# WASTEWATER TREATMENT PLANT
# FAQ

***1. What is a wastewater plant?***
A wastewater treatment plant is a facility that cleans used water and sewage from homes and businesses before releasing it back into the environment. The treatment process removes harmful substances, including organic matter, nutrients like nitrogen and phosphorus, and other pollutants, to ensure the water is safe and meets environmental standards.

***2. How many wastewater treatment plants does the Township have?***
The Township has one wastewater treatment plant located at 1 Astrolabe Rd in Cobden.The plant only services residents within the Village of Cobden.

***3. Why does Cobden need a wastewater treatment plant?***
It serves to safely treat sewage from residents, businesses, and institutions in Cobden, preventing environmental contamination, particularly into Muskrat Lake and the Muskrat River.

***4. What types of waste can the system handle?***
It is designed for standard residential and commercial sewage—not septage or leachate.

***5. Who owns and operates the plant?***
Ownership lies with the Township of Whitewater Region, while the Ontario Clean Water Agency (OCWA) is contracted to handle all operational responsibilities.

The Ontario Clean Water Agency (OCWA) is a non-profit crown agency established in 1993 to provide water and wastewater services that protect public health and the environment across Ontario. OCWA serves both small rural communities and large urban centers, offering technical expertise, operational support, and cost-effective solutions to ensure safe and sustainable water infrastructure.

***6. What is the Cobden Wastewater Treatment Plant?***
The Cobden Wastewater Treatment Plant is a Class III municipal sewage treatment facility serving the Village of Cobden in Ontario. It provides extended aeration, phosphorus removal, and disinfection through a membrane bioreactor (MBR) system.

### *7. What is a Membrane Bioreactor (MBR)?*

An MBR (Membrane Bioreactor) wastewater treatment plant combines biological treatment with membrane filtration to produce high-quality effluent, effectively removing solids and pathogens. Unlike conventional wastewater plants, MBRs eliminate the need for secondary clarifiers (large settling tanks), allowing for a smaller footprint and higher biomass concentrations.

### *8. What regulations or standards does the plant follow?*

It operates under Environmental Compliance Approval (ECA #1-617-79-006), following provincial wastewater regulations and monitored by licensed operators.

### *9. How does the wastewater treatment process work?*

Wastewater flows by gravity into bar screens and grit channels, enters an equalization tank, then undergoes fine screening and biological treatment through MBR tanks. Post-treatment includes ultrafiltration and UV disinfection before discharge.

### *10. What happens to treated water and is it safe for the environment?*

Yes. It undergoes rigorous treatment—extended aeration, phosphorus removal, ultrafiltration via MBR, and UV disinfection—ensuring safe discharge. Effluent is released into the Cobden Marsh, then flows into the Muskrat River and onward to Muskrat Lake.

### *11. What happens to the solid waste (sludge)?*

Activated sludge is aerobically digested, dewatered via centrifuge, and hauled off-site for landfill application.

### *12. What is the design capacity of the wastewater plant?*

The Cobden Wastewater Plant has a design capacity of 1000 cubic meters per day average over the year and a max day capacity of 3,500 cubic meters per day.

### *13. What is a cubic meter of wastewater?*

A cubic meter measures 1 meter in length by 1 meter in width by 1 meter in height. A cubic meter is equal to 1000 litres.

### *14. How much wastewater is treated each day?*

In 2024, the average daily flow was approximately 772 $m^3$/day, about 77% of the facility's 1,000 $m^3$/day capacity. Peak flows exceeded capacity during spring meltoff and heavy rains.

## Wastewater Rates

### *15. Do all residents pay for the Cobden Wastewater Treatment Plant?*

No. Only users connected to the Cobden wastewater collection system contribute to its funding. Cobden Wastewater Treatment Plant is funded annually through a combination of user rates and municipal budget allocations. These include revenues from water and wastewater rates paid by residents and businesses, as well as transfers from provincial funding such as the Ontario Community Infrastructure Fund (OCIF), which help support operations and infrastructure renewal.

