



Appendix D: Water & Wastewater Project Prioritization

Please consider the environment before printing this document.

Water and Wastewater Project Prioritization

New and Not Yet Started water and wastewater projects were prioritized based upon eight criteria. The criteria and their weighting factors are identified below.

No.	Weight	Criteria
1	12%	Condition
2	15%	Performance (Service Level/Reliability)
3	18%	Regulatory (Environmental/Legal)
4	11%	O&M
5	17%	Public Health & Safety
6	8%	Public Benefit
7	10%	Financial
8	9%	Efficiency

The following pages provide the detailed prioritization of each project compared to one another along with the individual score by Project Manager and by the Review Committee.

Project Manager Criteria Scores: Water

Rank	CIP No.	Title		0	10	20	30	40	50	60	70	80	90
1	1280	Lake Huron WTP Energy Management: Misc Mechanical Improvements	1280										
2	1227	Lake Huron WTP Energy Management Low Lift Pumping Improvements	1227										
3	1267	Springwells Replacement of 1958 Rapid Mix Units	1267										
4	1071	Springwells Low-Lift and High-Lift Pump Station	1071										
5	1356	Transmission System Valve Assessment and Rehab/Replacement (NEW)	1356										
6	1166	Yard Piping, Valves and Venturi Meters Replacement**	1166										
7	1321	96" Main Relocation, Isolation Valve Installations, and New Parallel Main	1321										
8	1256	Springwells Reservoir Fill Line Improvements	1256										
9	1327	Penn, SPW, & NE Raw Water Tunnel Improv. (CS-1623 inspection results)	1327										
10	1272	Yard Piping Replacement at Northeast WTP	1272										
11	1306	Yard Piping Improvements at Springwells	1306										
12	1300	LHWTP Filter Instrumentation Replace., Raw Water Flow Metering Improv.	1300										
13	1366	Water facilities lighting renovations (NEW)	1366										
14	1320	Springwells WTP 1930 Filter Building Roof Replacement	1320										
15	1307	Steam, Condensate Return and Compressed Air Piping at Springwells WTP	1307										
16	1305	New Waterworks Park to Northeast Transmission Main	1305										
17	1334	Study Phase Svcs for Proposed East Service Center PS & Reservoir	1334										
18	1355	Lapeer Co. Chlorine Booster Sta. & Isolation Valve for 72" Trans. Main	1355										
19	1270	Isolation Gate Valves for Line Pumps for WSC	1270										
20	1336	West Service Center/Duval Road Division Valve Upgrades	1336										
21	1318	LHWTP: Raw Sludge Clarifier & Raw Sludge Pumping System Improvements	1318										
22	1296	Needs Assessment Study for all Water Booster Stations	1296										
23	1269	1930 Sed. Basin Sluice Gates, Guides & Hoists Improvements @ SPWTP	1269										
24	1277	Southwest WTP High Lift Pump Discharge Valve Actuators Replacement	1277										
25	1297	Southwest WTP Residual Handling Facilities Decant Flow Modifications	1297										
26	1268	Springwells Powdered Activated Carbon System at Springwells WTP	1268										
27	1264	Water Production Flow Metering Improvements at NE, SW & SP WTP	1264										
28	1266	Springwells Administration Building Improvements	1266										
29	1294	Energy Management: Freeze Protection Pump at Imlay Station	1294										
30	1301	Comprehensive Condition Assessment at WWP WTP	1301										
31	1298	Lake Huron WTP Electrical Tunnel Rehabilitation	1298										
32	1289	Lake Huron WTP Evaluation of Flocculation Improvement Alternatives	1289										
33	1271	Hydraulic Surge Control for NSC Station (S, D/C)	1271										
NA	1412	Emergency Grating Replacement at Springwells WTP	1412										
NA	1410	Water Works Park WTP Chlorine System Upgrade	1410										
NA	1303	Suburban Water Meter Pit Rehabilitation and Meter Replacement	1303										
NA	1406	Energy Management: Miscellaneous Mechanical Improvements at Lake Huron WTP	1406										
NA	1389	Springwells Reservoir Fill Line Improvements	1389										
NA	1407	Springwells WTP Underground Fire Protection Loop Improvements	1407										
NA	1405	Lyon Township Transmission Main Extension Project	1405										

