

# Rubin & Hays

ATTORNEYS AT LAW

Kentucky Home Trust Building, 450 South Third Street, Louisville, Kentucky 40202-1410  
Telephone (502) 569-7525 Telefax (502) 569-7555 www.rubinhays.com

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

July 18, 2008

RECEIVED

JUL 21 2008

PUBLIC SERVICE  
COMMISSION

Ms. Stephanie Stumbo  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, Kentucky 40602

CASE NO: 2008-00304

Re: Todd County Water District - USDA, Rural Development Project

Dear Ms. Stumbo:

Enclosed please find the original and ten (10) copies of the Application of the Todd County Water District for a Certificate of Public Convenience and Necessity to construct, finance and increase rates pursuant to KRS 278.023.

Also enclosed are eleven (11) copies of the exhibits required pursuant to 807 KAR 5.069, with the exception of 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:jkm  
Enclosures  
cc: Distribution List

**DISTRIBUTION LIST**

Account No. 404.0000

**Re: Todd County Water District Waterworks Revenue Bonds, Series 2008, in the principal amount of \$1,800,000**

Mr. Kenneth Slone  
State Director  
USDA, Rural Development  
771 Corporate Drive, Suite 200  
Lexington, Kentucky 40503-5477

Telephone: (859) 224-7336

Mr. Jerry M. Cloyd  
USDA, Rural Development  
320 B Traylor Street  
Princeton, Kentucky 42445

Telephone: (270) 365-6530  
Fax: (270) 365-7842

Ms. Kathy Conyea  
Todd County Water District  
P.O. Box 520  
Elkton, Kentucky 42220

Telephone: (270) 265-2229  
Fax: (270) 265-2035

Mr. Mike McGhee  
McGhee Engineering, Inc.  
202 Ewing Street  
P.O. Box 267  
Guthrie, Kentucky 42234-0267

Telephone: (270) 483-9985  
Fax: (270) 483-9986

Harold M. Johns, Esq.  
12 Public Square  
P.O. Box 746  
Elkton, Kentucky 42220-0746

Telephone: (270) 265-2912  
Fax: (270) 265-2054

W. Randall Jones, Esq.  
Rubin & Hays  
Kentucky Home Trust Building  
450 South Third Street  
Louisville, Kentucky 40202

Telephone: (502) 569-7534  
Fax: (502) 569-7555

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED  
JUL 21 2008  
PUBLIC SERVICE  
COMMISSION

In the Matter of:

THE APPLICATION OF TODD COUNTY )  
WATER DISTRICT FOR A CERTIFICATE )  
OF PUBLIC CONVENIENCE AND )  
NECESSITY TO CONSTRUCT, FINANCE )  
AND INCREASE RATES PURSUANT TO )  
KRS 278.023. )

Case No. 2008 - 00304

APPLICATION

This Application of the Todd County Water District ("Applicant") respectfully shows:

1. That Applicant is a water district created and existing under and by virtue of Chapter 74 of the Kentucky Revised Statutes.

2. That the post office address of Applicant is:

Todd County Water District  
c/o Dr. George D. Brown, Chairman  
P.O. Box 520  
Elkton, Kentucky 42220

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

4. The project consists of the construction and installation of (i) approximately 28 miles of water line on 25 rural roadways; (ii) a 250,000 gallon elevated water storage tank; and (iii) radio read meters to replace the entire inventory of existing meters.

5. That Applicant proposes to finance the construction of the Project through (i) the issuance of \$1,800,000 of its Waterworks Revenue Bonds, (ii) a USDA, Rural Development ("RD") grant in the amount of \$600,000, and (iii) a Kentucky Infrastructure Authority ("KIA") grant in the amount of \$400,000. Applicant has a commitment from RD to purchase said \$1,800,000 of bonds maturing over a 40-year period, at an interest rate of not exceeding 4.125% per annum, as set out in the RD Letter of Conditions filed herewith as an Exhibit.

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

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

- A. Copy of RD Letter of Conditions.
- B. Copy of RD Letter of Concurrence in Bid Award.
- C. Certified statement from the Chairman of Applicant, based upon statements of the Engineers for 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 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.
- D. Copies of Preliminary and Final Engineering Reports.

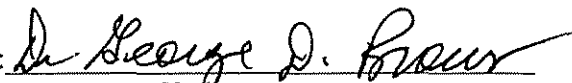
8. That Applicant has arranged for the publication, prior to or at the same time this Application is filed, of a Notice of Proposed Rate Change pursuant to Section 2 of 807 KAR 5:069, in the *News-Democrat & Leader* and the *Todd County Standard*, which are the newspapers of general circulation in Applicant's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

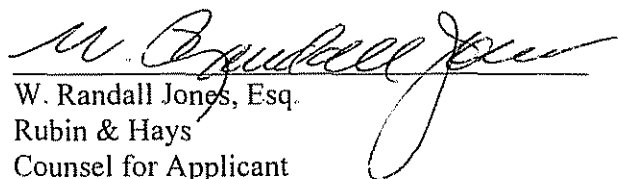
9. That the foregoing constitutes the documents necessary to obtain the approval of the Kentucky Public Service Commission in accordance with Section 278.023 of the Kentucky Revised Statutes and in accordance with the "Filing Requirements" specified in 807 KAR 5:069, Section 1.

**WHEREFORE**, Applicant, the Todd County Water District, asks that the Public Service Commission of the Commonwealth of Kentucky grant to Applicant the following:

- a. A Certificate of Public Convenience and Necessity permitting Applicant to construct a waterworks project consisting of extensions, additions, and improvements to the existing waterworks system of Applicant.
- b. An Order approving the financing arrangements made by Applicant, viz., the issuance of (i) \$1,800,000 of Todd County Water District Waterworks Revenue Bonds at an interest rate of not exceeding 4.125% per annum, (ii) an RD grant in the amount of \$600,000, and (iii) a KIA grant in the amount of \$400,000.
- c. An Order approving the proposed increased rates as set out in Section 28 of the RD Letter of Conditions filed herewith as an Exhibit.

TODD COUNTY WATER DISTRICT

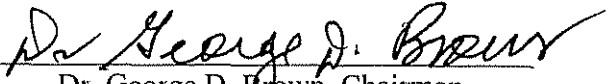
By:   
Chairman  
Board of Water Commissioners

  
W. Randall Jones, Esq.  
Rubin & Hays  
Counsel for Applicant  
Kentucky Home Trust Building  
450 South Third Street  
Louisville, Kentucky 40202  
(502) 569-7534

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF TODD )

The undersigned, Dr. George D. Brown, being duly sworn, deposes and states that he is the Chairman of the Board of Commissioners of the Todd County Water District, 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 July 17, 2008.

