

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF	)	
WARREN COUNTY WATER	)	
DISTRICT FOR A CERTIFICATE OF	)	
PUBLIC CONVENIENCE AND	)	CASE NO.
NECESSITY TO CONSTRUCT THE	)	2025-00351
ALVATON AREA CAPACITY	)	
IMPROVEMENT PROJECT	)	
PURSUANT TO THE PROVISIONS	)	
OF KRS 278.020 AND 807 KAR 5:001	)	

RESPONSE OF
WARREN COUNTY WATER DISTRICT
TO
COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
DATED NOVEMBER 24, 2025

Filed December 5, 2025

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BEFORE THE PUBLIC SERVICE COMMISSION

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WARREN COUNTY WATER	)	
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PUBLIC CONVENIENCE AND	)	CASE NO.
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OF KRS 278.020 AND 807 KAR 5:001		

**RESPONSE OF WARREN COUNTY WATER DISTRICT TO
COMMISSION STAFF’S FIRST REQUEST FOR INFORMATION**

Warren County Water District (the “District”) submits its Response to
Commission Staff’s First Request for Information.

/s/Tina C. Frederick
Tina C. Frederick
Stoll Keenon Ogden PLLC
300 West Vine Street, Ste 2100
Lexington, Kentucky 40507
Telephone: 859-231-3951
Fax: (859) 253-1093
Tina.frederick@skofirm.com

Damon R. Talley
Stoll Keenon Ogden PLLC
112 North Lincoln Boulevard
P.O. Box 150
Hodgenville, Kentucky 42748
Telephone: (270) 358-3187
Fax: (270) 358-9560
damon.talley@skofirm.com

*Counsel for Warren County Water
District*

CERTIFICATE OF SERVICE

In accordance with the Commission's Order of July 22, 2021 in Case No. 2020-00085 (Electronic Emergency Docket Related to the Novel Coronavirus COVID-19), this is to certify that the electronic filing has been transmitted to the Commission on December 5, 2025; and that there are currently no parties in this proceeding that the Commission has excused from participation by electronic means.

/s/Tina C. Frederick
Tina C. Frederick

SWORN CERTIFICATION AND VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF WARREN)

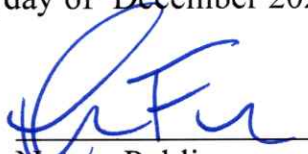
The undersigned, Jacob Cuarta, being duly sworn, deposes and states that he as the General Manager of the Warren County Water District, has personal knowledge of the matters set forth in the items for which he is identified as the witness in Warren County Water District's Response to Staff's First Request for Information in Kentucky Public Service Commission Case No. 2025-00351, and the information contained therein is true and correct to the best of his information, knowledge, and belief. Further, he certifies that he has supervised the preparation of this Response as required by 807 KAR 5:001, Section 4(12)(d)(2)(b), and that the Response is true and accurate to the best of his knowledge, information, and belief formed after a reasonable inquiry.



Jacob Cuarta, General Manager
Warren County Water District

Subscribed, sworn to, and acknowledged before me, a Notary Public in and for said County and State, this 5 day of December 2025.





Alyssa Freeman
Notary Public

My Commission Expires: 11/29/2027

Notary ID: KYNP83115

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-1

Responding Witness: Jacob Cuarta, General Manager

Q 1-1. Refer to the Application, page 6, paragraph 11. Provide a copy of the final enacted amended ordinance.

A 1-1. The ordinance is attached to this response as Attachment 1-1.

Attachment 1-1

Ordinance Number 23-42WC

June 22, 2023

COMMONWEALTH OF KENTUCKY
COUNTY OF WARREN

WARREN FISCAL COURT

ORDINANCE NUMBER 23-42WC

*** **

**ORDINANCE REPLACING ORDINANCE 02-26WC AND
ESTABLISHING MINIMUM STANDARDS FOR FIRE PROTECTION
IN WARREN COUNTY, KY**

WHEREAS, the residential and commercial development of Warren County has been considerable during the past ten years and is expected to continue into the future, demanding continued quality public safety services; and,

WHEREAS, Warren Fiscal Court recognizes it is in the best interest of Warren County citizens to maintain the minimum standards for fire protection by providing for the appropriate placement of fire hydrants, public safety services, and fire protection, particularly to the residences and businesses of Warren County; and,

WHEREAS, Warren Fiscal Court, by Ordinance 86-58WC dated October 24, 1986, and later amended by Ordinance 92-24 WC dated June 26, 1992, and later amended by Ordinance 02-26 WC dated July 26, 2002, established minimum standards for fire protection and desires to amend and replace these standards.

**NOW THEREFORE, BE IT HEREBY ORDAINED BY THE FISCAL COURT OF
WARREN COUNTY, COMMONWEALTH OF KENTUCKY**, as follows:

I. Regulation Application

A. That these regulations apply to all new development as outlined in the table below:

Zoning District	Required Fire Flow (GPM)/ Pressure	Maximum Distance Between Hydrants
AG (Minimum Lot Size 10+ Acres)	Exempt from Requirements	
AG (Minimum Lot Size < 10 Acres)*, RR*, R-E*, RS-1A, RS-1B, RS-1C, RS-1D	600 GPM @ 20 PSI	800 Feet
RM-2, RM-3, RM-4, MHP, P, NB, GB, CB, HB, OP-R, OP-C, LI, HI, PUD**	1,000 GPM @ 20 PSI	500 Feet

*A maximum of two lots may be exempt from meeting the above-listed requirements, as long as such lots are created from a parent tract existing in the same configuration since July 1, 2001.

** Minimum fire flow and hydrant spacing may be reduced to 600 GPM / 500 Feet for PUD developments containing only single family residential uses, at the discretion of the Warren County Fire Coordinator or Fire Chief of the applicable jurisdiction.

B. All agricultural subdivisions of ten (10) acres or more are exempt from the requirements of this ordinance.

II. All Agricultural and Single Family Residential Subdivisions

A. Water Supply

i. New water mains shall be supplied by existing water mains of sufficient size and capacity to yield a fire flow of at least 600 GPM at 20 PSI residual pressure from the newly constructed water mains.

ii. Where existing water supply facilities do not have adequate capacity to yield 600 GPM at 20 PSI residual pressure, any required improvements to existing facilities shall be made at the developer's expense.

iii. New water mains providing service to the subdivision property which provide fire protection shall not be less than six (6) inches in diameter, including fire hydrant branch connections.

iv. New water mains of larger sizes may be required if recommended by the local water authority to achieve the required fire flow.

B. Fire Hydrant Installation

i. Fire hydrants shall be placed no farther than 800 feet apart as measured over public, all weather roads.

III. All Other Subdivisions (Commercial, Multi-Family, Office, Industrial, Mobile Home Parks)

A. Water Supply

i. New water mains shall be supplied by existing water mains of sufficient size and capacity to yield a fire flow of at least 1,000 GPM at 20 PSI residual pressure from the newly constructed water mains.

ii. Where existing water supply facilities do not have adequate capacity to yield 1,000 GPM at 20 PSI residual pressure, any required improvements to existing facilities shall be made at the developer's expense.

iii. New water mains providing service to the subdivision property which provide fire protection shall not be less than six (6) inches in diameter, including fire hydrant branch connections.

iv. New water mains of larger sizes may be required if recommended by the local water authority to achieve the required fire flow.

v. Efforts should be made to arrange water mains so that the distance between intersecting mains does not exceed 1,500 feet.

B. Fire Hydrant Installation

i. Fire hydrants shall be placed no farther than 500 feet apart as measured over public, all weather roads.

ii. Fire hydrants must be located at least 25 feet from the exterior wall of any masonry building and at least 50 feet from any wood framed exterior wall, including those with brick, stone, or equivalent veneer.

IV. Additional Requirements

In addition to the requirements set out in Sections II and III above, the following shall apply to all residential uses, mobile home parks, commercial uses, industrial uses, and recreational uses.

A. Fire Hydrant Type

i. Fire hydrants shall meet the specifications of the local water authority and shall be installed in conformance with the requirements of the serving utility.

ii. Plan approval by the City-County Planning Commission and the serving utility shall be obtained prior to issuance of a building permit.

V. Alternative Fire Protection Plan

A. In cases where the minimum fire flow, as set out in Sections II and III above, is not feasible, an application can be made to Warren County Public Works for an "Alternative Fire Protection Plan".

Such plan shall be prepared and stamped by a professional engineer and shall follow the standards specified in NFPA 1142 (Standards on Water Supplies for Suburban and Rural Fire Fighting) for alternative water sources to provide substantially equal water supply and fire protection systems outlined in Sections II and III of this ordinance.

B. Any Alternative Fire Protection Plan must be reviewed and recommended by the Warren County Fire Department Coordinator and the Fire Chief of the applicable fire district.

C. An automatic residential sprinkler system may be designed, permitted, and installed in accordance with NFPA 13 (Standard for the Installation of Sprinkler Systems), International

Building Code, and Kentucky Building Code. Permits and inspections shall be conducted by the Warren County Building Inspector.

VI. City-County Planning Commission Responsibilities

The City-County Planning Commission shall require all subdivisions in the County of Warren to comply with fire hydrant and water supply requirements set out in the ordinance. In discharging its obligations imposed by the provisions of this ordinance, the City-County Planning Commission may rely upon the certification made on subdivision plats which attest to compliance with this ordinance.

This Ordinance is adopted pursuant to KRS 67.077 in that it was published in summary form on the 9 day of June, 2023, and was introduced and read on the 8 day of June, 2023, and given final reading on the 22 day of June, 2023, and said Ordinance shall be in full force and effect upon signature, recordation and publication in summary form pursuant to KRS Chapter 424 and KRS 67.077 Subsection 3.

APPROVED this the 22 day of June, 2023.

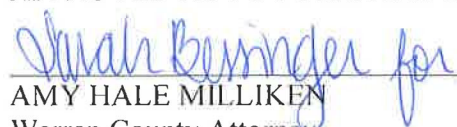

DOUG GORMAN
Warren County Judge Executive

ATTESTED:


CRYSTAL CUMMINGS
Warren County Fiscal Court Clerk

Passed by a Vote of 7 to 0.

APPROVED AS TO FORM AND LEGALITY BY:


AMY HALE MILLIKEN
Warren County Attorney

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-2

Responding Witness: Jacob Cuarta, General Manager

Q 1-2. Refer to the Application, Exhibit 7. Provide the 2008 Capital Improvement Plan

A 1-2. The 2008 Capital Improvement Plan is filed with this response as Exhibit 2-1. The "Old Scottsville Road Area Improvements" project presented in Phase 3 is the precursor to the Alvaton Area Capacity Improvement Project proposed in this proceeding.

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-3

Responding Witness: Jacob Cuarta, General Manager

Q 1-3. Refer to the Application, page 8, paragraphs 15 and 16. Refer also to Exhibit 7. Estimate of Probable Cost of 12-inch Transmission Line Option.

- a.** Provide an updated Probable Cost for a 12-inch Transmission Line Option utilizing the winning bidding information on the 16-inch main.
- b.** Provide an explanation for why the estimated costs for the 16-inch main were higher than the bids received.

A 1-3a. Attached to the response as Attachment 3-1 a is an itemized Estimate of Probable Cost to construct the Project with a 12-inch transmission line. The estimate utilizes actual bid costs. The total cost to construct the Project utilizing a 12-inch transmission line is **\$2,759,405**.

A1-3b. The Estimates of Probable Cost were prepared utilizing average bid prices received by the District during 2023 and 2024. The unit prices received by the District on projects to date in 2025 have typically been trending below the estimates. For example, the District received bids on a project on November 12, 2025, in which the low bid was 70% of the estimated project total cost. Warren District notes that generally

fewer public projects have been advertised for bids in 2025. This could be because fewer grant dollars have been appropriated for such projects. Warren District believes this has contributed to the favorable bid prices it has received recently. Warren District also notes that it is receiving a greater number of bids per project in 2025 than it did in 2023 and 2024. Other public agencies with whom Warren District is in contact report the same experience. Thus, the only explanation Warren District can offer the Commission concerning why the bids to construct the Project were lower than the estimated costs, is that there are fewer public projects being constructed and therefore competition for each project is greater.

Attachment 3-1a

Estimate of Probable Cost

12-Inch Transmission Line Utilizing Actual Bid Costs

Alvaton Area Capacity Improvements
Estimate of Probable Cost-Revised with Actual Bid Costs
Warren County Water District
12-inch Transmission Line Option

12/1/2025

ITEM NO.	DESCRIPTION	EST. QTY.	UNITS	UNIT PRICE	AMOUNT
1	10" x 10" Tapping Sleeve & Valve on PVC	3	EA	\$8,800.00	\$26,400.00
2	6" x 6" Tapping Sleeve & Valve on PVC	1	EA	\$5,500.00	\$5,500.00
3	12" Gate Valve	9	EA	\$7,365.00	\$66,285.00
4	Plug Exist Line	1	EA	\$1,500.00	\$1,500.00
5	5 1/4" Fire Hydrant Assembly	9	EA	\$9,700.00	\$87,300.00
6	Ductile Iron Fittings	7,000	LBS	\$12.00	\$84,000.00
7	Relocate Exist 5/8" x 3/4" Water Meter	6	EA	\$1,100.00	\$6,600.00
8	Reconnect Exist 5/8" x 3/4" Water Meter	13	EA	\$895.00	\$11,635.00
9	3/4" Service Line	30	LF	\$33.00	\$990.00
10	1" Service Line	20	LF	\$45.00	\$900.00
11	Customer Service Line	50	LF	\$33.00	\$1,650.00
12	20" Steel Casing by Bore w/ 12" Rest. Joint DIP Carrier	315	LF	\$755.00	\$237,825.00
13	20" Steel Casing by Bore w/ 12" DIP Carrier	400	LF	\$740.00	\$296,000.00
14	12" Class 250 Rest. Joint DIP Water line	1,093	LF	\$130.00	\$142,090.00
15	12" Class 250 DIP Water Line	15,067	LF	\$100.00	\$1,506,700.00
16	10" DIP Water Line	50	LF	\$77.00	\$3,850.00
17	6" DIP Water Line	50	LF	\$66.00	\$3,300.00
18	Miscellaneous Concrete	20	CY	\$370.00	\$7,400.00
19	Full Depth Crushed Stone Backfill	80	TN	\$26.00	\$2,080.00
20	Erosion Control	1	LS	\$10,000.00	\$10,000.00
21	Final Cleanup	16,800	LF	\$7.50	\$126,000.00
Item Summary					\$2,628,005.00
Contingency					\$ 131,400.00
Total Project Cost					\$2,759,405.00

Items 3, 14, & 15 were adjusted by contacting the Contractor's material supplier and determining the cost difference between 12" and 16" materials, while assuming installation and overhead/profit remain unchanged.

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-4

Responding Witness: Jacob Cuarta, General Manager

Q 1-4. Refer to the Application, page 8, paragraph 16, which states “the smaller 12-inch main would provide water at a flow-rate to meet the fire protection requirements for residential development to a much smaller area than the preferred 16-inch main and would still limit development in the area.”

- a.** Explain how much smaller of an area a 12-inch main would serve versus the 16-inch main.
- b.** Explain how the 12-inch main would limit development in the area.

A 1-4a. As discussed in paragraph 10 of Warren District's Application, The Project is being constructed primarily to provide the added capacity needed to alleviate the need to move water from Warren District's Plano Zone into the Drakes Creek Zone to meet demand. However, the consequences to development capacity to be achieved by construction of the Project are important and cannot be ignored, given that Warren County is the fastest-growing community in Kentucky. Installing a 16-inch main instead of a 12-inch main will provide the minimum fire flow required for single-family residential development (600 gallons per

minute at 20 PSI) to an additional **179 acres** of land along the project corridor. Providing water at a flow-rate to provide fire protection is a final step in opening these acres to development because the sewer service to these acres is already in place.

A1-4b. Development potential for 179 acres would be lost by choosing to construct the Project using a 12-inch main. Adding 179 acres of developable land in this area translates to over 700 additional homes that can be built by installing a 16-inch main instead of a 12-inch main. Constructing the Project using a 12-inch main sacrifices the potential to build 700 homes. However, of the 179 additional acres, 131 acres will meet the more demanding commercial/multi-family minimum flow requirements (1,000 gallons per minute at 20 PSI) if the Project is constructed using a 16-inch main. This opens up the possibility for commercial and more dense residential use on 131 acres. Instead of 4 single-family units per acre, 131 acres of the 179 acres of land added to Warren County's developable acreage can be developed into apartment homes for dozens of families or into commercial districts. The choice to construct the Project using a 16-inch main will, at minimum, permit the construction of over 700 more homes than constructing the Project

using a 12-inch main, but the potential development that can be served using the 16-inch main instead of a 12-inch main is far greater.

If the Project were constructed using a 12-inch main this potential would be lost. Water service to the 179 acres would not meet the minimum flow rate required for single-family residential development, much less the minimum requirements for commercial or multi-family residential development. Choosing to construct the Project using a 12-inch main would result in 179 acres of land that could not be readily developed due to lack of adequate water to provide fire protection. Attached to this response as **Attachment 4-1** are two figures showing the fire flows in the Project area, one figure shows the fire-flows to be achieved using a 12-inch main and the other shows the fire flows to be achieved using a 16-inch main.

Attachment 4-1

Fire Flow Illustrations
12-Inch Line
&
16-Inch Line

Figure 2 12-inch Fire Flow by Parcel

0 2,000 4,000 Feet

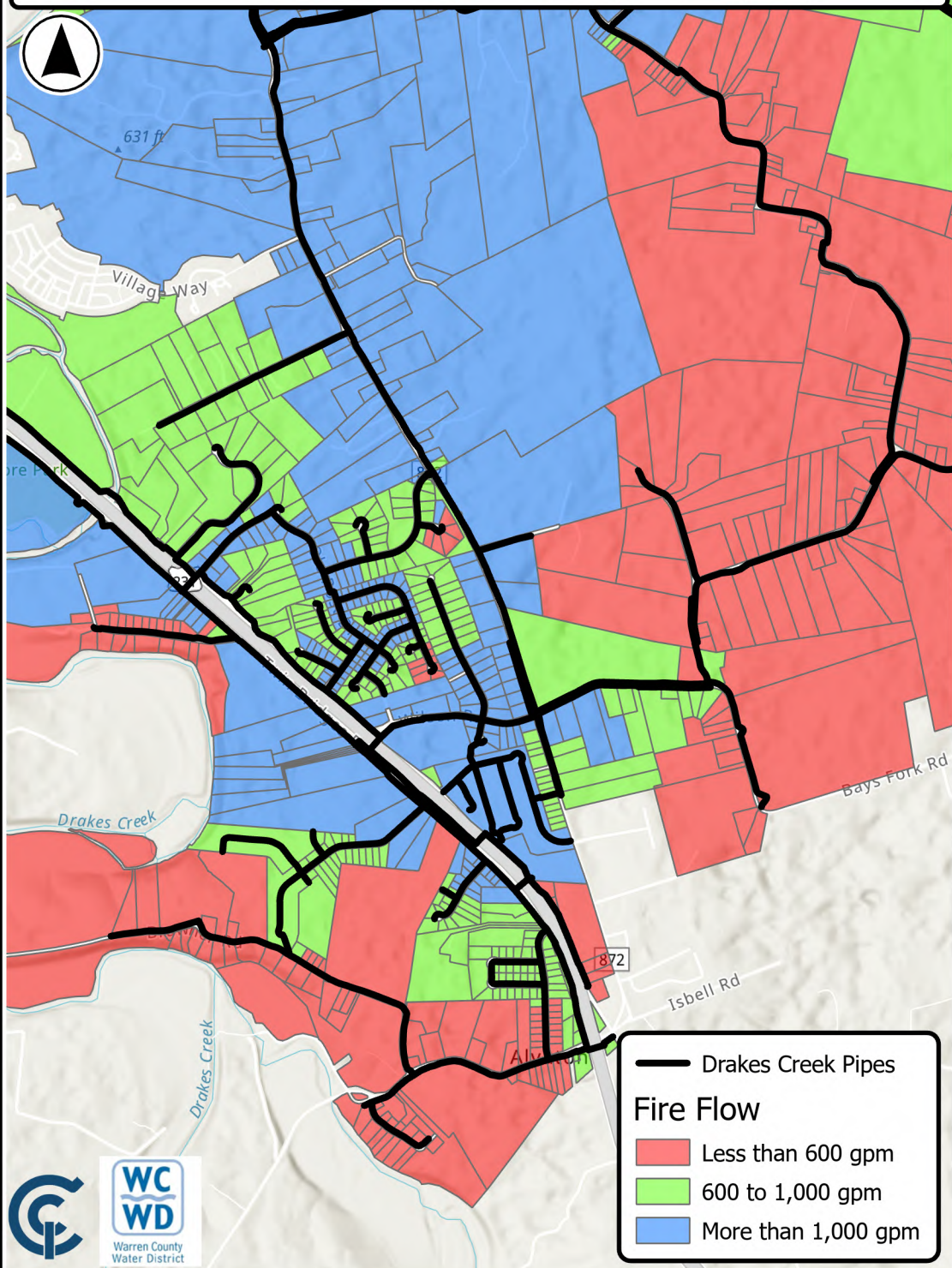
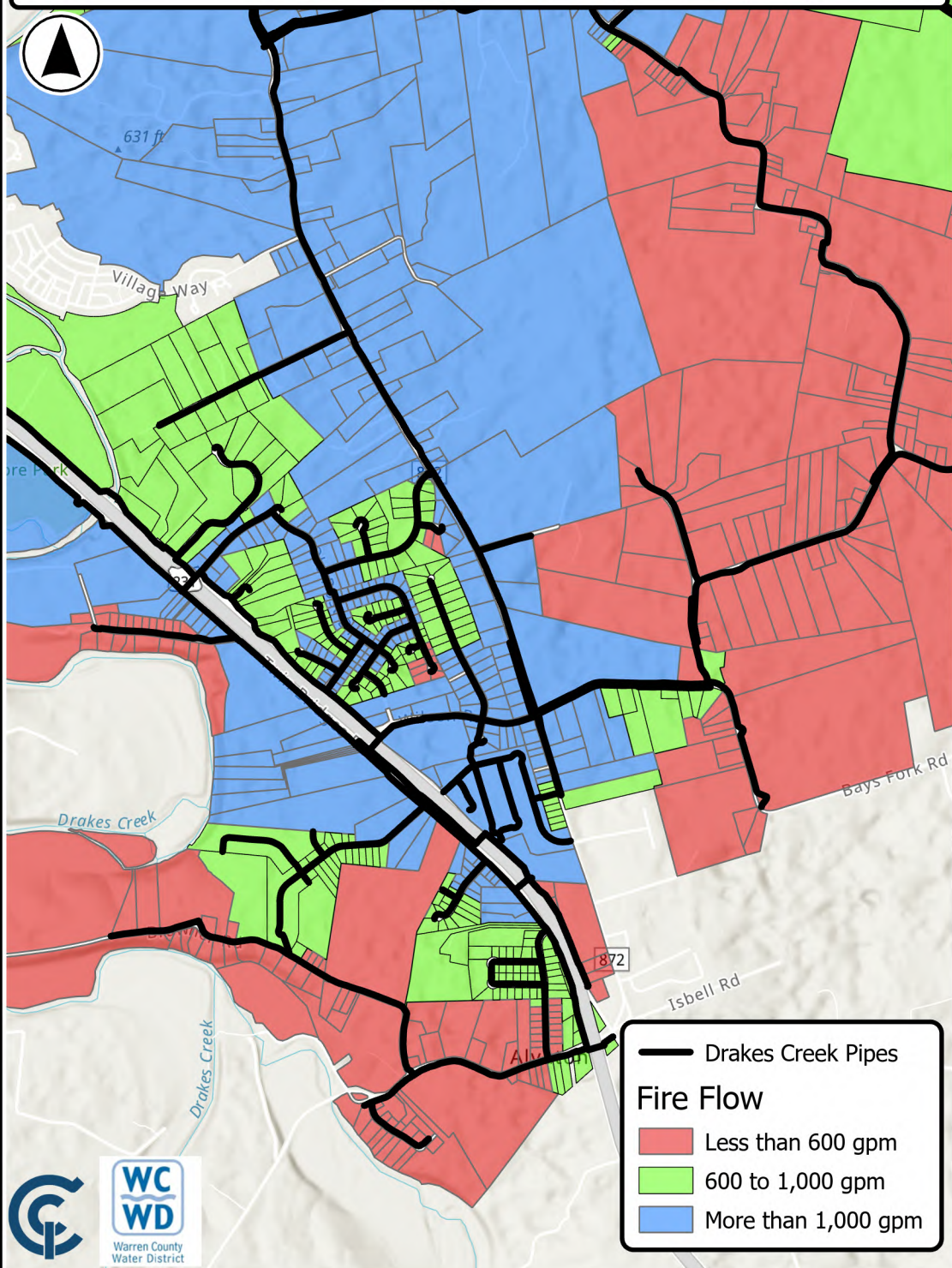


