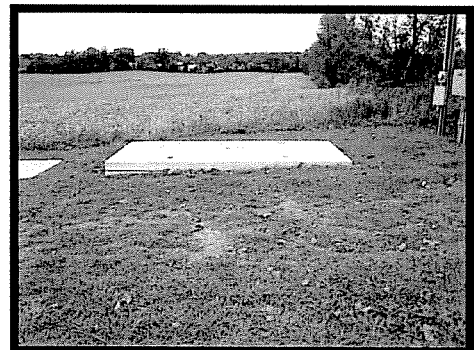
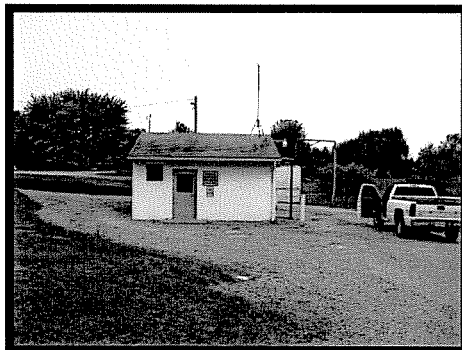
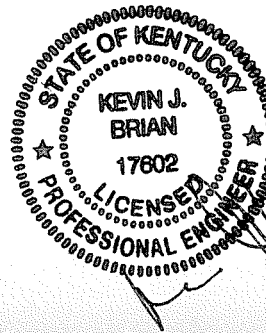


Final Engineering Report KY 228/Rhodelia Water System Expansion Project



Meade County Water District Brandenburg, Kentucky



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November 2009

HDR | Quest

Final Engineering Report

KY 228/Rhodelia Water System Expansion Project Meade County Water District

General

The purpose of this Final Engineering Report (FER) is to provide necessary information to the United States Department of Agriculture's, Rural Utilities Services, in order to acquire funding to construct the proposed water system expansion that is being planned by the Meade County Water District (MCWD). The expansion is to accommodate the continued growth of western Meade County and improve the health and safety of residents by providing potable water.

This report updates the *Preliminary Engineering Report* dated October 2007 prepared by HDR|Quest. These updates provide: revisions to the proposed water system improvements; actual bid costs; and summary addendum that assesses the financial position of Meade County Water District. The following maps are provided in Appendix A:

- Figure 1 – Location Map
- Figure 2 – Water Distribution System Map
- Figure 3 – Water System Expansion Map

Project Planning Area

Location

MCWD currently serves 3,800 residential and commercial customers in Meade County, Kentucky. MCWD also has two wholesale customers; the City of Louisville (Otter Creek Park) and Doe Valley.

The general location of Meade County is shown in Figure 1.

Environmental Resources Present

- Land Use - The MCWD service area includes areas west of the Fort Knox Military Reservation and outside the City of Brandenburg. Communities currently served include Flaherty, Ekron and Payneville,-Battletown and Garrett. Land use is predominantly agricultural but also includes residential and commercial in the area of the aforementioned communities.

- Land Features

- Topography - Meade County is in the Mississippian Plateaus Region of northern Kentucky. The Ohio River marks the northern boundary. The normal pool elevation of the river, 383 feet, is the lowest elevation in the county. Most of Meade County is a karst (sinkhole) plain of low local relief. Sinkholes abound in this area, and surface streams are rare except close to the valley of the Ohio River. Elevations on the karst plain range from approximately 700 to 750 feet on the east to 600 to 650 feet on the west. The sinkhole topography is interrupted by an occasional hill or ridge that stands above the general plain level.
- Floodplain - The planning area for new construction was not identified as being flood prone.
- Water Supply - MCWD currently purchases its water from two wholesalers. Forty percent is purchased from the City of Brandenburg at a rate of 1.15 per 1,000 gallons. Sixty percent is purchased from Hardin County Water District at a rate of \$1.41 per 1,000 gallons.
- Historical/Archaeological Sites - The planning area for new construction has been reviewed by the Kentucky Heritage Council and no archaeological survey is required. The new construction is predominantly along public roadways and adjacent private easement.

Growth Areas and Population Trends

History

The MCWD was established under Kentucky Revised Statutes, Chapter 74. The Board of Commissioners consists of five persons appointed to staggered terms by the County Judge Executive.

The MCWD has the authority and duty to plan, finance, construct, install, operate, replace, and maintain a water distribution system within the service area approved by the Kentucky Public Service Commission and the Meade County Fiscal Court.

Current System

MCWD had an average monthly demand of 760,000 gallons for 2006. The water distribution system consists of approximately 233 miles of 2-inch through 10-inch PVC/Ductile Iron water mains and the Brandenburg pump station (350-400 gpm capacity). A gravity interconnect with Hardin County Water District at KY 1600 and KY 920 with Hardin County Water District No. 1 provides a supply flow rate of 550 to 650 gpm. Water storage capacity is 1,100,000 gallons and consist of: 300,000 gallon elevated tank located on KY 144 in Payneville, 300,000 gallon elevated tank located on KY 1238 in Garrett, and 500,000 elevated tank located on KY 144 north of Flaherty.

A map of the current water distribution system is presented in Figure 2.

Projected Growth

The MCWD completed a Water Master Plan Study in October 2006. In this study based on Kentucky State Data Center data, the population for Meade County is projected to grow at annual rate of 0.8% over the next 20 years. Another element of projecting growth by the MCWD is expansion projects into unserved areas. The MCWD's service area is approximately 60% served.

From the study based on historical data, the MCWD has grown from 1,840 customers in 1999 to over 3,400 customers in 2006, for an annual growth rate of 9.2%.

The proposed KY 228/Rhodelia water system expansion project is part of MCWD's Water Master Plan to provide potable water service into unserved areas of Meade County.

Condition of Facilities

MCWD maintains its water distribution system in accordance with Kentucky Division of Water and Kentucky Public Service Commission regulation.

Need for the Project

Health and Safety

With only 65% of MCWD's service area served, a large number of residents are still dependent upon groundwater and/or cisterns. The proposed KY 228/Rhodelia Water System Expansion Project will add approximately 150 residents to the MCWD system, providing them with a dependable source of water.

System Operation and Maintenance (O&M)

The MCWD performs all routine maintenance required by the Kentucky Division of Water and Kentucky Public Service Commission, including:

- Documented annual inspections
- Periodic tank inspections
- Flushing the entire system twice a year
- Changing of meters annually

Alternatives Considered

Because of the nature of the proposed extensions, the only other alternative considered is a “no action” alternative.

Proposed Project

Project Design

The proposed project is the eighth phase in a series of expansions by the MCWD. The proposed KY 228/Rhodelia Water System Expansion Project consists of two (2) pressure reducing valve stations and approximately 33 miles of 4-inch through 8-inch water lines extensions along the following public roadways:

Bid Package A and B

- KY 228 (Battletown Road/Cedar Flats Road) from KY 1844 to KY 144
- KY 144 (Rhodelia) from KY 228 to Breckenridge County Line
- KY 376 from Breckenridge County Line to KY 1239/KY144

Alternative No. 1

- KY 230 (Concordia Road)

Alternative No. 2

- KY 259 (Mooleyville Road)

Alternative No. 3

- KY 886

A map of the proposed water line extensions is presented in Figure 3.

A hydraulic analysis was performed to verify that during a peak hour demand a minimum pressure of 30 psi can be provided at the customer meter and that flushing velocities can be maintained. Hydraulic calculations are provided in Appendix B.

Total Project Cost Estimate

Bids were opened on October 1, 2009. The actual bid amounts for each package and alternatives are as follows:

Package A -	\$ 843,312
Package B -	\$ 758,766
Alt No. 1 -	\$ 256,032
Alt No. 2 -	\$ 44,047
<u>Alt No. 3 -</u>	<u>\$ 19,038</u>
Total Bid	\$1,921,195

The RD loan and grant amount was based on the preliminary construction cost estimate of \$2,512,450. The difference between the preliminary construction cost estimate and actual bid is \$594,255. This amount for additional construction will be put in the contingency fund line item.

The Meade County Water District Board is putting together an Action Plan to decide how to spend the additional construction funds.

The total project cost estimate is summarized below:

Administrative and Legal	\$ 20,000
Land Structures, R/W etc.	\$ 10,000
Engineering	\$ 186,675
Other Engineering (PER)	\$ 15,000
Project Inspection Fees	\$ 107,784
Construction (actual bid)	\$ 1,921,195
<u>Miscellaneous</u>	<u>\$ 25,000</u>
SUBTOTAL	\$ 2,285,654
<u>Contingency (*)</u>	<u>\$ 842,500</u>
TOTAL PROJECT COST	\$ 3,128,154

(*) - Meade County Water District Board is putting together an Action Plan to decide how to spend \$594,255 of this line item for additional improvements.

Annual Operation Budget

Income

A summary addendum that assesses the financial position of the MCWD is provided in Appendix C.

A rate increase will not be required for this project.

Conclusions and Recommendations

The MCWD has the opportunity to provide potable water service to unserved customers in northwestern Meade County who depend on alternative water sources. We recommend that MCWD move forward with construction of the proposed project.

APPENDIX A

Figure 1 – Location Map

Figure 2 – Water Distribution System Map

Figure 3 – Water System Expansion Map

**PROJECT
LOCATION**

Louisville

**Pleasure
Ridge Pk**

**Fort Knox
Military
Reservation**

Radcliff

Elizabethtown

Larue

**Rough River
Dams S.P.P.**

Grayson

Butler

HDR | Quest

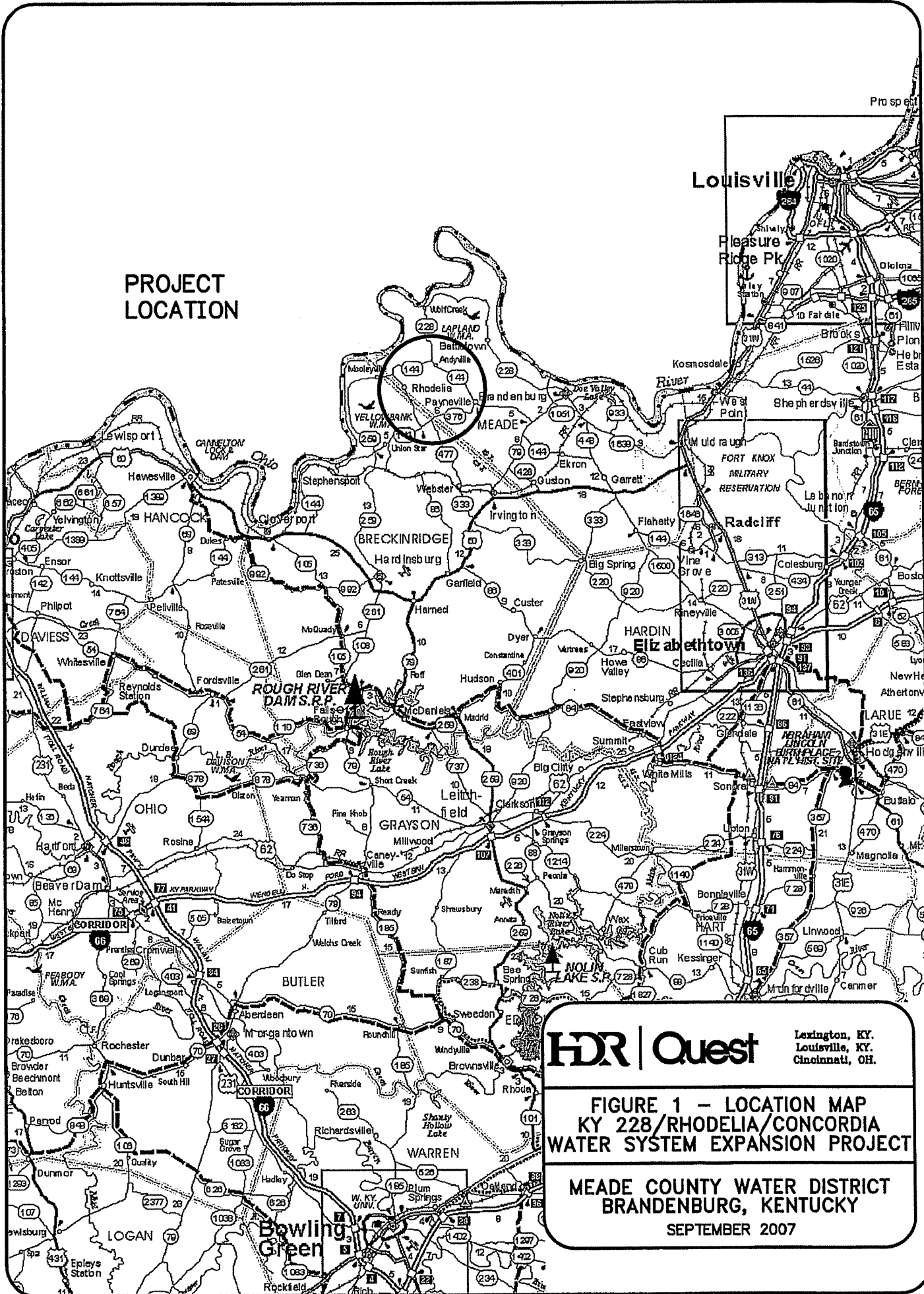
Lexington, KY.
Louisville, KY.
Cincinnati, OH.

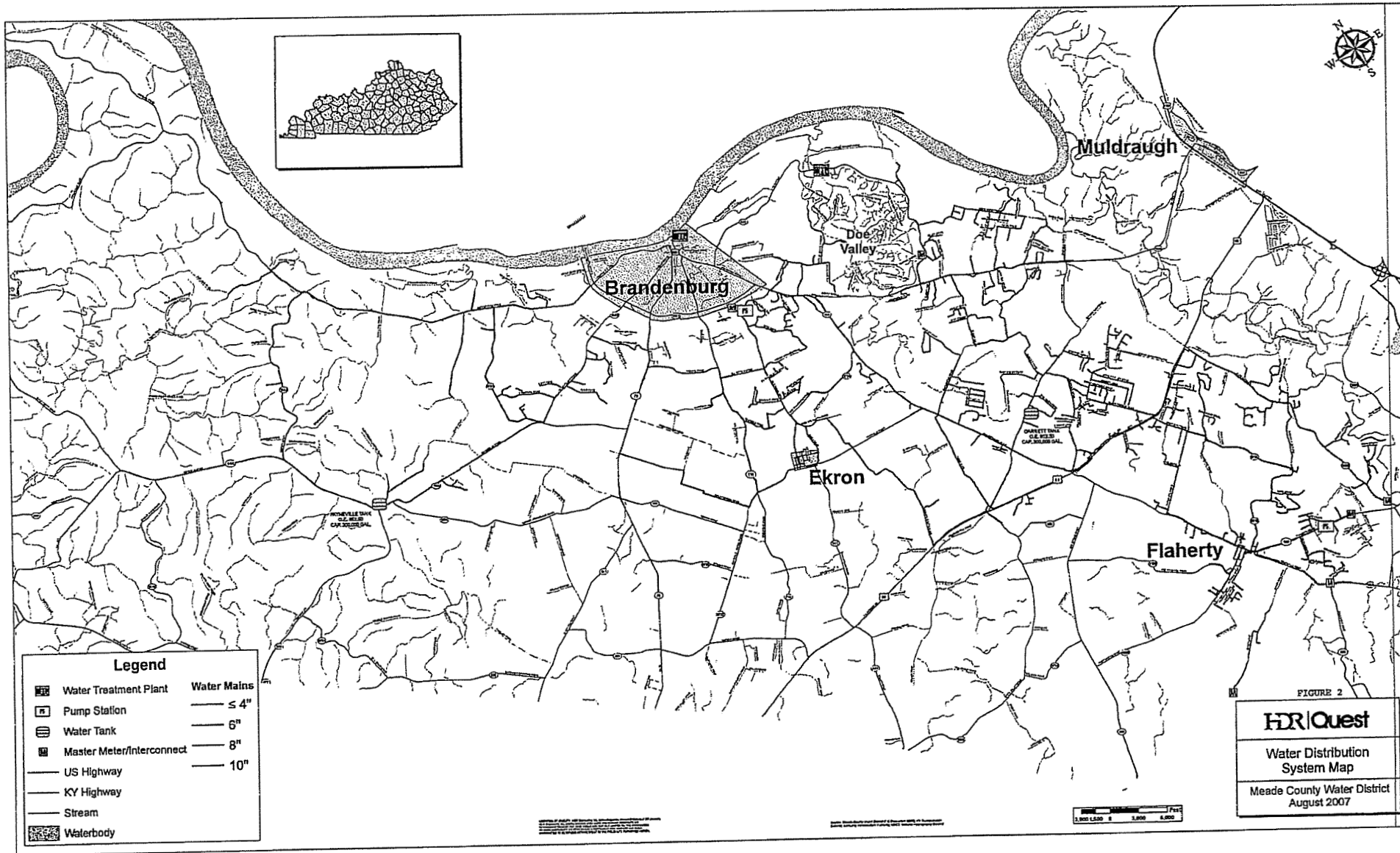
**FIGURE 1 - LOCATION MAP
KY 228/RHODELIA/CONCORDIA
WATER SYSTEM EXPANSION PROJECT**

