Association
2011 System Extension/Upgrade Project
Project Layout—Alternates

Basemap: County Highway Map	Scale: As Noted	Exhibit: 2
--------------------------------	--------------------	---------------






B US Hwy 79
4.5 Miles—8"

A Rville District 1
Area—3.2 mi



Scale in Miles

LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



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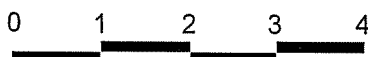
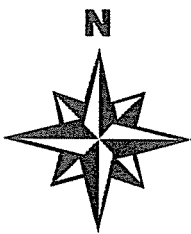
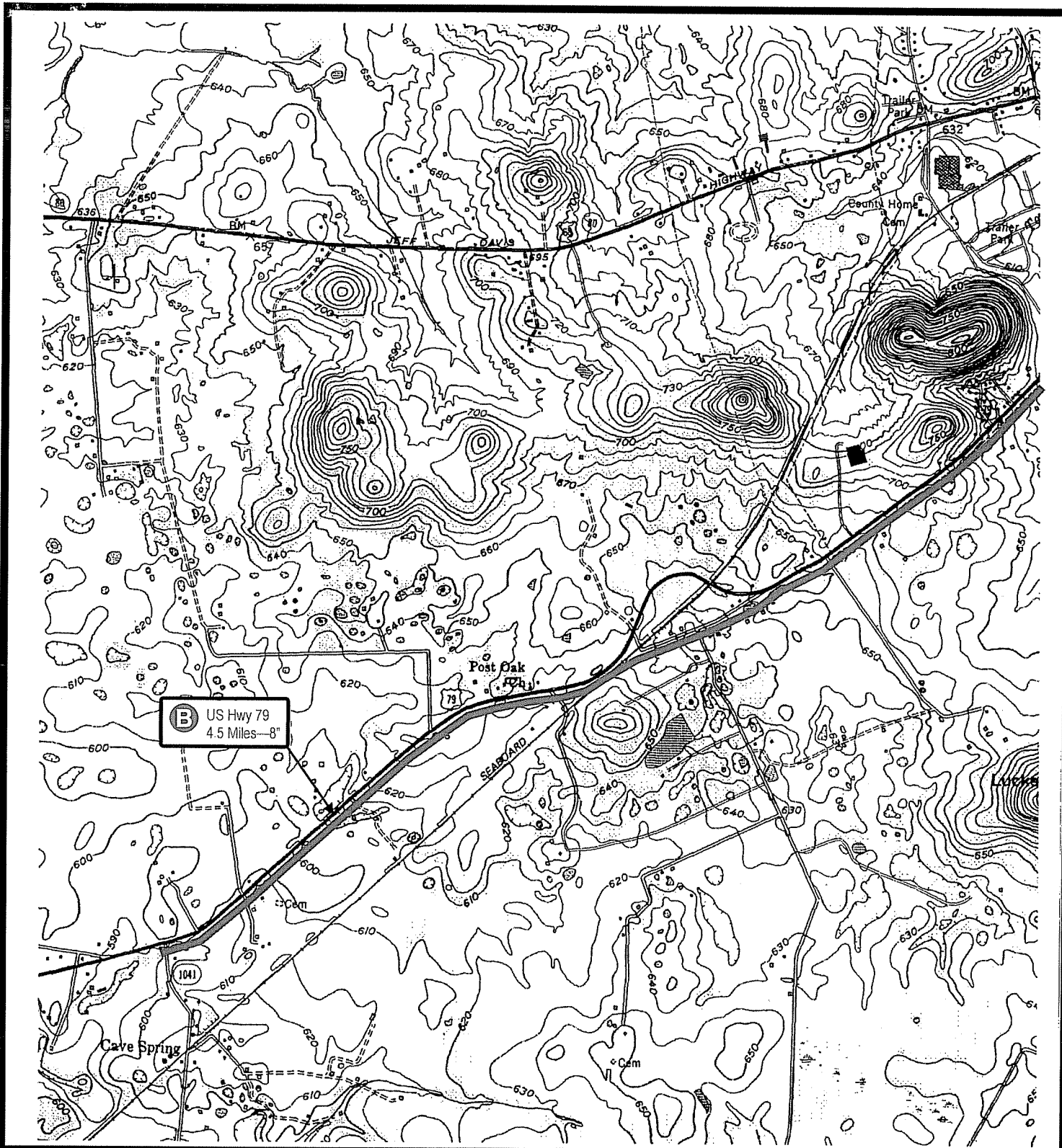
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Russellville District No. 1 Upgrade

Basemap
"Russellville" 7.5' Quad




Scale:
1"=2,000'

Exhibit:
3



Scale in Miles

LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



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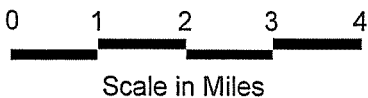
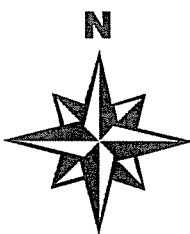
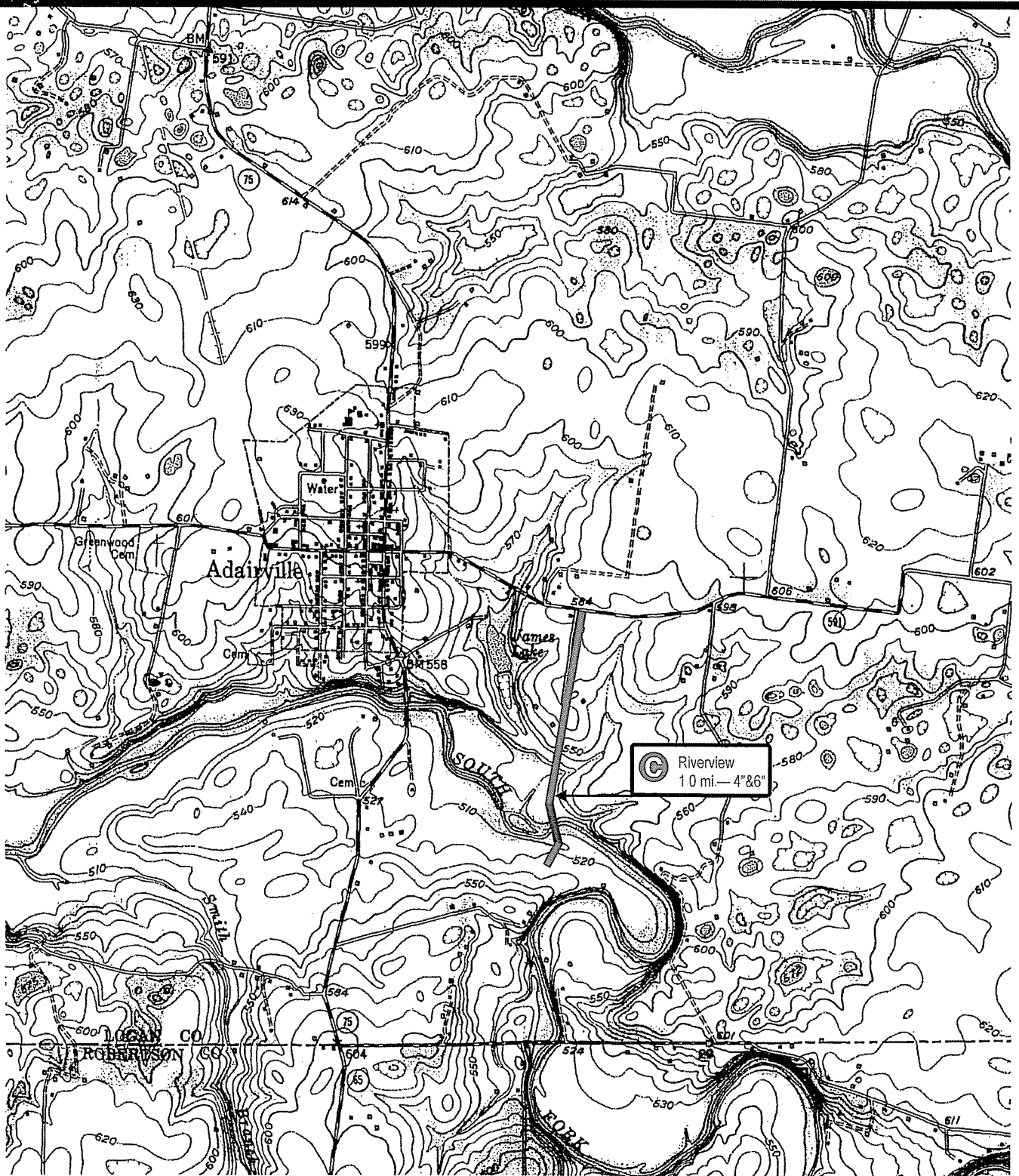
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
US Highway 79 Waterline Upgrade