Figure 3 16-in Fire Flow by Parcel

0 2,000 4,000 Feet



WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-5

Responding Witness: Jacob Cuarta, General Manager

Q 1-5. Refer to the Application, page 26, Exhibit 3. Provide a chart listing the NARUC depreciation life, the expected date the property will be placed in service, and the date when the first full year of depreciation is expected for each item listed in the exhibit.

A 1-5. The requested chart is provided on the following page.

It is anticipated that the entire Project will be completed and placed into service on September 30, 2026. Warren District will commence depreciating the entire Project cost at that time. It is anticipated that it will recognize three (3) months of depreciation expense during calendar year 2026. It will incur a full 12 months of depreciation expense during calendar year 2027. This will continue for the duration of the useful lives of each of the component items of the Project.



Alvaton Area Capacity Improvements

As-Bid Cost to Construct
Warren County Water District

16-inch Transmission Line

No.	ITEM	UNIT	QTY	Unit Price	Amount	Depreciation Period (yrs)	Date Placed Into Service	Full Yr. Depreciation
1	16" Class 250 Rest. Joint DIP Water Line	LF	1,235	\$151.00	\$186,485.00	62.5	9/30/2026	9/30/2027
2	16" Class 250 DIP Water Line	LF	14,948	\$121.00	\$1,808,708.00	62.5	9/30/2026	9/30/2027
3	10" DIP Water Line	LF	50	\$77.00	\$3,850.00	62.5	9/30/2026	9/30/2027
4	6" DIP Water Line	LF	50	\$66.00	\$3,300.00	62.5	9/30/2026	9/30/2027
5	24" Steel Casing by Bore w/ 16" Rest. Joint DIP Carrier	LF	335	\$755.00	\$252,925.00	62.5	9/30/2026	9/30/2027
6	24" Steel Casing by Bore w/ 16" DIP Carrier	LF	385	\$740.00	\$284,900.00	62.5	9/30/2026	9/30/2027
7	Ductile Iron Fittings	LBS	8,000	\$12.00	\$96,000.00	62.5	9/30/2026	9/30/2027
8	Reconnect 5/8"x3/4" Water Meter	EA	15	\$895.00	\$13,425.00	40	9/30/2026	9/30/2027
9	Relocate 5/8"x3/4" Water Meter	EA	1	\$1,100.00	\$1,100.00	40	9/30/2026	9/30/2027
10	3/4" Service Line (Line Side)	LF	50	\$33.00	\$1,650.00	40	9/30/2026	9/30/2027
11	1" Service Line (Road Crossing)	LF	700	\$45.00	\$31,500.00	40	9/30/2026	9/30/2027
12	Customer Service Line	LF	50	\$33.00	\$1,650.00	40	9/30/2026	9/30/2027
13	10" x 10" Tapping Sleeve & 10" Tapping Valve	EA	2	\$8,800.00	\$17,600.00	62.5	9/30/2026	9/30/2027
14	6" x 6" Tapping Sleeve & 6" Tapping Valve	EA	1	\$5,500.50	\$5,500.50	62.5	9/30/2026	9/30/2027
15	6" Gate Valve	EA	2	\$2,000.00	\$4,000.00	62.5	9/30/2026	9/30/2027
16	12" x 12" Tapping Sleeve & 12" Tapping Valve	EA	1	\$9,700.00	\$9,700.00	62.5	9/30/2026	9/30/2027
17	16" Butterfly Valve	EA	11	\$14,000.00	\$154,000.00	62.5	9/30/2026	9/30/2027
18	Blow-off Assembly	EA	1	\$2,600.00	\$2,600.00	62.5	9/30/2026	9/30/2027
19	5-1/4" Fire Hydrant Assembly	EA	9	\$9,315.00	\$83,835.00	50	9/30/2026	9/30/2027
20	Automatic Air Release Valve	EA	5	\$3,700.00	\$18,500.00	62.5	9/30/2026	9/30/2027
21	Miscellaneous Concrete	CY	20	\$370.00	\$7,400.00	62.5	9/30/2026	9/30/2027
22	Full Depth Stone Backfill	TN	250	\$26.00	\$6,500.00	62.5	9/30/2026	9/30/2027
23	Rock Check Dam	TN	100	\$40.00	\$4,000.00	NA	9/30/2026	9/30/2027
24	Silt Fencing	LF	1,000	\$2.75	\$2,750.00	NA	9/30/2026	9/30/2027
25	Channel Lining	TN	50	\$47.00	\$2,350.00	NA	9/30/2026	9/30/2027
26	Final Clean-up	LF	16,903	\$7.50	\$126,772.50	NA	9/30/2026	9/30/2027

Item Summary: \$3,131,001.00
3% Contingency \$ 93,930.00
Total Project Cost: \$ 3,224,931.00

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-6

Responding Witness: Jeff Peeples, Manager of Finance & Administration

Q 1-6. Provide the anticipated journal entries using the Uniform System of Accounts (USoA) Account Numbers to record the financing transactions.

A 1-6. Warren District will only require permanent financing for **\$738,211** of the construction cost. The remaining \$2,486,720 of the estimated total cost to construct the Project will be paid using Cleaner Water Program grant funds, which **must** be spent by **December 31, 2026** or they will be forfeited, as explained on page 10, paragraph 19 of Warren District's Application.

Initially, Warren District will use funds remaining from interim financing obtained from a Series 2025D Loan from Rural Water Financing Agency ("RWFA") to pay the \$738,211 of construction costs not covered by grant funds. Warren District obtained a \$22,985,000 RWFA Series 2025D Loan on July 17, 2025, to provide interim financing for the construction of Warren District's new Customer Service and Operations Facility, for which the Commission granted

Warren District a CPCN in Case No. 2024-00286. This loan matures on July 15, 2027, but can be pre-paid without penalty prior to that date. Therefore, Warren District has ample time to identify appropriate long-term financing for the Alvaton Project and select the most appropriate and least-cost financing alternative. Because the ultimate permanent financing has yet to be selected, The journal entries appearing below are purely speculative. For the purposes of providing this illustration Warren District has *assumed*, for illustration purposes **only**, that it will obtain permanent financing via a loan with RWFA in 2026. No such loan has *actually* been identified to date.¹

ANTICIPATED PERMANENT FINANCING ENTRY

GENERAL LEDGER ACCOUNT	DESCRIPTION	DEBIT	CREDIT
224-0043-2	Loan - Series 2026, RWFA		740,000.00
251-1043-2	Unamortized Premium - Series 2026, RWFA		23,736.00
181-0003-2	Unamortized Issuance Costs - Series 2026, RWFA	25,525.00	
127-1043-2	Construction Fund - Series 2026, RWFA	738,211.00	
	Total	763,736.00	763,736.00

¹ For the purposes of this illustration Warren District has assumed it will obtain permanent financing for these costs in the second quarter of 2026, which aligns with the District's current forecast concerning when it will obtain permanent financing for its Customer Service and Operations Facility. Warren District will file an application for financing approval when such financing has been identified.

WARREN COUNTY WATER DISTRICT**Case No. 2025-00351****Response to Commission Staff's First Request for Information****Question No. 1-7****Responding Witness:** Jacob Cuarta, General Manager

Q 1-7. Provide the anticipated journal entries by USoA Account Numbers to record the construction completion transactions.

A 1-7. The information requested is presented below.

Journal Entry – Construction Completion

USoA Account No.	Description	Debit	Credit
331	Transmission & Distribution Mains	\$3,091,771	
333	Services	\$ 34,800	
334	Meters & Meter Installation	\$ 14,525	
335	Hydrants	\$ 83,835	
105	Construction in Progress		\$ 3,224,931
	Total	\$3,224,931	

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-8

Responding Witness: Jacob Cuarta, General Manager

Q 1-8. Provide the current net book value for any lines being replaced.

A 1-8. The Project includes replacement of approximately 4,800 linear feet of 3-inch PVC distribution main. This line has an asset value of \$7,296 and is fully depreciated with a book value of \$0.00.

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-9

Responding Witness: Jacob Cuarta, General Manager

Q 1-9. Refer to the Application, page 4, paragraph 8, Overview of the Project.

- a. Explain whether the proposed construction would result in any interruption of service to customers.**
- b. If interruption of service is expected, explain the extent, including number of interruptions, the duration of the interruptions and the estimated number of customers impacted.**
- c. Explain how the district would minimize any interruption of water service related to the project.**

A 1-9a. The connections of the new transmission main to the existing distribution mains along the Project's route have been designed in such a way that the connections can be completed with no interruption in service. The only service interruptions in connection with the Project will occur due to the need to abandon a 3-inch distribution main serving 16 customers.

A1-9b. To accommodate installation of the new transmission main, an existing 3-inch distribution main will be abandoned. There are 16 individual customer connections that will be transferred from the 3-inch

distribution main to an existing 6-inch distribution main. Service to these customers will be interrupted as the services are being physically reconnected. The services will be transferred one at a time and Warren District expects the service interruption to be between 30 and 60 minutes for each customer.

A1-9C. Warren District's on-site construction inspector will individually contact the 16 customers affected by the need to abandon the line and inform them that a brief service interruption will occur during construction. The inspector will make this initial contact approximately one week before the connection is expected to be transferred and inform the customer that a brief service interruption will be necessary to transfer service to a larger line. The day of the transfer the inspector will knock on the customer's door and explain when during the day the interruption is likely to occur. Once the service is transferred the inspector will once again knock on the customer's door and let them know that service has been restored.

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-10

Responding Witness: Jacob Cuarta, General Manager

Q 1-10. State whether there were any other reasons, besides its submission of the lowest cost proposal, that were considered in the selection of Smith Brothers, LLC as the contractor for the project.

A 1-10. Smith Brothers, LLC was awarded the contract, subject to the Commission granting a CPCN for the Project, because it was the lowest responsive and responsible bidder. Below is an explanation of Warren District's bid solicitation and evaluation procedures.

As permitted by KRS 45A.343, Warren District has adopted Kentucky's Model Procurement Code and follows its provisions in soliciting and evaluating bids and in awarding contracts. In issuing the invitation for bids on the Project, evaluating the bids, and selecting the contractor to whom to award the Project, Warren District followed the competitive sealed bidding procedures set forth in KRS 45A.365. Pursuant to KRS 45A.365(5), Warren District awarded the contract (pending the Commission's granting a CPCN) to the responsive and responsible bidder with the **lowest bid**. A statement concerning the

basis for awarding the contract was included in the *Specifications and Contract Documents*, which was provided to contractors at the time bids were solicited. A copy of this document was filed with the Application as **Exhibit 8**, and the “Basis for Award” information appears on pages IB-3 and IB-4. A “responsive bidder” is a contractor who has submitted a bid that conforms in all material respects to the invitation for bids¹, and a “responsible bidder” is a contractor that has the capability in all respects to perform the contract requirements fully, and the integrity and reliability which will assure good faith performance.² Smith Brothers, LLC is a responsible bidder and it submitted a responsive bid that was the lowest of the six bids received. All bids received for the Project were responsive and all bidders were determined to be responsible bidders.

¹ KRS 45A.345(19).

² KRS 45A.345(20).

WARREN COUNTY WATER DISTRICT

Case No. 2025-00351

Response to Commission Staff's First Request for Information

Question No. 1-11

Responding Witness: Jacob Cuarta, General Manager

Q 1-11. Provide a breakdown of the revenue requirement impact of the project including the following items.

- a. Net operating expense increase or decrease by expense component;**
- b. Annual depreciation, including calculations, for each component for which there are different depreciation lives;**
- c. Annual debt service for each component;**
- d. Twenty percent working capital on debt service amounts in Item 11c; and**
- e. Total of all items above.**

A 1-11a. As stated in Warren District's Application, page 12, paragraph 27, Warren District does not anticipate that the Project will have any effect on its annual operating expenses at all except for depreciation expense on the Project and debt service expense associated with financing a portion of the Project cost. Warren District does not expect increased purchased power or purchased water expense because the amount of water flowing into the system is not expected to change. The Project

will allow water to flow more efficiently and at a flow-rate sufficient to support fire protection.

A1-11b. The requested information is presented in the table below.

Project Component	Cost to construct	NARUC Life	Annual Depreciation	Calculation
Transmission and Distribution Mains	\$3,091,771	50-75 Years Mid-point 62.5 Years	\$49,468.34	$\$3,091,771/62.5 = \$49,468.34$
Meters/Meter Installations & Services	\$ 49,325	35-45 Years Mid-point 40 Years	\$1,233.13	$\$49,325/40 = \$1,233.13$
Hydrants	\$ 83,835	40-60 Years Mid-point 50 years	\$1,676.70	$\$83,835/50 = \$1,676.70$
Total	\$3,224,931	N/A	\$52,378.17	N/A

A1-11c. As stated in Warren District's Application and its Response to Item 6 of this Request for Information, only \$738,211 of the \$3,224,931 estimated total cost of the Project will be financed; most of the Project costs will be covered using grant funds. The \$738,211 that will eventually be financed will be paid initially using proceeds remaining from interim financing that the District obtained to construct its new Customer Service and Operations Facility. As such, all information provided related to financing and debt service is speculative at this time.

The permanent financing for the construction costs for which financing will be necessary has yet to be identified. However, for the purposes of estimating the debt service on the portion of the Project for which financing will be necessary, Warren District has assumed that it will finance these costs using a 30-year Rural Water Financing Agency Series 2026 Loan having an interest rate varying from 4.125% to 5.20%, which translates to a True Interest Cost of 4.67%. The average annual debt service on such a loan is **\$43,960**.¹

A1-11d. The 20 percent additional working capital on \$43,960 of annual debt service is **\$8,792**.

A1-11e. The table below contains the information requested, rounded to the nearest dollar.

Revenue Requirement Element	Amount
Depreciation Expense	\$ 52,378
Annual Debt Service	\$ 43,960
Additional Working Capital	\$ 8,792
Total Increase to Revenue Requirement	\$105,130

¹ For the purposes of this illustration Warren District has assumed it will obtain permanent financing for the costs not covered by grant funds in the second quarter of 2026, which aligns with the District's current forecast concerning when it will obtain permanent financing for its Customer Service and Operations Facility. Warren District will file an application for financing approval when such financing has been identified.

Exhibit 2-1

2008 Capital Improvement Plan



Warren County
Water District

2008 Capital Improvement Plan Water System Facilities





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Appendix A: Existing System Map

Appendix B: Fire Protection Map & Summary of Remaining

Projects

Appendix C: 2008 Capital Improvement Plan Map



Appendix D: System Storage for Each Source during Each CIP Phase

INTRODUCTION

General

Warren County Water District (Warren Water) provides water service to Warren County, KY outside the service area of Bowling Green Municipal Utilities (BGMU). Within Warren County, Warren Water serves approximately 45% of the City of Bowling Green's land area, as well as the communities of Smiths Grove, Plum Springs, Oakland, and Woodburn.

A Capital Improvements Plan (CIP) is a long-range plan, which identifies capital projects, estimates the cost of the projects, and provides a planning schedule for the implementation of the projects. This CIP is a Water Master Plan that establishes a road map for water improvements currently anticipated for Warren County during the planning period. The planning period of this CIP is 2008 through 2040.

The purpose of this CIP is to identify projects that are required to:

1. Increase system capacity as system demands increase.
2. Ensure that the system remains in compliance with Kentucky Public Service Commission (PSC) requirements.
3. Replace facilities which will reach the end of their service life within the planning period.
4. Ensure the most efficient use of Warren Water's funds that will result in the best service to all customers.

This report is also intended to provide Warren Water's Management and Board of Commissioners with a tool to use in planning and coordinating the financial and logistical requirements for improvements to the water system.

As with all studies of this type which rely on projections of future occurrences, the certainty regarding the underlying predictions and corresponding recommendations diminishes as the time frame moves further into the future. Therefore, while recommendations listed for the near term projects should be implemented as described herein, the recommendations for medium and long term projects should be re-examined prior to implementation. This study will be updated as necessary so that adjustments may be made to account for unanticipated growth in specific areas, the announcement of new industrial customers that are large water users, or any other factor or set of factors that would have a significant impact on the system.

Existing Water Distribution System

Warren Water provides potable water to 23,618 active customers (as of December, 2007) through approximately 1,023 miles of transmission and distribution pipeline. The system utilizes 26 storage tanks and conveys water throughout the system with the use of 30 pump stations.

The system is divided into 33 areas of service called sources. A source is a delineated pipe network within the system. All water entering a source or exiting another source is metered. This allows water consumption to be calculated separately for each source. Sources may also have dissimilar pressure grades due to the fact that in many cases pump stations are situated to divide one source from another. Appendix A contains an existing system map depicting all sources.

Requirements for Customer Demands

Warren County has been and continues to be one of the fastest growing counties in the Commonwealth of Kentucky. According to the State Data Center at the University of Louisville, Warren County's population increased

by 16% from the year 1990 to 2000. Warren County has continued to grow at or near that pace since that time, and it is projected to experience a population increase of 40-45% in the next 25 years.

Growth on Warren Water's system is occurring at a rate greater than that of the county in general. In the last five years, an average of 783 customers per year have been added to the system. This growth is very beneficial to Warren Water, however the system's transmission and storage capacity must be increased to continue to meet the demand of these existing customers and provide for future growth.

Warren Water is under the jurisdiction of the PSC. PSC regulations require that all water systems have storage facilities with a capacity equal to the average daily demand on the system. In 2007, the average daily consumption on the system was approximately 7,574,000 gallons per day (gpd). The existing system has a storage capacity of 9,902,000 gallons, a surplus of 2,329,000 gallons. However, projections indicate that the systems average daily demand will climb to approximately 15,232,800 gpd by the year 2040. Therefore, a minimum of 5,330,800 gallons of additional storage capacity will be required by the end of the planning period.

