COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

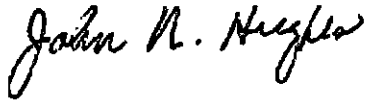
In the Matter of:

APPLICATION OF NORTHERN KENTUCKY	)	
WATER DISTRICT FOR APPROVAL OF	)	CASE NO. 2013-00390
THE RIPPLE CREEK WATER MAIN REPLACEMENT	)	
AND EXTENSION, ISSUANCE OF A CERTIFICATE OF	)	
CONVENIENCE AND NECESSITY AND	)	
APPROVAL OF FINANCING	)	

RESPONSE OF NORTHERN KENTUCKY WATER DISTRICT TO FIRST DATA REQUEST

Northern Kentucky Water District (NKWD), by counsel, submits its responses to the Staff's First Data Request.

SUBMITTED BY:



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AFFIDAVIT

COMMONWEALTH OF KENTUCKY

COUNTY OF KENTON

Affiant, Jack Bragg, appearing personally before me a notary public for and of the Commonwealth of Kentucky and after being first sworn, deposes, states, acknowledges, affirms and declares that he is Vice President – Finance and Distribution, that he is authorized to submit this Response on behalf of Northern Kentucky Water District, and that the information contained in the Response is true and accurate to the best of his knowledge, information and belief, after a reasonable inquiry, and as to those matters that are based on information provided to him, he believes to be true and correct.

Jack Bragg

This instrument was produced, signed, acknowledged and declared by Jack Bragg to be his act and deed the __19th___ day of December, 2013.

Notary Public

My Commission expires: 5-23-2016

District's responses to PSC first data request of December 16, 2013

Q1. At Paragraph No.5 of its Application, Northern District refers to "projected long term growth that is anticipated with the construction of the new Eastern Regional Sanitation Plant."

Q1a. State the number of anticipated new customers and the time period during which these new customers will appear

A1a. See attached population projection "Exhibit A" updated Nov. 2011.

Q1b. Provide all studies upon which Northern District relies for its expectation of long-term growth.

A1b. Studies are based on the attached population projection "Exhibit A" which was updated Nov. 2011.

Q1c. State whether the reference to "Eastern Regional Sanitation Plant" refers to Sanitation District No.1 of Northern Kentucky's Eastern Regional Water Reclamation Facility."

A1c. Yes, the "Eastern Regional Sanitation Plant" refers to Sanitation District No.1 of Northern Kentucky's Eastern Regional Water Reclamation Facility."

Q1d. State the expected completion date of the Eastern Regional Sanitation Plant. If construction has been completed, provide the completion date.

A1d. The Eastern Regional Sanitation Plant went into operation on September 28, 2007.

District's responses to PSC first data request of December 16, 2013

Q2. At Paragraph No. 5 of its Application, Northern District refers to a moratorium on construction in the area in which the proposed construction is planned.

Q2a. Describe the area that is subject to the moratorium.

A2a. The area subject to the moratorium includes all of the sanitary sewer collection system located within the City of Alexandria.

Q2b. State the date on which moratorium was imposed.

A2b. 1996

Q2c. Identify the agency which imposed the moratorium.

A2c. The Kentucky Division of Water imposed the building moratorium.

Q2d. State the date that the moratorium is expected to be lifted. If the moratorium has been lifted, state the date on which it was lifted.

A2d. The building moratorium was lifted in stages as construction projects were completed in the building moratorium area. Partial lifting of the moratorium occurred on November 14, 2007 and April 23, 2009. The entire moratorium for the Alexandria system was lifted on May 18, 2011.

District's responses to PSC first data request of December 16, 2013

Q3. Provide all projections regarding water usage in the area subject to the moratorium and the number of customers anticipated to be added upon the lifting of the moratorium. Describe the additional demand that these additional customers are expected to produce.

A3. We do not have any projections regarding water usage in the area subject to the moratorium. The number of new customers for the moratorium area added since the moratorium was lifted is 406. The estimated demand for these additional customers based on the DR Taylor Formula is 202 gpm.

The attached "Exhibit B" is the District's Future Demand Projections for our entire service area for your reference which was updated Nov. 2011.

District's responses to PSC first data request of December 16, 2013

Q4. State the expected average daily and peak water usage of the Eastern Regional Sanitation Plant.

A4. The current daily water usage of the Eastern Regional Sanitation Plant is 1,600 gallons per day with a peak of 2,560 gallons per day.

District's responses to PSC first data request of December 16, 2013

Q5. At Exhibit D of its Application, Northern District states that the proposed project has "a potential of 3 new customers to be added."

Q5a. State whether each of these customers has either executed a contract for water service or has otherwise indicated that it will apply for water service upon completion of the proposed construction. If no contract has been executed, state when Northern District expects to add the customer(s).

A5a. No contracts have been executed. It is anticipated that the existing un-served customers may consider connecting to the new main after the construction is complete.

Q5b. State the expected monthly water usage of each of these customers.

A5b. 2,000 – 5,000 gallons per month.

Q5c. State whether Northern District anticipates additional customers beyond these three customers at some future date. If Northern District anticipates additional customers, state the number of customers, their anticipated monthly water usage, and the anticipated date that each will request service.

