

The Law Office of
BRENDON D. MILLER

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JACKSON, KENTUCKY 41339
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2008-00225

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June 18, 2008

RECEIVED

JUN 19 2008

**PUBLIC SERVICE
COMMISSION**

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

RE: Breathitt County Water District
Case No. 2008-00225

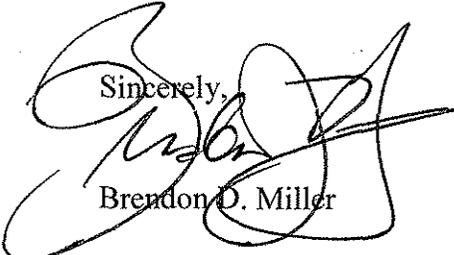
Dear Ms. Stumbo:

Enclosed please find the original and ten (10) copies of the Application of the Breathitt County Water District for a Certificate of Public Convenience and Necessity to construct and finance pursuant to KRS 278.020.

Also enclosed are eleven (11) copies of the exhibits required pursuant to 807 KAR 5.069.

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

Sincerely,


Brendon D. Miller

Enclosures

CC: Distribution List

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION
CASE NO. 2008- 00225

RECEIVED
JUN 19 2008
PUBLIC SERVICE
COMMISSION

In the Matter of:

THE APPLICATION OF THE BREATHITT COUNTY WATER
DISTRICT OF BREATHITT COUNTY, KENTUCKY, FOR A
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO
CONSTRUCT AND FINANCE, PURSUANT TO KRS 278.020.

APPLICATION

This Application of the Breathitt County Water District ("Applicant") of Breathitt County, Kentucky, respectfully shows:

1. That the Applicant is a water district of Breathitt County, Kentucky, created and existing under and by virtue of Chapter 74 of the Kentucky Revised Statutes.
2. That the post office address of the Applicant is:
Breathitt County Water District
1137 Main Street
Jackson, Kentucky 41339
3. That Applicant pursuant to the provisions of KRS 278.020, seeks (i) a Certificate of Public Convenience and Necessity, permitting Applicant to construct a waterworks construction project, consisting of extensions, additions, and improvements (the "Project") to the existing waterworks system of Applicant; and (ii) approval of the proposed plan of financing said project.
4. That the KY 1110 Phase 1 consists of the construction and installation of approximately 42,000 linear feet (lf) of 10-inch waterline, 6,300 lf of 8-inch waterline; 6,700 lf of 6-inch waterline; 34,800 linear feet of 4-inch waterline; and 1,800 linear feet of 2-inch waterline.
5. That Applicant proposes to finance the construction of the KY 1110 Phase 1 Project through a Grant Agreement titled "Federally Funded Memorandum of Agreement Between the Commonwealth of Kentucky Environmental and Public Protection Cabinet and Breathitt County Water District" administered by the Kentucky Division of Abandoned Mine Lands (AML). Applicant has a commitment from AML for up to \$3,000,000 for construction of this phase of the project. This agreement is

shown as Appendix "B" to the Final Engineering Report (FER) filed herewith as an exhibit.

6. That Applicant does not contemplate having the project constructed with any deviation from minimum construction standards of this Public Service Commission.
7. That Applicant files herewith the following Exhibits pursuant to 807 KAR 5:069 in support of this Application.
 - A. Copy of the AML Grant Agreement is attached as Appendix "B" of the FER
 - B. Copy of the Engineer's Concurrence of Bid Award attached as Appendix "C" of the FER.
 - C. Copy of the Preliminary Engineering Report amended to the FER, based on bids received on June 4, 2008.
 - D. Certified statement from the Chairperson of the Applicant, based upon statements of the Engineers for Applicant, concerning the following:
 1. The proposed plans and specifications for the Project have been designated to meet the minimum construction and operating requirements set out in 807 KAR 5:066, Section 4 (3) and (4); Section 5 (1); Sections 6 and 7; Section 8 (1) through (3); Section 9 Engineering Report.
 2. All other state approvals have already been obtained, including the approval of the Kentucky Division of Water, attached as Appendix "D" of the FER.
 3. The Existing rates of Applicant shall produce the total revenue requirements set out in the engineering reports, therefore no rate increase is necessary, and
 4. Setting out the date of July 1, 2008, when it is anticipated that construction will begin and March 2009 when it is anticipated to end.
8. The foregoing constitutes the documents necessary to obtain the approval of the Kentucky Public Service Commission in accordance with Section 278.020 of the KRS and in accordance with the "Filing Requirements" specified in 807 KAR 5:609, Section 1.

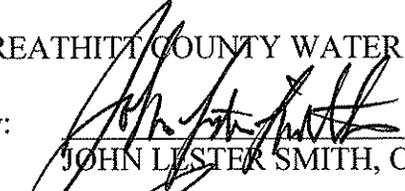
WHEREFORE, Applicant the Breathitt County Water District asks that the Public Service Commission of the Commonwealth of Kentucky grant to Applicant the following:

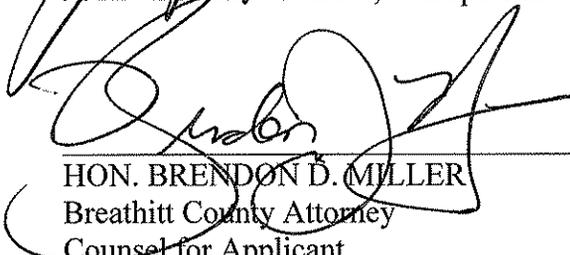
- a. A Certificate of Public Convenience and Necessity permitting Applicant to construct a waterworks project consisting of extensions, additions, and improvements of the existing waterworks system of Applicant.

- b. An order approving the financing arrangements made by Applicant, viz. through a Federally Funded Memorandum of Agreement Between the Commonwealth of Kentucky Environmental and Public Protection Cabinet and Breathitt County Water District administered by the Kentucky Division of Abandoned Mine Lands (AML).

BREATHITT COUNTY WATER DISTRICT

By:


JOHN LESTER SMITH, Chairperson


HON. BRENDON D. MILLER
Breathitt County Attorney
Counsel for Applicant

1149 Main Street
Jackson, Kentucky 41339
(606) 666-4400

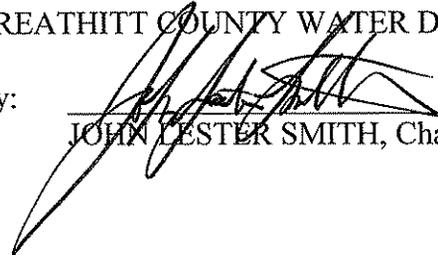
VERIFICATION

The undersigned, JOHN LESTER SMITH, being duly sworn, deposes and states that he is the Chairperson of the Board of Commissioners of the Breathitt County Water District, Applicant, in the above proceedings; that he has read the foregoing Application and has noted the contents thereof; that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, he believes same to be true.

IN TESTIMONY WHEREOF, witness the signature of the undersigned on this the 18th day of June, 2008.

BREATHITT COUNTY WATER DISTRICT

By:


JOHN LESTER SMITH, Chairperson

COMMONWEALTH OF KENTUCKY

COUNTY OF BREATHTT

The foregoing was subscribed and sworn to before me by John Lester Smith,
Chairperson of the Board of Commissioners of the Breathitt County Water District, on
this the 18th day of June, 2008.



NOTARY PUBLIC
Commission Expires: OCT-4-2009

CERTIFICATE OF CHAIRPERSON OF BREATHITT COUNTY
WATER DISTRICT, AS TO STATEMENT REQUIRED BY
SECTION 1 (5) OF 807 KAR 5:06

I, JOHN LESTER SMITH, hereby certify that I am the duly qualified and acting Chairperson of the Breathitt County Water District, and that said District is in the process of arranging to finance the construction of extensions, additions and improvements to the existing waterworks system of the District (the "Project"), in cooperation with Nesbitt Engineering, Inc., Lexington, Kentucky, the Engineers for the District (the "Engineers").

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

1. The proposed plans and specifications for the Project have been designated to meet the minimum construction and operating requirements set out in 807 KAR 5:066, Section 4 (3) and (4); Section 5 (1); Sections 6 and 7; Section 8 (1) through (3); Section 9 (1) and Section 10 as contained in Appendix "D" of the Final Engineering Report.

2. All other state approvals have already been obtained, including the approval of the Kentucky Division of Water, attached as Appendix "D" of the Final Engineering Report.

3. The Existing rates of the District filed with the Public Service Commission of Kentucky are contemplated to produce total revenue requirements set out in the Engineering Reports, prepared by the Engineers and filed with the Public Service Commission.

4. That it is now contemplated that construction of the KY 1110 PHASE 1 Project will begin on or about July 1, 2008, and will end on or about March 15, 2009.

IN TESTIMONY WHEREOF, witness my signature this 18th day of June 2008.

BREATHITT COUNTY WATER DISTRICT

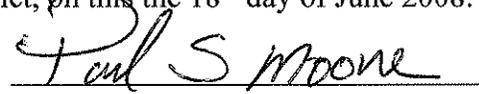
By: _____

JOHN LESTER SMITH, Chairperson

STATE OF KENTUCKY

COUNTY OF BREATHITT

Subscribed and sworn to before me by John Lester Smith, Chairperson of the Board of Commissioners of the Breathitt County Water District, on this the 18th day of June 2008.


NOTARY PUBLIC

Commission Expires: Oct -4-2009

DISTRIBUTION LIST

Case No. 2008-_____

Re: Breathitt County Water District Application

District Officials

Mr. John L. Smith, Chairperson
Mr. Shannon Moore, Manager
Breathitt County Water District
1137 Main Street
Jackson, Kentucky 41339

Telephone: (606) 666-3800
Fax: (606) 666-2860

Engineer

Mr. Ora C. Main, PE
Nesbitt Engineering, Inc.
227 North Upper Street
Lexington, Kentucky 40507

Telephone: (859) 233-3111
Fax: (859) 259-2717

Local Counsel

Hon. Brendon D. Miller
Breathitt County Attorney
1149 Main Street
Jackson, KY 41339

Telephone: (606) 666-4400
Fax: (606) 666-4422

Division Abandoned Mine Lands

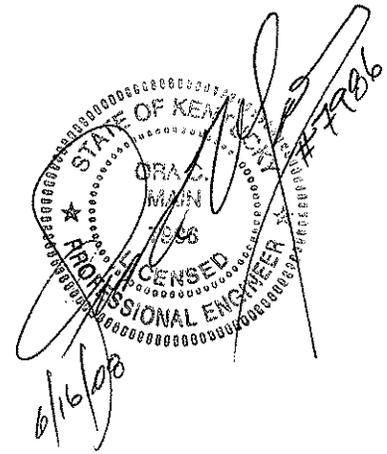
Mr. Robert Scott, Assistant Director
Division of Abandoned Mine Lands
2521 Lawrenceburg Road
Frankfort, Kentucky 40601

Telephone: (502) 564-2141
Fax: (502) 564-6544



nesbitt engineering, inc.
providing proven solutions since 1976

227 North Upper Street
Lexington, KY 40507-1016



June 2008

Breathitt County Water District

KY 1110 Waterline Extension

Jackson, Kentucky

Preliminary Engineering Report

Amended to

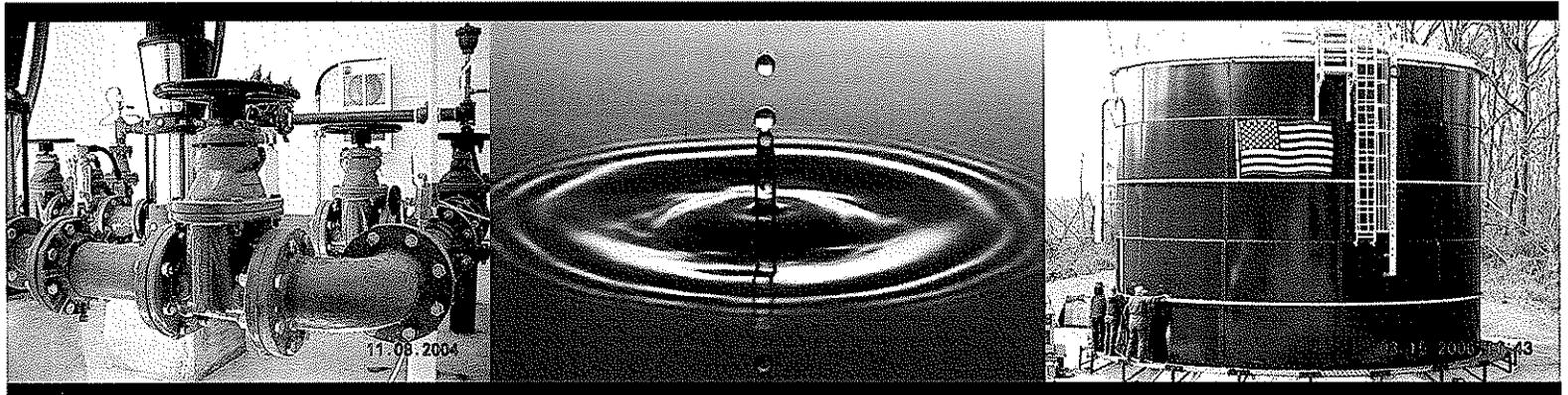
Final Engineering Report

RECEIVED

JUN 19 2008

PUBLIC SERVICE
COMMISSION

Contract #1



Jason Richardson, Judge/Executive

Breathitt County Water District Commissioners
John Lester Smith, Chairman

Jay Watts, Vice Chairman
Bobby Thorpe

Vurl Fugate, Treasurer
Cash Noble

SUBMITTED TO:
Breathitt County Water District

PREPARED BY:
Nesbitt Engineering, Inc.
Offices in Lexington—Hazard—Prestonsburg

Providing

Proven

Solutions Since 1976

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Chapter 1 – General

Breathitt County, which encompasses the City of Jackson, is located in the eastern coalfields of Kentucky, approximately 85 miles south and east of Lexington on KY 15, and approximately 34 miles north of Hazard. Jackson, the county seat, is a fourth class city located near the center of Breathitt County. The County borders Wolfe, Lee, Owsley, Perry, Knott, and Magoffin Counties. (See Figure 1)

The 2000 US Census figure for Breathitt County is 16,100 persons. There are 6,170 occupied housing units in Breathitt County and therefore 2.61 persons per household.

Major highways passing through Jackson and/or Breathitt County are KY 15, KY 30, KY 52, KY 315, KY 1110, KY 476 and KY 205. Some of these areas already have potable water available for residents and this proposed project will bring potable water to the residents along KY 15, KY 1278 and including portions of McIntosh Fork, Right Fork, and Little Leatherwood as well as other minor roads.

The construction for the project along KY 1110 includes approximately 16 miles of 10-inch, 8-inch, 6-inch, 4-inch and 2-inch diameter potable water mains. These water lines can be served from the District's existing distribution system by gravity and will provide potable water service to 252 customers. The majority of the lines will be installed on the Dept. of Transportation right of way, which is covered by the approved Encroachment Permit. Any other necessary easements and property for installation of the main and ancillary facilities will be secured, as needed, for the project very soon.

Construction bids for this Phase 1 Project were received on June 4, 2008. The Certified Bid Tabulation is provided in Appendix "A". Total Opinion of Estimated Project Costs, utilizing the low bid, for this project are shown in Appendix "A" Table A-1.

Two Federally Funded Memorandums of Agreement (MOA's) between the Commonwealth of Kentucky Environmental Protection Agency and Breathitt County Water District have been executed for this Project. The first MOA dated September 1, 2007 was for Engineering Design of the entire KY 1110 Project (approx. 39 miles), which includes the Phase 1 Project (approx. 16 miles) just bid. The second MOA dated July 1, 2008 is for the Phase 1 Project Construction and Engineering Services during that construction. Copies of both of these MOA's are included as Appendix "B" to this report.

