

Appendix 9-4

Erie County Facility Planning Areas

excerpted from:

TMACOG Areawide Water Quality Management Plan
June, 2002

TMACOG AREAWIDE WATER QUALITY MANAGEMENT PLAN

CHAPTER 3: WATER QUALITY MANAGEMENT FRAMEWORK

CHAPTER 4: PUBLIC WASTEWATER TREATMENT FACILITY PLANNING AREAS

June, 2002



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ERIE COUNTY FACILITY PLANNING AREAS

BAY VIEW FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- **Erie County:** Will serve as the lead agency for sewers to serve this area. Will own and operate sewers in unincorporated areas of Erie County. Will own and operate either a treatment facility to serve the area or a sewer line to connect to the Sandusky system.
- **Sandusky County:** Will own and operate sewers in unincorporated areas of Sandusky County.
- **Village of Bay View:** Will own and either operate or arrange for the operation of sewers within the corporate limits.

Bay View Facility Planning Area

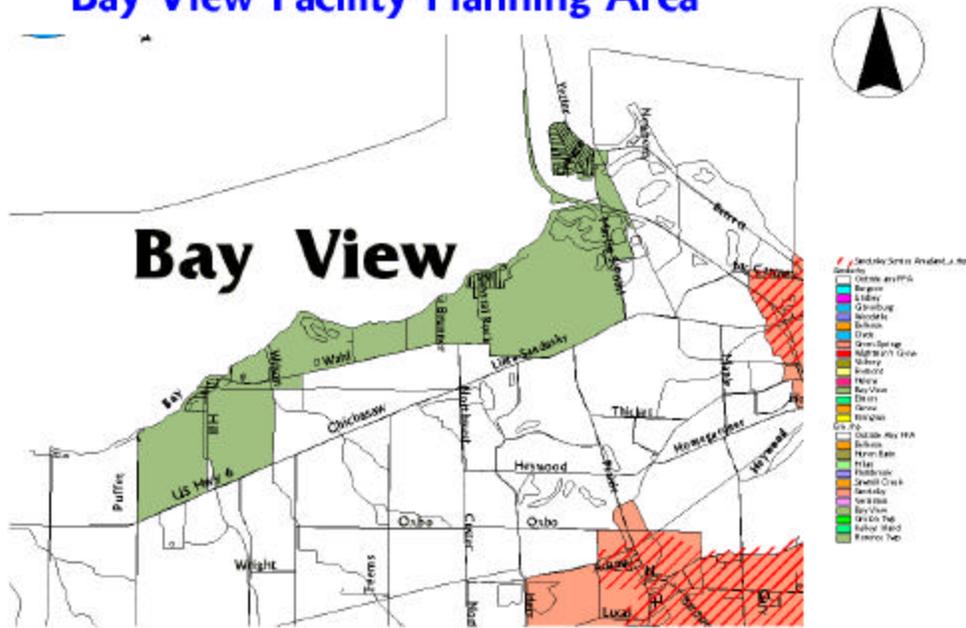


Table One lists the population projections for residents of all jurisdictions that are partly or completely in the planning area. Table Two represents just those persons that actually reside in the planning area. Current and projected populations are based on official US Census Bureau figures.

TABLE ONE

	1990	2020
Bay View	740	754
Margaretta Township	4,601	4,685
Townsend Twp	1,528	1,922
Total of Jurisdictions	6,869	7,361

TABLE TWO

	1990	2020
Bay View	740	754
Margaretta Township	611	621
Townsend Twp	211	266

Present Facilities

This area is presently unsewered; it includes the Village of Bay View and the two unincorporated towns of White's Landing and Crystal Rock. All three communities are located on the Sandusky Bay shore, and are served by onsite sewage systems. In Bay View, there are about half a dozen package plants in addition to individual household systems. Many of the houses were originally cottages on small lots; since there is no room for a leaching system, sewage is treated by aerators and sand filter systems with off-lot discharges. These discharges typically go to the storm sewers.

Crystal Rock and White's Landing are also served by on-site systems with significant failure rates. In White's Landing, poor drainage contributes to failure of septic systems. A storm sewer system would improve drainage and allow the leaching systems to work better.

Issues

All three have been identified as having public health problems from inadequate sewage treatment, and have been identified as *Critical Home Sewage Disposal Problem Areas* by the Eire and Sandusky County Health Departments. These communities are not under orders from Ohio EPA.

Future Needs

The White's Landing Facility Plan (for White's Landing and Crystal Rock; Bay View was in the Sandusky Planning Area then) was started but not completed. In the 80s it was anticipated that a new wastewater plant would serve White's Landing and Crystal Rock. In 1999, Erie County prepared a facilities study for the Bay View Planning Area. Proposing a new wastewater treatment plant at Bay View to serve the three communities, it estimated a user cost of over \$60/month even with grants. Additional funding is needed to make this project financially feasible. Sewers are needed for these three communities; either constructing a new wastewater plant or connecting to the Sandusky system should be considered.

FLORENCE TOWNSHIP FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- Erie County: will plan sanitary sewerage facilities, and own and operate sanitary sewers in unincorporated areas. If planning results in construction of a new wastewater plant, Erie County will own and operate it.

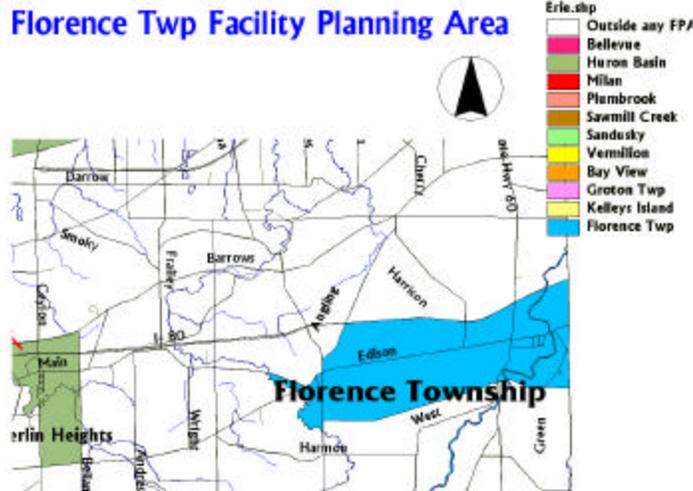


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TABLE ONE

	1990	2020
Florence Township	2,101	2,422
Total of Jurisdictions	2,101	2,422

TABLE TWO

	1990	2020
Florence Township	754	869
FPA Total	754	869

Present Facilities

There are no public sewerage facilities in this planning area. Florence and Birmingham are served by individual septic systems. There are eight package plants in the township, serving businesses, food service establishments, campgrounds, and a trailer park.