As system demands increase, pumping and transmission main capacities must also keep pace. Several such improvements are needed at this time and in future years. All of the projects outlined herein will be designed to meet the demands expected through the planning period. The PSC and the Kentucky Division of Water (DOW) require that all water systems maintain a minimum of 30 pounds per square inch (psi) at all customer meters. When demands increase to certain levels in various areas of the system and lower operating

pressures result, improvements will be required to meet the standards required by PSC and DOW.

Requirements for Fire Protection

PSC regulations require that a minimum of 250 gallons per minute (gpm) be available at any location that a fire hydrant is to be installed. Warren County ordinances and regulations require 250 gpm at 20 psi residual pressure for fire hydrants that are installed in residential areas and 600 gpm at 20 psi residual pressure for fire hydrants installed in commercial or industrial areas. The City of Bowling Green requires that 600 gpm at 20 psi residual pressure be available to all hydrants inside the city's corporate limits. Fire flows must be considered when improvements are being made to meet system demand. Improvements must not compromise the system's existing fire protection capability.

A Fire Protection Plan was created by Warren Water in 1993 which involved a series of projects which would result in the availability of fire flows and the installation of a fire hydrant within 2.5 miles of all locations in Warren County. Many of the projects in this proposal have been completed during the past 15 years. Many of the projects outlined in this CIP will result in the further completion of this goal. A map located in Appendix B outlines the areas of existing fire protection, areas which will be added as a result of this CIP, and areas from the original proposal which will still be required to meet the goal of placing a fire hydrant within 2.5 miles of all points in Warren County. In addition, a cost estimate of the remaining projects is also provided in Appendix B.

PROJECTED SYSTEM DEMANDS

Population Projections

Population projections for the planning period of this study (2008 - 2040) have been obtained from Warren County Planning Commission and the Kentucky State Data Center at the University of Louisville. The population projections have been made by both of these data sources for geographical areas known as Traffic Analysis Zones (TAZ). TAZs are used in transportation models to predict future needs of transportation infrastructure. They tend to be relatively small in size, and therefore provide more detail than census tracts or other common delineations of Warren County. Projections made for the 140 TAZs in Warren County were transferred to Warren Water's 33 sources so that improvement requirements could be evaluated for each source individually. Table 1 shows the population projections for each source within the system. The overall population of Warren County is projected to increase at an average rate of 1.79% per year through the planning period. The population within Warren Water's service area is projected to experience an average increase of 2.49% in the same time frame.

TABLE 1

Projected Population Change 2000-2040

SOURCE NAME	2000 CENSUS POPULATIO N	2010 PROJECTED POPULATIO N	2020 PROJECTED POPULATIO N	2030 PROJECTED POPULATIO N	2040 PROJECTED POPULATIO N	PERCENT CHANGE 2000- 2040
CASSADY	218	233	249	264	279	28%
KELLY VANCE	3,356	4,009	4,662	5,316	5,969	78%
FIRESTONE	944	1,032	1,121	1,209	1,297	38%
PLUM SPRINGS	1,051	1,401	1,752	2,102	2,452	133%
DETOUR RD	2,120	2,675	3,230	3,784	4,339	105%
GIRKEN	632	834	1,036	1,238	1,440	128%
RICHARDSVILLE	1,248	1,316	1,384	1,452	1,520	22%
BENLEO	978	983	988	994	999	2%
SANDHILL	1,459	1,518	1,577	1,637	1,696	16%
SMITHS GROVE	439	461	483	505	527	20%
HAYS	3,355	4,151	4,482	4,830	5,178	54%
BARREN COUNTY	685	717	748	780	812	19%
BLUEGRASS	2,131	2,929	3,726	4,523	5,321	150%
PLANO	3,282	4,142	5,001	5,861	6,721	105%
DRAKES CREEK/ BARRINGTON MANOR	3,273	5,038	6,804	8,570	10,335	215%
SOUTH ALVATON	1,555	1,654	1,753	1,853	1,952	25%
BOYCE	1,421	1,457	1,493	1,528	1,564	10%
HWY. 240	1,052	1,275	1,498	1,721	1,944	85%
HWY. 31W-SOUTH	3,543	7,091	10,638	14,186	17,734	400%
OLD HWY. 31W-S	1,428	1,880	2,332	2,784	3,236	127%
WOODBURN	913	1,075	1,238	1,400	1,563	71%
GRIDER POND	1,949	2,408	2,866	3,325	3,783	94%
HWY. 68W	2,810	3,398	3,985	4,573	5,160	84%
ROCKFIELD	1,167	1,179	1,191	1,203	1,215	4%
FUQUA ROAD	931	1,118	1,305	1,493	1,680	80%
HWY. 231	1,293	1,385	1,476	1,568	1,660	28%
MORGANTOWN RD #1	1,173	1,364	1,554	1,745	1,935	65%
MORGANTOWN RD #2	1,050	1,064	1,077	1,090	1,103	5%
HADLEY	1,025	1,004	984	963	942	-8%
BARREN RIVER RD	382	394	406	418	431	13%
BEECH BEND RD.	124	173	223	272	321	158%
BRIGGS HILL	1,250	1,230	1,211	1,191	1,171	-6%
LOVERS LANE	650	1,006	1,362	1,718	2,074	219%
TOTAL WCWD	48,239	60,589	72,474	84,377	96,280	99.6%
WARREN COUNTY	92,522	109,076	125,631	142,185	158,739	71.6%

System Demand Projections

To obtain projections for future water flow requirements, a variety of factors were considered. For residential demands, projected populations, average persons per household, and historical average customer usage are the primary factors that influence projected water demands. For commercial customers, a correlation was developed between rate of residential growth and commercial growth. Undeveloped areas which were anticipated to be developed as commercial properties were also taken into account. Large increases in demand could occur in undeveloped industrial areas such as exist in the South Central Kentucky Industrial Park and the Kentucky Transpark. Industrial projections were made assuming a moderate level of industrial growth.

The average quantity of water used by a particular customer varies from year to year. The major factor that influences this variance is the amount of rainfall during a given year, especially during the summer months. When there is little rain, lawn and plant watering and other related water usage causes the overall system demand to be much higher than normal. Since there is no way to predict when these conditions will occur, Warren Water must be prepared at all times. Therefore, the system demand projections presented hereafter represent "dry year" demand, which is the demand that would be anticipated in a year with less than average rainfall. "Dry year" demands were calculated by multiplying the projected number of future customers in a particular source by average customer usage during an extremely dry year.

System demand projections have been prepared for two conditions. Table 2 indicates the projected demand for each source on an average day in the given "dry year." By 2040, the average daily demand is projected to increase by more than double. Table 3 indicates the projected demand for each source

on a peak day, the highest anticipated daily demand in the given year. Peak daily demands are typically 1.6 times the average daily demand; however as a water system increases in size, peak demands tend to not deviate as much from average demand. By 2040 some areas of the system were assigned a peaking factor as low as 1.45. Peak demand is used in the sizing of pumps and water mains. Warren Water currently serves 23,618 active customers (as of December 2007). By 2040 the number of customers is estimated to increase to approximately 43,360.

Once system demand projections are established, a comparison was made of the anticipated demand and the existing capacity of transmission mains, pump stations, and storage tanks. If existing facilities are not sufficient to supply the customer demand, upgrades are required. Subsequent sections of this document will outline the necessary upgrades.

TABLE 2
Projected Average Day Water Demand 2007-2040

SOURCE NAME	2007 AVERAGE DEMAND	2010 AVERAGE DEMAND	2020 AVERAGE DEMAND	2030 AVERAGE DEMAND	2040 AVERAGE DEMAND
CASSADY	35,000	36,200	40,200	44,200	48,200
KELLY VANCE	1,049,000	1,097,000	1,254,000	1,407,000	1,560,000
FIRESTONE	277,000	666,400	1,956,400	2,015,400	2,095,400
TREATMENT PLANT	41,000	50,000	80,000	110,000	140,000
DETOUR RD	193,000	215,600	267,600	319,600	370,600
GIRKEN	64,000	69,400	86,400	104,400	121,400
RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800
BENLEO	73,000	73,600	73,600	74,600	74,600
SANDHILL	125,000	126,800	132,800	137,800	143,800
SMITH GROVE	99,000	100,800	105,800	110,800	115,800
HAYS	405,000	416,400	450,400	484,400	518,400
BARREN COUNTY	82,000	83,200	87,200	91,200	95,200
BLUEGRASS	465,000	489,000	568,000	644,000	720,000
PLANO	376,000	461,800	646,800	728,800	810,800
DRAKES CREEK/ BARRINGTON MANOR	525,000	591,000	830,000	1,104,000	1,432,000
SOUTH ALVATON	165,000	168,000	178,000	187,000	196,000
BOYCE	131,000	132,200	136,200	139,200	142,200
HWY. 240	64,000	70,000	90,000	110,000	130,000
HWY. 31W-SOUTH	1,426,000	1,792,600	2,576,600	2,898,600	3,216,600
OLD HWY. 31W-S	162,000	174,600	216,600	257,600	298,600
WOODBURN	93,000	97,800	113,800	128,800	143,800
GRIDER POND	259,000	271,000	311,000	350,000	389,000
HWY. 68W	274,000	289,000	337,000	383,000	428,000
ROCKFIELD	136,000	136,600	138,600	139,600	141,600
FUQUA ROAD	91,000	96,400	114,400	132,400	149,400
HWY. 231	241,000	248,200	272,200	296,200	321,200
MORGANTOWN RD #1	74,000	143,000	407,000	427,000	446,000
MORGANTOWN RD #2	95,000	95,600	97,600	98,600	99,600
HADLEY	76,000	76,000	77,000	77,000	78,000
BARREN RIVER RD	41,000	43,400	50,400	58,400	67,400
BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800
BRIGGS HILL	108,000	108,600	109,600	110,600	111,600
LOVERS LANE	158,000	196,000	283,000	314,000	346,000
TOTAL	7,574,000	8,790,800	12,274,800	13,681,800	15,159,800

TABLE 3
Projected Peak Day Water Demand 2007-2040

SOURCE NAME	2007 PEAK DEMAND	2010 PEAK DEMAND	2020 PEAK DEMAND	2030 PEAK DEMAND	2040 PEAK DEMAND
CASSADY	56,000	57,000	62,000	66,000	70,000
KELLY VANCE	1,404,000	1,457,000	1,653,000	1,830,000	1,995,000
FIRESTONE	500,000	1,106,000	3,054,000	3,063,000	3,097,000
TREATMENT PLANT	70,000	84,000	127,000	169,000	208,000
DETOUR RD	307,000	339,000	410,000	476,000	537,000
GIRKEN	110,000	117,000	140,000	164,000	184,000
RICHARDSVILLE	223,000	222,000	227,000	230,000	232,000
BENLEO	107,000	107,000	104,000	102,000	99,000
SANDHILL	167,000	167,000	171,000	173,000	177,000
SMITH GROVE	123,000	123,000	127,000	130,000	133,000
HAYS	520,000	529,000	565,000	597,000	627,000
BARREN COUNTY	110,000	110,000	113,000	115,000	117,000
BLUEGRASS	811,000	839,000	940,000	1,030,000	1,114,000
PLANO	567,000	694,000	958,000	1,054,000	1,144,000
DRAKES CREEK/ BARRINGTON MANOR	864,000	957,000	1,299,000	1,674,000	2,104,000
SOUTH ALVATON	210,000	211,000	220,000	226,000	231,000
BOYCE	178,000	177,000	178,000	176,000	175,000
HWY. 240	88,000	96,000	124,000	150,000	175,000
HWY. 31W-SOUTH	2,140,000	2,686,000	3,814,000	4,190,000	4,533,000
OLD HWY. 31W-S	230,000	246,000	304,000	356,000	405,000
WOODBURN	154,000	160,000	180,000	198,000	215,000
GRIDER POND	515,000	528,000	578,000	624,000	666,000
HWY. 68W	349,000	367,000	429,000	484,000	534,000
ROCKFIELD	172,000	170,000	167,000	163,000	160,000
FUQUA ROAD	116,000	123,000	146,000	168,000	188,000
HWY. 231	244,000	250,000	277,000	302,000	326,000
MORGANTOWN RD #1	144,000	251,000	649,000	662,000	673,000
MORGANTOWN RD #2	118,000	117,000	116,000	114,000	111,000
HADLEY	109,000	107,000	106,000	103,000	101,000
BARREN RIVER RD	69,000	72,000	81,000	91,000	102,000
BEECH BEND RD.	40,000	42,000	49,000	55,000	61,000
BRIGGS HILL	234,000	233,000	230,000	227,000	224,000
LOVERS LANE	252,000	308,000	433,000	468,000	502,000
TOTAL	11,301,000	13,052,000	18,031,000	19,630,000	21,220,000

Reasons for Water System Improvements

System improvements are required due to three primary causes. Some improvements are needed due to an existing system deficiency. Other improvements are required to replace facilities which have reached the end of their service life. Other improvements are required due to increases in customer demand.

There are several situations in which improvements are required due to existing system deficiencies. Redundant facilities are required at critical locations in the system or in locations that have a high risk of damage, such as river crossings. All pump stations in the system contain a least two pumps capable of supplying the required demand so that if a pump fails, the other pump or pumps will be able to maintain system operation. If a critical system location is identified that does not have redundancy, facilities should be constructed to provide the necessary back-up.

Replacement of a water main is sometimes necessary when frequent line breaks or leaks are experienced on a particular pipeline. There can be several causes of these failures such as pipe material or quality of installation. Replacement of a main or construction of a parallel main is sometimes required to increase the flow or pressure in an area, or to upgrade the system in an area to accommodate fire flows.

Due to the critical nature of the public water supply, facilities must be replaced as they reach the end of their expected service life. The expected life of a system component varies depending upon the type of facility and material used for construction. For example, water pipelines would generally have a longer service life than the electrical motor on a pump. Facilities which are approaching the end of their service life can be identified by frequent failures,

increasing maintenance costs, observed degradation, and/or insufficient size or height.

Some projects have been identified that, rather than alleviating a known deficiency, will increase the overall efficiency of the system. Warren Water always strives to design and construct system additions in the most efficient manner possible. This may result in lower energy costs and/or greater system reliability.

The major factor that necessitates system improvements is increases in customer demand. As the number of customers increase and the total demand on the system becomes larger, the system must keep pace with this growth. Since the rate of growth is not consistent across the entire service area, and the capacity for growth of the existing components of the system are not the same, each source within the system must be considered individually. Once examined, growth based improvement projects were identified.

Once all system deficiencies and growth based needs were recognized, solutions to these issues were identified. Every effort was made to resolve as many deficiencies as possible when developing an improvement project. For example, if a pump station must be replaced because it has reached the end of its service life, the new station was sized to accommodate the projected increases in demand for the area. The location of the pump station would also be examined to identify if, due to the construction of new mains since the construction of the original pump station, a more effective location may be selected.

DESCRIPTION OF PROPOSED PROJECTS

General

The projects proposed by this plan have been evaluated and prioritized by relative importance with respect to time and need. The priority for many projects was based on the time in which the demand in a particular area of the system is projected to exceed the transmission capacity in that area of the system. The projects which involve the replacement of facilities which are projected to reach the end of their service life during the planning period are prioritized based on the time in which the facility is projected to reach the end of its service life.

The proposed projects have been divided into four phases. Phase 1, which has been further divided into Part A and Part B, contains projects which are recommended to be completed by the end of the year 2010. Subsequent phases are divided into 10 year periods, 2011 to 2020 for Phase 2, 2021 to 2030 for Phase 3, and 2031 to 2040 for Phase 4.

The following information is provided for each project: a brief description of the project, the existing deficiency or other reason the project should be implemented, estimated cost, and recommended time frame for design and construction. All cost projections in this document are indicated in 2008 dollars. A map is enclosed as Appendix C which shows the location of all proposed projects.

Phase 1A Projects (Proposed for Year 2008)

System Reliability Improvement Project

Four water mains within the distribution system have been identified which for various reasons are subject to frequent leaks and/or breaks. Water main

breaks can result in the loss of water service to customers in the immediate area of the leak until the leak is repaired. Although Warren Water's construction personnel are proficient in the repair of these leaks, Warren Water strives to maintain reliable service to customers. In addition to the potential gap in service, these leaks are also a large expense. The cost of the water which is lost, repair materials and equipment, and labor expense (often overtime hours), all contribute to the high cost of repairing leaks.

An evaluation has been conducted to determine the exact location of the breaks. In all four cases, it was found that the breaks were occurring in a relatively short section of each main. This project consists of the replacement of these sections of main. The result of this project will be a significant improvement in the reliability of service provided to customers in these areas. The project will also reduce Warren Water's operating expenses associated with each leak repair. Approximately 3,450 feet of 6-inch water main will be replaced adjacent to Plano Road near Woodburn Allen Springs Road. Approximately 3,250 feet of 4-inch water main will be replaced adjacent to Boiling Springs Road. Approximately 5,025 feet of 8-inch water main will be replaced adjacent to Detour Road near the intersection with Plum Springs Road. Approximately 1,500 feet of 12-inch water main will be replaced adjacent to Plum Springs Loop between Commerce Street and Plum Springs Road. The estimated cost of this project is \$354,500. It is recommended that the design and construction of this project be completed by the end of 2008.

Greenhill Road Pump Station

The South Alvaton Source is located in southern Warren County between Scottsville and Cemetery Roads. This source is currently supplied water through a pump station located on Scottsville Road which has reached its capacity and cannot efficiently be upgraded. The completion of a recent

project ("Project 17") significantly upgraded the facilities which supply water to the Pleasant Hill Tank located near the intersection of Pleasant Hill and Carter Roads. As a result of that project, the supply of water to the South Alvaton Source will be significantly upgraded by constructing a booster pump station near the intersection of Old Greenhill and Alvaton-Greenhill Roads. Additionally this location will allow the proposed pump station to draw water from the Pleasant Hill Tank rather than the Plano and Greenwood Tanks. The areas served by the Plano and Greenwood Tanks are projected to experience a large amount of growth, therefore offloading these tanks will allow for more reliable service to those areas.

This project consists of the re-location of the existing Middle Bridge Pump Station, which is no longer utilized as a result of the new Drakes Creek Pump Station, to supply water to the South Alvaton Source. Approximately 4,100 linear feet of 8-inch and 2,900 linear feet of 6-inch water main will be installed adjacent to Cemetery and Greenhill Roads. These mains will allow higher suction pressure to the proposed pump station. As a result of this project, the total distance water travels to reach this source will be reduced by approximately 1.5 miles which will reduce the age of the water entering this source. The project will also reduce the number of pumps the water must pass through to reach the source which will lower operation and maintenance costs. Water currently passes through 5 pumps, however, once this project is placed into service the water will pass through only 3 pumps. The estimated cost of this project is approximately \$255,500. It is recommended that the design and construction of this project be completed before the summer of 2008.

Russellville Road Water Line Extension

The Rockfield Pump Station and the Fuqua Pump Station, located in western Warren County, draw suction from a single water main along Russellville Road. The majority of this water main is 12 inches in diameter, however approximately 2,500 feet northeast of the intersection of Russellville and Browning Roads, the main reduces to 6 inches. The limited hydraulic capacity of this 6-inch line causes the water pressure in this area to drop below acceptable levels when these two the pump stations are running concurrently. This project will increase the pressure by constructing a new 12-inch water main from the end of the existing 12-inch main at Hillwood Subdivision to the intersection of Russellville and Browning Roads, where the suction lines for the two pump stations split. The new main would also increase the flow rates of the two pump stations. The estimated cost of this project is approximately \$124,000. It is recommended that the design and construction of this project be completed before the summer of 2008.

Phase 1B Projects (2009-2010)

Three Springs Area Transmission and Storage Improvements

The Three Springs/Elrod Road area has experienced the most rapid residential growth in Warren County for the previous 15 years, and projections indicate that the trend of rapid residential growth will continue for some time into the future. This area is part of the Hwy 31W South Source. This source currently includes the South Central Kentucky Industrial Park, and several large subdivisions including Bailey's Farm, Hidden River, Hunter's Crossing, Ivan Downs, McCoy Place, Remington Place, The Springfield, Sutherland Farm, and several others. In addition, Bluegrass Farms, a 1,300 acre commercial development, which itself has an estimated ultimate demand of 1.1 million gpd, will be part of this source. These

developments place a very large demand on the system. The demand from the Hwy 31W South Source, on an average day, is currently approximately 1.36 million gallons.

Storage within the Hwy 31W South Source currently consists of the Hwy 31W South Tank, which has a capacity of 500,000 gallons. To reduce demands on this tank, and increase the system's emergency storage, a new 2,000,000 gallon elevated storage tank will be constructed on Three Springs Road near the William H. Natcher Parkway. Approximately 3,000 linear feet of 20-inch water main will be constructed to connect the new tank to the existing transmission infrastructure. In addition, two sections of 10-inch water main totaling 3,500 linear feet will be constructed adjacent to Springfield Boulevard and Three Springs Road to connect this tank to the existing distribution system. This tank will be filled by the existing Greenwood No. 2 Pump Station, which currently supplies the Hwy 31W South Tank. The improvements associated with this project will allow the flow rate from this pump station to increase from 2,500 gpm to approximately 3,500 gpm. This is a significant outcome of the project, as the demand on this pump station is rapidly approaching its capacity. Approximately 5,400 linear feet of 16-inch water main will be constructed on Hwy 31W to better supply the existing Hwy 31W South Tank. The projected cost of this project is estimated to total \$4,355,500.

