OTTAWA COUNTY FACILITY PLANNING AREAS

Last Updated, 2025

Bay Township Facility Planning Area

The Bay Township Facility Planning Area (FPA) is a designated region within the Bay Township area where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Bay Township (Figure 5-9). Bay Township FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Ottawa County which is represented by Designated Management Agencies. The responsibility of this agency is outlined below:

Designated Management Agency Responsibilities:

- **Ottawa County:** Will plan and construct facilities; and own and operate them if, and when built.

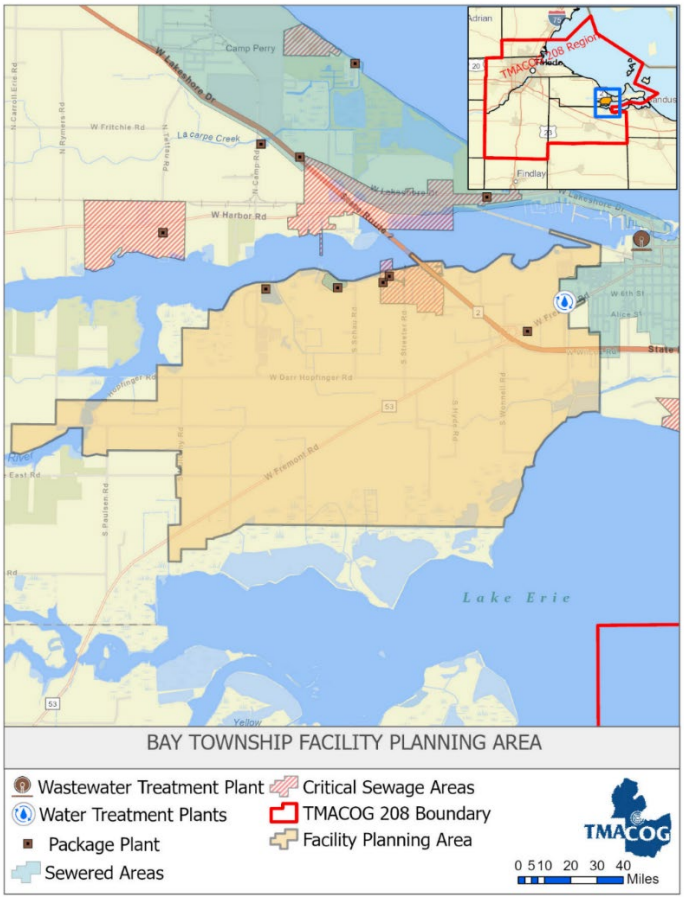

Figure 5 - 9: Bay Township Facility Planning Area

Table 5 - 25: Bay Township Area Population

Area	Population
Bay Township, entire jurisdiction *	1,142
Total	**1,142**

*only part of this jurisdiction is within the FPA boundary.

Source: U.S. Census 2020 decennial census.

Present Facilities

There are no municipal or county sewerage facilities in this area. There are several package plants located within the FPA, these are listed in Table 5-26.

Table 5 - 26: Package Plants in the Bay Township Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity (gpd)
Erie Islands Resort & Marina[A]	OT-135	Private	1989	2PS00008	110,000
Hy-Miler BP Station[A]	OT-06		1969		1,500
Johnny's Resort/Recreational Camp[A]	OT-137	Private	1990	2PR00150	12,500
Lagoon Saloon[A]	OT-147	Private*			4,200
Portage Cove MHP[A]	OT-140	Private*	1985		8,000

[A]Status is active

*Facility type is assumed

Note: Data are based on current available data as of April 2019

Issues

None presently.

Future Needs

Public sanitary sewers may be needed to eliminate existing package plants and serve areas where development occurs. Ottawa County and Bay Township are discussing future potential service area expansions.

The Ottawa County Commissioners incentivize affordable housing. Bringing water and sewer to areas near employers can aid in the Commissioner's directives. Ottawa County plans to explore the possibility of constructing a new wastewater treatment facility to serve Bay Township and Western Portage Township. Because a general plan for water in Bay Township is already complete, a Bay Township general plan for wastewater facilities is planned for 2027.

The capital improvement schedule for the Bay Township FPA is shown in Table 5-27.

Table 5 - 27: Bay Township FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Bay Twp. Regional Wastewater Treatment Plant and Collection System	Ottawa County	$30,000,000							Plan for 2033

Catawba Island/Portage Township Facility Planning Area

The Catawba Island/Portage Township Facility Planning Area (FPA) is a designated region within the Catawba Island and Portage Township area where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Catawba Island/Portage Township (Figure 5-10). Catawba Island/Portage Township FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Ottawa County which is represented by Designated Management Agencies. The responsibility of this agency is outlined below:

Designated Management Agency Responsibilities:

- **Ottawa County**: Owns and operates the wastewater treatment plant and sanitary sewers.

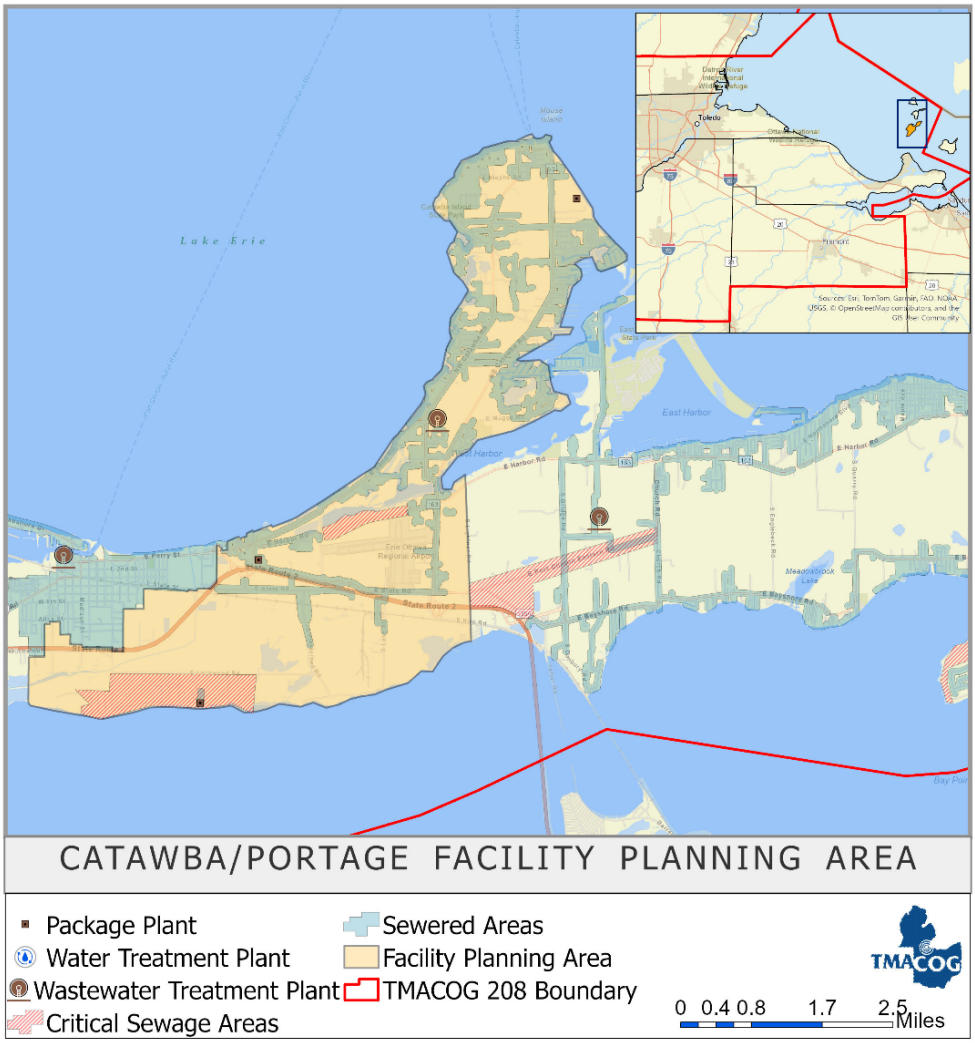

Figure 5 - 10: Catawba Island Facility Planning Area

Table 5 - 28: Catawba Island Area Population

Area	Population
Port Clinton, entire jurisdiction*	6,025
Catawba Island Township, entire jurisdiction	3,711
Portage Township, entire jurisdiction	1,558
Total	**11,294**

*only part of this jurisdiction is within the FPA boundary

Source: U. S. Census 2020 decennial census.

Present Facilities

The Catawba Island/Portage Township WWTP was built in 1991 with the region's last U.S. EPA Construction Grant. Prior to that time, the area was served by private septic systems and more than 50 package plants in Catawba Island Township alone. A 1984 survey found a third of the township's wells contaminated. This WWTP replaced the Catawba Island package plants and another 10 in Portage Township, greatly improving sewage treatment. The facility is an activated sludge plant with two batch reactor units. Because these units operate on a batch rather than continuous flow-through basis, they can accommodate widely varying flow rates. Final effluent goes through chlorination/dechlorination before discharge to Lake Erie. The plant has a summer average daily capacity of 1.34 mgd, and a winter average daily capacity of 0.68 mgd. Ohio EPA data shows an average flow of 0.3722 mgd during the period of 2013-2017.

The Catawba Island/Portage Township system is also unique in the region for its collection system. Much of Catawba Island Township has very shallow bedrock. To reduce construction costs, a pressure sewer system was installed. Individual houses tap into the sewer with grinder pumps, which are owned and operated by the County. The southern part of the system, in Portage Township, is served by conventional gravity sewers. Moore's Dock Road Sanitary Sewer Rehab/Replacement Project was completed in 2021 for $373,623. Package plants located in the FPA are listed in Table 5-29.

