

Casnovia Township Wastewater System

Current Status and Background Summary for Residents and Board Members - 3/9/2026

Purpose of This Document

This document provides a factual overview of the regulatory history, risks, and corrective actions related to the Casnovia Township wastewater disposal system (WWDS). Its purpose is to ensure that residents and Township officials understand what occurred, why the situation became serious, and how the Township ultimately moved toward restoring compliance.

The goal is transparency and institutional learning so that similar situations can be prevented in the future.

Regulatory History

Casnovia Township owns and operates a wastewater disposal system that is regulated under a State of Michigan groundwater discharge permit. As the permit holder, the Township has a legal duty to operate and maintain the system in compliance with state environmental laws and permit conditions.

Beginning in **2018**, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) notified the Township that the system was experiencing significant operational problems. EGLE issued a **Violation Notice on November 27, 2018**, documenting that portions of the drain field were saturated and that partially treated wastewater was surfacing. EGLE requested a written response and corrective work plan by **December 31, 2018**.

In **September 2021**, EGLE issued a **Second Violation Notice** documenting continued drain field failures and recurring violations.

On **February 1, 2023**, EGLE issued another **Second Violation Notice (SVN-01310)** summarizing the history of noncompliance. That letter documented repeated exceedances of the system's **10,000 gallon-per-day discharge limit**, numerous monitoring violations, lack of licensed operator oversight, and wastewater surfacing in the disposal field. EGLE stated that due to the length and severity of the violations, the matter was being evaluated for **escalated enforcement**.

A response was eventually transmitted to EGLE on the final day of the prior supervisor's term in office (11/20/2024). However, that response did not address the specific compliance issues identified in EGLE's violation notices and did not resolve any underlying operational problems.

Regulatory and Financial Risks

When wastewater systems fall out of compliance, regulators have authority to pursue enforcement actions intended to protect public health and the environment. These actions can include administrative orders, mandated corrective measures, and civil penalties (fines).

In addition, prolonged system failures can create potential civil exposure if residents or ratepayers suffer damages related to wastewater service problems.

Municipalities typically rely on insurance coverage to mitigate some of these risks. However, most insurance policies require prompt notification when regulatory violations or potential claims arise. When the Township's insurance agent was informed of the wastewater system situation in **early 2025**, the agent indicated that the carrier had **never previously been notified** of the violation notices issued in earlier years. Because timely notice is typically a condition of coverage, this raises the possibility that insurance coverage related to the wastewater violations may be limited or unavailable.

For all these reasons, addressing these issues became an urgent priority for the incoming supervisor starting in early 2025, triggering a months-long investigation along with changes that culminated in a 321 page compliance report on 11/3/2026.

Earlier Engineering Recommendations and the Cost Trajectory the Township Faced

Back in January 2024, the Township had received engineering recommendations suggesting that the wastewater system site was likely unsuitable for continued use. The **Preliminary Engineering Report (PER)** prepared by **Fleis & VandenBrink (F&V)** evaluated multiple alternatives and identified certain "principal alternatives," ultimately recommending a regional conveyance approach.

The PER's cost trajectory is important context because it shows how close the Township came to pursuing expensive solutions before the underlying operational problems were fully investigated.

Costs and Alternatives Presented in the F&V PER (January 2024)

The PER described (among other items) the following estimated costs and feasibility constraints:

A) Subsurface disposal options (with stated feasibility uncertainty):

- **Replace and expand the drainfield at the existing site (if feasible):** estimated capital cost **~\$2.8 million** (including engineering, land acquisition for reserve area, and other project costs).
 - PER noted that this alternative was **not technically feasible unless confirmed** through **~\$150,000** in preliminary design investigations—and those investigations might still determine it is not viable.
- **Expanded community drainfield at a new site:** estimated capital cost **~\$4.2 million** (including land acquisition and engineering), assuming a suitable site can be found.
 - PER again noted feasibility uncertainties and potential cost adjustments tied to investigations.