  
\_\_\_\_\_  
Dr. George D. Brown, Chairman  
Todd County Water District

Subscribed and sworn to before me by Dr. George D. Brown, Chairman of the Board of Commissioners of the Todd County Water District, on this July 17, 2008.

My Commission expires: March 8, 2009.

  
\_\_\_\_\_  
Notary Public





United States Department of Agriculture  
Rural Development  
Kentucky State Office

April 5, 2007

Dr. George D. Brown, Chairman  
Todd County Water District  
P.O. Box 520  
Elkton, Kentucky 42220

Dear Dr. Brown:

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/or 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/or 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 \$1,800,000; a RUS grant not to exceed \$600,000; and a Kentucky Infrastructure Authority (KIA) grant in the amount of \$400,000.

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 240 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:



1. Number of Users and Their Contribution:

There shall be 3,074 water users, of which 3,005 are existing users and 69 are new users. The Area Director will review and authenticate the number of users and the applicant's financial viability 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 District 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 Bond. Principal payment will not be deferred for a period in excess of two years from the date of the Bond. Payments will be in accordance with applicable KRS, which requires interest to be paid semi-annually (January 1st and July 1st) and principal will be due on or before the first of January. Rural Development may require the District to adopt a supplemental payment agreement providing for monthly payments of principal and interest so long as the bond is held or insured by RUS. Monthly payments will be approximate amortized installments.

5. Recommended Repayment Method:

Payments on this loan can 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 SF 5510, "Authorization Agreement for Preauthorized Payments," should be signed by the District 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 District will be required to deposit \$790 per month into a "Funded Depreciation Reserve Account" until the account reaches \$94,800. The deposits are to be resumed any time the account falls below the \$94,800.

The required monthly deposits to the Reserve Account and required Reserve Account levels are in addition to the requirements of the District's prior bond ordinances.

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 District also needs to fund an account for short-lived assets by depositing a sum of \$1,500 monthly into the account. The funds in the short-lived asset account may be used by the District as needed to replace or add short-lived assets in the District's water system.

7. Security Requirements:

A pledge of gross water revenue will be provided in the Bond Resolution. Bonds shall rank on a parity with existing bonds, if possible.

If this is not possible, the bond will be subordinate and junior to the existing bonds, in which case the District will be required to abrogate its right to issue additional bonds ranking on a parity with the existing bonds, so long as any unpaid indebtedness remains on this bond issue.

8. Land Rights and Real Property:

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

10. Business Operations:

The District 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 District after review by Rural Development. At no later than loan pre-closing, the District 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, bookkeeping, making and delivering required reports and audits.

11. Accounts, Records and Audits:

The District will be required to maintain adequate records and accounts and submit annual budgets and year-end reports (annual audits) in accordance with subsection 1780.47 of RUS Instruction 1780 and RUS Staff Instruction 1780-4, a copy of which is enclosed.

The enclosed audit booklet will be used as a guide for preparation of audits. The District 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 District will accomplish audits in accordance with OMB Circular A-133, during the years in which federal funds are received. The District 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 District. The District should obtain amounts of coverage as recommended by its attorney, consulting engineer and/or insurance provider.
- B. Worker's Compensation - The District will carry worker's compensation insurance for employees in accordance with applicable state laws.
- C. Fidelity Bond - The District 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 \$422,500.
- D. Real Property Insurance - The District 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 District 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 District will obtain and maintain adequate coverage on any facilities located in a 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 210 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.

Prior to receipt of an authorization to advertise for construction bids, the District will obtain advance clearance from Bond Counsel regarding compliance with KRS 424 pertaining to publishing of the advertisement for construction bids in local newspapers and the period of time the notice is required to be published.

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 District.

17. Compliance with Special Laws and Regulations:

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

18. Treatment Plant/System Operator:

The District is reminded that the treatment plant and/or system operator must have an Operator's Certificate issued by the State.

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

- A. Form RUS Bulletin 1780-27, "Loan Resolution (Public Bodies)."
- B. Form RD 400-1, "Equal Opportunity Agreement."
- C. Form RD 400-4, "Assurance Agreement."
- D. Form AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction."
- E. Form RD 1910-11, "Applicant Certification Federal Collection Policies for Consumer or Commercial Debts."
- F. RD Instruction 1940-Q, Exhibit A-1, "Certification for Contracts, Grants and Loans."
- G. RUS Bulletin 1780-22, "Eligibility Certification."

20. Refinancing and Graduation Requirements:

The District is reminded that if at any time it shall appear to the Government that the District 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 District will apply for and accept such loan in sufficient amount to repay the Government.

21. Commercial Interim Financing:

The District 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 District 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 District 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.

During construction, the District 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 District, 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 District.

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

Monthly audits of the District'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 District. Grant funds, upon receipt, must be deposited in an interest bearing account in accordance with 7 CFR part 3016 (as applicable). Interest earned on grant funds in excess of \$100 (as applicable) per year will be submitted to RUS at least quarterly.

24. Cost of Facility:

Breakdown of Costs:

Development	\$ 2,204,500
Land and Rights	12,000
Legal and Administrative	45,000
Engineering	265,000
Interest	25,000
PER, Environmental, Geo Testing	28,500
Contingencies	<u>220,000</u>
TOTAL	\$ 2,800,000

Financing:

RUS Loan	\$ 1,800,000
RUS Grant	600,000
KIA Grant	<u>400,000</u>
TOTAL	\$ 2,800,000

25. Commitment of Other Project Funds:

This Letter of Conditions is issued contingent upon a firm commitment being in effect prior to advertising for construction bids for the KIA grant in the amount of \$400,000.

26. Use of Remaining Project Funds:

After providing for all authorized costs, any remaining project funds will be considered to be RUS/KIA 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.

27. 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.

28. Rates and Charges:

Rates and charges for facilities and services rendered by the District 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:

First	2,000	gallons @ \$	19.63 - Minimum Bill.
Next	8,000	gallons @ \$	10.28 - per 1,000 gallons.
Next	10,000	gallons @ \$	9.16 - per 1,000 gallons.
Next	20,000	gallons @ \$	8.03 - per 1,000 gallons.
All Over	40,000	gallons @ \$	6.66 - per 1,000 gallons.

29. Water Purchase Contract:

The District 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.

30. Compliance with the Bioterrorism Act:

Prior to pre-closing the loan, the District 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).

31. Floodplain Construction:

The District will be required to pass and adopt a Resolution or amend its By-Laws whereby the District 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 District 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.

32. Mitigation Measures:

- A. The project shall be in compliance with all requirements noted in the Governor's Office for Local Development letter dated February 21, 2006, from Mr. Ronald W. Cook, Manager.
- B. 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.
- C. The design and construction shall be in compliance with all local, state and federal environmental statutes, regulations and executive orders applicable to the project.