Currently, the District does not have any long term debt on their other projects so customer service rates should be minimally affected, dependent upon the amount of debt required for this project.



KENTUCKY



NESBITT ENGINEERING, INC.
ENGINEERS • SURVEYORS • SCIENTISTS

LOCATION MAP
KY 1110 WATERLINE EXTENSION
BREATHITT COUNTY WATER DISTRICT

FIGURE 1

DRAWN BY:
JCW

DATE:
6-10-08

DISK/FILE NAME:
\\FER\FIGURE 1.DWG

LAST PLOT DATE:

JOB NO.:
998.23

SCALE:
NOT TO SCALE

NESBITT
ENGINEERING

Chapter 2 – Project Planning Area

Breathitt County Water District (BCWD) is a Class "C" Water District organized in August 2003 by the Breathitt County Judge Executive. The County Judge then appointed the Chairman and four other commissioners to serve on the Water District's Board.

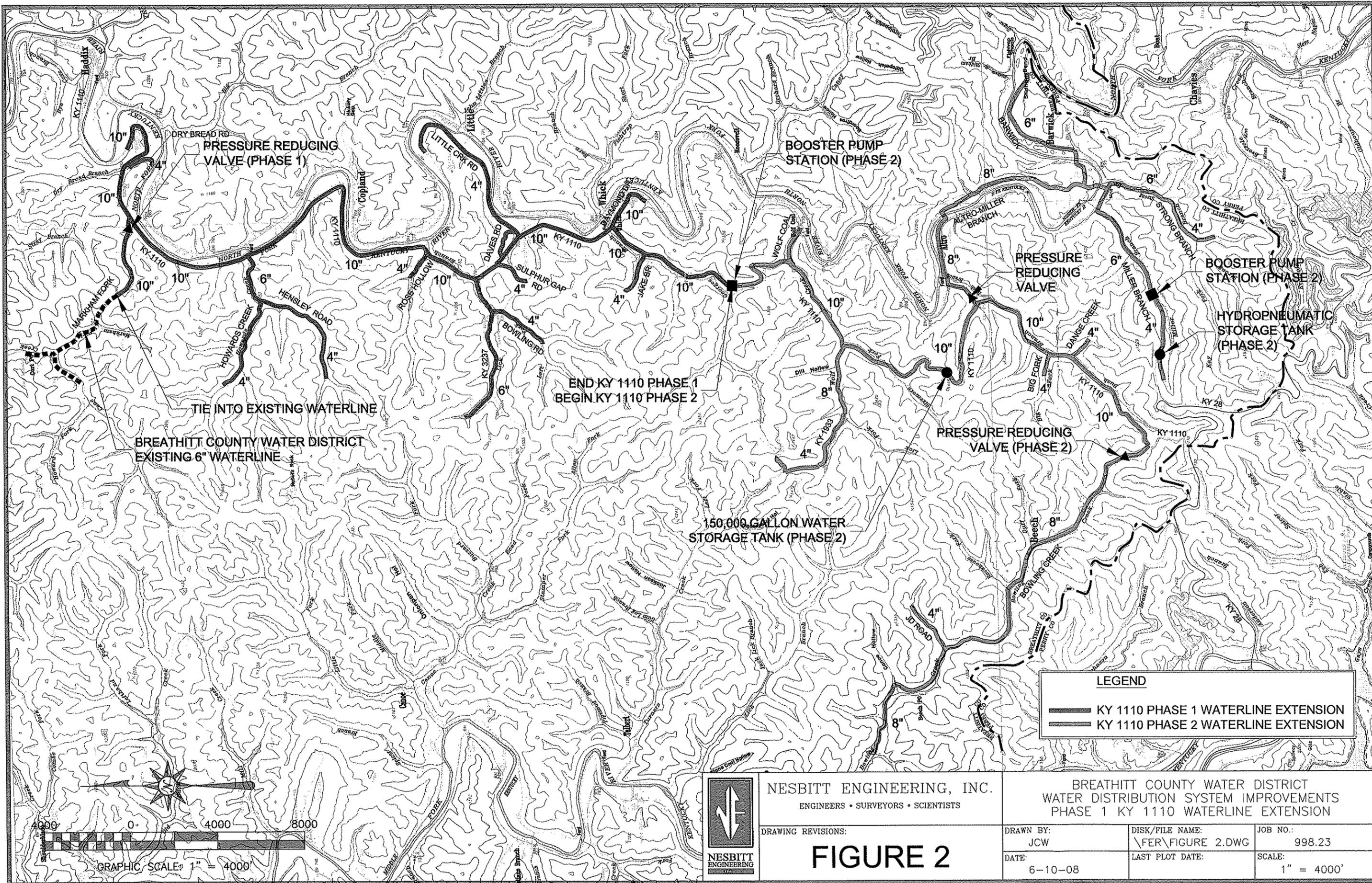
Currently, the BCWD has approximately 420 customers. In addition to these existing customers, at the completion of the KY 15 South Watts Waterline Extension Project (estimated to be August 2008) the District's customer base will increase to approximately 600 households.

Jackson, the county seat, operates an independent water system (Jackson Municipal Water Works), drawing water from the North Fork of the Kentucky River. The system currently serves 2,000 households. The water treatment plant (WTP), capable of producing 2.5 MGD, is expected to supply the potable water product to the various county water line extensions. Daily production by Jackson Municipal Water Works is currently 875,000-950,000 gallons (~35-40% of plant capacity) and their storage capacity is presently 925,000 gallons.

The District has two 105,000-gallon ground storage tanks (located on KY 30 and Cane Creek) that will provide service to this Phase 1 Project. It is planned to construct a new pump station and storage tank on the future phase of the KY 1110 project. This proposed project is the continuation of BCWD's effort to deliver potable drinking water to all residents outside Jackson's service area. Jackson's WTP is expected to have more than adequate capacity to supply the needed potable water for this proposed project.

See Figure 2 which shows the Phase 1 Project and the total Water Distribution Project Area for the KY 1110 corridor project.

Breathitt County has 6,170 occupied housing units per the 2000 US Census report. The KY 1110 Phase 1 Water Main Extension project area has approximately 252 residential households. This project has a maximum overall concentration of approximately 16 homes per mile. Most of the housing is currently served by privately operated wells. Most of the water obtained from drilled wells in Breathitt County is extremely hard and contains noticeable amounts of iron.



LEGEND

- KY 1110 PHASE 1 WATERLINE EXTENSION
- KY 1110 PHASE 2 WATERLINE EXTENSION

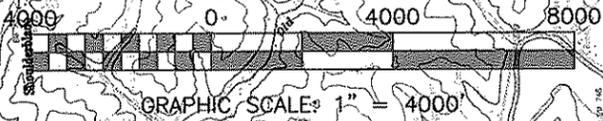


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DRAWING REVISIONS:

FIGURE 2

BREATHITT COUNTY WATER DISTRICT WATER DISTRIBUTION SYSTEM IMPROVEMENTS PHASE 1 KY 1110 WATERLINE EXTENSION		
DRAWN BY: JCW	DISK/FILE NAME: \\FER\FIGURE 2.DWG	JOB NO.: 998.23
DATE: 6-10-08	LAST PLOT DATE:	SCALE: 1" = 4000'



Chapter 3 – Existing Facilities/Need For Project

There is no potable water to the proposed project area. Residents in this area must rely either on wells, springs or hauled water for their domestic water needs. Breathitt County is one of the last counties in the Commonwealth to be provided treated water in the rural areas of the County.

The well water is extremely hard and contains noticeable amounts of iron. Salty water may be found from 50 feet to several hundred feet below the level of the principal valley bottoms. Where springs supply water, the yield is rarely more than 5 GPM. A more reliable and healthy source for water is needed.

The proposed project will consist of approximately 16 miles of various sized water lines ranging in sizes from 10-inch to 2-inch. These waterlines will be served by the existing BCWD distribution system on KY 397 and the source of water for this project will come from the Jackson Municipal Water Works thru a master meter located on KY 30 near Belcher Fork.

This proposed Phase 1 Project would bring potable water service to some 252 homes, some small businesses and churches in the project area. This waterline will later be extended to serve the entire KY 1110 corridor from Haddix to the Perry County line.

The 2000 US Census reports 2.61 persons per household so the maximum total service population will be approximately (2.61 x 252) 660 persons. At a conservative usage rate of 100 gallons per person per day, this would equate to a base water supply requirement of approximately 66,000 GPD. This amount would require Jackson's WTP to increase their production by 2.6 % of their rated capacity, but would still have them well under 50 % of their rated 2.5 MGD capacity.

Chapter 4 – Proposed Project/Project Cost/Financing

The proposed potable KY 1110 Water Extension Project was bid on June 4, 2008. There were six bidders on Contract 1 – the Waterline Contract. Bids which were submitted were very competitive as shown in the Certified Bid Tab provided in Appendix "A".

After the Certified Bid Tabs were prepared, a reference check of the low bid contractor was initiated. Several references were called to review their experience with this contractor. Based upon NEI's due diligence of the reference checks, NEI provided a recommendation letter stating that the contract for construction of Phase 1 should be awarded to the low bidder, G&W Construction Company, Inc. located in Morehead, KY, contingent upon receiving the Public Service Commission's Certificate of Convenience and Necessity and the concurrence/blessing of the KY Abandoned Mine Lands program (the agency thru which the funding is being provided). A copy of the recommendation letter from NEI to the BCWD Chairman is included in Appendix "C".

The Construction Cost, Project Cost, and Proposed Funding Sources are provided in Appendix "A" based upon the bids that were received on June 4, 2008.

The construction of Phase 1 should commence as soon as possible in order to make as much progress as can be made before inclement weather begins.

Chapter 5 – Conclusions & Recommendations

To provide potable water service to the 252 homes within the Phase 1 area of the KY 1110 corridor, the new water lines necessary. Since 100 % Grant Funds are to be used for construction this Project is fiscally feasible.

The health, environmental, land use, and economic enhancement issues combined necessitate the need for this water system extension in Breathitt County.

This project will also provide a reliable water supply to the additional customers along KY 1110 in the next Phase of construction. Additionally, the availability of reliable, clean, and chlorinated water from the centralized source will improve the economy of scale for both the BCWD and the Jackson Municipal Water Works.

Certified Bid Tabulation of Bids received by the BCWD on 6/4/08

Table A – 1 KY 1110 Waterline Extension, Total Opinion of Estimated Phase 1
Project Cost

Breathitt County Water District
Contract # 1 KY 1110 Waterline Extension
 Bid Opening: 11:00 AM Local Time, June 4, 2008