As a result of this project Warren Water will continue to be able to support the industrial, commercial, and residential growth in this rapidly developing area of the county. The storage capacity will be increased fivefold in this area, which will help Warren Water remain in compliance with PSC regulations. Fire flows will also be improved in this area. It is recommended that this project be constructed in the 2008-2010 timeframe.

Phase 2 Projects (2011-2020)

Morgantown Road Area Improvements

The Briggs Hill Tank serves an area of Warren County along Glen Lily Road, the northern portion of Barren River Road, and surrounding areas. Because of its condition, size, useful storage volume, and height, this tank is approaching the end of its service life. Some areas along Glen Lilly Road, particularly in the Hilltop Acres Subdivision, suffer from low pressures due to their high elevation relative to the water level in this tank.

The Morgantown No. 2 Pump Station currently operates to fill the Briggs Hill Tank and the Hammett Hill Tank. The pump station is located near the Morgantown reservoir, between Morgantown Road and Minnie Way. A large number of homes near the Morgantown Tank experience low pressures due the elevation of the homes being very close to the elevation of the reservoir.

To remedy these issues this project proposes to construct a new elevated storage tank near the intersection of Glen Lily Road and Hilltop Trail. The tank will have an overflow elevation of 900 feet and a capacity of 250,000 gallons. The new Morgantown No. 2 Pump Station will be constructed in a new location near the intersection of Morgantown Road and Guinn Court, so that the homes with low pressures will be placed under the influence of the proposed tank. The higher overflow of the proposed tank will provide these customers will higher pressures. To facilitate the relocation of the pump station approximately 2,900 linear feet of 8-inch water main will be constructed adjacent to Morgantown Road from West Villa Drive to Briggs Hill Road. The proposed pump station will no longer fill the Hammett Hill Tank, rather a control valve will be constructed near the intersection of Morgantown and Hammett Hill Roads. The control valve will allow water to be drawn from the proposed tank.

Along with the necessary replacement of a tank, this project will improve service by increasing pressures and improving service reliably. Fire protection will also be enhanced. It is estimated the cost of this project will be approximately \$917,000.

Glen Lily Area Improvements

The area near the intersection of Morgantown Road and Veterans Memorial Lane has experienced rapid growth in recent years. This area and areas to the north along Veterans Memorial Lane, including the intersections with Glen Lily Road and Bill Dedman Road, are projected to continue this trend for growth. The existing water tank and pump station that serve this area will not be able to accommodate the projected level of growth. For the water system to keep pace with the projected growth new facilities must be constructed. This project consists of the design and construction of a new 1,000,000 gallon ground storage tank to be located near Glen Lily Road, a new 1,000 gpm pump station to be located at the intersection of Morgantown Road and Veterans Memorial Lane, and a transmission pipeline to connect the pump to the tank. The transmission line includes approximately 4,550 linear feet of 10-inch water main on Veterans Memorial Lane, and approximately 5,025 linear feet of 12-inch water main on Glen Lily Road to the proposed tank.

An additional improvement associated with this project will be to bring a large portion of the current Hwy 231 Source under the influence of the proposed tank. This source is currently served by the BGMU pressure zone. Recent changes in BGMU's operation, specifically the construction of the "Big Red" Tank and the creation of a lower pressure zone, have decreased the pressures in the Hwy 231 Source. Some areas within the source now have a pressure that approaches a level that Warren Water considers to be

unacceptably low. A new 8-inch water main, approximately 1,050 linear feet in length, will be constructed to connect existing main on either side of Veterans Memorial Lane, north of Stonehenge Avenue. Also, to prevent the pressures from rising too high in the lower lying areas of the source a main line pressure reducing valve will be installed near the intersection of Veterans Memorial Lane and New Bond Way.

This project will result in a continuing high level of service for this area even as it experiences rapid growth. A water main will be constructed adjacent to a significant section of Veterans Memorial Lane which currently has no water service. In addition pressures in the Hwy 231 Source area will be increased and fire protection capabilities will be enhanced. The estimated cost for this project totals \$1,265,800.

Smiths Grove/Little Knob Improvements

Because of its condition, size, and height, the existing tank in Smiths Grove is approaching the end of its service life. Rather than reconstructing a new elevated storage tank on the same site as the existing tank, a site on the nearby Little Knob hill has been selected because this site will allow the tank to be designed as a ground storage tank. This style of tank is much more economical to construct and maintain. The new tank will be increased in capacity to 500,000 gallons and the overflow elevation will be raised to result in higher pressures for the area. The tank will be filled by a new 250 gpm pump station to be located near the intersection of Oakland and Upper Dixie Highway Roads. The pump station will draw suction from the proposed 12-inch transmission main associated with the "North Warren Water" project. The water will flow from the pump station to the tank primarily through existing water mains. The water supply will then flow from the proposed tank, through approximately 12,000 linear feet of proposed 8-inch water main, adjacent to

Little Knob Road and Hedge Street, to Smiths Grove. Once in Smiths Grove, the water main will be connected to four existing mains to ensure adequate fire protection capabilities throughout the community. This project is estimated to cost approximately \$780,000.

Porter Pike Area Improvements, Phase 1

The Porter Pike area of Warren County east of Interstate 65 is currently supplied water through a single water main adjacent to Porter Pike. No storage tanks exist in this area. If service is interrupted to this water main, a hundreds of customers are out of service. In addition, the majority of the water mains in this area are dead end mains. Dead end mains are only connected to the system in one location at the beginning of the main. These mains typically have lower water quality than looped water mains.

This project will resolve these issues and provide a greater level of reliability for customers in this area. A new 250,000 gallon elevated storage tank will be constructed near Goshen Church Road South. A new pump station will be constructed adjacent to Carl Jordan Road, south of Interstate 65, to supply water to the tank. A total of 6 separate, relatively short, water mains will each connect two or more existing mains. The new mains will be constructed adjacent to Petty Road, Sunnyside-Gott Road, Bethel Lane, Goshen Church Road South, Gotts-Hydro Road, and Carl Jordan Road. The lines will total approximately 11,500 linear feet of 4-inch main and 7,200 linear feet of 8-inch main.

In addition to the facilities to be constructed in the Porter Pike area, this project also includes two water mains located near the Hays community. Approximately 200 linear feet of 6-inch water main will be constructed

adjacent to C. W. Moore Road and approximately 1,500 linear feet of 4-inch water main will be constructed on Pondsville-Kepler Road.

This project will significantly improve the quality of service provided in this area. The water supply will be much more reliable, flow capacities and pressures will be increased, and water quality will be improved. This project will also make fire protection available for the first time along approximately 21 miles of roadway. The estimated cost of this project totals \$1,477,000.

Richpond Area Improvements, Phase 1

The Richpond area in Warren County is projected to experience growth due to the construction of the proposed Joseph Warren Middle and High Schools. To allow the system to maintain adequate pressures in this growing area, a new water main will be required adjacent to Richpond Road. This first phase of the project will consist of the construction of approximately 8,700 linear feet of 8-inch water main from Hwy 31W to Three Springs Road. The result of this project will be improved service to customers in this area. In addition, a more efficient operation will result by switching this area from the Woodburn Source to the Old Hwy 31W Source. This will allow the water supply to these customers to pass through one fewer pump stations, and reduce the age of the water entering the Old Hwy 31W Source. The estimated cost of the design and construction of this project is \$261,000.

Greenwood No. 2 Pump Station Upgrade

This project is the next phase of the required upgrades for the Three Springs Area. At the completion of the proposed Three Springs Area Transmission and Storage Improvement project, the pumps at the existing Greenwood No. 2 Pump Station will have a flow capacity of approximately 3,500 gpm. It is projected that by the year 2016 the water demand on this portion of the

system will exceeded this level. This project consists of new 5,100 gpm pumps and all necessary electrical and piping work at the station. The new pumps will provide the necessary pumping capacity to serve the area thorough the end of the planning period. The projected cost of replacing the pumps is \$225,000.

High Service Pump Station No. 2 Upgrade

The High Service Pump Station No. 2, located on the BGMU water treatment plant site, supplies water for the entire western half of the system. It is projected that during the 2016-2017 time frame that the capacity of the station will be exceeded by the water demand on the station. This project consists of new pumps to result in 8,600 gpm of firm capacity. This pump station currently consists of four pumps, therefore it is not required that one individual pump be able to provide the total required flow. The station may be designed such that a combination of two or even three pumps would supply the necessary peak flow. To ensure redundancy, the station must be able to supply the required flow with the largest pump out of service. The project will also include all necessary electrical and piping work at the station. The pump station upgrade will provide the necessary pumping capacity to serve the area thorough the end of the planning period. The projected cost of replacing the pumps is \$400,000.

Phase 3 Projects (2121-2030)

Hwy 68 West Reservoir

The existing Hwy 68 West Source is located along Hwy 68 from the William H. Natcher Parkway to Richpond Rockfield Road, and surrounding areas. There is a large variance in the elevation from the relatively low areas near the parkway to the higher areas further away from Bowling Green. To adequately serve the customers in the higher elevation areas, the Hwy 68

West Tank, which serves this area, must have a high overflow elevation. This causes the pressures closer to Bowling Green to be higher than necessary, which is not the most efficient operation. In addition, growth is projected to occur in the lower elevation area and additional storage will be needed.

This project proposes to construct a new 1,000,000 gallon ground storage tank adjacent to the existing tank, but at a lower overflow elevation. This will allow the pressures in the lower elevation areas of the existing source to be lowered to a more appropriate level, and provide additional storage capacity. The existing tank will be filled by a new pump station which will be constructed near the tank sites and will draw water from the new tank.

To facilitate the splitting of this source, a new 12-inch water main will be constructed from Hwy 68 to the new tank. This main will allow the tank to be filled and will supply water to the lower elevation areas. The existing main from Hwy 68 to the existing tank will supply the higher elevation areas of the source.

A second 12-inch water main, approximately 12,100 feet in length, is also proposed as part of this project. This main will be constructed adjacent to the proposed "Southwest Connector," a road which will connect Hwy 68 and Hwy 31W. Since the proposed tank will have the same overflow elevation as the existing Hwy 31W South Tank, growing areas along Hwy 31W will also be supplied water from the proposed tank. The projected cost of this project is approximately \$1,414,200.

Old Scottsville Road Area Improvements

The existing Drakes Creek Source has experienced a very high rate of growth over the past two decades. Due to this growth, a recent project ("Project 17") significantly upgraded the transmission facilities which supply water to this source. This future project will increase the storage capacity in this area by the construction a new 500,000 gallon elevated storage tank. The proposed tank will serve a new source which will be created from the southwestern portion of the Drakes Creek Source and the Olde Stone development which is currently supplied from the Plano Source.

The proposed tank will be supplied water from the Pleasant Hill Tank through a new control valve to be located at the intersection of Pleasant Hill and Old Greenhill Roads. Along with the improvements to the storage facilities in the area, approximately 17,400 feet of 10-inch water main will be constructed adjacent to Greathouse and Old Scottsville Roads to supply adequate flow and pressures to areas of projected growth within the new source. When implementing this project, construction of three 6-inch water mains will be required to maintain existing fire protection throughout the entire area. Approximately 80 linear feet will be installed at the intersection of Old Greenhill and Old Scottsville Roads, approximately 1,000 linear feet will be installed adjacent to Roy Thomas Road, and approximately 2,800 linear feet will be installed adjacent to Old Scottsville Road near Carver Lane. The estimated cost of this project is approximately \$1,660,000.

Tanglewood Pump Station Upgrade

The water demand from the Tanglewood Pump Station is projected to exceed the capacity of the station by the year 2022. Therefore the pump station must be upgraded to accommodate this demand. A sufficient flow can be obtained

simply be replacing the impellers in the existing pumps. The cost of this upgrade is estimated be approximately \$8,000.

Kelly Vance Pump Station Replacement

The existing Kelly Vance Pump Station is one of the oldest stations in the system. As such, the components of the pump station must be replaced to ensure reliable efficient service. Rather than reconstructing the pump station at the existing site, it is proposed that the pump station be constructed as an addition to the proposed Louisville Road Pump Station. The Louisville Road Pump Station will be constructed as part of the proposed "North Warren Water" project. Accommodations will be made in the initial station design to facilitate the addition for Kelly Vance pumps when needed. This "dual" pump station will result in a single station that be more efficient and cost less than the same facilities being constructed on two sites in two buildings.

This project consists of the necessary structure, pumps, piping, and electrical work to complete this portion of the station. It is projected that the total cost of the project will be approximately \$300,000.

Richardsville Pump Station Electrical Upgrades

The Richardsville Pump Station supplies water to a section of northern Warren County including the communities of Richardsville, Greencastle, Ben Leo, and Riverside. The capacity of this station is projected to be sufficient through the end of the planning period. However, to ensure reliable service, the electrical system in this station will require replacement. The cost estimate for this project is \$25,000.

Sandhill Tank Replacement

The Sandhill Tank, a ground storage standpipe, supplies water to the Sandhill community and the surrounding areas. Due to its location and condition, this tank is approaching the end of its service life and will require replacement. The new tank will be constructed on a new site due to difficulties in the access and security of the existing site; however the proposed tank will retain the same overflow elevation as the existing tank. The estimated cost of this project is approximately \$240,000.

Veterans Memorial Area Improvements

This project is the last of a series of projects to improve service in the Morgantown Road and Veterans Memorial Lane area. This project consists of approximately 5,800 linear feet of 10-inch water main to be constructed adjacent to Veterans Memorial Lane from Glen Lilly Road to the discharge of the existing Barren River Road Pump Station, located near the intersection of Barren River Road and Veterans Memorial Lane, and approximately 5,300 linear feet of 8-inch water main to be constructed adjacent to Barren River Road north of the Barren River Road Pump Station.

As a result of this project, the flow capacity and pressures will be significantly increased on Barren River and Bill Dedman Roads. Water service will be available for the first time on this portion of Veterans Memorial Lane. After the construction of this project, the Barren River Road Pump Station will be used to supplement the proposed Morgantown No. 1 Pump Station in the filling of the proposed Glen Lily Tank. This allows the proposed Morgantown No. 1 Pump Station to be constructed with a lower flow capacity which will cost less to construct and operate. The fire flow capabilities will be greatly enhanced as a result of this project as well. The estimated cost of this project is estimated to be \$276,250.

Phase 4 Projects (2031-2040)

McElwain Pump Station Upgrade

The McElwain Pump Station is located on Hwy 31W in southern Warren County. This station supplies water to the Woodburn community and surrounding areas. The demand in this area is projected to exceed the capacity of the station by the year 2030. At this point in time the pump station will require upgrades to increase its capacity.

This project consists of the construction of a new 350 gpm pump station approximately 1.5 miles south of the existing pump station location. This will allow the water demand from future development along the 1.5 mile section of Hwy 31W to be served from the Old Hwy 31W Source and not require additional pumping. The result will be to increase the efficiency of the system and place these demands on a larger capacity tank which will increase reliability. The project is projected to cost approximately \$125,000.

Richpond Area Improvements, Phase 2

This is the second phase of this project to improve service in the Richpond area. As growth occurs and demands increase in this area, the proposed main will be required to maintain pressure and accommodate the increase in flow. In this phase, approximately 13,500 linear feet of 8-inch water main is proposed along Richpond Road. The main will begin at the end of the main associated with the first phase of the project at Three Springs Road and continue along Richpond Road to Matlock Road. This project will further improve the pressures and flow capacity in this area. Fire protection will also be improved. The estimated cost of this project is \$405,000.

Porter Pike Area Improvements, Phase 2

In this phase of this project it is proposed that the pump station constructed during the first phase be relocated to Porter Pike approximately 0.3 miles east of Interstate 65. A new 8-inch water main, 33,000 feet in length, would be constructed from the pump station to the proposed Phase 1 8-inch main on Gotts-Hydro Road. This project will increase pressures and flow capacities in the area, and allow the source to draw water from the Kelly Vance Source rather than the Firestone Source, which will provide a more efficient operation and reduce demand in the Firestone Source. The project will also increase fire protection in the area. The estimated cost of this project is \$1,094,400.

Barren River Road Area Improvements

This project consists of the construction of a 50,000 gallon elevated storage tank to be located adjacent to Barren River Road near Westbrook Road. This tank will be filled from the proposed tank near Hilltop Trail by a control valve located on Glen Lily Road. This project will result in greater pressure and flow capacity in this area. Fire protection would also be improved. The estimated cost of this project is \$400,000.

CAPITAL IMPROVEMENT PLAN SUMMARY

The proposed capital improvement plan is summarized generally in Table 4. A more detailed summary for each phase is listed in Tables 5 – 8. The various phases of construction will maintain Warren Water's storage capacity above the average daily demand throughout the planning period, and therefore the requirements of the Kentucky PSC regarding storage will be met. Tables showing system storage for each source during each CIP phase is included as Appendix D. The storage capacity provided will enhance Warren Water's ability to attract and support residential, commercial, and industrial development; meet fire protection standards more readily; and increase reliability of the water system.

TABLE 4

Overall Capital Improvement Plan Summary

Phase	Proposed Transmission Lines (miles)	Proposed Pump Stations*	New Tanks	Replacement Tanks	Added Storage Capacity (Gal)**	Total System Storage Capacity (Gal)	Average System Demand (GPD)	Projected Cost (2008 \$)
Existing						9,902,000	7,573,000	
1A	4.4	1				9,902,000	8,181,900	\$ 734,000
1B	2.2	-	1	-	2,000,000	11,902,000	8,790,800	4,355,500
2	9.2	6	1	3	1,700,000	13,602,000	12,274,800	5,325,800
3	8.9	3	2	1	1,544,000	15,146,000	13,681,800	3,923,800
4	9.4	2	1	-	50,000	15,196,000	15,159,800	2,024,400
TOTAL								\$ 16,363,500

* Including major upgrades and relocations

** Adjusted for tanks removed from service

TABLE 5
Phase 1 Project Summary

	Recommend ed Year for Completion	Estimated Cost	Project Total
Phase 1A Projects			
System Reliability Improvement Project	2008		
3,450 ft of 6" WL on Plano Rd		\$ 86,250	
3,250 ft of 4" WL on Boiling Springs Rd		55,250	
5,000 ft of 8" WL on Detour Rd		150,000	
1,500 ft of 12" WL on Plum Springs Lp		63,000	
			\$354,500
Old Greenhill Road Pump Station	2008		
Relocation of Middle Bridge Pump Station (with pump replacement)		\$ 60,000	
4,100 ft of 8" WL on Cemetery Rd		123,000	
2,900 ft of 4" WL on Greenhill Rd		72,500	
			\$255,500
Russellville Road Water Line Extension	2008		
2,950 ft of 12" WL		\$124,000	
			\$124,000
PHASE 1A TOTAL			\$734,000
Phase 1B Projects			
Three Springs Area Transmission and Storage Improvements	2009-2010		
2,000,000 Gallon Composite Elevated Storage Tank		\$3,500,000	
		0	
3,000 ft of 20" WL on Three Springs Rd		288,000	
1,300 ft of 10" WL on Springfield Blvd		45,500	
2,200 ft of 10" WL on Three Springs Rd		77,000	
5,400 ft of 16" WL on Nashville Rd		405,000	
Meter & Control Valve Station (2)		40,000	
			\$4,355,500
PHASE 1B TOTAL			\$4,355,500

TABLE 6
Phase 2 Project Summary

	Estimated Year for Completion	Estimated Cost	Project Total
Morgantown Road Area Improvements	2012		
250,000 Gallon Elevated Storage Tank		\$625,000	
New Morgantown No. 2 Pump Station with Capacity of 500 gpm		135,000	
Control Valve Station		50,000	
PRV Station		20,000	
2,900 ft of 8" WL on Morgantown Road		87,000	
			\$917,000
Glen Lily Area Improvements	2014		
1,000,000 Gallon Ground Storage Reservoir		\$615,000	
New Morgantown No. 1 Pump Station with Capacity of 1,000 gpm		160,000	
PRV Station		55,000	
4,550 ft of 10" WL on Veterans Memorial Ln		159,250	
3,900 ft of 12" WL on Glen Lilly Rd		163,800	
1,125 ft of 12" WL from Glen Lilly Rd to Tank Site		47,250	
1,050 ft of 8" WL near Stonehenge/Oxford Center		65,500	
			\$1,265,800
Smiths Grove/Little Knob Area Improvements	2015		
500,000 Gallon Ground Storage Reservoir		\$300,000	
Little Knob Pump Station		120,000	
12,000 ft of 8" WL on Little Knob Rd and Hedge St		360,000	
			\$780,000
Porter Pike Area Improvements, Phase 1	2016		
250,000 Gallon Elevated Storage Tank		\$900,000	
Pump Station with In-line PRV for Fire Flow		130,000	
2,200 ft of 4" WL on Petty Rd		37,400	
1,600 ft of 4" WL on Sunnyside-Gott Rd		27,200	
5,800 ft of 4" WL on Bethel Ln		98,600	
5,800 ft of 8" WL on Gohen Church South Rd		174,000	
1,400 ft of 8" WL on Gotts-Hydro Rd		42,000	
1,900 ft of 4" WL on Carl Jordan Rd		32,300	
1,500 ft of 4" WL on Pondsville-Kepler Rd		25,500	
200 ft of 6" WL on C W Moore Rd		10,000	
			\$1,477,000
Richpond Area Improvements, Phase 1	2016		
8,700 ft of 8" WL on Richpond Rd		\$261,000	
			\$261,000
Greenwood No. 2 Pump Station Upgrade	2016		
Upgrade of Greenwood No. 2 PS to 5,100 gpm (Ultimate)		\$225,000	
			\$225,000



