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W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607• TELEPHONE (262) 547-6721
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SEWRPC Staff Memorandum

RESPONSE TO REQUESTS BY THE CITY OF PORT WASHINGTON AND THE VILLAGE OF SAUKVILLE TO AMEND THE PORT WASHINGTON AND SAUKVILLE SANITARY SEWER SERVICE AREAS

November 1, 2022

INTRODUCTION

By letters dated August 26, 2022, Mr. Anthony Brown, Administrator for the City of Port Washington, and Ms. Dawn Wagner, Administrator for the Village of Saukville, requested on behalf of the City and the Village that the Southeastern Wisconsin Regional Planning Commission (SEWRPC) amend the Port Washington and Saukville sanitary sewer service areas. The Port Washington sewer service area, tributary to the City of Port Washington sewage treatment facility, is currently documented in SEWRPC Community Assistance Planning Report No. 95 (2nd Edition), *Sanitary Sewer Service Area for the City of Port Washington and Environs, Ozaukee County, Wisconsin,* dated December 2000, as amended. The Saukville sewer service area, tributary to the Village of Saukville sewage treatment facility, is currently documented in SEWRPC Community Assistance Planning Report No. 90, *Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin,* dated September 1983, as amended. The basic purpose of the amendment would be to remove certain lands from the Saukville sanitary sewer service area and add those lands to the Port Washington sanitary sewer service area.

AREA DESCRIPTION

The area proposed to be removed from the Saukville sanitary sewer service area and added to the Port Washington sanitary sewer service area is shown on Map 1. The subject area encompasses approximately 43.9 acres and is located immediately southeast of the intersection of Jackson Road and W. Grand Avenue (STH 33), within the southeast one-quarter of U.S. Public Land Survey Section 30, Township 11 North, Range 22 East, City of Port Washington, Ozaukee County, Wisconsin.

The subject area does not contain any environmentally significant lands (i.e. environmental corridors, isolated natural resource areas, wetlands, floodplains, etc.).

Under the City's comprehensive plan, the subject area's future land use is identified as Small Lot Traditional Neighborhood and is recommended to be developed as smaller lot residential with a mix of residential types. It is estimated that upon full development, the subject site would accommodate about 103 housing units with an estimated population of 268 people.

A more detailed delineation of the amended sewer service area is shown on the aerial photograph reproduced as Map 2.

RELATIONSHIP OF THE PROPOSED CHANGE TO THE EXISTING SANITARY SEWER SERVICE AREAS

The proposed transfer of land from the Saukville sewer service area to the Port Washington sewer service area represents a refinement of the boundary between those sewer service areas based upon an adopted agreement entitled "Agreement Between the City of Port Washington and the Village of Saukville, Wisconsin, to Amend Sanitary Sewer Service Area Boundaries" dated August 2, 2022. It can be further noted that except for the existing adjacent public road rights-of-way, all of the subject property is currently located within the City Port Washington's municipal limits and is located immediately adjacent to the currently adopted Port Washington sewer service area. It can also be noted that STH 33 and two existing City-owned streets (Laura Lane and W. 2nd Avenue) about the eastern boundary of the subject property, and existing utilities including public sanitary sewers that are located within those public street rights-of-way, are envisioned to serve and be extended into the subject property.

Conversely, while the subject area is located within the currently adopted Saukville sewer service area, it is located outside and approximately 1,400 feet east of the current Village municipal limits. It can also be noted that the subject area is approximately 1,400 feet east of the closest Village-owned public sanitary sewer (at the intersection of W. Grand Avenue (STH 33) and Green Bay Road) that could potentially serve the subject area.

The proposed addition of 43.9 acres to the 5,933 acre Port Washington sanitary sewer service area represents an increase in the Port Washington planned sewer service area of less than 1 percent. The provision of 103 housing units (with an estimated population of about 268 people) within the subject area would increase the resident population of the Port Washington sewer service area by about 1.7 percent. The estimated buildout population of the expanded sewer service area—that is, the population that could be accommodated under full development of the sanitary sewer service area—would be approximately 16,468 people.[1] The year 2050 population range for this area in the regional land use plan is 15,640 to 18,230 persons.

WATER QUALITY IMPACTS

Under the adopted regional water quality management plan and the Port Washington sanitary sewer service area plan, it is envisioned that all new urban development within the planned sewer service area would receive sanitary sewer service. Assuming that all applicable Federal, State, and local permits are obtained, and that proper site development and construction practices are employed, there should be no significant adverse water quality impacts attributable to the development of the planned sanitary sewer service area.