Basemap:
"Russellville" 7.5' Quad

Scale:
1"=2,000'

Exhibit:
4



LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



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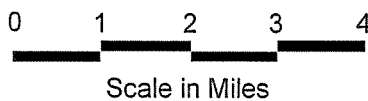
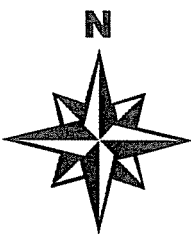
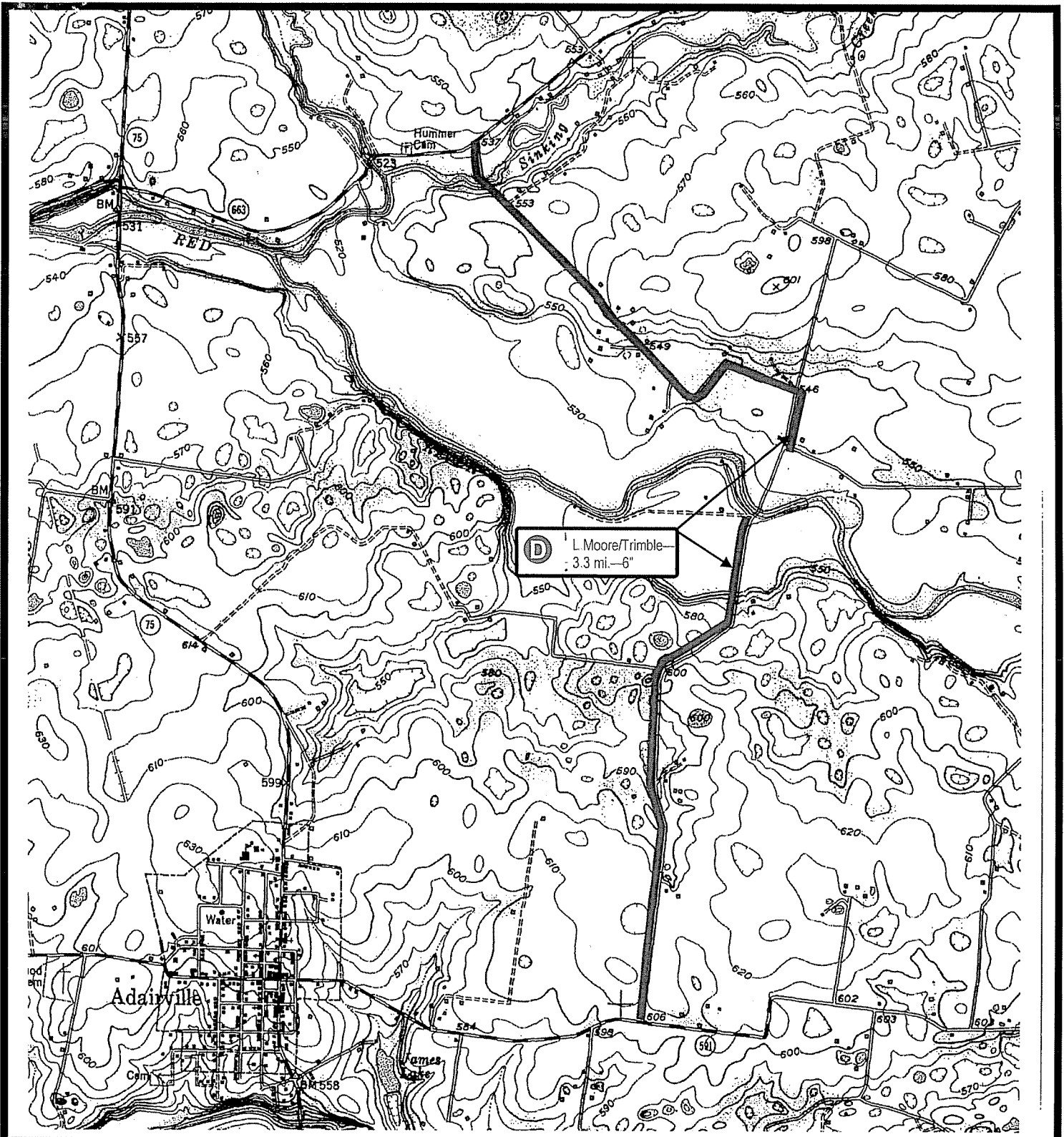
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Riverview/East Adairville Connector




Basemap:
 "Adairville" 7.5' Quad

Scale:
 1"=2,000'

Exhibit:
 5



LEGEND

-  Proposed 8" Waterline
-  Proposed 6" Waterline
-  Proposed 4" Waterline



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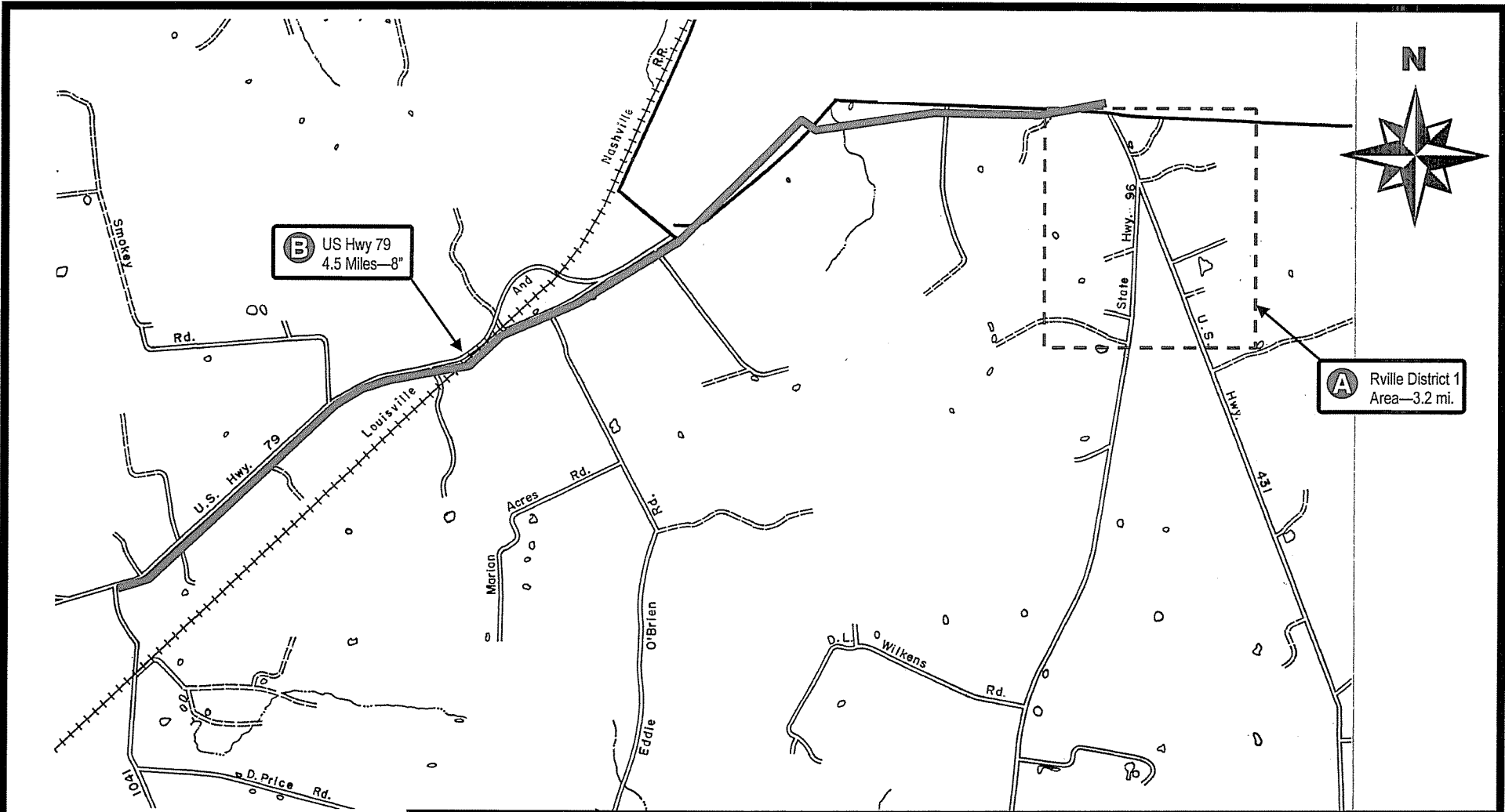
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Trimble & Loy Moore Road Upgrade