Table 5 - 29: Package Plants in the Catawba Island Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Bayshore Inn[A]	OT-116	Private	1987	2PR00164	8,300
Sandy Shores Mobile Home Park[A]	OT-40	Private	1984	2PR00257	12,500
Catawba Shores Mobile Home Park[A]	OT-20	Private*			

[A]Status is active

Note: Data are based on current available data as of April 2019

*Facility type is assumed

Issues

Portage and Catawba Island Townships in Ottawa County are especially popular areas for summer homes, boating, fishing, and other recreational use. These areas developed heavily without the benefit of public sewers. Failed septic systems and dozens of package plants contributed to severe problems with untreated sewage in ditches and streams. Construction of this wastewater plant eliminated many existing pollution problems and allowed further recreational development. Plant capacity is expected to be adequate for future needs.

Future Needs

- Package plants and septic systems should not be permitted in areas that may be served by public sewers.
- Sanitary sewer infrastructure projects are listed in the Capital Improvement Schedule in Table 5-30.

Table 5 - 30: Catawba Island FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
P.S. #450 (SR 53) Upgrade	Ottawa County	**$1,082,330**		2026					
PCl WWTP Sludge Removal Improvements	Ottawa County	**$3,000,000**							2033
SR 163 Sanitary Sewer Extension East of Christy Chapel Road	Ottawa County	**$1,560,787**							2033
SR 163 Sewer Ext. West of Lightner Road	Ottawa County	**TBD**							TBD
Gill Road Sanitary Sewer Extension	Ottawa County	**TBD**							TBD
PCI Grinder Pump Replacement	Ottawa County	**TBD**							TBD
		$5,643,117							

Curtice/Williston Facility Planning Area

The Curtice/Williston Facility Planning Area (FPA) is a designated region within the village of Curtice/Williston area where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Curtice/Williston (Figure 5-11). The Curtice/Williston FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from Lucas and Ottawa Counties. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Ottawa County**: Plans, owns and operates facilities in Ottawa County unincorporated areas.
- **Lucas County:** Plans, owns and operates collection system in Lucas County unincorporated areas.

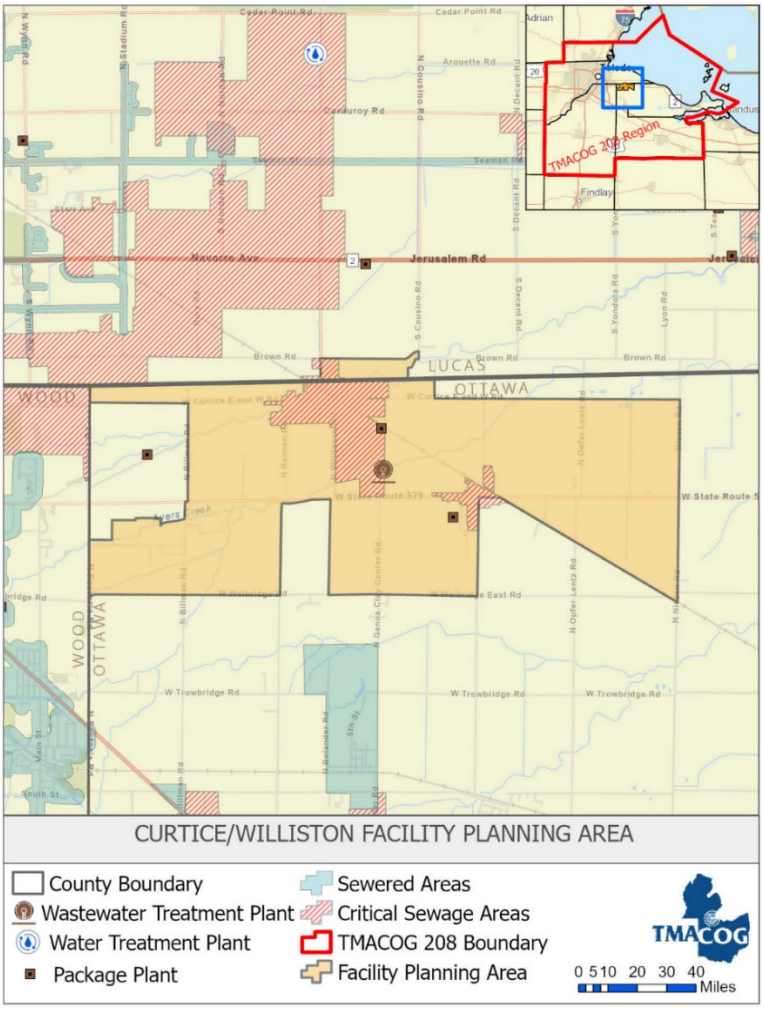

Figure 5 - 11: Curtice/Williston Facility Planning Area

Table 5 - 31: Curtice/Williston Area Population

Area	Population
Allen Township, entire jurisdiction*	2,754
Jerusalem Township, entire jurisdiction*	2,895
Total	**5,649**

*only part of this jurisdiction is within the FPA boundary.
Source U.S. Census 2020 decennial census.

Present Facilities

There are no public sewerage facilities in this Facility Planning Area. There are two package plants: a 57,000 gpd plant at Wildflower Place Subdivision in Curtice and a 32,500 gpd plant at the Luther Home of Mercy in Williston (Table 5-32).

Table 5 - 32: Package Plants in the Curtice/Williston Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Luther Home of Mercy[A]	OT-04	Private	1972, 1983	2PS00013	32,500
Wildflower Place Subdivision[A]	OT-155	Public	1999	2PW00010	57,000

[A]Status is active

Note: Data are based on current available data as of April 2019

Issues

Curtice

Curtice is an unincorporated, unsewered community in Jerusalem (Lucas County) and Allen Townships (Ottawa County). About three quarters of the town is located within Ottawa County.

In 1985, there were 145 houses in Curtice and there has been substantial new construction since that time. Six sewage bypasses to Cedar Creek were found in the village. Both the Toledo-Lucas County Health Department (TLCD) and Ottawa County Health Department have conducted sampling in the area, and found water quality violations due to high bacteria levels. Stream sampling conducted in 2015-2016 by the TLCHD, Ottawa County Health Department and the Ohio EPA documented bacterial concentrations above water quality standards at several stream sampling locations. Sewers are needed to solve the problem. In March 2016, the TLCD sent a letter to Ohio EPA in accordance with Section 6117.34 of the Ohio Revised Code to state a complaint of the unsanitary conditions present in the area.

Williston

Williston is an unincorporated community in Allen Township (Ottawa County); it is larger than either Clay Center or Rocky Ridge. Sewage is treated by home septic systems and one package plant. There is direct evidence that many septic systems have failed, in that there are obvious sewage bypasses to Crane Creek. The largest outfall is on the west side of Martin-Williston Road (Township Road 7), north of the Allen Township Cemetery. A large storm sewer discharges raw sewage and groundwater to the creek here. Ohio EPA or the Ottawa County Health Department should conduct stream and/or septic system tests to confirm the situation.

The single package plant in Williston serves the Luther Home of Mercy, and has a capacity of 32,500 gpd. In 1987, this facility served 127 residents and 300 to 350 staff. A house count at that time put a rough population estimate for Williston at 650. Approximately 90,000 gpd of treatment capacity would be needed to serve the entire town.

Being close, Williston to Curtice, Williston should be included in sewerage facility planning for Curtice - unless sampling fails to document a public health problem. Having both communities together in a sewage project improves the chances that the project will be financially feasible, in addition to solving sewage problems for both towns.

Future Needs

Ottawa County and Lucas County worked in collaboration and hired Poggemeyer Design Group (aka Kleinfelder) to develop a General Plan for the Curtice-Williston Area. The General Plan was prepared in response to the Ottawa County and Lucas County Health Departments and Ohio EPA findings of water quality degradation in Cedar Creek and Crane Creek throughout the Curtice-Williston area. In April 2019, Ottawa County and Lucas County completed a General Plan of Sewerage for the Curtice and Williston Unsewered Area. Since the Genoa WWTP did not have the capacity to provide treatment, the best option was to collect and pump to the City of Oregon WWTP for treatment.

The Curtice and Williston Unsewered Area General Plan was submitted to the Ohio EPA in April 2019 by the two Boards of County Commissioners. Since that time, Ottawa County and Lucas County officials have met with local, state and federal elected officials having jurisdiction over this area; as well as all federal and state funding program representatives assigned to the State of Ohio in an effort to develop an affordable financing plan for the project, which has since risen in cost to approximately $20 million.

The sanitary sewer project as proposed would serve 840 equivalent dwelling units (EDU's); resulting in a $23,553.56 per EDU up-front construction cost. Including Operation, Maintenance and Repair expenses, the estimated bill would be $218.00 per month per EDU. Elected, engineering and administrative officials from both Ottawa County and Lucas County have concluded that the Curtice-Williston Sanitary Sewer Project is unaffordable without substantial grant funding.

In an effort to have a good chance to secure H2Ohio grant funding, Ottawa and Lucas County were advised to prove and document how the Curtice-Williston sanitary sewer project would deliver a "Big Bang for the Buck". On October 22, 24, 28 and 30 in 2019, the Ottawa County Sanitary Engineering Department obtained and tested four E.coli samples, each day, from Cedar Creek and Crane Creek that were taken upstream and downstream of Curtice and Williston. The E.coli test results for Cedar Creek, upstream and downstream of Curtice, did not show substantial stream degradation. The E.coli test results for Crane Creek, upstream and downstream of Williston and the Wildflower Subdivision in Curtice, documented that the stream quality improved since the downstream E.coli concentration was lower than the upstream on every test performed.

