Rubin & Hays

ATTORNEYS AT LAW

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

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

March 23, 2009

2009-00126

RECEIVED
MAR 26 2009
PUBLIC SERVICE COMMISSION

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

Re: Nicholas County Water District - Public Service Commission Application for the Water System Improvements Project

Dear Mr. Derouen:

Enclosed please find the original and ten (10) copies of the Application of the Nicholas County Water District for a Certificate of Public Convenience and Necessity to construct a waterworks improvement project pursuant to KRS Chapter 278.

Also enclosed are eleven (11) copies of the required exhibits and three (3) copies of the project maps.

Plans and Specifications, as prepared by SME Engineers, will be submitted in the near future.

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

Sincerely,

Rubin & Hays

By W. Randall Jones

WRJ:jlm
Enclosures
cc: Distribution List

SERVICE LIST

Re: 2009 Nicholas County Water District PSC Application

Ms. Georgia Livingood, Manager
Nicholas County Water District
1639 Old Paris Road
Carlisle, Kentucky 40311
Telephone: (859) 289-3157

Mr. Mike Maggard
Sisler - Maggard Engineering, PLLC
220 East Reynolds Road, Suite A3
Lexington, Kentucky 40517
Telephone: (859) 271-2978
Fax: (859) 271-5670

W. Randall Jones, Esq.
Rubin & Hays
Kentucky Home Trust Building
450 South Third Street
Louisville, Kentucky 40202
Telephone: (502) 569-7525
Fax: (502) 569-7555

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:

APPLICATION OF THE NICHOLAS COUNTY WATER DISTRICT FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT AN IMPROVEMENTS PROJECT PURSUANT TO KRS 278.020	)))))	**Case No. 2009 - _____**

APPLICATION

The Nicholas County Water District (the "District"), by counsel, pursuant to KRS 278.020, petitions the Commission for a certificate of public convenience and necessity to construct a waterworks improvement project. The following information is filed in accordance with the Commission's regulations:

1. The District's office address is 1639 Old Paris Road, Carlisle, Kentucky 40311. Its principal officers are listed in its 2008 Annual Report, which is filed with the Commission;

2. The District is a non-profit water district organized under KRS Chapter 74 and has no separate articles of incorporation or by-laws;

3. A description of the District's water system and its property stated at original cost by accounts is contained in its Annual Report, which is incorporated by reference pursuant to 807 KAR 5:001 Section (5)(5). All required normal financial schedules and other data are in the Annual Report;

4. The water system improvements project consists of the construction and installation of various water lines and a 150,000 gallon elevated water storage tank.

5. The project is in the public interest and is necessary in order to provide adequate water storage and upgraded service to the customers.

6. The total project cost is approximately $1,403,000, as set forth in the Final As-Bid Budget attached hereto as **Exhibit A**;

7. The District has obtained all easements are required for the Project;

8. This service will not compete with any other utility in the area;

9. Based on these facts, the District believes that it is in the public interest that this certificate of public convenience and necessity be granted;

10. Copies of the certified bid tabulations are attached hereto as **Exhibit B**;

11. The following information is provided in response to 807 KAR 5:001 Section (8)(3);

a. Articles of Incorporation - None, the District is a statutorily created water district under KRS Chapter 74;

12. The following information is supplied to 807 KAR 5:001 Section (9)(2);

a. Facts relied upon to show that the Project is in the public interest: the project will provide necessary water storage and upgraded service to the customers.

b. No new franchises are required. Copies of the necessary permits are attached hereto as **Exhibit C**;

c. Diagrams of the proposed construction and construction specifications are contained in the Plans and Specifications on file with the Commission;

d. Three (3) maps of suitable scale showing location of the proposed facilities are filed with this Application;

e. The construction costs will be funded by (i) State HB 380 grant in the amount of $428,500; (ii) state grant in the amount of $400,000; and (iii) a 2 year short term loan from the Kentucky Rural Water Finance Corporation in the amount of $574,500;

f. The estimated cost of operation of the system after construction is completed is attached hereto as **Exhibit D**;

WHEREFORE, the Applicant, Nicholas County Water District requests that the Public Service Commission of Kentucky grant to the Applicant a Certificate of Public Convenience and Necessity permitting the Applicant to construct the water system improvement project.