33. 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,

  
KENNETH SLONE  
State Director

Enclosures

cc: Area Director - Princeton, Kentucky  
Rural Development Manager - Elkton, Kentucky  
Pennyriple ADD - Hopkinsville, Kentucky  
✓Rubin and Hays - Louisville, Kentucky  
Harold M. Johns - Elkton, Kentucky  
McGhee Engineering - Guthrie, Kentucky  
PSC - ATTN: Bob Amato - Frankfort, Kentucky





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

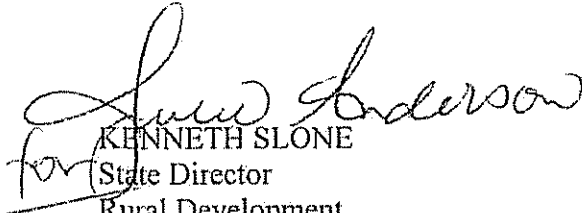
July 18, 2008

**SUBJECT:** Todd County Water District  
Hammacksville Water Improvements  
Contract Award Concurrence

**TO:** Area Director  
Princeton, 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 on Contract 1, Stotts Constructon, Inc., in the amount of \$958,685.95, and the low bidder on Contract 2, Caldwell Tanks, Inc., in the amount of \$786,600.00.*

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

  
KENNETH SLONE  
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>

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, Room 326-W, Whitten Building, 14<sup>th</sup> and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD).



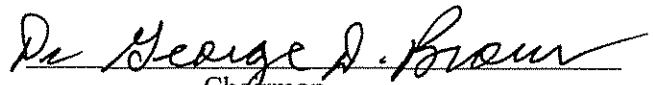
**CERTIFICATE OF CHAIRMAN OF TODD COUNTY WATER DISTRICT  
AS TO STATEMENT REQUIRED BY SECTION 1(5) OF 807 KAR 5:069**

I, Dr. George D. Brown, hereby certify that I am the duly qualified and acting Chairman of the Todd County Water District, and that said District is in the process of arranging to finance the construction of extensions, additions and improvements to the existing waterworks system of the District (the "Project"), in cooperation with McGhee Engineering, Inc., Guthrie, Kentucky, the Engineers for the District (the "Engineers").

Based on information furnished to me by said Engineers for the District, 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 District 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 August 15, 2008, and will end on or about August 15, 2009.

IN TESTIMONY WHEREOF, witness my signature this July 17, 2008.

  
Chairman

Todd County Water District

STATE OF KENTUCKY    )  
                                  ) SS  
COUNTY OF TODD        )

Subscribed and sworn to before me by Dr. George D. Brown, Chairman of the Board of Commissioners of the Todd County Water District, on this July 17, 2008.

  
Notary Public

In and For Said State and County

(Seal of Notary)



## 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 Todd County Water District, of a change to the District's rate schedule as set forth herein. The proposed rate change is required by the U. S. Department of Agriculture, acting through Rural Development ("RD"), in connection with a loan by RD to the District to be evidenced by the issuance by the District of its Waterworks Revenue Bonds in such amount, which RD has agreed to purchase provided the District meets certain conditions of RD, including changing the water rates as set forth below:

### Current Monthly Water Rates

First 2,000 gallons	\$17.90 minimum bill
Next 8,000 gallons	9.38 per 1,000 gallons
Next 10,000 gallons	8.35 per 1,000 gallons
Next 20,000 gallons	7.33 per 1,000 gallons
All over 40,000 gallons	5.89 per 1,000 gallons

### Proposed Monthly Water Rates

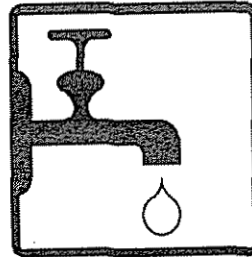
First 2,000 gallons	\$19.63 minimum bill
Next 8,000 gallons	10.28 per 1,000 gallons
Next 10,000 gallons	9.16 per 1,000 gallons
Next 20,000 gallons	8.03 per 1,000 gallons
All over 40,000 gallons	6.66 per 1,000 gallons

The RD loan proceeds will be used in conjunction with various other monies to finance the cost of extensions, additions and improvements to the waterworks system of the District, consisting of the construction and installation of (i) approximately 28 miles of water line on 25 rural roadways; (ii) a 250,000 gallon elevated water storage tank; and (iii) radio read meters to replace the entire inventory of existing meters. Signed: Dr. George D. Brown, Chairman, Todd County Water District

**Preliminary Engineering Report**

*prepared for the*

**Todd  
County  
Water  
District**



**RECEIVED**

JUL 21 2008

PUBLIC SERVICE  
COMMISSION

**Hammacksville Tank Addition and System  
Extension Project**

**Dr. George Brown**  
*Chairman*

**Edward Slack**  
*Treasurer*

**Lois Brown**  
*Secretary*

**Tony Adler**  
*Commissioner*

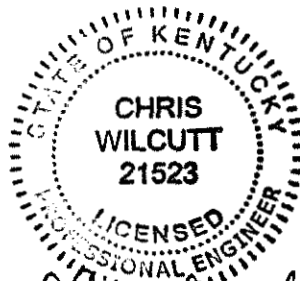
**William Lear**  
*Commissioner*

**John Haley**  
*Manager*

*prepared by*

**McGhee Engineering, Inc.**

202 Ewing Street, P. O. Box 267  
Guthrie, Kentucky 42234  
(270) 483-9985



*Chris Wilcutt*

8-10-06

August 2006



**Preliminary Engineering Report**  
**Table of Contents (cont.-)**  
**Todd County Water District's Hammacksville Tank Addition & System Extension Project**

Exhibits

	<u>No.</u>
Overall Project Layout	1
Adams Road, Mimms Road & Watts Cemetery Road Topography Map	2
Big Pond Road & Watts Cemetery Road (cont-) Topography Map	3
Jack Gray Road & Machine Shop Road Topography Map	4
Banton Coots Road Topography Map	5
Davis Mill/Highway 104 Tie-in & Jim Green Road Topography Map	6
US Highway 68 & KY Highway 102 Tie-in Topography Map	7
Curtis Small Road Tie-in Topography Map	8
Markham Road Topography Map	9
Paul Hurt Road & Phillips Road Topography Map	10
Boley Road & Latham Road Topography Map	11
Mt Sharon Road & Short Cut Road Tie-in Topography Map	12
Brown Road & Squire Groves Road Topography Map	13
Uitley Road Topography Map	14
Strader-Sears Road & Blake Road Topography Map	15
Jonah Wilson Road Topography Map	16
Red Hill Road Topography Map	17
County Soil Map	18

Appendix

- A Kentucky State Clearinghouse Comments
- B FmHA Summary/Addendum (KY Guide 7)