Certified Bid Tabulation

Item #	Item	Unit	Quantity	G & W Construction Co., Inc. Morehead, KY		Stotts Construction Columbia, KY		Music Construction Inc Shebiana, KY		R Risner Construction, Inc West Liberty, KY		D.F. Bailey Inc Owingsville, KY		Bluegrass Stream, LLC Beattyville, KY	
				Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
1	Tie Into Existing Waterline	LS	1	\$ 1,087.16	\$ 1,087.16	\$ 1,000.00	\$ 1,000.00	\$ 1,500.00	\$ 1,500.00	\$ 2,000.00	\$ 2,000.00	\$ 1,775.15	\$ 1,775.15	\$ 1,000.00	\$ 1,000.00
2	10" PVC SDR-21 waterline	LF	29000	\$ 16.42	\$ 476,180.00	\$ 18.00	\$ 522,000.00	\$ 21.00	\$ 609,000.00	\$ 19.00	\$ 551,000.00	\$ 20.51	\$ 594,790.00	\$ 30.00	\$ 870,000.00
3	10" PVC DR-18 waterline	LF	4400	\$ 19.17	\$ 84,348.00	\$ 20.00	\$ 88,000.00	\$ 23.18	\$ 101,992.00	\$ 23.00	\$ 101,200.00	\$ 22.89	\$ 100,716.00	\$ 33.00	\$ 145,200.00
4	10" PVC DR-14 waterline	LF	1900	\$ 21.70	\$ 41,230.00	\$ 22.60	\$ 42,940.00	\$ 26.02	\$ 49,438.00	\$ 24.73	\$ 46,987.00	\$ 25.92	\$ 49,248.00	\$ 35.00	\$ 66,500.00
5	10" D.I. CL 350 waterline	LF	6700	\$ 32.64	\$ 218,688.00	\$ 30.00	\$ 201,000.00	\$ 36.35	\$ 243,545.00	\$ 40.32	\$ 270,144.00	\$ 32.66	\$ 218,822.00	\$ 45.00	\$ 301,500.00
6	8" PVC DR-18 waterline	LF	6300	\$ 12.73	\$ 80,199.00	\$ 16.80	\$ 105,840.00	\$ 18.43	\$ 116,109.00	\$ 15.00	\$ 94,500.00	\$ 16.96	\$ 106,848.00	\$ 20.00	\$ 126,000.00
7	6" PVC SDR-21 waterline	LF	6700	\$ 8.01	\$ 53,667.00	\$ 11.20	\$ 75,040.00	\$ 12.00	\$ 80,400.00	\$ 9.05	\$ 60,635.00	\$ 11.67	\$ 78,189.00	\$ 16.00	\$ 107,200.00
8	4" PVC SDR-21 waterline	LF	28800	\$ 6.29	\$ 181,152.00	\$ 9.50	\$ 273,600.00	\$ 8.00	\$ 230,400.00	\$ 7.75	\$ 223,200.00	\$ 8.96	\$ 258,048.00	\$ 11.00	\$ 316,800.00
9	4" PVC DR-18 waterline	LF	1300	\$ 6.82	\$ 8,866.00	\$ 10.00	\$ 13,000.00	\$ 10.19	\$ 13,247.00	\$ 8.50	\$ 11,050.00	\$ 9.57	\$ 12,441.00	\$ 15.00	\$ 19,500.00
10	4" D.I. CL 350 waterline	LF	4700	\$ 23.20	\$ 109,040.00	\$ 20.00	\$ 94,000.00	\$ 27.00	\$ 126,900.00	\$ 26.00	\$ 122,200.00	\$ 24.19	\$ 113,693.00	\$ 25.00	\$ 117,500.00
11	2" PVC SDR-21 waterline	LF	1800	\$ 5.34	\$ 9,612.00	\$ 8.45	\$ 15,210.00	\$ 7.00	\$ 12,600.00	\$ 5.50	\$ 9,900.00	\$ 7.12	\$ 12,816.00	\$ 10.00	\$ 18,000.00
12	10" D.I.M.J. Gate Valve & Box	EA	14	\$ 1,562.95	\$ 21,881.30	\$ 1,450.00	\$ 20,300.00	\$ 1,800.00	\$ 25,200.00	\$ 1,763.00	\$ 24,682.00	\$ 1,284.46	\$ 17,982.44	\$ 1,600.00	\$ 22,400.00
13	8" D.I.M.J. Gate Valve & Box	EA	1	\$ 1,027.99	\$ 1,027.99	\$ 900.00	\$ 900.00	\$ 1,200.00	\$ 1,200.00	\$ 1,400.00	\$ 1,400.00	\$ 870.09	\$ 870.09	\$ 1,200.00	\$ 1,200.00
14	6" D.I.M.J. Gate Valve & Box	EA	4	\$ 716.09	\$ 2,864.36	\$ 620.00	\$ 2,480.00	\$ 900.00	\$ 3,600.00	\$ 700.00	\$ 2,800.00	\$ 603.59	\$ 2,414.36	\$ 800.00	\$ 3,200.00
15	4" D.I.M.J. Gate Valve & Box	EA	14	\$ 614.97	\$ 8,609.58	\$ 500.00	\$ 7,000.00	\$ 750.00	\$ 10,500.00	\$ 650.00	\$ 9,100.00	\$ 493.68	\$ 6,911.52	\$ 700.00	\$ 9,800.00
16	4" Blow off Assembly	EA	4	\$ 756.82	\$ 3,027.28	\$ 600.00	\$ 2,400.00	\$ 850.00	\$ 3,400.00	\$ 900.00	\$ 3,600.00	\$ 948.70	\$ 3,794.80	\$ 900.00	\$ 3,600.00
17	2" Blow off Assembly	EA	8	\$ 621.10	\$ 4,968.80	\$ 500.00	\$ 4,000.00	\$ 600.00	\$ 4,800.00	\$ 730.00	\$ 5,840.00	\$ 630.35	\$ 5,042.80	\$ 700.00	\$ 5,600.00
18	6" Fire Hydrant Assembly	EA	33	\$ 2,732.31	\$ 90,166.23	\$ 2,500.00	\$ 82,500.00	\$ 3,500.00	\$ 115,500.00	\$ 3,000.00	\$ 99,000.00	\$ 2,658.11	\$ 87,717.63	\$ 2,600.00	\$ 85,800.00
19	Air Relief Valve	EA	5	\$ 590.26	\$ 2,951.30	\$ 500.00	\$ 2,500.00	\$ 500.00	\$ 2,500.00	\$ 906.00	\$ 4,530.00	\$ 428.86	\$ 2,144.30	\$ 700.00	\$ 3,500.00
20	Valve Vault w/ Leak Detect. Ass. (Type-A)	EA	5	\$ 9,050.82	\$ 45,254.10	\$ 1,000.00	\$ 5,000.00	\$ 3,000.00	\$ 15,000.00	\$ 2,000.00	\$ 10,000.00	\$ 985.35	\$ 4,926.75	\$ 3,500.00	\$ 17,500.00
21	Valve Vault w/ Pressure Reducing Valve	EA	1	\$ 16,939.51	\$ 16,939.51	\$ 16,000.00	\$ 16,000.00	\$ 16,000.00	\$ 16,000.00	\$ 18,000.00	\$ 18,000.00	\$ 13,696.14	\$ 13,696.14	\$ 15,000.00	\$ 15,000.00
22	Concrete Driveway Replacement 4 1/2" depth	SY	2000	\$ 15.00	\$ 30,000.00	\$ 25.00	\$ 50,000.00	\$ 40.00	\$ 80,000.00	\$ 30.00	\$ 60,000.00	\$ 48.67	\$ 97,340.00	\$ 20.00	\$ 40,000.00
23	Bituminous Paving 3" depth	SY	2000	\$ 12.00	\$ 24,000.00	\$ 40.00	\$ 80,000.00	\$ 20.00	\$ 40,000.00	\$ 25.00	\$ 50,000.00	\$ 43.93	\$ 87,860.00	\$ 15.00	\$ 30,000.00
24	DGA at Driveways 6" depth	SY	1,000	\$ 6.00	\$ 6,000.00	\$ 20.00	\$ 20,000.00	\$ 20.00	\$ 20,000.00	\$ 20.00	\$ 20,000.00	\$ 15.22	\$ 15,220.00	\$ 5.00	\$ 5,000.00
25	5/8 x 3/4 Indiv Radio Read meters	EA	192	\$ 785.60	\$ 150,835.20	\$ 650.00	\$ 124,800.00	\$ 750.00	\$ 144,000.00	\$ 950.00	\$ 182,400.00	\$ 879.48	\$ 168,860.16	\$ 600.00	\$ 115,200.00
26	5/8 x 3/4 Indiv Radio Read meters w/prv	EA	60	\$ 880.22	\$ 52,813.20	\$ 800.00	\$ 48,000.00	\$ 850.00	\$ 51,000.00	\$ 1,060.00	\$ 63,600.00	\$ 999.20	\$ 59,952.00	\$ 750.00	\$ 45,000.00
27	3/4" Polyethylene service line	LF	14000	\$ 5.20	\$ 72,800.00	\$ 6.00	\$ 84,000.00	\$ 5.50	\$ 77,000.00	\$ 7.00	\$ 98,000.00	\$ 7.15	\$ 100,100.00	\$ 8.00	\$ 112,000.00
28	1" Polyethylene service line	LF	600	\$ 5.33	\$ 3,198.00	\$ 6.25	\$ 3,750.00	\$ 6.00	\$ 3,600.00	\$ 7.00	\$ 4,200.00	\$ 7.34	\$ 4,404.00	\$ 10.00	\$ 6,000.00
29	Hwy Xing-Bore & Jack w/16" steel casing	LF	225	\$ 121.29	\$ 27,290.25	\$ 130.00	\$ 29,250.00	\$ 200.00	\$ 45,000.00	\$ 120.00	\$ 27,000.00	\$ 156.08	\$ 35,118.00	\$ 200.00	\$ 45,000.00
30	Hwy Xing-Bore & Jack w/10.75" steel casing	LF	200	\$ 101.70	\$ 20,340.00	\$ 95.00	\$ 19,000.00	\$ 175.00	\$ 35,000.00	\$ 110.00	\$ 22,000.00	\$ 99.51	\$ 19,902.00	\$ 175.00	\$ 35,000.00
31	Type I - A Creek Crossing	LF	1860	\$ 73.55	\$ 136,803.00	\$ 30.00	\$ 55,800.00	\$ 60.00	\$ 111,600.00	\$ 100.00	\$ 186,000.00	\$ 77.58	\$ 144,298.80	\$ 60.00	\$ 111,600.00
32	Type I - B Creek Crossing	LF	1130	\$ 88.55	\$ 100,061.50	\$ 40.00	\$ 45,200.00	\$ 80.00	\$ 90,400.00	\$ 125.00	\$ 141,250.00	\$ 94.41	\$ 106,683.30	\$ 100.00	\$ 113,000.00
33	Waterline marker (Rhino # 70453 w/decal)	EA	40	\$ 54.68	\$ 2,187.20	\$ 30.00	\$ 1,200.00	\$ 75.00	\$ 3,000.00	\$ 75.00	\$ 3,000.00	\$ 44.88	\$ 1,795.20	\$ 60.00	\$ 2,400.00
Total Base Bid (Items 1 through 33)				\$ 2,088,087.96	\$ 2,135,710.00	\$ 2,483,431.00	\$ 2,529,218.00	\$ 2,534,420.44	\$ 2,917,000.00						
5	10" D.I. CL 350 waterline	LF	6300	\$ 32.64	\$ 205,632.00	\$ 30.00	\$ 189,000.00	\$ 36.35	\$ 229,005.00	\$ 40.32	\$ 254,016.00	\$ 32.66	\$ 205,758.00	\$ 45.00	\$ 283,500.00
	Sta 355+00 - 418+00 (Sheet C-14, 15, 16)														
10	4" D.I. CL 350 waterline	LF	4700	\$ 23.20	\$ 109,040.00	\$ 20.00	\$ 94,000.00	\$ 27.00	\$ 126,900.00	\$ 26.00	\$ 122,200.00	\$ 24.19	\$ 113,693.00	\$ 25.00	\$ 117,500.00
	C-46, 75														
Contractor Total Deductive Alternate Bid				\$ 314,672.00	\$ 263,000.00	\$ 355,905.00	\$ 376,216.00	\$ 319,451.00	\$ 401,000.00						

Notes: All unit prices used in Deductive Alternate must be the same as those used in calculating the Contractors Base Bid. Low Bidder will be determined based on Lowest Base Bid.

Italicized numbers indicate changes from the Bid Form as submitted, due either to extension of numbers and/or summations.

I hereby certify that the above tabulation accurately represents bids, received, opened and read in the Breathitt County Fiscal Court, Kentucky on June 4, 2008.

[Signature]
 Project Engineer - Oja C. Main, PE

6/5/08
 Date



Breathitt County Water District

Table A-1

KY1110 Waterline Extension Total Opinion of Estimated Phase 1 Project Cost & Funding Sources *Breathitt County, Kentucky*

Construction Cost based on June 4, 2008 Low Bid	\$ 2,088,087.96
Other Estimated Project Related Costs	
Legal and Administrative	\$ -
Land Acquisition & Rights of Way	\$ -
Interest during construction	\$ -
Engineering	
Engineering Design (entire Project ~ 38 miles) (by AML ¹)	\$ 150,000
Construction Advertising and Bidding (Phase 1) (by AML)	\$ 15,895
Engineering Review during Construction (Phase 1) (by AML)	\$ 31,790
Resident Observation (Phase 1) (by AML)	\$ 94,948
Project Contingencies	\$ 119,279
Total Opinion of Probable Project Cost	\$ 2,500,000
Funding Sources	
MOA 9-1-07 AML	\$ 150,000
MOA 7-1-08 AML (construction amt authoriz. up to \$ 3,000,000.)	\$ 2,350,000
Total of Possible Project Funding Sources	\$ 2,500,000

Note; 1) KY Abandoned Mine Lands



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227 North Upper Street
 Lexington, KY 40507-1016

Preliminary Engineering Report Amended to Final Engineering Report
KY 1110 Waterline Extension
Breathitt County Water District, Jackson, Kentucky

Appendix "B" – Project Funding

Grant Letter for Design – MOA between KY EPC and BCWD for Engineering Design of the entire KY 1110 corridor between Haddix and the Perry County line, dated 9/1/07 in the amount of \$ 150,000.

Grant Letter for Construction – MOA between KY EPC and BCWD for Phase 1 Construction and Engineering Services during construction dated 7/1/08 in the amount of \$ 3,000,000.

FEDERALLY FUNDED

MEMORANDUM OF AGREEMENT

BETWEEN THE

COMMONWEALTH OF KENTUCKY

ENVIRONMENTAL AND PUBLIC PROTECTION
CABINET

AND

BREATHITT COUNTY WATER DISTRICT

HIGHWAY 1110 (AML) WATER SUPPLY
DESIGN PROJECT
BREATHITT COUNTY

THIS MEMORANDUM OF AGREEMENT (the AGREEMENT) is made and entered into this first day of September, 2007, by and between the Commonwealth of Kentucky, the Environmental and Public Protection Cabinet, with an address of Capital Plaza Tower, Frankfort, Kentucky 40601, hereinafter known as "the Cabinet," and Breathitt County Water District, with an address of 1137 Main Street, Suite 305, Jackson, Kentucky, 41339, hereinafter known as "the District".

WITNESSETH

WHEREAS, a groundwater contamination study performed by the Division of Abandoned Mine Lands (AML) found that groundwater well samples taken from houses along and in the vicinity of Highway 1110 in Breathitt County including areas around Howard Creek, Whick, Wolf Coal, Altro, Bowlings Creek, and Barwick have been impacted by AML-eligible mining; and

WHEREAS, the study identified impacts from pre-law and interim coal mining as factors contributing to the reported groundwater problems; and

WHEREAS, approximately 533 residences located in the study area described above are within the affected area, and a predominate number of those were found to be AML-eligible; and

WHEREAS, the Cabinet and the District wish to begin preparations for an extension of water service into the study areas, to provide relief to the AML-affected residents;

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, and for other good and valuable consideration, the receipt, mutuality and sufficiency of which is hereby acknowledged by the parties to this AGREEMENT, the Cabinet and the District hereby COVENANT AND AGREE as follows:

1. OBLIGATIONS OF THE CABINET

- 1.1 The Cabinet shall undertake the following obligations:
- A. When requested to do so, the Cabinet shall forward the written report of any archaeological survey to the Kentucky Heritage Council and the Office of State Archaeology, University of Kentucky, for review.
 - B. The Cabinet shall review and concur, if acceptable, with proposed contracts for preparation of plans and specifications prepared by the District.
 - C. The Cabinet shall provide Request for Payment forms to the District.
 - D. The Cabinet shall review project, financial and status reports received from the District.
 - E. The Cabinet shall process payments to the District promptly after receipt of Requests for Payment and progress reports.
 - F. The Cabinet shall provide an affidavit form entitled, "Campaign Finance Law Compliance" to be included in the bid documents.
- 1.2 The Cabinet has been awarded a Federal grant to be used toward completion of the Project, and the following information pertains to that award:
- A. Catalog of Federal Domestic Assistance (CFDA) Number: 15.252,
 - B. CFDA Title: Abandoned Mine Lands Reclamation (AMLR) Program,
 - C. Award Name and Grant Number: 2007 Abandoned Mine Lands Grant, GR707210
 - D. Federal Awarding Agency: Office of Surface Mining Reclamation and Enforcement, Department of the Interior

E. Applicable Compliance Requirements: Additional compliance requirements for this Project are contained in Circular A-133, a copy of which the Cabinet has provided to the District.

2. OBLIGATIONS OF THE DISTRICT

2.1 The District shall undertake the following obligations:

A. The District shall provide to the Cabinet completed design drawings, technical specifications and other construction-related documents, in electronic and paper format, as soon as they have been completed. The District shall submit a detailed hydraulic analysis/profile of the existing water supply system and the proposed expansion

B. The District may contract preparation of design drawings, technical specifications and other construction-related documents to other governmental agencies or to private sector companies. The District will procure engineering contracts in accordance with applicable state and federal laws and regulations. Specifically, the District agrees to act in accordance with KRS 45A, "Kentucky Model Procurement Code", and the Federal Office of Management and Budget Circular A-87, "Cost Principles for State and Local Governments". Contracts with other governmental agencies and/or private sector companies shall be submitted to the Cabinet's Division of Abandoned Mine Lands (DAML) for review and concurrence, prior to execution by the District.

C. The District shall comply with the provisions of Section 106 of the Natural Historical Preservation Act of 1966, as amended (16 U.S.C. §§ 470); Executive Order No. 11593, which relates to the identification and protection of historic properties; and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C §§ 469(a)(1) et seq.). In particular, an archaeological survey shall be performed for all areas, such as tank sites

and pump stations, proposed for disturbance outside of highway rights-of-way, unless the site and the access thereto have previously been disturbed.

D. The District shall submit preliminary design drawings and technical specifications to DAML for review and concurrence, to assure adherence to the defined project scope. The District shall submit the necessary contract documents to the Cabinet's Division of Water for their review and approval in accordance with Chapter 224 of the Kentucky Revised Statutes.

E. Following review and concurrence by both DAML and Division of Water, the District shall submit two complete bid packages, including design drawings, technical specifications and other contract documents, and a construction cost estimate to DAML.

F. The District shall submit, on a regular basis, a Project status report to DAML. The report is to be accompanied by a financial report during the portion of the performance period that design activities are occurring. The status and financial reports shall be submitted upon completion of significant sections of the design. The reports and requests for payments shall be submitted on a monthly basis if required in writing by DAML. A "Request for Payment" form with an itemization of eligible Project costs attached shall be submitted at scheduled intervals as design work progresses. The Request for Payment forms shall be provided by DAML. The Chairman or the Chairman's designee must sign payment requests. The District shall provide written notification to the Division of Abandoned Mine Lands of any designees who have been given signatory authority.

G. The District shall establish a special Project identification code for all work performed under this Agreement and records shall be maintained of all related work,

whether performed by the District, or other governmental agencies or private sector companies.

H. The District shall establish a separate bank account that reflects federal receipts and shall furnish bank statements for months in which payments are received. These statements shall be submitted to the Cabinet to the attention of the Finance Branch, Division of Administrative Services, 4th Floor, Capitol Plaza Tower, Frankfort, Kentucky 40601.

I. The District shall have an audit made, if required by funding levels, in accordance with OMB Circular a-133. "Audits of State and Local Governments", which is incorporated into this AGREEMENT by reference. A copy of the audit report shall be provided to the Cabinet within 30 days after completion of the audit, but no later than one year after the end of the audit period

J. The District shall obtain prior approval for acquisition of equipment under this MOA. Requests for equipment acquisition authorization should be submitted to: Finance Branch, Division of Administrative Services, 4th Floor, Capital Plaza Tower, Frankfort, Kentucky 40601.

K. The District shall require all consultants and/or contractors to carry Worker's Compensation and Public Liability Insurance: single limit coverage of at least \$1,000,000.00. Proof of insurance shall be submitted to the Cabinet upon request.