### *16. How can I better understand the cost of water and wastewater?*

To better understand the cost of water and wastewater services in the Township of Whitewater Region, residents are encouraged to review the 2024 Water and Wastewater Rate FAQ, which explains rate structures, funding sources, and system challenges. You can access it here:

### *17. What can we expect for rates moving forward?*

Looking ahead, water and wastewater rates in the Township of Whitewater Region will continue to reflect system costs and regulatory requirements, with future adjustments guided by the findings of the 2025 Water and Wastewater Rate Study prepared by Watson & Associates. You can review the full report here:

## Cobden Wastewater Treatment Plant Upgrades

### *18. What was the plant upgraded?*

The original Cobden Wastewater Treatment Plant, constructed in the 1970s, provided only secondary treatment. While preliminary planning began in the 2010s, the Environmental Assessment (EA) process officially commenced around 2014.
The construction for the update was completed between 2018 and 2022, transitioning the facility to tertiary treatment, significantly improving the quality of wastewater discharged into Muskrat Lake by removing organic and inorganic compounds, including nitrogen and phosphorus.

***19. What is the difference between secondary and tertiary treatment?***

Secondary treatment uses biological processes to remove dissolved and suspended organic matter from wastewater, while tertiary treatment goes further by removing nutrients like nitrogen and phosphorus, as well as additional contaminants, to produce higher-quality effluent suitable for discharge or reuse. This helps protect Muskrat Lake and ensures compliance with environmental standards.

***20. What is approval process for the upgrading of the treatment plant?***

To upgrade a wastewater treatment plant in the Township of Whitewater Region, the process begins with a Municipal Class Environmental Assessment (EA) to evaluate the need and identify viable solutions. This is followed by public consultation, design development, regulatory approvals such as Environmental Compliance Approval (ECA), Once approved, the next steps include detailed engineering design, tendering and contractor selection, construction and commissioning, performance monitoring, and ongoing public communication to ensure transparency and regulatory compliance.

***21. Who supported the Township with this approval process?***

The Township of Whitewater Region retained a consultant as the engineering firm of record to complete the Environmental Assessment (EA) process and oversee the design and contract administration for the Cobden Wastewater Treatment Plant upgrade. The consultant was engaged through a formal agreement with the Township.

***22. How was the contractor hired?***

The contractor for the project was hired through a public tendering process initiated in the spring of 2018, which closed on June 22, 2018. On July 4, 2018, the construction tender was officially awarded to a general contractor for a bid amount of $10,980,000 (excluding HST).

***23. When did construction start and end?***

Construction for the Cobden Wastewater Treatment Plant upgrade began after contract documents were executed in October 2018, with sewage redirected into the new facility by October 2021, and the project reached substantial completion in March 2022.

***24. Did the Township receive funding for the Cobden Wastewater Treatment Plant Upgrade?***

Yes, the Township of Whitewater Region received $6,272,954 in funding for the Cobden Wastewater Treatment Plant upgrade through the New Building Canada Fund – Small Communities Fund (NBCF-SCF), approved in June 2015 by the Province of Ontario and the Government of Canada.

The funding application submitted at the time included a total estimated project cost of $9,409,431, based on figures provided by the project engineers. Following tender submissions, the estimate was revised in August 2018 to $12,216,726.

### *25. How much did the project cost?*

In August 2018, the total estimated cost for the Cobden Wastewater Treatment Plant upgrade was $12,216,726, which included engineering, contract administration, and construction as outlined in the tender documents and project reports. The current cost of engineering and construction is $12,780,407.

The final cost of engineering and construction is pending final reconciliation and subject to ongoing dispute resolution proceedings.

### *26. What is the breakdown of this cost?*

The breakdown of the Cobden Wastewater Treatment Plant Upgrade project costs:

Construction Costs

- ·Construction Contract: $10,980,000 (including $400,000 contingency)
- ·Additional Change Orders: $187,702
- ·Total: $11,167,702

Engineering & Contract Administration Cost

- ·EA, Design, Contract Administration: $1,236,726
- ·Contract Administration (Original to Substantial Completion): $204,294
- ·Contract Administration (Post Construction) : $148,109
- ·Other (Hydro and Advertising): $23,576

### *27. How were all of these costs approved?*

All project costs for the Cobden Wastewater Treatment Plant upgrade were approved by Council and/or staff through amendments to existing engineering and construction contracts (i.e., change orders). These approvals were reconciled as part of regular project updates and/or reviewed during the Township's annual budget process to ensure transparency and fiscal accountability.

### *28. Was the project consultant paid more for their services than the approved agreement?*

No. Records confirm that the payments made to the consultant aligned with the updated engineering costing approved in the summer of 2018. The increased costs were related to construction contract administration, which was modified to reflect the design-bid-build approach adopted for the Cobden Wastewater Treatment Plant upgrade. Additional expenditure was incurred as a result of the project extending beyond its originally scheduled completion date.