**Preliminary Engineering Report  
Table of Contents**

***Todd County Water District's Hammacksville Tank Addition & System Extension Project***

		<u>Page</u>
1.0	INTRODUCTION	1
2.0	PROJECT PLANNING AREA	
	2.1 Location	2
	2.2 Land Use and Environmental Resources Present	3
	2.3 Growth Areas and Population Trends	4
3.0	EXISTING FACILITIES	
	3.1 History and Assets	5
	3.2 Regulatory Compliance	6
	3.3 Existing Financial Charges and Status	
	3.3.1 Existing Rate Schedule	6
	3.3.2 O&M Costs	6
	3.3.3 Long Term Debts	6
4.0	NEED FOR PROJECT	
	4.1 Health and Safety	7
	4.2 System O&M	7
	4.3 Growth	7
5.0	ALTERNATIVES CONSIDERED	
	5.1 Alternative 1	8
	5.2 Alternative 2	8
	5.2.1 Description	8
	5.2.2 Environmental Impacts and Land Requirements	9
	5.2.3 Construction Problems	9
	5.2.4 Cost Estimates	9
6.0	PROPOSED PROJECT	
	6.1 Project Design	
	6.1.1 Water Supply	9
	6.1.2 Storage	10
	6.1.3 Distribution Layout	10
	6.1.4 Regulatory Compliance	10
	6.1.5 Hydraulic Calculations	11
	6.2 Cost Estimate	12
	6.3 Annual Operating Budget	13
7.0	RECOMMENDED SOLUTION	14

Tables

		<u>Page</u>
1	Waterline Information	2
2	Population History & Projections	4
3	Project Cost Estimate	12
4	Proposed Operating Budget	13
5	Project Rate Schedule with RUS Grant	14
6	Project Rate Schedule without RUS Grant	14

## 1.0 INTRODUCTION

The Todd County Water District (TCWD) was chartered in 1971 to supply potable water to rural residents of Todd County, Kentucky. The District is governed by five board members, and is regulated by the Kentucky Public Service Commission. The Board includes three members from Todd County and two from Logan County because of the significant number of customers served by the TCWD in the Lake Malone area of Logan County. Todd County has authority to plan, design, finance, construct, operate, replace and maintain the distribution facilities within its service area.

The Todd County water system is comprised of over 397 miles of water distribution lines and four water storage tanks with a total capacity of 717,800 gallons, all of which serves approximately 3,051 customers in rural Todd County and a small portion of northwestern Logan County. As of Spring 2003, the Todd County Water District began to purchase all of its 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 its distribution system consists of nearly 85 miles of pipeline and three storage tanks totaling 3,500,000 gallons in capacity. Since going online with the Commission, the average daily wholesale water demand within the Todd County system has averaged 565,000 gallons per day, which is considerably above the 406,000 gpd projected by LTRWC on the basis of historical data. Todd County has three meter stations with the Commission, one located in the southern part of the county, one in the north and one at Allensville.

The TCWD is a relatively large water system covering approximately 80% of the Todd County area. With the exception of the southwestern part of the county, most of the roads within the county have water service, with only short extensions needed from time to time to accommodate new development.

The main problems that faced the TCWD are its long-term supply of treated water, providing adequate water storage in the southern half of Todd County, extending water service to unserved areas, and installing lines for improved hydraulic performance. The water supply issue has been resolved with their transition to the Logan Todd Regional system. The remaining problems will be alleviated by the intended system extension project.

The proposed project involves construction of over 36 miles of water line on 26 rural roadways. Most of these lines are being planned primarily to serve new customers in need of a safe supply of drinking water, while others are being built to improve hydraulic performance of the existing distribution system. Also, the project will add a new elevated water storage tank in the southern end of the County. The new tank will have a capacity of 500,000 gallons, and the new tank will increase the total system storage volume to over 1,200,000 gallons, providing over two days of storage capacity at average demands.

Other low-pressure areas will be assisted by building interconnecting lines to complete hydraulic circuits or "loops". The loops will also improve the water quality by cutting down on the stagnant water in dead-end lines. Also included in the

project are improvements to the existing telemetry system to allow for additional monitoring and control of the system in greater detail. The total estimated cost of the proposed project is \$2,800,000.

## 2.0 PROJECT PLANNING AREA

### 2.1 Location

The waterline construction of the Todd County Water District's project will be spread out along various rural roadways. Over 36 miles of new waterline construction or upgrade are proposed for 26 different roadways. The affected roadways are listed in Table 1.

Table 1  
**Waterline Information**  
 (See Exhibit E-1 for Locations)

Map I.D.	PRIMARY ROUTES ROAD NAME	Length (miles)	Line Size (inches)
①	Adams Road	0.5	3
②	Banton Coots Road	2.1	4
③	Big Pond Road	2.7	3
④	Blake Road	1.1	3
⑤	Boley Road	1.4	4
⑥	Brown Road	0.9	3
⑦	Curtis Small Road Tie-In	1.1	4
⑧	Davis Mill & Hwy 104 Tie-In	2.6	4
⑨	Highway 102 Tie-In	1.3	4
⑩	Jack Gray Road	2.0	4
⑪	Jim Green Road	1.8	4
⑫	Jonah Wilson Road	0.8	3
⑬	Latham Road	1.5	4
⑭	Machine Shop Road	0.5	3
⑮	Markham Road	1.9	4
⑯	Mimms Road	0.9	4
⑰	Mt. Sharon Road	0.5	4
⑱	New 68/80	0.6	4
⑲	Paul Hurt Road	0.5	3
㉑	Phillips Road	0.8	3
㉒	Red Hill Road	0.9	4
㉓	Short Cut Road Tie-In	0.9	3
㉔	Squire Groves Road	1.6	4
㉕	Strader-Sears Road	0.7	3
㉖	Utley Road	0.7	3
㉗	Watts-Cemetery Road	6.4	6 & 4
	<b>TOTAL</b>	<b>36.4</b>	

The tank portion of the project involves the construction of a 500,000-gallon elevated water storage tank. The tank's proposed location is within the small community of Hammackville in southwestern Todd County. Todd County does not have a storage facility of significance in the southern half of the county other than a small standpipe, which only serves the Allensville community. The proposed overflow of the tank will be between 750'-800', which would match the current overflow of the Logan Todd Regional Water Commission's elevated tank in South Todd. A telemetry system and booster pumping station (or control valve mechanism) will be used to fill the new tank, and its operation and system pressure will be maintained by the tank's water level.

The proposed project is illustrated on the county highway map labeled as Exhibit E-1.