Because of the in-house upstream/downstream testing results and recognizing that sufficient grant funding does not exist to affordably enable an area-wide sanitary sewer system to be constructed to serve the Curtice-Williston Area, Ottawa County and Lucas County believe that the only way to proceed is to have the Ohio EPA complete a thorough water quality modeling analysis of the two streams and, at the same time, require the Ottawa County and Lucas County Health Departments to complete a detailed sanitary survey investigation throughout the area. Once this work is completed, sufficient documentation will then exist to substantiate moving forward with the appropriate corrective action solution to remedy the documented problems; which Ottawa County and Lucas County believe (at this point) will be the replacement of on-lot sewage treatment systems that have been confirmed to fail.

A meeting was held on July 14, 2020, with the Ohio EPA, Ottawa County and Lucas County to have an in-depth discussion of the plan moving forward for the Curtice-Williston Area. Ms. Tiffani Kavalec, Chief Division of Surface Water, appreciated the position statement submitted by Ottawa and Lucas Counties. The position statement proposed a sanitary survey of Curtice and Williston to be completed by Ottawa and Lucas County Health Departments as well as request the Ohio EPA to complete a thorough water quality modeling analysis of Cedar and Crane Creeks. An estimated timeline of two years was projected to complete the sanitary surveys and water quality modeling analysis. This timeline may vary depending

on any unknown circumstances related to COVID-19. Ms. Kavalec agreed to prepare a proposal to present to Ms. Laurie Stevenson, Director of the Ohio EPA, for Ms. Stevenson's approval.The Ohio EPA issued and entered the Director's Final Findings and Orders on May 25, 2021 to the Ottawa County Commissioners, Ottawa County Board of Health, Lucas County Commissioners and Lucas County Regional Board of Health for the Unincorporated Areas of Curtice and Williston. Lucas County and Ottawa County respondents shall submit a Home Sewage Sanitary Survey Plan for the Curtice/Williston Areas for Ohio EPA's review and approval. The Home Sewage Sanitary Survey Plan's goal shall be to document the type of system serving each home in the Curtice/Williston Areas and its environmental performance. The Home Sewage Sanitary Survey Plan shall be implemented within two years of the plan's approval by Ohio EPA which can be modified upon written agreement of all Parties.

A 2021 study by the U.S. Geological Survey and Ohio EPA found that Cedar and Crane Creeks near Curtice, Ohio, are significantly impaired by E. coli contamination, with human-origin fecal matter identified as the primary source. Sampling at 12 sites revealed high levels of the human-associated MST marker HF183/BacR287, detected in 97% of all samples and strongly correlated with E. coli concentrations. Notably, 91% of samples exceeded Ohio EPA's E. coli threshold. The Martin Williston Road ditch was highlighted as a significant point source of human contamination along Crane Creek, suggesting upstream inputs as well. While a canine marker (BacCan) was also detected, it overlaps with human waste, limiting its diagnostic value.

The capital improvement plan for the Curtice/Williston FPA is shown in Table 5-33.

Table 5 - 33: Curtice/Williston FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Allen/Jerusalem Twp. Sanitary Sewer System	Lucas County and Ottawa County	$20,000,000							TBD; Dependent upon Modeling, Sanitary Survey, and Financing

Danbury Township Facility Planning Area

Danbury Facility Planning Area (FPA) is a designated region within the township of Danbury where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Danbury Township (Figure 5-12). The Danbury FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within this boundary, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by the Ottawa County which is represented by Designated Management Agencies.

Designated Management Agency Responsibilities:

- **Ottawa County**: Owns and operates the wastewater treatment plant and sanitary sewers in the unincorporated areas and the Village of Marblehead.

Figure 5 - 12: Danbury Township Facility Planning Area

Table 5 - 34: Danbury Township Area Population

Area	Total Population
Marblehead, entire jurisdiction	865
Danbury Township, entire jurisdiction	4,924
Total	**5,789**

Source: U.S. Census 2020 decennial census.

Present Facilities

The Danbury Township WWTP was built to serve the most densely developed portions of the Township. The treatment plant, expanded in 2005, has three facultative aerated lagoons designed for an average flow of 3.8 MGD and peak flow of 6.0 MGD. Ohio EPA data shows an average flow of 1.145 MGD during the period of 2018-2023. Equipment includes a tertiary Actiflo unit and alum feed to meet phosphorus limits. The effluent is chlorinated and dechlorinated before discharging to Sandusky Bay.

Issues

Danbury and Catawba Island Townships in Ottawa County are popular areas for summer homes, boating, fishing, and other recreational uses. These areas developed heavily without public sewers. Failed septic systems and dozens of package plants contributed to severe problems with untreated sewage in ditches and streams. Construction of this wastewater plant eliminated many existing pollution problems and allowed further recreational development. In the years since the construction of the treatment plant, there have been several sewer extensions, providing service to previously unsewered areas. Consequently, the flow has gradually increased.

Future Needs

- Additional sewer extensions are needed to serve areas not covered by the original construction.
- Sewer extensions to eliminate remaining problems areas and provide service to new development. New package plants and septic systems should not be permitted in areas that may be served by public sewers.
- See Table 5-36 for sanitary sewer capital improvement projects in Danbury Township.

Table 5 - 35: Danbury Township FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Danbury Twp. WWTP Alum Feed Improvements	Ottawa County	$250,000		250,000					
Danbury Twp. WWTP Improvements	Ottawa County	$1,604,800				1,604,800			
Church Rd Sanitary Sewer Phase III	Ottawa County	$105,525							2037
SR 163 Sanitary Sewer Extension to Unsewered Areas	Ottawa County	$967,638							2036
Memorial Shoreway Sanitary Sewer Extension (Johnson's Island)	Ottawa County	TBD							TBD
Lightner Road Sanitary Sewer Extension to serve African Lion Safari	Ottawa County	TBD							TBD
Port Clinton Eastern Road Sanitary Sewer Extension (from Bayshore Rd to Church Rd)	Ottawa County	TBD							TBD
		2,927,163							

Elmore Facility Planning Area

Elmore Facility Planning Area (FPA) is a designated region within the Elmore area where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Elmore (Figure 5-13). The Elmore FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within this boundary, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by the Village of Elmore which is represented by Designated Management Agencies.

Designated Management Agency Responsibilities:

- **Village of Elmore**: Owns and operates wastewater treatment facilities, and collection system within the corporate limits.

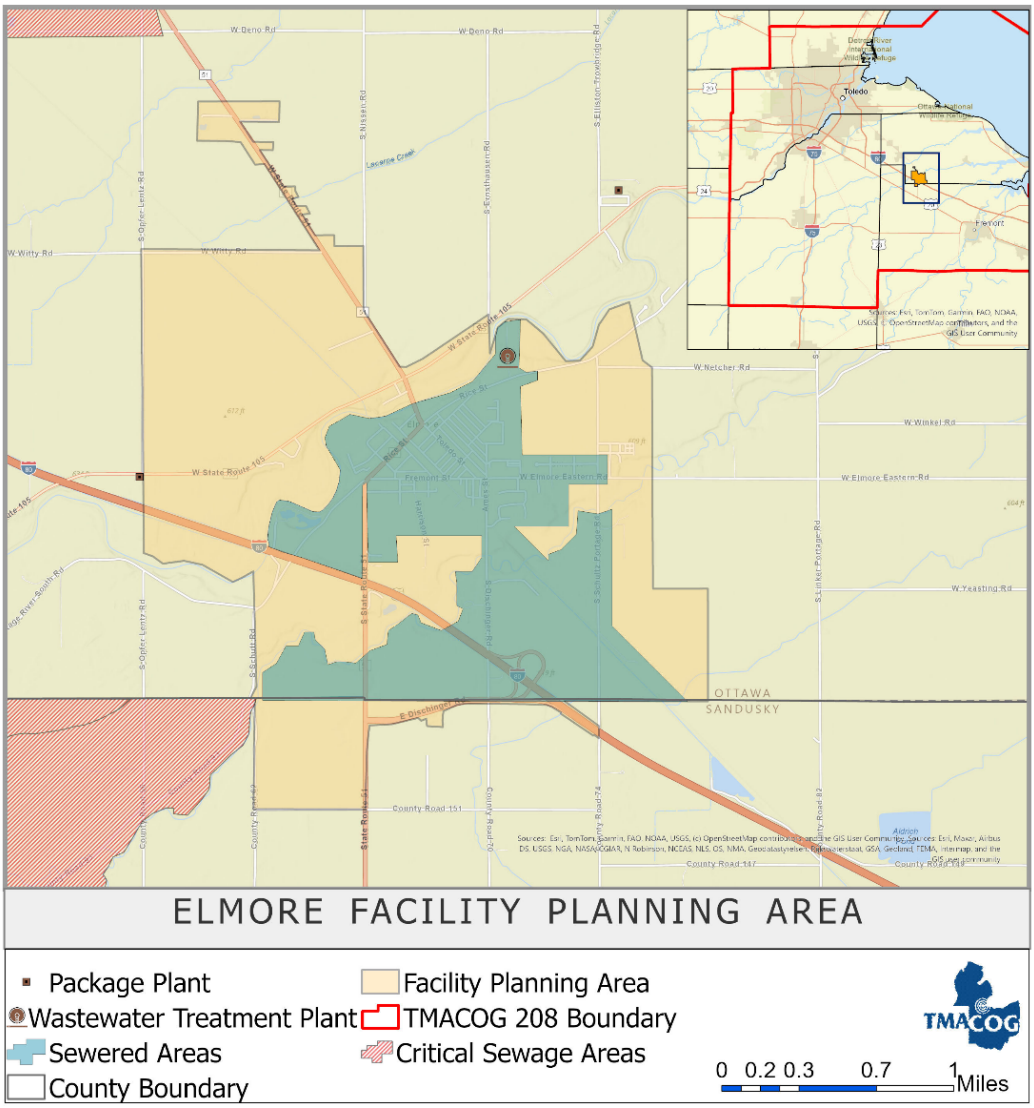

Figure 5 - 13: Elmore Facility Planning Area

Table 5-36: Elmore Area Population

Area	Population
Elmore, entire jurisdiction	1,370
Harris Township, entire jurisdiction (Ottawa County)*	2,910
Washington Township, entire jurisdiction (Sandusky County)*	2,315
Woodville Township, entire jurisdiction (Sandusky County)*	3,303
Total	**9,989**

*only part of this jurisdiction is within the FPA boundary.