Issues

The Erie County land use plan indicates growth in this area, showing residential and commercial development in the unincorporated towns of Florence (Wakeman Road at 113) and Birmingham (route 60 at 113). It also shows industrial development between the two towns between route 113 and the Ohio Turnpike.

Future Needs

Erie County should conduct or commission a study to evaluate the most cost-effective treatment options.

GROTON TOWNSHIP FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- Erie County: will plan sanitary sewerage facilities, and own and operate sanitary sewers in unincorporated areas. If planning results in construction of a new wastewater plant, Erie County will own and operate it.

Groton Twp Facility Planning Area

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-  Outside any FPA
-  Bellevue
-  Huron Basin
-  Milan
-  Plumbrook
-  Sawmill Creek
-  Sandusky
-  Vermilion
-  Bay View
-  Groton Twp
-  Kelleys Island
-  Florence Twp

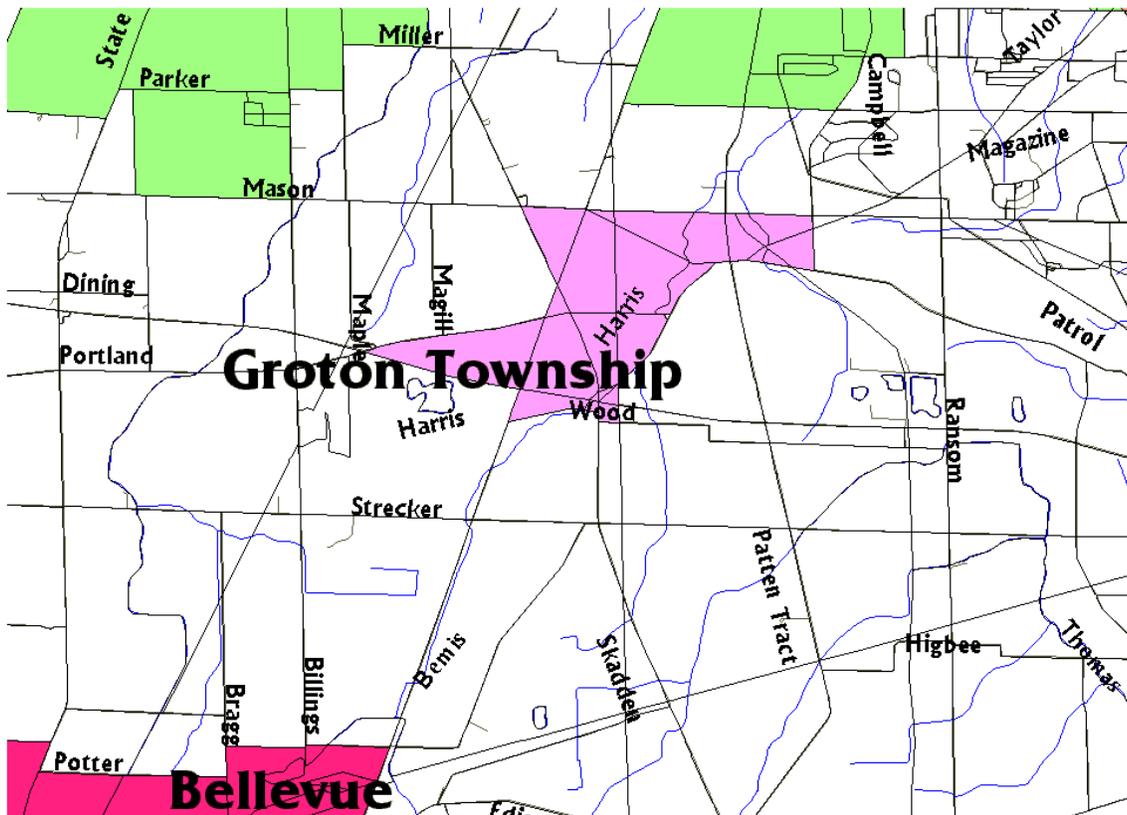


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TABLE ONE

1990 2020

Groton Township	1,245	1,300
Oxford Township	1,150	1,170
Total of Jurisdictions	2,395	2,470

TABLE TWO

	1990	2020
Groton Township	185	192
Oxford Township	199	202
FPA Total	384	394

Present Facilities

There are no public sewerage facilities in this planning area.

Issues

There is presently little development around the new Ohio Turnpike Interchange at SR 4, but soils are very poorly suited for septic systems. Sewers are likely to be needed as the interchange attracts development. A new plant here does not seem likely. Responding to a 1997 Facilities Study prepared by Erie County, OEPA denied a discharge to Pipe Creek based on assimilative capacity, and Mills Creek was found too distant to be economical as a receiving stream. The next alternatives to consider would be connecting to either the Bellevue and Sandusky systems.

Karst Bedrock Formations

The SR 4 Interchange within the a karst limestone geologic formation that stretches from Seneca County to Lake Erie at Sandusky. Karst bedrock is porous, with sinkholes that allow surface runoff to drain directly into groundwater. Because karst limestone is porous, water flows through it much more quickly. Drinking water sources that draw their supply from the karst aquifer are very vulnerable to contamination. Contaminated water may also reach Lake Erie through karst formations. Discharges of wastewater effluent from public or private treatment plants, or drain septic tanks into sinkholes should not be permitted.

