



Northern Kentucky Water District

2835 Crescent Springs Rd. • PO Box 18640 • Erlanger, KY 41018-0640

2008 Asset Management Program Update

November 2011

FINAL DRAFT



Report Prepared By:

Malcolm Pirnie, Inc.

8600 Governor's Hill Drive
Suite 210
Cincinnati, OHIO 45249
513-677-8380

4775-011



The Water Division of ARCADIS

IV. Identified Needs and Improvements



**Table 4-11.
5-Year CIP Project Description**

Designation	Description
Yearly	<u>Distribution System R&R</u> This program involves the systematic replacement of water mains in areas which the District has experienced problems such as discolored water, poor flows, or failures.
Yearly	<u>Coordinated Main Replacement</u> This program involves working with various cities and agencies in the service area to replace water mains in streets that are being resurfaced. Working together saves the District restoration costs and coordinates our work with the street work.
Yearly	<u>Mains to Unserved Areas</u> These funds are utilized to extend water mains into unserved areas. The total project funding may include these funds along with grant funds, county funds, and surcharges to the customers.
Yearly	<u>Annual General Facility R&R – Plants, Tanks, and Pump Stations</u> This program involves rehabilitation and replacement of aging infrastructure and miscellaneous improvements at the treatment plants, tanks, pump stations, and regulator and meter pits. This may include improvements to address recommendations such as adding flow meters on the discharge of all pumps and gravity feed lines from FTTP and MPTP, surge suppression at pump stations, and connecting pressure regulating valves and large meter pits into SCADA.
09-01	<u>FTTP – Advanced Treatment Project</u> NKWD must comply with Stage 2 of the Disinfection By-Product Rule (DBPR) in April 2012. The DBPR will require all water systems to comply with a local running annual average of 80 ug/L and 60 ug/L for THM and HAA5 respectively at worst-case sampling points in the distribution system. NKWD will not be able to comply with this new regulation with the existing treatment processes at the FTTP. This project will install granular activated carbon (GAC) and ultraviolet (UV) disinfection at the FTTP. The standby generator will also be replaced.
09-02	<u>TMTP – Advanced Treatment Project</u> The preliminary treatment process housing the rapid mix, flocculation basins, and sedimentation basins at the TMTP are approximately 50 years old and need to be replaced because they are failing. The existing basins will be demolished and a granular activated carbon (GAC) feed pump station and emergency power generators installed in their place. The preliminary design report for advanced treatment options includes GAC at TMTP in order to meet the 2012 regulations. The ultraviolet (UV) disinfection units will be moved to the new GAC building.

**Table 4-12
Master List of 5-Year CIP Projects 2009 – 2030**

Designation	Location	Project Description	Cost
22-05	Distribution	2022 Water Main Replacement Program	\$6,500,000
22-06	Distribution	2022 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
23-01	FTTP	Chemical Feed Systems Upgrades at FTTP	\$2,295,000
23-02	Dudley 1080 PS	Pump Station Improvements at Dudley 1080	\$3,600,000
23-03	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,190,000
23-04	Distribution	2023 Mains into Unserved Areas	\$250,000
23-05	Distribution	2023 Water Main Replacement Program	\$6,500,000
23-06	Distribution	2023 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
24-01	Latonia PS	Pump Station Improvements at Latonia	\$600,000
24-02	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,218,000
24-03	Distribution	2024 Mains into Unserved Areas	\$250,000
24-04	Distribution	2024 Water Main Replacement Program	\$6,500,000
24-05	Distribution	2024 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
25-01	Waterworks PS	Pump Station Improvements at Waterworks Road (include generator)	\$1,500,000
25-02	MPTP	MPTP Expand to 20 MGD - Actiflo	\$7,400,000
25-03	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,246,000
25-04	Distribution	2025 Mains into Unserved Areas	\$250,000
25-05	Distribution	2025 Water Main Replacement Program	\$6,500,000
25-06	Distribution	2025 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
26-01	TMTP PS	Pump Station Improvements at TMTP	\$3,100,000
26-02	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,277,000
26-03	Distribution	2026 Mains into Unserved Areas	\$250,000
26-04	Distribution	2026 Water Main Replacement Program	\$6,750,000
26-05	Distribution	2026 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
27-01	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,310,000
27-02	Distribution	2027 Mains into Unserved Areas	\$250,000
27-03	Distribution	2027 Water Main Replacement Program	\$7,000,000
27-04	Distribution	2027 Coordinated Roadway Imp./Water Main Replacement	\$2,500,000
27-05	Distribution	20" to Connect 11th Street in Newport to 12 Street in Covington	\$6,000,000
27-06	Distribution	12" Parallel Main Btwn Vulcan and Lytle	\$2,500,000
28-01	New PS	New pump station from Newport to Covington	\$7,000,000
28-02	WQ&P	Annual General Facility R&R - Plants, Tanks, Pump Stations	\$1,342,000
28-03	Distribution	24" Parallel Main Persimmon Grove from Riley to Jerry Wright	\$11,200,000
28-04	Distribution	16" Main Jerry Wright, Lickert, Old SR 4 to Claryville Tank	\$3,600,000