Source: U.S. Census 2020 decennial census.

Present Facilities

The Elmore WWTP is an oxidation ditch plant with two clarifiers, aerobic digesters/sludge storage, and ultraviolet disinfection of final effluent. The plant's design capacity is 0.275 mgd, expecting an average daily flow of 0.180 mgd and peak daily 1.25 mgd. Liquid sludge is applied to farmland.

A new pump station was built, routing all flows to the new plant, eliminating the two SSOs. The new plant includes two independent oxidation ditches, giving the facility the ability to treat high storm flows without interfering with the normal wastewater treatment process. During a rainfall event, the oxidation ditch facility can enter a stormwater treatment mode, reducing or eliminating the need for a retention basin.

The Elmore sewer system was formerly combined sanitary and storm. In 1991, work began to separate the system and was completed in 2000 at a total cost of $900,000, all constructed with local funds. In 2009, Elmore completed a Sanitary Sewer Interceptor Replacement and a new Trunk Sanitary Sewer Main project at a cost of $1.1 million, funded largely with Ohio Public Works Commission (OPWC) loans and local funds. The new WWTP was completed in 2013 at a cost of $5.5 million, with financing from the OPWC and the Ohio Water Pollution Control Loan Fund.

Issues

The new wastewater plant is expected to provide adequate treatment capacity, including flows that previously discharged through sanitary sewer overflows. Some sources of I/I have been eliminated, but extraneous flows into the sanitary sewers continue to be a problem. The new plant is designed with peak capacity to treat the wet weather flows.

Future Needs

With completion of sewer separation and a new wastewater treatment plant, Elmore's sewer system will meet the community's needs.

The current NPDES permit indicates:

- The Village of Elmore shall complete an Infiltration and Inflow (I&I) Study and Elimination Program.
- The plan shall be submitted to Ohio EPA not later than 18 months from the effective date of the permit.
- Summary reports shall be submitted not later than March 1 of each year.
- The I&I Study and Elimination Program shall be completed by no later than the expiration of the

permit.

During the time of this review (August 2025), Elmore was in the process of an I&I investigation; as part of this process, they smoke tested about 40% of the Village's storm sewers and shall be contracting to have these sewers televised. The Village was in the planning stages of completing the smoke testing and working with the contractor for the televising portion.

The capital improvement plan for the Elmore FPA is shown in Table 5-37.

Table 5 - 37: Elmore FPA Capital Improvement Schedule

Project	DMA	Total Cost ($)	Annual Capital Improvement Needs ($)						
			2025	2026	2027	2028	2029	2030	Future
I & I plan rehabilitation of sewers lines		237,190					237,190		

Genoa Facility Planning Area

The Genoa Facility Planning Area (FPA) is a designated region within the village of Genoa area where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Genoa (Figure 5-14). The Genoa FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from the village of Genoa and Ottawa County. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Village of Genoa**: Owns and operates wastewater treatment facilities, and collection system within the corporate limits.
- **Ottawa County:** Owns and operates collection system in Ottawa County unincorporated areas, and the Village of Clay Center, connecting to Village system for treatment services. Genoa maintains sewers under contract with Ottawa County.

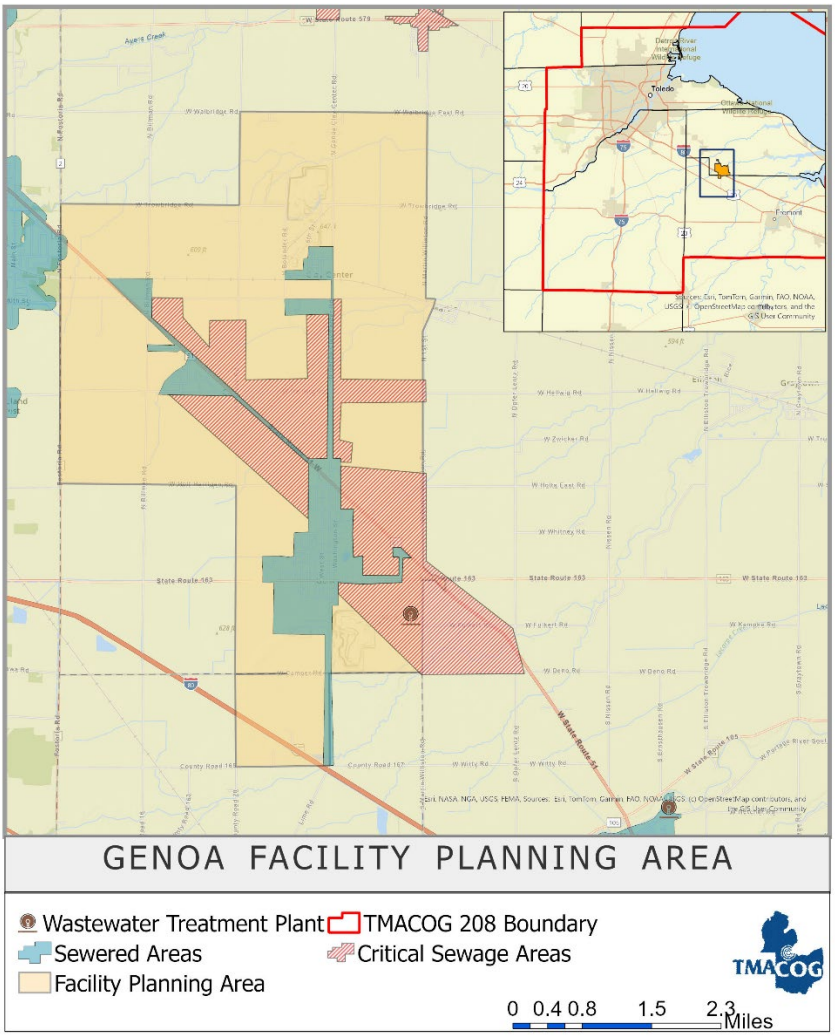

Figure 5 - 14: Genoa Facility Planning Area

Table 5 - 38: Genoa Area Population

Area	Total Population
Genoa, entire jurisdiction	2,232
Clay Center, entire jurisdiction	262
Allen Township, entire jurisdiction*	3,773
Clay Township, entire jurisdiction*	4,825
Woodville Township, entire jurisdiction*	3,303
Total	**14,395**

*only part of this jurisdiction is within the FPA boundary.
Source: U.S. Census 2020 decennial census

Present Facilities

Genoa has a lagoon treatment system with a design flow of 0.60 mgd. Ohio EPA data shows an average flow of 0.401 mgd, and a peak flow of 0.610 mgd during the period of 2004-2009. There are several

package plants in the area; several others have been eliminated by tapping into the Genoa system in recent years, including Woodland Estates, the rest areas at the Ohio Turnpike Rest Areas in Woodville Township located 1.5 miles south of Genoa, Genoa High School, and Guardian Industries.

Genoa completed separation of its sanitary sewer system and elimination of all combined sewer overflows in 2001.

Package plants located in the FPA are listed in Table 5-39. The Greenwood permit calls for the plant to tap into the Genoa system within 60 months (2016).

Table 5 - 39: Package Plants in the Genoa Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Blue Moon Apartments[A]	OT-133	Private	1991	2PW00019	2,000
Ernesto's Restaurant[A]	OT-47	Private	1964,2000	2PR00153	3,000

[A]Status is active

Note: Data are based on current available data as of April 2019

Issues

The Toussaint River TMDL study included sampling at three locations near the Village of Genoa. The results of the sampled data from three sites are as follow:

- **River Mile (RM) 20.20 – Camper Road (upstream of Genoa WWTP):**
  Fecal coliform bacteria levels exceeded the Primary Contact Recreation (PCR) criterion on two occasions. Genoa's sanitary sewer system does not extend south to this location; therefore, the most likely source of contamination is attributed to poorly treated sewage from failing on-lot septic systems.
- **RM 19.65 – Adjacent to Fulkert Road (downstream of Genoa WWTP):**
  Increased concentrations of nitrate+nitrite and phosphorus are observed downstream from the Genoa WWTP. One exceedance of the PCR criterion for fecal coliform bacteria is recorded. Median phosphorus concentrations remain below the target value.
- **RM 18.40 – Fulkert Road (further downstream):**
  Data show continued exceedances for fecal coliform bacteria and elevated levels of strontium and total dissolved solids.

At a downstream location, Martin Wilson Road (RM 11.30), nitrate+nitrite concentrations decrease compared to upstream levels at RM 14.73, yet still remain above the target threshold. Median phosphorus values approach the target of 0.1 µg/L.

The attainment status reported in the TMDL classifies RM 20.2 and 19.65 as in "full attainment" of water quality standards, while RM 18.4 is assessed as "partial attainment" due to sedimentation. Sources of impairment at RM 18.4 include row crop agriculture and quarry activity. Exceedances for fecal coliform bacteria and strontium are documented at all three Genoa-area sites, with total dissolved solids additionally exceeding limits at RM 18.4.