**MEADE COUNTY WATER DISTRICT
BRANDENBURG, KENTUCKY**

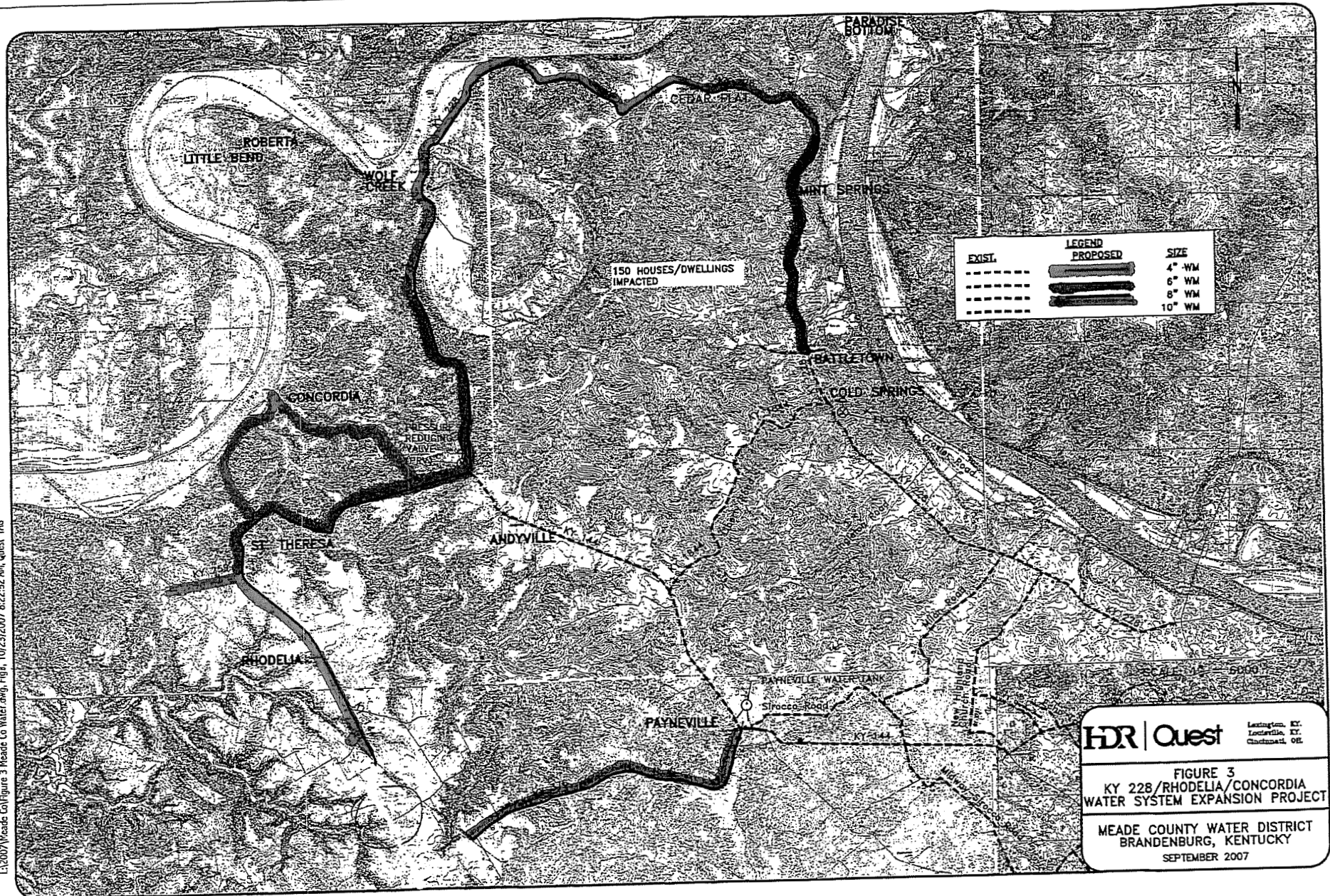
SEPTEMBER 2007

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I:\2007\Meade Co\Figure 3 Meade Co Water.dwg, Fig 1, 10/23/2007 8:22:52 AM, Quest, TAG



HDR | Quest Lexington, KY
 Louisville, KY
 Cincinnati, OH

FIGURE 3
KY 228/RHODELIA/CONCORDIA
WATER SYSTEM EXPANSION PROJECT

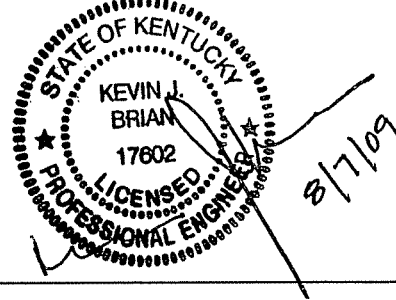
MEADE COUNTY WATER DISTRICT
BRANDENBURG, KENTUCKY
SEPTEMBER 2007

APPENDIX B

Hydraulic Modeling Results

ADDENDUM No. 1**Engineering Report and Hydraulic Analysis
KY 228 – Rhodelia Water System Improvements
Meade County Water District (MCWD)**

PREPARED FOR: Kentucky Division of Water
PREPARED BY: Brian E. Bradley, E.I.T./ HDR
Kevin J. Brian, P.E./HDR
DATE: August 7, 2009



This addendum to the KY 228 – Rhodelia Water System Improvements, Technical Memorandum dated December 10, 2008, addresses revisions to the scope of work for the KY 228 – Rhodelia Water System Improvements Project.

Scope of Revision

The revision involves eliminating approximately 3 miles of 6-inch and 8-inch DI/PVC/HDPE water mains along KY 144 and KY 376 in Breckinridge County, Kentucky and replacing an additional 3 miles of 6-inch DI/PVC/HDPE water mains along KY 144 in Meade County with 4-inch DI/PVC/HDPE water mains. See attached USGS Quadrangle Map and Drawings 42 -55 for location of revisions.

The segment of proposed water main extensions within Breckinridge County was eliminated from the project scope when the City of Hardinsburg planned to service this area and developed water main construction plans along the same KY 144 and KY 376 corridor. Breckinridge Fiscal Court provided approval to MCWD to extend water mains through Breckinridge County with the stipulation no individual services could come off the MCWD water main since the City of Hardinsburg would be constructing a distribution main. Because of these factors MCWD decided to eliminate the segment within Breckinridge County if the hydraulic evaluation supported this decision. In the future Meade County Water District will explore other possible routes within Meade County to close this loop.

Design

In order to maintain a residual pressure of 20 psi when flushing the water main along KY 144 it was necessary to replace a segment of the 6-inch water main from KY - 259 to the Meade County Breckinridge County line with a 4-inch water main.

The projected future demand (at full buildout) for the proposed water mains along KY 376 and KY 144 between KY 230 and the county line is 36,000 gpd (120 dwellings/lots at 300 gpd/dwelling). To maintain water quality and chlorine residuals until enough customers are connected and MCWD constructs another loop within Meade County to eliminate the dead end lines, distribution operations will flush these lines regularly.

Hydraulic Analysis

A hydraulic analysis was performed to evaluate pressure and flow for peak hour demands and flushing velocities for the proposed 4-inch water main along KY 144. A hydraulic analysis for the proposed 8-inch water main along KY 376 was previously performed. The results of the analysis are based on the same water system boundary conditions:

- System Average Day Demand (ADD)

Existing	858,000 gpd
New Waterline Ext.	126,000 gpd
(420 dwellings x 300 gpd)	
<hr/>	
Total	984,000 gpd
- Peak Hour Demand (3 x ADD) = 2050 gpm
- Garrett, Payneville and Flaherty Elevated Water Storage Tanks = 947.5 (mid-operating level)
- KY 1600 Interconnect Open = 450 - 500 gpm
- Brandenburg Pump Station = 400 gpm
- KY 144 Pump Station off

Results

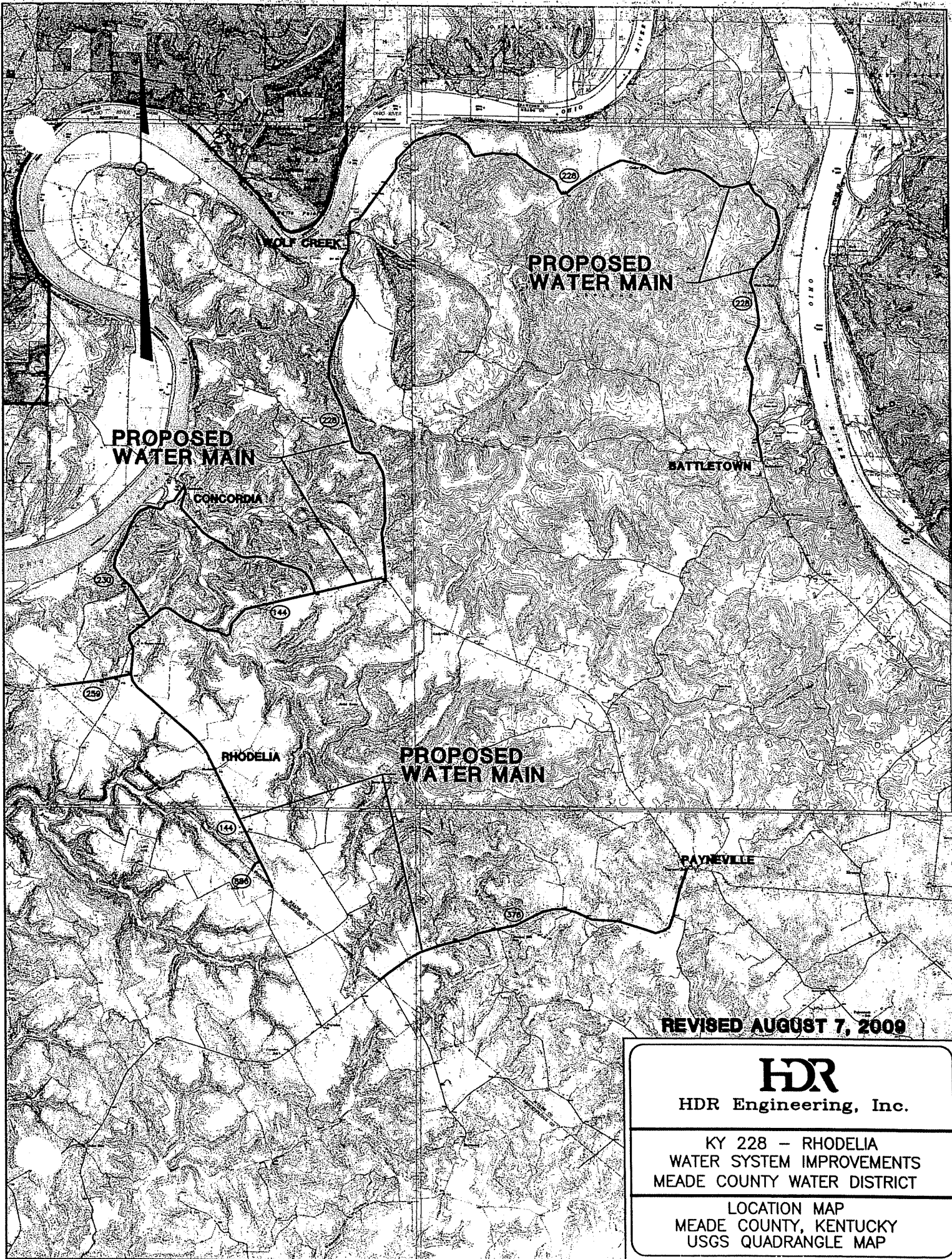
Peak Demand. During a peak hour demand simulation, the minimum pressure is above 40 psi along the proposed waterline extensions and above 34 psi in MCWD's service area.

Flushing Demand. To maintain a flushing velocity of 2.5 feet per second, as required by Kentucky Division of Water, a flowrate of 98 gpm is required through the 4-inch pipeline. The results of the analysis show that residual pressure at these flushing rates is above 20 psi throughout the system.

Attachments

The following attachments are provided with this addendum:

- Revised USGS Quadrangle Map
- Peak hour demand (PHD) Pipe 2000 output results (7 pages)
- Node map for revised area
- Flushing demand Pipe 2000 output results for 4" waterline extension on KY 144 (7 pages)
- Revised Plan Sheets (DWGS 42 – 55)



**PROPOSED
WATER MAIN**

**PROPOSED
WATER MAIN**

**PROPOSED
WATER MAIN**

REVISED AUGUST 7, 2009

<p>HDR HDR Engineering, Inc.</p>
<p>KY 228 - RHODELIA WATER SYSTEM IMPROVEMENTS MEADE COUNTY WATER DISTRICT</p>
<p>LOCATION MAP MEADE COUNTY, KENTUCKY USGS QUADRANGLE MAP</p>

PEAK HOUR DEMAND SIMULATION

KY 228 - Rhodelia Water System Improvements
 Meade County Water District
 Meade County, Kentucky

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* * * * * K Y P I P E 4 * * * * *
*
*           Pipe Network Modeling Software
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*           Copyrighted by KYPIPE LLC
*           Version 4 - April 2008
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 S U M M A R Y O F O R I G I N A L D A T A

U N I T S S P E C I F I E D

FLOWRATE = gallons/minute
 HEAD (HGL) = feet
 PRESSURE = psig

R E G U L A T I N G V A L V E D A T A

VALVE LABEL	VALVE TYPE	VALVE SETTING (ft or gpm)
RV-1	FCV-1	400.00
RV-2	PRV-1	742.31
RV-3	PRV-1	742.29

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Brandenburg DESCRIBED BY THE FOLLOWING DATA:
(ID= 19)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
380.00	0.00	75.00 (Default)
320.00	280.00	75.00 (Default)
248.00	402.00	75.00 (Default)

THERE IS A DEVICE AT NODE Flaherty P DESCRIBED BY THE FOLLOWING DATA:
(ID= 17)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
190.00	0.00	75.00 (Default)
173.00	200.00	75.00 (Default)
68.00	400.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE FOLLOWING DATA:
(ID= 20)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
80.00	0.00	75.00 (Default)
60.00	150.00	75.00 (Default)
40.00	200.00	75.00 (Default)

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL+ML/ 1000 (ft/ft)	HL/ 1000 (ft/ft)
	#1	#2						
683	Payneville	478	754.47	0.96	0.00	3.08	3.19	3.19
P-122		J-33	406.90	0.58	0.00	1.66	1.02	1.02
P-124		479	298.84	7.69	0.00	1.91	1.70	1.70
P-125		480	290.61	6.47	0.00	1.85	1.61	1.61
P-126		481	282.37	4.52	0.00	1.80	1.53	1.53
P-127		482	91.54	0.73	0.00	0.58	0.19	0.19
P-128		483	83.31	0.67	0.00	0.53	0.16	0.16
P-129		484	75.08	0.55	0.00	0.48	0.13	0.13
P-165	J-47	J-45	56.07	0.14	0.00	0.64	0.31	0.31
P-166	J-47	J-48	3.23	0.02	0.00	0.08	0.01	0.01
P-167	J-47	J-50	4.70	0.01	0.00	0.05	0.00	0.00
P-168	J-49	J-47	64.01	0.44	0.00	0.73	0.40	0.40
P-238	J-45	J-159	52.84	0.28	0.00	0.60	0.32	0.32
P-240	J-6	J-202	36.84	0.43	0.00	0.42	0.16	0.16
P-241	J-116	J-165	22.84	0.36	0.00	0.58	0.49	0.49
P-242	J-117	J-185	7.84	0.20	0.00	0.20	0.07	0.07
P-243	J-203	J-115	7.16	0.17	0.00	0.18	0.06	0.06
P-244	J-182	J-118	52.16	0.53	0.00	0.59	0.31	0.31
P-245	J-173	J-119	27.16	2.08	0.00	0.69	0.67	0.67
P-246	J-175	J-120	12.16	0.33	0.00	0.31	0.15	0.15
P-247	J-118	J-150	47.16	0.37	0.00	0.54	0.26	0.26
P-248	J-611	J-179	100.74	0.81	0.00	1.14	1.06	1.06
P-249	J-122	J-207	68.82	1.04	0.00	0.78	0.52	0.52
P-250	J-123	J-184	48.00	0.65	0.00	0.54	0.27	0.27
P-251	J-124	J-181	33.00	3.30	0.00	0.84	0.96	0.96
P-254	J-153	J-125	4.50	0.00	0.00	0.03	0.00	0.00
P-255	J-157	J-127	18.00	0.05	0.00	0.11	0.01	0.01
P-256	J-155	J-126	36.00	0.09	0.00	0.23	0.04	0.04
P-258	J-150	J-128	42.16	0.14	0.00	0.48	0.21	0.21
P-262	J-132	J-146	9.00	0.19	0.00	0.23	0.09	0.09
P-263	J-133	J-180	21.00	2.11	0.00	0.54	0.42	0.42
P-264	J-134	J-193	32.84	1.55	0.00	0.84	0.95	0.95
P-265	J-135	J-116	22.84	1.72	0.00	0.58	0.49	0.49
P-266	J-136	J-178	80.82	2.63	0.00	0.92	0.70	0.70
P-267	J-136	J-137	15.42	0.99	0.00	0.39	0.24	0.24
P-268	J-138	J-123	54.00	0.32	0.00	0.61	0.33	0.33
P-269	J-137	J-188	11.64	0.11	0.00	0.30	0.14	0.14
P-270	J-139	J-140	4.08	0.08	0.00	0.10	0.02	0.02
P-271	J-140	J-141	0.30	0.00	0.00	0.01	0.00	0.00
P-272	J-199	J-141	3.48	0.00	0.00	0.07	0.01	0.01
P-273	J-191	J-142	11.04	0.16	0.00	0.28	0.13	0.13
P-274	J-138	J-143	14.82	0.54	0.00	0.38	0.22	0.22
P-275	J-124	J-145	6.00	0.09	0.00	0.15	0.04	0.04
P-276	J-145	J-144	3.00	0.03	0.00	0.08	0.01	0.01
P-279	J-146	J-149	3.00	0.01	0.00	0.08	0.01	0.01
P-281	O-RV-2	J-189	11.64	0.01	0.00	0.30	0.14	0.14
P-284	J-154	J-153	9.00	0.01	0.00	0.06	0.00	0.00
P-286	J-127	J-154	13.50	0.02	0.00	0.09	0.01	0.01
P-290	478	J-155	40.50	0.05	0.00	0.26	0.05	0.05
P-291	J-126	J-156	31.50	0.06	0.00	0.20	0.03	0.03
P-292	J-208	J-157	22.50	0.03	0.00	0.14	0.02	0.02
P-293	J-156	J-158	27.00	0.05	0.00	0.17	0.02	0.02
P-300	J-159	J-201	48.84	0.65	0.00	0.55	0.28	0.28
P-301	J-160	J-161	44.84	0.84	0.00	0.51	0.24	0.24
P-302	J-161	J-6	40.84	0.32	0.00	0.46	0.20	0.20
P-303	J-162	J-117	12.84	0.92	0.00	0.33	0.17	0.17
P-304	J-163	J-166	2.84	0.02	0.00	0.05	0.00	0.00
P-305	J-165	J-162	17.84	1.43	0.00	0.46	0.31	0.31
P-306	J-115	J-166	2.16	0.01	0.00	0.06	0.01	0.01
P-307	J-119	J-171	22.16	0.99	0.00	0.57	0.46	0.46
P-308	J-611	J-172	57.16	1.03	0.00	0.65	0.37	0.37
P-309	J-197	J-173	32.16	0.05	0.00	0.36	0.13	0.13

