



More than a Project™

Lowell Wastewater Treatment Plant Expansion PER Public Hearing

May 28, 2024

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Overview

- Project Need/ Background
- Alternatives Evaluated
- About SRF
- Selected Plan Project Schedule
- Public Comment



Project Need and Background

- Current WWTP is undersized for current flows, resulting in multiple CSO events in last 5 years.
 - Conventional WWTP Capacity: 4.0 MGD
 - Wet Weather Facility Capacity: 10.0 MGD
 - Wet Weather Storage (EQ Basin): 14.0 MGD
 - Average daily influent flow: 3.3 MGD (82% of capacity)
 - Peak daily influent flow since January 2021: 33.81 MGD (120% of total wet weather capacity)
- Existing equipment at or exceeding useful life
- Long-Term Control Plan aimed at reducing Combined Sewer Overflows
- Agreed Order for EQ Basin issues
- Expected new limits for Total Nitrogen with the 2025 NPDES Permit renewal.

Alternatives No. 1 & 2 –No Action & Regionalization

- Do Nothing
 - CSO's will continue
 - Agreed Order/Long-Term Control Plan will not be met
 - Future development halted
- Regionalization
 - Required to consider alternative for SRF
 - Lowell WWTP already serves as regionalized facility for Lowell, Cedar Lake, and Lake Dalecarlia
 - No other regional facilities with capacity to accept Lowell wet weather flows

Alternative No. 3: Expand and Modify Existing Extended Aeration Process

- Work includes:
 - 3 new aeration tanks
 - 7 new blowers
 - New sludge pump station and force main
 - Electrical, I&C, and SCADA upgrades
 - Demolition of 2 clarifier structures
 - New yard piping

<i>Advantages</i>	<i>Disadvantage</i>
Lower capital cost	Less flexibility in treating varied flows and nutrient loading
Utilizes some of existing WWTP aeration tanks and piping	Lower energy efficiency
	More complicated operation

Alternative No. 4 – Oxidation Ditch

- Work includes:
 - New anaerobic tank
 - 4 oxidation ditch tanks
 - 6 oxidation ditch blowers
 - Fine bubble diffusers and mixers
 - New sludge pump station and force main
 - Demolition of existing structures and equipment
 - Electrical, I&C, and SCADA upgrades

<i>Advantages</i>	<i>Disadvantage</i>
Flexible treatment process for wide range of flows and loadings	Higher capital cost
Accessible mechanical equipment while tanks are still in service	
Reduced power usage and increased energy savings	

Other WWTP Upgrades

- Both Alternative 3 and 4 include improvements to the following plant processes:
 - Headworks: pump replacements, new electrical building
 - EQ Basin: liner replacement, new aerators, ground water pump station
 - Secondary Clarifiers: 4 new 50' diameter structures
 - Effluent Pump Station: new pumps and new pump building
 - UV Disinfection: duplication of existing UV structure and equipment
 - Solids Handling: aerobic digester improvements, 2 new digesters, 2 volute presses

Alternative Cost Comparison

	<i>Alternative 3: Expand and Modify Existing Extended Aeration</i>	<i>Alternative 4: Oxidation Ditch</i>
Total Probable Construction Cost	\$37,700,000	\$39,400,000
Contingency (10%)	\$3,800,000	\$3,900,000
Total Probable Non-Construction Cost	\$8,300,000	\$8,700,000
Total Probable Project Cost	\$48,800,000	\$52,000,000

About SRF

What is SRF?

- The State Revolving Fund (SRF) Loan Programs provide low-interest loans to Indiana communities for projects that improve wastewater and drinking water infrastructure.
- The Indiana Finance Authority (IFA) administers the SRF Loan Programs, which protect both the environment and public health