Clay Township

High bacteria levels in streams due to failed septic systems have long been documented. The areas of concern are in Clay Township Section 20. Providing sanitary sewers to these areas would significantly improve South Branch Turtle Creek. The health concerns indicated by the County Health Department would also improve dramatically. In response to these issues, a building ban was imposed several years ago. Ottawa County, the Village of Genoa, and the Village of Clay Center developed plans for expansion of the Genoa WWTP costing $500,000, and a phased extension of sanitary sewers. Several phases have been built; sewers for the Village of Clay Center and along Genoa-Clay Center Road were completed in 2004.

Future Needs

- Continue and complete Allen/Clay Township sewers (Phase V). Phase VI (areas adjacent to the Village of Genoa) both depend on financing.
- Implementation of the Toussaint River Basin TMDL calls for reducing phosphorus loadings to this watershed. In 2015, Ohio EPA set a deadline for a General Plan to meet 1.0 mg/l monthly average effluent phosphorus. The capital improvement plan supports state and federal financial assistance to implement the facilities needed.
- The village is currently studying expansion scenarios for their WWTP. This study will show that the WWTP could be feasibly expanded to 3.5 MGD. An expansion, expected to be to 1.0 MGD, is expected to start with the installation of a new aeration system in 2027. Cost estimates are expected by the end of 2025.

The capital improvement plan for the Genoa FPA is shown in Table 5-40.

Table 5 - 40: Genoa FPA Capital Improvements Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Allen / Clay Twp. Sanitary Sewer Extension, Phase 5	Ottawa County	**$2,388,750**							2035
Allen / Clay Twp. Sanitary Sewer Extension, Phase 6	Ottawa County	**$2,754,640**							2040
		$5,143,390							

Locust Point Facility Planning Area

Locust Point Township Facility Planning Area (FPA) is a designated region within the village of Locust Point where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Locust Point (Figure 5-15). The Locust Point FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from Carroll Township Regional Water and Sewer District. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Carroll Township Regional Water and Sewer District**: Responsible for planning sewerage facilities, and will own and operate a system, if and when built.

Figure 5 - 15: Locust Point Facility Planning Area

Table 5 - 41: Locust Point Area Population

Area	Population
Carroll Township, entire jurisdiction	2,117
Total	**2,117**

Source U.S. Census 2020 decennial census.

Present Facilities

The Locust Point area includes numerous marinas, mobile home parks, summer and permanent residences, and the Davis Besse nuclear power plant. There are several package plants in this area (Table 5-42), and several marinas that use honey tanks. Like in Danbury and Catawba Townships, growth in the recreational industry has applied pressure for adequate sewage treatment to accommodate the growth.

Table 5 - 42: Package Plants in the Locust Point Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Fenwick Marina[A]	OT-156	Public		2PR00130	15,000
First Energy Davis Besse Nuclear Power Plant[A]	OT-10A	Private	1974	2IB00011	15,000
First Energy Davis Besse Nuclear Power Plant[A]	OT-10B	Private	1974	2IB00011	23,000
Green Cove Condominiums[A]	OT-117	Private	1987	2PS00007	77,000
Inland Mobile Home Park/Magee East Marina[A]	OT-12	Private		2PY00074	35,000
Magee Marsh Nature Center[A]	OT-13	Private*	1971		6,000
Turtle Creek Marina & Campground[A]	OT-160	Private	2006	2PS00011	20,000

[A]Status is active

*Facility type is assumed

Note: Data are based on current available data as of April 2019

Issues

Although less heavily developed than Danbury or Catawba Island Townships, the situation is similar: pressure for lakefront recreational development has preceded the availability of sanitary sewers. Ohio EPA notes septic sewage issues in storm sewers in beach-front housing areas. It would be better for the existing package plants in these areas to tap into a join system to solve this problem.

The density of development, especially along the lake front where many houses are on small lots, calls for a public sewer system. Additional development will only make the problem worse, and the need greater.

Ohio EPA conducted a Total Maximum Daily Load (TMDL) study of the Toussaint River in 2003, which includes part of this FPA.

Future Needs

A General Plan or facilities study will be needed to determine how best to serve this area. There are no projects planned for the Locust Point FPA at the present.

Middle Bass Facility Planning Area

Middle Bass Facility Planning Area (FPA) is a designated region within the village of Middle Bass where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by wastewater treatment facilities in the village of Middle Bass (Figure 5-16). The Middle Bass FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from Ottawa County. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Ottawa County:** Will own and operate sewerage system, if and when built.

Figure 5 - 16: Middle Bass Facility Planning Area

Table 5 - 43: Middle Bass Area Population

Area	Population
Put-in-Bay Township, entire jurisdiction*	813
Total	**813**

*Only part of this jurisdiction is within the FPA boundary.
Source: U.S. Census 2020 decennial census.

Present Facilities

There are no public wastewater treatment facilities in this FPA.

Package plants in the FPA are listed in Table 5-44.

Table 5 - 44: Package Plants in the Middle Bass Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
East Point Villas[A]	OT-158	Private	2005	2PW00017	4,000
Lake Erie Utilities Co.[A]	OT-128	Private	1988	2PR00057	62,000
Middle Bass Club[A]	OT-92	Private	1980	2PW00020	5,000
St. Hazard[A]	OT-148	Private		2PR00117	35,000
Walleye's, J.F. Restaurant[A]	OT-152	Private	1997	2PR00125	15,000

[A]Status is active

Note: Data are based on current available data as of April 2019

Issues

Like South Bass Island, sewage treatment needs for Middle Bass are driven much more by peak recreational use during the summer than by year-round residents. As part of redeveloping the Lonz Winery property, the Lonz and Burgundy Bay Subdivision package plants were eliminated. The new Lake Erie Utilities plant serves Burgundy Bay and the Ohio Department of Natural Resources (ODNR) park.

In the long-term, the need for a central sewerage system for the island will increase. Development has continued, and individual systems are an increasing problem. Of note is beach front housing on small lots, notably on the island's north panhandle.

Future Needs

- The Township and County should evaluate long-term options to meet wastewater treatment needs. A facilities study should be prepared to evaluate need, feasibility, and financing. Options may include:
    - A single wastewater plant serving the entire island.
    - A single wastewater plant serving all Middle Bass Island and all or part of South Bass Island.
    - Provide wastewater treatment service for all Middle Bass Island and all or part of South Bass Island by connecting to the Catawba Island/Portage Township WWTP.

There are no projects planned for the Middle Bass FPA at present.

Oak Harbor Facility Planning Area

Oak Harbor Facility Planning Area (FPA) is a designated region within the village of Oak Harbor where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Oak Harbor (Figure 5-17). The FPA ensures that wastewater infrastructure is adequately planned to

meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from the village of Oak Harbor and Ottawa County. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Village of Oak Harbor**: Owns and operates the wastewater treatment facility and collection system within the corporate limits, and operates the collection system in unincorporated areas, connecting to the village system.
- **Ottawa County:** Owns the collection system in Ottawa County unincorporated areas, connecting to the village system for treatment services.

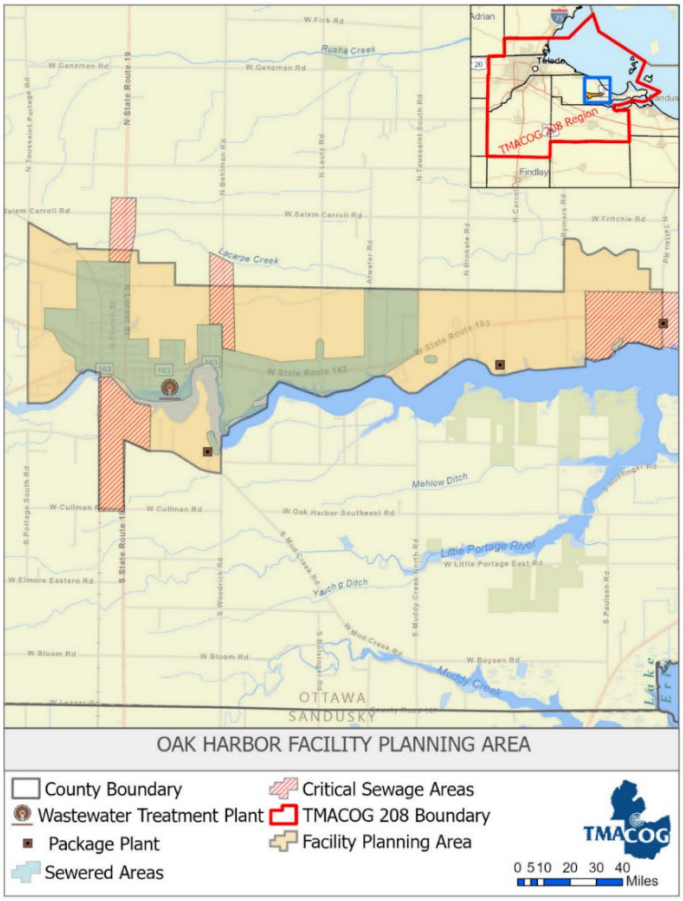

Figure 5 - 17: Oak Harbor Facility Planning Area

Table 5 - 45: Oak Harbor Area Population

Area	Population
Oak Harbor, entire jurisdiction	2,821
Salem Township, entire jurisdiction*	5,311
Total	**8,132**

*only part of this jurisdiction is within the FPA boundary.