P-310	J-192	J-174	37.16	0.18	0.00	0.42	0.17	0.17
P-311	J-171	J-175	17.16	0.82	0.00	0.44	0.29	0.29
P-312	J-142	J-176	7.26	0.20	0.00	0.19	0.06	0.06
P-313	J-177	J-139	7.86	0.21	0.00	0.20	0.07	0.07
P-314	J-178	J-122	74.82	1.93	0.00	0.85	0.61	0.61
P-315	J-179	J-136	96.24	3.94	0.00	1.09	0.97	0.97
P-316	J-180	J-132	15.00	0.37	0.00	0.38	0.22	0.22
P-317	J-181	J-133	27.00	1.96	0.00	0.69	0.66	0.66
P-318	J-172	J-204	52.16	0.37	0.00	0.59	0.31	0.31
P-319	J-185	J-163	7.84	0.07	0.00	0.20	0.07	0.07
P-321	J-196	J-195	36.84	0.48	0.00	0.94	1.18	1.18
P-322	J-174	J-197	32.16	0.27	0.00	0.36	0.13	0.13
P-325	J-188	I-RV-2	11.64	0.01	0.00	0.30	0.14	0.14
P-326	J-189	J-177	11.64	0.13	0.00	0.30	0.14	0.14
P-327	J-190	I-RV-3	11.04	0.01	0.00	0.28	0.13	0.13
P-328	J-143	J-190	11.04	0.03	0.00	0.28	0.13	0.13
P-329	O-RV-3	J-191	11.04	0.01	0.00	0.28	0.13	0.13
P-330	J-128	J-192	37.16	0.37	0.00	0.42	0.17	0.17
P-331	J-193	J-135	27.84	2.28	0.00	0.71	0.70	0.70
P-332	J-200	J-134	36.84	2.35	0.00	0.94	1.18	1.18
P-333	J-194	J-196	36.84	2.39	0.00	0.94	1.18	1.18
P-334	J-195	J-200	36.84	0.51	0.00	0.94	1.18	1.18
P-335	J-196	I-Pump-1	0.00	0.00	0.00	0.00	0.00	0.00
P-336	O-Pump-1	J-200	0.00	0.00	0.00	0.00	0.00	0.00
P-337	J-201	J-160	48.84	0.78	0.00	0.55	0.28	0.28
P-338	J-202	J-194	36.84	0.20	0.00	0.42	0.16	0.16
P-339	J-198	J-203	7.16	0.01	0.00	0.14	0.02	0.02
P-340	J-204	J-182	52.16	0.44	0.00	0.59	0.31	0.31
P-341	J-206	J-138	68.82	0.73	0.00	0.78	0.52	0.52
P-342	J-207	J-206	68.82	1.38	0.00	0.78	0.52	0.52
P-343	J-158	J-208	22.50	0.04	0.00	0.14	0.02	0.02
P-344	J-120	J-198	7.16	0.01	0.00	0.18	0.06	0.06
P-345	J-176	J-199	3.48	0.03	0.00	0.09	0.01	0.01
P-611	J-612	J-611	166.72	3.51	0.00	1.06	0.77	0.77
P-612	J-613	J-612	174.66	9.10	0.00	1.11	0.84	0.84
P-613	481	J-613	182.60	2.08	0.00	1.17	0.91	0.91

N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
477		8.23	948.41	680.00	268.41	116.31
478		8.23	951.54	800.00	151.54	65.67
479		8.23	943.85	773.00	170.85	74.04
480		8.23	937.38	791.00	146.38	63.43
481		8.23	932.86	800.00	132.86	57.57
482		8.23	932.13	785.00	147.13	63.76
483		8.23	931.47	800.00	131.47	56.97
484		8.23	930.92	831.00	99.92	43.30
485		8.23	930.61	810.00	120.61	52.27
486		8.23	930.32	824.00	106.32	46.07
487		8.23	930.11	755.00	175.11	75.88
488		0.00	930.10	755.00	175.10	75.87
489		8.23	930.17	591.00	339.17	146.97
490		8.23	930.31	544.00	386.31	167.40
564		8.23	930.12	674.00	256.12	110.99
Payneville	Payneville T	---	952.50	812.50	140.00	60.67
J-6		4.00	924.91	746.00	178.91	77.53
J-33		0.00	950.96	816.00	134.96	58.48
J-43		3.23	930.21	591.00	339.21	146.99
J-45		3.23	927.78	680.00	247.78	107.37
J-47		0.00	927.91	707.00	220.91	95.73

J-48		3.23	927.89	670.00	257.89	111.75
J-49		6.47	928.35	750.00	178.35	77.29
J-50		4.70	927.90	752.00	175.90	76.22
J-115		5.00	910.01	434.00	476.01	206.27
J-116		0.00	913.00	774.00	139.00	60.23
J-117		5.00	910.28	738.00	172.28	74.66
J-118		5.00	915.80	720.00	195.80	84.85
J-119		5.00	912.34	550.00	362.34	157.01
J-120		5.00	910.20	427.00	483.20	209.38
J-122		6.00	908.86	550.00	358.86	155.51
J-123		6.00	905.39	490.00	415.39	180.00
J-124		9.00	904.47	624.00	280.47	121.54
J-125		4.50	951.15	760.00	191.15	82.83
J-126		4.50	951.40	805.00	146.40	63.44
J-127		4.50	951.18	566.00	385.18	166.91
J-128		5.00	915.29	750.00	165.29	71.63
J-129	PRV STATION	0.00	930.10	755.00	175.10	75.88
J-131		6.00	896.45	714.00	182.45	79.06
J-132		6.00	896.72	673.00	223.72	96.95
J-133		6.00	899.21	630.00	269.21	116.66
J-134		4.00	918.54	824.00	94.54	40.97
J-135		5.00	914.71	793.00	121.71	52.74
J-136		0.00	913.42	683.00	230.42	99.85
J-137		3.78	912.44	650.00	262.44	113.72
J-138		0.00	905.71	450.00	455.71	197.47
J-139		3.78	741.96	555.00	186.96	81.02
J-140		3.78	741.89	440.00	301.89	130.82
J-141		3.78	741.89	380.00	361.89	156.82
J-142		3.78	742.12	530.00	212.12	91.92
J-143		3.78	905.17	594.00	311.17	134.84
J-144		3.00	904.34	600.00	304.34	131.88
J-145		3.00	904.38	660.00	244.38	105.90
J-146		0.00	896.53	670.00	226.53	98.17
J-149		3.00	896.52	680.00	216.52	93.83
J-150		5.00	915.43	750.00	165.43	71.69
J-153		4.50	951.15	770.00	181.15	78.50
J-154		4.50	951.16	650.00	301.16	130.50
J-155		4.50	951.49	800.00	151.49	65.65
J-156		4.50	951.35	810.00	141.35	61.25
J-157		4.50	951.23	770.00	181.23	78.53
J-158		4.50	951.29	770.00	181.29	78.56
J-159		4.00	927.50	664.00	263.50	114.18
J-160		4.00	926.07	653.00	273.07	118.33
J-161		4.00	925.22	770.00	155.22	67.26
J-162		5.00	911.21	766.00	145.21	62.92
J-163		5.00	910.02	600.00	310.02	134.34
J-165		5.00	912.64	790.00	122.64	53.14
J-166		5.00	910.00	450.00	460.00	199.33
J-171		5.00	911.35	450.00	461.35	199.92
J-172		5.00	917.14	760.00	157.14	68.09
J-173		5.00	914.42	670.00	244.42	105.91
J-174		5.00	914.73	710.00	204.73	88.72
J-175		5.00	910.53	430.00	480.53	208.23
J-176		3.78	741.92	440.00	301.92	130.83
J-177		3.78	742.17	600.00	142.17	61.61
J-178		6.00	910.79	645.00	265.79	115.18
J-179		4.50	917.36	690.00	227.36	98.52
J-180		6.00	897.09	670.00	227.09	98.41
J-181		6.00	901.17	620.00	281.17	121.84
J-182		0.00	916.33	750.00	166.33	72.08
J-183		0.00	930.02	755.00	175.02	75.84
J-185		0.00	910.09	700.00	210.09	91.04
J-188		0.00	912.33	650.00	262.33	113.68

J-189	0.00	742.30	650.00	92.30	40.00
J-190	0.00	905.15	600.00	305.15	132.23
J-191	0.00	742.28	600.00	142.28	61.65
J-192	0.00	914.92	698.00	216.92	94.00
J-193	5.00	916.99	820.00	96.99	42.03
J-194	0.00	924.28	713.00	211.28	91.55
J-195	0.00	921.40	770.00	151.40	65.61
J-196	0.00	921.88	770.00	151.88	65.82
J-197	0.00	914.46	680.00	234.46	101.60
J-198	0.00	910.18	390.00	520.18	225.41
J-199	0.00	741.89	380.00	361.89	156.82
J-200	0.00	920.89	780.00	140.89	61.05
J-201	0.00	926.84	720.00	206.84	89.63
J-202	0.00	924.48	794.00	130.48	56.54
J-203	0.00	910.18	390.00	520.18	225.41
J-204	0.00	916.77	800.00	116.77	50.60
J-206	0.00	906.44	470.00	436.44	189.13
J-207	0.00	907.82	400.00	507.82	220.06
J-208	0.00	951.26	809.00	142.26	61.64
J-611	8.82	918.18	701.00	217.18	94.11
J-612	7.94	921.69	720.00	201.69	87.40
J-613	7.94	930.79	780.00	150.79	65.34
I-Pump-1	0.00	921.88	770.00	151.88	65.82
I-RV-2	0.00	912.33	650.00	262.33	113.67
I-RV-3	0.00	905.13	600.00	305.13	132.22

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-198	225.41	324	34.92
J-203	225.41	323	34.94
J-207	220.06	315	38.44
J-120	209.38	I-Brandenbur	38.49
J-175	208.23	468	39.81
J-115	206.27	J-189	40.00
J-171	199.92	O-RV-2	40.00
J-166	199.33	467	40.16
J-138	197.47	J-134	40.97
J-206	189.13	J-193	42.03

R E G U L A T I N G V A L V E R E P O R T

VALVE LABEL	VALVE TYPE	VALVE SETTING (psi or gpm)	VALVE STATUS	UPSTREAM PRESSURE (psi)	DOWNSTREAM PRESSURE (psi)	THROUGH FLOW (gpm)
RV-1	FCV-1	400.00	ACTIVATED	146.18	122.28	400.00
RV-2	PRV-1	40.00	ACTIVATED	113.67	40.00	11.64
RV-3	PRV-1	61.66	ACTIVATED	132.22	61.66	11.04

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
- (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
Flaherty	-71.01	Flaherty Tan
Garrett	482.35	Garrett Tank
Payneville	754.47	Payneville T
R-1	0.00	KY 144
R-2	452.40	KY 1600
R-3	400.00	Brandenburg
R-4	20.58	Brizendine 1

NET SYSTEM INFLOW = 2109.80
NET SYSTEM OUTFLOW = -71.01
NET SYSTEM DEMAND = 2038.79

***** HYDRAULIC ANALYSIS COMPLETED *****

FLUSHING DEMAND SIMULATION

KY - 228 Rhodelia Water System Improvements
Meade County Water District
Meade County, Kentucky

Flushing Demand 4" Water Main KY 144

Flushing Demand (Node J-131) = 98 gpm

* * * * * K Y P I P E 4 * * * * *
*
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*
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* Version 4 - April 2008 *
* * * * *

Date & Time: Fri Aug 07 09:49:17 2009

INPUT DATA FILENAME ----- L:\HDRCON-1\COE3B8-1\HYDRAU-1\ALTERN-1\KY144flu.DT2
TABULATED OUTPUT FILENAME ----- L:\HDRCON-1\COE3B8-1\HYDRAU-1\ALTERN-1\KY144flu.OT2
POSTPROCESSOR RESULTS FILENAME --- L:\HDRCON-1\COE3B8-1\HYDRAU-1\ALTERN-1\KY144flu.RS2

S U M M A R Y O F O R I G I N A L D A T A

U N I T S S P E C I F I E D

FLOWRATE = gallons/minute
HEAD (HGL) = feet
PRESSURE = psig

R E G U L A T I N G V A L V E D A T A

VALVE LABEL	VALVE TYPE	VALVE SETTING (ft or gpm)
RV-1	FCV-1	400.00
RV-2	PRV-1	742.31
RV-3	PRV-1	742.29

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Brandenbur DESCRIBED BY THE FOLLOWING DATA: (ID= 19)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
380.00	0.00	75.00 (Default)
320.00	280.00	75.00 (Default)
248.00	402.00	75.00 (Default)

THERE IS A DEVICE AT NODE Flaherty P DESCRIBED BY THE FOLLOWING DATA: (ID= 17)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
190.00	0.00	75.00 (Default)
173.00	200.00	75.00 (Default)
68.00	400.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE FOLLOWING DATA: (ID= 20)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
80.00	0.00	75.00 (Default)
60.00	150.00	75.00 (Default)
40.00	200.00	75.00 (Default)

S Y S T E M C O N F I G U R A T I O N

NUMBER OF PIPES(p) = 527
NUMBER OF END NODES(j) = 481
NUMBER OF PRIMARY LOOPS(l) = 41
NUMBER OF SUPPLY NODES(f) = 7
NUMBER OF SUPPLY ZONES(z) = 2

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL+ML/ 1000 (ft/ft)	HL/ 1000 (ft/ft)
	#1	#2						
683	Payneville	478	314.93	0.19	0.00	1.29	0.63	0.63
P-122	478	J-33	139.71	0.08	0.00	0.57	0.14	0.14
P-124	478	479	158.97	2.39	0.00	1.01	0.53	0.53
P-125	479	480	156.22	2.05	0.00	1.00	0.51	0.51
P-126	480	481	153.48	1.46	0.00	0.98	0.50	0.50
P-127	481	482	1.75	0.00	0.00	0.01	0.00	0.00
P-128	483	482	0.99	0.00	0.00	0.01	0.00	0.00
P-129	484	483	3.74	0.00	0.00	0.02	0.00	0.00
P-165	J-47	J-45	28.57	0.04	0.00	0.32	0.09	0.09
P-166	J-47	J-48	1.08	0.00	0.00	0.03	0.00	0.00
P-167	J-47	J-50	1.57	0.00	0.00	0.02	0.00	0.00
P-168	J-49	J-47	31.22	0.12	0.00	0.35	0.11	0.11
P-238	J-45	J-159	27.49	0.08	0.00	0.31	0.10	0.10
P-240	J-6	J-202	22.16	0.17	0.00	0.25	0.06	0.06
P-241	J-116	J-165	17.49	0.22	0.00	0.45	0.30	0.30
P-242	J-117	J-185	12.49	0.47	0.00	0.32	0.16	0.16
P-243	J-115	J-203	7.49	0.18	0.00	0.19	0.06	0.06
P-244	J-182	J-118	7.51	0.01	0.00	0.09	0.01	0.01
P-245	J-119	J-173	0.83	0.00	0.00	0.02	0.00	0.00
P-246	J-120	J-175	5.83	0.08	0.00	0.15	0.04	0.04
P-247	J-118	J-150	5.84	0.01	0.00	0.07	0.01	0.01
P-248	J-611	J-179	131.58	1.33	0.00	1.49	1.73	1.73
P-249	J-122	J-207	120.78	2.94	0.00	1.37	1.48	1.48
P-250	J-123	J-184	114.00	3.25	0.00	1.29	1.33	1.33
P-251	J-124	J-181	109.00	30.21	0.00	2.78	8.81	8.81
P-254	J-153	J-125	1.50	0.00	0.00	0.01	0.00	0.00
P-255	J-157	J-127	6.00	0.01	0.00	0.04	0.00	0.00
P-256	J-155	J-126	12.00	0.01	0.00	0.08	0.01	0.01
P-258	J-150	J-128	4.17	0.00	0.00	0.05	0.00	0.00
P-262	J-132	J-146	101.00	16.94	0.00	2.58	7.65	7.65
P-263	J-133	J-180	105.00	41.61	0.00	2.68	8.22	8.22
P-264	J-134	J-193	20.83	0.67	0.00	0.53	0.41	0.41
P-265	J-135	J-116	17.49	1.05	0.00	0.45	0.30	0.30
P-266	J-136	J-178	124.78	5.88	0.00	1.42	1.57	1.57
P-267	J-136	J-137	5.30	0.14	0.00	0.14	0.03	0.03
P-268	J-138	J-123	116.00	1.31	0.00	1.32	1.37	1.37
P-269	J-137	J-188	4.04	0.02	0.00	0.10	0.02	0.02
P-270	J-139	J-140	1.52	0.01	0.00	0.04	0.00	0.00
P-271	J-140	J-141	0.26	0.00	0.00	0.01	0.00	0.00
P-272	J-199	J-141	1.00	0.00	0.00	0.02	0.00	0.00
P-273	J-191	J-142	3.52	0.02	0.00	0.09	0.02	0.02
P-274	J-138	J-143	4.78	0.07	0.00	0.12	0.03	0.03
P-275	J-124	J-145	2.00	0.01	0.00	0.05	0.01	0.01
P-276	J-145	J-144	1.00	0.00	0.00	0.03	0.00	0.00
P-279	J-146	J-149	1.00	0.00	0.00	0.03	0.00	0.00
P-281	O-RV-2	J-189	4.04	0.00	0.00	0.10	0.02	0.02
P-284	J-154	J-153	3.00	0.00	0.00	0.02	0.00	0.00
P-286	J-127	J-154	4.50	0.00	0.00	0.03	0.00	0.00
P-290	478	J-155	13.50	0.01	0.00	0.09	0.01	0.01
P-291	J-126	J-156	10.50	0.01	0.00	0.07	0.00	0.00
P-292	J-208	J-157	7.50	0.00	0.00	0.05	0.00	0.00
P-293	J-156	J-158	9.00	0.01	0.00	0.06	0.00	0.00
P-300	J-159	J-201	26.16	0.20	0.00	0.30	0.09	0.09
P-301	J-160	J-161	24.83	0.28	0.00	0.28	0.08	0.08
P-302	J-161	J-6	23.49	0.11	0.00	0.27	0.07	0.07
P-303	J-162	J-117	14.16	1.11	0.00	0.36	0.20	0.20
P-304	J-163	J-166	10.83	0.23	0.00	0.21	0.05	0.05
P-305	J-165	J-162	15.83	1.14	0.00	0.40	0.25	0.25
P-306	J-166	J-115	9.16	0.19	0.00	0.23	0.09	0.09
P-307	J-171	J-119	2.49	0.02	0.00	0.06	0.01	0.01
P-308	J-611	J-172	9.17	0.03	0.00	0.10	0.01	0.01
P-309	J-197	J-173	0.84	0.00	0.00	0.01	0.00	0.00