2008 Capital Improvement Plan
Water System Facilities

High Service Pump Station No. 2 Upgrade	2016-2017	
Upgrade of PS to 8,600 gpm (Ultimate)		\$400,000
		\$400,000
PHASE 2 TOTAL		\$5,325,800

TABLE 7
Phase 3 Project Summary

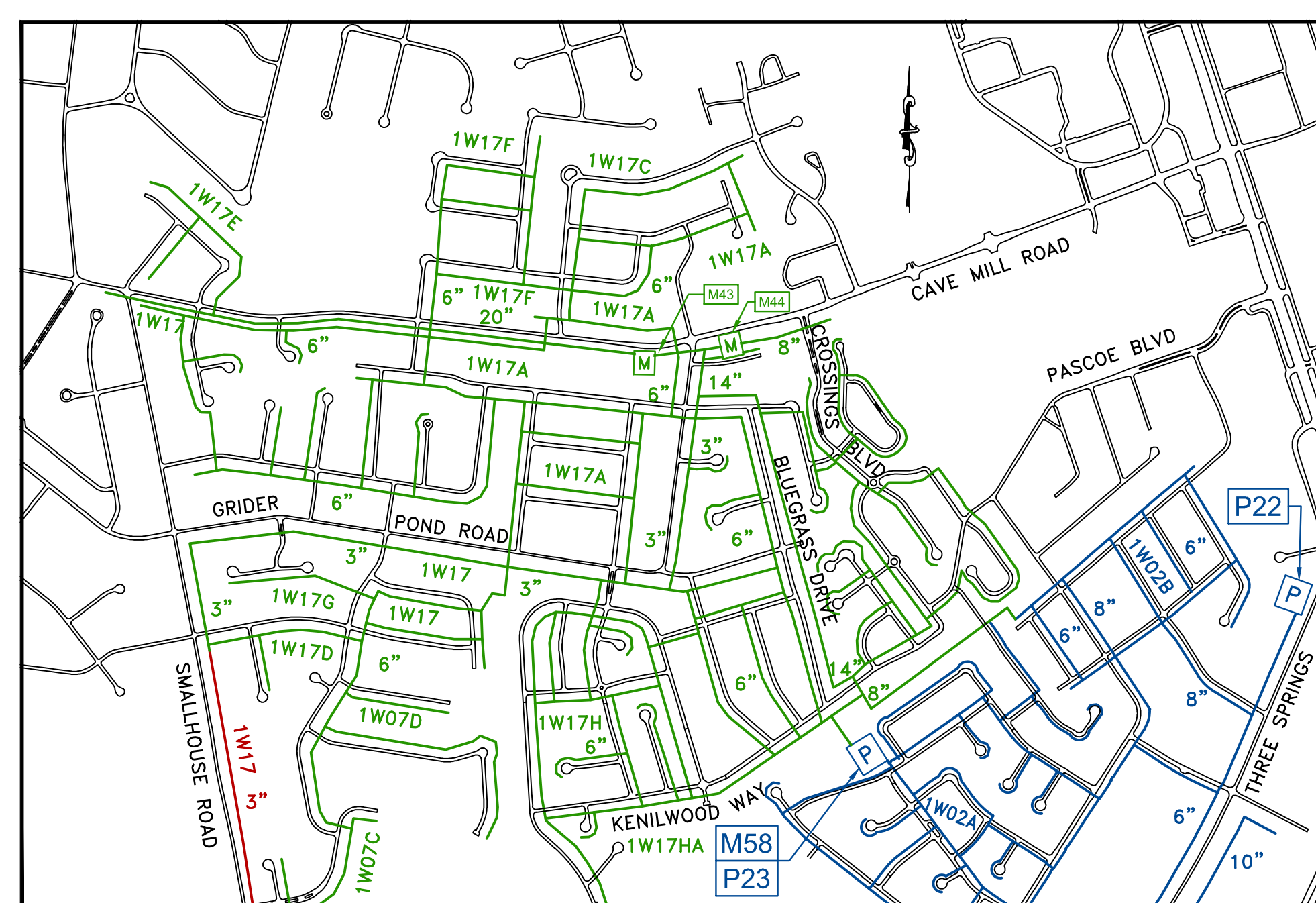
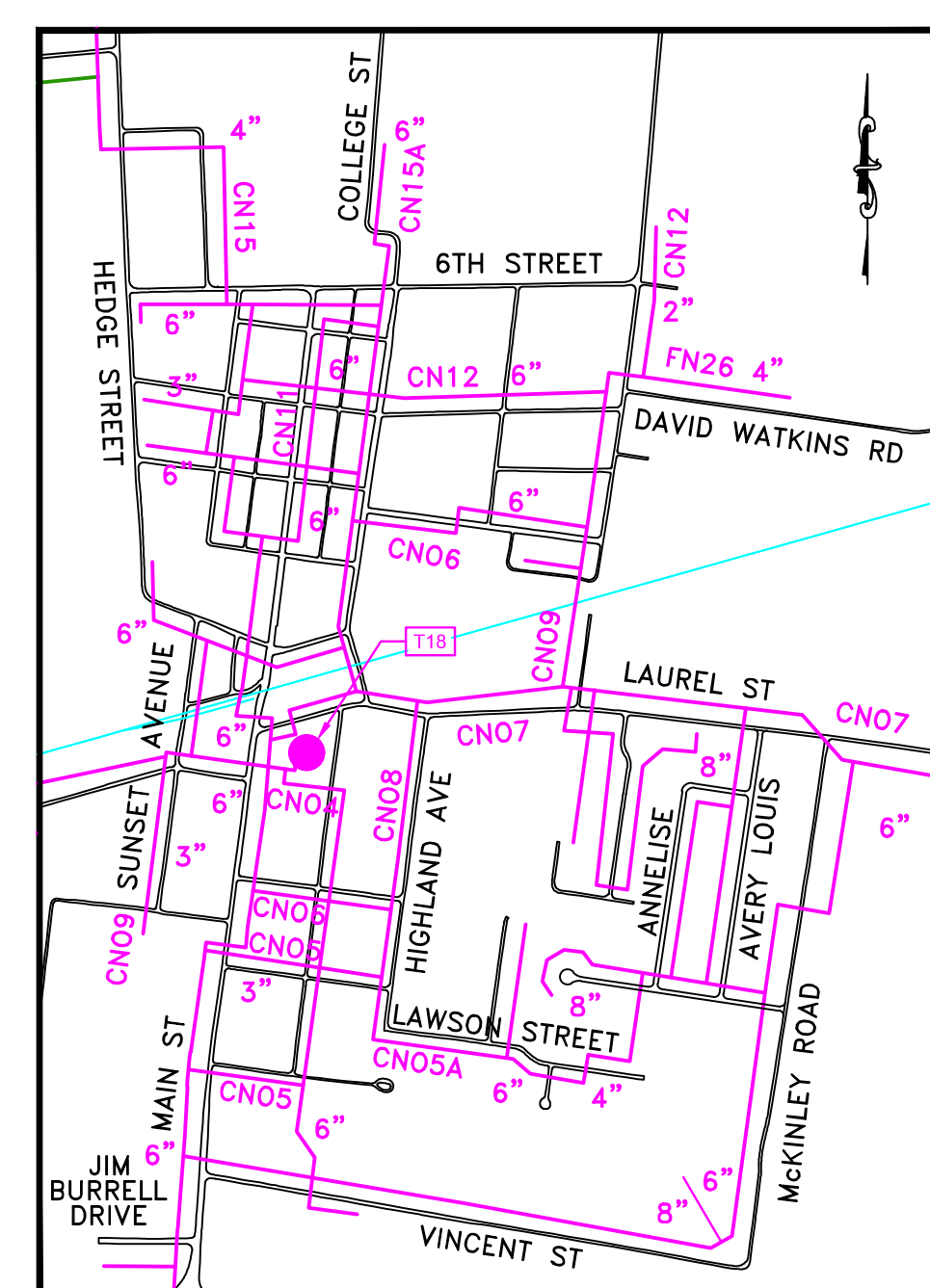
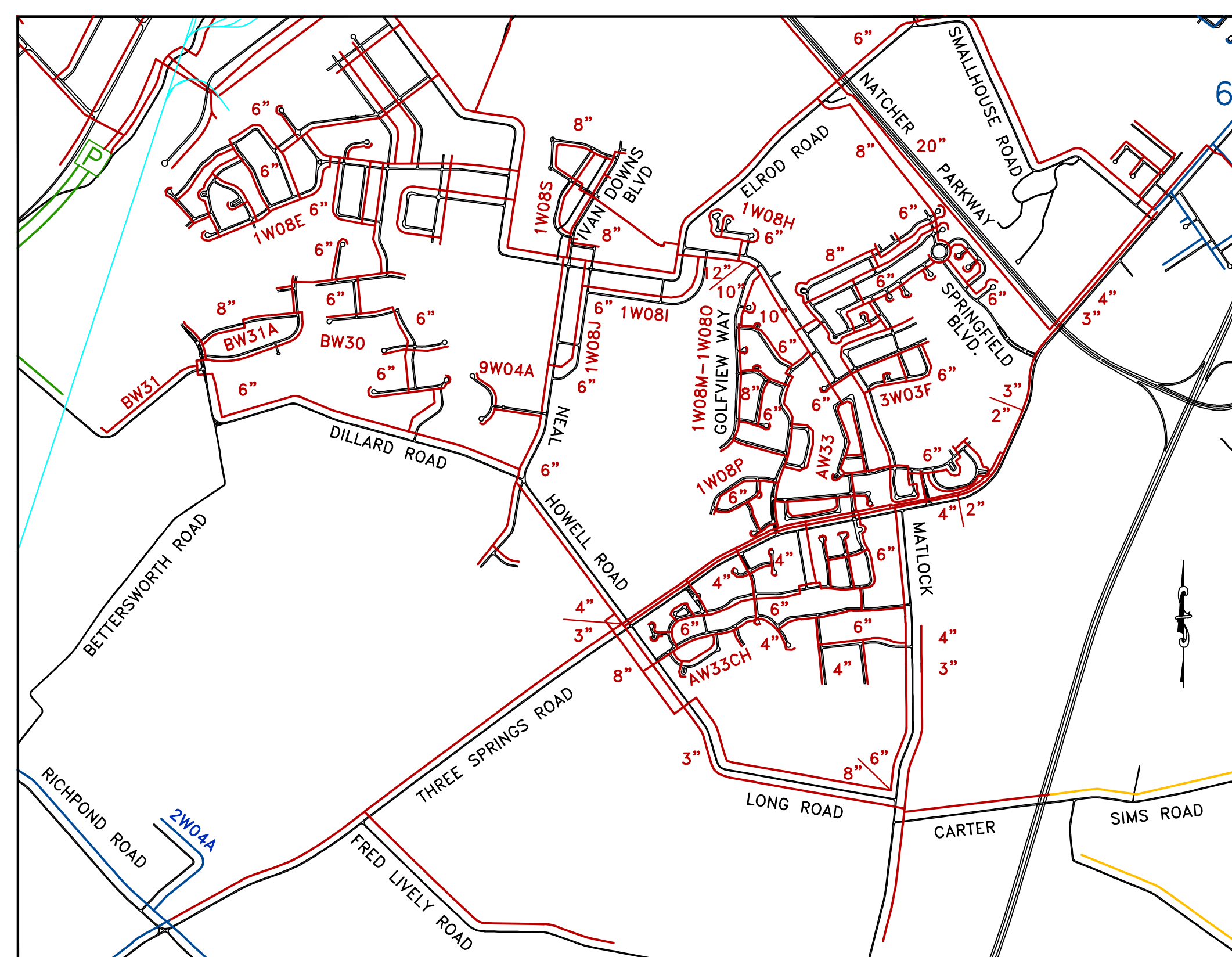
	Estimated Year for Completion 2020	Estimated Cost	Project Total
Hwy 68W Reservoir			
1,000,000 Gallon Ground Storage Reservoir		\$615,000	
New Pump Station with Capacity of 350 gpm		145,000	
Hwy 68W Pump Station Electrical Improvements		30,000	
2,000 ft of 12" WL from Hwy 68-80 to Reservoir		100,000	
400 ft of 8" WL from PS to Existing 68W Tank		16,000	
12,100 ft of 12" WL from Russellville Rd to Nashville Rd (SW Connector)		508,200	
			\$1,414,200
Old Scottsville Road Area Improvements	2021		
500,000 Gallon Elevated Storage Tank		\$900,000	
Control Valve Station		50,000	
17,400 ft of 10" WL on Greathouse Rd and Old Scottsville Rd		609,000	
1,000 ft of 6" WL on Roy Thomas Rd		25,000	
80 ft of 6" WL on Old Greenhill Rd at Middle Bridge Rd		6,000	
2,800 ft of 6" WL on Old Scottsville Rd		70,000	
			\$1,660,000
Tanglewood Pump Station Upgrade	2022		
Upgrade of PS to 650 gpm		\$8,000	
			\$8,000
Kelly Vance Pump Station Replacement	2024		
New Pump Station with Capacity of 2,600 gpm		\$300,000	
			\$200,000
Richardsville Pump Station Electrical Upgrade	2025		
Electrical Upgrades		\$25,000	
			\$25,000
Sandhill Tank Replacement	2026		
150,000 Gallon Ground Storage Standpipe		\$240,000	
			\$240,000
Veterans Memorial Area Improvements	2028		
5,800 ft of 10" WL on Veterans Memorial Ln		\$159,250	
5,300 ft of 8" WL on Barren River Rd		117,000	
			\$276,250
PHASE 3 TOTAL			\$3,923,450

TABLE 8
Phase 4 Project Summary

	Estimated Year for Completion	Estimated Cost	Project Total
McElwain Pump Station Upgrade	2030		
New Pump Station with Capacity of 350 gpm		\$125,000	\$125,000
Richpond Area Improvements, Phase 2	2032		
13,500 ft of 8" WL on Richpond Rd		\$405,000	\$405,000
Porter Pike Area Improvements, Phase 2	2034		
Relocation of PS to Porter Pike near I-65		\$ 50,000	
33,000 ft of 8" WL on Porter Pike and Gotts-Hydro Rd		990,000	
3,200 ft of 4" WL on Red Pond Rd		54,400	\$1,094,400
Barren River Road Area Improvements	2038		
50,000 Gallon Elevated Storage Tank		\$350,000	
Control Valve Station		50,000	
			\$400,000
PHASE 4 TOTAL			\$2,024,400

APPENDIX A

EXISTING SYSTEM MAP



TANKS									
ID		O.F. ELEV.	GALLONS	MAP #	ID	NAME	O.F. ELEV.	GALLONS	MAP #
T1	HWY 31 S SOUTH	755.00	500,000	AW46	T15	HWY 526	783.50	500,000	GN18
T2	WILSON	728.00	100,000	AW46	T16	WILSONVILLE	785.00	500,000	GN18
T3	HWY 68 WEST	825.00	200,000	1W62	T17	OKLAHOMA	793.50	50,000	GN12
T4	WILSON	760.00	100,000	AW46	T18	LOVEYS LAKE	800.00	50,000	GN12
T5	BLUE LEVEL ROAD	885.50	94,000	AW42	T19	HAITS #1	884.80	100,000	AN03
T6	MOUNTAIN ROAD	715.56	50,000	9AW40	T20	HAITS #2	885.00	100,000	AN03
T7	HAMMILL	797.00	100,000	9AW40	T21	LOVEYS LAKE	800.00	2,000,000	GN12
T8	BROGES HILL	671.67	100,000	3M05	T22	GREENWOOD	758.42	235,000	1W24
T9	HAILEY	740.00	150,000	AW46	T23	PLAND	785.00	500,000	AW43
T10	PULM SPRINGS #1	891.00	200,000	1M35	T24	BOYCE	780.00	150,000	AW44
T11	PULM SPRINGS #2	891.00	200,000	GN15	T25	PLAND	785.00	500,000	AW43
T12	GRAND	868.00	120,000	GN15	T26	PLEASANT HILL	785.00	500,000	CW19
T13	GRAND	868.00	120,000	GN15	T27	BALS FORK	810.00	50,000	CW19
T14	SANDHILL	836.50	106,000	GN01	T28	MIZPAH	790.00	1,000,000	FN22

ID	NAME	SIZE	MAP #	ID	NAME
M1	HWT 31W SOUTH		W065	M5	BARRON RIVER ROAD #2
M2	OLD 31W SOUTH		A0362	M1	BEECH
M3	RICHMOND AT SCHOOL		BW28	M18	KELLY YANCE
M4	HWT 240 W		M1	M15	WASSON
M5	MOOREHEAD ROAD		CW02	M20	KELLY YANCE TO WATER PLANT
M6	HWT 68 WEST		SW080	M21	WATER PLANT TO KELLY YANCE
M7	HWT 68 WEST		FW54	M22	PRESTON
M8	ROCKFIELD		AW38	M23	TANGLEWOOD
M9	FUGUA ROAD		CW18	M24	SANDHILL
M10	HWT 251		1M03	M25	OLD SANDHILL
M11	MORGANTOWN ROAD #2		9A04	M26	ANNA
M12	HARLEY		CW02	M27	SANDHILL
M13	BRIGGS COMPANY LINE		4M04	M28	GIRKIN
M14	BUITLER HILL ROAD		4M05	M29	OLD DETOUR ROAD
M15	BARRON RIVER ROAD #1		4M06	M30	4M06

SIZE	#	ID	NAME	SIZE	#	ID	NAME
4	4M03	M37	CEMETERY ROAD	2	CPW1	P1	PARKWAY
6	BN28	M38	CEMETERY ROAD	6	CPW2	P2	31W SOUTH
10	SN01	M39	LOVERS LANE	6	1W01H	P3	MCLELLAN
4	M40	M40	LOVERS LANE	2	CPW3	P4	31W WEST
4	M41	M41	GREENWOOD	6	CPW4	P5	ROCKWELL
4	M42	M42	FLANO	6	CPW5A	P6	FUGUA
4	M43	M43	GREENWOOD POND	6	1W17A	P7	BROWNING ROAD
6	M117	M44	BLUEGRASS	6	9W23A	P8	HWY 1083
6	M118	M45	GREENWOOD ALAVTON	6	CPW6	P9	BROWNING ROAD #1
6	SN08	M46	SOUTH ALAVTON	6	CPW3	P10	MORGANTOWN ROAD #2
2	BN57	M47	BOYCE	4	AW03	P11	KELLY KAYCE
2	BN11	M48	GOORUM	4	CPW1	P12	WILSON
4	G110	M49	SPARKS ROAD	2	AW04A	P13	TANGLEWOOD
4	SN50	M50	SPRINGFIELD	2	AW02A	P14	OLD DETOUR ROAD
4	SN65	M51	GRACIES CREEK	2	1W10V	P15	WINDY HILLSVILLE