## 2.2 Land Use and Environmental Resources Present

As stated earlier, the line portion of the project is spread out along over 36 miles of roadway, all within Todd County's service area. The line work is proposed to be constructed within utility easements that will be acquired by the Todd County Water District. The project will affect four main resources during construction: residential, agriculture, grazing and transportation. The general construction effect to the resources is the disturbances associated with building the facilities. Industrial, commercial, residential and agriculture resources in the entire District will be affected upon completion of the project by providing improved pressure and abundant storage capacity.

The project has been reviewed by the Kentucky State Clearinghouse. The Clearinghouse review identified no conflicts with state or local planning, and recommended approval of the project. The Clearinghouse review letter is included in Appendix A. An archeological investigation is required of the possible tank sites to determine if the proposed tank site affects historical and archeological resources that may be eligible for listing in the National Register for Historical Places. Dr. Jack Schock, of Arrow Enterprises, will conduct a review of the site(s) as soon as options are secured. However, it is anticipated that his report will conclude that no historical resource would be affected by the proposed project, and that the State Historical Preservation Officer will concur with his assessment.

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

- A topographic map of each proposed water line and proposed tank site, indicating the areas to be affected and the surrounding area, are attached as Exhibits 2 thru 17. The base maps are USGS 7.5' quadrangles images.
- Exhibit 18 shows soil survey data from the Soil Conservation Service.

### 2.3 Growth Areas and Population Trends

The population history of Todd 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, Todd County's population has hovered around 11,000 persons for the past 40 years. 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						
	1 9 4 0	1 9 5 0	1 9 6 0	1 9 7 0	1 9 8 0	1 9 9 0	2 0 0	2 0 0 5	2 0 1 0	2 0 1 5	2 0 2 0	2 0 2 5	2 0 3 0	
TODD	Elkton	1,214	1,312	1,448	1,612	1,815	1,789	1,984	1,968	2,025	2,117	2,205	2,288	2,365
	Guthrie	1,272	1,253	1,211	1,200	1,361	1,504	1,469	1,457	1,500	1,567	1,633	1,694	1,751
	Trenton	572	577	542	496	465	378	419	416	428	448	466	484	500
	Rural Areas	11,176	9,748	8,163	7,515	8,233	7,269	8,099	8,031	8,267	8,639	9,001	9,336	9,652
	Todd County	14,234	12,890	11,364	10,823	11,874	10,940	11,971	11,872	12,220	12,771	13,305	13,802	14,268
	% Change		-9.4%	-11.8%	-4.8%	9.7%	-7.9%	9.4%	-0.8%	2.9%	4.5%	4.2%	3.7%	3.4%
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 ( <a href="http://cbpa.louisville.edu/ksdc/">http://cbpa.louisville.edu/ksdc/</a> )												

Analyzing Table 2 from 1940 to 2000 shows that Elkton and Guthrie have grown overall with some fluctuations, while Trenton and the rural areas have declined in population. Recent years have seen growth in all areas, and projections call for modest growth over the next 30 years.

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. Over the last five years, the TCWD 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 Todd County's population is projected to grow on average about 3.5% every five years, which adds about 2,300 persons by 2030. While this growth rate is higher than historical, the projections, when compared with estimates by area development districts, universities, etc., are

sound. 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 Todd County Water District (TCWD) was formed by Todd County Court order in 1971 to supply potable water to rural residents of Todd County, Kentucky. There are four public water systems in Todd County, those being Elkton, Guthrie, Trenton and the TCWD. The Elkton and Guthrie systems serve the incorporated areas of those communities and only limited areas adjacent to town. The Trenton system serves the town's incorporated area, and a portion of the rural area south of town along Highway 104.

The TCWD water system is comprised of approximately 397 miles of water line and a total water storage capacity of 717,800 gallons. The existing distribution system consists of 10", 8", 6", 4", and 3" 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 their decommissioned (2003) water treatment plant located near the Allegre community in northern Todd County. 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.

TCWD has four water storage structures to serve the water system and one primary pumping station that boosts water into the higher-pressure north zone. Only three of the four existing water storage tanks provide useful storage for the TCWD system. The newly constructed Clifty elevated water tank, and the Coal Bank Road tank provide 250,000 and 150,000 gallons of storage respectively to the northern pressure zone. The Allensville standpipe has a storage capacity of 67,800 gallons and provides pressure to a small area in the southeastern part of the County. The fourth tank located on Allenders Hill acts as a pump tank for the Logan Todd Regional Water Commission's booster pump station at that location. Currently, the southern part of the county is served directly from an existing 1,500,000 gallon elevated tank owned by the LTRWC.

The Logan Todd Regional system supplies water to the TCWD system in three locations. The southern feed point is located at the base of the LTRWC tank described above, while the others are located at the Allender's Hill tank in northern Todd County, and at Allensville. Flow through each of these metering points is controlled by the LTRWC SCADA system. The northern pressure zone is controlled by level in the Clifty and Coal Bank Road tanks, the southern pressure zone is fed directly from the LTRWC tank and the Allensville system is controlled by the level in the Allensville tank.

### 3.2 Regulatory Compliance

According to the Division of Water's remarks within the Clearinghouse Comments, the Todd County 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 (Rates effective 8-1-03)

##### All Meter Sizes

First	<u>2,000</u>	Gallons @	<u>\$ 17.90</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 9.38</u>	per 1,000 Gallons
Next	<u>10,000</u>	Gallons @	<u>\$ 8.35</u>	per 1,000 Gallons
Next	<u>20,000</u>	Gallons @	<u>\$ 7.33</u>	per 1,000 Gallons
All Over	<u>40,000</u>	Gallons @	<u>\$ 5.89</u>	per 1,000 Gallons

This rate schedule went into effect as a result of the conversion to the Logan Todd Regional Water Commission as TCWD's treated water supply source.

#### 3.3.2 O&M Costs (FYE 12/31/05)

Item No.	Expense Item	Amount
1	Payroll Expense	\$ 300,888.00
2	Purchased Water	\$ 645,354.00
3	Distribution Expense	\$ 16,009.00
4	Contract Services	\$ 30,622.00
5	Utilities	\$ 21,329.00
6	Administrative Expense	\$ 36,389.00
7	Office Expenses	\$ 27,037.00
8	Depreciation	\$ 250,254.00
9	Insurance	\$ 30,411.00
10	Travel	\$ 17,072.00
11	Bad Debts	\$ 20,356.00
12	Miscellaneous	\$ 6,366.00
<b>Total Utility Expense</b>		<b>\$ 1,402,087.00</b>

#### 3.3.3 Long Term Debts (as of 12/31/05)

Date of Issue	Bond/Note Holder	Principal Balance	Maturity Date	Bond Type	Interest Rate
1979	Rural Dev	\$ 896,000	2017	Revenue	5.000%
1987	Rural Dev	\$ 506,000	2027	Revenue	5.000%
1990	Rural Dev	\$ 539,000	2030	Revenue	5.000%
1992	Rural Dev	\$ 181,400	2032	Revenue	5.000%
1996	Rural Dev	\$ 490,000	2036	Revenue	4.875%
2000	Rural Dev	\$ 775,000	2040	Revenue	4.750%
2005	Rural Dev	\$ 1,100,000	2045	Revenue	4.125%
Total		\$ 4,487,400			



## 4.0 NEED FOR PROJECT

### 4.1 Health and Safety

The majority of the water lines are proposed to bring water service to 69 potential customers that currently rely on groundwater sources or hauled water. Providing water to these potential residences is consistent with Todd County's approved Water Supply Plan as well as the state's initiative to provide adequate and potable water to all homes by the year 2020.