P-310	J-192	J-174	2.51	0.00	0.00	0.03	0.00	0.00
P-311	J-175	J-171	4.16	0.06	0.00	0.11	0.02	0.02
P-312	J-142	J-176	2.26	0.02	0.00	0.06	0.01	0.01
P-313	J-177	J-139	2.78	0.03	0.00	0.07	0.01	0.01
P-314	J-178	J-122	122.78	4.83	0.00	1.39	1.52	1.52
P-315	J-179	J-136	130.08	6.88	0.00	1.48	1.70	1.70
P-316	J-180	J-132	103.00	13.21	0.00	2.63	7.93	7.93
P-317	J-181	J-133	107.00	25.11	0.00	2.73	8.51	8.51
P-318	J-172	J-204	7.51	0.01	0.00	0.09	0.01	0.01
P-319	J-185	J-163	12.49	0.17	0.00	0.32	0.16	0.16
P-321	J-196	J-195	22.16	0.19	0.00	0.57	0.46	0.46
P-322	J-174	J-197	0.84	0.00	0.00	0.01	0.00	0.00
P-325	J-188	I-RV-2	4.04	0.00	0.00	0.10	0.02	0.02
P-326	J-189	J-177	4.04	0.02	0.00	0.10	0.02	0.02
P-327	J-190	I-RV-3	3.52	0.00	0.00	0.09	0.02	0.02
P-328	J-143	J-190	3.52	0.00	0.00	0.09	0.02	0.02
P-329	O-RV-3	J-191	3.52	0.00	0.00	0.09	0.02	0.02
P-330	J-128	J-192	2.51	0.00	0.00	0.03	0.00	0.00
P-331	J-193	J-135	19.16	1.14	0.00	0.49	0.35	0.35
P-332	J-200	J-134	22.16	0.92	0.00	0.57	0.46	0.46
P-333	J-194	J-196	22.16	0.93	0.00	0.57	0.46	0.46
P-334	J-195	J-200	22.16	0.20	0.00	0.57	0.46	0.46
P-335	J-196	I-Pump-1	0.00	0.00	0.00	0.00	0.00	0.00
P-336	O-Pump-1	J-200	0.00	0.00	0.00	0.00	0.00	0.00
P-337	J-201	J-160	26.16	0.25	0.00	0.30	0.09	0.09
P-338	J-202	J-194	22.16	0.08	0.00	0.25	0.06	0.06
P-339	J-203	J-198	7.49	0.01	0.00	0.14	0.03	0.03
P-340	J-204	J-182	7.51	0.01	0.00	0.09	0.01	0.01
P-341	J-206	J-138	120.78	2.07	0.00	1.37	1.48	1.48
P-342	J-207	J-206	120.78	3.91	0.00	1.37	1.48	1.48
P-343	J-158	J-208	7.50	0.00	0.00	0.05	0.00	0.00
P-344	J-198	J-120	7.49	0.01	0.00	0.19	0.06	0.06
P-345	J-176	J-199	1.00	0.00	0.00	0.03	0.00	0.00
P-611	J-612	J-611	143.69	2.66	0.00	0.92	0.58	0.58
P-612	J-613	J-612	146.34	6.56	0.00	0.93	0.60	0.60
P-613	481	J-613	148.99	1.42	0.00	0.95	0.62	0.62

N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
477		2.74	951.88	680.00	271.88	117.81
478		2.74	952.31	800.00	152.31	66.00
479		2.74	949.92	773.00	176.92	76.67
480		2.74	947.87	791.00	156.87	67.98
481		2.74	946.41	800.00	146.41	63.44
482		2.74	946.41	785.00	161.41	69.94
483		2.74	946.41	800.00	146.41	63.44
484		2.74	946.41	831.00	115.41	50.01
485		2.74	946.42	810.00	136.42	59.11
486		2.74	946.43	824.00	122.43	53.05
487		2.74	946.44	755.00	191.44	82.96
488		0.00	946.44	755.00	191.44	82.96
489		2.74	946.60	591.00	355.60	154.09
490		2.74	946.78	544.00	402.78	174.54
564		2.74	946.51	674.00	272.51	118.09
Payneville	Payneville T	----	952.50	812.50	140.00	60.67
J-6		1.33	944.92	746.00	198.92	86.20
J-33		0.00	952.23	816.00	136.23	59.03
J-43		1.08	946.65	591.00	355.65	154.12
J-45		1.08	945.85	680.00	265.85	115.20
J-47		0.00	945.89	707.00	238.89	103.52
J-48		1.08	945.89	670.00	275.89	119.55
J-49		2.16	946.01	750.00	196.01	84.94
J-50		1.57	945.89	752.00	193.89	84.02

J-115		1.67	936.04	434.00	502.04	217.55
J-116		0.00	939.58	774.00	165.58	71.75
J-117		1.67	937.11	738.00	199.11	86.28
J-118		1.67	935.69	720.00	215.69	93.47
J-119		1.67	935.68	550.00	385.68	167.13
J-120		1.67	935.84	427.00	508.84	220.50
J-122		2.00	916.83	550.00	366.83	158.96
J-123		2.00	906.60	490.00	416.60	180.53
J-124		3.00	902.02	624.00	278.02	120.48
J-125		1.50	952.26	760.00	192.26	83.31
J-126		1.50	952.29	805.00	147.29	63.83
J-127		1.50	952.26	566.00	386.26	167.38
J-128		1.67	935.68	750.00	185.68	80.46
J-129	PRV STATION	0.00	946.44	755.00	191.44	82.96
J-131		100.00	760.43	714.00	46.43	20.12
J-132		2.00	791.90	673.00	118.90	51.52
J-133		2.00	846.71	630.00	216.71	93.91
J-134		1.33	942.43	824.00	118.43	51.32
J-135		1.67	940.63	793.00	147.63	63.97
J-136		0.00	927.55	683.00	244.55	105.97
J-137		1.26	927.41	650.00	277.41	120.21
J-138		0.00	907.91	450.00	457.91	198.43
J-139		1.26	742.26	555.00	187.26	81.15
J-140		1.26	742.25	440.00	302.25	130.97
J-141		1.26	742.25	380.00	362.25	156.97
J-142		1.26	742.27	530.00	212.27	91.98
J-143		1.26	907.84	594.00	313.84	136.00
J-144		1.00	902.00	600.00	302.00	130.87
J-145		1.00	902.01	660.00	242.01	104.87
J-146		0.00	774.96	670.00	104.96	45.48
J-149		1.00	774.96	680.00	94.96	41.15
J-150		1.67	935.68	750.00	185.68	80.46
J-153		1.50	952.26	770.00	182.26	78.98
J-154		1.50	952.26	650.00	302.26	130.98
J-155		1.50	952.30	800.00	152.30	66.00
J-156		1.50	952.28	810.00	142.28	61.66
J-157		1.50	952.27	770.00	182.27	78.98
J-158		1.50	952.28	770.00	182.28	78.99
J-159		1.33	945.77	664.00	281.77	122.10
J-160		1.33	945.32	653.00	292.32	126.67
J-161		1.33	945.03	770.00	175.03	75.85
J-162		1.67	938.22	766.00	172.22	74.63
J-163		1.67	936.47	600.00	336.47	145.80
J-165		1.67	939.36	790.00	149.36	64.72
J-166		1.67	936.24	450.00	486.24	210.70
J-171		1.67	935.70	450.00	485.70	210.47
J-172		1.67	935.73	760.00	175.73	76.15
J-173		1.67	935.68	670.00	265.68	115.13
J-174		1.67	935.68	710.00	225.68	97.79
J-175		1.67	935.76	430.00	505.76	219.16
J-176		1.26	742.25	440.00	302.25	130.97
J-177		1.26	742.29	600.00	142.29	61.66
J-178		2.00	921.66	645.00	276.66	119.89
J-179		1.50	934.43	690.00	244.43	105.92
J-180		2.00	805.10	670.00	135.10	58.54
J-181		2.00	871.82	620.00	251.82	109.12
J-182		0.00	935.71	750.00	185.71	80.47
J-183		0.00	946.42	755.00	191.42	82.95
J-185		0.00	936.64	700.00	236.64	102.54
J-188		0.00	927.40	650.00	277.40	120.21
J-189		0.00	742.31	650.00	92.31	40.00
J-190		0.00	907.84	600.00	307.84	133.40
J-191		0.00	742.29	600.00	142.29	61.66

J-192	0.00	935.68	698.00	237.68	102.99
J-193	1.67	941.77	820.00	121.77	52.77
J-194	0.00	944.67	713.00	231.67	100.39
J-195	0.00	943.55	770.00	173.55	75.21
J-196	0.00	943.74	770.00	173.74	75.29
J-197	0.00	935.68	680.00	255.68	110.79
J-198	0.00	935.86	390.00	545.86	236.54
J-199	0.00	742.25	380.00	362.25	156.97
J-200	0.00	943.35	780.00	163.35	70.79
J-201	0.00	945.56	720.00	225.56	97.74
J-202	0.00	944.75	794.00	150.75	65.33
J-203	0.00	935.86	390.00	545.86	236.54
J-204	0.00	935.72	800.00	135.72	58.81
J-206	0.00	909.98	470.00	439.98	190.66
J-207	0.00	913.89	400.00	513.89	222.69
J-208	0.00	952.27	809.00	143.27	62.08
J-611	2.94	935.76	701.00	234.76	101.73
J-612	2.65	938.43	720.00	218.43	94.65
J-613	2.65	944.99	780.00	164.99	71.49
I-Pump-1	0.00	943.74	770.00	173.74	75.29
I-RV-2	0.00	927.40	650.00	277.40	120.20
I-RV-3	0.00	907.84	600.00	307.84	133.40

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-203	236.54	J-131	20.12
J-198	236.54	324	35.46
J-207	222.69	323	35.47
J-120	220.50	I-Brandenbur	38.49
J-175	219.16	315	39.51
J-115	217.55	468	39.81
J-166	210.70	J-189	40.00
J-171	210.47	O-RV-2	40.00
J-138	198.43	467	40.16
492	191.73	J-149	41.15

R E G U L A T I N G V A L V E R E P O R T

VALVE LABEL	VALVE TYPE	VALVE SETTING (psi or gpm)	VALVE STATUS	UPSTREAM PRESSURE (psi)	DOWNSTREAM PRESSURE (psi)	THROUGH FLOW (gpm)
RV-1	FCV-1	400.00	ACTIVATED	146.18	130.15	400.00
RV-2	PRV-1	40.00	ACTIVATED	120.20	40.00	4.04
RV-3	PRV-1	61.66	ACTIVATED	133.40	61.66	3.52

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
Flaherty	-399.38	Flaherty Tan
Garrett	20.25	Garrett Tank
Payneville	314.93	Payneville T
R-1	0.00	KY 144
R-2	434.95	KY 1600
R-3	400.00	Brandenburg
R-4	6.86	Brizendine 1

NET SYSTEM INFLOW = 1176.98
 NET SYSTEM OUTFLOW = -399.38
 NET SYSTEM DEMAND = 777.60

***** HYDRAULIC ANALYSIS COMPLETED *****

APPENDIX C

Summary Addendum

KENTUCKY GUIDE 7
MAY 1998

SUMMARY ADDENDUM
TO
PRELIMINARY ENGINEERING REPORT

DATED 2/29/2008

FOR

KY 228/Rhodelia/Concordia Water System Improvements
(Name of Project)

APPLICANT CONTACT PERSON Joe Bartley, General Manager

APPLICANT PHONE NUMBER (270) 422-5006

APPLICANT TAX IDENTIFICATION NUMBER (TIN) 611043975

ITEMS IN BOLD ITALIC PRINT ARE APPLICABLE TO SEWER SYSTEMS.

In order to avoid unnecessary delays in application processing, the applicant and its consulting engineer should prepare a summary of the preliminary report in accordance with this Guide.

Please complete the applicable sections of the Summary Addendum. ***Please note, if water and sewer revenue will both be taken as security for the loan, all user information and characteristics of both utility systems will be needed even though the project will benefit only one utility.***

Feasibility reviews and grant determinations may be processed more accurately and more rapidly if the Summary/Addendum is submitted simultaneously with the preliminary engineering report, or as soon thereafter as possible.

I. GENERAL

A. Proposed Project: Provide a brief description of the proposed project. In addition to this summary, the applicant/engineer should submit a project map of the service area.

The proposed project consists of approximately 137,000 feet of 6- to 8-inch water mains on

- KY 228 from KY 1844 to KY 144
- KY 144 (Rhodelia) from KY 228 to KY 376
- KY 376 from KY 144 to KY 1239/KY 144

(Map Attached)

II. FACILITY CHARACTERISTICS OF EXISTING SEWER SYSTEM N/A

A. *Sewage Treatment:*

1. *Type* _____

2. *Method of Sludge Disposal* _____

3. *Cost per 1,000 gallons if sewage treatment is contracted:*
\$ _____

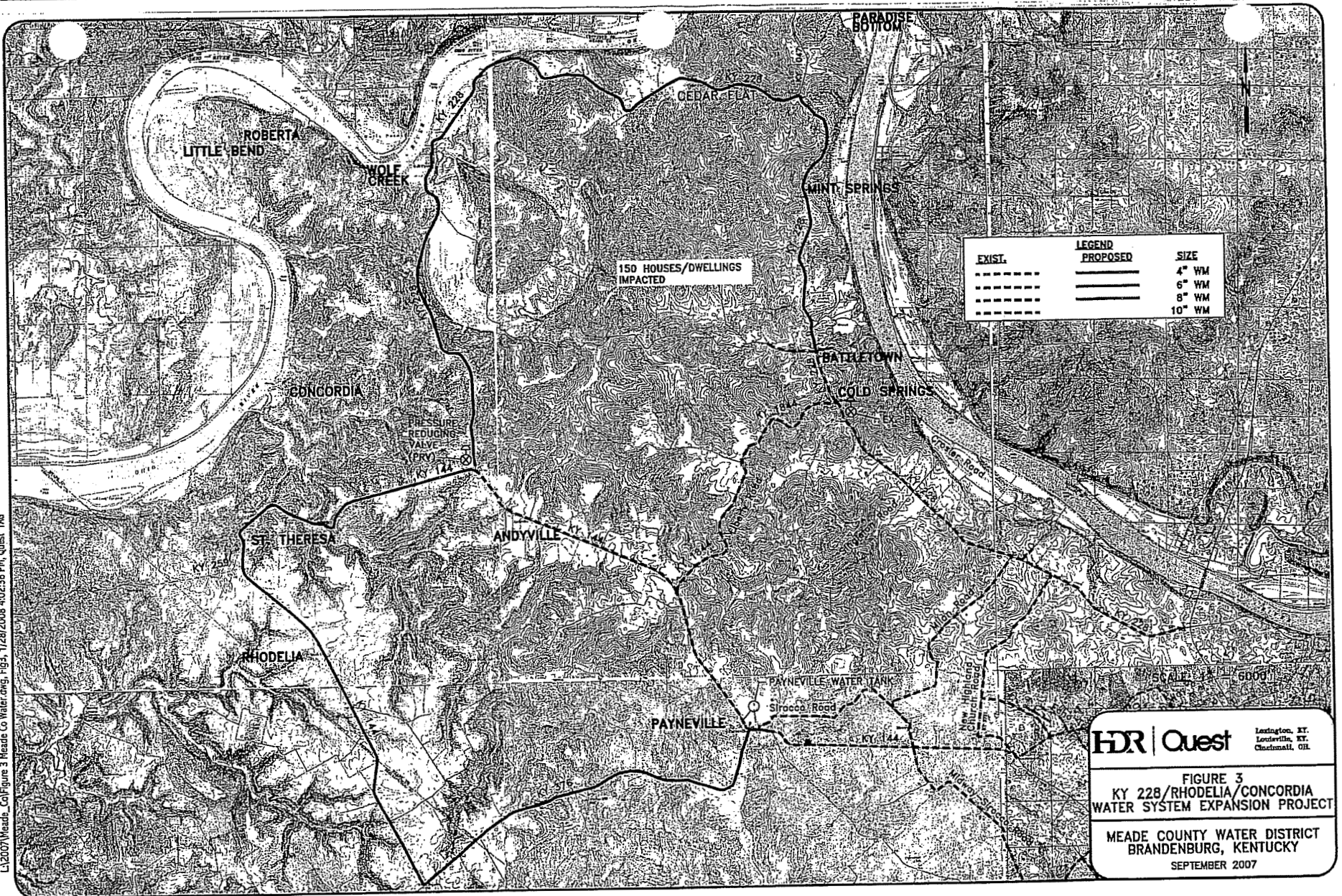
4. *Date Constructed* _____

B. *Treatment Capacity of Sewage Treatment Plant* _____

C. *Type of Sewage Collector System (Describe)* _____

D. *Number and Capacity of Sewage Lift Stations* _____

LA2007\Meade_Co\Figure 3 Meade Co Water.dwg, Fig3_1/28/2008 4:02:36 PM, Quest, TAG



E. Sewage Collection System:

Lineal Feet of Collector Lines, by size 6" _____ 8" _____
10" _____ 12" _____, Larger _____
Date(s) Constructed _____

F. Conditions of Existing System: Briefly describe the conditions and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

III. FACILITY CHARACTERISTICS OF EXISTING WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

If the applicant purchases water:

Seller(s):

1. City of Brandenburg, KY _____
2. Hardin County Water District No. 1 _____
3. _____

Price/1,000 gallons:

1. \$1.15 _____
2. \$1.39 _____
3. _____

Present Estimated Market Value of Existing System: \$ 8,342,000

B. Water Storage:

Type: Ground Storage Tank None Elevated Tank 2 @ 300,000 gallons
Standpipe _____ Other _____
Number of Storage Structures 2
Total Storage Volume Capacity 600,000 gallons
Date Storage Tank(s) Constructed Payneville Tank - 2000, Garrett Tank 2003

C. Water Distribution System:

Pipe Material PVC, HDPE, and DI
Lineal Feet of Pipe: 3" Diameter 52,407 4" 259,417
6" 426,383 8" 379,712
10" 56,902 12" None
Date(s) Water Lines Constructed First lines installed in 1987 with additions thereafter
Number and Capacity of Pump Station(s) Brandenburg PS - 300 to 400 GPM
KY 144 PS (emergency back-up) - 350 to 375 GPM

D. Condition of Existing Water System:

Briefly describe the condition and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

MCWD's distribution system (waterline, tanks, pump stations) is in satisfactory condition should continue to operate in the future without any major capital improvements

E. Percentage of Water Loss Existing System 8%

IV. EXISTING LONG-TERM INDEBTEDNESS

A. List of Bonds and Notes:

<u>Date of Issue</u>	<u>Bond/Note Holder</u>	<u>Principal Balance</u>	<u>Payment Date</u>	<u>Bond Type Water/Sewer*</u>	<u>Amount on Deposit in Reserve Account</u>
20 <u>02</u> Issue	Series A	\$ 583,000	1st	% _____ %	
19 <u> </u> Issue	KIA	\$ 152,500	1st	% _____ %	
19 <u>92</u> Issue	RD Bond	\$ 364,000	1st	% _____ %	
19 <u>92</u> Issue	KaCOLT	\$ 270,000	20th	% _____ %	
19 <u> </u> Issue	Fiscal Court	\$ 468,000	20th	% _____ %	
	KIA	3,63,169	1st		

* If a combined issue, show attributable portion to each system.