PUMP STATIONS

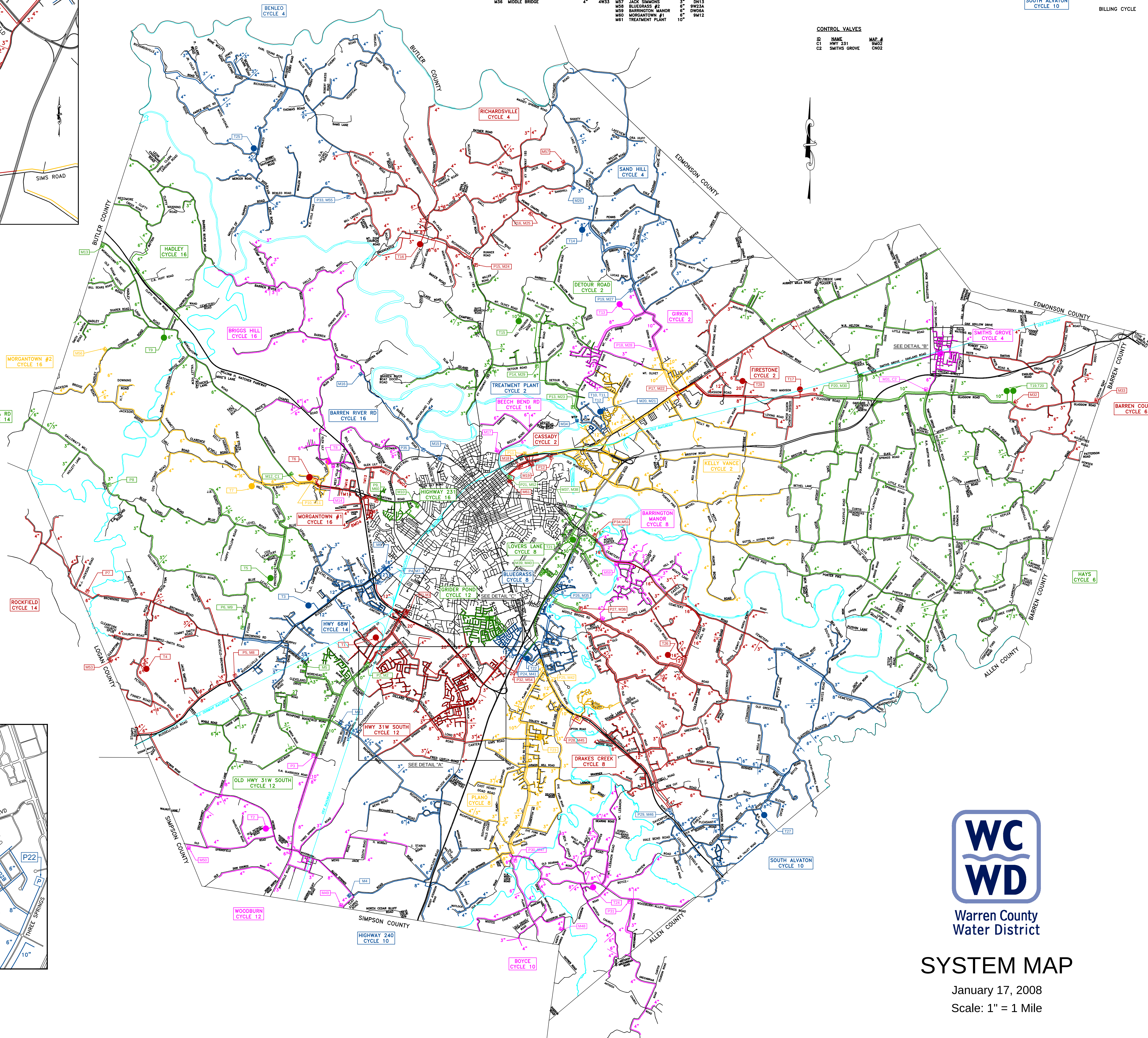
G.P.M.	MAP #	ID	NAME
900	4W59	P19	SANDHILL
600	8W31	P20	HAYS
370	8W32	P21	WICH SERVICE P.S. #2
700	8W34	P22	OLD GREENWOOD
200	4W38	P23	BLUEGRASS
175	8W18	P24	GREENWOOD
150	CW36	P25	FLANO
400	8W33	P26	ON MIDDLE BRIDGE
500	9M03	P27	MIDDLE BRIDGE
300	9M04	P28	NORTH ALVATON
2400	5N00B	P29	SOUTH ALVATON
980	1N09A	P30	BOYCE
600	GN17	P31	GREENBRIAR
350	4N56	P32	GREENWOOD #2
200	BN13	P33	BENLO

G.P.M.	MAP #
150	GN11
450	4N55
2500/5000	CW51
370	1W22
1400	9W23A
2100	CW48
750	CW08
260	4W62
400	CW46
300	CW09
200	AW40
260	AW39
60	8W35
1900	CW48
180	9M11A

LEGEND

	WATER LINE
	WATER MAIN
	PUMP STATION
	MASTER MET

CONTROL VALVES	
ID	NAME
C1	HWY 231
C2	SMITHS GROVE



LEGEND

8"	WATER LINE
P	WATER MAIN SIZE
M	PUMP STATION
●	MASTER METER
	STORAGE TANK
	SOURCE NAME
	BILLING CYCLE

Warren County
Water District

SYSTEM MAP

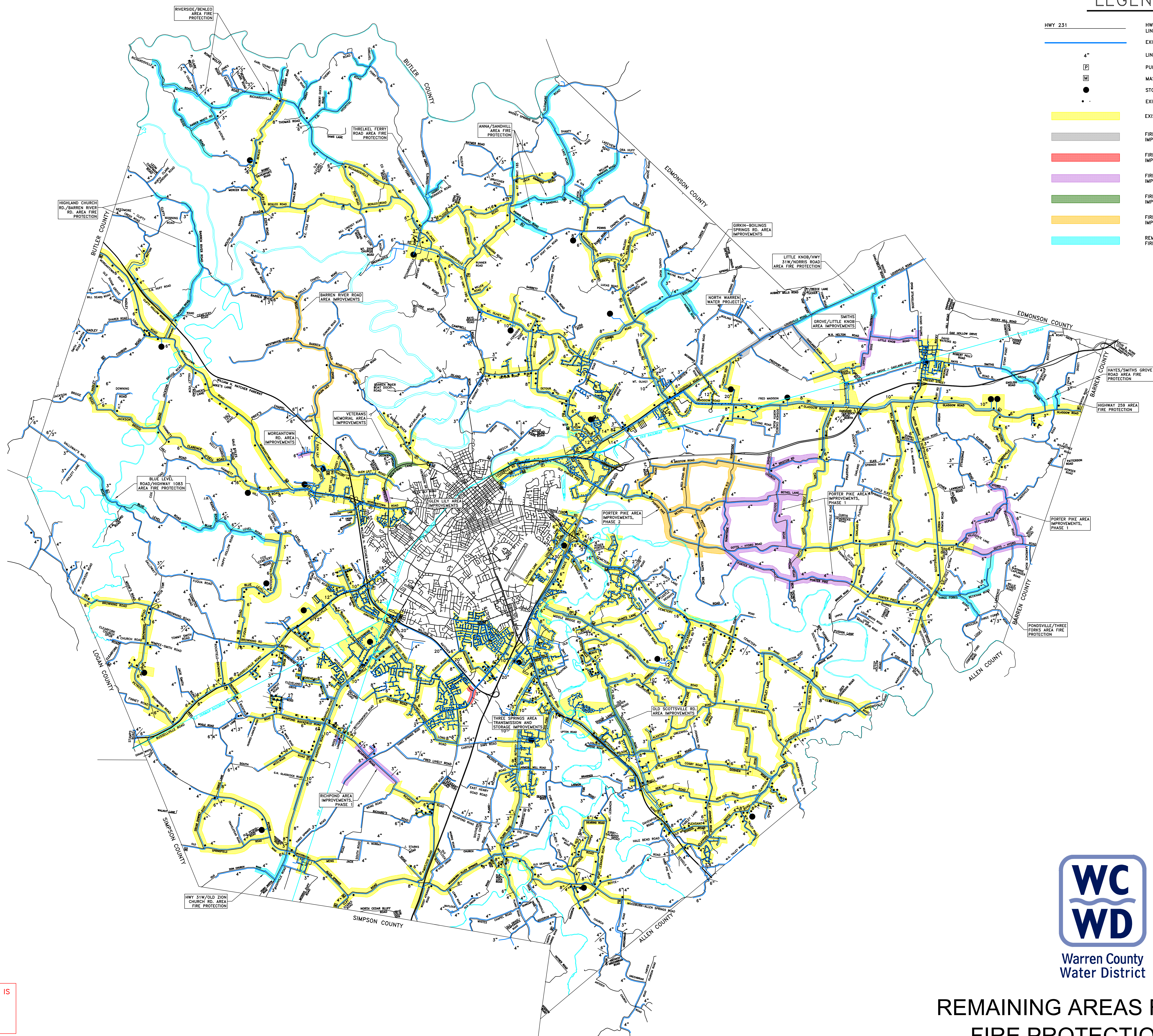
January 17, 2008
Scale: 1" = 1 Mile

APPENDIX B

FIRE PROTECTION MAP & SUMMARY OF REMAINING PROJECTS

LEGEND

HWY 231	HWY & RD CENTER LINE AND NAME
4"	EXISTING WATER LINES
P	LINE SIZE
M	PUMP STATION
●	MASTER METER
•	STORAGE TANK
	EXISTING FIRE HYDRANT
	EXISTING FIRE FLOW
	FIRE FLOW RESULTING FROM CAPITAL IMPROVEMENT PLAN PROPOSED PROJECTS
	FIRE FLOW RESULTING FROM CAPITAL IMPROVEMENT PLAN PHASE 1
	FIRE FLOW RESULTING FROM CAPITAL IMPROVEMENT PLAN PHASE 2
	FIRE FLOW RESULTING FROM CAPITAL IMPROVEMENT PLAN PHASE 3
	FIRE FLOW RESULTING FROM CAPITAL IMPROVEMENT PLAN PHASE 4
	REMAINING AREAS FROM 1993 FIRE PROTECTION PROPOSAL



NOTE: ALL INFORMATION ON THIS MAP IS FOR GENERAL ILLUSTRATION ONLY AND MAY NOT BE COMPLETELY ACCURATE. DETAILED REVIEW IS REQUIRED FOR RELIABLE, SPECIFIC INFORMATION.

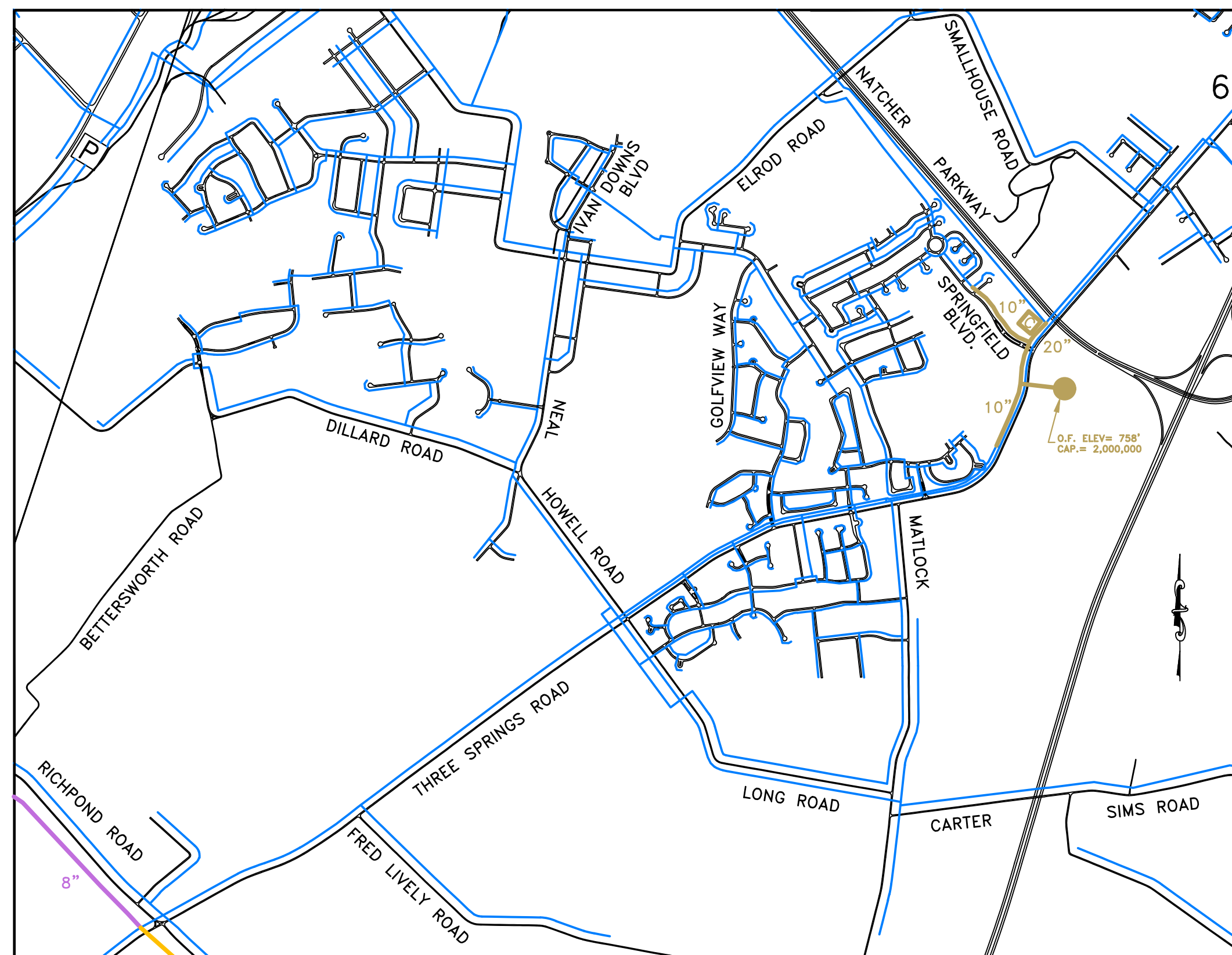


REMAINING AREAS FROM 1993 FIRE PROTECTION PLAN

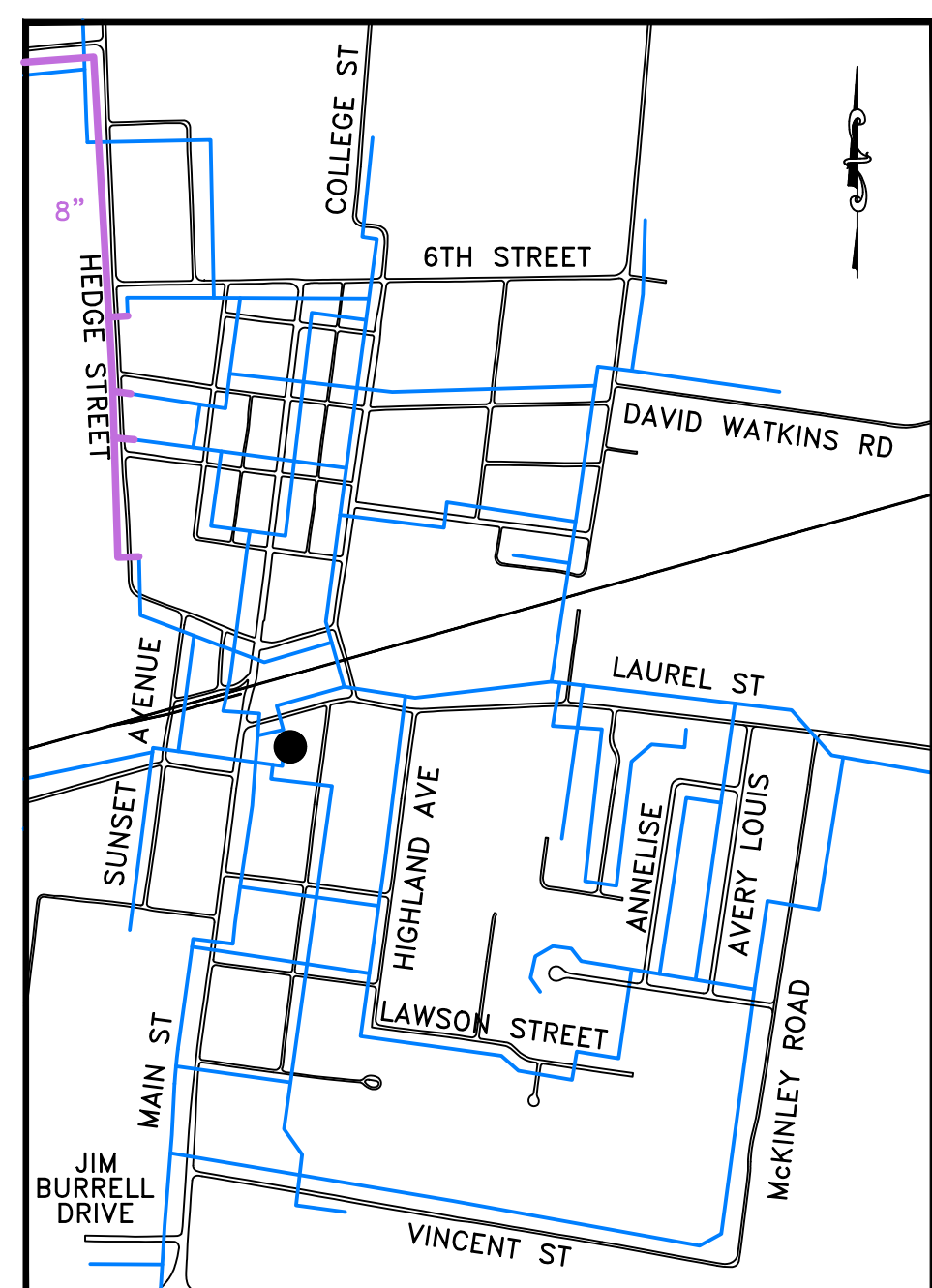
January 17, 2008
Scale: 1" = 1 Mile

APPENDIX C

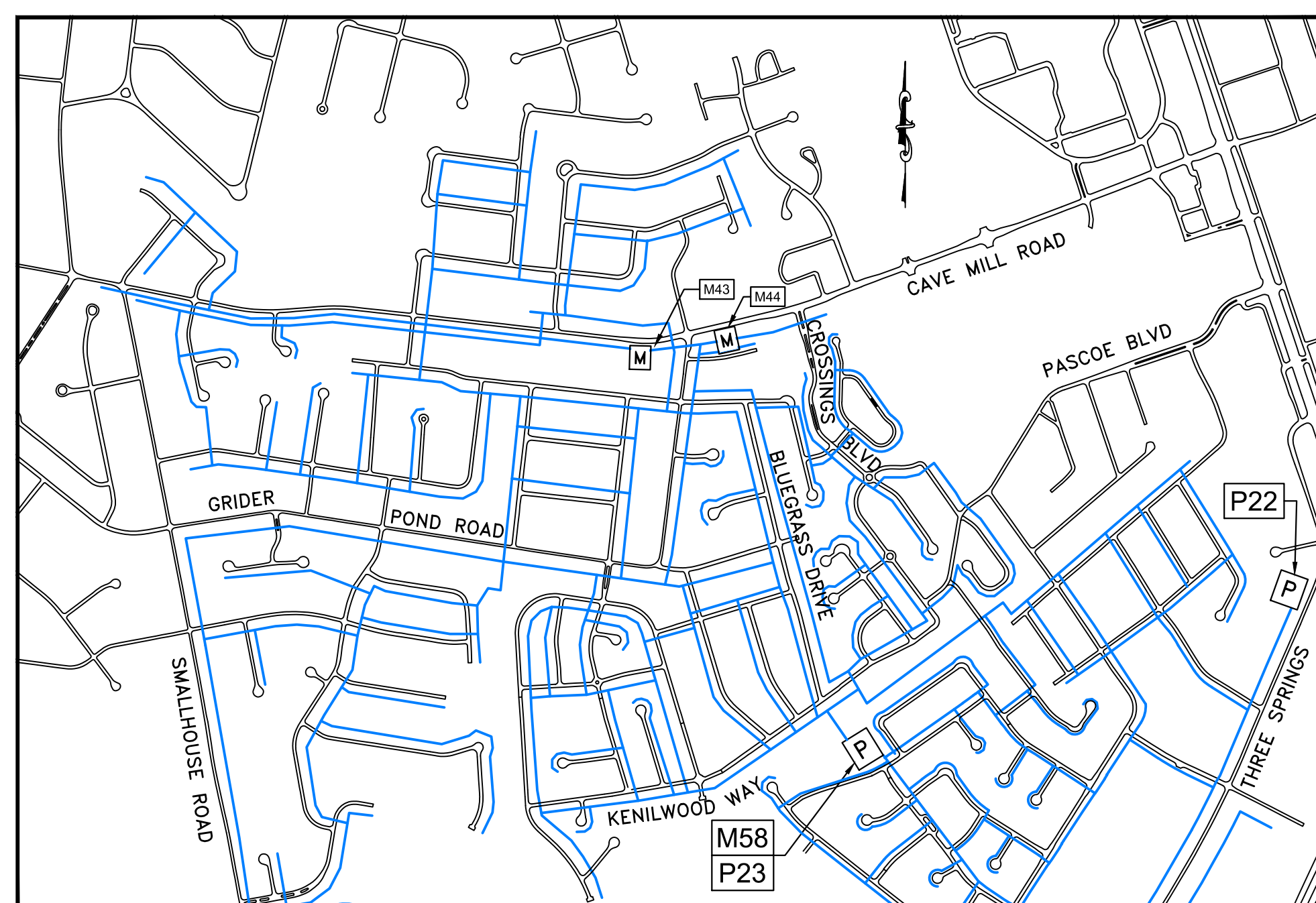
2008 CAPITAL IMPROVEMENT PLAN MAP



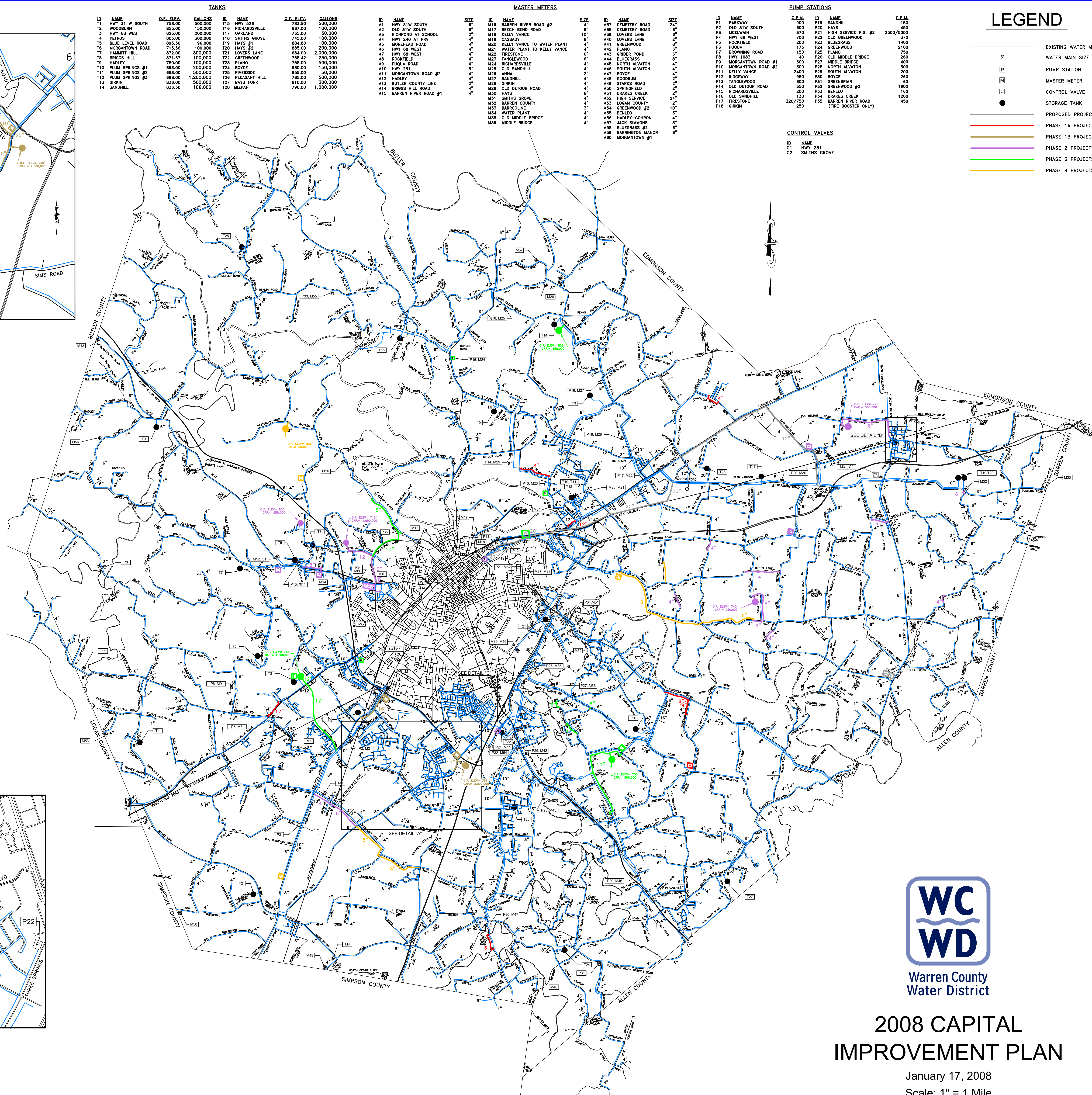
DETAIL "A"
SCALE: 1" = 2000'