COST-EFFECTIVENESS ANALYSIS

The area proposed to be added to the City of Port Washington sanitary sewer service area is currently located within the Village of Saukville sanitary sewer service area and immediately adjacent to the area served by the City. A cost effectiveness analysis was completed for each community to extend sewers to serve the proposed residential area (Appendix A). Based on this analysis, the equivalent average annual

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[1] As part of the sewer service area amendment for the City of Port Washington completed in 2003, the buildout population of the portion of the sewer service area tributary to the Port Washington wastewater treatment plan was estimated to be about 16,200 people. The proposed amendment to the sewer service area would increase the buildout population by approximately 268 people.

costs for each community to provide service are not within 10 percent of one another. The equivalent average annual costs for the City of Port Washington to serve the subject area would be approximately 26 percent more expensive as compared to the Village of Saukville (see Table 2 in Appendix A). However, based on the location of the existing municipal boundaries, location of existing utilities and other associated infrastructure, and development timing considerations, the subject area would best be served by the Port Washington wastewater treatment plant.[2]

WASTEWATER TREATMENT PLANT CAPACITY

Wastewater from the proposed multifamily residential development on the subject property will be conveyed through the Port Washington sewerage system and treated at the Port Washington wastewater treatment plant. The City of Port Washington wastewater treatment plant has a design capacity of 3.1 million gallons per day (mgd) on an average annual flow basis. The 2021 wastewater flow rate was about 1.1 mgd on an average annual basis. The proposed addition to the Port Washington planned sewer service area would add a planned residential development area of about 44 acres with a population of about 268 people. The anticipated sewage flow to be generated in the area proposed to be added to the sewer service area is expected to be about 0.03 mgd on an average annual basis. Thus, the treatment plant has adequate capacity to treat sewage flows from the subject area.

PUBLIC REACTION TO THE PLAN AMENDMENT

A public hearing was held on November 1, 2022, at the Port Washington City Hall to receive public comment on, and reaction to, the proposed sewer service area amendment. The hearing was sponsored by the City of Port Washington and the Regional Planning Commission. A summary of the amendment was presented prior to receiving public comment. No objections to the proposed amendment were expressed at the hearing.

LOCAL ACTION ON THE PLAN AMENDMENT

The Port Washington Common Council approved the sewer service area amendment following the public hearing on November 1, 2022, and the Saukville Village Board approved the sewer service area amendment on November 8, 2022.

REGIONAL HOUSING PLAN: JOB/HOUSING BALANCE

Appendix B provides job/housing balance information for the City of Port Washington developed under the SEWRPC regional housing plan. The inclusion of information from the regional housing plan in sewer service area amendment reports is based upon a regional housing plan recommendation (one of 50 recommendations made under the plan) that 1) SEWRPC provide the findings of the approximate job/housing balance analysis conducted under the regional housing plan to communities requesting an amendment of their sanitary sewer service area and 2) for those communities with a job/housing imbalance, that recommendations be provided to the community for their future consideration in addressing that imbalance. However, it is important to note that job/housing balance is not intended to be a requirement to be met by any individual sewer service area amendment.

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[2] The 10 percent guideline is founded upon good engineering practice and is generally accepted as the degree of precision with which the costs entailed can be estimated. The use of this 10 percent guideline has been endorsed by the technical advisory committees that have assisted the Commission over the years in the economic evaluation of alternative public works projects, and is commonly used by the Commission and the Wisconsin Department of Natural Resources staffs in their review and consideration of sewage treatment facility plan amendments.

CONCLUDING RECOMMENDATION

The Regional Planning Commission's evaluation of proposed sanitary sewer service area amendments includes a consideration of whether the amendment is consistent with the regional land use plan, the regional water quality management plan, and the provisions of the *Wisconsin Administrative Code* governing water quality management plans, and whether established procedures for amending sewer service areas have been followed.

- **Consistency with the Regional Land Use Plan**
  The regional land use plan recommends that, in addition to the infilling and redevelopment of existing urban centers, new urban development within the Region be accommodated through the orderly expansion of existing urban centers in locations which can be readily served by basic urban facilities, including sanitary sewer service, with the overall amount of new urban development consistent with projected growth in population and the economic base. The regional land use plan further recommends the preservation of primary environmental corridors and that consideration be given to the preservation of secondary environmental corridors and isolated natural resource areas. The proposed sewer service area amendment is consistent with these recommendations of the regional land use plan.

- **Consistency with the Regional Water Quality Management Plan**
  The regional water quality management plan recommends that new urban development within the Region be provided with centralized sanitary sewer service. The plan designates a wastewater treatment plant to serve each of the urban centers within the Region that are identified in the regional land use plan. In the case at hand, while the regional plan recommends that wastewater from the subject area be conveyed to and treated at the Saukville wastewater treatment plant, an agreement between the communities of Port Washington and Saukville has been approved for the transfer of the subject area to the Port Washington sewer service area, which would then be served by the City of Port Washington wastewater treatment plant. The proposed sewer service area amendment is consistent with these recommendations of the regional water quality management plan.

- **Consistency with Chapter NR 121 of the *Wisconsin Administrative Code***
  Chapter NR 121 of the *Wisconsin Administrative Code* governs the preparation of areawide water quality management plans, including the component sewer service area plans. The code requires that sewer service areas be determined in a way that promotes cost-effective and environmentally sound wastewater collection and treatment and that is consistent with 20-year population projections. Under the code, sewer service area plans must identify lands that are to be excluded from sewer service because of physical or environmental constraints or potential adverse water quality impacts. The proposed sewer service area amendment is consistent with these provisions of the *Wisconsin Administrative Code*.

