

Town of Plainville, CT

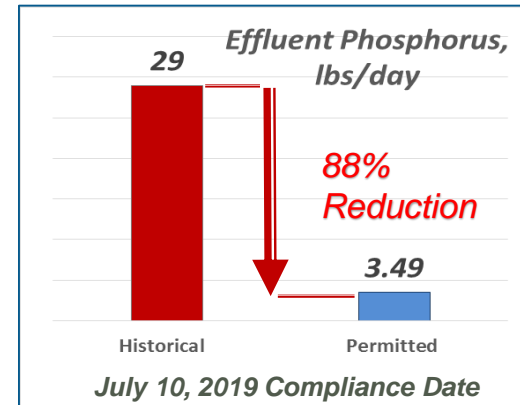
Water Pollution Control Facility Project *Public Information Meeting*



November 16, 2017

Key Project Goals

- Comply with new phosphorus limits
- Improve resiliency
- Improve sludge processing system



Key Project Goals

- Why is phosphorus of concern?
 - *Phosphorus affects fresh waters, like the Pequabuck River*
 - *Low flow rivers are most impacted*



Key Project Goals

- CT DEEP Discharge permits
 - *are legally binding*
 - *non-compliance results in judicial action and fines*
- CT Clean Water Fund
 - *offers grants and low-interest loans*
 - *Plainville is eligible for a 41% grant and a 2% loan for the balance*

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-6127 www.ct.gov/deep Alternative Action/Equal Opportunity Employer

MUNICIPAL NPDES PERMIT

issued to

| | |
|---|---|
| Permittee: Town of Plainville One Central Square Plainville, Connecticut 06062-1955 | Location Address: Plainville WPCF Crock Road Plainville, Connecticut 06062-1955 |
| Facility ID: 110-001 Permit ID: CT0100455 | Permit Expires: July 9, 2020 |
| Receiving Stream: Pequabuck River | Design Flow Rate: 3.8 MGD |

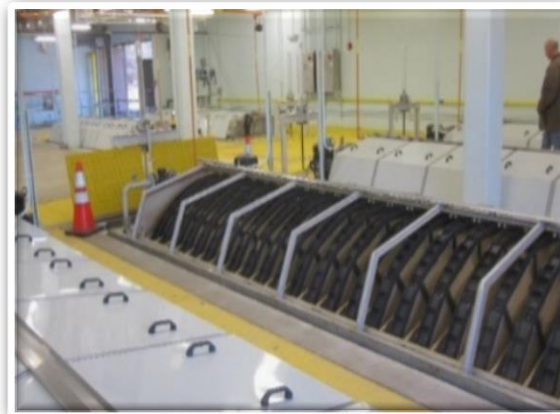
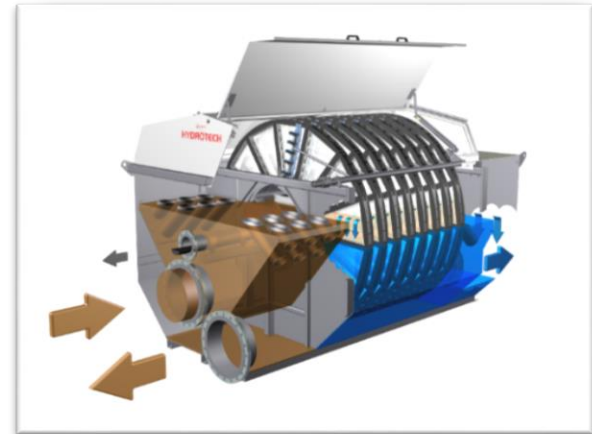
SECTION 1: GENERAL PROVISIONS

(A) This permit is released in accordance with Section 22a-490 of Chapter 446c, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and Section 472(b) of the Clean Water Act, as amended, 33 USC 1251, et