Nicholas County Water District

By Gary L. Hollar
Chairman

Rubin & Hays

By
Kentucky Home Trust Building
450 South Third Street
Louisville, Kentucky 40202
(502) 569-7525

COMMONWEALTH OF KENTUCKY)
) SS
COUNTY OF NICHOLAS)

The undersigned, Gary Hollar, being duly sworn, deposes and states that he is the Chairman of the Nicholas County Water District, Applicant; 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 March 6, 2009.

Gary L. Hollar
Gary Hollar, Chairman
Nicholas County Water District

Subscribed and sworn to before me by Gary Hollar, Chairman of the Nicholas County Water District, on this March 6, 2009.

My Commission expires Aug. 9, 2009.

Georgia Lunsford
Notary Public, in and for said County and State

Nicholas County Water District - Phase IX

AS - BID Budget

7/24/2008

		As Estimated 2005	As Bid 2008
Contract No. 9 - Water System Improvements		**$354,500**	**$549,540**
Contract No. 10 - 150,000 - Gallon Elevated Water Tank		**$285,000**	**$557,800**
TOTAL ESTIMATED CONSTRUCTION COSTS		**$639,500**	**$1,107,340**
CONTINGENCY @ =/- 10%		**$63,500**	**$67,660**
ENGINEER RELATED COSTS (DESIGN,INSPECTION,EASEMENTS,ETC..)			
PRELIMINARY ENGINEERING		**$2,000**	**$2,000**
DESIGN @ 8.64%		**$56,000**	**$102,000**
INSPECTION @ 5.43%		**$36,000**	**$64,000**
OTHER ENGINERING (Easements, Surveying, etc.)		**$20,000**	**$20,000**
RD RELATED PROJECT COSTS			
LEGAL & ADMINISTRATIVE		**$20,000**	**$20,000**
LAND ACQUISITION		**$10,000**	**$10,000**
INTEREST DURING CONSTRUCTION		**$10,000**	**$10,000**
TOTAL ESTIMATED OTHER PROJECT COSTS		**$154,000**	**$228,000**
TOTAL ESTIMATED PROJECT COSTS		**$857,000**	**$1,403,000**
PROPOSED PROJECT FUNDING			
STATE GRANT HB 380	$428,500		
STATE GRANT	$400,000		
KRWA Loan	$574,500		
TOTAL PROJECT FUNDING	**$1,403,000**		

BID TABULATION
CONTRACT NO. 9 - WATER SYSTEM IMPROVEMENTS
NICHOLAS COUNTY WATER DISTRICT
BID OPENING 4:00 PM, JUNE 24, 2008