L. 43CFR12 is incorporated by reference.

M. The District shall require the Consultant to sign and submit to the Division of Abandoned Mine Lands a Campaign Finance Law Compliance affidavit in accordance

with KRS 45A.110 and KRS 45A.115. Failure by the Consultant to provide the affidavit shall be grounds for disqualification.

2.2 The District shall retain all records relating to the Project until such records are audited by the Cabinet, or for three years after submitting the close-out report to the federal Office of Surface Mining, whichever first occurs. The District shall advise the Cabinet in writing if the Project is to be administered by another governmental entity on its behalf and the Project-related records will be maintained at an alternate site.

2.3 The District shall cooperate fully with the Cabinet in order to facilitate the obligations set out in this AGREEMENT including, but not limited to, allowing the Cabinet to inspect all records pertaining to the project at any time.

2.4 The District shall complete the Project no later than June 30, 2008, unless the Cabinet grants a written extension.

3. MUTUALITY OF OBLIGATIONS

3.1 The obligations imposed upon the parties to this AGREEMENT are for the benefit of the parties and the timely fulfillment of each and every obligation in accordance with this AGREEMENT is necessary. The failure of any party to fulfill any of its obligations under this AGREEMENT shall constitute a breach of this AGREEMENT, and shall entitle the other party to commence appropriate legal or equitable action to enforce its rights under this AGREEMENT, unless the fulfillment of such obligation is waived or modified by the affected party. All waivers shall be in writing, signed by the affected party, and a waiver of one breach shall not constitute a waiver of any other breach.

3.2 In the event of a material breach by either party to this AGREEMENT, the other party may terminate this AGREEMENT, as provided in paragraph 8 herein, without further obligation to the other party. The rights of the parties to this AGREEMENT to pursue remedies for breach of any of the provisions hereof shall survive the termination, expiration or cancellation of this AGREEMENT.

3.3 Except as otherwise provided in this AGREEMENT, the parties to this AGREEMENT shall be solely responsible for any costs incurred in fulfilling their obligations under this AGREEMENT.

4. METHOD OF PAYMENT

4.1 The maximum amount of compensation to the District from the Cabinet pursuant to this AGREEMENT is one hundred fifty thousand dollars (\$150,000.00), unless subsequently amended in writing. Any funds not expended pursuant to this AGREEMENT shall revert to or remain with the Cabinet. The District shall be reimbursed only for actual expenses incurred pursuant to this AGREEMENT. Payment shall be based on the percentage of the project that has been completed at the time that the request for payment is made.

4.2 Payments on this instrument shall not be authorized for services rendered after Government Contract Review Subcommittee disapproval of this instrument, unless the decision of the Committee is overridden by the Secretary of the Finance and Administration Cabinet or the agency head, if the agency has been granted delegation authority.

4.3 The parties agree that the Cabinet's funds are appropriated by the United States Congress from funds allocated to Kentucky pursuant to Section 402(g)(2) of Public Law 95-87. **The parties further agree and understand that this AGREEMENT will only become effective**

upon approval of the Project by the U. S. Office of Surface Mining (OSM). The Catalog of Federal Domestic Assistance number for this Project is CFDA #15-252.

5. TERM OF AGREEMENT

This AGREEMENT shall be effective on September 1, 2007 or upon approval by the Government Contract Review Subcommittee if that constitutes a different date, and shall expire on June 30, 2008 or upon the final completion of the Project as specified in Sections 1 and 2 of this AGREEMENT, whichever first occurs, unless extended in writing by the parties or terminated earlier in accordance with the terms hereof.

6. ASSURANCES

The parties shall comply with:

- 6.1 The Common Rule, which is incorporated by reference into this AGREEMENT.
- 6.2 The Anti-Drug Abuse Act (P.L. 100-690), which requires recipients of Federal funds to certify that they have met requirements designed to promote a drug-free workplace.
- 6.3 Federal statutes relating to nondiscrimination, including but not limited to:
 - A. Title VI of the Civil Rights Act of 1964 (P.L. 88-352), which prohibits discrimination on the basis of race, color, or national origin;
 - B. Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683 and 1685-1686), which prohibits discrimination on the basis of sex;
 - C. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §§ 794), which prohibits discrimination on the basis of handicaps;

D. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age;

E. The Drug Abuse Prevention, Treatment and Rehabilitation Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse;

F. The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism;

G. §§ 523 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;

H. Any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made or any other nondiscrimination statute(s) that apply to this AGREEMENT;

I. Office of Management and Budget Circular A-102.

6.4 The Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limits the political activities of employees whose principal employment activities are funded in whole or in part with federal funds.

6.5 Where required by law, the parties to this AGREEMENT shall comply with the Executive Branch Code of Ethics (KRS Chapter 11A) and all applicable state and federal statutes relating to nondiscrimination.

6.6 The parties certify, by the signatures of duly authorized representatives hereinafter affixed, that they are legally entitled to enter into this AGREEMENT and that they shall not be violating, either directly or indirectly, any conflict of interest statute of the Commonwealth of

Kentucky by performance of this AGREEMENT. Further, the parties promise that they presently have no conflict of interest, in any manner or degree, with the performance of services required to be performed under this AGREEMENT, and that no persons having any such conflict of interest shall be employed.

7. CHOICE OF LAW AND FORUM

7.1 All questions as to the execution, validity, interpretation, construction, and performance of this AGREEMENT or any of its terms shall be governed by the laws of the Commonwealth of Kentucky.

7.2 Any suit, action or other proceeding regarding the execution, validity, interpretation, construction, or performance of this AGREEMENT shall be filed in the Franklin Circuit Court of the Commonwealth of Kentucky.

8. CANCELLATION

Either party has the right to terminate or cancel this AGREEMENT without cause upon thirty days prior written notice to the other party, or for cause at any time without prior written notice.

9. MISCELLANEOUS PROVISIONS

9.1 The headings set forth in this AGREEMENT are for convenience of reference only, and the words contained therein shall in no way be intended to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this AGREEMENT.

9.2 The terms and conditions of this AGREEMENT shall be binding upon and shall inure to the benefit of the parties hereto and their successors and assigns. This provision shall not be construed to permit assignment by any party of any of its rights or duties under this

9.8 If a provision of this AGREEMENT or the application thereof to any person or circumstance shall be declared to be invalid or unenforceable to any extent, the remainder of this AGREEMENT and the application of such provision to other persons or circumstances shall not be affected thereby and shall be enforced to the fullest extent permitted by law.

9.9 This AGREEMENT may be executed simultaneously in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute but one and the same instrument. It shall not be necessary that any single counterpart hereof be executed by all parties hereto so long as at least one counterpart is executed by each party.

9.10 Except to the extent otherwise expressly specified in this AGREEMENT, all remedies specified herein are in addition to, and not in lieu of, other remedies available to the parties both at law and in equity.

**10. ACCESS TO CONTRACTOR'S BOOKS, DOCUMENTS, PAPERS,
RECORDS, OR OTHER EVIDENCE DIRECTLY
PERTINENT TO THE CONTRACT**

The Cabinet and the Finance and Administration Cabinet may audit or review all documentation and records pertaining to the Project pursuant to the provisions of KRS 45A.150, and may make other inspections pursuant to the provisions of KRS 45A.150. The Cabinet, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence which is directly pertinent to this AGREEMENT for the purpose of financial audit or program review. Furthermore, any books, documents papers, records, or other evidence provided to the Cabinet, the Finance and Administration Cabinet, the Auditor of Public Accounts, or the Legislative Research Commission that are directly pertinent to this AGREEMENT shall be subject to public disclosure regardless of the proprietary nature of

the information, unless specific information is identified and exempted and agreed to by the Secretary of the Finance and Administration Cabinet as meeting the provisions of KRS 61.878(1) (c) prior to the execution of the AGREEMENT. The Secretary of the Finance and Administration Cabinet shall not restrict the public release of any information that would otherwise be subject to public release if a state government agency was providing the services.

IN WITNESS WHEREOF, the Cabinet and the District have executed this AGREEMENT, to become effective upon approval by the Government Contract Review Subcommittee.

BREATHITT COUNTY WATER DISTRICT:

I hereby acknowledge that I was informed of, understand, and agree to comply with applicable compliance requirements, as set forth in this MEMORANDUM OF AGREEMENT. I further acknowledge receipt of circular A-133 from the Environmental and Public Protection Cabinet.

AGREED TO BY:



John Lester Smith, Chairman

Date: 7/18/07

APPROVED AS TO FORM AND LEGALITY:



Brendon Miller, Attorney

Date: 7/18/07

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET:

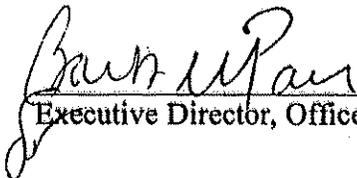
APPROVAL RECOMMENDED BY:



Susan C. Bush, P.G.
Commissioner, Department for Natural Resources

Date: 8-13-07

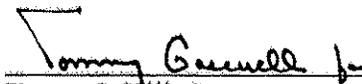
APPROVED AS TO FORM AND LEGALITY:



Executive Director, Office of Legal Services

Date: 8/28/07

AGREED TO BY:



Teresa J. Hill, Secretary

Date: 8-30-07

FEDERALLY FUNDED

MEMORANDUM OF AGREEMENT

BETWEEN THE

COMMONWEALTH OF KENTUCKY

ENVIRONMENTAL AND PUBLIC PROTECTION
CABINET

AND

BREATHITT COUNTY WATER DISTRICT

HIGHWAY 1110 (AML) WATER SUPPLY
CONSTRUCTION PROJECT – PHASE I
BREATHITT COUNTY

THIS MEMORANDUM OF AGREEMENT (the AGREEMENT) is made and entered into this first day of July, 2008, by and between the Commonwealth of Kentucky, the Environmental and Public Protection Cabinet, with an address of Capital Plaza Tower, Frankfort, Kentucky 40601, hereinafter known as “the Cabinet,” and Breathitt County Water District, with an address of 1137 Main Street, Suite 305, Jackson, Kentucky, 41339, hereinafter known as “the District”.

WITNESSETH

WHEREAS, a groundwater contamination study known as “HWY 1110 Groundwater Contamination Study” performed by Kentucky Division of Abandoned Mine Lands (AML) found that groundwater in an area that included Highway 1110 in Breathitt County including the areas Howard Creek, Whick, Wolf Coal, Altro, Bowlings Creek, and Barwick have been impacted by AML-eligible mining; and

WHEREAS, the study identified impacts from pre-law and interim coal mining as factors contributing to the reported groundwater problems; and

WHEREAS, approximately 533 residences located in the study area described above are within the affected area, and a vast majority of those were found to be AML-eligible; and

WHEREAS, the Cabinet and the District entered Agreement 595-0700005566-1 which provided funds for, among other things, the preparation of plans and specifications for an extension of water service into the affected area; and

WHEREAS, the Cabinet and the District wish to begin preparations for an extension of water service into the previously described area, to provide relief to the AML-affected residents;

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, and for other good and valuable consideration, the receipt, mutuality and sufficiency of which is hereby acknowledged by the parties to this AGREEMENT, the Cabinet and the District hereby COVENANT AND AGREE as follows:

1. OBLIGATIONS OF THE CABINET

1.1 The Cabinet shall undertake the following obligations:

- A. When requested to do so, the Cabinet shall forward the written report of any archaeological survey to the Kentucky Heritage Council and the Office of State Archaeology, University of Kentucky, for review.
- B. The Cabinet shall review and concur, if acceptable, with proposed contracts for preparation of plans and specifications prepared by the District.
- C. The Cabinet shall provide Request for Payment forms to the District.
- D. The Cabinet shall participate in monthly progress meetings, as necessary, and review monthly project financial and status reports received from the District
- E. The Cabinet shall process payments to the District promptly after receipt of monthly Requests for Payment and progress reports.
- F. The Cabinet shall participate in the final inspection of the Project.
- G. The Cabinet shall provide an affidavit form entitled, "Campaign Finance Law Compliance" to be included in the bid documents.

1.2 The Cabinet has been awarded a Federal grant to be used toward completion of the Project, and the following information pertains to that award:

- A. Catalog of Federal Domestic Assistance (CFDA) Number: 15.252,
- B. CFDA Title: Abandoned Mine Lands Reclamation (AMLR) Program,
- C. Award Name and Grant Number: 2008 Abandoned Mine Lands Grant, GR807210
- D. Federal Awarding Agency: Office of Surface Mining Reclamation and Enforcement, Department of the Interior
- E. Applicable Compliance Requirements: Additional compliance requirements for this Project are contained in Circular A-133, a copy of which the Cabinet has provided to the District.

2. OBLIGATIONS OF THE DISTRICT

2.1 The District shall undertake the following obligations:

- A. The District has or shall provide to the Cabinet completed design drawings, technical specifications and other construction-related documents in both paper and electronic format.
- B. The District has or shall submit the necessary contract documents to the Cabinet's Division of Water for its review and approval in accordance with Chapter 224 of the Kentucky Revised Statutes. The District shall obtain all other required permits or certifications.
- C. The District shall comply with the provisions of Section 106 of the National Historical Preservation Act of 1966, as amended (16 U.S.C. § 470); Executive Order No. 11593, which relates to the identification and protection of historic properties; and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§ 469(a)(1) et. seq.). In particular, an archaeological survey shall be performed for all areas, such as tank sites

and pump stations, proposed for disturbance outside of highway rights-of-way, unless the site and access thereto have previously been disturbed. Three copies of the written report resulting from such an archaeological survey shall be submitted to the Cabinet's Division of Abandoned Mine Lands.

D. The District shall provide adequate construction supervision during the period of contract performance. The District shall provide a copy of any contract for construction supervision to the Cabinet's Division of Abandoned Mine Lands for review and approval prior to execution.

E. The District shall submit, on a monthly basis, a Project status report to the Cabinet's Division of Abandoned Mine Lands. The report shall include a financial report prepared while construction activities are ongoing. A "Request for Payment" form with an itemization of eligible Project costs attached shall accompany monthly reports. The District Chairman or his designee shall sign the Request for Payment forms.

F. The District shall establish a special Project identification code for all work performed under this AGREEMENT and records shall be maintained of all related work, whether performed by The District, other governmental agencies, or private companies.

G. The District shall establish a separate bank account of Federal receipts, and shall mail monthly bank statements to the Cabinet as follows: Finance Branch, Office of Administrative and Information Support, 4th Floor, Capitol Plaza Tower, Frankfort, Kentucky 40601.

H. The District has or shall submit Tabulation of Construction Bids and any Notices of Award to the Division of Abandoned Mine Lands.

- I. The District and any of its subcontractors shall maintain records in accordance with 30 C.F.R. 886.24, which is incorporated into this AGREEMENT by reference. Project-related records shall be available for inspection and audit by the Cabinet.
- J. The District shall submit copies of Resident Inspector Daily Reports and Progress Meeting Minutes to the Division of Abandoned Mine Lands.
- K. The District shall submit As-Built plans upon completion of the Project.
- L. The District shall submit a written “close-out” report for the Project citing any problems occurring during the performance period of the contract, and the resolution of any problems.
- M. The District shall schedule a “final” inspection with the Cabinet upon completion of Project construction work.
- N. The District shall procure all engineering or construction contracts in accordance with applicable state and federal laws and regulations. Specifically, The District agrees to comply with all pertinent provisions of KRS 45A, “Kentucky Model Procurement Code”.
- O. The District shall have an audit performed in accordance with OMB Circular A-133, “Audits of State and Local Governments”. A copy of the audit report shall be provided to the Cabinet within 30 days after completion of the audit, but no later than nine months after the end of the audit period.
- P. The District shall obtain prior Cabinet approval for acquisition of equipment under this MOA. Requests for equipment acquisition authorization, other than that

implicit to the water supply project, shall be submitted to: Office of Administrative and Information Services, 4th Floor, Capital Plaza Tower, Frankfort, Kentucky 40601.