B. Principal and Interest Payments: (Begin with Next Fiscal Year Payment)

<u>Date of Issue</u>	<u>Bond/Note Holder</u>	<u>Payment Year 20 07</u>		<u>Payment Year 20 08</u>		<u>Payment Year 20 09</u>	
		<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>
20 <u>02</u> Issue	Series A	18,000	27,620	20,000	26,800	21,000	25,900
19 <u> </u> Issue	KIA "F"	15,565	10,840	16,000	10,370	16,520	9,880
19 <u>92</u> Issue	RD Bond	6,000	18,350	6,000	18,000	6,000	17,750
19 <u>92</u> Issue	KaCOLT	20,000	11,577	25,000	10,446	25,000	9,296
19 <u> </u> Issue	Fiscal Court	42,000	22,119	45,000	19,815	47,000	17,403
20 <u>04</u> Issue	KIA "C"	7,500	6,500	10,000	6,295	9,960	6,000

V. EXISTING SHORT-TERM INDEBTEDNESS

A. List of All Short Term Debts: (Do Not Show Any Debt Listed in Paragraph IV Above)

<u>Lender or Lessor</u>	<u>Date of Issue (Month & Year)</u>	<u>Principal Balance</u>	<u>Purpose (Water and/ or Sewer)</u>	<u>Payment Date</u>	<u>Principal & Interest Payment (P&I)</u>	<u>Date to Be Paid In Full</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

VI. LAND AND RIGHTS - EXISTING SYSTEM(S)

Number of Treatment Plant Sites: Water _____ *Sewer*
 Number of Storage Tank Sites Water 2 *Sewer*
 Number of Pump Stations: Water _____ *Sewer*
 Total Acreage: Water 2 Acres *Sewer* _____ *Acres*
 Purchase Price: Water \$ 20,000 *Sewer* \$ _____

VII. NUMBER OF EXISTING USERS

	Water	<i>Sewer</i>
Residential (In Town) *	_____	_____
Residential (Out of Town) *	<u>3,700</u>	_____
Non-Residential (In Town)	_____	_____
Non-Residential (Out of Town)	_____	_____

Total 3,700
 Number to Total Potential Users Living in the Service Area 7,000

*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence.

VIII. CURRENT WATER AND SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

<u>Meter Size</u>	<u>Water Connection Fee</u>	<u>Sewer Connection Fee</u>
<u>5/8" x 3/4"</u>	<u>\$ 500</u>	<u>\$</u>
<u>1 - Inch</u>	<u>\$</u>	<u>\$</u>

IX. SEWER RATES - EXISTING SYSTEM N/A

Percentage of Water Bill _____ % Minimum Charge \$ _____

Other: (If Charge Not Based on Water Bill) _____

Date This Rate Went Into Effect _____

X. WATER RATES - EXISTING SYSTEM

Existing Rate Schedule:

First	<u>2,000</u>	Gallons @ \$ <u>14.87</u>	Minimum.
Next	<u>5,000</u>	Gallons @ \$ <u>7.41</u>	per 1,000 Gallons.
Next	<u>10,000</u>	Gallons @ \$ <u>7.11</u>	per 1,000 Gallons.
Next	<u>20,000</u>	Gallons @ \$ <u>6.41</u>	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
All Over	<u>37,000</u>	Gallons @ \$ <u>5.41</u>	per 1,000 Gallons.

Date This Rate Went Into Effect 10/1/2005

If More Than One Rate Schedule, Please Include All Schedules.

XI. ANALYSIS OF ACTUAL SEWER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD N/A

For Period _____ to _____.

<u>All Meter Sizes</u>	<u>Monthly Sewer Usage</u>	<u>Average</u>	<u>Residential</u>		<u>Non-Residential</u>	
			<u>No. of Users</u>	<u>Usage (1000)</u>	<u>No. of Users</u>	<u>Usage (1000)</u>
	0 - 2,000 Gallons	1,000	_____	_____	_____	_____
	2,000 - 3,000 Gallons	2,500	_____	_____	_____	_____
	3,000 - 4,000 Gallons	3,500	_____	_____	_____	_____
	4,000 - 5,000 Gallons	4,500	_____	_____	_____	_____
	5,000 - 6,000 Gallons	5,500	_____	_____	_____	_____
	6,000 - 7,000 Gallons	6,500	_____	_____	_____	_____
	7,000 - 8,000 Gallons	7,500	_____	_____	_____	_____
	8,000 - 9,000 Gallons	8,500	_____	_____	_____	_____
	9,000 - 10,000 Gallons	9,500	_____	_____	_____	_____
	10,000 - 11,000 Gallons	10,500	_____	_____	_____	_____
	11,000 - 12,000 Gallons	11,500	_____	_____	_____	_____
	12,000 - 13,000 Gallons	12,500	_____	_____	_____	_____
	13,000 - 14,000 Gallons	13,500	_____	_____	_____	_____
	14,000 - 15,000 Gallons	14,500	_____	_____	_____	_____
	15,000 - 16,000 Gallons	15,500	_____	_____	_____	_____
	16,000 - 17,000 Gallons	16,500	_____	_____	_____	_____
	17,000 - 18,000 Gallons	17,500	_____	_____	_____	_____
	18,000 - 19,000 Gallons	18,500	_____	_____	_____	_____
	19,000 - 20,000 Gallons	19,500	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
		Total	() ()	() ()	() ()	() ()
		Average Usage	()	()	()	()

XII. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD Attached

For Period 1/1/2006 to 12/31/2006

All Meter Sizes	Monthly Water Usage	Average	Residential		Non-Residential	
			No. of Users	Usage (1000)	No. of Users	Usage (1000)
	0 - 2,000 Gallons	1,000				
	2,000 - 3,000 Gallons	2,500				
	3,000 - 4,000 Gallons	3,500				
	4,000 - 5,000 Gallons	4,500				
	5,000 - 6,000 Gallons	5,500				
	6,000 - 7,000 Gallons	6,500				
	7,000 - 8,000 Gallons	7,500				
	8,000 - 9,000 Gallons	8,500				
	9,000 - 10,000 Gallons	9,500				
	10,000 - 11,000 Gallons	10,500				
	11,000 - 12,000 Gallons	11,500				
	12,000 - 13,000 Gallons	12,500				
	13,000 - 14,000 Gallons	13,500				
	14,000 - 15,000 Gallons	14,500				
	15,000 - 16,000 Gallons	15,500				
	16,000 - 17,000 Gallons	16,500				
	17,000 - 18,000 Gallons	17,500				
	18,000 - 19,000 Gallons	18,500				
	19,000 - 20,000 Gallons	19,500				
	_____ Gallons	_____				
	_____ Gallons	_____				
	_____ Gallons	_____				
		Total	()	()	()	()
		Average Usage		()		()

Total Water Purchased and/or Produced	<u>274,142,700</u>	
Total Water Sold	<u>249,459,000</u>	

Meade County Water District
P.O. Box 367
Brandenburg, KY 40108

Meade County Water District

Annual Revenue with 2006 Existing Rates and Existing Residential Customer Monthly Billings

First 2,000 gallons	\$	14.87	flat		
Usage from 2,000 to 7,000 gallons	\$	7.41	per 1,000 gallons	\$37.05	Total per Usage Range
Usage from 7,000 to 17,000 gallons	\$	7.11	per 1,000 gallons	\$71.10	Total per Usage Range
Usage from 17,000 to 37,000 gallons	\$	6.41	per 1,000 gallons	\$128.20	Total per Usage Range
All over 37,000 gallons	\$	5.41	per 1,000 gallons		
Doe Creek Bulk Rate	\$	3.00	per 1,000 gallons		
Otter Creek Bulk Rate	\$	3.23	per 1,000 gallons		
Bulk Sales	\$	5.25	per 1,000 gallons		

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	1,050	\$ 14.87	9163	9,621	6.0%	\$136,253.81	10.3%	10.3%	6.0%
2-3K	2,522	\$ 18.74	7338	18,506	11.5%	\$137,499.59	10.4%	10.4%	11.5%
3-4K	3,491	\$ 25.92	7266	25,366	15.8%	\$188,322.44	14.3%	14.3%	15.8%
4-5K	4,484	\$ 33.28	5607	25,142	15.7%	\$186,581.00	14.2%	14.2%	15.7%
5-6K	5,476	\$ 40.63	3994	21,871	13.8%	\$162,264.88	12.3%	12.3%	13.6%
6-7K	6,472	\$ 48.01	2556	16,542	10.3%	\$122,707.22	9.3%	9.3%	10.3%
7-8K	7,468	\$ 55.25	1516	11,321	7.1%	\$83,755.18	6.4%	6.4%	7.1%
8-9K	8,471	\$ 62.38	878	7,438	4.8%	\$54,768.60	4.2%	4.2%	4.6%
9-10K	9,485	\$ 69.59	517	4,904	3.1%	\$35,977.18	2.7%	2.7%	3.1%
10-11K	10,483	\$ 76.68	330	3,459	2.2%	\$25,305.76	1.9%	1.9%	2.2%
11-12K	11,460	\$ 83.63	241	2,762	1.7%	\$20,154.97	1.5%	1.5%	1.7%
12-13K	12,448	\$ 90.66	176	2,191	1.4%	\$15,955.33	1.2%	1.2%	1.4%
13-14K	13,484	\$ 98.02	109	1,470	0.9%	\$10,684.32	0.8%	0.8%	0.9%
14-15K	14,462	\$ 104.97	122	1,764	1.1%	\$12,806.93	1.0%	1.0%	1.1%
15-16K	15,495	\$ 112.32	60	930	0.6%	\$6,739.17	0.5%	0.5%	0.6%
16-17K	16,527	\$ 119.66	47	777	0.5%	\$5,623.88	0.4%	0.4%	0.5%
17-18k	17,440	\$ 125.84	31	541	0.3%	\$3,901.05	0.3%	0.3%	0.3%
18-19K	18,465	\$ 132.41	26	480	0.3%	\$3,442.68	0.3%	0.3%	0.3%
19-20K	19,501	\$ 139.05	17	332	0.2%	\$2,363.87	0.2%	0.2%	0.2%
20-21K	20,335	\$ 144.40	18	366	0.2%	\$2,599.15	0.2%	0.2%	0.2%
21-22K	21,404	\$ 151.25	15	321	0.2%	\$2,268.74	0.2%	0.2%	0.2%
22-23K	22,523	\$ 158.42	12	270	0.2%	\$1,901.07	0.1%	0.1%	0.2%
23-24K	23,560	\$ 165.07	9	212	0.1%	\$1,485.63	0.1%	0.1%	0.1%
24-25K	24,636	\$ 171.97	10	246	0.2%	\$1,719.67	0.1%	0.1%	0.2%
25-26K	25,583	\$ 178.04	3	77	0.0%	\$534.11	0.0%	0.0%	0.0%
26-27K	26,449	\$ 183.59	7	185	0.1%	\$1,285.12	0.1%	0.1%	0.1%
27-28K	27,360	\$ 189.43	4	109	0.1%	\$757.71	0.1%	0.1%	0.1%
28-29K	28,513	\$ 196.82	6	171	0.1%	\$1,180.91	0.1%	0.1%	0.1%
29-30K	29,302	\$ 201.88	5	147	0.1%	\$1,009.38	0.1%	0.1%	0.1%
30-31K	30,362	\$ 208.67	6	182	0.1%	\$1,252.02	0.1%	0.1%	0.1%
31-32K	31,522	\$ 216.11	5	158	0.1%	\$1,080.53	0.1%	0.1%	0.1%
32-33K	32,513	\$ 222.46	3	98	0.1%	\$667.37	0.1%	0.1%	0.1%
33-34K	33,620	\$ 229.55	3	101	0.1%	\$688.66	0.1%	0.1%	0.1%
34-35K	34,638	\$ 236.08	4	139	0.1%	\$944.32	0.1%	0.1%	0.1%
35-36K	35,460	\$ 241.35	-1	35	0.0%	\$241.35	0.0%	0.0%	0.0%
36-37K	36,408	\$ 247.43	2	73	0.0%	\$494.85	0.0%	0.0%	0.0%
37-60K	45,791	\$ 298.78	14	641	0.4%	\$4,182.91	0.3%	0.3%	0.4%
Over 60K	107,120	\$ 630.57	12	1,285	0.8%	\$7,566.83	0.6%	0.6%	0.8%
Residential Meter Settings		\$ 500.00	139			\$69,500.00	5.3%	5.3%	
Totals			40,133	160,232	100.0%	\$1,316,468.18	100.0%	100.0%	100.0%
Average monthly usage in gallons				3,993					
Average monthly billing						\$32.80			
Number of Residential Customers			3344						
Total Annual Revenue from Residential Customers						\$1,316,468.18			

Meade County Water District

Annual Revenue with 2006 Existing Rates and Existing Non-Residential Customer Monthly Billings

First 2,000 gallons	\$ 14.87 flat	
Usage from 2,000 to 7,000 gallons	\$ 7.41 per 1,000 gallons	\$37.05 Total
Usage from 7,000 to 17,000 gallons	\$ 7.11 per 1,000 gallons	\$71.10 Total
Usage from 17,000 to 37,000 gallons	\$ 6.41 per 1,000 gallons	\$128.20 Total
All over 37,000 gallons	\$ 5.41 per 1,000 gallons	
Doe Creek Bulk Rate	\$ 3.00 per 1,000 gallons	
Otter Creek Bulk Rate	\$ 3.23 per 1,000 gallons	
Bulk Sales	\$ 5.25 per 1,000 gallons	

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	393	\$ 14.87	1187	466	0.6%	\$17,650.69	5.7%	5.7%	0.6%
2-3K	2,507	\$ 18.63	151	379	0.5%	\$2,812.66	0.9%	0.9%	0.5%
3-4K	3,453	\$ 25.64	109	376	0.5%	\$2,794.40	0.9%	0.9%	0.5%
4-5K	4,475	\$ 33.21	91	407	0.5%	\$3,022.09	1.0%	1.0%	0.5%
5-6K	5,521	\$ 40.96	63	348	0.4%	\$2,580.52	0.8%	0.8%	0.4%
6-7K	6,509	\$ 48.28	65	423	0.5%	\$3,138.31	1.0%	1.0%	0.5%
7-8K	7,555	\$ 55.87	43	325	0.4%	\$2,402.24	0.8%	0.8%	0.4%
8-9K	8,529	\$ 62.79	37	316	0.4%	\$2,323.27	0.8%	0.8%	0.4%
9-10K	9,338	\$ 68.54	13	121	0.2%	\$891.06	0.3%	0.3%	0.2%
10-11K	10,524	\$ 76.98	11	116	0.1%	\$846.73	0.3%	0.3%	0.1%
11-12K	11,513	\$ 84.01	10	115	0.1%	\$840.07	0.3%	0.3%	0.1%
12-13K	12,502	\$ 91.04	15	188	0.2%	\$1,365.59	0.4%	0.4%	0.2%
13-14K	13,503	\$ 98.16	12	162	0.2%	\$1,177.88	0.4%	0.4%	0.2%
14-15K	14,130	\$ 102.61	2	28	0.0%	\$205.23	0.1%	0.1%	0.0%
15-16K	15,697	\$ 113.76	6	94	0.1%	\$682.53	0.2%	0.2%	0.1%
16-17K	16,750	\$ 121.24	4	67	0.1%	\$484.97	0.2%	0.2%	0.1%
17-18k	17,470	\$ 126.03	7	122	0.2%	\$882.23	0.3%	0.3%	0.2%
18-19K	18,475	\$ 132.47	7	129	0.2%	\$927.32	0.3%	0.3%	0.2%
19-20K	19,470	\$ 138.85	4	78	0.1%	\$555.41	0.2%	0.2%	0.1%
20-21K	20,728	\$ 146.92	5	104	0.1%	\$734.58	0.2%	0.2%	0.1%
21-22K	21,583	\$ 152.40	4	86	0.1%	\$609.59	0.2%	0.2%	0.1%
22-23K	22,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
23-24K	23,300	\$ 163.40	1	23	0.0%	\$163.40	0.1%	0.1%	0.0%
24-25K	24,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
25-26K	25,455	\$ 177.22	4	102	0.1%	\$708.87	0.2%	0.2%	0.1%
26-27K	26,100	\$ 181.35	1	26	0.0%	\$181.35	0.1%	0.1%	0.0%
27-28K	27,200	\$ 188.40	1	27	0.0%	\$188.40	0.1%	0.1%	0.0%
28-29K	28,680	\$ 197.89	3	86	0.1%	\$593.67	0.2%	0.2%	0.1%
29-30K	29,310	\$ 201.93	1	29	0.0%	\$201.93	0.1%	0.1%	0.0%
30-31K	30,700	\$ 210.84	5	154	0.2%	\$1,054.19	0.3%	0.3%	0.2%
31-32K	31,420	\$ 215.45	3	94	0.1%	\$646.36	0.2%	0.2%	0.1%
32-33K	32,550	\$ 222.70	2	65	0.1%	\$445.39	0.1%	0.1%	0.1%
33-34K	34,000	\$ 231.99	1	34	0.0%	\$231.99	0.1%	0.1%	0.0%
34-35K	34,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
35-36K	35,530	\$ 241.80	1	36	0.0%	\$241.80	0.1%	0.1%	0.0%
36-37K	36,500	\$ 248.02	1	37	0.0%	\$248.02	0.1%	0.1%	0.0%
37-60K	47,940	\$ 310.41	16	767	1.0%	\$4,966.49	1.6%	1.6%	1.0%
Over 60K	100,940	\$ 597.14	23	2322	2.9%	\$13,734.11	4.4%	4.4%	2.9%
Doe Valley	4,871,417	\$ 14,614.25	12	58457	74.1%	\$175,371.01	56.7%	56.7%	74.1%
Otter Creek	765,417	\$ 2,472.30	12	9185	11.6%	\$29,667.56	9.6%	9.6%	11.6%
Bulk Sales	247,792	\$ 1,300.91	12	2974	3.8%	\$15,610.90	5.0%	5.0%	3.8%
Meter Settings, 1" and Larger		\$ 600.00	30			\$18,000.00	5.8%	5.8%	
Totals			1,945	78,868	100.0%	\$309,182.80	100.0%	100.0%	100.0%
Average monthly usage in gallons				40,549					
Average monthly billing						\$158.96			
Number of Non-Residential Customers			162						
Total Annual Revenue from Non-Residential Customers						\$309,182.80			

XIII. FACILITY CHARACTERISTICS OF PROPOSED SEWER SYSTEM N/A

A. Sewage Treatment:

1. Type _____

2. Method of Sludge Disposal _____

3. Cost per 1,000 gallons if sewage treatment is contracted:

\$ _____

B. Treatment Capacity of Sewage Treatment Plant _____

C. Type of Sewage Collector System (Describe) _____

D. Number and Capacity of Sewage Lift Stations _____

E. Sewage Collection System:

Lineal Feet of Collector Lines, by size 6" _____ 8" _____

10" _____ 12" _____, Larger _____

XIV. LAND AND RIGHTS - PROPOSED SEWER SYSTEM

Number of Treatment Plant Sites _____

Number of Pump Sites _____

Number of Other Sites _____

Total Acreage _____ **Acres**

Purchase Price \$ _____

XV. FACILITY CHARACTERISTICS OF PROPOSED WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

Water purchase contracts with Brandenburg and Hardin County Water District No. 1 will be extended to cover the 40-year term of the loan.