The proposed elevated water storage tank will provide an ample storage facility in the District's southern half. Currently, the southern half of the county is solely dependant upon the Logan Todd Regional Water Commission's water tank, whose purpose is to maintain pressure for all water systems in Todd County as well as Oak Grove in Christian County. The new tank will have a capacity of 500,000 gallons, and the new tank will increase the total system storage volume to over 1,200,000 gallons, providing over two days of storage capacity at average demands.

### 4.2 System O&M

There are two primary reasons for the District's proposed project. The first is to provide a reliable and potable water source to approximately 69 potential residences as described in the preceding section. The second reason is to improve the operation and maintenance of the system by expanding the storage capacity and hydraulic capacity of the southern portion of the system. As previously stated, the water system includes several dead end or low flow lines. Some of the proposed line extensions will connect dead end lines to loop water flow, which reduces the need for frequent flushing to rid the line of stagnant water.

### 4.3 Growth

As mentioned earlier, the population of Todd County and the rural areas should grow by an average of 3.5% every five years over the next 30 years based upon census records and expected growth. The proposed project is necessary to provide water service to 69 potential customers. Overall, the proposed project is being designed to ultimately improve water service to all 3,051 customers. The new infrastructure will ensure the District'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 Todd County Water District 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 District would continue their current endurance of operation, maintenance and water capacity problems plus approximately 69 residences would remain unserved. Therefore, the 'do nothing' alternative is not a viable option as it would only prolong the problems.

### 5.2 Alternative 2

The second alternative is one that offers several advantages and resolves the three critical deficiencies in the water system. This alternative provides water service to unserved residences; eliminates some dead end lines that suffer with water quality problems and require frequent flushing; and provides a water storage structure in the southern half of the county eliminating the direct dependency of another utility's water tank. 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 the water storage facility in a high demand agriculture area, which will reduce seasonal pressure spikes and provide at least 30-psi pressure during all demand times.

#### 5.2.1 *Description*

The project involves construction of 36.4 miles of water line on twenty-six rural roads in various parts of Todd County. Most of these lines are being built primarily to serve new customers in need of a safe supply of drinking water, while others are being built to improve the hydraulic performance of the existing distribution system. The District does not have any water storage facilities in the southern end of their system, requiring the use of another utility's water tank to maintain pressure. This will be corrected by the construction of a 500,000-gallon water storage tank (O.F. = ~750-800'). Miscellaneous low-pressure and/or low-flow areas can be corrected by building interconnecting lines to complete hydraulic circuits or "loops". 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, Todd County is also proposing to install additional telemetry components to allow the operators to monitor the performance of the system in greater detail, and to identify problems earlier. The layout of the proposed lines 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. Todd County is in the process of securing a land option in the Hammacksville community that can be reasonably purchased for the proposed elevated water tank. As mentioned earlier, the project will affect four main land resources during construction: 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 Todd County service area has varying soil conditions ranging from near ideal in some of the southern parts of the county, to sporadic instances of rock outcrops in the north. All of the pipeline routes and the proposed tank sites are very accessible, and there is little 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 service area. Also, several of the waterline extensions will require creek crossings, but none of which should be unmanageable or exceptionally costly.

### 5.2.4 *Cost Estimates*

The Todd County Water District's Hammacksville Tank Addition & System Extension Project is estimated to have a total cost of \$2,800,000. The project cost consists of construction, non-construction and contingency costs, which are \$2,204,500, \$375,500 and \$220,000 respectively. The project is anticipated to be funded in part by a \$1,200,000 grant and \$1,200,000 loan from Rural Development, plus a \$400,000 grant from the Kentucky Infrastructure Authority.

## 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 newly completed 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 Todd County project since the

estimated 69 new customers should, based on average usage, only add an additional 11,000 gallon per day total demand.

### 6.1.2 *Storage*

The proposed project will involve the construction of a new 500,000-gallon elevated storage tank (OF = ~750-800'). This new tank will be constructed in the Hammacksville community, which is located in the southern end of the county where there is presently no large water structure belonging to the District. The new tank will place a sufficient water storage supply in a high demand agriculture area producing a steady pressure environment of at least 40 psi in the higher elevations of the community. Overall, the water system's total storage capacity will increase to 1,217,800 gallons or more than two times the current daily demand. The proposed tank site is illustrated in Exhibit E-1 and E-3.

### 6.1.3 *Distribution Layout*

The waterline construction of the Todd County Water District's system extension project will be spread out over 36 miles of rural roadways. The affected roadways are not clustered together as typical in most system upgrades, but they are rather "fill-in" lines to serve new customers and hydraulic improvements for water quality and flow. The line portion of the project involves the new construction of approximately 51,700 LF of 3" PVC treated water line, 106,700 LF of 4" PVC treated water line, and 34,000 LF of 6" PVC treated water line. In addition to the waterlines, a booster pumping station and/or control valve vault will be constructed to control the filling of the proposed water tank. Also, in an attempt to improve service to customers, Todd County is proposing to install additional telemetry system equipment to allow the operators to monitor the performance of the entire system in greater detail, and to identify problems earlier.

The proposed line extensions and possible tank site area are illustrated in Exhibits E-1 through E-17.

### 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, was used to construct a system wide model to determine the hydraulic characteristics of the Todd County Water District, as it currently exists. The proposed line additions, tank and pump station were then added and a 48-hour extended period simulation of the distribution system was run to analyze the diurnal pressure and flow variations.

The "existing conditions" model verified the existence of low pressure areas during high demand periods, and identified the county's south end in need of a water storage facility. The "future conditions" model verified that the new tank will correct the storage problem, and that the new areas can be successfully served with adequate pressure and flow. The requirement to provide a line flushing velocity of at least 2.5 feet per second has also been considered. Detailed model results are available upon request.

## 6.2 Cost Estimate

The proposed itemized cost estimate of the Todd County Water District's Hammacksville Tank Addition and System Extension Project is shown in Table 3.