Q. The District shall require all consultants and contractors to carry Workers Compensation and Public Liability Insurance, with single limit coverage of at least \$1,000,000.00. Proof of insurance shall be submitted to the Cabinet upon request.

R. The District has or shall submit the names of the low bidder for the construction contract and all subcontracts to the Cabinet so that the Cabinet may conduct an Office of Surface Mining Applicant Violator System review. The Cabinet may reject the low bidder or any subcontractor if the review identifies the low bidder or subcontractor as a mining violator. The District shall provide the Cabinet with a copy of each contractor/subcontractor's federal ID#, mailing address and phone number.

S. 43CFR12 is incorporated by reference.

T. The District shall require each bidder to sign and submit to the Division of Abandoned Mine Lands a Campaign Finance Law Compliance affidavit in accordance with KRS 45A.110 and KRS 45A.115. Failure by the bidder to provide the affidavit shall be grounds for disqualification

2.2 The District shall retain all records relating to the Project until such records are audited by the Cabinet, or for three years after submitting the close-out report to the federal Office of Surface Mining, whichever first occurs. The District shall advise the Cabinet in writing if the Project is to be administered by another governmental entity on its behalf and the Project-related records will be maintained at an alternate site.

2.3 The District shall cooperate fully with the Cabinet in order to facilitate the obligations set out in this AGREEMENT including, but not limited to, allowing the Cabinet to inspect all records pertaining to the project at any time.

2.4 The District shall complete the Project no later than June 30, 2011, unless the Cabinet grants a written extension.

3. MUTUALITY OF OBLIGATIONS

3.1 The obligations imposed upon the parties to this AGREEMENT are for the benefit of the parties and the timely fulfillment of each and every obligation in accordance with this AGREEMENT is necessary. The failure of any party to fulfill any of its obligations under this AGREEMENT shall constitute a breach of this AGREEMENT, and shall entitle the other party to commence appropriate legal or equitable action to enforce its rights under this AGREEMENT, unless the fulfillment of such obligation is waived or modified by the affected party. All waivers shall be in writing, signed by the affected party, and a waiver of one breach shall not constitute a waiver of any other breach.

3.2 In the event of a material breach by either party to this AGREEMENT, the other party may terminate this AGREEMENT, as provided in paragraph 8 herein, without further obligation to the other party. The rights of the parties to this AGREEMENT to pursue remedies for breach of any of the provisions hereof shall survive the termination, expiration or cancellation of this AGREEMENT.

3.3 Except as otherwise provided in this AGREEMENT, the parties to this AGREEMENT shall be solely responsible for any costs incurred in fulfilling their obligations under this AGREEMENT.

4. METHOD OF PAYMENT

4.1 The maximum amount of compensation to the District from the Cabinet pursuant to this AGREEMENT is Three Million Dollars (\$3,000,000.00), unless subsequently amended in writing. Any funds not expended pursuant to this AGREEMENT shall revert to or remain with the Cabinet. The District shall be reimbursed only for actual expenses incurred pursuant to this AGREEMENT. Payment shall be based on the percentage of the project that has been completed at the time that the request for payment is made.

4.2 Payments on this instrument shall not be authorized for services rendered after Government Contract Review Subcommittee disapproval of this instrument, unless the decision of the Committee is overridden by the Secretary of the Finance and Administration Cabinet or the agency head, if the agency has been granted delegation authority.

4.3 The parties agree that the Cabinet's funds are appropriated by the United States Congress from funds allocated to Kentucky pursuant to Section 402(g)(2) of Public Law 95-87. **The parties further agree and understand that this AGREEMENT will only become effective upon approval of the Project by the U. S. Office of Surface Mining (OSM).** The Catalog of Federal Domestic Assistance number for this Project is CFDA #15-252.

5. TERM OF AGREEMENT

This AGREEMENT shall be effective on July 1, 2008 or upon approval by the Government Contract Review Subcommittee if that constitutes a different date, and shall expire on June 30, 2011 or upon the final completion of the Project as specified in Sections 1 and 2 of this AGREEMENT, whichever first occurs, unless extended in writing by the parties or terminated earlier in accordance with the terms hereof.

6. ASSURANCES

The parties shall comply with:

- 6.1 The Common Rule, which is incorporated by reference into this AGREEMENT.
- 6.2 The Anti-Drug Abuse Act (P.L. 100-690), which requires recipients of Federal funds to certify that they have met requirements designed to promote a drug-free workplace.
- 6.3 Federal statutes relating to nondiscrimination, including but not limited to:
 - A. Title VI of the Civil Rights Act of 1964 (P.L. 88-352), which prohibits discrimination on the basis of race, color, or national origin:
 - B. Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683 and 1685-1686), which prohibits discrimination on the basis of sex;
 - C. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §§ 794), which prohibits discrimination on the basis of handicaps;
 - D. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age;
 - E. The Drug Abuse Prevention, Treatment and Rehabilitation Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse;
 - F. The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism;
 - G. §§ 523 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;

H. Any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made;

I. Any other nondiscrimination statute(s) that apply to this AGREEMENT.

6.4 Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646), which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of federal or federally-assisted programs.

6.5 The Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limits the political activities of employees whose principal employment activities are funded in whole or in part with federal funds.

6.6 The Davis-Bacon Act (40 U.S.C. § 267a to 276a-7); the Copeland Act (40 U.S.C. § 276(c) and 18 U.S.C. § 874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally-assisted construction sub-agreements.

6.7 The flood insurance purchases requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234), which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000.00 or more.

6.8 The parties shall further:

A. Comply with environmental quality control measures pursuant to the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order No. 11514;

B. Notify violating facilities pursuant to Executive Order No. 11738;

C. Protect wetlands pursuant to Executive Order no. 11990;

D. Evaluate flood hazards in flood plains in accordance with Executive Order No. 11988;

E. Ensure actions comply with state implementation plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§ 7401 et seq.);

F. Protect underground sources of drinking water pursuant to the Safe Drinking Water Act of 1974, as amended (P.L. 93-523);

G. Comply with the Endangered Species Act of 1973, as amended (P.L. 93-205); and

H. Comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq).

6.9 The parties shall comply with the Executive Branch Code of Ethics (KRS Chapter 11A) and all state statutes relating to nondiscrimination.

6.10 The parties certify, by the signatures of duly authorized representatives hereinafter affixed, that they are legally entitled to enter into this AGREEMENT and that they shall not be violating, either directly or indirectly, any conflict of interest statute of the Commonwealth of Kentucky by performance of this AGREEMENT. Further, the parties promise that they presently have no conflict of interest, in any manner or degree, with the performance of services required to be performed under this AGREEMENT, and that no persons having any such conflict of interest shall be employed.

7. CHOICE OF LAW AND FORUM

7.1 All questions as to the execution, validity, interpretation, construction, and performance of this AGREEMENT or any of its terms shall be governed by the laws of the Commonwealth of Kentucky.

7.2 Any suit, action or other proceeding regarding the execution, validity, interpretation, construction, or performance of this AGREEMENT shall be filed in the Franklin Circuit Court of the Commonwealth of Kentucky.

8. CANCELLATION

Either party has the right to terminate or cancel this AGREEMENT without cause upon thirty days prior written notice to the other party, or for cause at any time without prior written notice.

9. MISCELLANEOUS PROVISIONS

9.1 The headings set forth in this AGREEMENT are for convenience of reference only, and the words contained therein shall in no way be intended to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this AGREEMENT.

9.2 The terms and conditions of this AGREEMENT shall be binding upon and shall inure to the benefit of the parties hereto and their successors and assigns. This provision shall not be construed to permit assignment by any party of any of its rights or duties under this AGREEMENT, which assignment shall be prohibited except with the prior written consent of all parties hereto. Such consent shall not be unreasonably withheld.

9.3 This AGREEMENT sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing agreements among them concerning the subject matter hereof, and may be modified only by a written instrument duly executed by each of the parties hereto.

9.4 Time is of the essence in the performance of each of the terms and conditions of this AGREEMENT.

9.5 All notices, requests, demands, waivers, and other communications given as provided in this AGREEMENT shall be in writing, sent by First Class Mail, deemed effective upon mailing, and addressed as follows:

If to the Cabinet: Environmental and Public Protection Cabinet
Department for Natural Resources:
Division of Abandoned Mine Lands
Steve Hohmann, Director
2521 Lawrenceburg Road
Frankfort KY 40601

If to the District: Breathitt County Water District
John Lester Smith, Chairman
1137 Main Street, Suite 305
Jackson, KY 41339
Phone # 606-666-3800

9.6 Either party to this AGREEMENT may change the address at which it is to receive notices, requests, demands, waivers, and other communications, on the condition that party first provides written notice of that change of address to the other party.

9.7 Nothing in this AGREEMENT shall be interpreted as guaranteeing the rights of any person or governmental agency other than the parties to this AGREEMENT.

9.8 If a provision of this AGREEMENT or the application thereof to any person or circumstance shall be declared to be invalid or unenforceable to any extent, the remainder of this AGREEMENT and the application of such provision to other persons or circumstances shall not be affected thereby and shall be enforced to the fullest extent permitted by law.

9.9 This AGREEMENT may be executed simultaneously in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute but one and the same instrument. It shall not be necessary that any single counterpart hereof be executed by all parties hereto so long as at least one counterpart is executed by each party.

9.10 Except to the extent otherwise expressly specified in this AGREEMENT, all remedies specified herein are in addition to, and not in lieu of, other remedies available to the parties both at law and in equity.

**10. ACCESS TO CONTRACTOR'S BOOKS, DOCUMENTS, PAPERS,
RECORDS, OR OTHER EVIDENCE DIRECTLY
PERTINENT TO THE CONTRACT**

The Cabinet and the Finance and Administration Cabinet may audit or review all documentation and records pertaining to the Project pursuant to the provisions of KRS 45A.150, and may make other inspections pursuant to the provisions of KRS 45A.150. The Cabinet, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence which is directly pertinent to this AGREEMENT for the purpose of financial audit or program review. Furthermore, any books, documents papers, records, or other evidence provided to the Cabinet, the Finance and Administration Cabinet, the Auditor of Public Accounts, or the Legislative Research Commission that are directly pertinent to this AGREEMENT shall be subject to public disclosure regardless of the proprietary nature of the information, unless specific information is identified and exempted and agreed to by the Secretary of the Finance and Administration Cabinet as meeting the provisions of KRS 61.878(1) (c) prior to the execution of the AGREEMENT. The Secretary of the Finance and Administration Cabinet shall not restrict the public release of any information which would otherwise be subject to public release if a state government agency was providing the services.

IN WITNESS WHEREOF, the Cabinet and the District have executed this AGREEMENT, to become effective upon approval by the Government Contract Review Subcommittee.

BREATHITT COUNTY WATER DISTRICT:

I hereby acknowledge that I was informed of, understand, and agree to comply with applicable compliance requirements, as set forth in this MEMORANDUM OF AGREEMENT. I further acknowledge receipt of circular A-133 from the Environmental and Public Protection Cabinet.

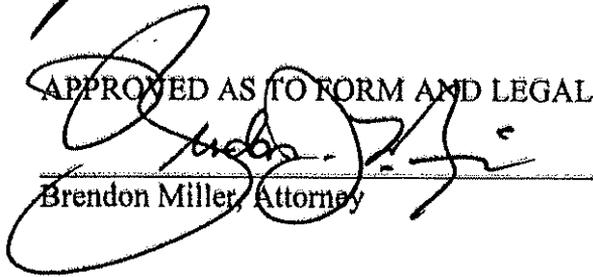
AGREED TO BY:



John Lester Smith, Chairman

Date: 3-20-08

APPROVED AS TO FORM AND LEGALITY:



Brendon Miller, Attorney

Date: 3-20-2008

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET:

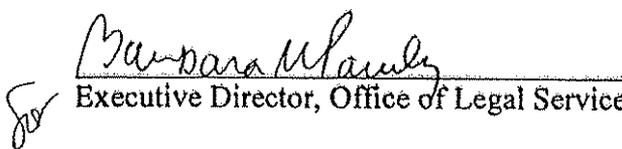
APPROVAL RECOMMENDED BY:



Susan C. Bush, P.G.
Commissioner, Department for Natural Resources

Date: 4-10-08

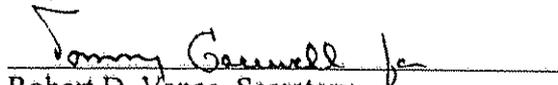
APPROVED AS TO FORM AND LEGALITY:



Executive Director, Office of Legal Services

Date: 4-17-08

AGREED TO BY:



Robert D. Vance, Secretary

Date: 4-21-08

Preliminary Engineering Report Amended to Final Engineering Report
KY 1110 Waterline Extension
Breathitt County Water District, Jackson, Kentucky

Appendix "C" – Engineer's Letter of Recommendation to Award Bid



June 11, 2008

Mr. J. L. Smith, Chairman
Breathitt County Water District
1137 Main Street
Jackson, Kentucky 41339

RE: Award of Construction Contracts
Contract # 1: KY 1110 Phase 1 Waterline Extension Project

Dear Mr. Smith:

On June 4, 2008, at the Breathitt County Court House in Jackson, KY, six (6) bids were received for Contract # 1. A Certified Bid Tabulations was prepared by our office for the contract and then mailed to you for your review and information.

After the Certified Bid Tabulation was prepared, a reference check of the Low Bid Contractor was initiated by Nesbitt Engineering, Inc. (NEI). The contractor furnished nine references and five of these nine were contacted. All of them gave the contractor a raving review and one even said "I wish they would do every job – they are the cadillac of contractors". The funding agency likewise gave them a rousing endorsement. Based on this information, we conclude that G&W Construction Company, Inc. (Contract # 1) qualify as responsive and responsible bidders, and are unaware of any reason a construction contract should not be awarded to them. Therefore, NEI recommends that Breathitt County Water District (BCWD) award Contract # 1 to G&W Construction Company, Inc. in the amount of \$2,088,087.96.

Issuance of the "Notice of Award" for this Contract is recommended pending concurrence of the Kentucky Public Service Commission, and the KY Division of Abandoned Mine Lands.

Please feel free to call me if you have any questions. Thank you for your time and attention to this matter.

Sincerely,

Ora C. Main, PE, MBA
Vice President/Project Manager

c: Jason Richardson, Judge-Executive
Shannon Moore, BCWD Superintendent
Bob Scott, KY AML
Bryan Kirby, CEDA
Gabriel Alderman, G&W Construction Co., Inc

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Preliminary Engineering Report Amended to Final Engineering Report
KY 1110 Waterline Extension
Breathitt County Water District, Jackson, Kentucky

Appendix "D" – Kentucky Division of Water Approval Letter



STEVEN L. BESHEAR
GOVERNOR

ROBERT D. VANCE
SECRETARY

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WATER

14 REILLY ROAD

FRANKFORT, KENTUCKY 40601

www.kentucky.gov

April 30, 2008

Mr. John Smith, Chairman
Breathitt Co Water District
1137 Main St
Jackson (Breathitt), KY 41339

RE: Breathitt Co Water District
AI # 45303, APE20080001
PWSID # 0131012-08-001
Cont. # 1-KY 1110 WLE, Cont. #2 150,000 Gallon Water
Storage Tank
Breathitt County, KY

Dear Mr. Smith:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 39 miles of 10, 8, 6, 4, & 2 inch PVC & DIP waterlines; 30 HP, 180 GPM booster pump station; 10 HP, 26 GPM hydropneumatic pump station; and 150,000 gallon water storage tank. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

Construction shall include the "red line" addition as shown to replace Plan Sheet D-6 for Contract No. 1 with Plan Sheets D-6A & D-6B of the approved plans pursuant to the conversation with Mr. Ken Reid of Nesbitt Engineering on 4/18/08.