- **Consistency with Procedural Requirements**
  As carried out by the Regional Planning Commission, the sewer service area amendment process must begin with a request to the Commission from the appropriate local unit of government or government agency to process the amendment. A public hearing must be held on the proposed amendment; the hearing is jointly sponsored by the Regional Planning Commission and the requesting agency or unit of government. Subsequent to the public hearing, the requesting agency or unit of government must act to approve the amendment as presented at the hearing, approve a modified amendment, or deny the amendment. Only after approval by the requesting agency or unit of government will the proposed amendment be considered for adoption by the Regional Planning Commission as an amendment to the areawide water quality management plan. All of the Commission's procedural requirements have been met for this amendment.

Given all of the foregoing, it is recommended that the Southeastern Wisconsin Regional Planning Commission formally amend the City of Port Washington and Village of Saukville sanitary sewer service areas as documented in SEWRPC Staff Memorandum, Response to Requests by the City of Port Washington and Village of Saukville to Amend the Port Washington and Saukville Sanitary Sewer Service Areas, November 1, 2022, in the manner shown on Maps 1 and 2. It is also recommended that the Wisconsin Department of Natural Resources approve this sewer service area plan amendment and transmit the plan amendment to the U.S. Environmental Protection Agency for certification.

#264612v4
Draft Port Washington SSA Amendment Staff Memorandum
300-3000
BRM/JED/LKH/KMM/ac
11/9/22; 9/29/22; 9/28/22; 8/30/22