DETAIL "B"
SCALE: 1" = 1000'



DETAIL "C"
SCALE: 1" = 1000'



TANKS

ID	NAME	O.F. ELEV.	GALLONS	ID	NAME	O.F. ELEV.	GALLONS
T1	HWY 31 W SOUTH	728.00	500,000	T15	HWY 526	783.50	500,000
T2	WOODBURN	855.00	150,000	T16	RICHARDSVILLE	867.00	100,000
T3	HWY 68 WEST	825.00	200,000	T17	OAKLAND	735.00	50,000
T4	PETROS	805.00	300,000	T18	SMITHS GROVE	745.00	100,000
T5	BLUE LEVEL ROAD	895.50	86,000	T19	HAYS #1	884.80	100,000
T6	MORGANTOWN ROAD	715.56	100,000	T20	HAYS #2	885.00	200,000
T7	HAMMATT HILL	872.00	300,000	T21	LOVERS LANE	684.00	2,000,000
T8	BRIGGS HILL	871.87	100,000	T22	GREENWOOD	758.42	250,000
T9	HADLEY	780.00	100,000	T23	PLANO	758.00	500,000
T10	PLUM SPRINGS #1	698.00	200,000	T24	BOYCE	830.00	150,000
T11	PLUM SPRINGS #2	698.00	500,000	T25	RIVERSIDE	855.00	50,000
T12	PLUM SPRINGS #3	698.00	1,200,000	T26	PLEASANT HILL	785.00	500,000
T13	GIRIN	836.00	500,000	T27	BAIS FORK	810.00	300,000
T14	SANDHILL	854.50	106,000	T28	MIDPAH	790.00	1,000,000

MASTER METERS

ID	NAME	SIZE	ID	NAME	SIZE
M1	HWY 31W SOUTH	6"	M37	CEMETERY ROAD	24"
M2	OLD 31W SOUTH	6"	M38	CEMETERY ROAD	6"
M3	RICHMOND AT SCHOOL	2"	M39	LOVERS LANE	6"
M4	HWY 240 AT HWY	4"	M40	LOVERS LANE	6"
M5	MOREHEAD ROAD	4"	M41	GREENWOOD	6"
M6	HWY 68 WEST	4"	M42	PLANO	6"
M7	HWY 68 WEST	4"	M43	GRIDER POND	6"
M8	ROCKFIELD	4"	M44	BLUEGRASS	6"
M9	FLUGIA ROAD	4"	M45	NORTH ALVATON	4"
M10	HWY 231	8"	M46	SOUTH ALVATON	4"
M11	MORGANTOWN ROAD #2	4"	M47	SPRINGFIELD	4"
M12	HADLEY	4"	M48	GODDUM	2"
M13	BUTLER COUNTY LINE	2"	M49	STARKS ROAD	2"
M14	BRIGGS HILL ROAD	4"	M50	HAYS	6"
M15	BARREN RIVER ROAD #1	4"	M51	DRAKES CREEK	2"

PUMP STATIONS

ID	NAME	G.P.M.	ID	NAME	G.P.M.
P1	PARKWAY	900	P19	SANDHILL	150
P2	OLD 31W SOUTH	600	P20	HAYS	450
P3	MCLAVAN	370	P21	HIGH SERVICE P.S. #2	2500/3000
P4	HWY 68 WEST	700	P22	OLD GREENWOOD	370
P5	ROCKFIELD	200	P23	BLUEGRASS	1400
P6	FLUGIA	175	P24	GREENWOOD	2100
P7	BROWNING ROAD	150	P25	PLANO	750
P8	HWY 1083	40	P26	OLD MIDDLE BRIDGE	280
P9	MORGANTOWN ROAD #1	500	P27	MIDDLE BRIDGE	400
P10	MORGANTOWN ROAD #2	300	P28	NORTH ALVATON	300
P11	KELLY VANCE	2400	P29	SOUTH ALVATON	200
P12	RIDGEWAY	980	P30	BOYCE	280
P13	TANGLEWOOD	600	P31	GREENHAR	60
P14	OLD DETOUR ROAD	350	P32	GREENWOOD #2	1900
P15	RICHARDSVILLE	120	P33	BENLO	160
P16	OLD SANDHILL	130	P34	DRAKES CREEK	1200
P17	FIRESTONE	320/750	P35	BARREN RIVER ROAD (FIRE BOOSTER ONLY)	450
P18	GIRIN	250			

CONTROL VALVES

ID	NAME
C1	HWY 231
C2	SMITHS GROVE

LEGEND

- EXISTING WATER MAIN
- WATER MAIN SIZE
- P PUMP STATION
- M MASTER METER
- C CONTROL VALVE
- STORAGE TANK
- PROPOSED PROJECTS
- PHASE 1A PROJECTS
- PHASE 1B PROJECTS
- PHASE 2 PROJECTS
- PHASE 3 PROJECTS
- PHASE 4 PROJECTS



Warren County
Water District

2008 CAPITAL IMPROVEMENT PLAN

January 17, 2008

Scale: 1" = 1 Mile

APPENDIX D

SYSTEM STORAGE FOR EACH SOURCE DURING EACH CIP PHASE



Warren County Water District
2008 Capital Improvement Plan
Storage Capacity Per Source
EXISTING SYSTEM

TANK ID	TANK NAME	CAPACITY (GALLONS)	SOURCE ID	SOURCE NAME	2007 AVERAGE DEMAND (MGD)	2010 AVERAGE DEMAND (MGD)	2020 AVERAGE DEMAND (MGD)	2030 AVERAGE DEMAND (MGD)	2040 AVERAGE DEMAND (MGD)	2007 HOURS OF STORAGE	2010 HOURS OF STORAGE	2020 HOURS OF STORAGE	2030 HOURS OF STORAGE	2040 HOURS OF STORAGE
T1	HWY 31 W SOUTH	500,000	18	HWY. 31W-SOUTH	1,426,000	1,792,600	2,576,600	2,898,600	3,216,600	7.56	6.10	4.30	3.80	3.41
			19	OLD HWY. 31W-S	162,000	174,600	216,600	257,600	298,600					
					1,588,000	1,967,200	2,793,200	3,156,200	3,515,200					
T2	WOODBURN	150,000	19A	WOODBURN	93,000	97,800	113,800	128,800	143,800	22.93	21.45	17.66	15.08	13.15
			17	HWY 240	64,000	70,000	90,000	110,000	130,000					
					157,000	167,800	203,800	238,800	273,800					
T3	HWY 68 WEST	200,000	21	HWY. 68W	274,000	289,000	337,000	383,000	428,000	17.52	16.61	14.24	12.53	11.21
T4	PETROS	300,000	22	ROCKFIELD	136,000	136,600	138,600	139,600	141,600	52.94	52.71	51.95	51.58	50.85
T5	BLUE LEVEL ROAD	96,000	23	FUQUA ROAD	91,000	96,400	114,400	132,400	149,400	25.32	23.90	20.14	17.40	15.42
T6	MORGANTOWN ROAD	100,000	24A	M-TOWN RD #1	74,000	143,000	407,000	427,000	446,000	32.43	16.78	5.90	5.62	5.38
T7	HAMMITT HILL	300,000	25	M-TOWN RD #2	95,000	95,600	97,600	98,600	99,600	75.79	75.31	73.77	73.02	72.29
T8	BRIGGS HILL	100,000	29	BRIGGS HILL	108,000	108,600	109,600	110,600	111,600	22.22	22.10	21.90	21.70	21.51
T9	HADLEY	100,000	26	HADLEY	76,000	76,000	77,000	77,000	78,000	31.58	31.58	31.17	31.17	30.77
T10	PLUM SPRINGS #1	200,000								N/A	N/A	N/A	N/A	N/A
T11	PLUM SPRINGS #2	500,000	4	PLUM SPRINGS	41,000	50,000	80,000	110,000	140,000	37.43	35.57	30.58	26.90	24.00
T12	PLUM SPRINGS #3	1,200,000	2	KELLY VANCE	1,049,000	1,097,000	1,254,000	1,407,000	1,560,000					
TOTAL		1,700,000			1,090,000	1,147,000	1,334,000	1,517,000	1,700,000					
T13	GIRKIN	500,000	6	GIRKIN	64,000	69,400	86,400	104,400	121,400	187.50	172.91	138.89	114.94	98.85
T14	SANDHILL	106,000	8	SANDHILL	125,000	126,800	132,800	137,800	143,800	20.35	20.06	19.16	18.46	17.69
T15	HWY 526	500,000	5	DETOUR RD	193,000	215,600	267,600	319,600	370,600	62.18	55.66	44.84	37.55	32.38
T16	RICHARDSVILLE	100,000	7	RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800	16.44	16.24	15.50	14.93	14.39
T17	MIZPAH	1,000,000	3	FIRESTONE	277,000	666,400	1,956,400	2,015,400	2,095,400	86.64	36.01	12.27	11.91	11.45
T18	SMITHS GROVE	100,000	9	SMITH GROVE	99,000	100,800	105,800	110,800	115,800	24.24	23.81	22.68	21.66	20.73
T19	HAYS #1	100,000	10	HAYS	405,000	416,400	450,400	484,400	518,400	14.78	14.41	13.39	12.51	11.73
T20	HAYS #2	200,000	11	BARREN COUNTY	82,000	83,200	87,200	91,200	95,200					
TOTAL		300,000			487,000	499,600	537,600	575,600	613,600					
T21	LOVERS LANE	2,000,000	12A	LOVERS LANE	158,000	196,000	283,000	314,000	346,000	303.80	244.90	169.61	152.87	138.73
T22	GREENWOOD	250,000	12	BLUEGRASS	465,000	489,000	568,000	644,000	720,000	8.29	7.89	6.83	6.04	5.41
			20	GRIDER POND	259,000	271,000	311,000	350,000	389,000					
					724,000	760,000	879,000	994,000	1,109,000					
T23	PLANO	500,000	13	PLANO	376,000	461,800	646,800	728,800	810,800	31.91	25.99	18.55	16.47	14.80
T24	BOYCE	150,000	16	BOYCE	131,000	132,200	136,200	139,200	142,200	27.48	27.23	26.43	25.86	25.32
T25	RIVERSIDE	50,000	7A	BENLEO	73,000	73,600	73,600	74,600	74,600	16.44	16.30	16.30	16.09	16.09
T26	PLEASANT HILL	500,000	14	MIDDLE BRIDGE	525,000	591,000	830,000	1,104,000	1,432,000	22.86	20.30	14.46	10.87	8.38
T27	BAYS FORK	300,000	15	SOUTH ALVATON	165,000	168,000	178,000	187,000	196,000	43.64	42.86	40.45	38.50	36.73
TOTAL SYSTEM STORAGE		9,902,000												
TOTAL SYSTEM DEMAND					8,322,000	9,583,200	13,214,200	14,763,200	16,381,200					
BGMU STORAGE			28	BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800					
BGMU STORAGE			1	CASSADY	35,000	36,200	40,200	44,200	48,200					
BGMU STORAGE			27	BARREN RIVER RD	41,000	43,400	50,400	58,400	67,400					
BGMU STORAGE			24	HWY. 231	241,000	248,200	272,200	296,200	321,200					

LEGEND	
> 24 HRS STORAGE	
>15, <24 HRS STORAGE	
< 15 HRS STORAGE	
< 5 HRS STORAGE	

Warren County Water District
2008 Capital Improvement Plan
Storage Capacity Per Source
POST PHASE 1

TANK ID	TANK NAME	CAPACITY (GALLONS)	SOURCE ID	SOURCE NAME	2007 AVERAGE DEMAND (MGD)	2010 AVERAGE DEMAND (MGD)	2020 AVERAGE DEMAND (MGD)	2030 AVERAGE DEMAND (MGD)	2040 AVERAGE DEMAND (MGD)	2007 HOURS OF STORAGE	2010 HOURS OF STORAGE	2020 HOURS OF STORAGE	2030 HOURS OF STORAGE	2040 HOURS OF STORAGE
T1	HWY 31 W SOUTH	500,000	18	HWY. 31W-SOUTH	213,900	268,890	386,490	434,790	482,490	31.92	27.06	19.90	17.33	15.36
			19	OLD HWY. 31W-S	162,000	174,600	216,600	257,600	298,600					
					375,900	443,490	603,090	692,390	781,090					
NEW THREE SPRINGS		2,000,000	NEW 20	THREE SPRINGS GRIDER POND	1,212,100	1,523,710	2,190,110	2,463,810	2,734,110	28.97	24.12	17.59	15.63	14.07
					445,000	466,600	538,200	607,600	677,000					
					1,657,100	1,990,310	2,728,310	3,071,410	3,411,110					
T2	WOODBURN	150,000	19A	WOODBURN	93,000	97,800	113,800	128,800	143,800	22.93	21.45	17.66	15.08	13.15
			17	HWY 240	64,000	70,000	90,000	110,000	130,000					
					157,000	167,800	203,800	238,800	273,800					
T3	HWY 68 WEST	200,000	21	HWY. 68W	274,000	289,000	337,000	383,000	428,000	17.52	16.61	14.24	12.53	11.21
T4	PETROS	300,000	22	ROCKFIELD	136,000	136,600	138,600	139,600	141,600	52.94	52.71	51.95	51.58	50.85
T5	BLUE LEVEL ROAD	96,000	23	FUQUA ROAD	91,000	96,400	114,400	132,400	149,400	25.32	23.90	20.14	17.40	15.42
T6	MORGANTOWN ROAD	100,000	24A	M-TOWN RD #1	74,000	143,000	407,000	427,000	446,000	32.43	16.78	5.90	5.62	5.38
T7	HAMMITT HILL	300,000	25	M-TOWN RD #2	95,000	95,600	97,600	98,600	99,600	75.79	75.31	73.77	73.02	72.29
T8	BRIGGS HILL	100,000	29	BRIGGS HILL	108,000	108,600	109,600	110,600	111,600	22.22	22.10	21.90	21.70	21.51
T9	HADLEY	100,000	26	HADLEY	76,000	76,000	77,000	77,000	78,000	31.58	31.58	31.17	31.17	30.77
T10	PLUM SPRINGS #1	200,000								N/A	N/A	N/A	N/A	N/A
T11	PLUM SPRINGS #2	500,000	4	PLUM SPRINGS	41,000	50,000	80,000	110,000	140,000	37.43	35.57	30.58	26.90	24.00
T12	PLUM SPRINGS #3	1,200,000	2	KELLY VANCE	1,049,000	1,097,000	1,254,000	1,407,000	1,560,000					
TOTAL		1,700,000			1,090,000	1,147,000	1,334,000	1,517,000	1,700,000					
T13	GIRKIN	500,000	6	GIRKIN	64,000	69,400	86,400	104,400	121,400	187.50	172.91	138.89	114.94	98.85
T14	SANDHILL	106,000	8	SANDHILL	125,000	126,800	132,800	137,800	143,800	20.35	20.06	19.16	18.46	17.69
T15	HWY 526	500,000	5	DETOUR RD	193,000	215,600	267,600	319,600	370,600	62.18	55.66	44.84	37.55	32.38
T16	RICHARDSVILLE	100,000	7	RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800	16.44	16.24	15.50	14.93	14.39
T17	MIZPAH	1,000,000	3	FIRESTONE	560,500	957,880	2,271,680	2,354,480	2,458,280	42.82	25.06	10.56	10.19	9.76
T18	SMITHS GROVE	100,000	9	SMITH GROVE	99,000	100,800	105,800	110,800	115,800	24.24	23.81	22.68	21.66	20.73
T19	HAYS #1	100,000	10	HAYS	121,500	124,920	135,120	145,320	155,520	35.38	34.60	32.39	30.44	28.72
T20	HAYS #2	200,000	11	BARREN COUNTY	82,000	83,200	87,200	91,200	95,200					
TOTAL		300,000			203,500	208,120	222,320	236,520	250,720					
T21	LOVERS LANE	2,000,000	12A	LOVERS LANE	158,000	196,000	283,000	314,000	346,000	303.80	244.90	169.61	152.87	138.73
T22	GREENWOOD	250,000	12	BLUEGRASS	279,000	293,400	340,800	386,400	432,000	21.51	20.45	17.61	15.53	13.89
T23	PLANO	500,000	13	PLANO	376,000	461,800	646,800	728,800	810,800	31.91	25.99	18.55	16.47	14.80
T24	BOYCE	150,000	16	BOYCE	131,000	132,200	136,200	139,200	142,200	27.48	27.23	26.43	25.86	25.32
T25	RIVERSIDE	50,000	7A	BENLEO	73,000	73,600	73,600	74,600	74,600	16.44	16.30	16.30	16.09	16.09
T26	PLEASANT HILL	500,000	14	MIDDLE BRIDGE	525,000	591,000	830,000	1,104,000	1,432,000	22.86	20.30	14.46	10.87	8.38
T27	BAYS FORK	300,000	15	SOUTH ALVATON	165,000	168,000	178,000	187,000	196,000	43.64	42.86	40.45	38.50	36.73
TOTAL SYSTEM STORAGE		11,902,000												
TOTAL SYSTEM DEMAND					7,232,000	8,436,200	11,880,200	13,246,200	14,681,200					
BGMU STORAGE			28	BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800					
BGMU STORAGE			1	CASSADY	35,000	36,200	40,200	44,200	48,200					
BGMU STORAGE			27	BARREN RIVER RD	41,000	43,400	50,400	58,400	67,400					
BGMU STORAGE			24	HWY. 231	241,000	248,200	272,200	296,200	321,200					

LEGEND	
> 24 HRS STORAGE	
>15, <24 HRS STORAGE	
< 15 HRS STORAGE	
< 5 HRS STORAGE	

Warren County Water District
2008 Capital Improvement Plan
Storage Capacity Per Source
POST PHASE 2