Source: U.S. Census 2020 decennial census

Present Facilities

The Oak Harbor WWTP is a trickling filter plant with an average flow capacity of 0.930 mgd. Ohio EPA data shows an average flow of 0.678 mgd and a peak flow of 7.333 mgd during the period of 2004-2009. The treatment processes include primary settling, pre-aeration, trickling filters, final settling, and ultra-violet disinfection. The peak capacity while meeting effluent standards is 2.16 mgd. The peak hydraulic capacity is 4.33 mgd at which rate 2.16 mgd receives complete treatment, and the additional 2.17 mgd receives primary treatment and disinfection. Sludge handling facilities have been upgraded. The new facilities were completed in 2000 at a cost of $1,003,563, and include aerobic digestion and a belt filter press. Class B Sludge may be applied to farmland, disposed of in a solid waste landfill, or taken to another municipal wastewater treatment plant, commonly referred to as Publicly Owned Treatment Works (POTW).

In 1990, Oak Harbor completed major storm sewer improvements, to separate storm runoff from the sanitary sewer system. Four major storm sewers were built: (1) Locust Street, from Main to the Portage River; (2) Finke Street, its entire length to the river; (3) Toussaint Street from Walnut to the river; and (4) Locust from North Railroad Street to Lacarpe Creek. The project cost was $1.276 million, locally funded. These improvements should substantially reduce Oak Harbor's I/I problems and reduce bypassing.

- The collections system currently has seven permitted overflow points. An updated LTCP was approved by OEPA in 2018. The 2018 LTCP includes constructing a new storm sewer and sanitary sewer in the Church Street corridor from S. Railroad Street to the Portage River, installing a CSO Basin Overflow at the 5MG retention basin, installing a storm sewer at the intersection of State Route 19 and Main Street, installing a storm sewer on Oak Street and potentially closing CSO's 8 and 10, in addition to the previously closed CSO's 2, 4, and 7. These new facilities were completed in June 2021 at the cost of $9.2 million. Funding was provided by local funds and the USDS in the form of grants and loans.
- Park Street from State Route 19 to Church Street was totally reconstructed including a new storm sewer directed to the Church Street Storm at a cost of $400,000. This was completed in July 2021. This project was funded by local funds and the Ohio Public Works Commission.
- Oak Harbor completed a Long-Term Control Plan (LTCP) that was approved by Ohio EPA in 2004. The plan includes a collection and treatment solution, with an intercepting sewer between the present combined sewer overflows (CSOs) and the river and a 5.0 million gallon CSO retention basin. Other improvements include screening and pumping facilities for the CSO retention basin. The new facilities and repairs were completed in 2013 at a cost of $7.62 million.

Package plants located in the FPA are listed in Table 5-46.

Table 5 - 46: Package Plants in the Oak Harbor Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Chet's Place Campground[A]	OT-159	Public	2006	2PR00234	3,500
Portage Pointe Condos/Oak Harbor Golf Course[A]	OT-115	Public	1986	2PR00127	12,000

[A]Status is active

Note: Data are based on current available data as of April 2019

Future Needs

- Additional sewer separation projects will be built if required to reduce extraneous stormwater entering the system and reduce CSO events.
- Sewer extensions to eliminate remaining problem areas and provide service to new development. New package plants and septic systems should not be permitted in areas that may be served by public sewers. Several areas have been identified as needing service:
  - South of the Portage River, Ohio EPA testing identified septic sewage in a ditch crossing SR 19.
  - Tap residences along SR 19 north of the Village into the sewer system, up to Salem-Carroll Road.

The capital improvement plan for the Oak Harbor FPA is shown in Table 5-47.

Table 5 - 47: Oak Harbor FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Salem Twp. – Behlman Rd Sewer Extension	Ottawa County	$4,000,050							2036

Port Clinton Facility Planning Area

Port Clinton Facility Planning Area (FPA) is a designated region within the city of Port Clinton where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Port Clinton (Figure 5-18). The Port Clinton FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from the city of Port Clinton and Ottawa County. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- The **City of Port Clinton**: Owns and operates wastewater treatment facilities, and the collection system within the corporate limits.
- **Ottawa County:** Owns the collection system in unincorporated areas, except as agreed between Ottawa County and the City of Port Clinton. Additionally, Ottawa County operates the collection system in unincorporated areas, except as agreed upon between Ottawa County and the City of Port Clinton. All sewers in the planning area connect to the Port Clinton system for treatment services under contract.

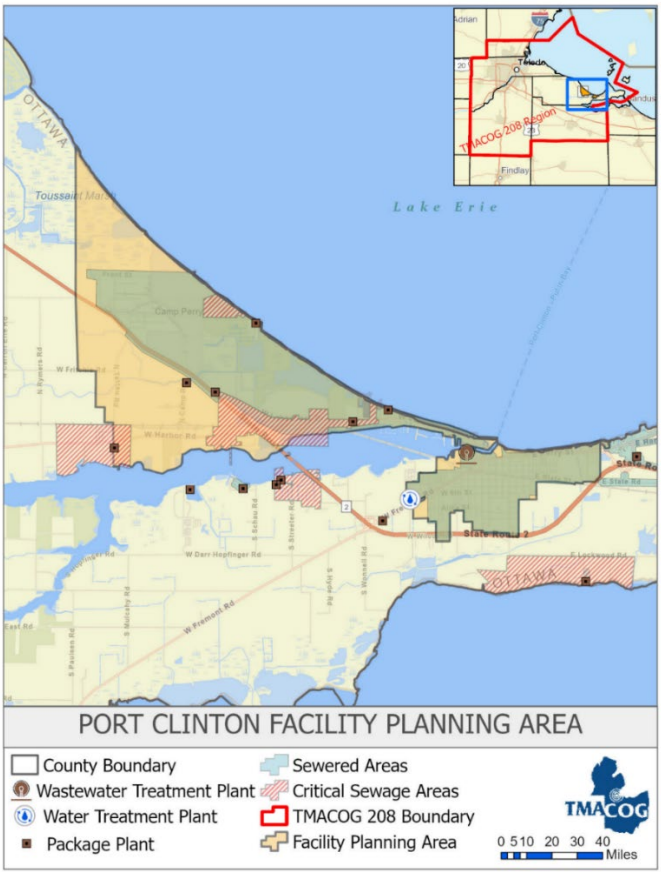

Figure 5 - 18: Port Clinton Facility Planning Area

Table 5 - 48: Port Clinton Area Population

Area	Population
Port Clinton	6, 025
Bay Township, entire jurisdiction*	1,142
Erie Township, entire jurisdiction*	1,147
Total	**8,314**

*only part of this jurisdiction is within the FPA boundary.

Source: U.S. Census 2020 decennial census

Present Facilities

Port Clinton has an activated sludge plant which experiences heavy I/I flows. The treatment plant began Port Clinton has an activated sludge plant which experiences heavy I/I flows. The treatment plant began expansion with the completion of Phase I in 2004. Phase I included new primary treatment, chlorination, and the Actiflo system. The design average daily flow rate is 2.0 mgd; the plant has a peak daily design for secondary treatment of 4.0 mgd, and a peak daily flow rate of 24.0 mgd for their Actiflo system. The City of Port Clinton's Wastewater Treatment Plant has an average daily flow of approximately 2.699 MGD. This translates to an estimated annual treatment volume of around 985 million gallons. The Port Clinton system experiences heavy I/I flows; the purpose of the Actiflo system is to enable the plant to treat as much storm flow as possible up to 24.0 mgd and meet permit requirements under high flow

conditions. The extraneous water results in overflows from the system's combined sewer overflow (CSO) into the Portage River. Duckbill valves which stopped the inflow from high lake levels were installed on the CSOs in the late 1990s, decreasing peak flows by about 1.0 mgd. The amount of inflow the system receives is influenced by the lake level. Dechlorination facilities were added to the plant in 1995.

The wastewater plant underwent an extensive upgrade and capacity expansion to treat wet weather capacity.

- The first phase (Phase IA) included new headworks, modified the influent coarse screening, replaced influent fine screening, and modified the chlorine contact chamber. An Actiflo system capable of handling 24.0 total mgd was also installed: a compact device that includes screening, flocculation, settling, and disinfection. The normal daily flow is sent directly to secondary treatment while the Actiflo system is used for' during wet weather flows.

  The second phase expanded the biological treatment, final clarifiers, and sludge handling. The upgraded plant produces Class B sludge, dewatered by sludge press, and was completed in 2009.

Since 1999, Port Clinton has received a series of state and federal grants, including federal line-items of $1.4 million in 1999, $485,000 in 2001, and $630,000 and $607,433 in 2003. In addition, Port Clinton secured an Ohio Public Works Commission (OPWC) grants/loans, State and Tribal Assistance Grant (STAG) funding of $257,957. In all, Port Clinton raised $3.7 million in federal and state grants from 1999-2003. In 2006, Port Clinton applied for $3.266 million in financing from the Ohio Water Pollution Control (OWPC) Loan Fund for Phase II improvements. In 2008, a $2.79 million low-interest loan was approved by the Ohio EPA Water Pollution Control Loan Fund for the second phase of Port Clinton's Long-Term Control Plan to increase plant capacity. These projects have all been completed.

There are several package sewage treatment plants located in the Port Clinton FPA; they are listed in Table 5-49.

Table 5 - 49: Package Plants in the Port Clinton Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Perry House[A]	OT-67	Private*	1969		2,500
Portage View Mobile Home Park[A]	OT-68	Private	1985	2PY00056	12,500
Sunset Inn[I]	OT-69	Private*	1974		9,000
White Caps Campground[A]	OT-144	Private*	1988		6,000
Willow Beach Trailer Park[A]	OT-73	Private	1964	2PY00085	9,000
Wagon Wheel[I]	OT-71	Private	1960	2PY00084	12,500

[A]Status is active; [I]Status is inactive

*Facility type is assumed

Note: Data are based on current available data as of April 2019

Issues

Combined Sewer Overflows

Port Clinton's combined sewer overflows have been addressed per the Consent Decree with U.S. EPA. All but one CSO has been eliminated, by utilizing the Actiflo system, stopping lake inflow to remaining CSO, and current sewer separation projects

The city is under a consent decree with U.S. EPA for its CSOs. In 2000, Port Clinton eliminated three CSOs, is not accepting new sewer taps in the combined sewer area and installed flap valves on all remaining regulators. In 2003, the pump stations were upgraded, with new pumps and controls, greater capacity, at a cost of $700,000. In 2004, the Jackson Street CSO regulator was eliminated, leaving the Port Clinton system with one CSO point (Adams Street). In 2012, telemetering was added to the Adams Street CSO.