Future Needs

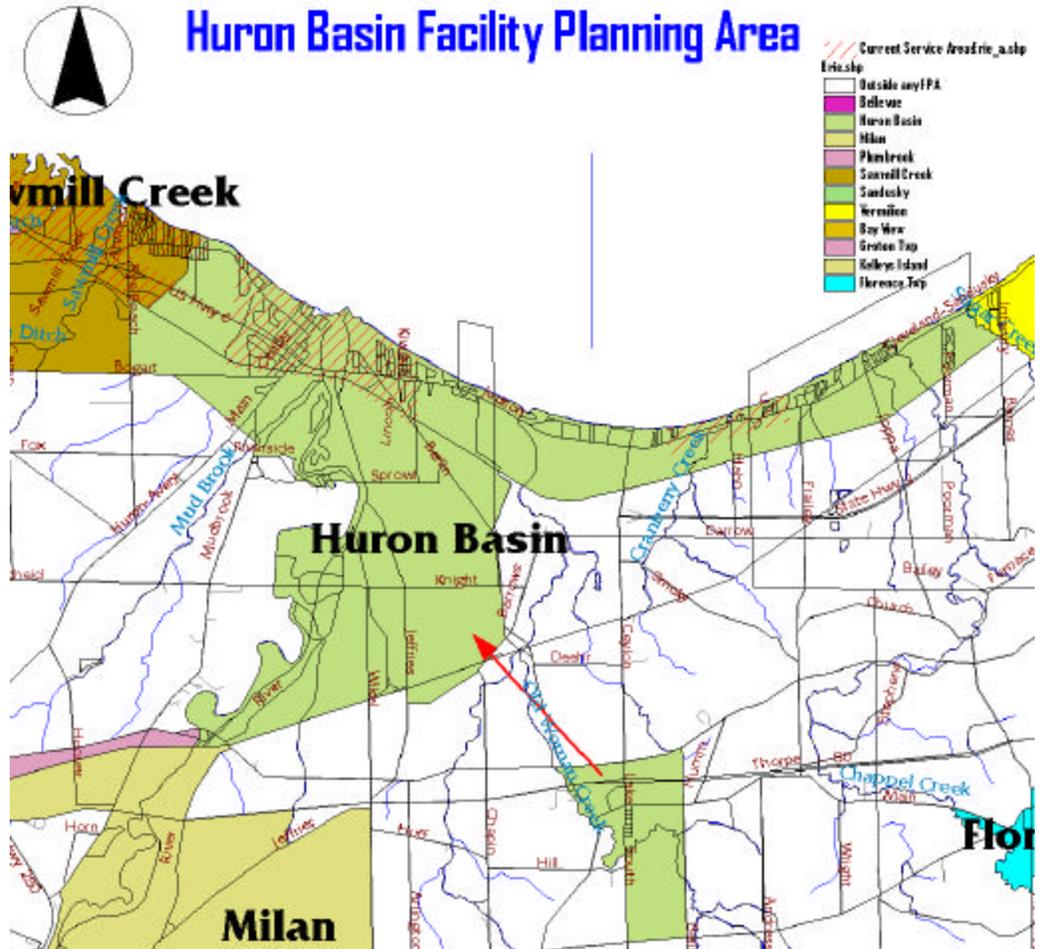
- As development proceeds around the interchange, Erie County should further develop plans to provide sanitary sewerage service in cooperation with Sandusky and/or Bellevue as needed. The likely options are:
 - Connect to the Bellevue system
 - Connect to the Sandusky system
 - Construct a new wastewater treatment facility — although the 1997 study indicated this alternative will probably not be feasible.

HURON BASIN FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- Erie County: Owns and operates the WWTP and sanitary sewer system; owns and operates sewers in unincorporated areas. Responsible for planning public sewerage systems for presently unsewered areas.

Table One lists the population projections for residents of all jurisdictions that are partly or completely in the planning area. Table Two



represents just those persons that actually reside in the planning area. Current and projected populations are based on official US Census Bureau figures.

TABLE ONE

	1990	2020
Huron	7,030	7,101
Berlin Heights	692	679
Berlin Township	2,628	2,728
Huron Township	2,267	3,096
Milan Township	2,093	2,332
Vermilion Township	4,051	4,303
Total of Jurisdictions	18,761	20,239

TABLE TWO

	1990	2020
Huron	5,631	5,678
Berlin Heights	691	681
Berlin Township	529	547
Huron Township	217	297
Milan Township	281	311
Vermillion Township	630	668
FPA Total	7,979	8,182

Present Facilities

A 2.0 MGD Rotating Biological Contactor WWTP was constructed at the City of Huron to serve the city and the rest of the planning area. The current flow is approximately 0.82 MGD. During high flow conditions, excess flow from the Sawmill Creek plant is pumped here for treatment.

The unsewered areas are served by onsite systems, and several package plants. One is in Berlin Heights, but the greatest concentration is around the Turnpike. Erie County owns and operates the Lake Erie Manufacturers' Outlet plant in the turnpike area. There are also existing package plants, especially around the Turnpike Interchange and in unsewered areas along the lake; the largest is at Harbortown. In 2000, a sewer extension to Mitiwanga-Ruggles Beach connected this existing sewer system into the Huron Basin plant. This plant will continue to be used, but just for pre-treatment, notably by providing pre-aeration for odor control.

Issues

Wastewater treatment for the Village of Berlin Heights is provided by individual "on-lot" septic tanks currently numbering about 235 units. The only wastewater facility is a small 0.02 MGD package plant installed in 2000 at the school. Dye checking of the on-lot systems revealed that improperly treated sanitary wastes were discharging into storm water sewers, catch basins, ditches and Old Woman Creek. Old Woman Creek has been designated as a National Estuary, and is one of our region's highest quality coastal wetland areas. Installation of sewers in Berlin Heights will be necessary to protect this sensitive area.

Because of the village's size and proximity to Huron, Berlin Heights was included in the Huron Planning Area. In 1980, Ohio EPA issued the Village Findings and Orders to tap into the County sewer system, under a US EPA constrictor grant application requirement. Those orders have since been dropped.

The Avery area (Ohio Turnpike/US 250 interchange) is a place where package plants and septic systems cause a water quality problem. The single largest draw of traffic is Cedar Point, and US 250 is heavily traveled in the summer between the interchange and Sandusky.

Franklin Flats, near Knight and River Roads in Huron and Milan Townships, needs sewers. Some houses currently use honey tanks. This project is the County's next priority after White's Landing.

The County is connecting the Mitiwanga / Ruggles Beach plant, tying its existing sewers into the Huron Basin system. The ultimate service area should go as far east as Orchard Beach. It will include Harbourn Town Trailer Park, currently on a package plant, whose sewers have serious I/I problems. The County is applying for Issue 2 funding to eliminate the infiltration.

Future Needs

The Huron Basin WWTP is Erie County's central wastewater treatment facility, and likely to remain so. It has a good outfall location and its site is amenable to expansion. A study is underway to consider increasing the capacity.

Sewer extensions should continue to be built to increase the Huron Basin plant's service area, eliminating package plants and concentrations of on-site systems. The priority areas are:

- Franklin Flats, near River and Knight Roads in Milan Township, is the top priority. Houses in this area, which is located in the Huron River floodway, are on very small lots, and many use sewage holding tanks.
- Developed or developing lake-front areas, particularly where sewers could eliminate package plants other systems that discharge off-lot.
- Berlin Heights
- Avery (Ohio Turnpike / US 250 Interchange). The turnpike forms a natural boundary, with Huron serving the north side and Milan the south.
- Harbourn Town Trailer Park — proceed with plans to rehabilitate sewers and eliminate infiltration. The existing package plant should be eliminated when the trailer park taps into the public sewer system.