Additionally, prior to connecting potable water to existing structures in areas served by the above referenced new waterline, provide the names and addresses of the described customers to the Division of Plumbing, Department of Housing, Bldg. 127, US 127 South, Frankfort, KY 40601.

If you have any questions concerning this project, please contact Mr. Jonathan Reynolds at 502-564-8158 extension 595.

Sincerely,

for Donna S. Marlin, Manager
Drinking Water Branch
Division of Water

MR:JR

Enclosures

C: Nesbitt Engineering Inc
Breathitt County Health Department
Public Service Commission
Division of Plumbing
City of Jackson
Bob Scott, Division of Abandoned Mine Lands

Distribution-Major Construction

Breathitt Co Water District

Subject Item Inventory

Activity ID No.: APE20080001

Subject Item Inventory:

ID	Designation	Description
AIOO45303		
PORT10	Booster Pump Station	30 HP, 430 TDH, 180 gpm booster pump station
PORT11	Hydropneumatic Pump Sta	10 hp, 500 TDH, 26 gpm hydropneumatic pump
PORT12	Water Lines	39 miles of 10, 8, 6, 4, and 2 inch PVC and DIP waterlines
STOR8	Ground Storage Tank	150,000 gallon Ground Storage Tank
STOR9	Hydropneumatic Tank	2-158 gallon hydropneumatic tanks

Subject Item Groups:

ID	Description	Components
GACT6	Contract #1-KY 1110 WLE, Contract #2-150,000 gallon Water Storage Tank	PORT11 10 hp, 500 TDH, 26 gpm hydropneumatic pump PORT12 39 miles of 10, 8, 6, 4, and 2 inch PVC and DIP waterlines STOR8 150,000 gallon Ground Storage Tank STOR9 2-158 gallon hydropneumatic tanks PORT10 30 HP, 430 TDH, 180 gpm booster pump station

KEY

ACTV = Activity

AREA = Area

EQPT = Equipment

PERS = Personnel

AIOO = Agency Interest

COMB = Combustion

MNPT = Monitoring Point

PORT = Transport

Distribution-Major Construction

Breathitt Co Water District

Subject Item Inventory

Activity ID No.: APE20080001

KEY

STOR = Storage

STRC = Structure

TRMT = Treatment

Distribution-Major Construction

Breathitt Co Water District
Facility Requirements

Activity ID No.: APE20080001

Page 1 of 32

GACT6 (KY 1110 WLE, 150,000 tank) Contract #1-KY 1110 WLE, Contract #2-150,000 gallon Water Storage Tank:

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new or relocated water line(s). Take samples at connection points to existing lines, at 1 mile intervals, and at dead ends without omitting any branch of the new or relocated water line. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7), 401 KAR 8:150 Section 4, Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.
M-2	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new storage structure(s). With at least 1 sample taken at least 24 hours after the first construction complete sample(s), take 2 or more samples from the yard hydrant, the outlet piping from the storage structure, or a sample tap directly connected to the storage structure. Sample bottles shall be clearly identified as "special" construction tests. [Recommended Standards for Water Works 7.0.18, 401 KAR 8:150 Section 4] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.
M-3	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new pump(s). If the pump(s) are independent of (not directly connected to) the new or relocated lines, take at least 1 sample at the discharge side pitcock. Otherwise, no additional sampling beyond the sampling required for new or relocated lines shall be required in association with the pump(s). Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.

Submittal/Action Requirements:

Coliform:

Condition No.	Condition
S-1	Coliform For new construction projects, the distribution system, using the most expedient method, shall submit Coliform test results to the Cabinet: Due immediately following disinfection and flushing. [401 KAR 8:150 Section 4(2)]

Distribution-Major Construction

Breathitt Co Water District

Facility Requirements

Activity ID No.: APE20080001

GACT6 (continued):

Submittal/Action Requirements:

Condition No.	Condition
S-2	For proposed changes to the approved plan, submit information: Due prior to any modification to the Cabinet for approval. Changes to the approved plan shall not be implemented without the prior written approval of the Cabinet. [401 KAR 8:100 Section 1(8)]
S-3	The person who presented the plans shall submit the professional engineer's certification: Due when construction is complete to the Division of Water. The certification shall be signed by a registered professional engineer and state that the water project has been constructed and tested in accordance with the approved plans, specifications, and requirements. [401 KAR 8:100 Section 1(8)]

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	Additional Limitations: Chlorinated water resulting from disinfection of project components shall be disposed in a manner which will not violate 401 KAR 5:031. [401 KAR 8:020 Section 2(20)]

Condition No.	Condition
T-2	This project has been permitted under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies. Further, this permit does not address the authority of the permittee to provide service to the area to be served. [401 KAR 8:100 Section 1(7)]
T-3	Unless construction of this project is begun within 1 year from the issuance date of this permit, the permit shall expire. If requested prior to the permit expiration, an official extension from the Division of Water may be granted. If this permit expires, the original plans and specifications may be resubmitted for a new comprehensive review. If you have any questions concerning this project, please contact the Drinking Water Branch at 502/564-3410. [401 KAR 8:100 Section 1(9)]

Distribution-Major Construction

Breathitt Co Water District

Facility Requirements

Activity ID No.: APE20080001

GACT6 (continued):

Narrative Requirements:

Condition	
No.	Condition
T-4	During construction, a set of approved plans and specification shall be available at the job site at all times. All work shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 1(7)(a)]

Distribution-Major Construction

Breathitt Co Water District

Facility Requirements

Activity ID No.: APE20080001

PORT10 (Booster Pump Station) 30 HP, 430 TDH, 180 gpm booster pump station:

Page 4 of 32

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Pressure	Pump stations shall be located or controlled so that intake Pressure \geq 20 psi is maintained during normal pump operation. [Recommended Standards for Water Works 6.4.b] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-2	Pressure	Pump stations shall be located or controlled so that an automatic cutoff or a low pressure controller maintains a Pressure \geq 10 psi in the suction line under all operating conditions. [Recommended Standards for Water Works 6.4.c] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Residual Disinfection	New pumps shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect new pumps use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection \geq 25 ppm at the end of 24 hours. Follow the disinfection with thorough flushing and place each pump into service if, and only if, Coliform monitoring applicable to the pump does not show the presence of Coliform. If Coliform is detected, repeat flushing of the pump and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the pump has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Slope	Pumping facilities shall be located and designed to maintain the sanitary quality of pumped water. As part of this, all pump station floors shall have Slope \geq 3 in per 10 ft to a suitable drain. [Recommended Standards for Water Works 6.2.e, Recommended Standards for Water Works 6.0, Recommended Standards for Water Works 6.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Air Change Rate	Ventilation shall conform to existing local and/or state codes. At a minimum forced ventilation shall produce an Air Change Rate \geq 6 air change(s)/hr. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.

Distribution-Major Construction

Breathitt Co Water District
Facility Requirements

Activity ID No.: APE20080001

Page 5 of 32

PORT10 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-6	Height	Pumping stations shall not be subject to flooding. To this end, 1) grading around stations shall lead surface drainage away and 2) stations shall be elevated or protected to a Height \geq 3 ft above the highest of the following: a) the 100-year flood elevation, or b) the highest recorded flood elevation. [Recommended Standards for Water Works 6.1.1, Recommended Standards for Water Works 6.0] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-7	Height	When a pump station has pits or compartments which must be entered, stairways or ladders shall be provided between all floors. Stairs shall have risers with a Height \leq 9 in, handrails on both sides, and treads with non-slip material wide enough for safety. [Recommended Standards for Water Works 6.2.3] This requirement is applicable during the following months: All Year. Statistical basis: Maximum.

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	Additional Limitations: Pumping stations shall be so located that the proposed site will meet the requirements for hydraulics of the system. [Recommended Standards for Water Works 6.1]
T-2	Additional Limitations: Pumping stations shall be readily accessible at all times for servicing and repairs. [Recommended Standards for Water Works 6.1.1.b, Recommended Standards for Water Works 6.4.3]
T-3	Additional Limitations: Pumping stations shall be designed to prevent vandalism and protect against entrance of animals or unauthorized persons. [Recommended Standards for Water Works 6.1.1.d]
T-4	Additional Limitations: Pumping stations shall be of durable construction with outward-opening doors. [Recommended Standards for Water Works 6.2.b]

Distribution-Major Construction

Breathitt Co Water District
Facility Requirements

Activity ID No.: APE20080001

Page 6 of 32

PORT10 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-5	Additional Limitations: Pumping stations shall be fire and weather resistant. [Recommended Standards for Water Works 6.2.b]
T-6	Additional Limitations: Pumping stations shall have suitable pump gland discharges so that drainage from the glands is not onto the floor. [Recommended Standards for Water Works 6.2.f]
T-7	Additional Limitations: If underground structures are present at pumping stations, they shall be waterproofed. [Recommended Standards for Water Works 6.2.d]
T-8	Additional Limitations: Pumping stations shall have adequate space for the installation of additional pumps. [Recommended Standards for Water Works 6.2.a]
T-9	Additional Limitations: Pumping stations shall have adequate space for the safe servicing of all equipment. [Recommended Standards for Water Works 6.2.a]
T-10	Additional Limitations: Pump stations shall have crane-ways, hoist beams, eyebolts, or other adequate facilities for servicing or removal of pumps, motors or other heavy equipment. [Recommended Standards for Water Works 6.2.2.a]
T-11	Additional Limitations: Pump stations shall have openings as needed for removal of heavy or bulky equipment. [Recommended Standards for Water Works 6.2.2.b]
T-12	Additional Limitations: Pump stations shall have a convenient tool board, or other facilities as needed, for proper maintenance of equipment. [Recommended Standards for Water Works 6.2.2.c]
T-13	Additional Limitations: In areas where excess moisture could cause safety hazards or damage to equipment, dehumidification shall be provided. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.6]
T-14	Additional Limitations: Electrical controls shall be located above grade. [Recommended Standards for Water Works 6.6.5]

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PORT10 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-15	<p>Additional Limitations: All electrical equipment and work shall conform with the applicable state and local electrical codes and the National Electrical Code. [Recommended Standards for Water Works 6.5, Recommended Standards for Water Works 6.2.7]</p>
T-16	<p>Additional Limitations: Pump stations shall be adequately lighted throughout. [Recommended Standards for Water Works 6.2.7]</p>
T-17	<p>Additional Limitations: All automatic pump stations shall be provided with automatic signaling apparatus which will report when the station is out of service. All remote controlled stations shall be electrically operated and controlled and shall have signaling apparatus of proven performance. [Recommended Standards for Water Works 6.5]</p>
T-18	<p>Additional Limitations: Automatic or remote control pump stations shall be located or shall have control devices setup so that the range between start and cutoff pressure prevents excessive pump cycling. [Recommended Standards for Water Works 6.4.d]</p>
T-19	<p>Additional Limitations: Equipment shall be provided or other arrangements made to prevent surge pressures from activating controls which switch on pumps or activate other equipment outside the normal design cycle of operation. [Recommended Standards for Water Works 6.6.5]</p>
T-20	<p>Additional Limitations: Provisions shall be made to prevent energizing the motor in the event of a backspin cycle. [Recommended Standards for Water Works 6.6.5]</p>
T-21	<p>Additional Limitations: Pump stations shall be provided with enough heat to prevent freezing of equipment or treatment processes. [Recommended Standards for Water Works 6.2.4]</p>
T-22	<p>Additional Limitations: Pump stations shall have at least 2 pumps. Pumps shall be sized so that if any single pump is out service, the remaining pump or pumps shall be capable of providing the peak demand on the station. [Recommended Standards for Water Works 6.3, Recommended Standards for Water Works 6.4.1]</p>
T-23	<p>Additional Limitations: Provisions shall be made for pump alternation. [Recommended Standards for Water Works 6.6.5]</p>

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PORT10 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-24	<p>Additional Limitations: Pumps shall</p> <ol style="list-style-type: none">have ample capacity to supply the peak demand against the required distribution system pressure without dangerous overloading,be driven by prime movers able to meet the maximum horsepower condition of the pumps,be provided readily available spare parts and tools, andbe served by control equipment that is properly protected against temperatures to be encountered. [Recommended Standards for Water Works 6.3]
T-25	<p>Additional Limitations: Pumps, their prime movers and accessories shall be controlled in such a manner that they will operate at rated capacity without dangerous overload. [Recommended Standards for Water Works 6.6.5]</p>
T-26	<p>Additional Limitations: Pump stations shall be located or controlled so that a bypass is available. [Recommended Standards for Water Works 6.4.e]</p>
T-27	<p>Additional Limitations: Pump stations shall contain indicating and totalizing metering of the total water pumped. Each pump shall have</p> <ol style="list-style-type: none">a standard pressure gauge on its discharge line anda compound gauge on its suction line. <p>Each pump should have a means for measuring the instantaneous volume per time discharge. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.4.2, Recommended Standards for Water Works 6.6.3]</p>
T-28	<p>Additional Limitations: Pumps shall be adequately valved to permit satisfactory operation, maintenance and repair of the equipment. Each pump shall have a positive-acting check valve on the discharge side between the pump and the shut-off valve. [Recommended Standards for Water Works 6.6.1]</p>

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PORT10 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-29	<p>Additional Limitations: Piping for pumps shall, in general,</p> <ol style="list-style-type: none">1) be designed so that the friction losses will be minimized,2) not be subject to contamination,3) have watertight joints,4) be protected against surge or water hammer,5) be provided with restraints where necessary, and6) a) be such that each pump has an individual suction line or6) b) be manifolded such that the lines insure similar hydraulic and operating conditions. [Recommended Standards for Water Works 6.6.2]
T-30	<p>Additional Limitations: To ensure continuous service when the primary power is interrupted, power supplied to pump stations shall be</p> <ol style="list-style-type: none">a) from at least 2 independent sources orb) from a primary source with a standby or auxiliary source provided. <p>If standby power is provided by onsite generators or engines, the fuel storage and fuel line must be designed to protect the water supply from contamination. [Recommended Standards for Water Works 6.6.6]</p>

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PORT11 (Hydropneumatic Pump Sta) 10 hp, 500 TDH, 26 gpm hydropneumatic pump:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Pressure	Pump stations shall be located or controlled so that intake Pressure ≥ 20 psi is maintained during normal pump operation. [Recommended Standards for Water Works 6.4.b] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-2	Pressure	Pump stations shall be located or controlled so that an automatic cutoff or a low pressure controller maintains a Pressure ≥ 10 psi in the suction line under all operating conditions. [Recommended Standards for Water Works 6.4.c] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Residual Disinfection	New pumps shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect new pumps use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection ≥ 25 ppm at the end of 24 hours. Follow the disinfection with thorough flushing and place each pump into service if, and only if, Coliform monitoring applicable to the pump does not show the presence of Coliform. If Coliform is detected, repeat flushing of the pump and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the pump has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Slope	Pumping facilities shall be located and designed to maintain the sanitary quality of pumped water. As part of this, all pump station floors shall have Slope ≥ 3 in per 10 ft to a suitable drain. [Recommended Standards for Water Works 6.2.e, Recommended Standards for Water Works 6.0, Recommended Standards for Water Works 6.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Air Change Rate	Ventilation shall conform to existing local and/or state codes. At a minimum forced ventilation shall produce an Air Change Rate ≥ 6 air change(s)/hr. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.

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PORT11 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-6	Height	Pumping stations shall not be subject to flooding. To this end, 1) grading around stations shall lead surface drainage away and 2) stations shall be elevated or protected to a Height \geq 3 ft above the highest of the following: a) the 100-year flood elevation, or b) the highest recorded flood elevation. [Recommended Standards for Water Works 6.1.1, Recommended Standards for Water Works 6.0] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-7	Height	When a pump station has pits or compartments which must be entered, stairways or ladders shall be provided between all floors. Stairs shall have risers with a Height \leq 9 in, handrails on both sides, and treads with non-slip material wide enough for safety. [Recommended Standards for Water Works 6.2.3] This requirement is applicable during the following months: All Year. Statistical basis: Maximum.

