Pittsfield Wastewater Treatment Facility Sludge Removal Project

Bond Hearing Presentation

January 13, 2026

HOYLE TANNER

Trusted Experts | Innovative Results

Today's team

Joe Ducharme, PE

Senior Vice President &
Project Manager

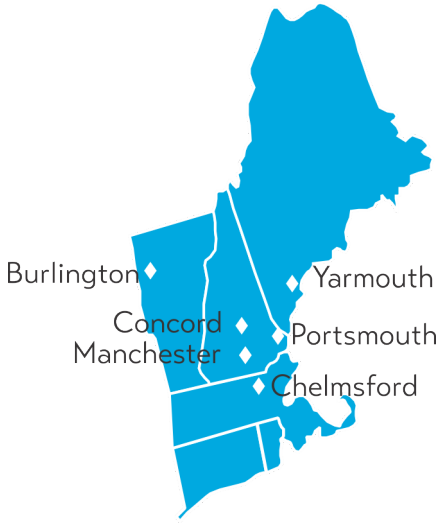
Nichole Davis

Vice President &
Public Outreach Manager

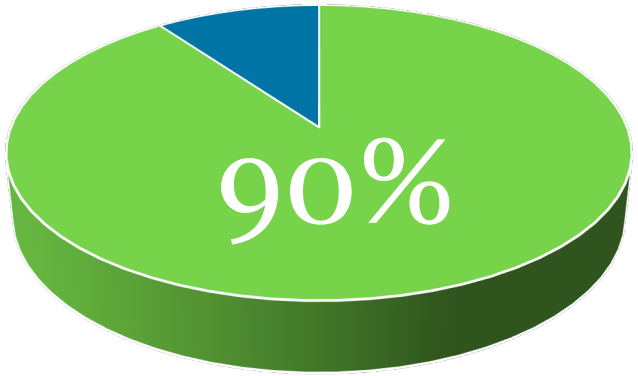
Our Firm

130+

Engineers, surveyors, planners, environmental permitting specialists, technicians, inspectors & administrative personnel



7 offices throughout New England & Florida



Repeat Clients

Delivering engineering solutions for over 50 years

Mission

Dedicated professionals delivering the right solutions connecting people to sustainable environments.

Vision

Our projects will improve the natural and built environments providing healthy and vibrant communities.

Values

Respect • Responsibility • Quality • Commitment

Agenda

1. Existing Facility
2. Discharge Permit Changes
3. Lagoon Sludge Evaluation
4. Next Steps
5. Why Now

Existing Facility

Aerated Lagoon Treatment Process

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Pittsfield Wastewater Treatment Plant

