Cost Estimates

The updated cost estimates for the 2008 recommendations are shown in Table 12. Calculations of the cost estimates are included in Appendix A. These cost estimates include cost of construction and professional services but do not include costs for easement acquisition, major utility relocation, bonds, or fees for permitting or inspection.

Table 12: Updated Cost Summary of 2008 Recommendations

	ID	Description	Updated Cost Estimate
Tier 1			
	091-06	Install a PRV on 13 Mile Road east of Novi Road and de-commission Meadowbrook PRV if determined necessary.	$843,000
Tier 2			
	091-10	Extend a 24-inch main 2,600 feet north to 14 Mile Road	$1,139,000
	091-11	Install new DWSD master meter with PRV	$1,305,000
COMPLETE	091-16	Extend 900 feet of 12-inch main from west of Kingswood Boulevard to Columbia Drive.	$173,000
PROPOSED	091-23	Extend a 12-inch main approximately 5,700 feet from the proposed 12-inch main at Napier Road and Park Place Drive to the south along Napier Road to 8 Mile Road then east to the proposed 12-inch main on 8 Mile Road.	$1,082,000
	091-25	Extend a 16-inch main approximately 2,400 feet from the existing 16-inch main on 9 Mile Road west of Center Street to the east along 9 Mile Road to the existing 12-inch main at Novi Road and 9 Mile Road.	$647,000
COMPLETE	091-26	Extend a 12-inch main approximately 1,300 feet from the existing 12-inch main on 8 Mile Road at Club Lane to the east to the existing 12-inch main on 8 Mile Road east of Cambridge Drive. Install 12-Inch main approximately 600 feet from Meadowbrook Rd east to Llorac Ln.	$362,000
Tier 3 required for other recommendations			
PROPOSED	091-14	Extend a 12-inch water main approximately 2,400 feet from the existing 12-inch water main at 9-Mile Rd and then south on Napier Rd to Park Place Dr. (Required for recommendation 091-23.)	$457,000
PARTIALLY COMPLETE	091-15	Extend a 12-inch water main approximately 4,300 feet from the existing 12-inch water main at 8-Mile Rd and Garfield Rd to the west along 8-Mile Rd. (Required for recommendation 091-23. Length reduced by 400 feet from 2008 report due to Ballantyne development.) REMAINDER PROPOSED	$817,000
COMPLETE	091-22	Connect the existing 12-inch water main at Wixom Rd and 10-Mile Rd to the existing 12-inch water main east of Terra Del Mar Drive on 10-Mile Rd with approximately 2,700 feet of 12-inch water main. (Required for Island Lake recommendations.)	$513,000
		Total Cost of Updated Recommendations:	**$7,338,000**

The cost estimates for recommendations new to this report are shown in Table 13. Calculations of the cost estimates are included in Appendix A. These cost estimates include cost of construction and professional services but do not include costs for easement acquisition, major utility relocation, bonds, or fees for permitting or inspection.

Table 13: Cost Summary of New Recommendations

	ID	Description	Cost Estimate
COMPLETE	WP-01	Install 1.5 MG ground storage reservoir near West Park Pump Station and reconfigure Pump Station to pump out of storage at 11 MGD. Includes SCADA system.	$4,004,000
PHASE 2	IL-01	Install approximately 3,000 feet of new 12-inch water through existing Novi Links golf course. (Replaces recommendation 091-28 from 2008 report.)	$570,000 *
PARTIALLY COMPLETE	IL-02	Install approximately 3,200 feet of new 12-inch water main along 10-Mile Rd from Wixom Rd to Woodham Rd. REMAINDER IN PHASE 2	$608,000
COMPLETE	IL-03	Install approximately 2,800 feet of new 16-inch water main from Providence Park Hospital to Wixom Rd across City owned parcel.	$754,000
PHASE 2	IL-04	Install new PRV at 9-Mile Rd and Beck Rd.	$592,000
PHASE 2	IL-05	Install new PRV at 10-Mile Rd and Beck Rd.	$665,000
PROPOSED	IL-06	De-commission PRV near Catholic Central School.	$100,000
PHASE 2	IL-07	Replace Existing Pumps in the Island Lake Pump Station.	$488,000
		Total Cost of New Recommendations:	**$7,211,000 ***

* CIP# IL-01 will be built by a developer and is not included in the cost summation.

Operational Recommendations

In addition to the CIP recommendations above, there are several operational recommendations to improve system performance and efficiency.

- As part of the WPPS upgrades, system controls should be re-evaluated to eliminate excessive run-time of the WPPS pumps.
- As part of the WPPS upgrades, system operators should open an existing valve in the yard of the WPPS. A map of the WPPS with this valve called out is included in Appendix A.
- Once SCADA upgrades are complete, flows and pressures should be monitored at the ILPS to refine the future design flows required for the expanded Island Lake Pressure District. A preliminary engineering evaluation of upgrades at the ILPS should be performed to refine the cost estimate of station upgrades.
- SCADA upgrades at the ILPS, WPPS, Novi-North PRV, Grand River PRV, and 10-Mile PRV will allow system operators to monitor in-system flows to calculate the distribution of water loss and peak usage within the system. System operators should use this information to guide future CIP recommendations and asset management activities.