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	Additional Limitations: Pumping stations shall be so located that the proposed site will meet the requirements for hydraulics of the system. [Recommended Standards for Water Works 6.1]
T-2	Additional Limitations: Pumping stations shall be readily accessible at all times for servicing and repairs. [Recommended Standards for Water Works 6.1.1.b, Recommended Standards for Water Works 6.4.3]
T-3	Additional Limitations: Pumping stations shall be designed to prevent vandalism and protect against entrance of animals or unauthorized persons. [Recommended Standards for Water Works 6.1.1.d]
T-4	Additional Limitations: Pumping stations shall be of durable construction with outward-opening doors. [Recommended Standards for Water Works 6.2.b]

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PORT11 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-5	Additional Limitations: Pumping stations shall be fire and weather resistant. [Recommended Standards for Water Works 6.2.b]
T-6	Additional Limitations: Pumping stations shall have suitable pump gland discharges so that drainage from the glands is not onto the floor. [Recommended Standards for Water Works 6.2.f]
T-7	Additional Limitations: If underground structures are present at pumping stations, they shall be waterproofed. [Recommended Standards for Water Works 6.2.d]
T-8	Additional Limitations: Pumping stations shall have adequate space for the installation of additional pumps. [Recommended Standards for Water Works 6.2.a]
T-9	Additional Limitations: Pumping stations shall have adequate space for the safe servicing of all equipment. [Recommended Standards for Water Works 6.2.a]
T-10	Additional Limitations: Pump stations shall have crane-ways, hoist beams, eyebolts, or other adequate facilities for servicing or removal of pumps, motors or other heavy equipment. [Recommended Standards for Water Works 6.2.2.a]
T-11	Additional Limitations: Pump stations shall have openings as needed for removal of heavy or bulky equipment. [Recommended Standards for Water Works 6.2.2.b]
T-12	Additional Limitations: Pump stations shall have a convenient tool board, or other facilities as needed, for proper maintenance of equipment. [Recommended Standards for Water Works 6.2.2.c]
T-13	Additional Limitations: In areas where excess moisture could cause safety hazards or damage to equipment, dehumidification shall be provided. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.6]
T-14	Additional Limitations: Electrical controls shall be located above grade. [Recommended Standards for Water Works 6.6.5]

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PORT11 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-15	<p>Additional Limitations: All electrical equipment and work shall conform with the applicable state and local electrical codes and the National Electrical Code. [Recommended Standards for Water Works 6.5, Recommended Standards for Water Works 6.2.7]</p>
T-16	<p>Additional Limitations: Pump stations shall be adequately lighted throughout. [Recommended Standards for Water Works 6.2.7]</p>
T-17	<p>Additional Limitations: All automatic pump stations shall be provided with automatic signaling apparatus which will report when the station is out of service. All remote controlled stations shall be electrically operated and controlled and shall have signaling apparatus of proven performance. [Recommended Standards for Water Works 6.5]</p>
T-18	<p>Additional Limitations: Automatic or remote control pump stations shall be located or shall have control devices setup so that the range between start and cutoff pressure prevents excessive pump cycling. [Recommended Standards for Water Works 6.4.d]</p>
T-19	<p>Additional Limitations: Equipment shall be provided or other arrangements made to prevent surge pressures from activating controls which switch on pumps or activate other equipment outside the normal design cycle of operation. [Recommended Standards for Water Works 6.6.5]</p>
T-20	<p>Additional Limitations: Provisions shall be made to prevent energizing the motor in the event of a backspin cycle. [Recommended Standards for Water Works 6.6.5]</p>
T-21	<p>Additional Limitations: Pump stations shall be provided with enough heat to prevent freezing of equipment or treatment processes. [Recommended Standards for Water Works 6.2.4]</p>
T-22	<p>Additional Limitations: Pump stations shall have at least 2 pumps. Pumps shall be sized so that if any single pump is out service, the remaining pump or pumps shall be capable of providing the peak demand on the station. Additionally, pumps shall be sized so that the pump station is capable of providing at least 10 times the average demand of the area served by the station. [Recommended Standards for Water Works 6.3, Recommended Standards for Water Works 6.4.1, Recommended Standards for Water Works 7.2.2.a]</p>

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PORT11 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-23	Additional Limitations: Provisions shall be made for pump alternation. [Recommended Standards for Water Works 6.6.5]
T-24	Additional Limitations: Pumps shall <ol style="list-style-type: none">have ample capacity to supply the peak demand against the required distribution system pressure without dangerous overloading,be driven by prime movers able to meet the maximum horsepower condition of the pumps,be provided readily available spare parts and tools, andbe served by control equipment that is properly protected against temperatures to be encountered. [Recommended Standards for Water Works 6.3]
T-25	Additional Limitations: Pumps, their prime movers and accessories shall be controlled in such a manner that they will operate at rated capacity without dangerous overload. [Recommended Standards for Water Works 6.6.5]
T-26	Additional Limitations: Pump stations shall be located or controlled so that a bypass is available. [Recommended Standards for Water Works 6.4.e]
T-27	Additional Limitations: Pump stations shall contain indicating and totalizing metering of the total water pumped. Each pump shall have <ol style="list-style-type: none">a standard pressure gauge on its discharge line anda compound gauge on its suction line. Each pump should have a means for measuring the instantaneous volume per time discharge. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.4.2, Recommended Standards for Water Works 6.6.3]
T-28	Additional Limitations: Pumps shall be adequately valved to permit satisfactory operation, maintenance and repair of the equipment. Each pump shall have a positive-acting check valve on the discharge side between the pump and the shut-off valve. [Recommended Standards for Water Works 6.6.1]

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PORT11 (continued):

Narrative Requirements:

Additional Limitations:

Condition

No. Condition

T-29

Additional Limitations:

Piping for pumps shall, in general,

- 1) be designed so that the friction losses will be minimized,
- 2) not be subject to contamination,
- 3) have watertight joints,
- 4) be protected against surge or water hammer,
- 5) be provided with restraints where necessary, and
- 6) a) be such that each pump has an individual suction line or
b) be manifolded such that the lines insure similar hydraulic and operating conditions. [Recommended Standards for Water Works 6.6.2]

T-30

Additional Limitations:

To ensure continuous service when the primary power is interrupted, power supplied to pump stations shall be

- a) from at least 2 independent sources or
- b) from a primary source with a standby or auxiliary source provided.

If standby power is provided by onsite generators or engines, the fuel storage and fuel line must be designed to protect the water supply from contamination.

[Recommended Standards for Water Works 6.6.6]

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PORT12 (Water Lines) 39 miles of 10, 8, 6, 4, and 2 inch PVC and DIP waterlines:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Depth	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a Depth ≥ 6 in below the bottom of the pipe. [Recommended Standards for Water Works 8.5.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-2	Depth	All water lines shall be covered to a Depth ≥ 30 in to prevent freezing. [Recommended Standards for Water Works 8.5.3, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Diameter	All water lines shall have Diameter ≥ 3 in. [Recommended Standards for Water Works 8.1.4] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Diameter	Water lines with Diameter < 6 in shall not have fire hydrants. [Recommended Standards for Water Works 8.1.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Diameter	All new and existing water lines serving fire hydrants or where fire protection is provided shall have Diameter ≥ 6 in. [Recommended Standards for Water Works 8.1.2] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-6	Distance	Water lines shall have a sufficient quantity of valves so that inconvenience and sanitary hazards will be minimized during repairs. A valve spacing Distance ≤ 800 feet should be utilized in non-commercial districts. Alternatively, non-commercial districts should utilize a valve spacing Distance ≤ 1 block. Commercial districts should utilize a valve spacing Distance ≤ 500 ft. [Recommended Standards for Water Works 8.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-7	Distance	Hydrant drains shall not be connected to sanitary sewers or storm drains and shall be located a Distance > 10 ft from sanitary sewers and storm drains. [Recommended Standards for Water Works 8.3.4] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.

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PORT12 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-8	Distance	<p>Except when not practical, water lines shall be laid a horizontal Distance \geq 10 ft from any existing or proposed sewer. The distance shall be measured edge to edge.</p> <p>In cases where it is not practical to maintain a 10 foot separation, water lines may be installed closer to a sewer provided that the water lines shall be laid in a separate trench or on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water line is at least 18 inches above the top of the sewer. [Recommended Standards for Water Works 8.6.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-9	Distance	<p>When water lines and sewers cross,</p> <ol style="list-style-type: none">1) water lines shall be laid such that either<ol style="list-style-type: none">a) the the top of the water line is a vertical Distance \geq 18 in below the bottom of the sewer line orb) the bottom of the water line is a vertical Distance \geq 18 in above the top of the sewer line,2) 1 full length of the water pipe shall be located so that both joints of the water pipe will be as far from the sewer as possible, and3) special structural support for the water and sewer pipes may be required. [Recommended Standards for Water Works 8.6.3] <p>This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-10	Distance	<p>The open end of an air relief pipe from automatic valves shall be extended a Distance \geq 1.0 ft above grade and provided with a screened, downward-facing elbow. The pipe from a manually operated valve shall be extended to the top of the pit. Use of manual air relief valves is recommended wherever possible. [Recommended Standards for Water Works 8.4.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-11	Pressure	<p>Pipes shall not be installed unless all points of the distribution system remain designed for ground level Pressure \geq 20 psi under all conditions of flow. [Recommended Standards for Water Works 8.1.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-12	Pressure	<p>Pressure \geq 30 psi must be available on the discharge side of all meters. [401 KAR 8:100 Section 4(2)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>

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PORT12 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-13	Residual Disinfection	<p>New or relocated water lines shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect the new or relocated lines use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection \geq 25 ppm at the end of 24 hours. Follow the line disinfection with thorough flushing and place the lines into service if, and only if, Coliform monitoring applicable to the line does not show the presence of Coliform.</p> <p>If Coliform is detected, repeat flushing of the line and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the line has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:150 Section 4(1), Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-14	Velocity	<p>Each blow-off, fire hydrant, or flush hydrant shall be sized so that Velocity \geq 2.5 ft/sec can be achieved in the water main served by the blow-off or hydrant during flushing. [Recommended Standards for Water Works 8.1.6.b, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	leaks	<p>The presence or absence of leaks monitored by physical testing as needed shall be determined in all types of installed pipe. Pressure testing and leakage testing shall be in accordance with the latest edition of AWWA Standard C600. [Recommended Standards for Water Works 8.5.5] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>

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PORT12 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: Water line installation shall be in accordance with AWWA standards or manufacturer recommendations. [Recommended Standards for Water Works 8.5.1]</p>
T-2	<p>Additional Limitations: Pipes, fittings, valves and fire hydrants shall conform to the latest standards issued by the AWWA or NSF (if such standards exist). PVC and PE piping used must be certified to ANSI/NSF Standard 61. [Recommended Standards for Water Works 8.0.1]</p>
T-3	<p>Additional Limitations: At high points in water lines, where air can accumulate, provisions shall be made to remove the air by means of hydrants or air relief valves. Automatic air relief valves shall not be used in situations where manhole or chamber flooding may occur. [Recommended Standards for Water Works 8.4.1]</p>
T-4	<p>Additional Limitations: All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.5.4]</p>
T-5	<p>Additional Limitations: A flush hydrant or blow-off shall be required at the end of each dead end line that is less than 6 inches in diameter. [Recommended Standards for Water Works 8.1.6]</p>
T-6	<p>Additional Limitations: For each fire or flush hydrant, auxiliary valves shall be installed in the hydrant lead pipe. [Recommended Standards for Water Works 8.3.3]</p>
T-7	<p>Additional Limitations: No flushing device, blow-off, or air relief valve shall be directly connected to any sewer. Chambers, pits or manholes containing valves, blow-offs, meters, or other such appurtenances shall not be directly connected to any storm drain or sanitary sewer. Such chambers, pits or manholes shall be drained to absorptions pits underground or to the surface of the ground where they are not subject to flooding by surface water. [Recommended Standards for Water Works 8.1.6, Recommended Standards for Water Works 8.4.3]</p>
T-8	<p>Additional Limitations: If water lines are installed or replaced in areas of organic contamination or in areas within 200 ft of underground or petroleum storage tanks, ductile iron or other nonpermeable materials shall be used in all portions of the water line installation or replacement. [401 KAR 8:100 Section 1(5)(d)6, Recommended Standards for Water Works 8.0.2]</p>

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PORT12 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-9	Additional Limitations: No water pipe shall pass through or come in contact with any part of a sewer manhole. [Recommended Standards for Water Works 8.6.6]
T-10	Additional Limitations: If a fire sprinkler system is to be installed, a double check detector assembly approved for backflow prevention shall be utilized. The double check detector assembly of the system shall be accessible for testing. [401 KAR 8:100 Section 1(7)]
T-11	Additional Limitations: If water lines cross a stream or wetland, the provisions in the attached Water Quality Certification shall apply. If you have any questions please contact the Water Quality Certification Supervisor of the Water Quality Branch at (502) 564-2225. [401 KAR 8:100 Section 1(7)]

Subfluvial Pipe Crossings:

Condition No.	Condition
T-12	Subfluvial Pipe Crossings: For subfluvial pipe crossings, a floodplain construction permit will not be required pursuant to KRS 151.250 if the following requirements of 401 KAR 4:050 Section 2 are met. <ol style="list-style-type: none">1) No material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc. during construction of pipe crossings.2) Crossing trenches shall be backfilled as closely as possible to the original contour.3) All excess material resulting from construction displacement in a crossing trench shall be disposed of outside the flood plain.4) For erodible channels, there shall be at least 30 inches of backfill on top of all pipe or conduit points in the crossing.5) For nonerodible channels, pipes or conduits in the crossing shall be encased on all sides by at least 6 inches of concrete with all pipe or conduit points in the crossing at least 6 inches below the original contour of the channel. [401 KAR 8:100 Section 1(7)]

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PORT12 (continued):

Narrative Requirements:

Subfluvial Pipe Crossings:

Condition

No. Condition

T-13

Subfluvial Pipe Crossings:

For subfluvial pipe crossings greater than 15 feet in width,

- 1) the pipe shall be of special construction, having flexible, restrained, or welded watertight joints, and
- 2) valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair.

Valves shall

- a) be easily accessible,
- b) not be subject to flooding, and
- c) if closest to the supply source, be in a manhole with permanent taps made on each side of the valve to allow insertion of a small meter to determine leakage and for sampling purposes. [Recommended Standards for Water Works 8.7.2]

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STOR8 (Ground Storage Tank) 150,000 gallon Ground Storage Tank:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Depth	High and low level Depth ≥ 30 ft apart should not be allowed in storage structures providing pressure to a distribution system. [Recommended Standards for Water Works 7.3.2] This requirement is applicable during the following months: All Year. Statistical basis: Maximum.
L-2	Depth	Water Depth ≥ 50 percent of the total water depth should be above grade. [Recommended Standards for Water Works 7.0.2.b] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-3	Distance	Sewers, drains, standing water and similar sources of possible contamination shall be a Distance ≥ 50 ft from ground-level storage structures. The only exception allowed is for gravity sewers. Gravity sewers are allowed within 50 ft of ground-level storage structures only if they are a) greater than 20 ft from all ground-level storage structures and b) constructed of water main pipe pressure tested in place to 50 psi without leakage. [Recommended Standards for Water Works 7.0.2.b] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Distance	To prevent excessive erosion of storage structure foundations, the overflow and main drain shall either a) discharge to concrete or other stable surfaces (splash pads) which extend a Distance ≥ 10 ft away from the base of the storage structure or b) discharge directly into a crushed stone pit that is at least 2' x 2' x 2' which is a Distance ≥ 10 ft away from the base of the storage structure. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Height	Tanks shall have an overflow which is a) brought down to a Height ≥ 12 and ≤ 24 in above the ground surface, b) of sufficient diameter to permit waste of water in excess of the filling rate, c) open downward, d) screened with twenty-four mesh noncorrodible screen installed within the pipe at a location least susceptible to damage by vandalism, and e) located on the outside of the tank so that any discharge is visible. [Recommended Standards for Water Works 7.0.7] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.

