

What is the “The Bridge”?

The April 2018 approval of the modifications to the WWIP to include a “Bridge Schedule”. These projects represent a “bridge” between Phase 1 and Phase 2 that was required by the Regulators to obtain more time for developing the Phase 2A program.

The term “Phase 1” or “Phase 1 Program” refers to a list of projects included in Attachment 1B of the Final WWIP that includes a total of 133 construction contracts that must be constructed in accordance with Consent Decree requirements (and Allowances) for completion by December 31, 2018.

The term “Phase 2” or “Phase 2 Program” refers to the WWIP requirements to complete projects included in Attachment 2 of the Final WWIP as well as future Allowances. The proposed Phase 2A schedule is to be submitted to the Regulators by June 30, 2018 for review and acceptance in accordance with the Final WWIP agreement. The Phase 2A scope and schedule will establish the next phase of WWIP projects beginning in 2020.

How were the Bridge Projects developed?

The Regulators originally identified a portion of Attachment 2 listed projects advanced to proceed through December 2019. The projects that were ultimately agreed upon was a result of negotiations between the parties to ultimately settle upon a schedule and more specific milestones of what will be completed by December 2020. Most of the projects come down to urgency, readiness, risk reduction or wet weather benefit from the utility perspective. There are some Bridge projects that have some “level of effort” but may not be completed by 2020 – for the most part, those projects are ideal candidates for Phase 2A. The Bridge Projects were included and approved in MSD’s 2018 CIP and are summarized below. In addition to WWIP projects, MSD’s 2018 CIP includes approximately \$50M/year in Asset Management projects that repair or replace utility assets to maintain capacity, operability and regulatory compliance.

Summary of Bridge Projects:

- **Nine (9) regulator improvements (RI) Projects** – Seven within the Muddy Creek; Two within Little Miami Watershed. “Regulators” are structures that “regulate flow” of combined sewage into the interceptor or to a discharge point. The prioritized RI projects in the Bridge are included because it was determined that excessive intrusion of river water enters the sewers taking up capacity. MSD will design & construct nine RIs in the Bridge timeframe and four RIs are anticipated to be constructed (2 in Little Miami, 2 In Muddy Creek).
- **Six (6) Sewer Separation Projects** – There is one separation project in the Little Miami Watershed, four in Mill Creek (one is property acquisition only). Separation projects help to reduce overflow of combined sewage into rivers and streams as well as provide capacity in the sewers to reduce SBUs. In total, approx. 3000 In ft. in storm sewers and at least 200 In ft. of new sanitary sewers will be installed.
- **Five (5) Wastewater Treatment Improvement Projects**
 - **The Muddy Creek and Westbourne HRT** - Diversion chamber modifications and other improvements will improve the hydraulics through the facility. The project will also include identification, evaluation and selection of potential screening and operational improvements of the facility. All of these improvements and potential improvements will be compatible with future facility plans.
 - **Little Miami WWTP Preliminary Tmt** – An upgrade to the existing medium screens equipment in the Screens Building downstream of the Four Mile Pump Station. The Grit System is out of date and the grit that passes through preliminary treatment causes operational problems, reducing treatment efficacy.
 - **Little Miami WWTP Electrical Upgrades** - New electrical distribution equipment, switchgear tie-in, transformer, and conduit. The existing switchgear feeding the the Little Miami Pump Station was installed in the 1950s and is well beyond its useful life.
 - **Mill Creek Diversion Chamber** – A new diversion chamber can be constructed to facilitate future isolation of the existing North and South pump stations and facilitate future wet weather treatment.
 - **SSO 700 Reliability Improvements** – A new storage 1.2 MG storage tank, pump station, hydraulics and actuators, disinfection improvements, polymer system & coordinated control to utilize the Smart Sewer System to enable use of the facility to minimize wet weather capacity constraints downstream and reduce overflow in other parts of the basin.
- **Upper Muddy Creek Interceptor (UMCI)** – This project will replace a portion of the UMCI that was originally installed between 1929 to 1935. The existing sewer is aging and deteriorating and is among the District’s highest risk interceptor in need of replacement. The existing sewer allows an excessive amount of creek infiltration into the sewer system.
- **Dynamic Underflow Control (DUC)**– This project will make modifications to CSO 83 & CSO 472 that will provide for an automated control of flow into the interceptor sewer. The proposed improvements consist of replacement of the underflow pipe, replacement of the regulator, addition of level sensors, and telemetry equipment. These locations are selected for DUC where there is capacity in sewers.

Regulator Improvements (RI) to Reduce River Inflow into Interceptors which reduce capacity for sanitary sewage			Storm Water Separation Projects to reduce overflows, SBUs and free up capacity in interceptors			Wastewater Treatment Improvements to replace treatment facilities in need of repair or upgrade			Wastewater Collection Improvements to replace 7000 In ft of high risk sewer			Dyanamic Underflow Control to maximize collection & treatment where capacity exists		
Index #	CSO #	(2006\$)	Index #	CSO #	(2006\$)	Index #	Asset	(2006\$)	Index #	Asset	(2006\$)	Index #	CSO #	(2006\$)
185	135	\$438,400	188R	214	\$2,982,418		Little Miami WWTP	\$16,200,000						
186	43	\$433,100	231	513	\$5,602,400		Mill Creek WWTP	\$7,464,000						
218-222	402-406	\$1,989,500	232	514	\$1,419,700	229	SSO 700 Facility	\$8,557,600						
238-239 (Partial)	408/413	\$1,827,000	n/a	Columbia Square	\$555,514	319	Prospect Woods Pump Station	\$668,641	234	Upper Muddy Creek Interceptor	\$5,495,655	255 & 285	CSO 83 & 472	\$2,266,342
				12 (acquisition of land for detention)		236	Muddy Creek & Westbourne HRT	\$4,600,000						

Note: "R" Represents an adapted project from the description in the WWIP. "Partial" indicates that part of the project is advancing in the Bridge, not all CSOs listed in the Indexed Bundle.