TANK ID	TANK NAME	CAPACITY (GALLONS)	SOURCE ID	SOURCE NAME	2007 AVERAGE DEMAND (MGD)	2010 AVERAGE DEMAND (MGD)	2020 AVERAGE DEMAND (MGD)	2030 AVERAGE DEMAND (MGD)	2040 AVERAGE DEMAND (MGD)	2007 HOURS OF STORAGE	2010 HOURS OF STORAGE	2020 HOURS OF STORAGE	2030 HOURS OF STORAGE	2040 HOURS OF STORAGE
T1	HWY 31 W SOUTH	500,000	18	HWY. 31W-SOUTH OLD HWY. 31W-S	213,900 162,000 375,900	268,890 174,600 443,490	386,490 216,600 603,090	434,790 257,600 692,390	482,490 298,600 781,090	31.92	27.06	19.90	17.33	15.36
NEW THREE SPRINGS		2,000,000	NEW 20	THREE SPRINGS GRIDER POND	1,212,100 445,000 1,657,100	1,523,710 466,600 1,990,310	2,190,110 538,200 2,728,310	2,463,810 607,600 3,071,410	2,734,110 677,000 3,411,110	28.97	24.12	17.59	15.63	14.07
T2	WOODBURN	150,000	19A 17	WOODBURN HWY 240	93,000 64,000 157,000	97,800 70,000 167,800	113,800 90,000 203,800	128,800 110,000 238,800	143,800 130,000 273,800	22.93	21.45	17.66	15.08	13.15
T3	HWY 68 WEST	200,000	21	HWY. 68W	274,000	289,000	337,000	383,000	428,000	17.52	16.61	14.24	12.53	11.21
T4	PETROS	300,000	22	ROCKFIELD	136,000	136,600	138,600	139,600	141,600	52.94	52.71	51.95	51.58	50.85
T5	BLUE LEVEL ROAD	96,000	23	FUQUA ROAD	91,000	96,400	114,400	132,400	149,400	25.32	23.90	20.14	17.40	15.42
T6	MORGANTOWN ROAD	400,000								N/A	N/A	N/A	N/A	N/A
NEW GLEN LILLY		1,000,000	24A 24 27	M-TOWN RD #1 HWY. 231 BARREN RIVER RD	74,000 192,800 41,000 307,800	143,000 198,560 43,400 384,960	407,000 217,760 50,400 675,160	427,000 236,960 58,400 722,360	446,000 256,960 67,400 770,360	77.97	62.34	35.55	33.22	31.15
T7	HAMMITT HILL	300,000	25	M-TOWN RD #2	95,000	95,600	97,600	98,600	99,600	75.79	75.31	73.77	73.02	72.29
T8	BRIGGS HILL	400,000								N/A	N/A	N/A	N/A	N/A
NEW HILLTOP TRAIL		250,000	29	BRIGGS HILL	108,000	108,600	109,600	110,600	111,600	55.56	55.25	54.74	54.25	53.76
T9	HADLEY	100,000	26	HADLEY	76,000	76,000	77,000	77,000	78,000	31.58	31.58	31.17	31.17	30.77
T10	PLUM SPRINGS #1	200,000								N/A	N/A	N/A	N/A	N/A
T11	PLUM SPRINGS #2	500,000	4	PLUM SPRINGS	41,000	50,000	80,000	110,000	140,000	41.42	39.33	33.76	29.64	26.42
T12	PLUM SPRINGS #3	1,200,000	2	KELLY VANCE	944,100	987,300	1,128,600	1,266,300	1,404,000					
TOTAL		1,700,000			985,100	1,037,300	1,208,600	1,376,300	1,544,000					
NEW PORTER PIKE		250,000	NEW	PORTER PIKE	165,650	172,160	192,960	213,360	233,760	36.22	34.85	31.09	28.12	25.67
T13	GIRKIN	500,000	6	GIRKIN	64,000	69,400	86,400	104,400	121,400	187.50	172.91	138.89	114.94	98.85
T14	SANDHILL	106,000	8	SANDHILL	125,000	126,800	132,800	137,800	143,800	20.35	20.06	19.16	18.46	17.69
T15	HWY 526	500,000	5	DETOUR RD	193,000	215,600	267,600	319,600	370,600	62.18	55.66	44.84	37.55	32.38
T16	RICHARDSVILLE	100,000	7	RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800	16.44	16.24	15.50	14.93	14.39
T17	MIZPAH	1,000,000	3	FIRESTONE	499,750	895,420	2,204,120	2,281,820	2,380,520	48.02	26.80	10.89	10.52	10.08
T18	SMITHS GROVE	400,000								N/A	N/A	N/A	N/A	N/A
NEW LITTLE KNOB		500,000	9	SMITH GROVE	99,000	100,800	105,800	110,800	115,800	121.21	119.05	113.42	108.30	103.63
T19	HAYS #1	100,000	10	HAYS	121,500	124,920	135,120	145,320	155,520	35.38	34.60	32.39	30.44	28.72
T20	HAYS #2	200,000	11	BARREN COUNTY	82,000	83,200	87,200	91,200	95,200					
TOTAL		300,000			203,500	208,120	222,320	236,520	250,720					
T21	LOVERS LANE	2,000,000	12A	LOVERS LANE	158,000	196,000	283,000	314,000	346,000	303.80	244.90	169.61	152.87	138.73
T22	GREENWOOD	250,000	12	BLUEGRASS	279,000	293,400	340,800	386,400	432,000	21.51	20.45	17.61	15.53	13.89
T23	PLANO	500,000	13	PLANO	376,000	461,800	646,800	728,800	810,800	31.91	25.99	18.55	16.47	14.80
T24	BOYCE	150,000	16	BOYCE	131,000	132,200	136,200	139,200	142,200	27.48	27.23	26.43	25.86	25.32
T25	RIVERSIDE	50,000	7A	BENLEO	73,000	73,600	73,600	74,600	74,600	16.44	16.30	16.30	16.09	16.09
T26	PLEASANT HILL	500,000	14	MIDDLE BRIDGE	525,000	591,000	830,000	1,104,000	1,432,000	22.86	20.30	14.46	10.87	8.38
T27	BAYS FORK	300,000	15	SOUTH ALVATON	165,000	168,000	178,000	187,000	196,000	43.64	42.86	40.45	38.50	36.73
TOTAL SYSTEM STORAGE		13,602,000												
TOTAL SYSTEM DEMAND					7,465,800	8,678,160	12,148,360	13,541,560	15,005,560					
BGMU STORAGE			28	BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800					
BGMU STORAGE			1	CASSADY	35,000	36,200	40,200	44,200	48,200					
BGMU STORAGE														
BGMU STORAGE			24	HWY. 231	48,200	49,640	54,440	59,240	64,240					

LEGEND	
> 24 HRS STORAGE	
>15, <24 HRS STORAGE	
< 15 HRS STORAGE	
< 5 HRS STORAGE	

Warren County Water District
2008 Capital Improvement Plan
Storage Capacity Per Source
POST PHASE 3

TANK ID	TANK NAME	CAPACITY (GALLONS)	SOURCE ID	SOURCE NAME	2007 AVERAGE DEMAND (MGD)	2010 AVERAGE DEMAND (MGD)	2020 AVERAGE DEMAND (MGD)	2030 AVERAGE DEMAND (MGD)	2040 AVERAGE DEMAND (MGD)	2007 HOURS OF STORAGE	2010 HOURS OF STORAGE	2020 HOURS OF STORAGE	2030 HOURS OF STORAGE	2040 HOURS OF STORAGE
T1	HWY 31 W SOUTH	500,000	18	HWY. 31W-SOUTH	213,900	268,890	386,490	434,790	482,490	31.92	27.06	19.90	17.33	15.36
			19	OLD HWY. 31W-S	162,000	174,600	216,600	257,600	298,600					
					375,900	443,490	603,090	692,390	781,090					
NEW THREE SPRINGS		2,000,000	NEW	THREE SPRINGS GRIDER POND	1,212,100	1,523,710	2,190,110	2,463,810	2,734,110	28.97	24.12	17.59	15.63	14.07
			20		445,000	466,600	538,200	607,600	677,000					
					1,657,100	1,990,310	2,728,310	3,071,410	3,411,110					
T2	WOODBURN	150,000	19A	WOODBURN HWY 240	93,000	97,800	113,800	128,800	143,800	22.93	21.45	17.66	15.08	13.15
			17		64,000	70,000	90,000	110,000	130,000					
					157,000	167,800	203,800	238,800	273,800					
T3	HWY 68 WEST	200,000	21	HWY. 68W	82,200	86,700	101,100	114,900	128,400	58.39	55.36	47.48	41.78	37.38
NEW HWY 68W RESERVOIR		1,000,000	NEW	NEW HWY 68W	191,800	202,300	235,900	268,100	299,600	125.13	118.64	101.74	89.52	80.11
T4	PETROS	300,000	22	ROCKFIELD	136,000	136,600	138,600	139,600	141,600	52.94	52.71	51.95	51.58	50.85
T5	BLUE LEVEL ROAD	96,000	23	FUQUA ROAD	91,000	96,400	114,400	132,400	149,400	25.32	23.90	20.14	17.40	15.42
T6	MORGANTOWN ROAD	400,000								N/A	N/A	N/A	N/A	N/A
NEW GLEN LILLY		1,000,000	24A	M-TOWN RD #1	74,000	143,000	407,000	427,000	446,000	77.97	62.34	35.55	33.22	31.15
			24	HWY. 231	192,800	198,560	217,760	236,960	256,960					
			27	BARREN RIVER RD	41,000	43,400	50,400	58,400	67,400					
					307,800	384,960	675,160	722,360	770,360					
T7	HAMMITT HILL	300,000	25	M-TOWN RD #2	95,000	95,600	97,600	98,600	99,600	75.79	75.31	73.77	73.02	72.29
T8	BRIGGS HILL	400,000								N/A	N/A	N/A	N/A	N/A
NEW HILLTOP TRAIL		250,000	29	BRIGGS HILL	108,000	108,600	109,600	110,600	111,600	55.56	55.25	54.74	54.25	53.76
T9	HADLEY	100,000	26	HADLEY	76,000	76,000	77,000	77,000	78,000	31.58	31.58	31.17	31.17	30.77
T10	PLUM SPRINGS #1	200,000								N/A	N/A	N/A	N/A	N/A
T11	PLUM SPRINGS #2	500,000	4	PLUM SPRINGS	41,000	50,000	80,000	110,000	140,000	41.42	39.33	33.76	29.64	26.42
T12	PLUM SPRINGS #3	1,200,000	2	KELLY VANCE	944,100	987,300	1,128,600	1,266,300	1,404,000					
TOTAL		1,700,000			985,100	1,037,300	1,208,600	1,376,300	1,544,000					
NEW PORTER PIKE		250,000	NEW	PORTER PIKE	165,650	172,160	192,960	213,360	233,760	36.22	34.85	31.09	28.12	25.67
T13	GIRKIN	500,000	6	GIRKIN	64,000	69,400	86,400	104,400	121,400	187.50	172.91	138.89	114.94	98.85
T14	SANDHILL	406,000								N/A	N/A	N/A	N/A	N/A
NEW SANDHILL		150,000	8	SANDHILL	125,000	126,800	132,800	137,800	143,800	28.80	28.39	27.11	26.12	25.03
T15	HWY 526	500,000	5	DETOUR RD	193,000	215,600	267,600	319,600	370,600	62.18	55.66	44.84	37.55	32.38
T16	RICHARDSVILLE	100,000	7	RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800	16.44	16.24	15.50	14.93	14.39
T17	MIZPAH	1,000,000	3	FIRESTONE	499,750	895,420	2,204,120	2,281,820	2,380,520	48.02	26.80	10.89	10.52	10.08
T18	SMITHS GROVE	400,000								N/A	N/A	N/A	N/A	N/A
NEW LITTLE KNOB		500,000	9	SMITH GROVE	99,000	100,800	105,800	110,800	115,800	121.21	119.05	113.42	108.30	103.63
T19	HAYS #1	100,000	10	HAYS	121,500	124,920	135,120	145,320	155,520	35.38	34.60	32.39	30.44	28.72
T20	HAYS #2	200,000	11	BARREN COUNTY	82,000	83,200	87,200	91,200	95,200					
TOTAL		300,000			203,500	208,120	222,320	236,520	250,720					
T21	LOVERS LANE	2,000,000	12A	LOVERS LANE	158,000	196,000	283,000	314,000	346,000	303.80	244.90	169.61	152.87	138.73
T22	GREENWOOD	250,000	12	BLUEGRASS	279,000	293,400	340,800	386,400	432,000	21.51	20.45	17.61	15.53	13.89
T23	PLANO	500,000	13	PLANO	349,680	438,710	627,396	721,512	802,692	34.32	27.35	19.13	16.63	14.95
T24	BOYCE	150,000	16	BOYCE	131,000	132,200	136,200	139,200	142,200	27.48	27.23	26.43	25.86	25.32
T25	RIVERSIDE	50,000	7A	BENLEO	73,000	73,600	73,600	74,600	74,600	16.44	16.30	16.30	16.09	16.09
T26	PLEASANT HILL	500,000	14	MIDDLE BRIDGE	420,000	472,800	664,000	883,200	1,145,600	28.57	25.38	18.07	13.59	10.47
NEW GREATHOUSE RD		500,000	NEW	OLD SCOTTSVILLE RD	115,570	114,324	173,440	194,968	251,548	103.83	104.96	69.19	61.55	47.70
T27	BAYS FORK	300,000	15	SOUTH ALVATON	180,750	185,730	202,900	220,120	238,960	39.83	38.77	35.49	32.71	30.13
TOTAL SYSTEM STORAGE		15,146,000												
TOTAL SYSTEM DEMAND					7,465,800	8,668,924	12,161,296	13,541,560	15,005,560					
BGMU STORAGE			28	BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800					
BGMU STORAGE			1	CASSADY	35,000	36,200	40,200	44,200	48,200					
BGMU STORAGE			24	HWY. 231	48,200	49,640	54,440	59,240	64,240					

LEGEND	
> 24 HRS STORAGE	
>15, <24 HRS STORAGE	
< 15 HRS STORAGE	
< 5 HRS STORAGE	

Warren County Water District
2008 Capital Improvement Plan
Storage Capacity Per Source
POST PHASE 4

TANK ID	TANK NAME	CAPACITY (GALLONS)	SOURCE ID	SOURCE NAME	2007 AVERAGE DEMAND (MGD)	2010 AVERAGE DEMAND (MGD)	2020 AVERAGE DEMAND (MGD)	2030 AVERAGE DEMAND (MGD)	2040 AVERAGE DEMAND (MGD)	2007 HOURS OF STORAGE	2010 HOURS OF STORAGE	2020 HOURS OF STORAGE	2030 HOURS OF STORAGE	2040 HOURS OF STORAGE
T1	HWY 31 W SOUTH	500,000	18	HWY. 31W-SOUTH	213,900	268,890	386,490	434,790	482,490	31.92	27.06	19.90	17.33	15.36
			19	OLD HWY. 31W-S	162,000	174,600	216,600	257,600	298,600					
					375,900	443,490	603,090	692,390	781,090					
	NEW THREE SPRINGS	2,000,000	NEW 20	THREE SPRINGS GRIDER POND	1,212,100	1,523,710	2,190,110	2,463,810	2,734,110	28.97	24.12	17.59	15.63	14.07
					445,000	466,600	538,200	607,600	677,000					
					1,657,100	1,990,310	2,728,310	3,071,410	3,411,110					
	T2 WOODBURN	150,000	19A	WOODBURN HWY 240	93,000	97,800	113,800	128,800	143,800	22.93	21.45	17.66	15.08	13.15
			17		64,000	70,000	90,000	110,000	130,000					
					157,000	167,800	203,800	238,800	273,800					
	T3 HWY 68 WEST	200,000	21	HWY. 68W	82,200	86,700	101,100	114,900	128,400	58.39	55.36	47.48	41.78	37.38
	NEW HWY 68W RESERVOIR	1,000,000	NEW	NEW HWY 68W	191,800	202,300	235,900	268,100	299,600	125.13	118.64	101.74	89.52	80.11
	T4 PETROS	300,000	22	ROCKFIELD	136,000	136,600	138,600	139,600	141,600	52.94	52.71	51.95	51.58	50.85
	T5 BLUE LEVEL ROAD	96,000	23	FUQUA ROAD	91,000	96,400	114,400	132,400	149,400	25.32	23.90	20.14	17.40	15.42
	T6 MORGANTOWN ROAD	400,000								N/A	N/A	N/A	N/A	N/A
	NEW GLEN LILLY	1,000,000	24A	M-TOWN RD #1	74,000	143,000	407,000	427,000	446,000	77.97	62.34	35.55	33.22	31.15
			24	HWY. 231	192,800	198,560	217,760	236,960	256,960					
			27	BARREN RIVER RD	41,000	43,400	50,400	58,400	67,400					
					307,800	384,960	675,160	722,360	770,360					
	T7 HAMMITT HILL	300,000	25	M-TOWN RD #2	95,000	95,600	97,600	98,600	99,600	75.79	75.31	73.77	73.02	72.29
	T8 BRIGGS HILL	400,000								N/A	N/A	N/A	N/A	N/A
	NEW HILLTOP TRAIL	250,000	29	BRIGGS HILL	86,400	90,138	93,160	94,010	94,860	69.44	66.56	64.41	63.82	63.25
	NEW BARREN RIVER ROAD	50,000	NEW	BARREN RIVER ROAD	21,600	18,462	16,440	16,590	16,740	55.56	65.00	72.99	72.33	71.68
	T9 HADLEY	100,000	26	HADLEY	76,000	76,000	77,000	77,000	78,000	31.58	31.58	31.17	31.17	30.77
	T10 PLUM SPRINGS #1	200,000								N/A	N/A	N/A	N/A	N/A
	T11 PLUM SPRINGS #2	500,000	4	PLUM SPRINGS	41,000	50,000	80,000	110,000	140,000	41.42	39.33	33.76	29.64	26.42
	T12 PLUM SPRINGS #3	1,200,000	2	KELLY VANCE	944,100	987,300	1,128,600	1,266,300	1,404,000					
	TOTAL	1,700,000			985,100	1,037,300	1,208,600	1,376,300	1,544,000					
	NEW PORTER PIKE	250,000	NEW	PORTER PIKE	165,650	172,160	192,960	213,360	233,760	36.22	34.85	31.09	28.12	25.67
	T13 GIRKIN	500,000	6	GIRKIN	64,000	69,400	86,400	104,400	121,400	187.50	172.91	138.89	114.94	98.85
	T14 SANDHILL	406,000								N/A	N/A	N/A	N/A	N/A
	NEW SANDHILL	150,000	8	SANDHILL	125,000	126,800	132,800	137,800	143,800	28.80	28.39	27.11	26.12	25.03
	T15 HWY 526	500,000	5	DETOUR RD	193,000	215,600	267,600	319,600	370,600	62.18	55.66	44.84	37.55	32.38
	T16 RICHARDSVILLE	100,000	7	RICHARDSVILLE	146,000	147,800	154,800	160,800	166,800	16.44	16.24	15.50	14.93	14.39
	T17 MIZPAH	1,000,000	3	FIRESTONE	499,750	895,420	2,204,120	2,281,820	2,380,520	48.02	26.80	10.89	10.52	10.08
	T18 SMITHS GROVE	400,000								N/A	N/A	N/A	N/A	N/A
	NEW LITTLE KNOB	500,000	9	SMITH GROVE	99,000	100,800	105,800	110,800	115,800	121.21	119.05	113.42	108.30	103.63
	T19 HAYS #1	100,000	10	HAYS	121,500	124,920	135,120	145,320	155,520	35.38	34.60	32.39	30.44	28.72
	T20 HAYS #2	200,000	11	BARREN COUNTY	82,000	83,200	87,200	91,200	95,200					
	TOTAL	300,000			203,500	208,120	222,320	236,520	250,720					
	T21 LOVERS LANE	2,000,000	12A	LOVERS LANE	158,000	196,000	283,000	314,000	346,000	303.80	244.90	169.61	152.87	138.73
	T22 GREENWOOD	250,000	12	BLUEGRASS	279,000	293,400	340,800	386,400	432,000	21.51	20.45	17.61	15.53	13.89
	T23 PLANO	500,000	13	PLANO	349,680	438,710	627,396	721,512	802,692	34.32	27.35	19.13	16.63	14.95
	T24 BOYCE	150,000	16	BOYCE	131,000	132,200	136,200	139,200	142,200	27.48	27.23	26.43	25.86	25.32
	T25 RIVERSIDE	50,000	7A	BENLEO	73,000	73,600	73,600	74,600	74,600	16.44	16.30	16.30	16.09	16.09
	T26 PLEASANT HILL	500,000	14	MIDDLE BRIDGE	420,000	472,800	664,000	883,200	1,145,600	28.57	25.38	18.07	13.59	10.47
	NEW GREATHOUSE RD	500,000	NEW	OLD SCOTTSVILLE RD	115,570	114,324	173,440	194,968	251,548	103.83	104.96	69.19	61.55	47.70
	T27 BAYS FORK	300,000	15	SOUTH ALVATON	180,750	185,730	202,900	220,120	238,960	39.83	38.77	35.49	32.71	30.13
	TOTAL SYSTEM STORAGE	15,196,000												
	TOTAL SYSTEM DEMAND				7,465,800	8,668,924	12,181,296	13,541,560	15,005,560					
	BGMU STORAGE		28	BEECH BEND RD.	25,000	26,800	31,800	36,800	41,800					
	BGMU STORAGE		1	CASSADY	35,000	36,200	40,200	44,200	48,200					
	BGMU STORAGE													
	BGMU STORAGE		24	HWY. 231	48,200	49,640	54,440	59,240	64,240					

LEGEND	
> 24 HRS STORAGE	
>15, <24 HRS STORAGE	
* 15 HRS STORAGE	
< 5 HRS STORAGE	