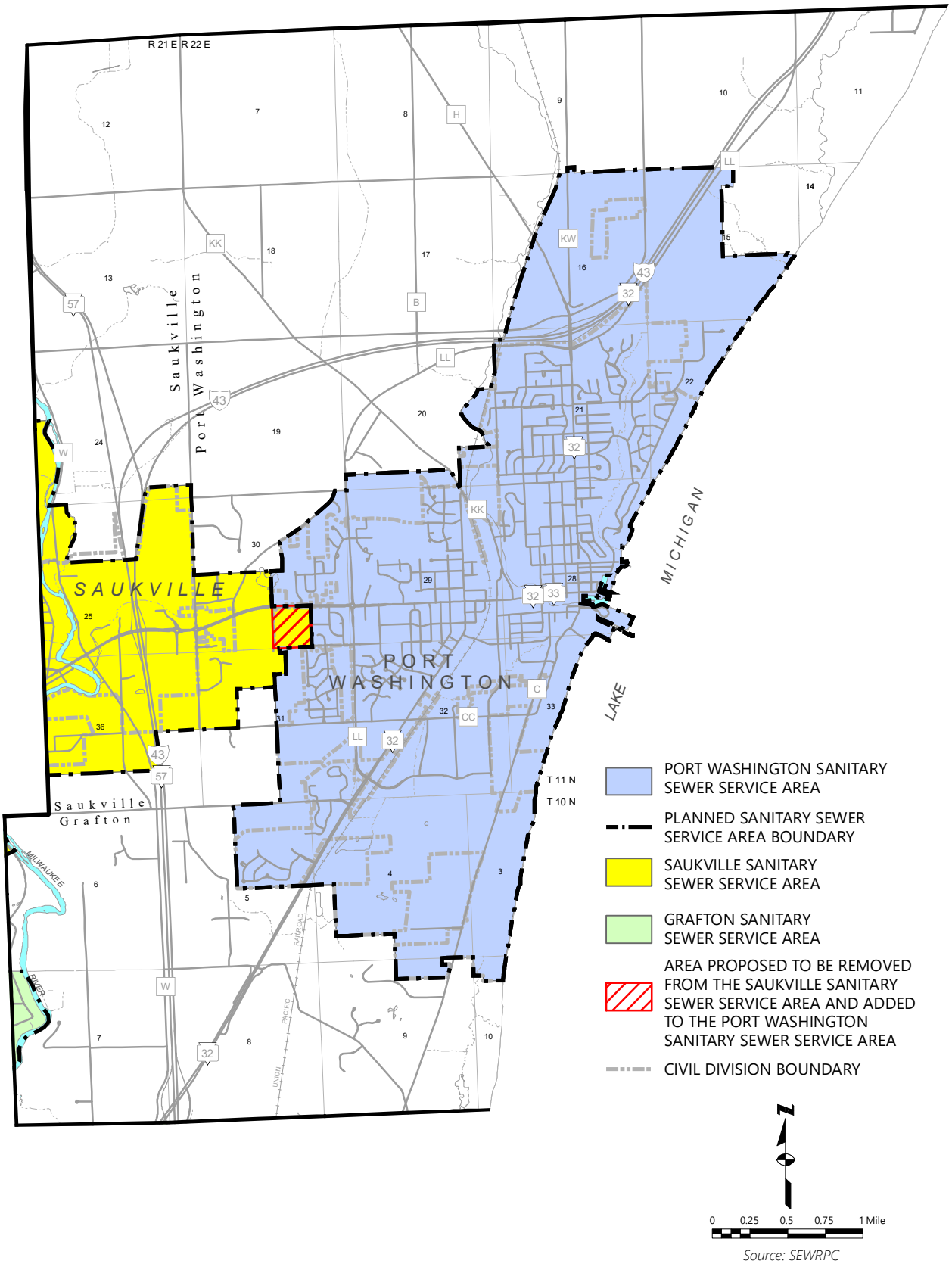
SEWRPC Staff Memorandum

RESPONSE TO REQUEST BY THE CITY OF PORT WASHINGTON TO AMEND THE PORT WASHINGTON SANITARY SEWER SERVICE AREA

October 11, 2022

MAPS

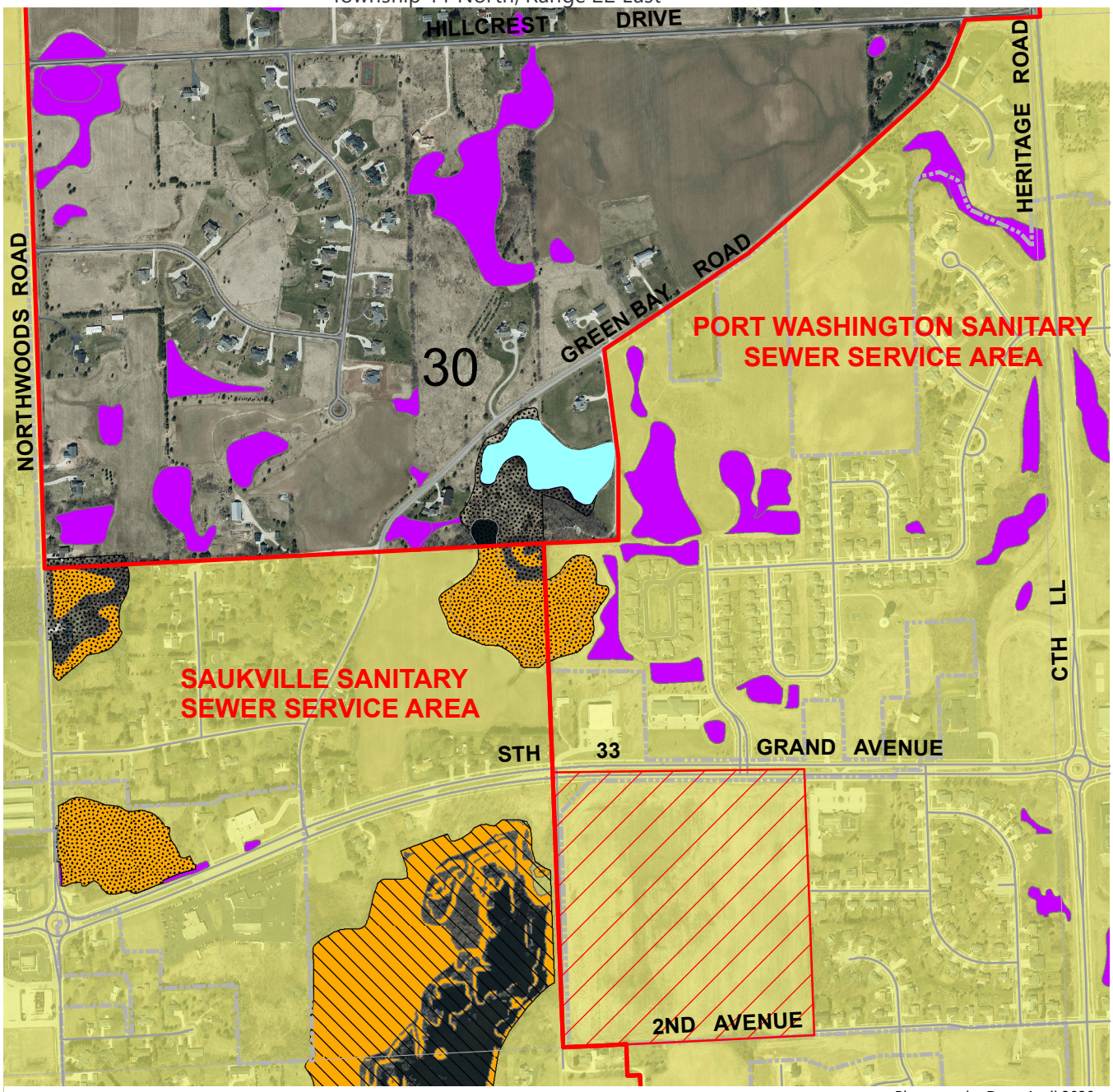
Map 1
Proposed Amendment to the City of Port Washington Sanitary Sewer Service Area



Source: SEWRPC

Map 2
Environmentally Significant Lands and Planned Sanitary Sewer Service Area for the City of Port Washington