A5c. At this time, there are no anticipated additional customers along the project route. There are several large tracks of land that could develop along the project route

Q5d. State the estimated total water demand resulting from the water main extension.

A5d. This water main extension will not increase the total water demand, it provides a redundant water main to the existing 12-inch water main along U.S. 27 and allows for future growth beyond the project limits.

District's responses to PSC first data request of December 16, 2013

Q6. At Exhibit A of the Application, Northern District describes the proposed project as "partial water main replacement project and a water main extension plus hydraulic improvement."

Q6a. State the diameter, length, and composition of the water main that Northern District proposes to replace.

A6a. 6-inch, 3,900 linear feet of unlined cast iron pipe

Q6b. State the length of the proposed main that constitutes the "water main extension."

A6b. 5,337 linear feet

Q6c. State the size, length, and composition of the water main that is being replaced.

A6c. 6-inch, 3,900 linear feet of unlined cast iron pipe

Q6d. State whether the water main that is being replaced will be removed. If the replaced water main is not being removed, state whether it will continue in service. Explain.

A6d. The existing 6-inch water main will be abandoned in place

Q6e. State the age of the water main that being replaced.

A6e. Approx. 51 years old

District's responses to PSC first data request of December 16, 2013

Q7. If the replaced water main is being removed or otherwise taken out of service, describe how Northern District will reflect this action for accounting purpose.

A7. The old main will be retired and new main posted to 331-0001-000.

District's responses to PSC first data request of December 16, 2013

Q8. Explain how Northern District determined that the proposed water main should be 24 inches in diameter.

A8. The District worked with a consultant to run a "all-pipe" hydraulic water model to run various scenarios on the existing water system to determine water system's weak areas based on projected growth areas and other planned improvements. A 24-inch water main was determined the best size to meet current demands plus potential future demands.

District's responses to PSC first data request of December 16, 2013

Q9. Describe the hydraulic problems or concerns that require the proposed construction.

Q9. The southern end of Campbell County is currently being feed by a pair of 12-inch water mains which the District has experienced some problems with. This new 24-inch line will provide strong and dependable feed to the District's Main Street Storage Tank and allow for future extension of a larger water main to the southern end of the District's Campbell Service Area.

District's responses to PSC first data request of December 16, 2013

Q10. State whether Northern District has received any complaints regarding water service in the area that Northern District attributes directly to the size of the existing water main that it proposes to replace. If Northern District has received such complaints, provide a copy of each complaint and describe Northern District's response to each complaint.

A10. The District has not received any complaints regarding water service in the area that Northern District attributes directly to the size of the existing water main that it proposes to replace. The District has experienced numerous water main breaks on the existing water main which affects approx. 60 customers.

District's responses to PSC first data request of December 16, 2013

Q11. Describe the hydraulic benefits or improvements that the proposed construction will produce.

A11. The proposed new 24-inch transmission water main will provide a critical interconnect from the existing 24-inch along AA Highway to the Main Street 24-inch which will provide a redundant/backup line to the existing 12-inch along U.S. 27. This new line will improve the efficiency of the Ripple Creek Booster Pump Station by allowing additional pumps to run to push additional water to the southern end of Campbell County and help maintain tank levels due to high demands (main breaks, fire flows, etc.). This new water main will replace an existing 6-inch which the District has experienced numerous water main breaks that affect approx. 60 customers. This new 24-inch line will provide strong and dependable feed to the District's Main Street Storage Tank and allow for future extension of a larger transmission water main to the southern end of the District's Campbell Service Area to help meet projected future growth.

1.3.5. Population Projections

Population projections for Kenton and Campbell County indicate an average population increase of 2.37% between 2005 and 2030 (see Table 1-9). Recent trends in water consumption indicate an overall decrease in water usage per person as environmental awareness becomes more prevalent and more efficient appliances and plumbing related devices (i.e. low flow toilets, showerheads, etc.) replace some of the older generation models.

Table 1-9.
Historical and Projected Population by County

Year	Kenton	Campbell	Total	% Change
1990	142,031	83,866	225,897	
1995	147,206	87,742	234,948	3.85%
2000	151,464	88,616	240,080	2.14%
2005	152,240	87,518	239,758	-0.13%
2010	154,572	91,130	245,702	2.42%
2015	158,966	95,828	254,794	3.57%
2020	163,014	100,167	263,181	3.19%
2025	166,579	104,251	270,830	2.82%
2030	169,402	108,024	277,426	2.38%
			Average (2005-2030)	**2.37%**

Source: Kentucky State Data Center, Projections from November 2004

As indicated in Table 1-8 the average annual percent increase in the projected average day demand between now and 2030 is 1.62%. Discussions with NKWD indicate a level of confidence with these projections and their relation to the population projections.

1.4. Supply and Storage Requirements

1.4.1. Introduction

A supply and storage gap analysis was performed to determine, based on a planning level approach, if there are any system deficiencies based on current and future demands. The supply gap analysis examined the current firm pumping capacities at each of the pump stations and compared that to the current and future demands by pressure zone. The supply gap analysis assumed that maximum day demands will need to be met through pumping only and did not take into account any excess storage available.