A Cost-Effective, Proven System for Phosphorus Removal

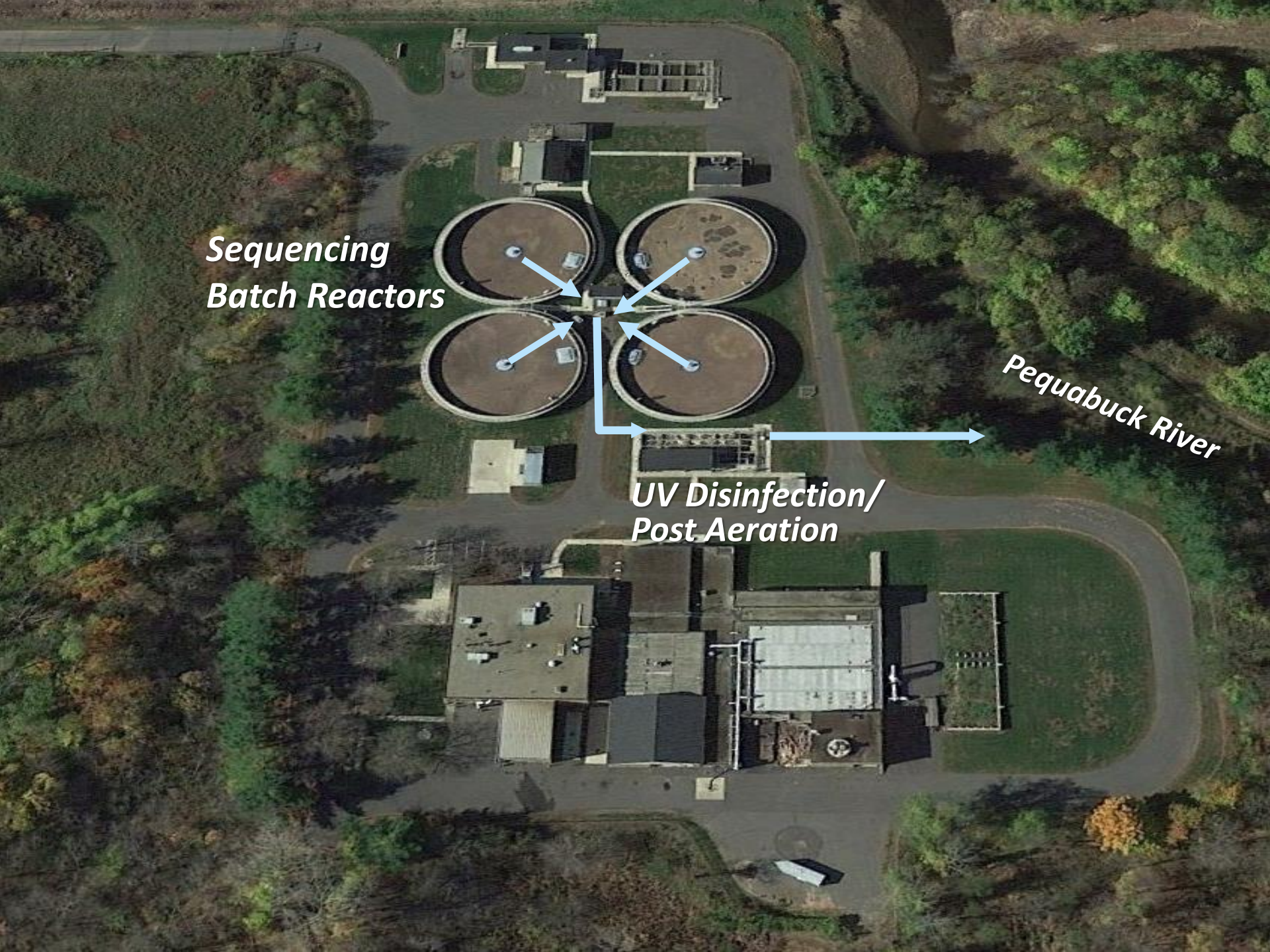
- Conducted bench scale testing
- Selected the best technology