Basemap:
 "Adairville" 7.5' Quad

Scale:
 1"=2,000'




Exhibit:
 6



B US Hwy 79
4.5 Miles - 8"

A Russellville District 1
Area - 3.2 mi.

Legend

- Proposed Water Line 
- Proposed Tank 
- Proposed Pump Station/Valve Vault 



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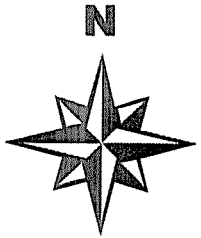
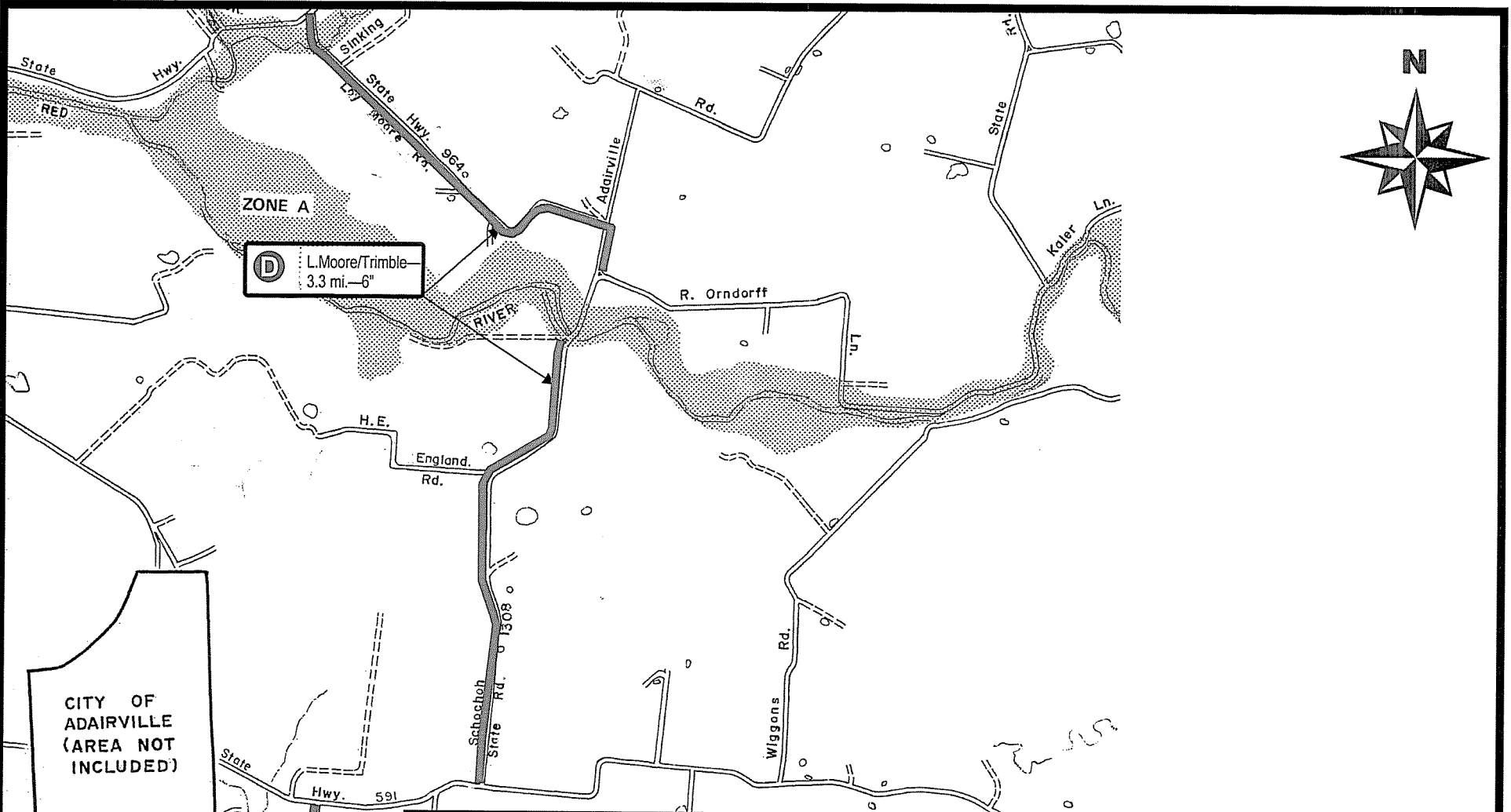
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Flood Zone Vicinity Map
Russellville District No. 1 & US Hwy 79

FEMA Flood Map:
Panel 210341-0005 A

Scale:
None

Exhibit:
7



CITY OF ADAIRVILLE
(AREA NOT INCLUDED)

(C) Riverview
1.0 mi. - 4"