ITEM NO.	ITEM DESCRIPTION	ENGINEERS ESTIMATE				BP Pipeline Quincy, KY		Tilton Excavating, LLC Mt. Olivet, KY		Statons Construction Salt Lick, KY		Johnny Robinson South Shore, KY		Little Creek Construction Greenup, KY		DF Bailey, Inc. Owingsville, KY		Dallas Dean, Inc. Harrodsburg, KY		Stotts Construction Columbia, KY	
		UNIT QUANTITY		UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	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	6" W.L. CL 200 PVC Waterline	35,000	LF	$7.00	$245,000.00	$7.00	$245,000.00	$7.00	$245,000.00	$7.16	$250,600.00	$8.00	$280,000.00	$8.15	$285,250.00	$7.99	$279,650.00	$9.50	$332,500.00	$11.30	$395,500.00
2	3" W.L. CL 250 PVC Waterline	1700	LF	$5.00	$8,500.00	$5.00	$8,500.00	$5.00	$8,500.00	$4.81	$8,177.00	$5.25	$8,925.00	$6.25	$10,625.00	$5.10	$8,670.00	$8.50	$14,450.00	$9.25	$15,725.00
3	3" W.L. CL 200 PVC Waterline	24,000	LF	$4.50	$108,000.00	$4.50	$108,000.00	$4.50	$108,000.00	$4.66	$111,840.00	$5.10	$122,400.00	$5.45	$130,800.00	$4.88	$117,120.00	$6.00	$144,000.00	$9.05	$217,200.00
4	2" W.L. CL 200 PVC Waterline	3,100	LF	$4.25	$13,175.00	$4.00	$12,400.00	$4.00	$12,400.00	$4.26	$13,206.00	$4.15	$12,865.00	$5.35	$16,585.00	$4.33	$13,423.00	$8.00	$24,800.00	$8.60	$26,660.00
5	3/4" W.L. CL 200 Polyethylene Service Line	7700	LF	$4.00	$30,800.00	$2.50	$19,250.00	$3.50	$26,950.00	$2.39	$18,403.00	$3.25	$25,025.00	$4.50	$34,650.00	$3.11	$23,947.00	$5.00	$38,500.00	$6.25	$48,125.00
6	6" Gate Valves	14	EA	$650.00	$9,100.00	$600.00	$8,400.00	$520.00	$7,280.00	$750.00	$10,500.00	$600.00	$8,400.00	$550.00	$7,700.00	$644.04	$9,016.56	$650.00	$9,100.00	$650.00	$9,100.00
7	4" Gate Valves	1	EA	$550.00	$550.00	$500.00	$500.00	$450.00	$450.00	$610.00	$610.00	$500.00	$500.00	$500.00	$500.00	$521.69	$521.69	$500.00	$500.00	$650.00	$650.00
8	3" Gate Valves	14	EA	$525.00	$7,350.00	$450.00	$6,300.00	$400.00	$5,600.00	$560.00	$7,840.00	$450.00	$6,300.00	$400.00	$5,600.00	$469.44	$6,572.16	$500.00	$7,000.00	$550.00	$7,700.00
9	2" Gate Valves	7	EA	$500.00	$3,500.00	$350.00	$2,450.00	$300.00	$2,100.00	$490.00	$3,430.00	$350.00	$2,450.00	$300.00	$2,100.00	$383.62	$2,685.34	$400.00	$2,800.00	$500.00	$3,500.00
10	Blowoff Valve Assembly (all sizes)	16	EA	$800.00	$12,800.00	$750.00	$12,000.00	$750.00	$12,000.00	$800.00	$12,800.00	$600.00	$9,600.00	$650.00	$10,400.00	$1,066.80	$17,068.80	$800.00	$12,800.00	$700.00	$11,200.00
11	Air Release Valve	2	EA	$700.00	$1,400.00	$500.00	$1,000.00	$450.00	$900.00	$530.00	$1,060.00	$600.00	$1,200.00	$350.00	$700.00	$511.17	$1,022.34	$450.00	$900.00	$1,000.00	$2,000.00
12	Bore & Jack w/ 6" W.L. (12" Steel Casing)	350	LF	$80.00	$28,000.00	$60.00	$21,000.00	$70.00	$24,500.00	$116.00	$40,600.00	$85.00	$29,750.00	$75.00	$26,250.00	$103.41	$36,193.50	$175.00	$61,250.00	$100.00	$35,000.00
13	Bore & Jack w/ 4" W.L. (10" Steel Casing)	60	LF	$70.00	$4,200.00	$50.00	$3,000.00	$70.00	$4,200.00	$110.00	$6,600.00	$75.00	$4,500.00	$50.00	$3,000.00	$95.40	$5,724.00	$110.00	$6,600.00	$85.00	$5,100.00