U.S. Public Land Survey Section 30
Township 11 North, Range 22 East



Photography Date: April 2020

- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- AREA PROPOSED TO BE REMOVED FROM THE SAUKVILLE SANITARY SEWER SERVICE AREA AND ADDED TO THE PORT WASHINGTON SANITARY SEWER SERVICE AREA
- SURFACE WATER WITHIN ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
- WETLANDS AND SURFACE WATER AREAS LESS THAN 5 ACRES IN SIZE OUTSIDE ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
- PLANNED SANITARY SEWER SERVICE AREA
- SANITARY SEWER SERVICE AREA BOUNDARY

RESTRICTIONS ON SEWERED DEVELOPMENT

- PORTIONS OF THE SECONDARY ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS WITHIN THE PLANNED SANITARY SEWER SERVICE AREA WHICH ARE COMPRISED OF FLOODPLAINS, WETLANDS, RIPARIAN BUFFER, AND/OR ADJACENT STEEP SLOPES: THE EXTENSION OF SEWERS TO SERVE NEW DEVELOPMENT IN THESE AREAS IS NOT PERMITTED.

NOTE: This Map replaces Map 5, page 8, of SEWRPC document, *Amendment to the Regional Water Quality Management Plan, City of Port Washington*, December 2003, and replaces the corresponding portion of Map 10 - 6, page 30, of SEWRPC Community Assistance Planning Report No. 90, *Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin*, September 1983.

N

0 0.1 0.2 0.3 0.4 Miles

Source: SEWRPC

APPENDICES

SANITARY SEWER SERVICE AREA FOR THE CITY OF PORT WASHINGTON
OZAUKEE COUNTY, WISCONSIN

Appendix A

DOCUMENTATION OF ANALYSES ASSOCIATED WITH PROVIDING SANITARY SEWER SERVICE TO CERTAIN LANDS LYING SOUTH OF STH 33 AND EAST JACKSON ROAD IN THE CITY OF PORT WASHINGTON, OZAUKEE COUNTY

INTRODUCTION

In 2000 the City of Port Washington (City) annexed a 40-acre parcel known as "Schanen Farm", the subject parcel, into its city limits. At that time the subject parcel was within the Village of Saukville (Village) sanitary sewer service area (SSSA). Multiple attempts over the years have been made between the City and the Village to reach an agreement to amend the two respective SSSAs to transfer the subject parcel from the Village of Saukville SSSA to the City of Port Washington SSSA. In 2022 an agreement was reached and on August 26, 2022, a request was made to the Commission to amend both SSSAs.

As part of this request, the Commission completed a cost-effectiveness analysis to evaluate providing sanitary sewer service to the subject parcel by either the City or the Village. The results of this analysis are documented in this memorandum. In preparing this memorandum, the Commission staff independently evaluated the merits of the alternative courses of action to serve the subject parcel considering the existing sewerage systems for the Village and City.

The geographic area for which the cost-effectiveness analysis was conducted is identified on Map A.1.

BASIC ASSUMPTIONS AND PROCEDURES

In conducting its analyses in this matter, Commission staff made certain assumptions and selected certain procedures to be followed. These basic assumptions and procedures are summarized in the following paragraphs.

Study Area

The primary study area consists of the 40-acre parcel being considered for connection to either of the sewerage systems involved as identified on Map A.1. The adjacent lands and associated sewers that relate to sewer service for the subject parcel were also considered, as needed.

Design Year, Land Use, and Population of Service Areas
For purposes of this analysis, full buildout conditions were assumed for the subject parcel. Land use and population data were based upon residential land use assuming 17 duplex lots and 69 single residential lots (Map A.1). This development pattern added 268 people to the sanitary sewer service area and a 50 year economic period was used for this analysis.

Sewage Flows and Design Criteria
The design sewage flow rates expressed in terms of average annual and peak hourly hydraulic loading for the area in question are set forth in Table A.1. The design sewage flow rates are based upon the land use and population for the area. The unit loadings and peaking factors used were based upon a refinement of the values developed for use in the regional water quality management plan and upon review of the current sewerage system data. The unit area loadings used were 125 gallons per capita per day (gpcd) on an average annual basis and 500 gpcd on a short-term peak wet weather basis. The peak flow rate was based upon a factor of 4.0 for peak-to-average daily flow with an allowance for wet weather infiltration and inflow.

Gravity sewers are designed to carry peak flows without surcharge. The capacity of the proposed gravity sewers was developed by means of the Manning's formula utilizing a roughness coefficient "n" of 0.013.

Method of Economic Analysis and Cost Data
Costs were prepared for both alternatives using a set of common unit prices and design assumptions. The costs were developed for the construction of the sanitary collection system and connecting sewers only and did not include additional site development costs such as roadways, grading, site earthwork, etc. It was assumed that the future topography of the developed site will be the same as the existing 2010 topography. Site restoration costs for the subject parcel were not included in the analysis because it was assumed that the sanitary sewer system would be constructed before or in conjunction with the construction of the roadways and development of the lots. A minimum pipe depth of 8-feet was assumed and sewer alignments were under the proposed roads on the subject parcel.