KELLEYS ISLAND FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- The Village of Kelleys Island will be responsible for a public sewerage system if and when it is built.

Kelleys Island Facility Planning Area

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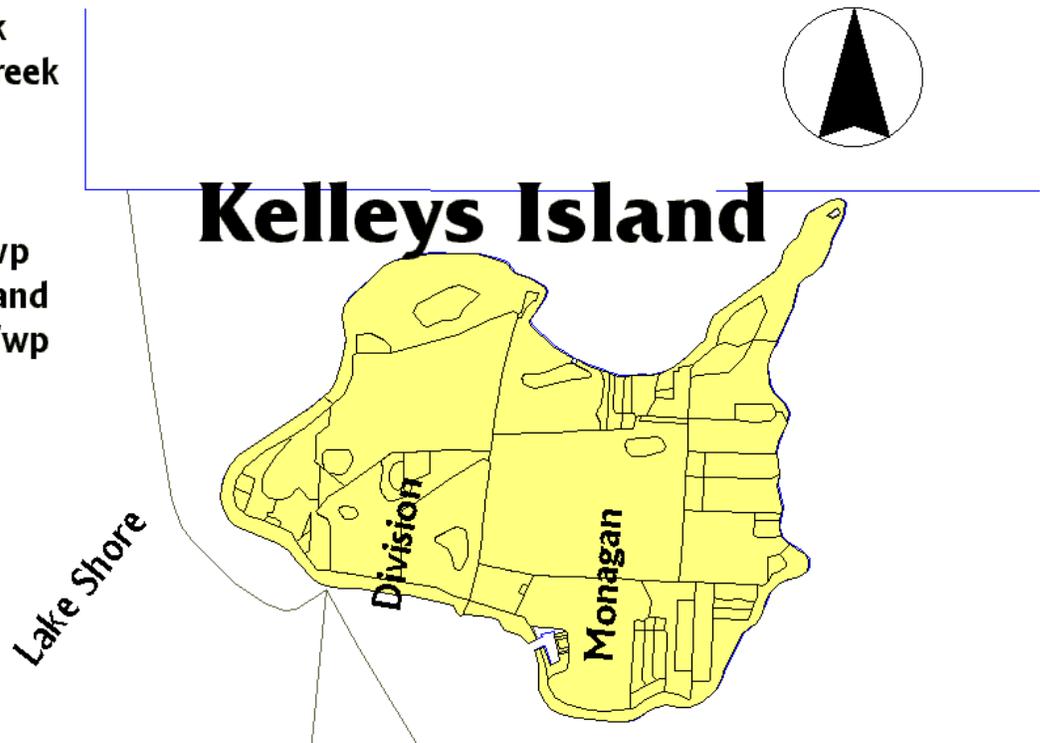


Table One lists the population projections for residents of all jurisdictions that are partly or completely in the planning area. Table Two represents just those persons that actually reside in the planning area. Current and projected populations are based on official US Census Bureau figures. Forecasts were developed from 1990 projections, which are the most recent available.

TABLE ONE

	2000	2020
Kelleys Island	367	189
Total of Jurisdictions	367	189

TABLE TWO

	2000	2020
Kelleys Island	367	189

FPA Total

367

189

Present Facilities

Presently there is no public sewerage system on Kelleys Island. There are several package plants on the island, serving Kelleys Island State Park and the larger commercial establishments. All of the extended aeration package plants operate under NPDES permits, and several have upgraded to meet permit requirements. In addition, the 4-H Camp operates an open trickling filter plant, which surface discharges to an isolated, wooded area. No problems have been noted, however Ohio EPA will monitor the situation. Residences and all other businesses are served by individual septic systems. Table Three lists package plants on Kelleys Island.

TABLE THREE

Package Plant	Install or Upgrade Date	NPDES Permit?	Capacity, gpd
Kelleys Island State Park	1988	Yes	20,000
Kelleys Island Marina	1982	Yes	1,500
Quarry Condominiums (expanding to serve to Portside Marina, Kelleys Cove, Water Street Café, Casino, and Anchor Inn)	1990, 1999	Yes	24,000
Village Pump and Bag the Moon Restaurant	1973, 1982, 1999	Yes	14,000
Camp Patmos	1992	Yes	20,000
Fresch's Island House	1987	Yes	2,000
Caddy Shack	1991	Yes	9,000
Navorska (Sunset Point) Trailer Park; new plant approved but not yet installed	(2000)	Yes	3,000
Island Café	1997	Yes	3,200
4-H Camp (trickling filter plant — see discussion above)	1945?	No	Unknown

Issues

Kelleys Island has a small year-round population, but is growing in popularity for summer recreation and cottages. Its sewage treatment problems come with the crowds of summer. Ohio EPA surveyed the Island in 1994 for residential sewage system failures, and did not find evidence of a problem at that time.

The Quarry Condominiums package plant was expanded in 1999, increasing its service area and eliminating two smaller, older plants. The larger plant has improved water quality and eliminated odor complaints. Over half of the package plants on the island were installed or upgraded in the '90s, and all extended aeration plants have NPDES permits.

Future Needs

- A public sewerage system may be needed on Kelleys Island; establishment of a public system should be driven by documented failure of existing systems, such as failure to meet NPDES effluent requirements, or inadequately treated sewage in storm sewers or ditches. If a public sewer system is built in the future, the highest priority for service should be concentrated areas of residential and commercial development, especially downtown and the south lake shore. A wastewater treatment system would need to be designed to accommodate greatly varying flow rates of just year-round

residents during the winter and peak crowds on summer weekends. Improvements in package plants and their operation under NPDES permits have reduced the pressure for immediate action.

- The following Best Management Practices are recommended for existing and future on-site wastewater treatment facilities in this FPA:
 - o All package sewage treatment plants are to be issued and operated under NPDES permits.
 - o When installing new or upgrading package plants, Ohio EPA should encourage neighboring businesses to use a shared facility, as feasible, similar to the expansion of the Quarry Condominium plant that eliminated neighboring smaller plants.

Residential sewage systems with off-lot discharges may be subject to regulation under NPDES permits in the future. Off-lot discharges may be permitted if all of the following apply:

- The new system will replace a failing system.
- An on-lot system cannot be installed for a lack of space.
- An NPDES Notice of Intent for the off-lot system is approved by OEPA

Every effort to install a leaching system after the initial treatment system will be made to reduce the amount of effluent discharged off the property

- o For systems serving commercial establishments or groups of more than three residences, Ohio EPA prohibits off-lot discharges unless regulated under an NPDES permit.