B) Lagoon alternative (principal alternative):

- **Construct two facultative lagoons at the existing site:** PER table total capital cost **~\$7.69 million** (including non-construction costs, land acquisition assumptions, contingencies, engineering/legal/administration, and a treatment building; with the PER also acknowledging significant siting and permitting challenges).

C) Regional conveyance alternative (recommended alternative):

- **Convey wastewater to the City of Grant WWTP (“Pump to Grant”):** PER table total capital cost **~\$6.37 million**, including an intermediate lift station, approximately 4 miles of sewer/forcemain components, and a stated **\$300,000 City of Grant connection fee**.

Why This Matters for the Township

At the time, these PER narratives and figures placed the Township on a path where the “realistic” choices appeared to be **multi-million-dollar capital projects** (with an intermediate step of **~\$150,000** in additional investigations that still might not produce a feasible on-site solution). This is a very different trajectory than what ultimately occurred.

This matters because:

- The Bailey sewer system is the Township’s **most valuable single public asset** (approximately **\$1.5 million** book value).
- The Township still has material long-term financial obligations tied to the system, including outstanding bond debt on the order of **\$400,000** from original construction.
- Without major outside funding, multi-million-dollar capital projects would have posed serious affordability challenges for the Township and ratepayers.

During the 2025 compliance response effort, the technical review and field work concluded that **the core problems were operational and correctable**, and that key hydrogeologic and

site-specific information already existed in the regulatory record (rather than being a complete “unknown” requiring re-creation at high cost). In other words, the Township was not necessarily locked into the PER’s implied “either/or” between expensive alternatives.

Investigation and Corrective Work

In 2025 the Township’s new licensed wastewater operator, Huron Environmental Consultants, began working with the new supervisor along with additional technical assistance from a local consultant to identify the causes of these long-standing problems.

The investigation included:

- review of historical regulatory records and monitoring data
- evaluation of flow patterns and infiltration issues
- field investigation of drain field conditions
- analysis of wastewater distribution infrastructure
- identification of operational and system management issues

The investigation determined that several factors contributed to the compliance issues, including uneven wastewater distribution, soil compaction in portions of the drain field, infiltration and inflow issues within the collection system, and periodic abnormal influent flow surges, possibly from suspected illicit dumping.

Corrective actions implemented during 2025 included:

- repair/adjustment of distribution valves to restore more even loading of disposal zones
- manual rotation of discharge zones to reduce stress on previously overloaded areas
- identification/correction of a significant infiltration and inflow (I&I) issue in Bailey
- installation of security monitoring measures after suspected illicit discharge events
- engagement of qualified, licensed operator for proper operation and required permit sampling

These corrective actions focused on operational improvements rather than immediate infrastructure replacement.

The total cost of the investigation and compliance response work was **less than \$10,000**, a small fraction of the costs previously contemplated for the PER’s proposed preliminary investigation budget and multi-million-dollar replacement pathways.

The work culminated in preparation of a comprehensive compliance report dated 11/3/2025 documenting the investigation, findings, and corrective actions. A copy is available from the township offices for any interested parties.

Township Board Action

On **December 8, 2025**, the Township Board adopted **Resolution 2025-21**, approving submission of the compliance report to EGLE.

This action represented the Township's first comprehensive response that directly addressed the technical issues raised in the earlier violation notices.

Submission of the report demonstrated to regulators that the Township had investigated the problem, implemented corrective actions, and was working toward restoring compliance.