Equivalent annual costs for each alternative were computed using a 50-year economic analysis period and an interest rate of 2.875 percent per Wisconsin Department of Natural Resources guidance. Annual operation and maintenance costs for the gravity sewers, lift station, and force main were included in the analysis. The estimated construction costs include a 35 percent contingency to cover the cost of engineering services, legal and administrative costs, and permitting. Table A.2 summarizes the initial capital cost, average annual operation and maintenance cost, and equivalent average annual cost for each alternative. Table A.3 and Table A.4 present more detailed cost breakdowns for each alternative.

Sewage Treatment Plant Considerations
For purposes of this analysis, no detailed quantitative evaluations were made of the specific costs for treatment plant capacity associated with the two plants concerned; capacities and current flows were reviewed for both plants, and both have sufficient capacity to treat flows from the subject parcel. The amount of sewage being generated from the subject parcel on an average daily basis, 33,500 gallons per day (gpd), is relatively small in comparison to the existing sewage treatment plant capacities of 1.6 million gallons per day (mgd) and 3.1 mgd for the Village of Saukville and City of Port Washington treatment plants, respectively. In the case of the Village of Saukville sewage treatment plant, the subject parcel was planned for in its recent plant expansion, since the area is within the currently adopted Village sewer service area. In the case of the City of Port Washington sewage treatment plant, this area would not have been specifically planned for. However, given the current (2021) average daily flow to the City plant is 1.1 mgd, there is sufficient available plant capacity to accommodate the subject parcel. It was therefore assumed for purposes of this analysis that treatment plant capacity could be provided in the case of either of the two sewerage systems analyzed and that the costs of treatment would be similar at either

facility, given the similar plant sizes and levels of treatment. Consequently, the cost-effectiveness analysis was undertaken solely on the basis of sewage conveyance costs.

ALTERNATIVE 1: CONNECTION TO THE VILLAGE OF SAUKVILLE SEWERAGE SYSTEM

One alternative means of providing sanitary sewer service to the subject parcel is by connection to the Village of Saukville sewerage system. Under that alternative, as shown on Map A.2, sewage from the area would be conveyed to the northwest corner of the subject parcel. An additional 1,750 ft of gravity sewer would route the flow west along STH 33 and connect to an existing Village sanitary manhole located about 1,300 feet west of Jackson Road. Under this alternative, the entire subject parcel would be served by 8" gravity sewer without any need for a lift station.

As shown in Table A.2, the total initial capital cost of this alternative is estimated at $811,000, which includes a 35 percent contingency. Over the 50 year analysis period the equivalent average annual maintenance cost was approximately $3,200. The total equivalent average annual capital and maintenance cost is about $34,000.

ALTERNATIVE 2: CONNECTION TO CITY OF PORT WASHINGTON SEWERAGE SYSTEM

A second alternative means of providing sanitary sewer service to the subject parcel is by connection to the City of Port Washington sewerage system. Under that alternative, as shown on Map A-3, sewage from the area would be conveyed to the northeast of the parcel and would connect to the existing City manhole located in the STH 33/Sweetwater Blvd intersection directly north of the subject parcel. Under this alternative, there would be a lift station located in the northwest corner of the subject parcel that would serve 13.7 acres and 38 dwelling units. The lift station would pump into a six-inch-diameter force main connecting to an eight-inch gravity sewer to the northeast, as shown on Map A-3. To provide regional service to the area comparable to what would be served by Alternative 1 about 1,330 lineal feet of sanitary sewer along STH 33 would also be required to serve lands lying west of Jackson Road and south of STH 33. Upon review of the Village of Saukville existing sanitary sewer system, it was determined that parcels on the north side of STH 33 and just west of Jackson Road extended would be best served by sewers on the north side of STH 33. Thus only a small extension of the Village system was assumed under Alternative 2 to serve the remaining existing parcel on the south side of STH 33.

As shown in Table A.2, the total capital cost of this alternative is estimated at $842,000, which includes a 35 percent contingency. Over the 50 year analysis period the equivalent average annual maintenance cost was approximately $11,200. The total equivalent average annual capital and maintenance cost is about $43,000.

EVALUATION FACTORS

Cost Summary

A summary of the economic analyses is included in Table A.2. In comparing the cost of the alternatives, the guidelines used indicate that if two compared alternatives are found to be within 10 percent of one another in equivalent annual costs, then those alternatives are considered to be equally cost-effective.[1] In this case, the difference in equivalent annual costs of the alternatives exceeds 10 percent. However, there are other considerations in comparing the alternatives beyond cost as discussed below.

[1] *The 10 percent guideline is founded in good engineering practice and is generally accepted as the degree of precision with which the costs entailed can be estimated. The use of this 10 percent guideline has been endorsed by the technical advisory committees that have assisted the Commission over the years in the economic evaluation of alternative public works projects.*

Environmental Impacts
The environmental impacts of the two alternatives are generally considered to be similar. In all cases, the urban development patterns considered are expected to be similar between alternatives and do not envision encroachment into environmentally sensitive areas.

Sewerage System Impacts
The potential impacts on the sewerage systems involved are not expected to be significant, given the relatively small size of the flows from the subject parcel as compared to the available capacity in both respective systems.