Package Plants and Onsite Sewage Systems

In 2009, the force main connecting Camp Perry with the Port Clinton sewerage system was completed. For reasons of environmental protection, public health, and financial viability of sewer system improvements, it is necessary that existing package plants and onsite systems be eliminated, and restrictions be placed on new onsite systems. The following restrictions apply to §§ 21, 22, 26, 27, 28, 33, 34, 35, and 36 of Erie Township in this FPA when Ottawa County and Port Clinton deem the force main connecting Camp Perry with Port Clinton available for local service connections along its route:

- No new package plants shall be permitted; connection to the Port Clinton sewerage system shall be required.
- No replacement package plants shall be permitted; connection to the Port Clinton sewerage system shall be required.
- No upgraded package plants shall be permitted; connection to the Port Clinton sewerage system shall be required. Repairs to maintain proper operation are allowed when they do not change the design capacity of the package plant or make a fundamental design change required to comply with effluent standards.
- No new onsite sewage treatment systems shall be permitted:
    - Except for property where no sanitary sewer connecting to the Port Clinton sewerage system is Available and Accessible (see **Chapter 5**), and provided the on-site system produces no off-lot discharge;
    - In all other cases, connection to the Port Clinton sewerage system shall be required.
- Existing on-site sewage disposal or treatment systems may not be replaced, repaired, or upgraded where a sanitary sewer connecting to the Port Clinton sewerage system is Available and Accessible.
- Existing on-site sewage disposal or treatment systems may be replaced, repaired, or upgraded, but only where the complete system is on-lot, and it produces no off-lot discharge, and where no sanitary sewer connecting to the Port Clinton sewerage system is Available and accessible.

Future Needs

- Ottawa County and the City of Port Clinton wastewater treatment services agreement for a portion of Erie Township, including Camp Perry, the Erie Industrial Park, and the BFI landfill. The first areas served were Camp Perry and Fenner Dunlop, completed in 2009. A sewer to collect the BFI landfill's leachate is planned at an estimated cost of $860,345.
- With the expansion and upgrade of the WWTP completed, the plant will handle wet weather flow substantially better than the old system. Port Clinton will continue to separate sewers as feasible.

- In February 2018, Ottawa County entered into a contract with Underground Utilities to install sewers in the Ascher Beach Area at the east end of the Erie Township: SR 163 and Richey Road Critical Sewage Area. The project, an assessment initiative, was completed in August 2018 and resulted in the elimination of three package plants: Spinnaker Bay, Wagon Wheel, and Transmissions Unlimited. The eastern boundary of the critical sewage area is now defined as the western boundary of Spinnaker Bay Condominium (north side of SR 163) and the western boundary of Transmissions Unlimited (south side of SR 163). Following consultation with the City of Port Clinton, it was determined that all parcels within the Richey Road portion of this Critical Sewage Area (16C-OT), with one exception, are now connected to the existing sewer collection system. The only unconnected parcel is the former Jackknife Marina at the end of Richey Road, which lies outside city limits and is currently inactive as a marina. The property contains one single-family dwelling with a holding tank, and the owner has expressed interest in connecting to the sewer system in the future. Since the parcel is located outside city limits but within the City of Port Clinton's 208 FPA, any future development plans will prompt consultation with the City to explore connection options. Ottawa County recommends renaming this area from "Erie Twp: SR 163 and Richey Road" to **"Erie Twp: SR 163 and Lakeshore Drive"** to more accurately reflect the updated service area boundaries.

The capital improvement plan for the Port Clinton FPA is shown in Table 5-50.

Table 5 - 50: Port Clinton FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Erie Twp. Sanitary Sewer Extension	Ottawa County	$3,847,156							2034

Put-In-Bay Facility Planning Area

The Put-in-Bay Facility Planning Area (FPA) is a designated region within the village of Put-in-Bay where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Put-in-Bay (Figure 5-19). The Put-in-Bay FPA ensures that wastewater infrastructure is adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from the Village of Put-in-Bay and Ottawa County. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Village of Put-in-Bay**: Owns and operates wastewater treatment facilities, and the collection system within the corporate limits. Sets standards for collection system in unincorporated area, which the Village will own and operate after construction.
- **Ottawa County:** Plans and may construct the collection system in unincorporated areas, connecting

to Village system for treatment services.

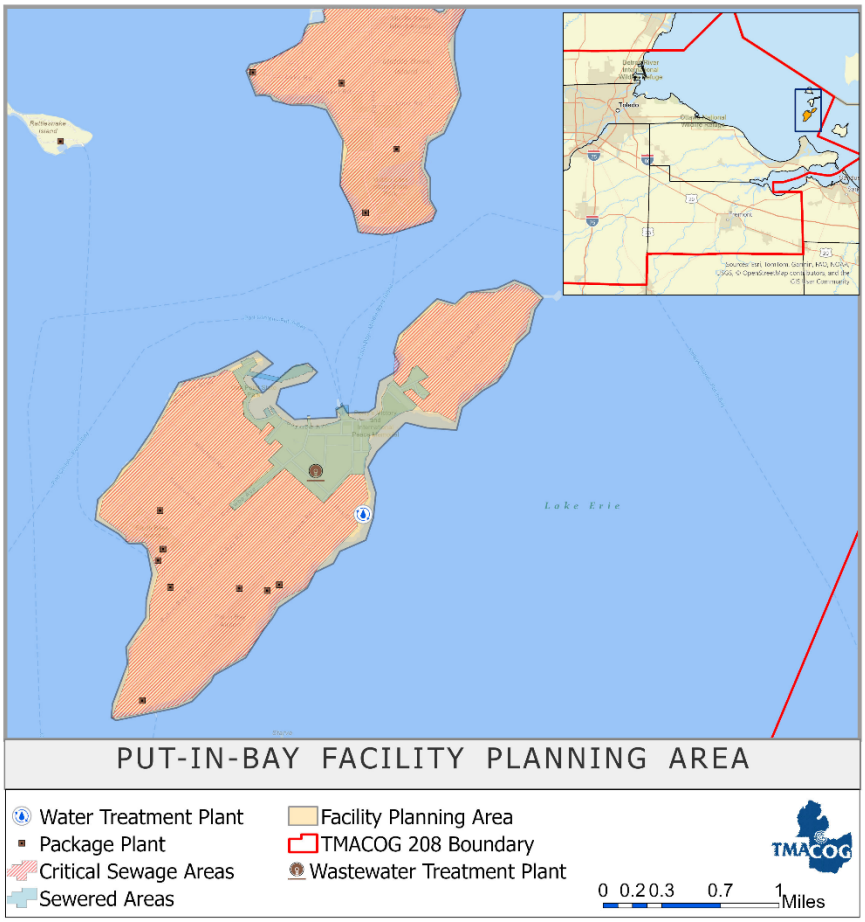

Figure 5 - 19: Put-in-Bay Facility Planning Area

Table 5 - 51: Put-in-Bay Area Population

Area	Population
Put-in-Bay, entire jurisdiction	154
Put-in-Bay Township, entire jurisdiction*	813
Total	**967**

*only part of this jurisdiction is within the FPA boundary.
Source: U.S. Census 2020 decennial census.

Present Facilities

The Put-in-Bay wastewater plant was built in the early 1980s, originally to serve the central downtown area of the Village, eliminating package plants and individual septic systems. Like other coastal areas in Ottawa County, the served population on a summer weekend is far greater than the permanent residents. While there are only 128 year-round residents in the Village, there are often 10,000 persons in town during the spring and summer. The treatment plant is a sequencing batch reactor (SBR) activated sludge facility with a design capacity of 500,000 gpd in three SBR units with fine bubble diffusers, ultraviolet disinfection, sludge dewatering and storage, and standby power generator. The plant was expanded in 2010 with the third SBR unit costing $890,000 from the Corps of Engineers, $650,000 from the Ohio Public Works Commission (OPWC), up to $1.3 million from American Recovery and

Reinvestment Act (ARRA), and a low interest loan from Ohio Water Development Authority (OWDA).

In 2004, the summer average daily flow was 0.1 mgd, and the peak daily was 0.31 mgd. The winter average daily flow was 0.03 mgd and the peak daily was 0.28 mgd. The WWTP was originally designed based on a waste stream of 300 mg/L BOD_5. As the service area has expanded, the influent strength has regularly approached 200 mg/L BOD_5.

Before the installation of the current treatment plant, the Village used a 0.12 mgd extended aeration plant. This plant is still used as an aerobic digester during summer months when the system experiences its peak organic loadings.

There are several package plants in the unincorporated areas of South Bass Island (Table 5-52).