Present Facilities

The Village of Milan WWTP is a 600,000 gpd contact stabilization facility with aerobic sludge digestion; sludge is applied to land in liquid form. The present flow is approximately 0.35 mgd.

Milan's WWTP has substantial unused capacity, and a substantial portion of the Village is still unsewered. In particular, the Huron County part of town needs sanitary sewers.

Issues

The Milan planning area includes US 250 north to the Turnpike Interchange, where there are several package plants and continuing pressure for development.

Only the Erie County part of town is sewered. The Huron County portion should be connected to the sewer system as well.

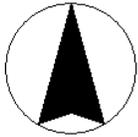
Future Needs

- The Milan plant has available capacity, but not enough for the entire village *and* all of Interchange 7. A cooperative effort between Erie County and the Village is needed to serve the portions of the Turnpike Interchange and the US 250 Corridor in the Milan Planning Area.
- Sewer extensions are needed to serve the rest of Milan, and to eliminate the package plants and other private sewage systems at the Turnpike Interchange.

PLUMBROOK FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- The City of Sandusky WWTP provides wastewater treatment for most of the Plumbrook service area
- Erie County owns and operates the sanitary sewers in Plumbrook, and treats the rest of the sewage at its Sawmill Creek WWTP.



Plumbrook Facility Planning Area

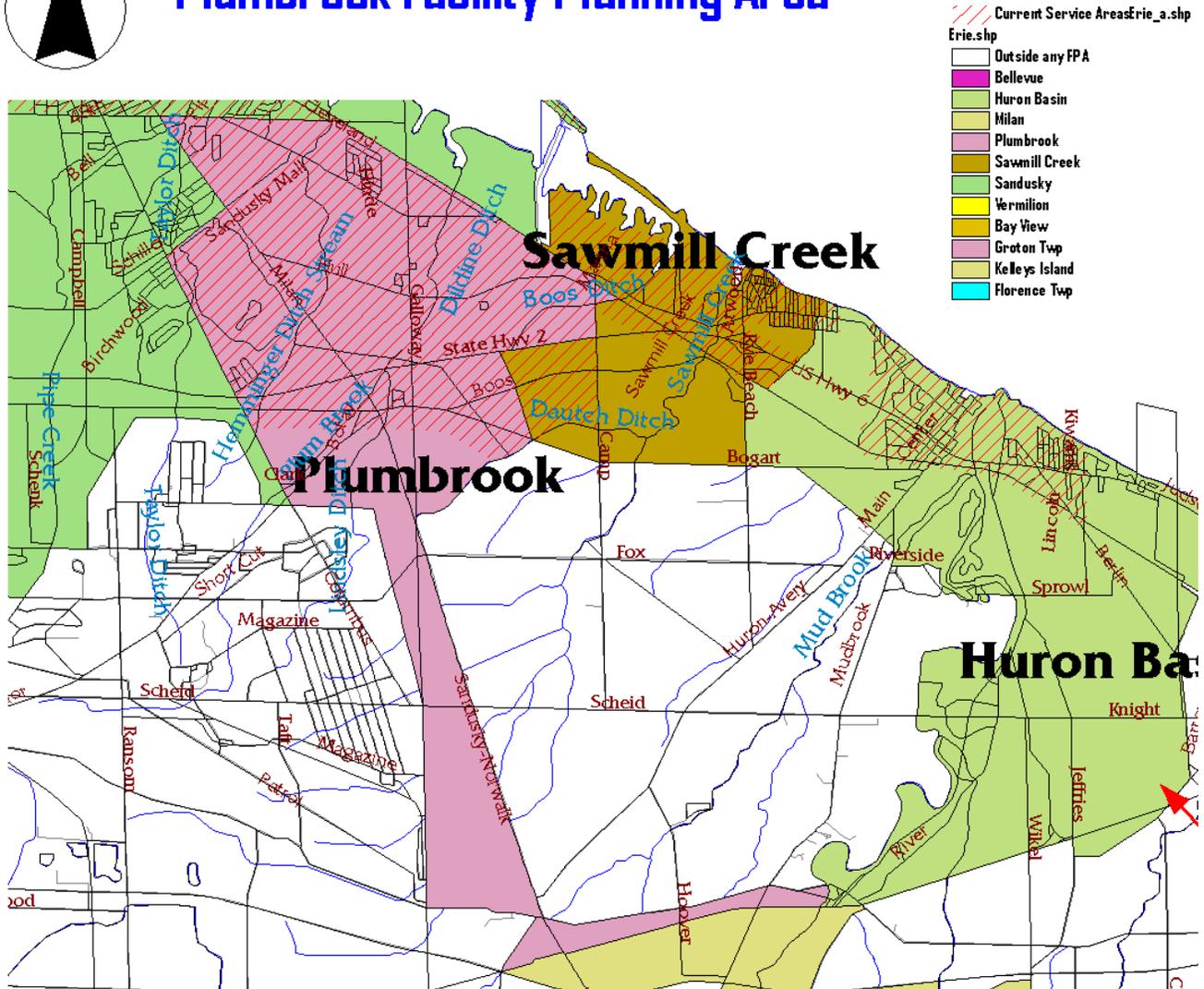


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TABLE ONE

	1990	2020
Huron Township	2,267	3,096
Milan Township	2,093	2,332
Perkins Township	10,793	11,065

Total of Jurisdictions	15,153	16,493
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TABLE TWO

	1990	2020
Huron Township	964	1,316
Milan Township	44	50
Perkins Township	3,916	4,014
FPA Total	4,924	5,380

Present Facilities

An interceptor was built in the Plumbrook service area with funding from the US EPA Construction Grants program. Sewage was treated entirely at the Sandusky WWTP originally. In the early 90s, Erie County began diverting some of the Plumbrook wastewater to the Sawmill Creek WWTP instead because of wet weather capacity limits in the Sandusky system. Erie County and the City of Sandusky have an agreement that flow from Plumbrook to Sandusky will not exceed 1.0 mgd on the average, or 2.2 mgd peak. Total wet weather flow can be 3.0 to 3.5 mgd, with substantial I/I flows. Flows over these amounts go to the Sawmill Creek WWTP instead. See also descriptions of the Sandusky, Sawmill Creek and Huron Basin FPAs.

Future Needs

The Plumbrook district is an area under pressure for development. The continuing need for the area will be to provide sanitary sewerage service as development occurs.