Civil Division Boundaries
The subject parcel is located within the City of Port Washington civil division boundary. Thus, all other things being equal, it would be more expeditious to serve the area to the City sewerage system. This would avoid the need for an intermunicipal agreement for sewer service.

Timing Considerations
Under Alternative 1, providing for connection to the Village of Saukville sewerage system, the assumption was made that the sewer along STH 33 serving the subject parcel will be constructed, in any case, to serve lands to the west of the subject parcel. This connecting sewer availability for the subject parcel has yet to be constructed and the Village does not have any immediate plans to construct to the east of their current system. Under Alternative 2, providing for connection to the Port Washington sewerage system, the sewer connection is readily available, and the subject parcel could be served in the near future. In addition, other utilities/infrastructure in the City are located immediately adjacent to the subject parcel and available for use. These would include City-owned streets, public water mains, gas, electrical, and internet services.

CONCLUSION

Based upon the foregoing, it is recommended that the subject parcel be transferred into the sanitary sewer service area of the City of Port Washington by a sanitary sewer service area amendment and connected to the City's collection system, as described under Alternative 2 above. This conclusion is based upon the mutual agreement achieved between the Village and the City, the ability and willingness to serve the parcel now, and the additional amenities readily available in the City.

Appendix A

DOCUMENTATION OF ANALYSES ASSOCIATED WITH PROVIDING SANITARY SEWER SERVICE TO CERTAIN LANDS LYING SOUTH OF STH 33 AND EAST JACKSON ROAD IN THE CITY OF PORT WASHINGTON, OZAUKEE COUNTY

TABLES

Table A.1
Population and Design Flow Data for Subject Parcel Development

	Design Sewage Hydraulic Loading Gallons per Day (gpd)	
Design Population	Average Annual	Peak Hourly
268	33,500	134,000

Table A.2
Cost Analysis Summary of Alternative Sewer System Plans to Serve Subject Parcel

Alternative Plan Components	Initial Capital Cost ($)	50-Year Average Annual O&M Cost[a] ($)	Equivalent Average Annual Cost[a] ($)
Alternative 1 – Connection to Saukville			
Construction Cost	601,000	3,200	26,000
Engineering, Legal, and Miscellaneous Contingencies	210,000	--	8,000
Alternative 1 Total	811,000	3,200	34,000
Alternative 2 – Connection to Port Washington			
Service to Site			
Construction Cost	583,000	11,000	33,100
Engineering, Legal, and Miscellaneous Contingencies	204,000	--	7,700
Total	787,000	11,000	40,800
Regional Service			
Construction Cost	41,000	200	1,700
Engineering, Legal, and Miscellaneous Contingencies	14,000	--	500
Total	55,000	200	2,200
Alternative 2 Total	842,000	11,200	43,000

[a] *Economic analysis was conducted assuming at 50-year analysis period and a 2.875 percent interest rate.*

Source: SEWRPC

Table A.3
Detailed Cost Breakdown for Alternative 1 – Connection to Saukville

Item Number	Item Description	Unit	Quantity	Unit Price ($)	Total ($)
Construction					
1	8" Sanitary Sewer - PVC	LF	6,263	14.88	93,213
2	Manhole – Sanitary	LS	1	125,120	125,120
3	Excavation – Trench	LS	1	55,100	55,100
4	Dewatering – Trench	Day	44	271	11,997
5	Gravel Fill Around Pipe	CY	2,320	40.00	92,793
6	Backfill - Trench, From Spoils	LCY	17,693	8.48	150,018
7	Compaction – Trench Backfill	ECY	14,154	0.74	10,448
8	Concrete Sidewalk Removal	SY	759	18.34	13,918
9	Concrete – New Sidewalk	SY	759	60.34	45,794
10	Terrace Restoration	SY	1,526	0.63	959
11	Asphalt Removal	SY	39	11.12	432
12	New Asphalt	SY	39	31.58	1,228
				Construction Subtotal	601,100
				35 percent Contingency	210,385
				Construction Total	811,500

Table A.4
Detailed Cost Breakdown for Alternative 2 – Connection to Port Washington