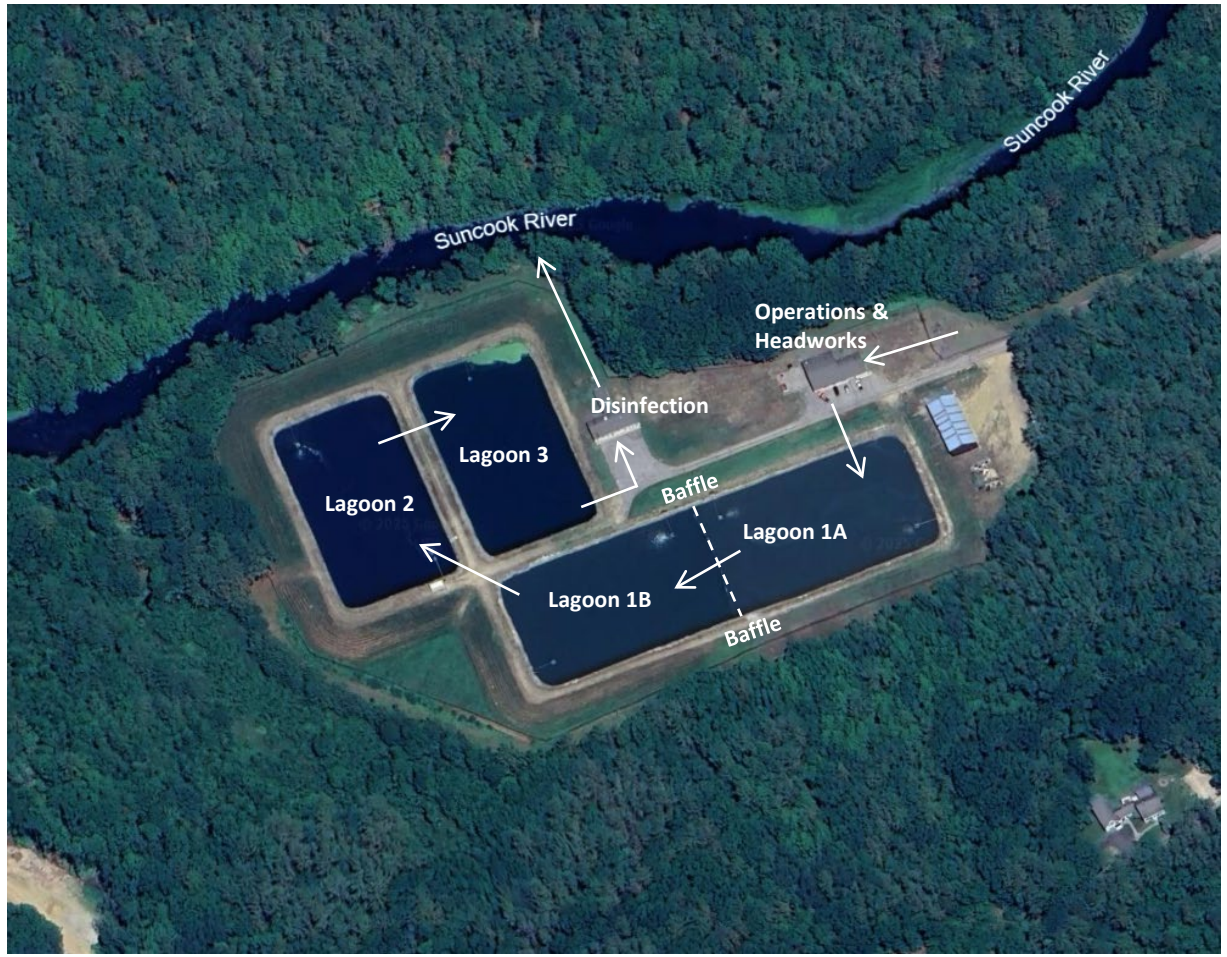
Constructed 1978-80;
Operational in 1981

Designed to treat 0.4 MGD

(1.7MGD peak)