- The City of Sandusky will need to address capacity and wet weather issues as per the Sandusky FPA description.
- To reduce wet weather overloading of the Sandusky system, OEPA requires one gallon of stormwater to be removed from the system for each new gallon of sanitary sewage added. This anti-degradation policy will help decrease I/I. Some Plumbrook sewers have flooding problems, and Sandusky cannot handle all the wet weather flow.
- The City of Sandusky and Erie County should update their service agreements and this Plan as needed to provide capacity as dictated by future needs.

SANDUSKY FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- City of Sandusky: Owns and operates the wastewater plant and sewers within its corporate limits.
- Erie County: Owns and operates sewers in unincorporated areas and Castalia.

Sandusky Facility Planning Area

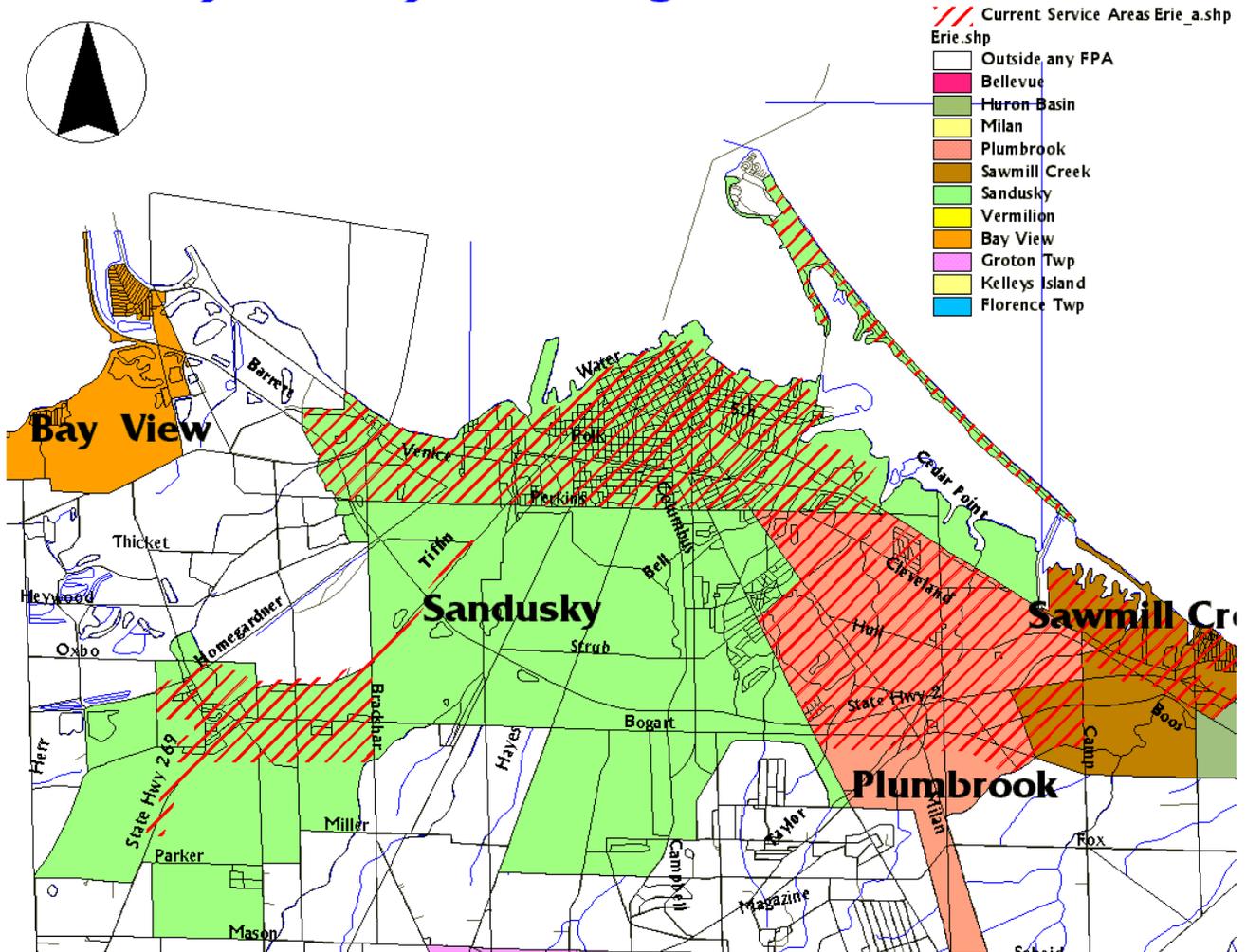


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TABLE ONE

	1990	2020
Sandusky	29,764	31,995
Castalia	915	944
Huron Township	2,267	3,096
Margaretta Township	4,601	4,695
Perkins Township	10,793	11,065
Total of Jurisdictions	48,340	51,795

TABLE TWO

	1990	2020
Sandusky	29,764	31,982
Castalia	915	944
Huron Township	14	19
Margaretta Township	2,492	2,543
Perkins Township	6,680	6,846
FPA Total	39,865	42,334

Present Facilities

The Sandusky WWTP is a conventional activated sludge, with phosphorus removal and anaerobic sludge digestion. Its average daily capacity is 14.7 mgd, and its wet weather capacity is 24 mgd¹. The sludge is applied to land in liquid form. The average daily flow was 8.4 mgd in 2001. Between 1999 and 2001, \$5 million in improvements were made to the wastewater plant. These upgrades increased plant capacity from its former 12.5 mgd, and when complete will bring average daily capacity to 15.7 mgd. Improvements include \$1.3 million for new sludge digesters and \$2 million for an ultraviolet disinfection system. Approximately 30% of the wastewater treated by the plant comes from outside the Sandusky city limits². Sandusky installed flow meters on its CSOs in 2000.

Sandusky serves the Castalia area with the waste being conveyed through a force main and an interceptor sewer. The Sandusky plant was originally designed to serve the entire Plumbrook area, but it no longer does. Flows over a set amount are diverted to the Sawmill Creek WWTP instead. See the Plumbrook FPA for details.

Issues

Combined sewers, extraneous flows from I/I, and plant capacity are the primary issues facing Sandusky. Sandusky is under a Consent Decree with Ohio EPA to abate its CSOs; the City has prepared a General Plan for sewerage that includes a CSO Long Term Control Plan. There are 17 CSOs: 15 discharging to Sandusky Bay, one to Pipe Creek, and one to Mills Creek. Erie County service areas tributary to the Sandusky WWTP have separate sewers.