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STOR8 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-6	Height	Tanks shall have manholes that are a) framed a Height ≥ 4 in above the surface of the roof at the opening and b) fitted with a solid watertight cover which overlaps the framed opening and extends down around the frame at least 2 inches. Manholes should be hinged at one side and shall have a locking device. [Recommended Standards for Water Works 7.0.8] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: The materials and designs used for storage structures shall provide stability and durability as well as protection for the quality of the stored water. Steel structures shall follow the AWWA standards wherever they are applicable. Other materials of construction are acceptable when properly designed to meet the requirements in this permit. [Recommended Standards for Water Works 7.0]</p>
T-2	<p>Additional Limitations: The safety of employees must be considered in the design of any storage structure. The design of storage structures shall</p> <ol style="list-style-type: none">meet or exceed the minimum requirements of pertinent safety laws and regulations in the areas where the structures are constructed,include ladders, ladder guards and balcony railings (where applicable),locate entrance hatches in safe places, andconsider confined space entry requirements. [Recommended Standards for Water Works 7.0.12]
T-3	<p>Additional Limitations: Storage structures shall be designed with reasonably convenient access to the interior for cleaning and maintenance. Where space permits, at least 2 manholes shall be provided above the waterline at each water compartment. [Recommended Standards for Water Works 7.0.8]</p>
T-4	<p>Additional Limitations: Fencing, locks on access manholes, and other necessary precautions shall be provided to prevent trespassing, vandalism, and sabotage. [Recommended Standards for Water Works 7.0.4]</p>

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STOR8 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-5	<p>Additional Limitations: All storage structures and their appurtenances, especially the riser pipes, overflows, and vents, shall be designed to prevent freezing. [Recommended Standards for Water Works 7.0.13]</p>
T-6	<p>Additional Limitations: Tanks shall be constructed with no openings except properly constructed vents, manholes, overflows, risers, drains, pump mountings, control ports, and piping for inflow and outflow. For steel tanks, any pipes running through the roof or sidewall must be welded or properly gasketed. For concrete tanks, any pipes running through the roof or sidewall shall be connected to standard wall castings which were poured in place during the forming of the concrete and which should have seepage rings imbedded in the concrete. [Recommended Standards for Water Works 7.0.10]</p>
T-7	<p>Additional Limitations: All finished water storage structures shall have suitable watertight roofs and sidewalls which exclude birds, animals, insects, and excessive dust. [Recommended Standards for Water Works 7.0.3, Recommended Standards for Water Works 7.0.10]</p>
T-8	<p>Additional Limitations: The roof of each storage structure shall be well drained. Downspout pipes shall not enter or pass through storage structures. Parapets or similar structures which would tend to hold water and snow on a storage structure roof shall not be approved unless adequate waterproofing and drainage are provided. [Recommended Standards for Water Works 7.0.11]</p>
T-9	<p>Additional Limitations: Storage structures shall be designed so they can be isolated from the distribution system and drained for cleaning or maintenance without necessitating loss of pressure in the distribution system. [Recommended Standards for Water Works 7.3.2, Recommended Standards for Water Works 7.0.5]</p>
T-10	<p>Additional Limitations: Storage structure drains shall discharge to the ground surface at a drainage structure inlet or splash plate. [Recommended Standards for Water Works 7.3.2, Recommended Standards for Water Works 7.0.7]</p>
T-11	<p>Additional Limitations: No drain on a storage structure may have a direct connection to a sewer or storm drain. [Recommended Standards for Water Works 7.0.5, Recommended Standards for Water Works 7.0.7, Recommended Standards for Water Works 7.3.2]</p>

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STOR8 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-12	<p>Additional Limitations: Main drains from storage structures shall have a twenty-four mesh noncorrodible screen installed within the drain pipe at a location least susceptible to damage by vandalism. [401 KAR 8:100 Section 1(7)]</p>
T-13	<p>Additional Limitations: Storage structures shall be designed to facilitate turn over of water. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.0.6]</p>
T-14	<p>Additional Limitations: Ground level storage tanks and standpipes shall be equipped with separate inlet/outlet pipes installed on opposite sides of the tank. A check valve shall be installed in the outlet pipe to insure turnover of the water. The inlet pipe</p> <ul style="list-style-type: none">a) shall be installed near the overflow elevation andb) shall not interfere with the overflow discharge. [401 KAR 8:100 Section 1(7)]
T-15	<p>Additional Limitations: Storage structures shall have sufficient capacity, as determined from engineering studies, to meet domestic demands. Additionally, if fire protection is provided, capacity shall also be sufficient to meet fire flow demands. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.0.1]</p>
T-16	<p>Additional Limitations: The bottom of the structure shall be above</p> <ul style="list-style-type: none">a) the maximum flood level andb) the groundwater level. [Recommended Standards for Water Works 7.0.2]
T-17	<p>Additional Limitations: Storage structure discharge pipes shall be located in a manner that will prevent the flow of sediment into the distribution system. Additionally, removable silt stops should be provided. [Recommended Standards for Water Works 7.0.15]</p>
T-18	<p>Additional Limitations: Appropriate sampling tap(s) shall be provided to facilitate collection of water samples for both bacteriologic and chemical analyses. [Recommended Standards for Water Works 7.0.19]</p>

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STOR8 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-19	<p>Additional Limitations: Storage structures shall be vented. Overflows shall not be considered as vents. Open construction between the sidewall and roof is not permitted. Vents shall</p> <ul style="list-style-type: none">a) prevent the entrance of rainwater,b) exclude birds and animals, andc) exclude insects and dust (as much as compatible with effective venting). <p>Vents may use four-mesh noncorrodible screen. [Recommended Standards for Water Works 7.0.9]</p>
T-20	<p>Additional Limitations: Adequate controls shall be provided to maintain levels in storage structures. The level controls shall be acceptable to the Division of Water. Level indicating devices should be provided at a central location. Overflow and low-level warnings or alarms should be located at places in the community where they will be under responsible surveillance 24 hrs a day. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.3.3]</p>
T-21	<p>Additional Limitations: If storage structures have a catwalk over the water, the catwalk floor shall be solid with raised edges so that shoe scrapings and dirt will not fall into the water. [Recommended Standards for Water Works 7.0.14]</p>
T-22	<p>Additional Limitations: The area around the storage structure shall be graded in a manner that will prevent surface water from standing within 50 ft of the storage structure. [Recommended Standards for Water Works 7.0.16]</p>
T-23	<p>Additional Limitations: Proper protection shall be given to metal surfaces by</p> <ul style="list-style-type: none">a) paints or other protective coatings and/orb) cathodic protective devices. [Recommended Standards for Water Works 7.0.17]
T-24	<p>Additional Limitations: If cathodic protection is utilized,</p> <ul style="list-style-type: none">a) competent technical personnel should design and install the protection andb) a maintenance contract should be provided. [Recommended Standards for Water Works 7.0.17]

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STOR8 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-25	<p>Additional Limitations: If the interior of the storage structure is coated or lined, the coating or lining shall be of a type approved by the Division of Water for use in contact with potable water. [401 KAR 8:020 Section 2(19)]</p>
T-26	<p>Additional Limitations: Paints and coatings</p> <ol style="list-style-type: none">shall meet NSF standard 61,shall be acceptable to the Division of Water,shall be properly applied and cured, andshall not transfer any substance to the water which will be toxic or cause tastes or odors (following curing). <p>Wax coatings shall not be used in any storage structure and must be completely removed before using other paints or coatings in an existing storage structure. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.0.17]</p>
T-27	<p>Additional Limitations: New water storage structures shall be thoroughly disinfected (in accordance with AWWA Standard C652) upon completion of construction and before being placed into service. To disinfect new storage structures</p> <ol style="list-style-type: none">remove all scaffolding, planks, tools, rags, and other items that are not part of the structural or operational facilities of the storage structure,clean thoroughly by sweeping, scrubbing, using high-pressure water jets, or some equivalently effective means, anduse chlorine or chlorine compounds as subsequently described. <p>Finalize disinfection by</p> <ol style="list-style-type: none">chlorination method 1, described in detail at AWWA Standard C652 Section 4.3.1,chlorination method 2, described in detail at AWWA Standard C652 Section 4.3.2, orchlorination method 3, described in detail at AWWA Standard C652 Section 4.3.3. <p>See the following conditions for abbreviated descriptions of the methods.</p> <p>Following the finalization of disinfection, place storage structures into service if, and only if, Coliform monitoring applicable to the storage structure does not show the presence of Coliform.</p> <p>If Coliform is detected, flush the tank and repeat Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the tank has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [Recommended Standards for Water Works 7.0.18]</p>

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STOR8 (continued):

Narrative Requirements:

Condition No.	Condition
T-28	If applicable, chlorination method 1 generally requires a) filling a storage structure to the overflow level with water providing a free chlorine Residual Disinfection ≥ 10 ppm and b) i) completely draining the storage facility and refilling or b) ii) otherwise reducing (in accordance with method 1) the free chlorine residual to a level appropriate for distribution. [Recommended Standards for Water Works 7.0.18]
T-29	If applicable, chlorination method 2 generally requires a) scrubbing or spraying the water-contact surfaces of a storage structure with a water solution having an available chlorine concentration = 200 ppm and b) purging of the strong chlorine solution and filling to the overflow level. [Recommended Standards for Water Works 7.0.18]
T-30	If applicable, chlorination method 3 generally requires a) filling a storage structure to approximately 5% of the total storage volume with water having an available chlorine concentration of 50 ppm, b) continued filling of the storage structure to the overflow level with normal potable water, and c) purging the storage structure so that various disinfection by-products do not reach water consumers. [Recommended Standards for Water Works 7.0.18, 401 KAR 8:100 Section 1(7)]

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STOR9 (Hydropneumatic Tank) 2-158 gallon hydropneumatic tanks:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Residual Disinfection	<p>New water tanks shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect new tanks use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection \geq 25 ppm at the end of 24 hours. Follow the disinfection with thorough flushing and place tanks into service if, and only if, Coliform monitoring applicable to the tank does not show the presence of Coliform.</p> <p>If Coliform is detected, repeat flushing of the tank and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the tank has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-2	Volume	<p>Hydropneumatic (pressure) tanks should have a gross Volume \geq 1000 percent of the largest supply pump's per minute rating (i.e. if the largest pump connected to a pressure tank has a rating of 250 gpm, then the size of the pressure tank should be at least 2,500 gallons). The minimum tank volume shall be an even higher percentage (based on the necessary chlorine detention time) if a water system requires a chlorine detention time greater than the detention time that the related treatment/distribution facilities and this limit otherwise provide. [Recommended Standards for Water Works 7.2.2] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: Hydropneumatic (pressure) tanks shall be the only water storage structure in the water distribution system. [Recommended Standards for Water Works 7.2]</p>
T-2	<p>Additional Limitations: Hydropneumatic (pressure) tanks shall serve no more than 50 living units. [401 KAR 8:100 Section 1(7)]</p>
T-3	<p>Additional Limitations: Hydropneumatic (pressure) tanks shall not provide fire protection. [Recommended Standards for Water Works 7.2]</p>

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STOR9 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-4	<p>Additional Limitations: The materials and designs used for tanks shall provide stability and durability as well as protection for the quality of the stored water. Steel structures shall follow the AWWA standards wherever they are applicable. Other materials of construction are acceptable when properly designed to meet the requirements in this permit. [Recommended Standards for Water Works 7.0]</p>
T-5	<p>Additional Limitations: The safety of employees must be considered in the design of any storage structure. The design of storage structures shall meet or exceed the minimum requirements of pertinent safety laws and regulations in the areas where the structures are constructed. [Recommended Standards for Water Works 7.0.12]</p>
T-6	<p>Additional Limitations: Hydropneumatic (pressure) tanks shall meet ASME code requirements for the construction and installation of unfired pressure vessels or an equivalent requirement of state and local laws and regulations. [Recommended Standards for Water Works 7.2]</p>
T-7	<p>Additional Limitations: Fencing, locks on access manholes, and other necessary precautions shall be provided to prevent trespassing, vandalism, and sabotage. [Recommended Standards for Water Works 7.0.4]</p>
T-8	<p>Additional Limitations: Completely house the tank and locate it above the normal ground surface. [Recommended Standards for Water Works 7.2.1]</p>
T-9	<p>Additional Limitations: All tanks and their appurtenances shall be designed to prevent freezing. [Recommended Standards for Water Works 7.0.13]</p>
T-10	<p>Additional Limitations: The roof and sidewalls of each tank must be watertight with no openings except properly constructed drains, control ports, and piping for inflow and outflow. Any pipes running through the roof or sidewall must be welded. [Recommended Standards for Water Works 7.0.10]</p>
T-11	<p>Additional Limitations: Tank drains shall discharge to the ground surface at a drainage structure inlet or splash plate. [Recommended Standards for Water Works 7.3.2, Recommended Standards for Water Works 7.0.7]</p>

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STOR9 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-12	<p>Additional Limitations: No drain on a tank may have a direct connection to a sewer or storm drain. [Recommended Standards for Water Works 7.0.5, Recommended Standards for Water Works 7.0.7, Recommended Standards for Water Works 7.3.2]</p>
T-13	<p>Additional Limitations: Tanks shall be designed to facilitate turn over of water. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.0.6]</p>
T-14	<p>Additional Limitations: Tanks shall have sufficient capacity, as determined from engineering studies, to meet domestic demands. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.0.1]</p>
T-15	<p>Additional Limitations: Hydropneumatic (pressure) tanks shall have</p> <ol style="list-style-type: none">1) bypass piping, to permit operation of the water distribution system while the tank is being repaired or painted,2) a drain, and3) control equipment. <p>The control equipment shall include</p> <ol style="list-style-type: none">a) a pressure gauge,b) a water sight glass,c) an automatic or manual blow-off,d) a means for adding air, ande) pressure operated start-stop controls for the pumps. [Recommended Standards for Water Works 7.2.3]
T-16	<p>Additional Limitations: Tank discharge pipes shall be located in a manner that will prevent the flow of sediment into the distribution system. [Recommended Standards for Water Works 7.0.15]</p>
T-17	<p>Additional Limitations: Appropriate sampling tap(s) shall be provided to facilitate collection of water samples for both bacteriologic and chemical analyses. [Recommended Standards for Water Works 7.0.19]</p>

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STOR9 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-18	<p><i>Additional Limitations:</i> Adequate controls shall be provided to maintain levels in storage structures. The level controls shall be acceptable to the Division of Water. Level indicating devices should be provided at a central location. Overflow and low-level warnings or alarms should be located at places in the community where they will be under responsible surveillance 24 hrs a day. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 7.3.3]</p>
T-19	<p><i>Additional Limitations:</i> Proper protection shall be given to metal surfaces by</p> <ol style="list-style-type: none">paints or other protective coatings and/orcathodic protective devices. [Recommended Standards for Water Works 7.0.17]
T-20	<p><i>Additional Limitations:</i> If cathodic protection is utilized,</p> <ol style="list-style-type: none">competent technical personnel should design and install the protection anda maintenance contract should be provided. [Recommended Standards for Water Works 7.0.17]
T-21	<p><i>Additional Limitations:</i> If the interior of the tank is coated or lined, the coating or lining shall be of a type approved by the Division of Water for use in contact with potable water. [401 KAR 8:020 Section 2(19)]</p>
T-22	<p><i>Additional Limitations:</i> Paints and coatings</p> <ol style="list-style-type: none">shall meet NSF standard 61,shall be acceptable to the Division of Water,shall be properly applied and cured, andshall not transfer any substance to the water which will be toxic or cause tastes or odors (following curing). [Recommended Standards for Water Works 7.0.17]