*Sequencing
Batch Reactors*

*UV Disinfection/
Post Aeration*

Pequabuck River



CT DEEP Requires Measures to Reduce Flood Impacts



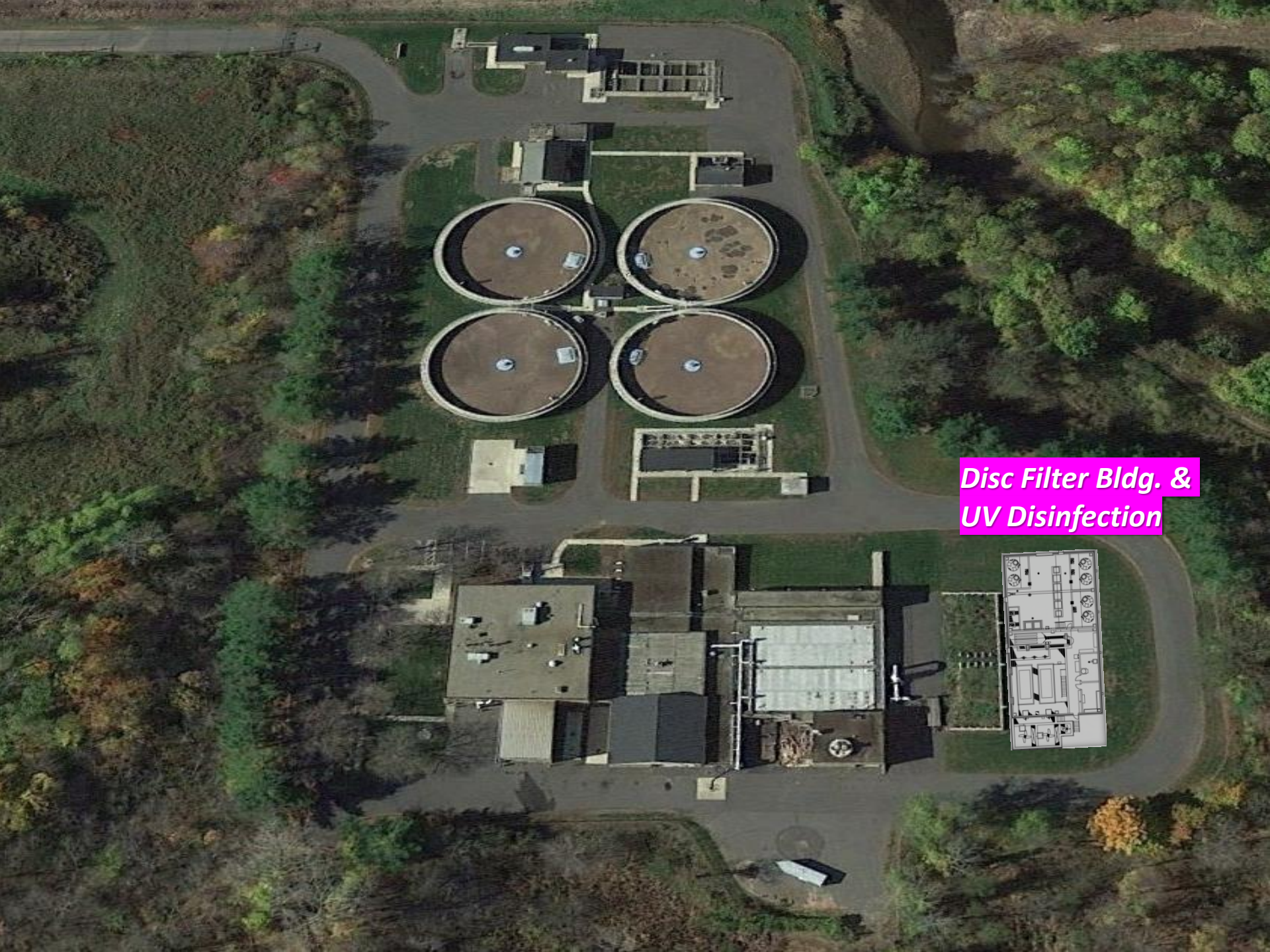
Effects of Tropical Storm Irene, August 2011