With its current service area, the Sandusky plant is running at or slightly over its rated capacity on an average day — flows depend on I/I which are influenced by the lake level. On a wet day, the combined sewers bypass and the plant cannot handle flow from its entire service area. The Sandusky FPA includes large unsewered areas; major plant improvements will be needed to serve these areas.

The City of Sandusky has identified future needs for its system to provide adequate treatment capacity and reduce CSOs to provide safe recreation on its lakefront. The facilities needed to accomplish these goals will depend on whether Erie County sewer service areas remain in the Sandusky system; see further details below.

In 2000, Sandusky obtained a \$1.53 million loan from OWDA for wastewater treatment and collection system improvements.³

1 Cited by Rick Zuzik of OEPA: "Sewage Warnings Mandatory: EPA" *Sandusky Register* 6/9/95 page A-2

2 "County, City Near Deal on Wastewater Contract," *Sandusky Register*, January 25, 2002

3 "Sandusky to monitor overflowing sewers," *Sandusky Register* March 11, 2000

Karst Bedrock Formations

Sandusky lies in the heart of a karst limestone geologic formation that stretches from Seneca County to Lake Erie at Sandusky. Karst bedrock is porous, with sinkholes that allow surface runoff to drain directly into groundwater. Because karst limestone is porous, water flows through it much more quickly. Drinking water sources that draw their supply from the karst aquifer are very vulnerable to contamination. Contaminated water may also reach Lake Erie through karst formations. Discharges of wastewater effluent from public or private treatment plants, or drain septic tanks into sinkholes should not be permitted.

Future Needs

In order to meet future needs, the Sandusky WWTP will need to:

- Reduce CSO volume by 85% by making sewer, regulator, and/or storage/treatment improvements.
- Increase treatment capacity to provide service for the projected customer base.
- The General Plan⁴ evaluates system needs based on three scenarios:
 1. Erie County service areas stay in the Sandusky system through 2040;
 2. Erie County service areas withdraw from the Sandusky system between now and 2010
 3. Erie County service areas remain in the system until 2010 and then are removed
- The General Plan calls for improvements that would increase peak flow capacity from 24 mgd to 36 mgd. Improvements are scheduled as far in the future as 2023 at an estimated total cost, in 1999 dollars, of \$22.5 million.⁵ Identified improvements include:
 - An additional primary clarifier
 - An additional aeration tank
 - An additional secondary clarifier
 - An additional primary sludge thickener
 - Ultraviolet disinfection
- Treatment plant facilities needed vary depending on the future service area. The General Plan discusses these alternatives in detail. The following table summarizes of capital needs under the three service area alternatives.

WWTP Improvements	County in system through 2040	County leaves system between now and 2010	County leaves system in 2010
WWTP expansion, facility improvements, disinfection, and odor control [optional]	\$12,752,000	\$5,291,000	\$8,599,000
CSO monitoring, stormwater removal, regulator reconstruction, and treatment facilities	\$9,225,000	\$7,600,000	\$7,600,000
Total Capital Costs	\$12,754,040.00	\$5,293,010.00	\$8,601,010.00

⁴ City of Sandusky General Plan for Wastewater Improvements and Disinfection General Plan; January 15, 1997, Malcolm Pirmie

⁵ "Sandusky to monitor overflowing sewers," Sandusky Register March 11, 2000

- The Campbell/Bogart area of Perkins Township has a package plant and a number of septic systems that need to be replaced by public sewers. It is anticipated that this area will have sewers available around 2004-5.

SAWMILL CREEK FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- Erie County: Owns and operates wastewater plant and sewers.



Sawmill Creek Facility Planning Area

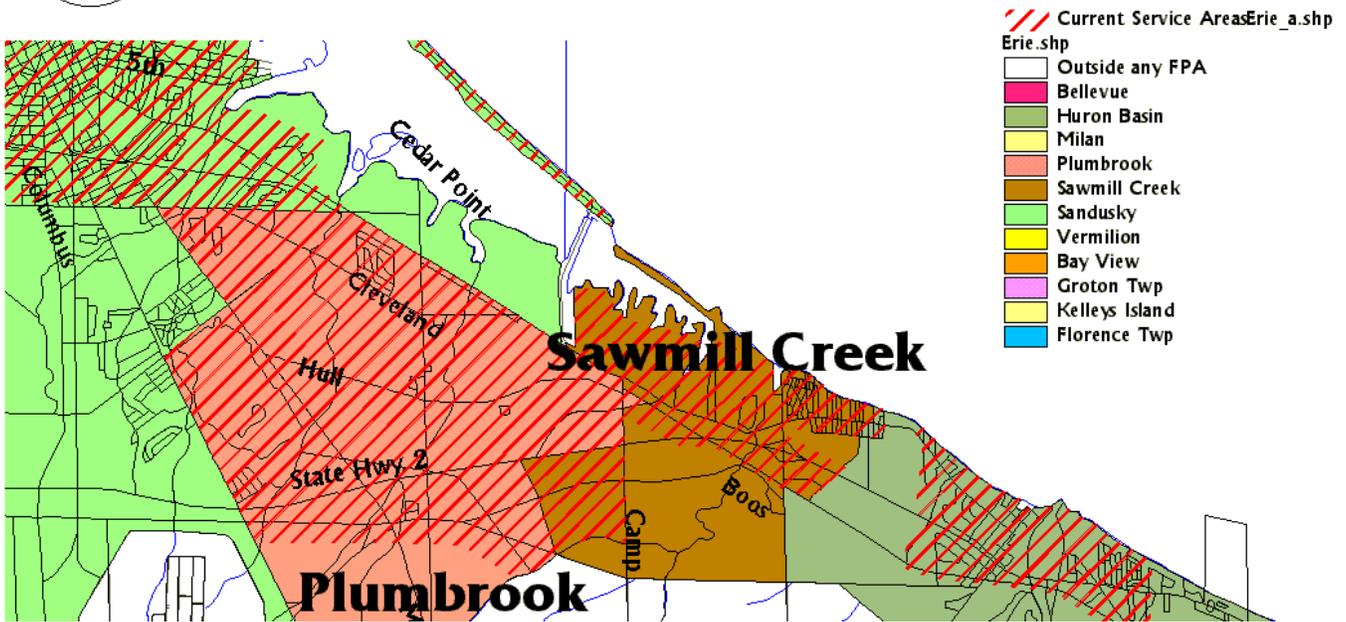


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TABLE ONE

	1990	2020
Huron	7,030	7,101
Huron Township	2,267	3,096
Total of Jurisdictions	9,297	10,197

TABLE TWO

	1990	2020
Huron	1,383	1,388
Huron Township	373	508
FPA Total	1,756	1,896

Present Facilities

The Sawmill Creek plant is a contact stabilization facility with an average design capacity of 1.2 mgd and peak hydraulic capacity of 8.0 mgd. The current flow at the Sawmill Creek WWTP is approximately 0.82 MGD.