Table 1-8.
NKWD Future Demand Projections

Year	Wholesale Customers							New Accounts		Total Consumption Demands			Total System Demand		
	Bullock Pen[1] (MGD)	Additional Demand per Year (MGD)	City of Walton[2] (MGD)	Additional Demand per Year (MGD)	Pendelton County[1] (MGD)	Additional Demand per Year (MGD)	Total Additional Wholesale (MGD)	No. of New Accounts Per Year	New Accounts ADD Demand[3] (MGD)	Average Day Demand (MGD)	Percent Increase	Maximum Day Demand[4] (MGD)	Plant Demand[5]	Total Average Day Demand (MGD)	Total Maximum Day Demand (MGD)
2006	0.280		0.500		0.250			986		27.25		41.82	1.33	28.58	43.15
2007	0.288	0.008	0.510	0.010	0.258	0.008	0.026	1025	0.544	27.82	2.09%	44.51	1.33	29.15	45.84
2008	0.297	0.009	0.520	0.008	0.265	0.008	0.024	1025	0.544	28.39	2.04%	45.42	1.33	29.72	46.75
2009	0.306	0.009	0.530	0.008	0.273	0.008	0.025	1025	0.544	28.96	2.00%	46.33	1.33	30.29	47.66
2010	0.315	0.009	0.540	0.008	0.281	0.008	0.025	1025	0.544	29.53	1.97%	47.24	1.33	30.86	48.57
2011	0.325	0.009	0.550	0.008	0.290	0.008	0.026	1025	0.544	30.10	1.93%	48.16	1.33	31.43	49.49
2012	0.334	0.010	0.560	0.008	0.299	0.009	0.026	1025	0.544	30.67	1.90%	49.07	1.33	32.00	50.40
2013	0.344	0.010	0.570	0.008	0.307	0.009	0.027	1025	0.544	31.24	1.86%	49.98	1.33	32.57	51.31
2014	0.355	0.010	0.580	0.008	0.317	0.009	0.028	1025	0.544	31.81	1.83%	50.90	1.33	33.14	52.23
2015	0.365	0.011	0.590	0.008	0.326	0.010	0.028	1025	0.544	32.38	1.80%	51.81	1.33	33.71	53.14
2016	0.376	0.011	0.600	0.008	0.336	0.010	0.029	1025	0.544	32.96	1.77%	52.73	1.33	34.29	54.06
2017	0.388	0.011	0.610	0.008	0.346	0.010	0.029	1025	0.544	33.53	1.74%	53.65	1.33	34.86	54.98
2018	0.399	0.012	0.620	0.008	0.356	0.010	0.030	1025	0.544	34.10	1.71%	54.57	1.33	35.43	55.90
2019	0.411	0.012	0.630	0.008	0.367	0.011	0.031	1025	0.544	34.68	1.69%	55.49	1.33	36.01	56.82
2020	0.424	0.012	0.640	0.008	0.378	0.011	0.031	1025	0.544	35.26	1.66%	56.41	1.33	36.59	57.74
2021	0.436	0.013	0.650	0.008	0.389	0.011	0.032	1053	0.450	35.74	1.37%	57.18	1.33	37.07	58.51
2022	0.449	0.013	0.660	0.008	0.401	0.012	0.033	1053	0.450	36.22	1.35%	57.95	1.33	37.55	59.28
2023	0.463	0.013	0.670	0.008	0.413	0.012	0.034	1053	0.450	36.70	1.33%	58.72	1.33	38.03	60.05
2024	0.477	0.014	0.680	0.008	0.426	0.012	0.034	1053	0.450	37.19	1.32%	59.50	1.33	38.52	60.83
2025	0.491	0.014	0.690	0.008	0.438	0.013	0.035	1053	0.450	37.67	1.30%	60.27	1.33	39.00	61.60
2026	0.506	0.015	0.700	0.008	0.452	0.013	0.036	1053	0.450	38.16	1.29%	61.05	1.33	39.49	62.38
2027	0.521	0.015	0.710	0.008	0.465	0.014	0.037	1053	0.450	38.64	1.27%	61.83	1.33	39.97	63.16
2028	0.537	0.016	0.720	0.008	0.479	0.014	0.038	1053	0.450	39.13	1.26%	62.61	1.33	40.46	63.94
2029	0.553	0.016	0.730	0.008	0.493	0.014	0.038	1053	0.450	39.62	1.25%	63.39	1.33	40.95	64.72
2030	0.569	0.017	0.740	0.008	0.508	0.015	0.039	1053	0.450	40.11	1.23%	64.17	1.33	41.44	65.50
Total		0.289		0.194		0.258	0.741	24,880	12.116						
Average								1,037			1.62%				

Notes:

[1]Based on a 3% increase per year

[2]Based on an increase of 50 homes/year with demand of 200 gal/day/home

[3]Based on an average of 256 gpd/account for 2007-2020 and 280 gpd/account for 2021-2030.

[4]Based on a Peak Multiplier of 1.60

[5]Based on estimated values including demand from GAC