14	Bore & Jack w/ 3" W.L. (6" Steel Casing)	420	LF	$65.00	$27,300.00	$50.00	$21,000.00	$65.00	$27,300.00	$90.00	$37,800.00	$70.00	$29,400.00	$50.00	$21,000.00	$79.14	$33,238.80	$100.00	$42,000.00	$65.00	$27,300.00
15	Bore & Jack w/ 2" W.L. (4" Steel Casing)	80	LF	$50.00	$4,000.00	$50.00	$4,000.00	$55.00	$4,400.00	$90.00	$7,200.00	$60.00	$4,800.00	$50.00	$4,000.00	$63.15	$5,052.00	$40.50	$3,240.00	$45.00	$3,600.00
16	Casing Pipe (Open Cut)(12" SDR 35 PVC @ gas line crossing)	10	LF	$70.00	$700.00	$4.00	$40.00	$30.00	$300.00	$150.00	$1,500.00	$25.00	$250.00	$50.00	$500.00	$51.02	$510.20	$85.00	$850.00	$50.00	$500.00
17	Gravel Surface Replacement	500	SY	$10.00	$5,000.00	$5.00	$2,500.00	$10.00	$5,000.00	$9.00	$4,500.00	$10.00	$5,000.00	$10.00	$5,000.00	$16.62	$8,310.00	$30.00	$15,000.00	$30.00	$15,000.00
18	Concrete Encasement	110	LF	$40.00	$4,400.00	$10.00	$1,100.00	$20.00	$2,200.00	$30.00	$3,300.00	$40.00	$4,400.00	$35.00	$3,850.00	$23.53	$2,588.30	$40.00	$4,400.00	$40.00	$4,400.00
19	Tie new 3" to existing 4" Wet Tap	1	EA	$2,000.00	$2,000.00	$1,200.00	$1,200.00	$2,000.00	$2,000.00	$1,250.00	$1,250.00	$1,400.00	$1,400.00	$1,000.00	$1,000.00	$1,849.82	$1,849.82	$1,300.00	$1,300.00	$1,300.00	$1,300.00
20	Tie new 6" to existing 4" Wet Tap	3	EA	$2,000.00	$6,000.00	$1,200.00	$3,600.00	$2,000.00	$6,000.00	$1,250.00	$3,750.00	$1,500.00	$4,500.00	$1,200.00	$3,600.00	$1,909.14	$5,727.42	$1,350.00	$4,050.00	$1,250.00	$3,750.00
21	Tie new 6" to existing 6"	1	EA	$1,000.00	$1,000.00	$1,200.00	$1,200.00	$2,000.00	$2,000.00	$1,250.00	$1,250.00	$600.00	$600.00	$500.00	$500.00	$693.85	$693.85	$600.00	$600.00	$250.00	$250.00
22	Tie new 3" to existing 6" Wet Tap	1	EA	$2,000.00	$2,000.00	$1,200.00	$1,200.00	$2,000.00	$2,000.00	$1,250.00	$1,250.00	$1,500.00	$1,500.00	$1,200.00	$1,200.00	$1,873.01	$1,873.01	$1,200.00	$1,200.00	$1,300.00	$1,300.00
23	Tie new 4" to existing 4"	2	EA	$1,000.00	$2,000.00	$1,000.00	$2,000.00	$1,500.00	$3,000.00	$1,250.00	$2,500.00	$600.00	$1,200.00	$500.00	$1,000.00	$651.21	$1,302.42	$450.00	$900.00	$300.00	$600.00
24	5/8" X 3/4" Meter Assembly	6	EA	$700.00	$4,200.00	$700.00	$4,200.00	$600.00	$3,600.00	$750.00	$4,500.00	$700.00	$4,200.00	$650.00	$3,900.00	$777.34	$4,664.04	$600.00	$3,600.00	$700.00	$4,200.00
25	Fire Hydrant Assembly w/ G.V.	6	EA	$2,000.00	$12,000.00	$2,400.00	$14,400.00	$2,600.00	$15,600.00	$2,850.00	$17,100.00	$3,000.00	$18,000.00	$2,300.00	$13,800.00	$3,062.13	$18,372.78	$3,100.00	$18,600.00	$2,500.00	$15,000.00
26	Reconnect Existing Meter	141	EA	$300.00	$42,300.00	$300.00	$42,300.00	$425.00	$59,925.00	$175.00	$24,675.00	$200.00	$28,200.00	$300.00	$42,300.00	$370.77	$52,278.57	$500.00	$70,500.00	$250.00	$35,250.00
27	Relocate Existing Meter	6	EA	$500.00	$3,000.00	$500.00	$3,000.00	$500.00	$3,000.00	$550.00	$3,300.00	$500.00	$3,000.00	$400.00	$2,400.00	$612.01	$3,672.06	$750.00	$4,500.00	$520.00	$3,120.00
	TOTAL AMOUNT BID (ITEMS 1-27)				$588,275.00		$549,540.00		$594,205.00		$599,541.00		$618,365.00		$638,210.00		$661,747.56		$825,940.00		$893,030.00