Legend

- Proposed Water Line
- Proposed Tank
- Proposed Pump Station/Valve Vault



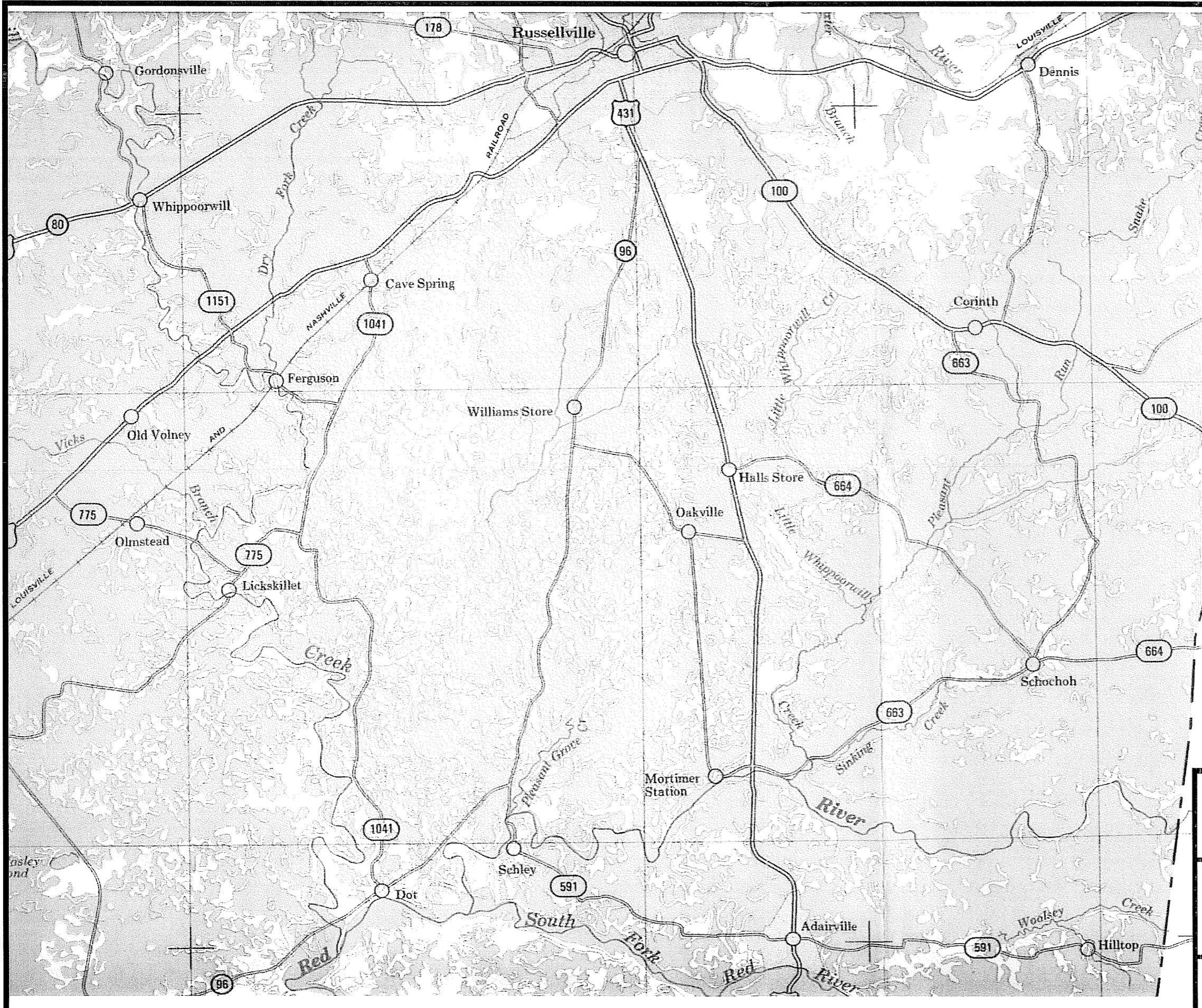
MCGHEE ENGINEERING, INC.
Guthrie, Kentucky








South Logan Water Association
2011 System Extension/Upgrade Project
Flood Zone Vicinity Map
Riverview, Loy Moore & Trimble Roads

FEMA Flood Map:
Panel 210341-0008 A

Scale:
None

Exhibit:
8



- LEGEND**
-  Prime farmland
Total acres - 194,000
 -  Unique farmland,
other than prime
Total acres - none reported
 -  Additional farmland of
statewide importance
Total acres - 53,000
 -  Additional farmland of
local importance
Total acres - none reported
 -  Other land
 -  Water areas
 -  Approximate limits
of urban growth

 **MCGHEE ENGINEERING, INC.**
Guthrie, Kentucky

South Logan Water Association
2011 System Extension/Upgrade Project
Important Farmlands
South Logan Area

Basemap: USDA: Logan County	Scale: As Noted	Exhibit: 9
--------------------------------	--------------------	---------------

Exhibit 3

KY State Clearinghouse Letter



STEVEN L. BESHEAR
GOVERNOR

DEPARTMENT FOR LOCAL GOVERNMENT
OFFICE OF THE GOVERNOR
1024 CAPITAL CENTER DRIVE, SUITE 340
FRANKFORT, KENTUCKY 40601-8204
PHONE (502) 573-2382 FAX (502) 573-2939
TOLL FREE (800) 346-5606
WWW.DLG.KY.GOV

TONY WILDER
COMMISSIONER

December 27, 2010

Mr. Chris Wilcutt
McGhee Engineering
P.O. Box 267
Guthrie, KY 42234

RE: SOUTH LOGAN WATER ASSOCIATION - SYSTEM UPGRADES AND
EXTENSIONS
WX21141037
SAI# KY20101206-1794
CFDA# 10-760

Dear Mr. Wilcutt:

The Kentucky State Clearinghouse, which has been officially designated as the Commonwealth's Single Point of Contact (SPOC) pursuant to Presidential Executive Order 12372, has completed its evaluation of your proposal. The clearinghouse review of this proposal indicates there are no identifiable conflicts with any state or local plan, goal, or objective. Therefore, the State Clearinghouse recommends this project be approved for assistance by the cognizant federal agency.

Although the primary function of the State Single Point of Contact is to coordinate the state and local evaluation of your proposal, the Kentucky State Clearinghouse also utilizes this process to apprise the applicant of statutory and regulatory requirements or other types of information which could prove to be useful in the event the project is approved for assistance. Information of this nature, if any, concerning this particular proposal will be attached to this correspondence.

You should now continue with the application process prescribed by the appropriate funding agency. This process may include a detailed review by state agencies that have authority over specific types of projects.

This letter signifies only that the project has been processed through the State Single Point of Contact. It is neither a commitment of funds from this agency or any other state or federal agency.

The Transportation has made the following advisory comment pertaining to State Application Identifier Number KY201012061794

Moore (D3), Jeff: This office has reviewed the project pertaining to our district. Concerning this project, if work is done for this project on the right of way of state maintained roads including any entrances, then a permit is to be secured from our Kentucky Transportation Cabinet District 3 Permits Engineer (Allen Cox @ 270.746.7898).

The Natural Resources has made the following advisory comment pertaining to State Application Identifier Number KY201012061794

Whippoorwill Creek is an Outstanding State Resource Water. All construction activities associated with Whippoorwill Creek must utilize best management practices designed to collect all of the runoff from the project into Whippoorwill Creek. Best management practices will be utilized at other areas of the project to reduce runoff into adjacent surface waters. ENDORSE WITH CONDITIONS

This review was based upon the information that was provided by the applicant through the Clearinghouse for this project. An endorsement of this project does not satisfy, or imply, the acceptance or issuance of any permits, certifications or approvals that may be required from this agency under Kentucky Revised Statutes or Kentucky Administrative Regulations. Such endorsement means this agency has found no major concerns from the review of the proposed project as presented other than those stated as conditions or comments.

Kentucky Division for Air Quality Regulation 401 KAR 63:010 Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.

The proposed project is subject to Division of Water (DOW) jurisdiction because the following are or appear to be involved: SIX BASIC COMPONENTS including REPLACEMENT OF APPROXIMATELY 17,000 LF OF AGED AND TROUBLESOME WATERLINE. Prior approval must be obtained from the DOW before construction can begin. The applicant must cite the State Application Identifier: KY201012061794 when submitting plans and specifications.

This project is consistent with the LOGAN County Water Management Plan. It is approved for water management planning. It is approved for water withdrawal by the Water Quantity Management Section of DOW. From the application data, DOW ascertains all construction taking place in the floodplain and/or stream crossings will require a 'stream construction permit application' be submitted to the Division of Water for review of the project.

The Kentucky Housing Corporation has made the following advisory comment pertaining to State Application Identifier Number KY201012061794

No comments.