***29. What is the difference between a design-build and a design-bid-build contract approach?***

A design-build approach involves a single entity responsible for both the design and construction of a project, streamlining communication and potentially accelerating timelines. In contrast, a design-bid-build approach separates these phases—first completing the design, then publicly tendering the construction—allowing for more detailed oversight but often requiring more time and coordination.

This approach was considered appropriate for the Cobden Wastewater Treatment Plant upgrade due to the funding timeline and the need to complete the Environmental Assessment (EA) process, including the Part II Order, which commenced in 2014.

***30. Why was the design-bid-build approach selected for the Cobden Wastewater Treatment Plant upgrade?***

The design-bid-build approach was chosen to expedite project delivery and meet critical funding deadline, which was at risk due to delays in the Environmental Assessment (EA) process - Part II Order. By separating the design from the construction contract, the engineering team was able to initiate a detailed design process immediately.

## Issues and Dispute Resolution

***31. What issues have occurred since the upgrade?***

Since the Cobden Wastewater Treatment Plant reached substantial completion in March 2022, it has experienced multiple overflow incidents and operational challenges. An independent engineering review found that the overflow incidents were primarily caused by design issues, leading to the plant operating with less than the intended capacity for wastewater.

***32. Why do the overflowing events mostly only happen during the spring melt?***

Overflow events during spring melt are primarily attributed to excessive inflow of meltwater and rainfall exceeding the capacity of the Wastewater Treatment Plant. This inflow is largely caused by sump pumps and roof leaders that are improperly connected to the wastewater collection system, allowing excess water to enter during snowmelt or heavy precipitation.

The Township has recently introduced a new Sewer Use By-law (May 2025) to prohibit these connections and reduce inflow, which should assist in mitigating (but does not eliminate) the impact of spring melt on the plant’s operation.

### *33. Why did the Township hire a third-party expert to review the overflow and operational challenges at the new plant?*

The Township hired a third-party engineering expert to conduct an independent review of the design and function of the Cobden Wastewater Treatment Plant following multiple overflow incidents and operational challenges after its substantial completion in March 2022.

The expert found that the overflow incidents were primarily caused by the original design, which did not adequately account for future capacity needs or meet Ministry guidelines. Immediate corrective measures are now underway to improve treatment performance and ensure long-term compliance.

### *34. What is the status of the contractor's claim?*

Construction on the project began in fall 2018, with an initial completion target of October 2020. However, substantial completion was not reached until March 2022. The contractor for the Cobden Wastewater Treatment Plant upgrade, has submitted a claim against the Township alleging delays and design-related changes. The parties have initiated and continue to participate in dispute resolution proceedings, in accordance with the process outlined in the contract documents.

### *35. Will the plant continue to operate during this process?*

Yes, the Cobden Wastewater Treatment Plant remains fully operational during the ongoing dispute resolution process. The Township continues to prioritize its performance and compliance with environmental standards while working on implementing corrective measures to address identified challenges.

### *36. What needs to be fixed at the wastewater treatment plant?*

To address the deficiencies identified at the Cobden Wastewater Treatment Plant, the Township will retain a third-party engineering firm to determine the most effective and efficient solution.

### *37. Who will pay to fix the plant?*

The Township has provided notices of claims against the original design engineer and the contractor to recover costs associated with delays and performance challenges at the Cobden Wastewater Treatment Plant. While the most recent water and wastewater rate study includes a debenture to support necessary upgrades—Council and staff remain committed to minimizing the financial impact on wastewater users.

### *38. Can the fix wait?*

No, the fix cannot wait. If left unaddressed, the membranes at the Cobden Wastewater Treatment Plant will continue to foul, compromising treatment performance and leading to more frequent overflow events, especially during high inflow periods like spring melts. Timely corrective action is essential to maintain compliance with environmental regulations and protect Muskrat Lake.

### *39. Is the Township taking legal action?*

Yes. The Township is actively pursuing and defending its position in ongoing dispute proceedings with the support of legal counsel and third-party experts. This includes addressing both the contractor's claim and the Township's own claim.
These proceedings are being conducted confidentially to comply with the requirements of the relevant agreements and to protect the legal interests of all parties involved.

### *40. Why can't more details be shared?*

At this time, the Township is unable to share additional information due to its contractual obligations and the confidential nature of the legal and dispute resolution processes. This is necessary to protect the legal rights of all parties involved.

### *41. Where can residents find more information?*

Residents can visit https://www.whitewaterregion.ca or contact the Township office for updates, reports, and news releases.Residents can also contact Chief Administrative Officer Ivan Burton at iburton@whitewaterregion.ca or 613-646-2282 Ext. 124.

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