Early Indicators of Improvement (2025 Flow Data)

A key question for the Township is whether the operational changes made in **August–September 2025** improved system performance. Daily flow data were evaluated for 2 periods:

- **Before improvements:** January 1 – September 3, 2025
- **After improvements:** September 4 – December 31, 2025

The early results are encouraging:

- **Surfaced wastewater at the treatment site**, a longstanding violation, has been completely eliminated except for 2 small spots that require minor turf repair this spring.
- **Average daily flow decreased** from about **6,746 gpd** to **6,055 gpd** (roughly a **10%reduction**). To date (3/9/2026), 2026 trends show continued improvement.
- **Peak daily flow decreased** from about **11,900 gallons** to **8,800 gallons** (about a **26%reduction**). To date (3/9/2026), 2026 trends show continued improvement.
- **High-flow surge days (>10,000 gpd) dropped from 11 days to 0 days**—surge events were eliminated in the post-improvement period. None to date (3/9/2026)
- Day-to-day variability in flow decreased substantially (about a **41% reduction**), indicating more stable operation.

These results suggest that the repairs and operational management changes reduced hydraulic stress on the disposal system, lowered peak loading, eliminated extreme surge events, and produced more stable daily performance.

It is important to note that these findings are based on the initial post-improvement period, and additional work or refinement could still be needed. As of this writing, the Township has

not yet received an EGLE response to the report - and may not. The extent to which the identified issues have impacted the service life of the system is not known. However, right now, data indicates that the system is trending in a healthier direction.

Lessons for the Future

Several important lessons can be drawn from this experience.

Early response matters.

Environmental regulators expect permit holders to respond promptly when violations occur. Delays increase regulatory risk and make problems more difficult and expensive to resolve. There are very serious consequences for noncompliance that cannot be ignored.

Compliance responsibilities cannot be delegated away.

Even when a Township hires consultants or operators, the Township itself remains legally responsible for compliance with its discharge permit.

Operational investigation should occur before major infrastructure decisions.

In this case, operational improvements costing less than **\$10,000** addressed issues that had been framed as requiring **~\$150,000** of additional preliminary investigations and potential infrastructure paths in the **\$6–\$8 million+** range (plus long schedules and ongoing O&M implications). Obtaining second opinions on these matters helps preserve the township's independence and avoid potential conflicts of interest.

Communication and documentation are essential.

Timely communication with regulators, insurers, and the public helps prevent small problems from becoming major liabilities.

Moving Forward

The Township's focus now is to maintain system stability and ensure ongoing compliance with state regulations.

Based on the findings of the 2025 investigation and compliance response, the key elements of maintaining compliance include:

- maintaining licensed operator oversight of the wastewater system
- continuing permit sampling and monitoring requirements
- maintaining and periodically adjusting distribution valves and zone rotation to ensure even loading of the drain field
- continuing efforts to identify and eliminate infiltration and inflow sources within the sewer system

- maintaining security and monitoring measures intended to prevent abnormal or illicit discharge events
 - responding promptly to any future regulatory concerns
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Proposed Sewer System Advisory Committee

One constructive step currently under discussion is the formation of a **Township Sewer System Advisory Committee**.

The purpose of such a committee would be to provide ongoing oversight and institutional memory for the wastewater system. Members could include twp officials, sewer customers, and residents with technical or engineering backgrounds or who are familiar with system operations.

The committee's role would not be to operate the system, but to:

- review monitoring data and system performance
- maintain communication with the Township's licensed operator
- provide early warning when operational concerns arise
- assist the Board in understanding technical issues before they become regulatory problems
- assist the Board with long term planning for the system

Establishing a small advisory group dedicated to wastewater oversight can help ensure that operational issues are addressed promptly and that the Township avoids long periods of inattention that contribute to compliance concerns.

Closing

The events of the past several years highlight the importance of careful investigation, accurate technical analysis, and prompt response to regulatory concerns.

In this case, the Township ultimately avoided a potential path toward very costly infrastructure decisions and instead identified operational solutions that significantly improved system performance at a comparatively small cost.

Continued attention to system operation, monitoring, and oversight will help ensure that the Township's wastewater system remains reliable, compliant, and financially sustainable for the residents it serves.

Prepared for informational purposes to provide a factual overview of the regulatory history and corrective actions related to the Casnovia Township wastewater disposal system.

Contact Supervisor Paul Black with any questions (616) 675-4064 or supervisor@casnoviatownshipmi.gov