The Fish & Wildlife has made the following advisory comment pertaining to State Application Identifier Number KY201012061794

To minimize impacts to the aquatic environment the Kentucky Dept. of Fish & Wildlife Resources recommends that erosion control measures be developed and implemented prior to construction to reduce siltation into waterways located within the project area. Such erosion control measures may include, but are not limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches. Erosion control measures will need to be installed prior to construction and should be inspected and repaired regularly as needed. Please contact Dan Stoelb @ 502-564-7109 ex. 4453 or Daniel.stoelb@ky.gov if you have further questions or require additional information.

The Heritage Council has made the following advisory comment pertaining to State Application Identifier Number KY201012061794

The applicant must ensure compliance with the Advisory Council on Historic Preservation's Rules and Regulations for the Protection of Historic and Cultural Properties (36CRF, Part 800) pursuant to the National Historic Preservation Act of 1966, the National Environmental Policy Act of 1969, and Executive Order 11593.

Existing lines and infrastructure within or adjacent to the right-of-way do not require an archaeological survey; however, the new lines and infrastructure outside of or not adjacent to the right-of-way must be surveyed by a professional archaeologist to determine if sites eligible for listing in the National Register of Historic Places will be affected by the undertaking. In particular the new cross-country line noted in Section C will need to be surveyed. Where a given project area or portions thereof have been disturbed by prior construction, the applicant may file documentation of that disturbance with the State Historic Preservation Officer and may request an opinion concerning the need of an archaeological survey (note: farming does not constitute disturbance). The State Historic Preservation Officer must review and approve the survey report.

If you have any questions, please contact Philip Mink at 502-564-7005, extension 140.

PRELIMINARY ENGINEERING REPORT

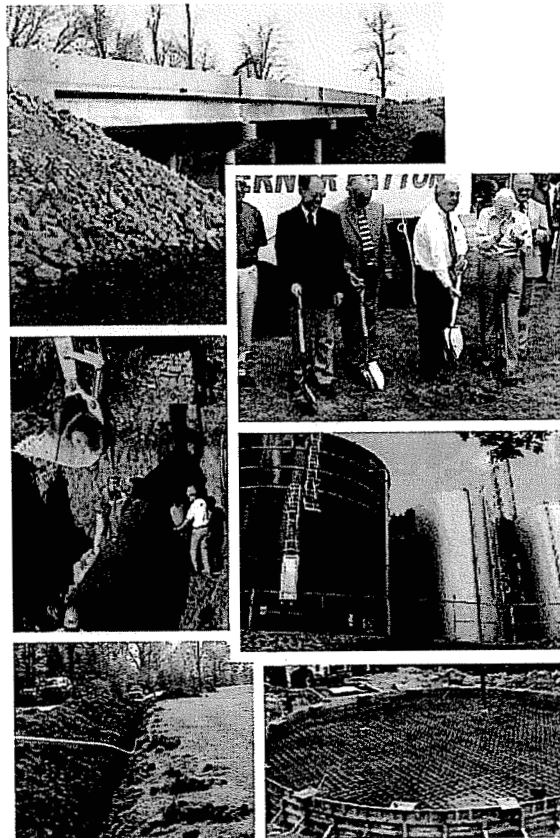
SOUTH LOGAN WATER ASSOCIATION 2011 SYSTEM UPGRADE PROJECT

December 2010

RECEIVED

MAY 23 2013

PUBLIC SERVICE
COMMISSION



MCGHEE ENGINEERING, INC.

202 South Ewing Street
Guthrie, Kentucky 42234

(270) 483-9985
www.mcgheeengineering.com

**PRELIMINARY ENGINEERING REPORT
SOUTH LOGAN WATER ASSOCIATION
2011 SYSTEM UPGRADE PROJECT**

Logan County, Kentucky

prepared for the:

South Logan Water Association
P.O. Box 277
Adairville, KY 42202

prepared by:

MCGHEE ENGINEERING, INC.
EIN# 61-1338167
202 Ewing Street
P.O. Box 267
Guthrie, KY 42234
(270) 483-9985



December 2010

Preliminary Engineering Report
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Preliminary Engineering Report
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1.0 INTRODUCTION

The South Logan Water Association (SLWA) was chartered in 1971 to supply potable water to residents of southern Logan County, Kentucky. The Association consists of six board members, and it is regulated by the Kentucky Public Service Commission. South Logan has authority to plan, design, finance, construct, operate, replace and maintain the distribution facilities within its service area.

The South Logan water system is comprised of over 260 miles of water distribution lines and three water storage tanks with a total capacity of 736,000 gallons, all of which serves approximately 1,649 customers in southern Logan County. As of the end of March 2003, the South Logan Water Association began to purchase all of their treated water from the recently completed water system of the Logan Todd Regional Water Commission (LTRWC). The Commission's water treatment facility is rated at 10 million gallons per day, and their distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. The 2009 average daily LTRWC usage within the South Logan system was approximately 390,000 gallons per day. South Logan has two meter stations with the Commission, one located in Russellville and the other near the Mortimer community.

The Association is a relatively large water system covering nearly a third of the Logan County area. Almost all roads within the Association boundary have water service, with only short extensions needed from time to time to accommodate new development.

The main problems that have plagued the Association were its long-term supply of treated water, low pressure in certain areas of the system, extending water service to unserved areas, and installing lines for improved hydraulic performance. Going online with the Logan Todd Regional system and recent USDA extension projects have resolved the majority of these problems. However, there are many original areas that are now strained due to the dramatic growth of the Association. To initiate a solution to alleviating these "growing pains", the South Logan Water Association has requested funding assistance to undertake their 2011 System Upgrade Project.

The proposed project includes construction of a new emergency supply meter with LTRWC in the Olmstead community, construction of four new master meter stations to assist with water loss and leak detection, addition of additional telemetry equipment for monitoring of master meter locations, and water line Extensions & Upgrades along 12 miles of the following roads. The total cost of the proposed project is estimated to be \$1,660,000.

2.0 PROJECT PLANNING AREA

2.1 Location

The waterline construction of the South Logan Water Association's project will be spread out along various rural and urban roadways. Over 12 miles of new

waterline construction or upgrades are proposed for 4 different roadways or urban areas. The affected areas are listed in Table 1.

Table 1
Waterline Information

Exhibit	Map I.D.	PRIMARY ROUTES ROAD NAME	Length (miles)	Line Size (inches)
1	A	Old Russellville District No. 1	3.2	4, 6 & 8
1	B	US Highway 79	4.5	8
1	C	Riverview/E. Adairville Connector	1.1	4 & 6
1	D	Loy Moore & Trimble Road Area	3.3	6
		SUBTOTAL	12.1	
		ALTERNATE ROUTES		
2	E	KY Highway 96	3.2	6
2	F	Smith Grove Road	2.9	4
2	G	Bores Road	1.8	4
2	H	Conn Road	2.7	6
2	I	Tillett Lane	0.6	4
2	J	Kenny Stratton Road	0.8	4
2	K	Beauchamp Road	1.0	4
2	L	Clay Dockins Road	1.4	4
		SUBTOTAL	14.4	
		TOTAL	26.5	

The planned emergency Logan Todd supply meter is proposed to be located at the intersection of KY Highway 775 and the RJ Corman Railroad, which is centrally located to the Olmstead community and elementary school. Four master meter vaults with SCADA will be located at various location in the system, with final site selection coordinated by the Association operator.

The proposed project is illustrated on a county highway map and labeled as Exhibit 1.

2.2 Land Use and Environmental Resources Present

As stated earlier, the line portion of the project is spread out along over 12 miles of roadway, mostly within rural areas of southern Logan County. The line work is proposed to be constructed within utility easements previously acquired or to be acquired by the South Logan Water Association. The project will affect five main resources during construction: flood plains, residential, agriculture, grazing and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. No long-term impact is expected to any environmental resource.