Project Manager Criteria Scores: Water

Rank	CIP No.	Title	1	2	3	4	5	6	7	8	PM Score	1	2	3	4	5	6	7	8	Modifier	RC Score
1	1280	Lake Huron WTP Energy Management: Misc Mechanical Improvements	5	4	1	4	4	1	4	4	66.8	5	5	4	4	4	0	3	4	-	77.0
2	1227	Lake Huron WTP Energy Management Low Lift Pumping Improvements	5	5	3	3	1	1	4	4	64.6	5	5	1	5	2	5	4	4	-	71.6
3	1267	Springwells Replacement of 1958 Rapid Mix Units	5	5	5	5	1	2	2	3	72	5	5	3	3	2	2	3	5	-	69.4
4	1071	Springwells Low-Lift and High-Lift Pump Station	5	5	1	2	5	3	4	4	72	5	5	1	5	5	2	1	3	-	69.2
5	1356	Transmission System Valve Assessment and Rehab/Replacement (NEW)	5	4	2	3	4	3	3	4	69.4	5	3	2	4	3	4	3	4	-	66.8
6	1166	Yard Piping, Valves and Venturi Meters Replacement**	5	5	1	3	2	2	3	3	58.6	5	5	2	3	2	4	3	3	-	65.4
7	1321	96" Main Relocation, Isolation Valve Installations, and New Parallel Main	3	5	3	5	2	2	2	2	61.6	2	5	2	5	4	5	1	2	-	65.2
8	1256	Springwells Reservoir Fill Line Improvements	5	5	1	5	1	5	4	4	68.2	5	5	2	0	4	3	5	1	-	64.4
9	1327	Penn, SPW, & NE Raw Water Tunnel Improv. (CS-1623 inspection results)	5	5	1	1	3	5	3	1	58.8	5	5	2	0	4	3	5	1	-	64.4
10	1272	Yard Piping Replacement at Northeast WTP	5	4	0	1	1	2	3	2	42.4	5	5	2	3	2	2	3	3	-	62.2
11	1306	Yard Piping Improvements at Springwells	5	4	2	1	2	3	1	2	50.6	5	5	2	3	2	2	3	3	-	62.2
12	1300	LHWTP Filter Instrumentation Replace., Raw Water Flow Metering Improv.	4	5	5	5	1	1	1	2	64.2	4	3	3	3	2	4	2	5	-	62.2
13	1366	Water facilities lighting renovations (NEW)	5	0	0	5	0	0	0	0	23	3	3	3	4	3	1	3	4	-	60.8
14	1320	Springwells WTP 1930 Filter Building Roof Replacement	5	3	3	3	2	1	1	3	54.2	5	5	3	5	2	0	1	1	-	59.4
15	1307	Steam, Condensate Return and Compressed Air Piping at Springwells WTP	5	5	1	3	4	1	3	3	63.8	5	5	0	4	3	1	2	4	-	58.8
16	1305	New Waterworks Park to Northeast Transmission Main	3	3	0	3	0	0	0	3	28.2	0	5	0	5	1	5	5	5	-	56.4
17	1334	Study Phase Svcs for Proposed East Service Center PS & Reservoir	1	3	0	0	0	3	2	3	25.6	2	5	3	2	2	4	1	3	-	55.6
18	1355	Lapeer Co. Chlorine Booster Sta. & Isolation Valve for 72" Trans. Main	1	5	5	1	5	1	0	0	56.2	0	5	5	0	4	5	0	0	-	54.6
19	1270	Isolation Gate Valves for Line Pumps for WSC	5	5	3	5	4	4	1	3	76.2	5	5	2	2	1	3	2	2	-	54.4
20	1336	West Service Center/Duval Road Division Valve Upgrades	3	4	1	4	3	2	2	2	52.6	3	4	1	4	1	5	1	5	-	54.0