*Sequencing
Batch Reactors*

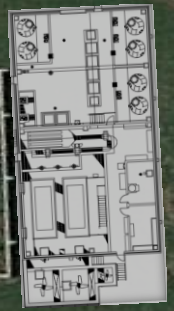


UV Disinfection



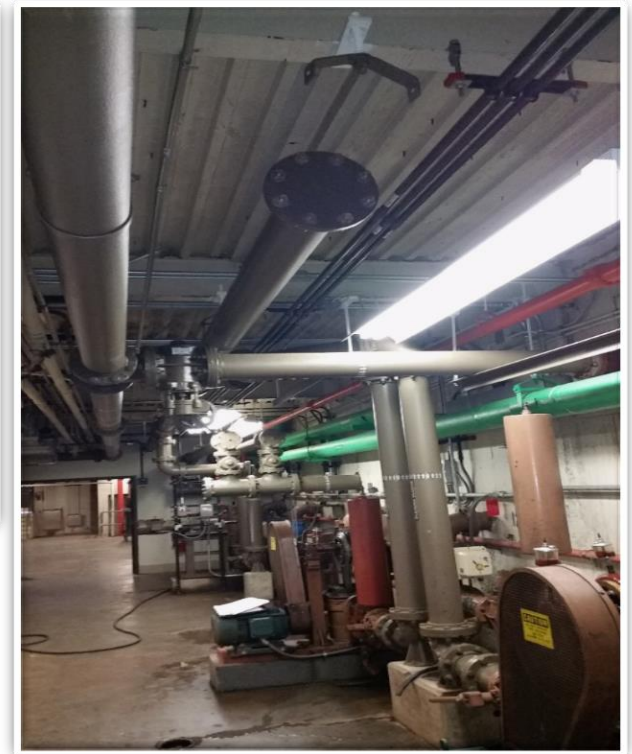


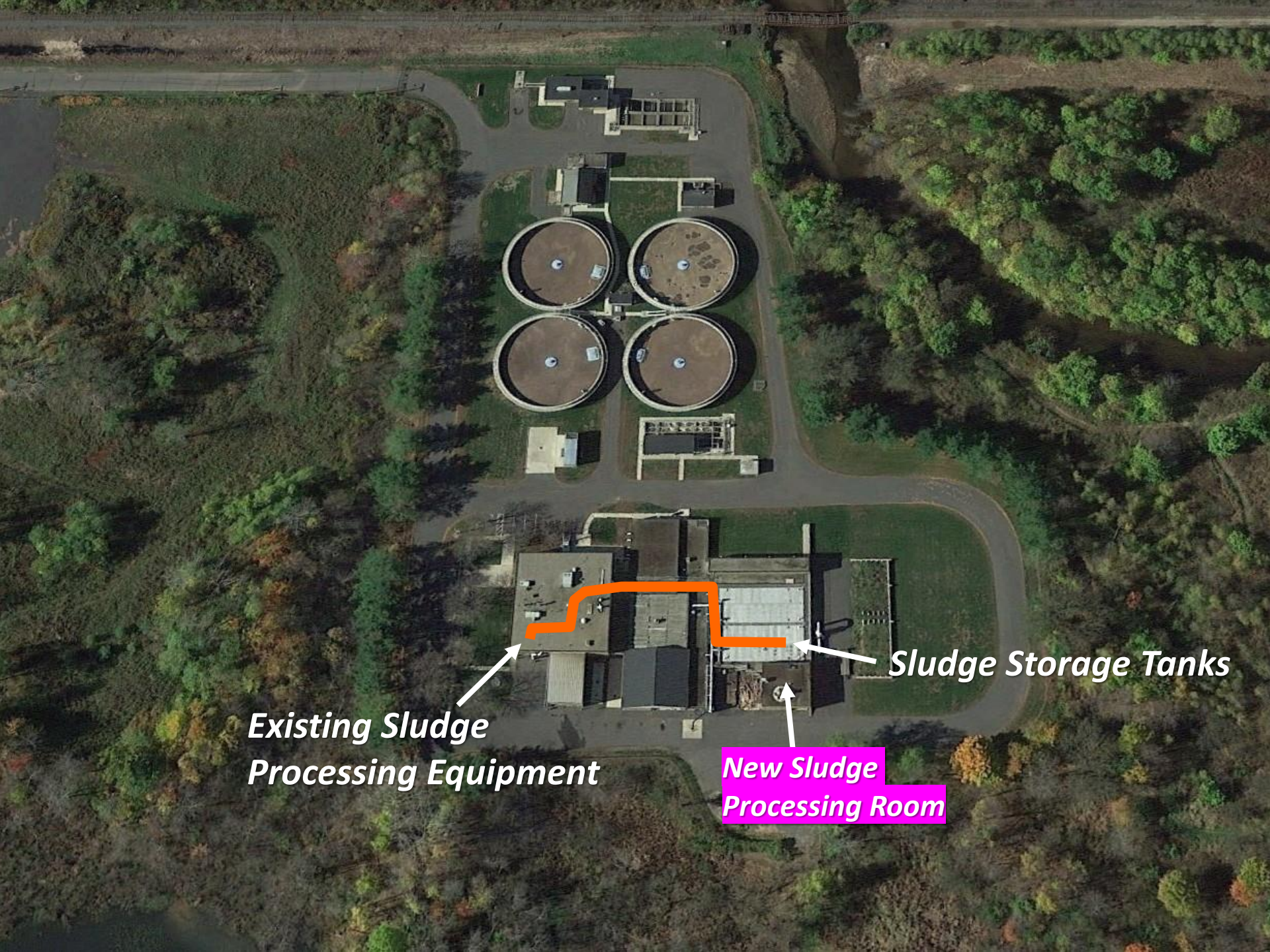
*Disc Filter Bldg. &
UV Disinfection*



Sludge Processing System Improvements are Needed

- Current conditions
 - Aging equipment
 - Limited capacity
 - High O&M
 - 260' sludge piping





**Existing Sludge
Processing Equipment**

Sludge Storage Tanks

**New Sludge
Processing Room**

New Sludge Processing Room (Former Lime Silo Room)

- Improvements provide:
 - Higher capacity to handle phosphorus sludge
 - Improved efficiency and reliability
 - Less maintenance



Estimated Project Cost

| | |
|--|---------------------------|
| Construction Cost | \$12,334,000 |
| Engineering Services | |
| - Design | \$1,192,145 |
| - Construction Admin | \$1,637,000 |
| SCADA Programming and Permitting | \$179,000 |
| Temporary Borrowing Cost | \$419,000 |