An archeological investigation is not anticipated for the affected line routes due to the fact these areas have been previously disturbed. However, if such an investigation is warranted, Dr. Jack Schock of Arrow Enterprises will conduct any

necessary reviews with a report submitted to the State Historical Preservation Officer. Regardless, it is expected that no historical resource will be affected by the proposed project.

The following exhibits indicate the environmental resources present within the project planning area:

- A topographic map of each proposed water line (excluding alternates), indicating the areas to be affected and the surrounding area, are attached as Exhibits 3 thru 6. The base maps are USGS 7.5' quadrangles images.
- Waterlines that are near or traverse through defined FEMA floodplain zones are illustrated in Exhibits 7 and 8.
- Soil survey data from the Soil Conservation Service is shown as Exhibit 9.

2.3 Growth Areas and Population Trends

The population history of Logan County is an important element in determining the growth patterns over the last 50 years. Analysis of the population history will assist in forming a reliable estimate of the future water needs of the project area.

According to historical records, Logan County's population was 20,896 in 1960, which represents its lowest census year during the last 60 years. Steady growth has been the trend in Logan County since the 1960's. Table 2 provides the population history and projections of the county based on data obtained from the U.S. Bureau of the Census.

Table 2
Population History and Projections

YEAR	Historical							Projections					
	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	
L Adairville	784	800	848	973	1,105	906	920	930	943	956	970	976	988
O Auburn	955	994	1,013	1,160	1,467	1,273	1,444	1,489	1,535	1,578	1,622	1,612	1,651
G Lewisburg	524	496	512	651	972	772	903	918	931	945	959	965	976
A Russellville	3,986	4,529	5,861	6,456	7,520	7,454	7,149	7,271	7,418	7,565	7,711	7,726	7,850
N Rural Areas	17,096	15,516	12,662	12,553	13,074	14,011	16,157	16,230	16,440	16,553	16,642	16,906	16,943
N Logan County	23,345	22,335	20,896	21,793	24,138	24,416	26,573	26,838	27,267	27,597	27,904	28,185	28,408
% Change		-4.3%	-6.4%	4.3%	10.8%	1.2%	8.8%	1.0%	1.6%	1.2%	1.1%	1.0%	0.8%
Notes to Table 1:	1. Shaded areas have been calculated based on census and projection data.												
Sources to Table 1:	1. Historical & Projections provided by the KY State Data Center and Census Bureau University of Louisville, State Data Center (http://cbpa.louisville.edu/ksdc/)												

Analyzing Table 2 from 1940 to 2000 shows that the cities in Logan County have grown overall with some fluctuations. Most of the cities' gains came at the expense of the rural populations in Logan County. However, based on census data,

the rural population should continue to grow and approach the 1940 population figures. Therefore, the population of the South Logan Water Association should experience similar growth based upon these projections.

Several factors influence the growth of a community, some of which include accessibility, technology, education, water infrastructure, sewer facilities, and jobs. Over the past ten years, the community has experienced the benefit of a new four-lane highway, which has increased the areas access to larger Kentucky cities such as Hopkinsville and Bowling Green plus improved access to Interstates 24 and 65. High speed internet and wireless technology has gradually entered the communities, creating greater and easier contact to the rest of the world. The local school system is strong and provides a quality education. Recent census figures reveal that over two thirds of the county's population are high school graduates, which is near the state average. Over the last ten years, the Association and other communities within the county have worked together to secure a reliable source of potable water for the next thirty years as the county goes online with the recently completed Logan Todd Regional Water Commission.

Further analysis of these projections indicates Logan County's population is projected to grow approximately 7% or add 1,835 persons by 2030. It should be noted that population would be impacted by the availability or unavailability of water supply. An ample supply of water will promote growth while the lack thereof will limit growth. These factors must be considered when reviewing this report since many assumptions are dependent on these projections.

3.0 EXISTING FACILITIES

3.1 History and Assets

The South Logan Water Association (SLWA) was formed by Logan County Court order in the early 1970's to supply potable water to residents within the southern portions of Logan County, Kentucky, between the cities of Adairville and Russellville. The water system is comprised of approximately 260 miles of water line and a total water storage capacity of 736,000 gallons. The existing distribution system consists of 8", 6", 4", 3" and 2" PVC lines. The general service area is depicted in Exhibit 1, which illustrates the general distribution layout. The existing transmission and distribution lines generally radiate from Adairville, its former water supplier, and from the Association's water storage tanks south of Russellville. The system is well laid out with many loops. However, there are some dead end and low-flow lines within the system that require frequent flushing.

SLWA has three water storage structures to serve the water system. The primary storage structure is a ground level tank, located just south of Russellville, and the tank has a total capacity of 436,000 gallons and an overflow elevation of 842 feet. The other tanks are elevated storage tanks, located in the Mortimer and Schochoh communities. The Mortimer tank is a leg-style water storage tank, and it has a capacity of 100,000 gallons and an overflow elevation of 746 feet. The Schochoh tank is also a leg-style water storage tank, and it has a capacity of 200,000 gallons and an overflow elevation of 800 feet.

The Logan Todd Regional system initially supplies water to the SLWA system in two locations. The larger feed point is located at the base of the Association's ground level tanks in Russellville, and the other is located north of Adairville near the Red River along US Highway 431 to serve the Mortimer tank. A small pump station is utilized within the system to serve and fill the Schochoh tank. Flow through each of these metering points and pump station is controlled by the LTRWC SCADA system, and pressure is regulated as flow enters to match the existing tank overflows. System pressures are normally maintained by the level in the respective storage tanks.

3.2 Regulatory Compliance

According to the recent Public Service Commission inspections plus Division of Water's remarks within the Clearinghouse Comments, the South Logan water system is currently in compliance with appropriate regulatory agencies. No other remarks were given to suggest that the water system was in or near a noncompliance status. The comments of the Division of Water and other agencies are included in Appendix A.

3.3 Existing Financial Charges and Status

3.3.1 Existing Rate Schedule (Effective March 1, 2010)

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 21.92</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 40.62</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 57.42</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 87.82</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 3-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 117.82</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 152.12</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 7.76</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 7.50</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.24</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 6.99</u>	per 1,000 Gallons

3.3.2 O&M Costs (FYE 12/31/09)

Item No.	Expense Item	Amount
1	Purchased Water	\$ 462,324.00
2	Salaries and wages	\$ 140,975.00
3	Directors Fees	\$ 2,300.00
4	Transmission & Distribution	\$ 36,581.00
5	Repairs & maintenance	\$ 16,976.00
6	Contractual Services	\$ 6,348.00
7	Utilities & Telephone	\$ 13,913.00
8	Professional Fees	\$ 6,267.00
9	Insurance	\$ 26,087.00
10	Taxes & licenses	\$ 420.00
11	Office Supplies	\$ 24,329.00
12	Water Tests	\$ 3,726.00
13	Bad Debt	\$ 3,169.00
14	Miscellaneous Expense	\$ 8,651.00
Total Utility Expense		\$ 752,066.00

3.3.3 Long Term Debts (as of 12/31/09)

Date of Issue	Bond/Note Holder	Principal Balance	Payment Date	Bond Type	Amount on Deposit in Reserve *
1993 Issue	FmHA	\$ 338,987.00	2033	Water	\$ 83,563.00
1998 Issue	FmHA	\$ 513,024.00	2038	Water	
2005 Issue	USDA-RD	\$ 756,616.00	2045	Water	

3.3.4 Short Term Debts (as of 12/31/09)

<u>Lender or Lessor</u>	<u>Date of Issue (Mo. & Year)</u>	<u>Principal Balance</u>	<u>Purpose</u>	<u>Payment Date</u>	<u>Principal & Interest Payment (P&I)</u>	<u>Date to Be Paid In Full</u>
Not Applicable						

4.0 NEED FOR PROJECT

4.1 Health and Safety

Portions of the South Logan Water Association are currently strained due to growth and recent expansion projects to serve unserved areas. The strain limits the Association's ability to deliver drinking water to all its customers at proper pressure and quantity as set forth by the Kentucky Division of Water (KDOW). The Ten State Standards require a minimum working pressure of 35 psi. However, during peak times, some isolated fringe areas, which also contain large number of users, experience pressures dipping to 30 psi.