21	1318	LHWTP: Raw Sludge Clarifier & Raw Sludge Pumping System Improvements	5	5	3	4	3	1	1	1	62.2	5	5	1	2	2	1	4	1	-	53.2
22	1296	Needs Assessment Study for all Water Booster Stations	3	2	2	1	1	1	1	1	31.4	3	3	1	2	2	2	4	5	-	51.2
23	1269	1930 Sed. Basin Sluice Gates, Guides & Hoists Improvements @ SPWTP	5	5	1	4	5	1	0	1	59.8	5	2	0	4	5	0	1	1	-	47.6
24	1277	Southwest WTP High Lift Pump Discharge Valve Actuators Replacement	5	5	3	4	2	3	2	1	64	4	1	3	5	2	1	1	1	-	46.6
25	1297	Southwest WTP Residual Handling Facilities Decant Flow Modifications	2	4	5	3	3	1	0	0	53.2	1	5	5	2	1	1	0	0	-	44.8
26	1268	Springwells Powdered Activated Carbon System at Springwells WTP	5	5	5	5	2	3	0	0	67.6	5	5	1	1	0	3	2	1	-	43.4
27	1264	Water Production Flow Metering Improvements at NE, SW & SP WTP	5	5	2	2	1	3	2	3	56.2	3	5	0	0	0	5	2	4	-	41.4
28	1266	Springwells Administration Building Improvements	5	2	0	0	1	0	0	0	21.4	5	2	0	3	2	0	2	0	-	35.4
29	1294	Energy Management: Freeze Protection Pump at Imlay Station	1	4	0	3	0	3	3	3	37.2	0	1	1	3	1	1	4	5	-	35.2
30	1301	Comprehensive Condition Assessment at WWP WTP	3	3	3	1	1	1	1	1	38	2	3	0	2	1	3	1	2	-	32.0
31	1298	Lake Huron WTP Electrical Tunnel Rehabilitation	3	3	2	2	4	1	1	1	46.8	2	1	2	1	3	1	1	0	-	31.0
32	1289	Lake Huron WTP Evaluation of Flocculation Improvement Alternatives	3	4	3	5	1	1	4	1	55.8	3	3	0	3	0	0	1	3	-	30.2
33	1271	Hydraulic Surge Control for NSC Station (S, D/C)	1	3	1	3	1	4	2	1	37.2	1	1	0	0	1	5	1	1	-	20.6
NA	1412	Emergency Grating Replacement at Springwells WTP	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1410	Water Works Park WTP Chlorine System Upgrade	NA	NA	NA	NA	NA	NA	NA	NA	85.8	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1303	Suburban Water Meter Pit Rehabilitation and Meter Replacement	NA	NA	NA	NA	NA	NA	NA	NA	82.8	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1406	Energy Management: Miscellaneous Mechanical Improvements at Lake Huron WTP	NA	NA	NA	NA	NA	NA	NA	NA	69.2	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1389	Springwells Reservoir Fill Line Improvements	NA	NA	NA	NA	NA	NA	NA	NA	68.2	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1407	Springwells WTP Underground Fire Protection Loop Improvements	NA	NA	NA	NA	NA	NA	NA	NA	46.8	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1405	Lyon Township Transmission Main Extension Project	NA	NA	NA	NA	NA	NA	NA	NA	39.4	NA	NA	NA	NA	NA	NA	NA	NA		NA