Table 5 - 52: Package Plants in the Put-in-Bay Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Bird's Nest[A]	OT-86	Private	1982	2PR00208	7,000
Fox's Den Campground[A]	OT-90	Private	1980	2PR00207	5,000
Island Club MHP[A]	OT-136	Private	1988	2PR00074	29,000
Miller Boat Lines[A]	OT-153	Private		2PR00154	5,000
Put-in-Bay Condos[A]	OT-142	Private	1987	2PR00222	10,600
Saunder's Resort South[A]	OT-93	Private	1983	2PR00133	4,500
South Bass Island State Park[A]	OT-95	Public	1992	2PP00045	20,000
Victory Park Resort[A]	OT-97	Private*	1958	No discharge	1,500

[A]Status is active
*Facility type is assumed
Note: Data are based on current available data as of April 2019

Issues

The existing system should be expanded to serve the entire Village. Most of the Village is presently served; the remaining areas should be connected. A public sewerage system is needed to serve as much of the developed part of South Bass Island as possible. Conventional extended aeration package plants are poorly suited to handle widely varying flow rates. When small treatment plants receive surge flows, they provide little wastewater treatment.

The Ottawa County Health Department is concerned with the potential for failed septic systems on South Bass Island. The Health Department determines the adequacy of septic systems whenever there is an application for a building or development permit, and during mortgage inspections. In addition, all permits currently issued for new or replacement septic systems include a requirement for annual inspections of the septic system and an operational and maintenance permit for the life of the septic system. Whenever the Health Department finds evidence of a failed or failing septic system it requires the owner to replace the septic system.

The village is working with Ohio EPA to create a phosphorous reduction plan. This is currently in the planning stage and will be updated once next steps are determined.

Package Plants and Onsite Sewage Systems

Ohio EPA, Ottawa County Commissioners, Ottawa County Health Department, and the Put-in-Bay

Township Trustees negotiated Findings & Orders that impose a Special Connection Ban on South Bass Island. For reasons of environmental protection, public health, and financial viability of sewer system improvements restrictions need to be placed on new on-site systems and package plants. The following restrictions apply to the entirety of South Bass Island:

- No new package plants shall be permitted; connection to the Put-in-Bay sewerage system shall be required.
- No replacement package plants shall be permitted; connection to the Put-in-Bay sewerage system shall be required.
- No expansions to existing package plants shall be permitted; connection to the Put-in-Bay sewerage system shall be required. This shall not preclude an expansion to a system that is in violation of its National Pollutant Discharge Elimination System (NPDES) permit and expansion is necessary to handle existing flows so long as a connection to the Put-in-Bay system is not available or accessible. If a plant is expanded under this condition, no additional connections to the system will be permitted.
- Repairs to maintain proper operation are allowed when they do not change the design capacity of the package plant.
- No new onsite or off-site sewage treatment systems shall be permitted:
    - except for the limited situations identified in the Ohio EPA's 2008 Findings and Orders;
    - until the Special Connection Ban in the Ohio EPA's 2008 Findings and Orders has been lifted.
- Existing on-site and off-site sewage disposal or treatment systems may not be replaced, repaired, or upgraded where a sanitary sewer connecting to the Put-in-Bay sewerage system is Available and Accessible (see **Chapter 6**).
- The term "off-site sewage system" means a sewage system with a discharge that will leave the property where the system is located, including, but not limited to a discharge to a storm sewer, ditch, or surface water.

Future Needs

- Sewer extensions will be needed to provide service in the Township portions of South Bass Island, and some parts of the Village of Put-in-Bay as well. The township portions are estimated at millions.
- The existing wastewater plant requires additional capacity for future needs. The Village, Township, and County have entered a long-term agreement that addresses service needs for South Bass and Gibraltar Islands; Stone Lab on Gibraltar Island was connected to the Put-in-Bay sewer in 2007. Sewage flows vary greatly by season and weekday versus weekend.

  The capital improvement plan for the Put-in-Bay FPA is shown in Table 5-53.

Table 5 - 53: Put-in-Bay FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs ($)						
			2025	2026	2027	2028	2029	2030	Future
Delaware St. 400' sewer lining	PIB				50,000				
Biosolids Drying Pad Upgrade	PIB	**100,000**			100,000				
PIB Township Sewer Extensions	Ottawa County	**TBD**							2045
Storm from Toledo to Cincinnati		**50,000**	50,000						
Cincinnati storm sewer to Bath Street to lake discharge		**60,000**		60,000					
Storm from Concord Str to Erie Str		**50,000**			50,000				
Stoiber Dorms to park drain system		**50,000**				50,000			

Several additional infrastructure projects are underway with costs and timelines to be updated. New 3" forced main from monument to LS to Toledo gravity sewer for future use

- Sybil LPS from water plant to Langram Ave. gravity sewer
- Toledo Ave LPS to Langram Ave.
- Reverse flow on Loraine Ave. to wastewater plant, lowering load on the Bathhouse LS
- Extending Shore Villas/East Point Rd. LPS system
- Extension of gravity sewer from Catawba LS to State Park using Catawba Ave.
- Change flow from Bayshore Resort to Back Bay Condos to lower loading on Bath Str. LS

Rocky Ridge Facility Planning Area

The Rocky Ridge Facility Planning Area (FPA) is a designated region within the village of Rocky Ridge where wastewater management, including sewage treatment and disposal, is planned and coordinated. The FPA boundaries define the areas that are expected to be serviced by the wastewater treatment facilities in Rocky Rideg (Figure 5-21). The Rocky Ridge FPA ensures that wastewater infrastructure is

adequately planned to meet the needs of the population within these boundaries, considering factors like population growth, environmental impacts, and regulatory requirements. This FPA is managed by Designated Management Agencies from the Rocky Ridge. The responsibilities of these agencies are outlined below:

Designated Management Agency Responsibilities:

- **Rocky Ridge**: Responsible for planning public sewerage system; and will own and operate it if, and when built.

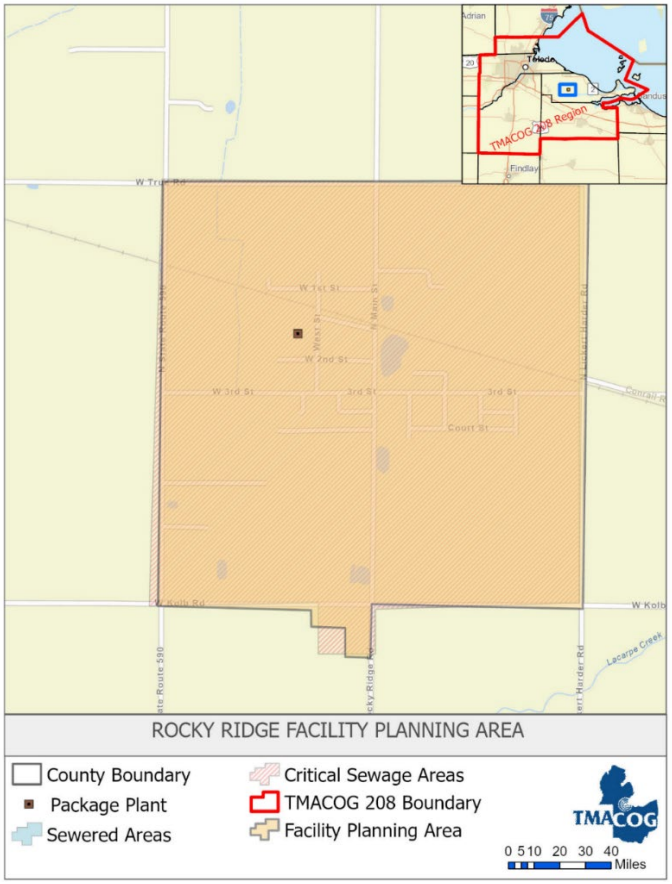

Figure 5 - 20: Rocky Ridge Facility Planning Area

Table 5 - 54: Rocky Ridge Area Population

Area	Population
Rocky Ridge, entire jurisdiction	312
Estimates within the FPA boundary	

Source: U.S. Census 2020 decennial census.

Present Facilities

The Village of Rocky Ridge does not have a treatment or a collection system and has been identified as having health problems due to the presence of septic tank effluent in the local ditches. Rocky Ridge School has a 2,100 gpd package plant; otherwise, the Village is served by individual septic systems, many

of which are believed to be failing.

Package plants located in the FPA are listed in Table 5-55.

Table 5 - 55: Package Plants in the Rocky Ridge Facility Planning Area

Package Plant	Map ID	Type	Install or Upgrade Date	NPDES Permit	Capacity, gpd
Zinser HomesteadI	OT-08	Private	1984	2PT00029	2,100

[I]Status is inactive

Note: Data are based on current available data as of April 2019

Issues

Rocky Ridge's need for a public sewerage system has been long documented. The town is not under orders, however, and there is no currently active project.

The Toussaint River TMDL notes, "Further downstream at Rocky Ridge Road (RM 10.45), fecal coliform bacteria levels exceeded the PCR [Primary Contact Recreation] criterion on one occasion and strontium levels remained elevated. Bacteria levels were likely influenced by the discharge of poorly treated sewage from the unsewered Village of Rocky Ridge."

Future Needs

Rocky Ridge should prepare a General Plan to identify the most cost-effective sewerage option. Implementation should include preparing a financing plan that will make the system affordable to residents. An income survey may be needed to support grant and low interest loan applications.

Building sewers in Rocky Ridge would be expensive because of its shallow bedrock. On the positive side, the Village seems likely to qualify for grant programs. If a sewer system were built, the most likely treatment options would be:

- A new treatment plant for Rocky Ridge.
- Tap into the existing Oak Harbor system; the western edge of the Oak Harbor FPA is about 2.5 miles from the eastern corporate limits of Rocky Ridge.

The capital improvement plan for the Rocky Ridge FPA is shown in Table 5-56.

Table 5 - 56: Rocky Ridge FPA Capital Improvement Schedule

Project	DMA	Total Cost	Annual Capital Improvement Needs						
			2025	2026	2027	2028	2029	2030	Future
Rocky Ridge Sanitary Sewer Project	Ottawa County	TBD							2045