The Association constantly battles line breaks of older pipelines as well as water loss within the system. Due to the vast area served, South Logan has methodically broken its system into mini zones to better monitor and locate leaks as they arise. Unfortunately, the attempts to solve the water loss problems also creates pressure problems as more flow is forced into fewer pipelines rather than multiple loops. Thus, the Association constantly has to balance its effort to minimize water loss with its requirement to deliver proper pressure.

4.2 System O&M

There are two primary reasons for the Association's proposed project. The first is to reduce interruptions of service from older line breaks and improve its ability to supply stable pressures above the Ten States Standard threshold. The second reason is to improve and assist South Logan's ability to monitor water flow and locate leaks to minimize water loss. The water system has experienced the majority of its growth in some of the original constructed areas of the water system. During pipeline breaks on the primary distribution lines, the secondary feeder lines are incapable of providing adequate flows resulting in unacceptable pressures. Also, these problems have shown not only to be a nuisance to the maintenance crews in non-ideal conditions but also very costly to the Association's finances due to material needs, overtime pay, and equipment costs.

The project will also include the addition of master meter stations with additional telemetry equipment. These components will improve South Logan's ability to monitor water flow and make timely locations of water leaks. With the added master meters and the recent conversion to radio-read meters, management of purchased water costs should be greatly improved with the new equipment's potential to assist and locate waterloss.

4.3 Growth

As mentioned earlier, the population of Logan County and the rural areas should grow by an average of 5 to 7% over the next 30 years based upon reliable census records and expected growth. The proposed project is necessary to provide continued and reliable water service to all its nearly 1,650 customers. The new infrastructure will insure the Association's ability to properly serve the existing customer base plus future growth in the area.

5.0 ALTERNATIVES CONSIDERED

A resolution to the problems faced by the South Logan Water Association is a relatively simple project with two alternatives.

5.1 Alternative 1

The first obvious alternative is to do nothing or a smaller variation of the project. However, the Association would continue their current endurance of operation, maintenance and water flow problems. Therefore, the 'do nothing' alternative is not a viable option as it would only prolong the inevitable.

5.2 Alternative 2

The second alternative is one that offers several advantages and resolves the three critical deficiencies in the water system. The alternative eliminates dead end lines that suffer with water quality problems and require frequent flushing; replaces system-plaguing pipeline sections known for leaks; and provides additional system monitoring equipment for quick identification of water leaks and other problems. The project adheres with the Commonwealth's drive to provide a reliable and potable water source to all families by the year 2020. Also, the project provides a solution to South Logan's inability to provide at least 30-psi pressure during all demand times.

5.2.1 Description

The project involves construction of 12.1 miles of water line in four areas of the system in southern Logan County. All of these lines are being built to improve the hydraulic performance of the existing distribution system. Some of the low-pressure areas will be corrected by the up-sizing and looping of interconnecting lines. These loops will also improve the water quality by cutting down on the stagnant water in dead-end lines.

In a further attempt to improve service to customers, South Logan is also proposing to install a number of additional master metering stations and upgrades to their existing telemetry system to allow the operators to monitor the performance of the system in greater detail, and to identify problems earlier. The alternative is illustrated in Exhibit 1.

5.2.2 *Environmental Impacts and Land Requirements*

The alternative has little to no impact upon the environment and land resources because the proposed construction will be done along existing easements and highways. The line extensions and upgrades are proposed for construction in existing pipeline easements where possible or in county/state right-of-way and easements as necessary. As mentioned earlier, the project will affect five main resources during construction: flood plains, residential, agriculture, grazing and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. No other effect to the resources is expected after construction of the facilities is complete.

5.2.3 *Construction Problems*

There are no severe construction problems foreseen for the project. The South Logan area is known for its ideal soil conditions with only sporadic instances of rock outcrops. The entire pipeline routes are very accessible, and there is little to no evidence of a high water table. However, mobilization will be significant during the project since all of the proposed water lines are spread out throughout the vast service area. Also, several of the waterline extensions will require stream crossings, but none of which should be unmanageable or costly.

5.2.4 *Cost Estimates*

The South Logan Water Association's 2011 System Upgrade Project is estimated to have a total cost of \$1,660,000. The project cost consists of construction, non-construction and contingency costs, which are \$1,300,000, \$231,300 and \$128,700 respectively. The project is anticipated to be funded in part by a \$498,000 grant and \$1,162,000 loan from Rural Development

6.0 PROPOSED PROJECT

6.1 Project Design

6.1.1 *Water Supply*

The Logan Todd Regional Water Commission's plant will serve the proposed project. Based upon figures from LTRWC, the fairly new plant is producing approximately 4,000,000 gallons per day, which is approximately 40% of the design capacity. Therefore, sufficient capacity exists to serve the South Logan project since no new customers are expected.

6.1.2 *Storage*

The proposed project will not include any additions to or modifications of the Association's water storage facilities. Adequate

storage volume exists at their Russellville, Mortimer and Schochoh sites to serve the project.

6.1.3 *Distribution Layout*

The waterline construction of the South Logan Water Association's system extension project will be spread out along nearly 12 miles of rural roadways. The affected roadways are not clustered together as typical in most system upgrades. The upgrades consist of approximately 17,000 LF of new 8-inch 6-inch and 4-inch piping sections in the Old Russellville District No. 1 area, originally built in the 1960's. Also, the project includes 23,500 LF of 8-inch upgrade along US Highway 79 South, 17,300 LF of 6-inch upgrade between KY Highway 663 and KY Highway 591 along Loy Moore Road and Trimble Road, and 5,700 LF of 6-inch piping to provide a connector from East Adairville to South Adairville. Also, in an attempt to improve service to customers, South Logan is proposing to install additional master metering stations with telemetry capability to allow operators to better monitor the performance of the entire system in greater detail, and to identify problems earlier.

The proposed line extension and proposed booster pump station is illustrated in Exhibit 1.

6.1.4 *Regulatory Compliance*

The proposed project has been submitted to the Kentucky State Clearinghouse for their comments. The clearinghouse comments are included in Appendix A. The clearinghouse review of the proposal indicates there are no identifiable conflicts with any state or local plan, goal, or objective. Furthermore, no notices have been received and none are expected to suggest that the water system is in or near a noncompliance status.

6.1.5 *Hydraulic Calculations*

For preliminary planning purposes, the computer hydraulic simulator, KYPIPE 2000, has been used to construct a system wide model to determine the hydraulic characteristics of the South Logan water system as it currently exists. The model includes all of the existing lines from the water supply connection with Logan Todd, plus the proposed line upgrades and other features of the project. The modeling indicates all four of the waterlines may be constructed as proposed.

6.2 Cost Estimate

The proposed itemized cost estimate of the South Logan Water Association's 2011 System Extension Project is shown in Table 3.