B. Water Storage:

Type: Ground Storage Tank _____ Elevated Tank _____
Standpipe _____ Other _____

Number of Storage Structures _____

Total Storage Volume Capacity _____

C. Water Distribution System:

Pipe Material PVC _____

Lineal Feet of Pipe: 3" Diameter _____ 4" _____

6" 129,500 _____ 8" 7,900 _____

10" _____ 12" _____

Number and Capacity of Pump Station(s) 0 _____

XVI. LAND AND RIGHTS - PROPOSED WATER SYSTEM

Number of Treatment Plant Sites _____

Number of Pump Sites _____

Number of Other Sites _____

Total Acreage _____ Acres

Purchase Price _____ 16

XVII. NUMBER OF NEW SEWER USERS N/A

<i>Residential (In Town) *</i>	_____
<i>Residential (Out of Town) *</i>	_____
<i>Non-Residential (In Town)</i>	_____
<i>Non-Residential (Out of Town)</i>	_____
<i>Total</i>	_____
<i>Number to Total Potential Users Living in the Service Area</i>	_____

***Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.**

XVIII. PROPOSED SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

<u>Meter Size</u>	<u>Connection Fee</u>
<u>5/8" x 3/4"</u>	\$
<u>1 - Inch</u>	\$
<u>1-1/2 Inch</u>	\$
<u>2 - Inch</u>	\$
<u>3 - Inch</u>	\$
<u>4 - Inch</u>	\$
<u>5 - Inch</u>	\$
<u>6 - Inch</u>	\$

XIX. NUMBER OF NEW WATER USERS

Residential (In Town) *	_____
Residential (Out of Town) *	<u>159</u>
Non-Residential (In Town)	_____
Non-Residential (Out of Town)	_____
Total	<u>159</u>
Number to Total Potential Users Living in the Service Area	<u>198</u>

*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.

XX. PROPOSED WATER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION:

<u>Meter Size</u>	<u>Connection Fee</u>
<u>5/8" x 3/4"</u>	<u>\$ 632</u>
<u>1 - Inch</u>	<u>\$ Actual Cost</u>
<u>1-1/2 Inch</u>	<u>\$ Actual Cost</u>
<u>2 - Inch</u>	<u>\$ Actual Cost</u>
<u>3 - Inch</u>	<u>\$ Actual Cost</u>
<u>4 - Inch</u>	<u>\$ Actual Cost</u>
<u>5 - Inch</u>	<u>\$ Actual Cost</u>
<u>6 - Inch</u>	<u>\$ Actual Cost</u>

XXI. SEWER RATES - PROPOSED N/A

A. Proposed Rate Schedule without RUS Grant:

Percentage of Water Bill _____ % Minimum Charge \$ _____

Other: (If Charge Not Based on Water Bill) _____

Proposed Rate Schedule: (Without RUS Grant)

First	_____	Gallons @ \$ _____	Minimum.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
All Over	_____	Gallons @ \$ _____	per 1,000 Gallons.

The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).

B. Recommended Rate Schedule with RUS Grant:

Percentage of Water Bill _____ % Minimum Charge \$ _____

Other: (If Charge Not Based on Water Bill) _____

Recommended Rate Schedule: (With RUS Grant)

First	_____	Gallons @ \$ _____	Minimum.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
All Over	_____	Gallons @ \$ _____	per 1,000 Gallons.

If more than one rate, use additional sheets.

XXII. WATER RATES - PROPOSED - The Proposed Rates went into Effect 1/1/2008.

A. Proposed Rate Schedule without RUS Grant:

First	<u>2,000</u>	Gallons @ \$ <u>15.85</u>	Minimum.
Next	<u>5,000</u>	Gallons @ \$ <u>7.66</u>	per 1,000 Gallons.
Next	<u>10,000</u>	Gallons @ \$ <u>7.35</u>	per 1,000 Gallons.
Next	<u>20,000</u>	Gallons @ \$ <u>6.65</u>	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
All Over	<u>37,000</u>	Gallons @ \$ <u>5.65</u>	per 1,000 Gallons.

The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).

B. Recommended Rate Schedule with RUS Grant:

First	<u>2,000</u>	Gallons @ \$ <u>15.85</u>	Minimum.
Next	<u>5,000</u>	Gallons @ \$ <u>7.66</u>	per 1,000 Gallons.
Next	<u>10,000</u>	Gallons @ \$ <u>7.35</u>	per 1,000 Gallons.
Next	<u>20,000</u>	Gallons @ \$ <u>6.65</u>	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
Next	_____	Gallons @ \$ _____	per 1,000 Gallons.
All Over	<u>37,000</u>	Gallons @ \$ <u>5.65</u>	per 1,000 Gallons.

If more than one rate, use additional sheets.

**XXIII. FORECAST OF SEWER USAGE - INCOME - EXISTING SYSTEM - EXISTING
USERS N/A**

<u>Meter Size*</u>	<u>Monthly Sewer Usage</u>	<u>Average Rate</u>	<u>Residential</u>			<u>Non-Residential</u>		
			<u>No. of Users**</u>	<u>Usage (1000)</u>	<u>Income</u>	<u>No. of Users</u>	<u>Usage (1000)</u>	<u>Income</u>
	0 - 2,000 Gallons	1,000						
	2,000 - 3,000 Gallons	2,500						
	3,000 - 4,000 Gallons	3,500						
	4,000 - 5,000 Gallons	4,500						
	5,000 - 6,000 Gallons	5,500						
	6,000 - 7,000 Gallons	6,500						
	7,000 - 8,000 Gallons	7,500						
	8,000 - 9,000 Gallons	8,500						
	9,000 - 10,000 Gallons	9,500						
5/8	10,000 - 11,000 Gallons	10,500						
x	11,000 - 12,000 Gallons	11,500						
3/4	12,000 - 13,000 Gallons	12,500						
Inch	13,000 - 14,000 Gallons	13,500						
	14,000 - 15,000 Gallons	14,500						
	15,000 - 16,000 Gallons	15,500						
	16,000 - 17,000 Gallons	16,500						
	17,000 - 18,000 Gallons	17,500						
	18,000 - 19,000 Gallons	18,500						
	19,000 - 20,000 Gallons	19,500						
	- Gallons							
	- Gallons							
	- Gallons							
	Sub-Total		()	()	()	()	()	()
	Average Monthly Rate	()						
	Average Monthly Usage		()			()		

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

	-	Gallons							
	-	Gallons							
5-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total		()	()	()	()	()	()
	-	Gallons							
	-	Gallons							
6-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total		()	()	()	()	()	()
		TOTALS		()	()	()	()	()	()

MULTI-FAMILY AND APARTMENT USER ANALYSIS N/A

If billed as a typical user, the information should be included in the residential information above. If not billed as a typical residential user, please explain below.

<u>Name of Unit</u>	<u>Number of Units</u>	<u>Number of Meters</u>	<u>Revenue Calculations</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

XXIV. FORECAST OF SEWER USAGE - INCOME - NEW USERS - EXTENSION ONLY

N/A

<i>Meter Size*</i>	<i>Monthly Sewer Usage</i>	<i>Average Rate</i>	<i>Residential</i>		<i>Non-Residential</i>	
			<i>No. of Users** (1000)</i>	<i>Usage Income (1000)</i>	<i>No. of Users (1000)</i>	<i>Usage Income (1000)</i>
	0 - 2,000 Gallons	1,000				
	2,000 - 3,000 Gallons	2,500				
	3,000 - 4,000 Gallons	3,500				
	4,000 - 5,000 Gallons	4,500				
	5,000 - 6,000 Gallons	5,500				
	6,000 - 7,000 Gallons	6,500				
	7,000 - 8,000 Gallons	7,500				
	8,000 - 9,000 Gallons	8,500				
	9,000 - 10,000 Gallons	9,500				
5/8	10,000 - 11,000 Gallons	10,500				
x	11,000 - 12,000 Gallons	11,500				
3/4	12,000 - 13,000 Gallons	12,500				
Inch	13,000 - 14,000 Gallons	13,500				
	14,000 - 15,000 Gallons	14,500				
	15,000 - 16,000 Gallons	15,500				
	16,000 - 17,000 Gallons	16,500				
	17,000 - 18,000 Gallons	17,500				
	18,000 - 19,000 Gallons	18,500				
	19,000 - 20,000 Gallons	19,500				
	- Gallons					
	- Gallons					
	- Gallons					
	<i>Sub-Total</i>		()	()	()	()
	<i>Average Monthly Rate</i> ()					
	<i>Average Monthly Usage</i>		()		()	

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

	-	Gallons						
	-	Gallons						
5-	-	Gallons						
Inch	-	Gallons						
	-	Gallons						
	-	Gallons						
	-	Sub-Total	()	()	()	()	()	()
	-	Gallons						
	-	Gallons						
6-	-	Gallons						
Inch	-	Gallons						
	-	Gallons						
	-	Gallons						
	-	Sub-Total	()	()	()	()	()	()
		TOTALS	()	()	()	()	()	()

MULTI-FAMILY AND APARTMENT USER ANALYSIS N/A

If billed as a typical user, the information should be included in the residential information above. If not billed as a typical residential user, please explain below.

<u>Name of Unit</u>	<u>Number of Units</u>	<u>Number of Meters</u>	<u>Revenue Calculations</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS

Meter Size*	Monthly Sewer Usage	Average Rate	Attached					
			Residential		Non-Residential			
			No. of Users**	Usage (1000)	Income	No. of Users	Usage (1000)	Income
	0 - 2,000 Gallons	1,000						
	2,000 - 3,000 Gallons	2,500						
	3,000 - 4,000 Gallons	3,500						
	4,000 - 5,000 Gallons	4,500						
	5,000 - 6,000 Gallons	5,500						
	6,000 - 7,000 Gallons	6,500						
	7,000 - 8,000 Gallons	7,500						
	8,000 - 9,000 Gallons	8,500						
	9,000 - 10,000 Gallons	9,500						
5/8	10,000 - 11,000 Gallons	10,500						
x	11,000 - 12,000 Gallons	11,500						
3/4	12,000 - 13,000 Gallons	12,500						
Inch	13,000 - 14,000 Gallons	13,500						
	14,000 - 15,000 Gallons	14,500						
	15,000 - 16,000 Gallons	15,500						
	16,000 - 17,000 Gallons	16,500						
	17,000 - 18,000 Gallons	17,500						
	18,000 - 19,000 Gallons	18,500						
	19,000 - 20,000 Gallons	19,500						
	- Gallons							
	- Gallons							
	- Gallons							
	Sub-Total		()	()	()	()	()	()
	Average Monthly Rate ()							
	Average Monthly Usage			()			()	

* Breakdown of meter size usage is not required unless different water rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

Meade County Water District

Annual Revenue with 2006 Existing Rates and Existing Residential Customer Monthly Billings

First 2,000 gallons	\$ 14.87 flat	
Usage from 2,000 to 7,000 gallons	\$ 7.41 per 1,000 gallons	\$37.05 Total per Usage Range
Usage from 7,000 to 17,000 gallons	\$ 7.11 per 1,000 gallons	\$71.10 Total per Usage Range
Usage from 17,000 to 37,000 gallons	\$ 6.41 per 1,000 gallons	\$128.20 Total per Usage Range
All over 37,000 gallons	\$ 5.41 per 1,000 gallons	
Doe Creek Bulk Rate	\$ 3.00 per 1,000 gallons	
Otter Creek Bulk Rate	\$ 3.23 per 1,000 gallons	
Bulk Sales	\$ 5.25 per 1,000 gallons	

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	1,050	\$ 14.87	9163	9,621	6.0%	\$136,253.81	10.3%	10.3%	6.0%
2-3K	2,522	\$ 18.74	7338	18,506	11.5%	\$137,499.59	10.4%	10.4%	11.5%
3-4K	3,491	\$ 25.92	7266	25,366	15.8%	\$188,322.44	14.3%	14.3%	15.8%
4-5K	4,484	\$ 33.28	5607	25,142	15.7%	\$186,581.00	14.2%	14.2%	15.7%
5-6K	5,476	\$ 40.63	3994	21,871	13.6%	\$162,264.88	12.3%	12.3%	13.6%
6-7K	6,472	\$ 48.01	2556	16,542	10.3%	\$122,707.22	9.3%	9.3%	10.3%
7-8K	7,468	\$ 55.25	1516	11,321	7.1%	\$83,755.18	6.4%	6.4%	7.1%
8-9K	8,471	\$ 62.38	878	7,438	4.6%	\$54,768.60	4.2%	4.2%	4.6%
9-10K	9,485	\$ 69.59	517	4,904	3.1%	\$35,977.18	2.7%	2.7%	3.1%
10-11K	10,483	\$ 76.68	330	3,459	2.2%	\$25,305.76	1.9%	1.9%	2.2%
11-12K	11,460	\$ 83.63	241	2,762	1.7%	\$20,154.97	1.5%	1.5%	1.7%
12-13K	12,448	\$ 90.66	176	2,191	1.4%	\$15,955.33	1.2%	1.2%	1.4%
13-14K	13,484	\$ 98.02	109	1,470	0.9%	\$10,684.32	0.8%	0.8%	0.9%
14-15K	14,462	\$ 104.97	122	1,764	1.1%	\$12,806.93	1.0%	1.0%	1.1%
15-16K	15,495	\$ 112.32	60	930	0.6%	\$6,739.17	0.5%	0.5%	0.6%
16-17K	16,527	\$ 119.66	47	777	0.5%	\$5,623.88	0.4%	0.4%	0.5%
17-18k	17,440	\$ 125.84	31	541	0.3%	\$3,901.05	0.3%	0.3%	0.3%
18-19K	18,465	\$ 132.41	26	480	0.3%	\$3,442.68	0.3%	0.3%	0.3%
19-20K	19,501	\$ 139.05	17	332	0.2%	\$2,363.87	0.2%	0.2%	0.2%
20-21K	20,335	\$ 144.40	18	366	0.2%	\$2,599.15	0.2%	0.2%	0.2%
21-22K	21,404	\$ 151.25	15	321	0.2%	\$2,268.74	0.2%	0.2%	0.2%
22-23K	22,523	\$ 158.42	12	270	0.2%	\$1,901.07	0.1%	0.1%	0.2%
23-24K	23,560	\$ 165.07	9	212	0.1%	\$1,485.63	0.1%	0.1%	0.1%
24-25K	24,636	\$ 171.97	10	246	0.2%	\$1,719.67	0.1%	0.1%	0.2%
25-26K	25,583	\$ 178.04	3	77	0.0%	\$534.11	0.0%	0.0%	0.0%
26-27K	26,449	\$ 183.59	7	185	0.1%	\$1,285.12	0.1%	0.1%	0.1%
27-28K	27,360	\$ 189.43	4	109	0.1%	\$757.71	0.1%	0.1%	0.1%
28-29K	28,513	\$ 196.82	6	171	0.1%	\$1,180.91	0.1%	0.1%	0.1%
29-30K	29,302	\$ 201.88	5	147	0.1%	\$1,009.38	0.1%	0.1%	0.1%
30-31K	30,362	\$ 208.67	6	182	0.1%	\$1,252.02	0.1%	0.1%	0.1%
31-32K	31,522	\$ 216.11	5	158	0.1%	\$1,080.53	0.1%	0.1%	0.1%
32-33K	32,513	\$ 222.46	3	98	0.1%	\$667.37	0.1%	0.1%	0.1%
33-34K	33,620	\$ 229.55	3	101	0.1%	\$688.66	0.1%	0.1%	0.1%
34-35K	34,638	\$ 236.08	4	139	0.1%	\$944.32	0.1%	0.1%	0.1%
35-36K	35,460	\$ 241.35	1	35	0.0%	\$241.35	0.0%	0.0%	0.0%
36-37K	36,408	\$ 247.43	2	73	0.0%	\$494.85	0.0%	0.0%	0.0%
37-60K	45,791	\$ 298.78	14	641	0.4%	\$4,182.91	0.3%	0.3%	0.4%
Over 60K	107,120	\$ 630.57	12	1,285	0.8%	\$7,566.83	0.6%	0.6%	0.8%
Residential Meter Settings		\$ 500.00	139			\$69,500.00	5.3%	5.3%	
Totals			40,133	160,232	100.0%	\$1,316,468.18	100.0%	100.0%	100.0%
Average monthly usage in gallons				3,993					
Average monthly billing						\$32.80			
Number of Residential Customers			3344						
Total Annual Revenue from Residential Customers						\$1,316,468.18			