| Total Project Cost | \$15,761,000 |
| Grant Funds (41.2%) | (\$6,497,000) |
| <i>Net Cost to Town After Grant</i> | <i>\$9,264,000</i> |

Projected Revenues, Expenses, Fund Balance, and Sewer Rates

| <i>Fiscal Year</i> | <i>2018</i> | <i>2019</i> | <i>2020</i> | <i>2021</i> | <i>2022</i> | <i>2023</i> | <i>2024</i> | <i>2025</i> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Total Revenue</i> | 3,634,000 | 3,806,088 | 3,977,725 | 4,157,601 | 4,314,693 | 4,478,068 | 4,616,120 | 4,725,765 |
| <i>Total Expense</i> | 3,365,246 | 3,432,551 | 4,473,666 | 4,563,139 | 4,654,402 | 4,747,490 | 4,842,440 | 4,939,289 |
| <i>Fund Balance</i> | 3,107,931 | 3,481,468 | 2,985,527 | 2,579,989 | 2,240,280 | 1,970,858 | 1,744,538 | 1,531,014 |
| <i>Typical User Charge (minimum)</i> | \$387 | \$405 | \$425 | \$445 | \$463 | \$481 | \$497 | \$510 |
| <i>User Charge % Increase</i> | 4.80% | 4.80% | 4.80% | 4.80% | 4.00% | 4.00% | 3.25% | 2.50% |

Project Schedule