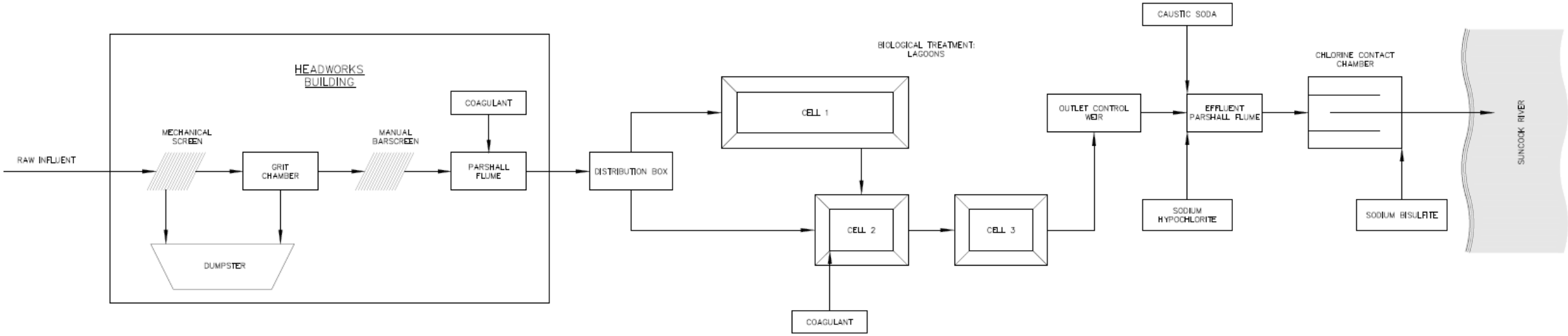
Modest improvements in 2001 & 2009

11 miles of sewers; 3 pump stations; 550 customers



Pittsfield Wastewater Treatment Plant via Google Earth

Existing Treatment Lagoon Process



Limitations of a Lagoon Facility

- Limited treatment capability - designed to reduce biological strength & suspended solids before disinfection.
- Sludge is stored in lagoons over many years for periodic removal (every 10-15 years).
- Accumulated sludge concentrates metals & other contaminants.
- New discharge permits can add new limits or make current limits stricter
- Lagoon treatment facilities provide limited control to meet stricter limits

Discharge Permit Changes

Challenges to Meeting the New Limits

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EPA NPDES Permit Requirements

2015 Permit

Standard biological, solids, disinfection & pH limits;

Total Phosphorous & Ammonia Nitrogen limits

Total Recoverable Copper limit

2023 Permit

Stricter biological & solids limits

Stricter limits for total phosphorous & ammonia nitrogen

Stricter copper limit & new metals limits (Al & Pb)

Testing & reporting for nitrogen & four PFAS compounds

Chemical Addition Pros & Cons

- Began chemical addition in 2016 to meet phosphorous limits
- Chemical addition reduced phosphorous but increased the rate of sludge accumulation
- High sludge volume now affecting biological treatment capacity & solids retention.
- Permit violations - suspended solids & metals over the past two years.

Lagoon Sludge Evaluation

Field Measurements, Sampling & Laboratory Analysis

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Three Step Process

1 – Field Measurements

- Established a grid system for sludge blanket depth, water depth, & blanket thickness measurements in the three lagoons

2 – Field Sampling

- Collected sludge samples from the three lagoons while taking field measurements; created composite samples for independent testing

3 – Laboratory Analysis

- Composite sludge samples sent to a commercial laboratory for testing to establish baseline sludge quality which determines disposal alternatives

Findings

Lagoon Sludge

Outlets for sludge disposal are decreasing

- Sludge in place today estimated to be 993 dry tons (twice the volume in 2001)
- Sludge taking up 40% of lagoon treatment capacity
- Sludge contains heavy metals & PFAS
- Ultimate disposal will likely be to a landfill

Next Steps

Recommend Sludge Removal

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2026 Warrant Article

Warrant Article #2

Sludge Removal Warrant Article

- Project Cost $2,660,000
- Needed to restore lagoon treatment capacity & comply with discharge permit.
- Permit violations have been ongoing – to date no fines incurred.
- No action would result in more permit violations & potential fines.

Sludge Removal

January – June 2026:
Prepare sludge management plan + sludge removal bid package + funding assistance

July – August 2026:
Advertise for bids; select contractor

September – November 2026:
Remove accumulated sludge for disposal &/or storage in geobags

Source: PacTec, Inc.

Funding Opportunities

NH DES Clean Water State Revolving Fund (CWSRF)

- Low-interest loan with loan forgiveness; pre-applications submitted for sludge removal & WWTF design ★★**APPLICATION APPROVED**★★

NH DES State Aid Grant (SAG)

- 20% grant for eligible constructed projects (helps pay down the loan)

US Department of Agriculture (USDA) Rural Utilities

- Combination of low interest loan & grant (apply Spring 2026)

Other Funding Sources

- NH Bond Bank
- Northern Borders Regional Commission (NBRC) matching grant
- Economic Development Administration (EDA) matching grant

Why Now?

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Why Now…

NPDES Discharge Permit

New Discharge Permit has stricter nutrient & metals limits & added requirements. Violations have occurred & the current facility can't meet the limits without removing the sludge.

The Environment

Project will **improve the facility's discharged water quality to the Suncook River** & ultimately the Merrimack River where other communities get their drinking water.

The Community's Future

Improvements will allow the wastewater treatment facility to provide **continual service to current & future residents & businesses**.