Table 3
Project Cost Estimate

Construction		
No.	Item	Total
1	Old Russellville District No. 1 Waterline Upgrades	\$ 490,300
2	US Highway 79 Waterline Upgrade	\$ 399,800
3	Riverview & East Adairville Waterline Connector	\$ 64,700
4	Loy Moore Road & Trimble Road Waterline Upgrades	\$ 263,550
5	Interconnection Meter Zone Pits & SCADA Upgrades	\$ 81,650
	Subtotal - Construction	\$1,300,000
Non-Construction		
1	Administrative Expenses	\$ 5,000
2	Legal Costs	\$ 17,000
3	Land & R.O.W.	\$ 10,000
4	Preliminary Engineering & Environmental Services	\$ 20,000
5	Design Engineering	\$ 77,300
6	Construction Phase Engineering Services	\$ 33,100
7	Construction Inspection	\$ 68,900
	Subtotal - Nonconstruction	\$ 231,300
	Contingency	\$ 128,700
	TOTAL ESTIMATED PROJECT COST	\$ 1,660,000

6.3 Annual Operating Budget

The proposed annual operating budget for the South Logan Water Association's 2011 System Extension Project is shown in Table 4.

Table 4
Proposed Operating Budget

Operating Income	Existing ⁽¹⁾	Extension Only	Future
Water Sales (2009 Rates)	\$1,020,506.00	\$0.00 ⁽²⁾	\$0.00
Water Sales (Approx w/ 2010 Rates)	\$0.00	\$0.00 ⁽²⁾	\$1,158,007.50 ⁽⁵⁾
Other Charges	\$26,223.00	\$0.00 ⁽²⁾	\$26,223.00
Total Operating Income	\$1,046,729.00	\$0.00	\$1,184,230.50
Operating and Maintenance Expense			
Purchased Water	\$462,324.00	\$0.00 ⁽²⁾	\$523,781.00 ⁽⁴⁾
Management	\$143,275.00	\$4,298.00 ⁽³⁾	\$147,573.00
Transmission & O&M Expense	\$57,283.00	\$1,718.00 ⁽³⁾	\$59,001.00
Insurance	\$26,087.00	\$783.00 ⁽³⁾	\$26,870.00
Utilities	\$13,913.00	\$417.00 ⁽³⁾	\$14,330.00
Professional & Contracted Fees	\$12,615.00	\$378.00 ⁽³⁾	\$12,993.00
Office Supplies & Collection Expense	\$27,918.00	\$838.00 ⁽³⁾	\$28,756.00
Miscellaneous Expense	\$8,651.00	\$260.00 ⁽³⁾	\$8,911.00
Total Operating Expenses	\$752,066.00	\$8,692.00	\$822,215.00
Net Operating Income	\$294,663.00	(\$8,692.00)	\$362,015.50
Non-Operating Income (Expense)			
Interest Income	\$2,720.00	\$0.00	\$2,720.00
Other	(\$1,685.00)	\$0.00	(\$1,685.00)
RUS Interest (Bonds pre-2010)	(\$73,621.00) ⁽⁷⁾	\$0.00	(\$72,393.00) ⁽⁷⁾
RUS Principal (Bonds pre-2010)	(\$25,286.00) ⁽⁷⁾	\$0.00	(\$26,897.00) ⁽⁷⁾
RUS Interest (2011 Project)	\$0.00	(\$46,480.00) ⁽⁵⁾	(\$46,480.00) ⁽⁵⁾
RUS Principal (2011 Project)	\$0.00	(\$13,520.00) ⁽⁵⁾	(\$13,520.00) ⁽⁵⁾
Non-RUS Interest	\$0.00	\$0.00	\$0.00
Non-RUS Principal	\$0.00	\$0.00	\$0.00
Total Non-Operating Income	(\$97,872.00)	(\$60,000.00)	(\$158,255.00)
Net for Coverage & Depreciation	\$196,791.00	(\$68,692.00)	\$203,760.50
10% Debt Service Coverage	(\$9,891.00) ⁽⁶⁾	(\$6,000.00) ⁽⁶⁾	(\$15,929.00)
Net for Depreciation	\$186,900.00	(\$74,692.00)	\$187,831.50

Notes:

1. Based on the December 31, 2009 Audit & PSC Report
2. Based on 0 new customers.
3. Based on 3% nominal increase due to anticipated annual cost increases.
4. Reflects \$0.44/1,000 gallon increase from LTRWC passed in 2010.
5. Estimated Project Debt Service: Based on a \$1,162,000 RUS loan at 4.0% and 38 payments
6. Estimated Project Debt Service Reserve Requirement (10%).
7. Debt Service per Amortization Schedules. 2011 Figures used for Future.
8. Reflects an added \$0.53/1,000 gallon increase from recent LTRWC increase (116,798,000 gallons sold) + 7% rate increase.

Based on the projections and assumptions outlined above, the commitment of a \$498,000 Rural Development Grant and added revenues from the increased water

rates (+7%) are expected to produce an equivalent to the present Net for Depreciation. Without securing the referenced grants, it is estimated that an additional 2.25% increase to the proposed water rates would be required to offset the increase in debt service and maintain the equivalent fund for depreciation.

Table 5 illustrates the project's rate schedule with the requested RUS Grant, and Table 6 shows the necessary rate schedule if the project is undertaken without the requested RUS Grant and funded entirely with RUS loan and other monies.

Table 5
Project Rate Schedule with RUS Grant

Meter Size <u>5/8x3/4 Inch</u> :			
First	<u>2,000</u>	Gallons @ <u>\$ 23.45</u>	Minimum
Next	<u>8,000</u>	Gallons @ <u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @ <u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @ <u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @ <u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>1-Inch</u> :			
First	<u>2,000</u>	Gallons @ <u>\$ 43.46</u>	Minimum
Next	<u>8,000</u>	Gallons @ <u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @ <u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @ <u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @ <u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>1 1/2-Inch</u> :			
First	<u>2,000</u>	Gallons @ <u>\$ 61.44</u>	Minimum
Next	<u>8,000</u>	Gallons @ <u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @ <u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @ <u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @ <u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>2-Inch</u> :			
First	<u>2,000</u>	Gallons @ <u>\$ 93.97</u>	Minimum
Next	<u>8,000</u>	Gallons @ <u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @ <u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @ <u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @ <u>\$ 7.48</u>	per 1,000 Gallons
Meter Size <u>3-Inch</u> :			
First	<u>2,000</u>	Gallons @ <u>\$ 126.07</u>	Minimum
Next	<u>8,000</u>	Gallons @ <u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @ <u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @ <u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @ <u>\$ 7.48</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 162.77</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.30</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.03</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.75</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.48</u>	per 1,000 Gallons

Table 6
Project Rate Schedule without RUS Grant

Meter Size 5/8x3/4 Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 23.95</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 1-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 44.38</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 1 1/2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 62.73</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 2-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 95.94</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 3-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 128.72</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

Meter Size 4-Inch :

First	<u>2,000</u>	Gallons @	<u>\$ 166.19</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 8.48</u>	per 1,000 Gallons
Next	<u>40,000</u>	Gallons @	<u>\$ 8.19</u>	per 1,000 Gallons
Next	<u>50,000</u>	Gallons @	<u>\$ 7.91</u>	per 1,000 Gallons
All Over	<u>100,000</u>	Gallons @	<u>\$ 7.64</u>	per 1,000 Gallons

7.0 RECOMMENDED SOLUTION

In order to address the problems and needs of the water system, the South Logan Water Association should do the following:

- Construct approximately 12 miles of waterline to replace troublesome areas of pipeline plus improve flow and pressure conditions throughout the system.
- Construct additional master meter vaults with SCADA capability for better monitoring of the system and quicker identification of problems and leaks.
- Continue the application process for \$498,000 in grant and \$1,162,000 in loan from Rural Development.
- Initiate discussion among the District's Board of Directors concerning public awareness and implementation of raising water rates to fund the project if grant funds are unavailable.
- Continue pursuing different means of financing through other available agencies and methods.