Certification: Sisler-Maggard Engineering, PLLC
We hereby certify that the above bid tabulations accurately represents bids received, except for noted corrections, and the bids were promptly opened and read.

Corrected Amount

6/26/08

JOSEPH T. SISLER, P.E.
PROJECT ENGINEER

DATE

ID TABULATION
CONTRACT NO. 10 - 150,000 Gallon Elevated Water Tank
NICHOLAS COUNTY WATER DISTRICT
BID OPENING 4:00 PM, JUNE 24, 2008

		ENGINEERS ESTIMATE			Caldwell Tanks Louisville, KY		Phoenix Fabricators & Erectors Avon, IN	
ITEM NO.	ITEM DESCRIPTION	UNIT QUANTITY	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST
1	150,000 Gallon Elevated Water Tank and Appurtenances	1 LS	$375,000.00	$375,000.00	$557,800.00	$557,800.00	$574,757.00	$574,757.00
	TOTAL AMOUNT BID			**$375,000.00**		**$557,800.00**		**$574,757.00**

B

(2)

Certification: Sisler-Maggard Engineering, PLLC
We hereby certify that the above bid tabulations accurately represents bids received, except for noted corrections, and the bids were promptly opened and read.

Joseph F. Sisler 6/25/08

JOSEPH F. SISLER, P.E. DATE
PROJECT ENGINEER

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

May 15, 2008

RECEIVED
MAY 2[illegible] 2008
SISLER-MAGGARD

Ms. Jackie Bromagen, System Operator
Nicholas Co Water District
1639 Old Paris Rd
Carlisle, KY 40311

RE: Nicholas Co Water District
AI # 34050, APE20080001
PWSID # 0910314-08-001
PhaseIX Cont.#9 System Improv. & Cont.#10 150,000 Tank
Nicholas County, KY

Dear Ms. Bromagen:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC waterline and a 150,000 gallon elevated water storage tank. For the purpose of review, DOW will not approve lines less than 3-inches for distribution. When 2-inch lines are proposed for distribution they are approved on a case-by-case basis with the stipulations that such cannot be extended. In areas where lines may be extended in the future, DOW reserves the right to approve 3-inch waterlines as a minimum diameter. Construction shall include all "red line" additions as shown on the approved plans pursuant to the correspondence with Mike Maggard, PE of Sisler-Maggard Engineering, PLLC regarding changing the fire hydrant at the end of Lakeshore Drive to a blow-off assembly on sheet 8 of the Contract 9 plans dated August 2008. 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.

If you have any questions concerning this project, please contact Ms. Sarah Tucker at 502-564-8158 extension 482.