Meade County Water District

Annual Revenue with 2006 Existing Rates and Existing Non-Residential Customer Monthly Billings

First 2,000 gallons	\$ 14.87 flat	
Usage from 2,000 to 7,000 gallons	\$ 7.41 per 1,000 gallons	\$37.05 Total
Usage from 7,000 to 17,000 gallons	\$ 7.11 per 1,000 gallons	\$71.10 Total
Usage from 17,000 to 37,000 gallons	\$ 6.41 per 1,000 gallons	\$128.20 Total
All over 37,000 gallons	\$ 5.41 per 1,000 gallons	
Doa Creek Bulk Rate	\$ 3.00 per 1,000 gallons	
Otter Creek Bulk Rate	\$ 3.23 per 1,000 gallons	
Bulk Sales	\$ 5.25 per 1,000 gallons	

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	393	\$ 14.87	1187	466	0.6%	\$17,650.69	5.7%	5.7%	0.6%
2-3K	2,507	\$ 18.63	151	379	0.5%	\$2,812.66	0.9%	0.9%	0.5%
3-4K	3,453	\$ 25.64	109	376	0.5%	\$2,794.40	0.9%	0.9%	0.5%
4-5K	4,475	\$ 33.21	91	407	0.5%	\$3,022.09	1.0%	1.0%	0.5%
5-6K	5,521	\$ 40.96	63	348	0.4%	\$2,580.52	0.8%	0.8%	0.4%
6-7K	6,509	\$ 48.28	65	423	0.5%	\$3,138.31	1.0%	1.0%	0.5%
7-8K	7,555	\$ 55.87	43	325	0.4%	\$2,402.24	0.8%	0.8%	0.4%
8-9K	8,529	\$ 62.79	37	316	0.4%	\$2,323.27	0.8%	0.8%	0.4%
9-10K	9,338	\$ 68.54	13	121	0.2%	\$891.06	0.3%	0.3%	0.2%
10-11K	10,524	\$ 76.98	11	116	0.1%	\$846.73	0.3%	0.3%	0.1%
11-12K	11,513	\$ 84.01	10	115	0.1%	\$840.07	0.3%	0.3%	0.1%
12-13K	12,502	\$ 91.04	15	188	0.2%	\$1,365.59	0.4%	0.4%	0.2%
13-14K	13,503	\$ 98.16	12	162	0.2%	\$1,177.88	0.4%	0.4%	0.2%
14-15K	14,130	\$ 102.61	2	28	0.0%	\$205.23	0.1%	0.1%	0.0%
15-16K	15,697	\$ 113.76	6	94	0.1%	\$682.53	0.2%	0.2%	0.1%
16-17K	16,750	\$ 121.24	4	67	0.1%	\$484.97	0.2%	0.2%	0.1%
17-18K	17,470	\$ 126.03	7	122	0.2%	\$882.23	0.3%	0.3%	0.2%
18-19K	18,475	\$ 132.47	7	129	0.2%	\$927.32	0.3%	0.3%	0.2%
19-20K	19,470	\$ 138.85	4	78	0.1%	\$555.41	0.2%	0.2%	0.1%
20-21K	20,728	\$ 146.92	5	104	0.1%	\$734.58	0.2%	0.2%	0.1%
21-22K	21,583	\$ 152.40	4	86	0.1%	\$609.59	0.2%	0.2%	0.1%
22-23K	22,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
23-24K	23,300	\$ 163.40	1	23	0.0%	\$163.40	0.1%	0.1%	0.0%
24-25K	24,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
25-26K	25,455	\$ 177.22	4	102	0.1%	\$708.87	0.2%	0.2%	0.1%
26-27K	26,100	\$ 181.35	1	26	0.0%	\$181.35	0.1%	0.1%	0.0%
27-28K	27,200	\$ 188.40	1	27	0.0%	\$188.40	0.1%	0.1%	0.0%
28-29K	28,680	\$ 197.89	3	86	0.1%	\$593.67	0.2%	0.2%	0.1%
29-30K	29,310	\$ 201.93	1	29	0.0%	\$201.93	0.1%	0.1%	0.0%
30-31K	30,700	\$ 210.84	5	154	0.2%	\$1,054.19	0.3%	0.3%	0.2%
31-32K	31,420	\$ 215.45	3	94	0.1%	\$646.36	0.2%	0.2%	0.1%
32-33K	32,550	\$ 222.70	2	65	0.1%	\$445.39	0.1%	0.1%	0.1%
33-34K	34,000	\$ 231.99	1	34	0.0%	\$231.99	0.1%	0.1%	0.0%
34-35K	34,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
35-36K	35,530	\$ 241.80	1	36	0.0%	\$241.80	0.1%	0.1%	0.0%
36-37K	36,500	\$ 248.02	1	37	0.0%	\$248.02	0.1%	0.1%	0.0%
37-60K	47,940	\$ 310.41	16	767	1.0%	\$4,966.49	1.6%	1.6%	1.0%
Over 60K	100,940	\$ 597.14	23	2322	2.9%	\$13,734.11	4.4%	4.4%	2.9%
Doe Valley	4,871,417	\$ 14,614.25	12	58457	74.1%	\$175,371.01	56.7%	56.7%	74.1%
Otter Creek	765,417	\$ 2,472.30	12	9185	11.6%	\$29,667.56	9.6%	9.6%	11.6%
Bulk Sales	247,792	\$ 1,300.91	12	2974	3.8%	\$15,610.90	5.0%	5.0%	3.8%
Meter Settings, 1" and Larger		\$ 600.00	30			\$18,000.00	5.8%	5.8%	
Totals			1,945	78,868	100.0%	\$309,182.80	100.0%	100.0%	100.0%
Average monthly usage in gallons				40,549					
Average monthly billing						\$158.96			
Number of Non-Residential Customers			162						
Total Annual Revenue from Non-Residential Customers						\$309,182.80			

	-	Gallons					
	-	Gallons					
1-	-	Gallons					
Inch	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Sub-Total	()	()	()	()	()

	-	Gallons					
	-	Gallons					
1-1/2	-	Gallons					
Inch	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Sub-Total	()	()	()	()	()

	-	Gallons					
	-	Gallons					
2-	-	Gallons					
Inch	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Sub-Total	()	()	()	()	()

	-	Gallons					
	-	Gallons					
3-	-	Gallons					
Inch	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Sub-Total	()	()	()	()	()

	-	Gallons					
	-	Gallons					
4-	-	Gallons					
Inch	-	Gallons					
	-	Gallons					
	-	Gallons					
	-	Sub-Total	()	()	()	()	()

* Breakdown of meter size usage is not required unless different water rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

	-	Gallons							
	-	Gallons							
5-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total		()	()	()	()	()	()
	-	Gallons							
	-	Gallons							
6-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total		()	()	()	()	()	()
		TOTALS		()	()	()	()	()	()

MULTI-FAMILY AND APARTMENT USER ANALYSIS N/A

If billed as a typical user, the information should be included in the residential information above.
 If not billed as a typical residential user, please explain below.

<u>Name of Unit</u>	<u>Number of Units</u>	<u>Number of Meters</u>	<u>Revenue Calculations</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* Breakdown of meter size usage is not required unless different water rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

XXVI. FORECAST OF WATER USAGE - INCOME - NEW USERS - EXTENSION ONLY

Meter Size*	Monthly Sewer Usage	Average Rate	Residential			Non-Residential		
			No. of Users**	Usage (1000)	Income	No. of Users	Usage (1000)	Income
	0 - 2,000 Gallons	1,000						
	2,000 - 3,000 Gallons	2,500						
	3,000 - 4,000 Gallons	3,500						
	4,000 - 5,000 Gallons	4,500	34.49	1908	7,618			
	5,000 - 6,000 Gallons	5,500						
	6,000 - 7,000 Gallons	6,500						
	7,000 - 8,000 Gallons	7,500						
	8,000 - 9,000 Gallons	8,500						
	9,000 - 10,000 Gallons	9,500						
5/8	10,000 - 11,000 Gallons	10,500						
x	11,000 - 12,000 Gallons	11,500						
3/4	12,000 - 13,000 Gallons	12,500						
Inch	13,000 - 14,000 Gallons	13,500						
	14,000 - 15,000 Gallons	14,500						
	15,000 - 16,000 Gallons	15,500						
	16,000 - 17,000 Gallons	16,500						
	17,000 - 18,000 Gallons	17,500						
	18,000 - 19,000 Gallons	18,500						
	19,000 - 20,000 Gallons	19,500						
	- Gallons							
	- Gallons							
	- Gallons							
	Sub-Total		(1908)	(7618)	(65800)	()	()	()
	Average Monthly Rate (34.49)							
	Average Monthly Usage				(3993)		()	

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

	-	Gallons							
	-	Gallons							
1-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total	()	()	()	()	()	()	()

	-	Gallons							
	-	Gallons							
1-1/2	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total	()	()	()	()	()	()	()

	-	Gallons							
	-	Gallons							
2-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total	()	()	()	()	()	()	()

	-	Gallons							
	-	Gallons							
3-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total	()	()	()	()	()	()	()

	-	Gallons							
	-	Gallons							
4-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Sub-Total	()	()	()	()	()	()	()

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

	-	Gallons							
	-	Gallons							
5-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
	-	Gallons							
		Sub-Total		()	()	()	()	()	()
	-	Gallons							
	-	Gallons							
6-	-	Gallons							
Inch	-	Gallons							
	-	Gallons							
	-	Gallons							
		Sub-Total		()	()	()	()	()	()
		TOTALS		()	()	()	()	()	()

MULTI-FAMILY AND APARTMENT USER ANALYSIS N/A

If billed as a typical user, the information should be included in the residential information above.
 If not billed as a typical residential user, please explain below.

<u>Name of Unit</u>	<u>Number of Units</u>	<u>Number of Meters</u>	<u>Revenue Calculations</u>

* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

** Number of users should reflect the actual number of "meter settings".

XXVII. CURRENT OPERATING BUDGET - (SEWER SYSTEM) N/A
(As of the last full operating year.)

A. Operating Income:

Sewer Revenue \$ _____
Late Charge Fees _____
Other (Describe) _____
Less Allowances and Deductions (_____)
Total Operating Income \$ _____

B. Operation and Maintenance Expenses:
*(Based on Uniform System of Accounts prescribed by National Association of
Regulatory Utility Commissioners)*

Operation Expense \$ _____
Maintenance Expense _____
Customer Accounts Expense _____
Administrative and General Expense _____
Total Operating and Maintenance Expenses \$ _____
Net Operating Income \$ _____

C. Non-Operating Income:

Interest on Deposits \$ _____
Other (Identify) _____
Total Non-Operating Income \$ _____

D. Net Income

\$ _____

E. Debt Repayment:

RUS Interest \$ _____
RUS Principal _____
Non-RUS Interest _____
Non-RUS Principal _____
Total Debt Repayment \$ _____

F. Balance Available for Coverage \$ _____

**XXVIII. PROPOSED OPERATING BUDGET - (SEWER SYSTEM) - EXISTING SYSTEM
AND NEW USERS** *(1st Full Year of Operation) Year Ending* _____

A. Operating Income:

Sewer Revenue \$ _____

Late Charge Fees _____

Other (Describe) _____

Less Allowances and Deductions (_____)

Total Operating Income \$ _____

B. Operation and Maintenance Expenses:
*(Based on Uniform System of Accounts prescribed by National Association of
 Regulatory Utility Commissioners)*

Operation Expense \$ _____

Maintenance Expense _____

Customer Accounts Expense _____

Administrative and General Expense _____

Total Operating and Maintenance Expenses \$ _____

Net Operating Income \$ _____

C. Non-Operating Income:

Interest on Deposits \$ _____

Other (Identify) _____

Total Non-Operating Income \$ _____

D. Net Income \$ _____

E. Debt Repayment:

RUS Interest \$ _____

RUS Principal _____

Non-RUS Interest _____

Non-RUS Principal _____

Total Debt Repayment \$ _____

F. Balance Available for Coverage \$ _____

XXIX. PROPOSED OPERATING BUDGET - (SEWER SYSTEM) - NEW USERS -
EXTENSION ONLY (1st Full Year of Operation) Year Ending _____

A. Operating Income:

Sewer Revenue \$ _____
Late Charge Fees _____
Other (Describe) _____
Less Allowances and Deductions (_____)
Total Operating Income \$ _____

B. Operation and Maintenance Expenses:

*(Based on Uniform System of Accounts prescribed by National Association of
Regulatory Utility Commissioners)*

Operation Expense \$ _____
Maintenance Expense _____
Customer Accounts Expense _____
Administrative and General Expense _____
Total Operating and Maintenance Expenses \$ _____
Net Operating Income \$ _____

C. Non-Operating Income:

Interest on Deposits \$ _____
Other (Identify) _____
Total Non-Operating Income \$ _____

D. Net Income

\$ _____

E. Debt Repayment:

RUS Interest \$ _____
RUS Principal _____
Non-RUS Interest _____
Non-RUS Principal _____
Total Debt Repayment \$ _____

F. Balance Available for Coverage

\$ _____

XXX. CURRENT OPERATING BUDGET - (WATER SYSTEM)
(As of the last full operating year.) 2006

A. Operating Income:

Water Sales	\$ 1,538,153
Disconnect/Reconnect/Late Charge Fees	
Other (Describe) New Meter Fees	87,548
Less Allowances and Deductions	()
Total Operating Income	\$ 1,625,701

B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of
Regulatory Utility Commissioners)

Source of Supply Expense	\$ 0
Pumping Expense	18,683
Water Treatment Expense	0
Transmission and Distribution Expense	454,050
Customer Accounts Expense	26,214
Administrative and General Expense	663,594
Total Operating Expenses	\$ 1,162,541
Net Operating Income	\$ 463,160

C. Non-Operating Income:

Interest on Deposits	\$
Other (Identify)	
Total Non-Operating Income	\$

D. Net Income \$ 463,160

E. Debt Repayment:

RUS Interest	\$ 18,625
RUS Principal	5,000
Non-RUS Interest	93,100
Non-RUS Principal	97,100
Total Debt Repayment	\$ 213,825

F. Balance Available for Coverage \$ 249,335

XXXI. PROPOSED OPERATING BUDGET - (WATER SYSTEM) - EXISTING SYSTEM
AND NEW USERS (1st Full Year of Operation) Year Ending 2010

A. Operating Income:

Water Sales	\$ 1,754,650
-------------	--------------

Meade County Water District

Annual Revenue with 2008 Rates, with Existing and Proposed Residential Customer Monthly Billings

First 2,000 gallons	\$ 15.85 flat	
Usage from 2,000 to 7,000 gallons	\$ 7.66 per 1,000 gallons	\$38.30 Total per Usage Range
Usage from 7,000 to 17,000 gallons	\$ 7.35 per 1,000 gallons	\$73.50 Total per Usage Range
Usage from 17,000 to 37,000 gallons	\$ 6.65 per 1,000 gallons	\$133.00 Total per Usage Range
All over 37,000 gallons	\$ 5.65 per 1,000 gallons	
Doe Creek Bulk Rate	\$ 3.26 per 1,000 gallons	
Otter Creek Bulk Rate	\$ 3.37 per 1,000 gallons	
Bulk Sales	\$ 5.25 per 1,000 gallons	