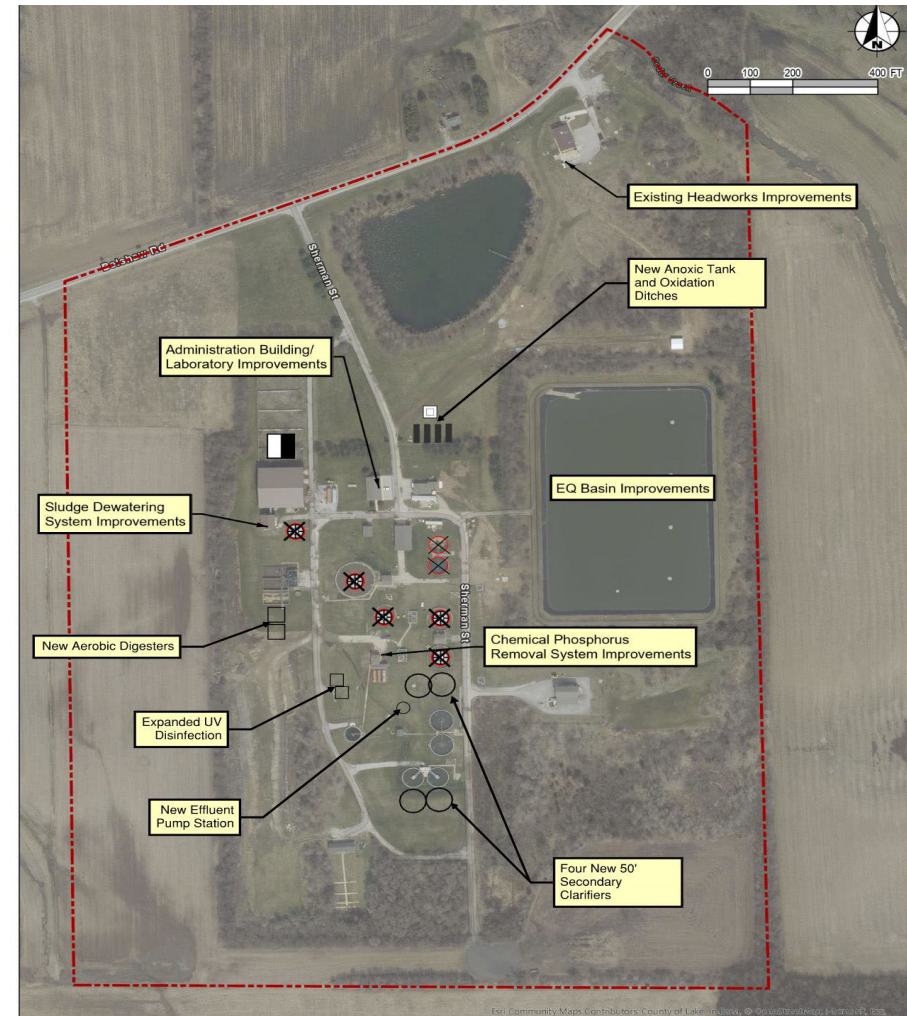
What are the loan terms?

- The SRF loan is a fixed rate, 20-year loan.
- Interest rates are reset quarterly and are at or below 90% of the average 20-year AAA-rated, general obligation bond Municipal Market Data. Rates are further discounted based on the applicant's median household income and local user rates.
- Anticipated rate for this project is 2-2.5%

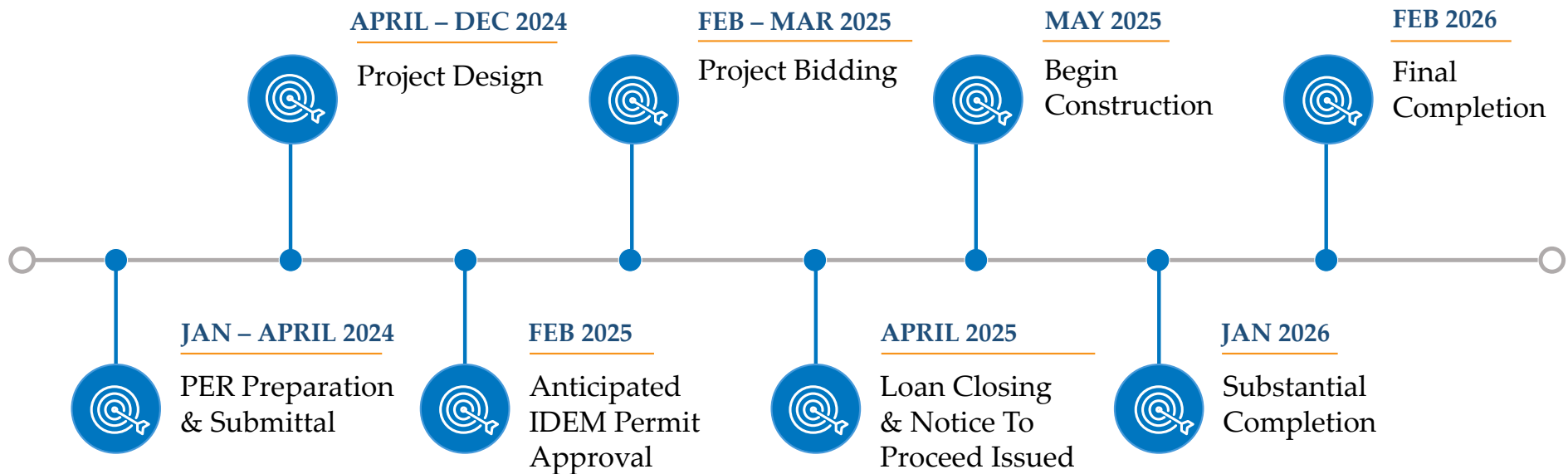
Selected Alternative

Alternative 4 – Oxidation Ditch

- Increase Average Design Flow from 4.0 MGD to 8.0 MGD
- Increase Peak Design Flow from 4.0 MGD to 13.3 MGD



PRELIMINARY TIMELINE



Availability of PER

A copy of the Preliminary Engineering Report (PER) was available for public viewing and comment 10 calendar days prior to this public hearing and will be available for 5 calendar days after the public hearing at Lowell Town Hall.

Written comments should be sent to Wessler Engineering, 1435 Win Hentschel Blvd, Ste. 105, West Lafayette, IN 47906 prior to June 4, 2024.

Public Comment

Please state your first and last name for the record before asking your question.



A dynamic background image showing a splash of water with many bubbles and droplets, set against a dark blue-grey gradient. Two horizontal orange lines are positioned above and below the contact information.

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