Table 3  
*Project Cost Estimate*

<b>CONSTRUCTION</b>	
Adams Road	\$ 15,000
Banton Coats Road	\$ 71,550
Big Pond Road	\$ 88,050
Blake Road	\$ 34,700
Boley Road	\$ 54,450
Brown Road	\$ 26,350
Curtis Small Road Tie-In	\$ 32,000
Davis Mill & Hwy 104 Tie-In	\$ 92,000
Highway 102 Tie-In	\$ 48,000
Jack Gray Road	\$ 68,000
Jim Green Road	\$ 66,550
Jonah Wilson Road	\$ 25,500
Latham Road	\$ 60,650
Machine Shop Road	\$ 15,000
Markham Road	\$ 77,950
Mimms Road	\$ 29,000
Mt. Sharon Road	\$ 18,000
New 68/80	\$ 21,000
Paul Hurt Road	\$ 16,000
Phillips Road	\$ 25,500
Red Hill Road	\$ 35,000
Short Cut Road Tie-In	\$ 33,000
Squire Groves Road	\$ 74,100
Strader-Sears Road	\$ 25,900
Utley Road	\$ 31,250
Watts-Cemetery Road	\$ 320,000
Hammacksville Water Storage Tank (500,000 Elevated)	\$ 700,000
SCADA Improvements	\$ 100,000
<b>Subtotal - Construction</b>	<b>\$ 2,204,500</b>
<b>NON-CONSTRUCTION</b>	
Land & Right-of-Way	\$ 12,000
Administrative & Legal Costs	\$ 45,000
Preliminary Engineering plus Environmental & Geotechnical Services	\$ 28,500
Design Engineering	\$ 117,000
Construction Phase Engineering Services	\$ 50,000
Construction Inspection	\$ 98,000
Financing Costs	\$ 25,000
<b>Subtotal - Non-Construction</b>	<b>\$ 375,500</b>
Contingency	\$ 220,000
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$ 2,800,000</b>

### 6.3 Annual Operating Budget

The proposed annual operating budget for the Todd County Water District's Hammacksville Tank Addition and System Extension Project is shown in Table 4.

Table 4  
*Proposed Operating Budget*

Operating Income	Extension		
	Existing <sup>(1)</sup>	Only	Future
Water Sales	\$1,472,342.00	\$34,238.00 <sup>(2)</sup>	\$1,702,435.40 <sup>(6)</sup>
Late Charges	\$28,347.00	\$0.00	\$28,347.00
Other Charges	\$26,462.00	\$0.00	\$26,462.00
<b>Total Operating Income</b>	<b>\$1,527,151.00</b>	<b>\$34,238.00</b>	<b>\$1,757,244.40</b>
<b>Operating and Maintenance Expense</b>			
Purchased Water	\$645,354.00	\$10,843.00 <sup>(3)</sup>	\$735,121.00 <sup>(7)</sup>
Payroll Expense	\$300,888.00	\$9,000.00 <sup>(4)</sup>	\$309,888.00
Distribution Expense	\$16,009.00	\$500.00 <sup>(4)</sup>	\$16,509.00
Contract Services	\$30,622.00	\$900.00 <sup>(4)</sup>	\$31,522.00
Utilities & Telephone	\$21,329.00	\$600.00 <sup>(4)</sup>	\$21,929.00
Administrative Expense	\$36,389.00	\$1,100.00 <sup>(4)</sup>	\$37,489.00
Office Expenses	\$27,037.00	\$800.00 <sup>(4)</sup>	\$27,837.00
Insurance	\$30,411.00	\$900.00 <sup>(4)</sup>	\$31,311.00
Travel	\$17,072.00	\$500.00 <sup>(4)</sup>	\$17,572.00
Bad Debts	\$20,356.00	\$600.00 <sup>(4)</sup>	\$20,956.00
Miscellaneous	\$6,366.00	\$200.00 <sup>(4)</sup>	\$6,566.00
<b>Total Operating Expenses</b>	<b>\$1,151,833.00</b>	<b>\$25,943.00</b>	<b>\$1,256,700.00</b>
<b>Net Operating Income</b>	<b>\$375,318.00</b>	<b>\$8,295.00</b>	<b>\$500,544.40</b>
<b>Non-Operating Income (Expense)</b>			
Interest Income	\$12,313.00	\$0.00	\$12,313.00
Debt Service - City of Elkton	\$57,640.00	\$0.00	\$57,640.00
RUS Interest (Bonds pre-2005)	(\$169,242.00)	\$0.00	(\$161,711.00) <sup>(8)</sup>
RUS Principal (Bonds pre-2005)	(\$97,507.00)	\$0.00	(\$109,500.00) <sup>(8)</sup>
RUS Interest (2005 Issue)	\$0.00	\$0.00	(\$45,375.00) <sup>(8)</sup>
RUS Principal (2005 Issue)	\$0.00	\$0.00	(\$12,475.00) <sup>(8)</sup>
RUS Interest (2007 Issue)	\$0.00	(\$49,500.00) <sup>(5)</sup>	(\$49,500.00) <sup>(8)</sup>
RUS Principal (2007 Issue)	\$0.00	(\$13,600.00) <sup>(5)</sup>	(\$13,600.00) <sup>(8)</sup>
Non-RUS Interest	\$0.00	\$0.00	\$0.00
Non-RUS Principal	\$0.00	\$0.00	\$0.00
<b>Total Non-Operating Income</b>	<b>(\$196,796.00)</b>	<b>(\$63,100.00)</b>	<b>(\$322,208.00)</b>
<b>Net for Coverage &amp; Depreciation</b>	<b>\$178,522.00</b>	<b>(\$54,805.00)</b>	<b>\$178,336.40</b>

**Notes:**

- 1 Based on the 2005 Audit & 2005 PSC Report
- 2 Based on 69 new customers using 4,500 gallons per month at current rates.
- 3 Based on increased water demand of 3,726,000 gallons per year at \$2.91 wholesale rate
- 4 Based on 3% nominal increase due to anticipated annual cost increases
- 5 Based on a \$1,200,000 RUS loan at 4.125% and 36 payments
- 6 Estimated Debt Service for 2007
- 7 Based on 12% nominal increase due to wholesale increase of \$2.91/1,000 gallons to \$3.26/1,000 gallons
8. Approximate 13% rate increase required to roughly maintain current Net for Coverage & Depreciation.

Based on the projections and assumptions outlined above, the commitment of a \$1,200,000 Rural Development Grant, a \$400,000 state grant, and added revenues from the increased water rates are expected to produce an adequate fund for coverage and depreciation, nearly equal to the previous year. Without securing

the referenced Rural Development grant, it is estimated that an additional 4% increase to the proposed water rates would be required to offset the increase in debt service and maintain the equivalent fund for coverage and 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 the RUS loan and KIA Grant.