Project Manager Criteria Scores: Wastewater

Rank	CIP No.	Title		0	20	40	60	80	100	
1	1384	CSO, RTB & SDF Chemical Feed System + Conner Creek CSO Facility	1384							
2	1331	Northeast Pumping Station Improvements	1331							
3	1315	Freud & Conner Creek Pump Station Improvements	1315							
4	1402	DTE Primary Electric 3rd Feed Supply Line to the WWRf	1402							
5	1392	Collection System Valve Remote Operation Structures Improvements	1392							
6	1311	Construction of Improved Sludge Conveyance & Lighting System at the WWRf	1311							
7	1329	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	1329							
8	1332	North Interceptor East Arm (NIEA) Evaluation and Rehabilitation	1332							
9	1314	Replacement of Bar Racks at Pump Station No.2	1314							
10	1223	Grit, Screening System Rehab at PS-2; Sampling Site Rehab at WWRf	1223							■ RC Score
11	1221	Rehabilitation of Central Offload Facility (C New, S/D/CA UP)	1221							■ PM Scores
12	1382	Rehabilitation of Ferric Chloride Feed Systems	1382							
13	1140	Study/Repair Potable Water, SFE, Nat'l Gas, Compressed Air Lines, WWRf	1140							
14	1383	Rehabilitation of the Dry Ash Handling Systems	1383							
15	1222	Replacement of Chlorination and Dechlorination Equipment at the WWRf	1222							
16	1393	Collection System Access Hatch Improvements (SCC)	1393							
17	1381	SFE Pump Station and Secondary Water System Rehab	1381							
18	1286	Oakwood District Intercommunity Relief Sewer Mod. @ Oakwood District	1286							
19	1285	New IWC Division and Analytical Laboratory Operations Construction	1285							
20	1287	Pump Station No. 2 Improvements Phase II at WWRf	1287							
21	1386	Rehab of Circular Primary Clarifier Scum Removal System	1386							
22	1357	Collection System Backwater Gates and Regulator Gates Rehabilitation (SCC)	1357							
23	1385	Rehabilitation of the Secondary Clarifiers	1385							
24	1387	Roofing Systems Replacement at WRRF, CSO RTBs, & SDFs	1387							
25	1399	Study for Phosphorus Recovery at the WWRf	1399							
26	1237	Main Plant Maint. Bldg Rehab, Plant Maint. Area Replace, Work Env. Impr.	1237							
27	1284	Complex I Incinerators Decommissioning and Reusability at WRRF	1284							
28	1388	Wastewater System Wide I&C Software and Hardware Upgrade	1388							
29	1391	Collection System In System Storage Devices (ISDs) Improvements (SCC)	1391							
NA	1344	Sewage Meter Design, Installation, Replacement and Rehabilitation Program	1344							
NA	1409	CSO Outfall Rehabilitation	1409							
NA	1411	NIEA Evaluation and Rehabilitation from WRRF to Gratiot Ave. and Sylvester St.	1411							

