

# New Wastewater Treatment Facility

Village of Covington, Ohio

## Plant Type

The sequencing batch reactor (SBR) is a fill-and draw activated sludge system for wastewater treatment. In this system, wastewater is added to a single "batch" reactor, treated to remove undesirable components, and then discharged. Equalization, aeration, and clarification can all be achieved using a single batch reactor. To optimize the performance of the system, two or more batch reactors are used in a predetermined sequence of operations. SBR systems have been successfully used to treat both municipal and industrial wastewater. They are uniquely suited for wastewater treatment applications characterized by low or intermittent flow conditions.

## Site Design



The site includes multiple buildings that serve multiple functions. The administration building has the lab, employee rooms, and vehicle storage. The headworks building which includes the primary SBR function is above the blower and dewatering buildings. The site is complete surrounded by fencing and rolling gates to restrict access.

## **Estimated Cost and Proposed Funding**

### **Engineer's Estimated Cost for Project - \$18,000,000**

- Includes the design and construction of the proposed facility
- Inflation adjusted from original estimate, which added roughly \$4,900,000.

### **Village Sewer (Fund 52) Budget – Generally**

- Revenue from collection fees: ~\$600,000
- Expenses: ~\$420,000
- Net: ~\$180,000

### **Proposed Funding**

- Reserve Funds Utilized:
  - ARPA Funds: \$284,000
  - Village Sewer Funds: \$100,000
  - Total: \$384,000
- Estimated Loan Cost minus reserves: \$17,616,000
- WPCLF Loan Forgiveness: \$4,000,000
- WPCLF Loan Amount Necessary after forgiveness: \$13,616,000
  - ~\$5,500,000 @ 0% - Nutrient Reduction Credit
  - ~\$8,100,000 @ 1% - Hardship Community Credit
- Estimated Annual Loan Payment: ~\$498,000

### **Future Revenue and Expenditures**

#### **Revenue**

- Collection Fee revenues have increased 3% from 2022 and are anticipated to be ~\$600,000 in 2023 unless there is a modification to the rate structures

#### **Expenditures**

- Current Sewer Fund Budget (\$420,000) Includes:
  - ~\$200,000 – Salaries / Benefits
  - ~\$160,000 – Operations / Maintenance
  - ~\$60,000 – Debt Service
- New Sewer Fund Budget will increase substantially:
  - No changes to Salaries / Benefits
  - Potential reduction in O/M costs, but not guaranteed
  - Increase in debt service to \$560,000 annually
- Anticipated annual expenditures of \$920,000 in future years with debt added

#### **Net**

- Current (2023) Anticipated Revenue: \$600,000
- Anticipated Annual Expenditures after debt: \$920,000
- Net: Loss of \$320,000 / year

### **Rate Increases**

- A rate increase is required to cover that net loss.