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	1,050	\$ 15.85	9163	9621	5.4%	\$145,233.55	10.1%	10.1%	5.4%
2-3K	2,522	\$ 19.85	7338	18506	10.4%	\$145,648.44	10.1%	10.1%	10.4%
3-4K	3,491	\$ 27.27	8208	28654	16.1%	\$223,840.86	15.5%	15.5%	16.1%
4-5K	4,484	\$ 34.88	5607	25142	14.2%	\$195,557.81	13.5%	13.5%	14.2%
5-6K	5,476	\$ 42.48	6573	35994	20.3%	\$279,195.80	19.3%	19.3%	20.3%
6-7K	6,472	\$ 50.11	2556	16542	9.3%	\$128,069.71	8.9%	8.9%	9.3%
7-8K	7,468	\$ 57.59	1516	11321	6.4%	\$87,306.14	6.0%	6.0%	6.4%
8-9K	8,471	\$ 64.96	878	7438	4.2%	\$57,036.50	4.0%	4.0%	4.2%
9-10K	9,485	\$ 72.41	517	4904	2.8%	\$37,438.43	2.6%	2.6%	2.8%
10-11K	10,483	\$ 79.75	330	3459	1.9%	\$26,317.52	1.8%	1.8%	1.9%
11-12K	11,460	\$ 86.93	241	2762	1.6%	\$20,950.37	1.5%	1.5%	1.6%
12-13K	12,448	\$ 94.19	176	2191	1.2%	\$16,577.93	1.1%	1.1%	1.2%
13-14K	13,484	\$ 101.81	109	1470	0.8%	\$11,097.01	0.8%	0.8%	0.8%
14-15K	14,462	\$ 109.00	122	1764	1.0%	\$13,297.48	0.9%	0.9%	1.0%
15-16K	15,495	\$ 116.59	60	930	0.5%	\$6,995.30	0.5%	0.5%	0.5%
16-17K	16,527	\$ 124.17	47	777	0.4%	\$5,836.15	0.4%	0.4%	0.4%
17-18k	17,440	\$ 130.58	31	541	0.3%	\$4,047.86	0.3%	0.3%	0.3%
18-19K	18,465	\$ 137.39	26	480	0.3%	\$3,572.20	0.2%	0.2%	0.3%
19-20K	19,501	\$ 144.28	17	332	0.2%	\$2,452.79	0.2%	0.2%	0.2%
20-21K	20,335	\$ 149.83	18	366	0.2%	\$2,696.90	0.2%	0.2%	0.2%
21-22K	21,404	\$ 156.94	15	321	0.2%	\$2,354.05	0.2%	0.2%	0.2%
22-23K	22,523	\$ 164.38	12	270	0.2%	\$1,972.54	0.1%	0.1%	0.2%
23-24K	23,560	\$ 171.27	9	212	0.1%	\$1,541.47	0.1%	0.1%	0.1%
24-25K	24,636	\$ 178.43	10	246	0.1%	\$1,784.29	0.1%	0.1%	0.1%
25-26K	25,583	\$ 184.73	3	77	0.0%	\$554.18	0.0%	0.0%	0.0%
26-27K	26,449	\$ 190.49	7	185	0.1%	\$1,333.40	0.1%	0.1%	0.1%
27-28K	27,360	\$ 196.54	4	109	0.1%	\$786.18	0.1%	0.1%	0.1%
28-29K	28,513	\$ 204.21	6	171	0.1%	\$1,225.27	0.1%	0.1%	0.1%
29-30K	29,302	\$ 209.46	5	147	0.1%	\$1,047.29	0.1%	0.1%	0.1%
30-31K	30,362	\$ 216.51	6	182	0.1%	\$1,299.04	0.1%	0.1%	0.1%
31-32K	31,522	\$ 224.22	5	158	0.1%	\$1,121.11	0.1%	0.1%	0.1%
32-33K	32,513	\$ 230.81	3	98	0.1%	\$692.43	0.0%	0.0%	0.1%
33-34K	33,620	\$ 238.17	3	101	0.1%	\$714.52	0.0%	0.0%	0.1%
34-35K	34,638	\$ 244.94	4	139	0.1%	\$979.77	0.1%	0.1%	0.1%
35-36K	35,460	\$ 250.41	1	35	0.0%	\$250.41	0.0%	0.0%	0.0%
36-37K	36,408	\$ 256.71	2	73	0.0%	\$513.43	0.0%	0.0%	0.0%
37-60K	45,791	\$ 310.32	14	641	0.4%	\$4,344.47	0.3%	0.3%	0.4%
Over 60K	107,120	\$ 656.83	12	1285	0.7%	\$7,881.94	0.5%	0.5%	0.7%
Totals			43,654	177,644	100.0%	\$1,443,564.50	100.0%	100.0%	100.0%
Average monthly usage in gallons				4,069					
Average monthly billing						\$33.07			
Number of Residential Customers			3638						
Total Annual Revenue from Residential Customers						\$1,443,564.50			

Meade County Water District

Annual Revenue with 2008 Rates and 2006 Existing Non-Residential Customer Monthly Billings

First 2,000 gallons	\$ 15.85 flat	
Usage from 2,000 to 7,000 gallons	\$ 7.66 per 1,000 gallons	\$38.30 Total
Usage from 7,000 to 17,000 gallons	\$ 7.35 per 1,000 gallons	\$73.50 Total
Usage from 17,000 to 37,000 gallons	\$ 6.65 per 1,000 gallons	\$133.00 Total
All over 37,000 gallons	\$ 5.65 per 1,000 gallons	
Doe Creek Bulk Rate	\$ 3.26 per 1,000 gallons	
Otter Creek Bulk Rate	\$ 3.37 per 1,000 gallons	
Bulk Sales	\$ 5.25 per 1,000 gallons	

Monthly Usage Gallons	Average Usage Gallons	Average Bill \$	Number of Billings	Usage X 1000 Gallons	% of Total Gallons	Annual Revenue \$	% of Total Income Dollars	% of total Revenue	% of total Gallons
0-2K	393	\$ 15.85	1187	466	0.6%	\$18,813.95	6.0%	6.0%	0.6%
2-3K	2,507	\$ 19.73	151	379	0.5%	\$2,979.78	1.0%	1.0%	0.5%
3-4K	3,453	\$ 26.98	109	376	0.5%	\$2,940.82	0.9%	0.9%	0.5%
4-5K	4,475	\$ 34.81	91	407	0.5%	\$3,167.57	1.0%	1.0%	0.5%
5-6K	5,521	\$ 42.82	63	348	0.4%	\$2,697.71	0.9%	0.9%	0.4%
6-7K	6,509	\$ 50.39	65	423	0.5%	\$3,275.28	1.1%	1.1%	0.5%
7-8K	7,555	\$ 58.23	43	325	0.4%	\$2,503.86	0.8%	0.8%	0.4%
8-9K	8,529	\$ 65.39	37	316	0.4%	\$2,419.36	0.8%	0.8%	0.4%
9-10K	9,338	\$ 71.33	13	121	0.2%	\$927.35	0.3%	0.3%	0.2%
10-11K	10,524	\$ 80.05	11	116	0.1%	\$880.57	0.3%	0.3%	0.1%
11-12K	11,513	\$ 87.32	10	115	0.1%	\$873.21	0.3%	0.3%	0.1%
12-13K	12,502	\$ 94.59	15	188	0.2%	\$1,418.85	0.5%	0.5%	0.2%
13-14K	13,503	\$ 101.95	12	162	0.2%	\$1,223.36	0.4%	0.4%	0.2%
14-15K	14,130	\$ 106.56	2	28	0.0%	\$213.11	0.1%	0.1%	0.0%
15-16K	15,697	\$ 118.07	6	94	0.1%	\$708.44	0.2%	0.2%	0.1%
16-17K	16,750	\$ 125.81	4	67	0.1%	\$503.25	0.2%	0.2%	0.1%
17-18k	17,470	\$ 130.78	7	122	0.2%	\$915.43	0.3%	0.3%	0.2%
18-19K	18,475	\$ 137.46	7	129	0.2%	\$962.21	0.3%	0.3%	0.2%
19-20K	19,470	\$ 144.08	4	78	0.1%	\$576.30	0.2%	0.2%	0.1%
20-21K	20,728	\$ 152.44	5	104	0.1%	\$762.21	0.2%	0.2%	0.1%
21-22K	21,583	\$ 158.13	4	86	0.1%	\$632.51	0.2%	0.2%	0.1%
22-23K	22,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
23-24K	23,300	\$ 169.55	1	23	0.0%	\$169.55	0.1%	0.1%	0.0%
24-25K	24,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
25-26K	25,455	\$ 183.88	4	102	0.1%	\$735.50	0.2%	0.2%	0.1%
26-27K	26,100	\$ 188.17	1	26	0.0%	\$188.17	0.1%	0.1%	0.0%
27-28K	27,200	\$ 195.48	1	27	0.0%	\$195.48	0.1%	0.1%	0.0%
28-29K	28,680	\$ 205.32	3	86	0.1%	\$615.97	0.2%	0.2%	0.1%
29-30K	29,310	\$ 209.51	1	29	0.0%	\$209.51	0.1%	0.1%	0.0%
30-31K	30,700	\$ 218.76	5	154	0.2%	\$1,093.78	0.4%	0.4%	0.2%
31-32K	31,420	\$ 223.54	3	94	0.1%	\$670.63	0.2%	0.2%	0.1%
32-33K	32,550	\$ 231.06	2	65	0.1%	\$462.12	0.1%	0.1%	0.1%
33-34K	34,000	\$ 240.70	1	34	0.0%	\$240.70	0.1%	0.1%	0.0%
34-35K	34,500	\$ -	0	0	0.0%	\$0.00	0.0%	0.0%	0.0%
35-36K	35,530	\$ 250.87	1	36	0.0%	\$250.87	0.1%	0.1%	0.0%
36-37K	36,500	\$ 257.33	1	37	0.0%	\$257.33	0.1%	0.1%	0.0%
37-60K	47,940	\$ 322.46	16	767	1.0%	\$5,159.38	1.7%	1.7%	1.0%
Over 60K	100,940	\$ 621.91	23	2322	2.9%	\$14,303.95	4.6%	4.6%	2.9%
Doe Valley	4,871,417	\$ 15,880.82	12	58457	74.1%	\$190,569.83	61.3%	61.3%	74.1%
Otter Creek	765,417	\$ 2,579.46	12	9185	11.6%	\$30,953.46	10.0%	10.0%	11.6%
Bulk Sales	247,792	\$ 1,300.91	12	2974	3.8%	\$15,610.90	5.0%	5.0%	3.8%
Totals			1,945	78,868	100.0%	\$311,082.22	100.0%	100.0%	100.0%
Average monthly usage in gallons				40,549					
Average monthly billing						\$159.94			
Number of Non-Residential Customers			162						
Total Annual Revenue from Non-Residential Customers						\$311,082.22			

Meade Co. Water District RD Loan

TABLE DATA

Loan amount:	\$2,150,000		Table starts at date:	
Ann. interest rate:	4.375%		or at payment number:	1
Term in years:	38			
Payments / year:	1			
First payment due:	1/1/2010			
		Payment:	\$117,064	
	No.	Payment Date	Beginning Balance	Interest
	1	1/1/2010	2,150,000.00	94,062.50
	2	1/1/2011	2,126,998.46	93,056.18
	3	1/1/2012	2,102,990.60	92,005.84
	4	1/1/2013	2,077,932.40	90,909.54
	5	1/1/2014	2,051,777.90	89,765.28
Use payment of:	\$117,064.04	Beginning balance at payment 1:	2,150,000.00	
payment in table: 1		Cumulative interest prior to payment 1:	0.00	
Table		Capital Recovery Factor:	0.054448392	

No.	Payment Date	Beginning Balance	Interest	Principal	Ending Balance	Cumulative Interest
1	1/1/2010	2,150,000.00	94,062.50	23,001.54	2,126,998.46	94,062.50
2	1/1/2011	2,126,998.46	93,056.18	24,007.86	2,102,990.60	187,118.68
3	1/1/2012	2,102,990.60	92,005.84	25,058.20	2,077,932.40	279,124.52
4	1/1/2013	2,077,932.40	90,909.54	26,154.50	2,051,777.90	370,034.06
5	1/1/2014	2,051,777.90	89,765.28	27,298.76	2,024,479.14	459,799.35
6	1/1/2015	2,024,479.14	88,570.96	28,493.08	1,995,986.06	548,370.31
7	1/1/2016	1,995,986.06	87,324.39	29,739.65	1,966,246.40	635,694.70
8	1/1/2017	1,966,246.40	86,023.28	31,040.76	1,935,205.64	721,717.98
9	1/1/2018	1,935,205.64	84,665.25	32,398.80	1,902,806.85	806,383.23
10	1/1/2019	1,902,806.85	83,247.80	33,816.24	1,868,990.60	889,631.03
11	1/1/2020	1,868,990.60	81,768.34	35,295.70	1,833,694.90	971,399.36
12	1/1/2021	1,833,694.90	80,224.15	36,839.89	1,796,855.01	1,051,623.52
13	1/1/2022	1,796,855.01	78,612.41	38,451.64	1,758,403.38	1,130,235.92
14	1/1/2023	1,758,403.38	76,930.15	40,133.89	1,718,269.48	1,207,166.07
15	1/1/2024	1,718,269.48	75,174.29	41,889.75	1,676,379.73	1,282,340.36
16	1/1/2025	1,676,379.73	73,341.61	43,722.43	1,632,657.30	1,355,681.97
17	1/1/2026	1,632,657.30	71,428.76	45,635.29	1,587,022.02	1,427,110.73
18	1/1/2027	1,587,022.02	69,432.21	47,631.83	1,539,390.19	1,496,542.94
19	1/1/2028	1,539,390.19	67,348.32	49,715.72	1,489,674.46	1,563,891.26
20	1/1/2029	1,489,674.46	65,173.26	51,890.78	1,437,783.68	1,629,064.52
21	1/1/2030	1,437,783.68	62,903.04	54,161.01	1,383,622.67	1,691,967.56
22	1/1/2031	1,383,622.67	60,533.49	56,530.55	1,327,092.12	1,752,501.05
23	1/1/2032	1,327,092.12	58,060.28	59,003.76	1,268,088.36	1,810,561.33
24	1/1/2033	1,268,088.36	55,478.87	61,585.18	1,206,503.19	1,866,040.20
25	1/1/2034	1,206,503.19	52,784.51	64,279.53	1,142,223.66	1,918,824.71
26	1/1/2035	1,142,223.66	49,972.29	67,091.76	1,075,131.90	1,968,797.00
27	1/1/2036	1,075,131.90	47,037.02	70,027.02	1,005,104.88	2,015,834.02
28	1/1/2037	1,005,104.88	43,973.34	73,090.70	932,014.18	2,059,807.36
29	1/1/2038	932,014.18	40,775.62	76,288.42	855,725.76	2,100,582.98
30	1/1/2039	855,725.76	37,438.00	79,626.04	776,099.71	2,138,020.98
31	1/1/2040	776,099.71	33,954.36	83,109.68	692,990.04	2,171,975.34
32	1/1/2041	692,990.04	30,318.31	86,745.73	606,244.31	2,202,293.65
33	1/1/2042	606,244.31	26,523.19	90,540.85	515,703.45	2,228,816.84
34	1/1/2043	515,703.45	22,562.03	94,502.02	421,201.44	2,251,378.87
35	1/1/2044	421,201.44	18,427.56	98,636.48	322,564.96	2,269,806.43
36	1/1/2045	322,564.96	14,112.22	102,951.83	219,613.13	2,283,918.65
37	1/1/2046	219,613.13	9,608.07	107,455.97	112,157.17	2,293,526.72
38	1/1/2047	112,157.17	4,906.88	112,157.17	0.00	2,298,433.60

Disconnect/Reconnect/Late Charge Fees	_____
Other (Describe)	_____
Less Allowances and Deductions	(_____)
Total Operating Income	\$ 1,754,650

B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of
Regulatory Utility Commissioners)

Source of Supply Expense	\$ 0
Pumping Expense	20,550
Water Treatment Expense	0
Transmission and Distribution Expense	499,000
Customer Accounts Expense	28,835
Administrative and General Expense	729,953
Total Operating Expenses	\$ 1,278,338
Net Operating Income	\$ 476,312

C. Non-Operating Income:

Interest on Deposits	\$ _____
Other (Identify)	_____
Total Non-Operating Income	\$ 0

D. Net Income

\$ 476,312

E. Debt Repayment:

RUS Interest	\$ 112,625
RUS Principal	28,000
Non-RUS Interest	63,400
Non-RUS Principal	122,000
Total Debt Repayment	\$ 326,025

F. Balance Available for Coverage

\$ 150,287

XXXII. PROPOSED OPERATING BUDGET - (WATER SYSTEM) - NEW USERS -
EXTENSION ONLY (1st Full Year of Operation) Year Ending 2010

A. Operating Income:

Water Sales	\$ 65,800
Disconnect/Reconnect/Late Charge Fees	_____

Other (Describe)	_____
Less Allowances and Deductions	(_____)
Total Operating Income	\$ <u>65,800</u>

B. Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National Association of
Regulatory Utility Commissioners)

Source of Supply Expense	\$ <u>0</u>
Pumping Expense	<u>20,550</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>499,000</u>
Customer Accounts Expense	<u>28,835</u>
Administrative and General Expense	<u>729,953</u>
Total Operating Expenses	\$ <u>1,278,338</u>
Net Operating Income	\$ <u>- 1,212,538</u>

C. Non-Operating Income:

Interest on Deposits	\$ _____
Other (Identify)	_____
Total Non-Operating Income	\$ <u>0</u>

D. Net Income

\$ - 1,212,538

E. Debt Repayment:

RUS Interest	\$ <u>112,625</u>
RUS Principal	<u>28,000</u>
Non-RUS Interest	<u>63,400</u>
Non-RUS Principal	<u>122,000</u>
Total Debt Repayment	\$ <u>326,025</u>

F. Balance Available for Coverage

\$ - 1,538,563

XXXIII. ESTIMATED PROJECT COST - SEWER
(Round to nearest \$100)

	<u>Collection</u>	<u>Treatment</u>	<u>Total</u>
<i>Development</i>	_____	_____	_____
<i>Land and Rights</i>	_____	_____	_____
<i>Legal</i>	_____	_____	_____

<i>Engineering</i>	_____	_____	_____
<i>Interest</i>	_____	_____	_____
<i>Contingencies</i>	_____	_____	_____
<i>Initial Operating and Maintenance</i>	_____	_____	_____
<i>Other</i>	_____	_____	_____
TOTAL	_____	_____	_____

XXXIV. PROPOSED PROJECT FUNDING - SEWER

	<u>Collection</u>	<u>Treatment</u>	<u>Total</u>
<i>Applicant - User Contribution Fees</i>	_____	_____	_____
<i>Other - Applicant Contribution</i>	_____	_____	_____
<i>RUS Loan</i>	_____	_____	_____
<i>RUS Grant</i>	_____	_____	_____
<i>ARC Grant (If applicable)</i>	_____	_____	_____
<i>CDBG (If applicable)</i>	_____	_____	_____
<i>Other (Specify)</i>	_____	_____	_____
<i>Other (Specify)</i>	_____	_____	_____

XXXV. ESTIMATED PROJECT COST - WATER

Development	\$ 2,515,450
Land and Rights	10,000
Legal	20,000
Engineering	309,459
Interest	25,000
Contingencies	215,245
Initial Operating and Maintenance	0
Other	0
TOTAL	\$ 3,128,154

XXXVI. PROPOSED PROJECT FUNDING

Applicant - User Connection Fees	\$ 79,500
Other Applicant Contribution	
RUS Loan	2,148,654
RUS Grant	900,000
ARC Grant (If applicable)	
CDBG (If applicable)	
Other (Specify)	
Other (Specify)	
TOTAL	\$ 3,128,154

Meade County Water District
KY 228/Rhodelia/Concordia Water System Expansion
Summary Addendum Memo
2/28/2008

The final totals in the Summary Addendum do not reflect the KIA Fund "F" Loan that was approved for the Phase VII Water System Improvements by the KIA Board on 2/7/2008. This loan will be for a total project cost of \$1,950,949 and will have a rate of 3% and a term of 20 years. Design is complete on this project and construction should begin in the Spring of 2008. The KIA principal, interest and administrative fees totaling \$134,000 annually will begin in FY2010. The number of potential customers on this project is 240. Assuming an initial 80% tap-on rate (192) and an average monthly usage of 4,000 gallons, this would generate approximately \$76,000 in annual revenues. This will have a direct impact on the funds available for coverage.