The Sawmill Creek plant receives some flows from the Plumbrook area. Under an agreement with the City of Sandusky, Plumbrook flows over a set amount are pumped to Sawmill Creek for treatment. See the Plumbrook FPA for details. During wet weather some excess flow from Sawmill Creek may be pumped to the Huron Basin WWTP for treatment.

Plant improvements completed in 1996 include ultraviolet disinfection, a 1 MG equalization basin with chlorination/dechlorination, and a gravity belt sludge thickener. Project cost was \$2.7 million.

Future Needs

The Sawmill Creek plant is expected to be adequate for future needs based on its present service area. However, demand for its treatment capacity will be affected by expansion, CSO and I/I abatement, and service area changes for the Sandusky WWTP. Depending on how much flow from the Plumbrook service area goes to Sawmill Creek, the Sawmill Creek WWTP may need additional capacity.

VERMILION FACILITY PLANNING AREA

DESIGNATED MANAGEMENT AGENCY RESPONSIBILITIES:

- City of Vermilion: Owns and operates the wastewater plant and sanitary sewers within its corporate limits
- Erie County: Owns and operates sanitary sewers in unincorporated areas

Vermilion Facility Planning Area

Vermilion

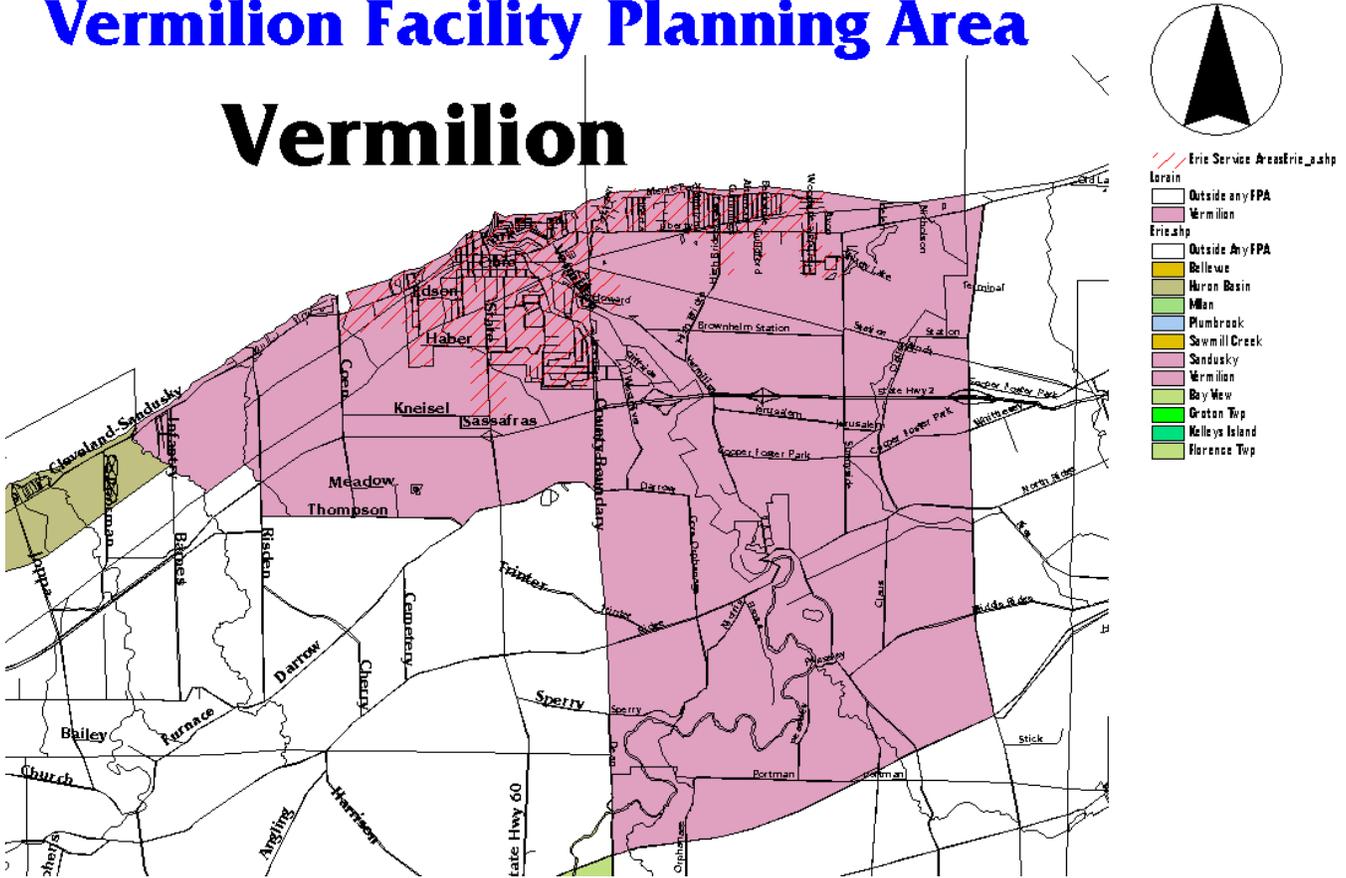


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TABLE ONE

	1990	2020
Vermilion	11,016	13,831
Brownhelm Township (Lorain County)	1,471	2,100
Vermilion Township (Erie County)	4,051	4,303
Total of Jurisdictions	16,538	20,234

TABLE TWO

	1990	2020
Vermilion	11,016	13,831
Brownhelm Township (Lorain County)	944	1,348

Vermilion Township (Erie County)	1,707	1,811
FPA Total	13,667	16,990

Present Facilities

The Vermilion WWTP has a capacity of 2.5 mgd, and had an annual average flow was 1.78 mgd in 1986.

The WWTP includes a contact stabilization activated sludge process with anaerobic sludge digestion. The sludge is processed as a liquid and it is applied to land

Issues

Expand service to accommodate growth, especially along lake front areas west of the City and south along SR 60 toward its interchange with SR 2. Eliminating package plants in developing areas should be a priority.

Future Needs

- Build sewers to accommodate new development and eliminate existing package plants.