Sincerely,

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

MR:ST

Enclosures
C: Sisler-Maggard Engineering, PLLC
Nicholas County Health Department
Public Service Commission
Division of Plumbing

Distribution-Major Construction

Nicholas Co Water District

Subject Item Inventory

Activity ID No.: APE20080001

Subject Item Inventory:

ID	Designation	Description
AIOO34050		
PORT3	Water Line	35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC
STOR1	Elevated Storage Tank	150,000 gallons

Subject Item Groups:

ID	Description	Components
GACT3	35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC and a 150,000 gallon elevated water storage tank	STOR1 150,000 gallons
		PORT3 35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC

KEY

ACTV = Activity
AREA = Area
EQPT = Equipment
PERS = Personnel
STOR = Storage
AIOO = Agency Interest
COMB = Combustion
MNPT = Monitoring Point
PORT = Transport
STRC = Structure

GACT3 (Phase IX Cont#9 & Cont#10) 35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC and a 150,000 gallon elevated 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.

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)]

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)]

PORT3 (Water Line) 35,000 feet of 6-inch, 25,000 feet of 3-inch and 3,500 feet of 2-inch PVC:

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	Water lines on the following streets may have, Diameter = 2 in but such lines shall not be extended. -Azalea Drive -Catnip Conet -Cardinal's Court -Chicory Court. [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 <= 1.0 mi should be utilized. [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.

PORT3 (continued):

Limitation Requirements:

Condition No.	Parameter	Condition
L-13	Residual Disinfection	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 >= 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. 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.
L-14	Velocity	Each blow-off, fire hydrant, or flush hydrant shall be sized so that Velocity >= 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.

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	leaks	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.

PORT3 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-8	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]
T-9	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]
T-10	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-11	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)]

STOR1 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	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]
T-2	Additional Limitations: The safety of employees must be considered in the design of any tank. The design of tanks shall a) meet or exceed the minimum requirements of pertinent safety laws and regulations in the areas where the tanks are constructed, b) include ladders, ladder guards and balcony railings (where applicable), c) locate entrance hatches in safe places, d) provide railings or handholds where persons must transfer from an access tube to the water compartment, and e) consider confined space entry requirements. Additionally, if tanks have riser pipes over 8 inches in diameter, the tanks shall have protective bars over the riser openings inside of the tank. [Recommended Standards for Water Works 7.0.12]
T-3	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]
T-4	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]
T-5	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]
T-6	Additional Limitations: Tanks shall be constructed with no openings except properly constructed vents, manholes, overflows, risers, drains, control ports, and piping for inflow and outflow. Any pipes running through the roof or sidewall must be welded or properly gasketed. [Recommended Standards for Water Works 7.0.10]

STOR1 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-15	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]
T-16	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]
T-17	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 a) prevent the entrance of rainwater, b) exclude birds and animals, and c) exclude insects and dust (as much as compatible with effective venting). Vents may use four-mesh noncorrodible screen. [Recommended Standards for Water Works 7.0.9]
T-18	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]
T-19	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]
T-20	Additional Limitations: Proper protection shall be given to metal surfaces by a) paints or other protective coatings and/or b) cathodic protective devices. [Recommended Standards for Water Works 7.0.17]

STOR1 (continued):

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-24	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 newstorage structures 1) remove all scaffolding, planks, tools, rags, and other items that are not part of the structural or operational facilities of the storage structure, 2) clean thoroughly by sweeping, scrubbing, using high-pressure water jets, or some equivalently effective means, and 3) use chlorine or chlorine compounds as subsequently described. Finalize disinfection by a) chlorination method 1, described in detail at AWWA Standard C652 Section 4.3.1, b) chlorination method 2, described in detail at AWWA Standard C652 Section 4.3.2, or c) chlorination method 3, described in detail at AWWA Standard C652 Section 4.3.3. See the following conditions for abreviated descriptions of the methods. 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. 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]

Condition No.	Condition
T-25	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-26	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]

Nicholas County Water District
Phase IX - Water System Improvements Project
SME # 05001

Estimated Water Tank Replacements Cost	Costs to replace in 12 years	Costs to replace in 18 years	estimated annual O & M
Tank surface prep and painting	$22,000.00	$17,000.00	$1,159.00