Table 5  
Project Rate Schedule with RUS Grant

First	<u>2,000</u>	Gallons @	<u>\$ 20.23</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 10.60</u>	per 1,000 Gallons
Next	<u>10,000</u>	Gallons @	<u>\$ 9.44</u>	per 1,000 Gallons
Next	<u>20,000</u>	Gallons @	<u>\$ 8.28</u>	per 1,000 Gallons
All Over	<u>40,000</u>	Gallons @	<u>\$ 6.66</u>	per 1,000 Gallons

Table 6  
Project Rate Schedule without RUS Grant

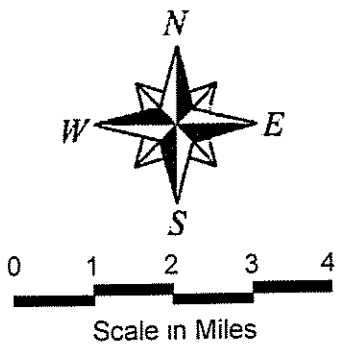
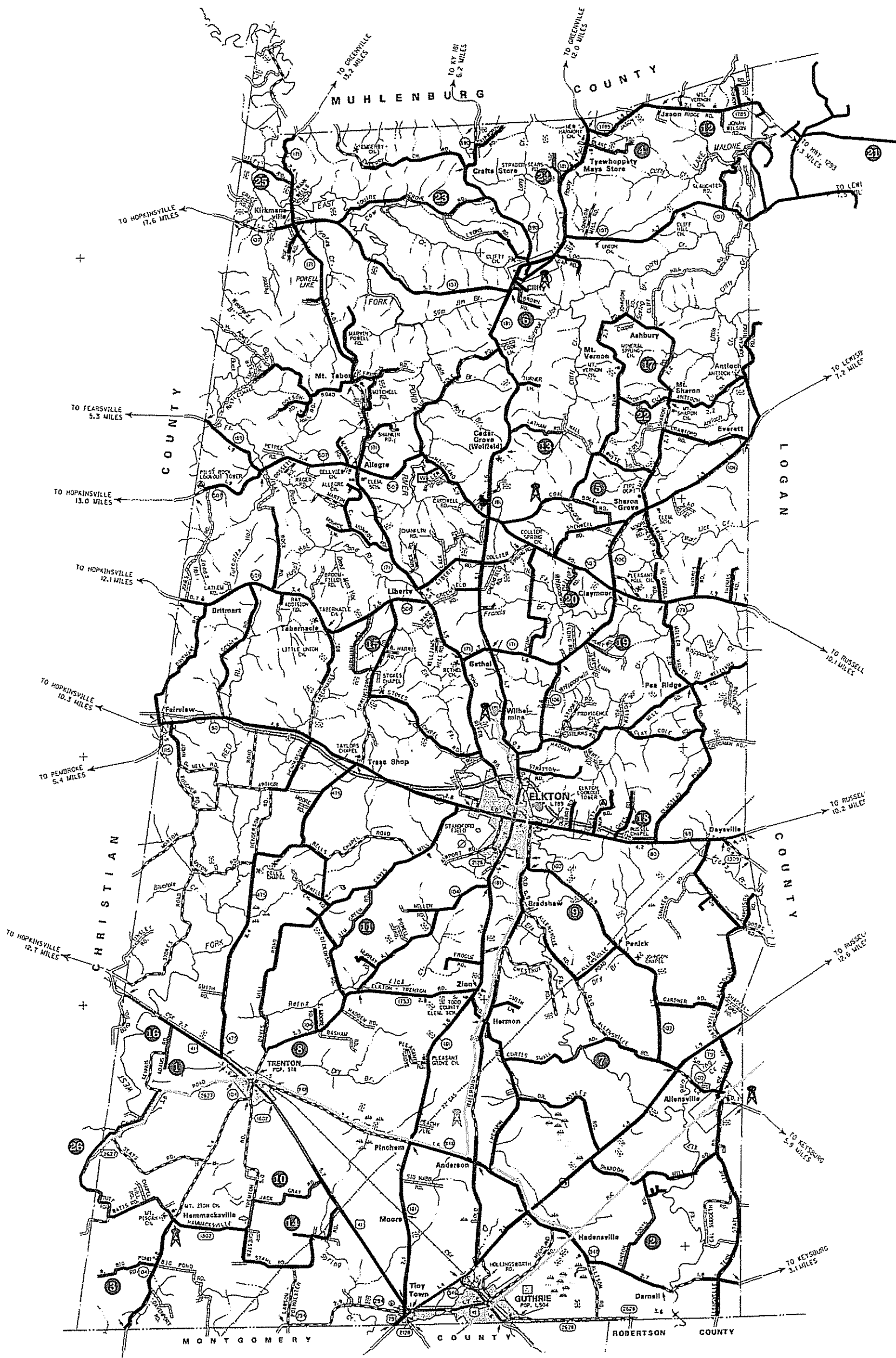
First	<u>2,000</u>	Gallons @	<u>\$ 20.94</u>	Minimum
Next	<u>8,000</u>	Gallons @	<u>\$ 10.97</u>	per 1,000 Gallons
Next	<u>10,000</u>	Gallons @	<u>\$ 9.77</u>	per 1,000 Gallons
Next	<u>20,000</u>	Gallons @	<u>\$ 8.58</u>	per 1,000 Gallons
All Over	<u>40,000</u>	Gallons @	<u>\$ 6.89</u>	per 1,000 Gallons

## 7.0 RECOMMENDED SOLUTION

In order to address the problems and needs of the water system, the Todd County Water District should do the following:

- Construct a 500,000-gallon elevated water storage tank (OF = ~750-800') in the Hammacksville community to serve the northern part of Todd County.
- Construct approximately 36 miles of new waterline to serve a potential of 69 residences plus improve the system's hydraulics and water quality.
- Construct a booster pumping station and/or electronic control valve vault to control the flow and filling of the proposed Hammacksville tank.
- Continue the application process for \$1,200,000 in grant and \$1,200,000 in loan from Rural Development.
- Conduct any required geotechnical investigations to insure the proposed tank site is suitable for an elevated tank foundation.
- 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.





**LEGEND**

- Existing Water Line—TCWD
- Proposed Water Line—TCWD
- Existing Water Line—LTRWC
- Line Reference Number
- Existing Water Storage Tank
- Proposed Water Storage Tank
- Existing Pump Station



**McGHEE ENGINEERING, INC.**  
Guthrie, Kentucky

**Todd County Water District  
Hammacksville Tank & System Extension  
OVERALL PROJECT LAYOUT**

By: McGhee	Scale: As Noted	Date: 06-05-06	Page: E-1
---------------	--------------------	-------------------	--------------

Background Map: KyDOT Todd County General Highway Map—1998