Project Manager Criteria Scores: Wastewater

Rank	CIP No.	Title	1	2	3	4	5	6	7	8	PM Score	1	2	3	4	5	6	7	8	Modi-fier	RC Score
1	1384	CSO, RTB & SDF Chemical Feed System + Conner Creek CSO Facility	4	4	5	4	4	3	4	4	82	4	4	5	4	5	5	5	4	-	90.6
2	1331	Northeast Pumping Station Improvements	5	3	4	4	3	2	2	2	65.2	5	5	4	4	4	5	5	4	-	89.0
3	1315	Freud & Conner Creek Pump Station Improvements	5	5	5	3	3	4	2	2	75.8	4	4	5	3	4	5	5	1	-	79.6
4	1402	DTE Primary Electric 3rd Feed Supply Line to the WWRF	5	4	5	4	5	3	5	3	88	5	5	3	1	4	5	5	1	-	73.4
5	1392	Collection System Valve Remote Operation Structures Improvements	4	4	3	4	4	4	3	3	72.6	4	4	3	5	3	2	3	3	-	68.2
6	1311	Construction of Improved Sludge Conveyance & Lighting System at the WWRF	0	0	0	0	0	0	0	0	0	5	5	4	3	2	2	4	1	-	67.8
7	1329	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	5	4	4	3	3	4	4	2	73.2	5	4	3	1	3	4	5	1	-	65.4
8	1332	North Interceptor East Arm (NIEA) Evaluation and Rehabilitation	5	4	4	3	3	4	4	2	73.2	5	4	3	1	3	4	5	1	-	65.4
9	1314	Replacement of Bar Racks at Pump Station No.2	0	0	0	0	0	0	0	0	0	3	4	4	4	3	3	3	1	-	65.2
10	1223	Grit, Screening System Rehab at PS-2; Sampling Site Rehab at WWRF	0	0	0	0	0	0	0	0	0	4	5	4	3	3	1	1	3	-	64.8
11	1221	Rehabilitation of Central Offload Facility (C New, S/D/CA UP)	0	0	0	0	0	0	0	0	0	4	4	2	4	4	2	2	1	-	60.2
12	1382	Rehabilitation of Ferric Chloride Feed Systems	4	4	5	4	3	4	4	4	80.2	4	4	3	3	1	2	3	3	-	57.0
13	1140	Study/Repair Potable Water, SFE, Nat'l Gas, Compressed Air Lines, WWRF	0	0	0	0	0	0	0	0	0	4	3	3	3	2	2	3	2	-	55.6
14	1383	Rehabilitation of the Dry Ash Handling Systems	5	4	4	4	4	4	4	4	82.4	4	3	3	4	3	1	1	1	-	53.8
15	1222	Replacement of Chlorination and Dechlorination Equipment at the WWRF	0	0	0	0	0	0	0	0	0	3	2	2	3	4	4	2	1	-	52.8
16	1393	Collection System Access Hatch Improvements (SCC)	5	3	2	3	4	5	2	3	65.8	5	3	2	2	4	3	0	1	-	52.8
17	1381	SFE Pump Station and Secondary Water System Rehab	5	4	5	4	5	3	5	4	89.8	3	3	2	4	1	1	3	5	-	52.2
18	1286	Oakwood District Intercommunity Relief Sewer Mod. @ Oakwood District	0	0	0	0	0	0	0	0	0	1	4	2	1	3	4	3	3	-	51.8
19	1285	New IWC Division and Analytical Laboratory Operations Construction	0	0	0	0	0	0	0	0	0	3	2	3	2	2	3	3	3	-	51.4
20	1287	Pump Station No. 2 Improvements Phase II at WWRF	0	0	0	0	0	0	0	0	0	3	4	2	3	2	1	2	3	-	50.8
21	1386	Rehab of Circular Primary Clarifier Scum Removal System	4	4	3	4	3	2	4	4	69.8	4	4	1	5	0	0	3	4	-	49.4
22	1357	Collection System Backwater Gates and Regulator Gates Rehabilitation (SCC)	5	4	4	3	3	4	3	2	71.2	4	3	1	2	1	3	3	3	-	46.2
23	1385	Rehabilitation of the Secondary Clarifiers	4	3	3	3	3	3	3	3	62.4	3	3	3	3	1	0	1	1	-	40.8
24	1387	Roofing Systems Replacement at WRRF, CSO RTBs, & SDFs	4	4	4	4	3	2	4	4	73.4	4	4	2	1	1	0	3	0	-	40.4
25	1399	Study for Phosphorus Recovery at the WWRF	3	3	0	3	3	5	5	4	58.2	1	4	1	4	1	1	2	2	-	39.4
26	1237	Main Plant Maint. Bldg Rehab, Plant Maint. Area Replace, Work Env. Impr.	0	0	0	0	0	0	0	0	0	4	3	1	2	1	1	1	3	-	39.0
27	1284	Complex I Incinerators Decommissioning and Reusability at WRRF	0	0	0	0	0	0	0	0	0	1	3	1	3	1	1	2	3	-	36.0
28	1388	Wastewater System Wide I&C Software and Hardware Upgrade	4	4	5	5	3	3	3	3	77	1	2	2	3	1	1	2	1	-	33.0
29	1391	Collection System In System Storage Devices (ISDs) Improvements (SCC)	4	4	3	4	2	2	1	3	58.6	2	2	2	1	1	2	1	1	-	30.6
NA	1344	Sewage Meter Design, Installation, Replacement and Rehabilitation Program	NA	NA	NA	NA	NA	NA	NA	NA	82.8	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1409	CSO Outfall Rehabilitation	NA	NA	NA	NA	NA	NA	NA	NA	69.8	NA	NA	NA	NA	NA	NA	NA	NA		NA
NA	1411	NIEA Evaluation and Rehabilitation from WRRF to Gratiot Ave. and Sylvester St.	NA	NA	NA	NA	NA	NA	NA	NA	69.8	NA	NA	NA	NA	NA	NA	NA	NA		NA