Item Number	Item Description	Unit	Quantity	Unit Price ($)	Total ($)
Service to Site Construction					
1	8" Sanitary Sewer - PVC	LF	4,71	14.88	70,157
2	6" Force Main	LF	758	10.00	7,579
3	Lift Station	LS	1	175,000	175,000
4	Manhole - Sanitary	LS	1	95,040	95,040
5	Excavation – Trench	LS	1	38,200	38,200
6	Dewatering – Trench	Day	31	271	8,479
7	Gravel Fill Around Pipe	CY	1,746	40.00	69,843
8	Backfill - Trench, From Spoils	LCY	12,505	8.48	106,026
9	Compaction – Trench Backfill	ECY	10,004	0.74	7,384
10	Asphalt Removal	SY	113	11.12	1,260
11	New Asphalt	SY	113	31.58	3,579
				Site Construction Subtotal	582,600
				35 percent Contingency	203,910
				Site Construction Total	786,600
Regional Service[a] Construction					
12	8" Sanitary Sewer - PVC	LF	329	14.88	4,897
13	Manhole – Sanitary	LS	1	3,917	3,197
14	Excavation – Trench	LS	1	2,104	2,104
15	Dewatering – Trench	Day	2	271	504
16	Gravel Fill Around Pipe	CY	122	40.00	4,874
17	Backfill - Trench, From Spoils	LCY	743	8.48	6,296
8	Compaction – Trench Backfill	ECY	594	0.74	438
19	Concrete Sidewalk Removal	SY	217	18.34	3,974
20	Concrete – New Sidewalk	SY	217	60.34	13,074
21	Terrace Restoration	SY	587	0.63	369
				Regional Construction Subtotal	40,500
				35 percent Contingency	1,175
				Regional Construction Total	54,700
				Overall Construction Total	841,300

[a] *Pertains to service provided by the sewer west of the site along the southern side of STH 33 that connects to the Village of Saukville collection system.*

Appendix A

DOCUMENTATION OF ANALYSES ASSOCIATED WITH PROVIDING SANITARY SEWER SERVICE TO CERTAIN LANDS LYING SOUTH OF STH 33 AND EAST JACKSON ROAD IN THE CITY OF PORT WASHINGTON, OZAUKEE COUNTY

MAPS

Map A.1
Concept Layout for Subject Parcel

Map A.2
Alternative 1 Layout

Map A.3
Alternative 2 Layout

Appendix B

REGIONAL HOUSING PLAN: JOB/HOUSING BALANCE ANALYSIS

On March 13, 2013, the Regional Planning Commission adopted a regional housing plan for the seven-county Southeastern Wisconsin Region. That plan is documented in SEWRPC Planning Report No. 54, *A Regional Housing Plan for Southeastern Wisconsin*, dated March 2013. The plan addresses a range of housing issues and concerns, including the balance between jobs and housing throughout the Region. The plan includes a generalized analysis of the "job/housing balance" for subareas of the Region. The regional housing plan recommends providing the findings of the job-housing analysis to communities seeking to amend their sanitary sewer service areas, with the intent to inform communities of any job/housing imbalance, and to encourage them to consider addressing the imbalance when they review and update their community comprehensive plan and zoning ordinance. Accordingly, the findings of that analysis are summarized in this appendix.

The job/housing analysis conducted under the regional housing study examined the relationship between jobs and housing that would exist in areas planned by local governments to be served by a public sanitary system, assuming implementation of adopted long-range comprehensive plans for those areas. For each sewered community, the analysis compared the projected relative shares of lower-cost, moderate-cost, and higher-cost housing[1] with the projected relative shares of lower-wage, moderate-wage, and higher-wage jobs,[2] respectively. Job/housing imbalances identified under this analysis are indicated on Map B.1. A "lower-cost" job/housing imbalance indicates a community projected to have a higher percentage of lower-wage jobs than lower-cost housing. A "moderate-cost" job/housing imbalance indicates a community projected to have a higher percentage of moderate-wage jobs than moderate-cost housing.

Map B.1 shows the City of Port Washington is projected to have a moderate-cost job/housing imbalance. The regional housing plan would encourage the City to consider conducting a more detailed job/housing analysis specific to their community, with the community-level analysis considering community-specific wage data and housing price data. The community-specific analysis could also consider the effect of multiple workers in a household, which was not incorporated in the regional-level analysis.

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[1] For purposes of the analysis, lower-cost housing generally includes multi-family dwellings and single- and two-family dwellings at densities of 6,000 square feet or less per dwelling unit; moderate-cost housing includes single- and two-family dwellings at densities of one dwelling per 6,000 to 20,000 square feet for homes constructed prior to 2000 and at densities of one dwelling per 6,000 to 10,000 square feet for housing constructed after 2000; and higher-cost housing includes the balance of the housing stock.

[2] For purposes of the analysis, lower-wage jobs include those with an average annual wage that is 80 percent or less than the average annual wage for all jobs in the county; moderate-wage jobs include those with an average annual wage between 80 percent and 135 percent of average annual wage for all jobs in the county; and higher-wage jobs include those with an average annual wage that is 135 percent or more of the annual average wage for all jobs in the county.

The regional housing plan further recommends that communities which are demonstrated to have a job/housing imbalance following a community-specific analysis consider making changes to their comprehensive plan and zoning ordinance, as appropriate, to enable the provision of housing suitable for the people holding jobs in their community. Actions to address a moderate-cost job/housing imbalance could include modifying the comprehensive plan to permit some single-family residences on smaller lots (1/4 acre or less) and of modest square footage (1,200 square feet). Actions to address a lower-cost job/housing imbalance could include modifying the comprehensive plan to permit some modest multi-family housing (density of about 10 housing units per acre and 800 to 850 square feet per two bedroom apartment).

Additional information about the housing plan and the job/housing balance analysis is available on the SEWRPC website (www.sewrpc.org/sewrpc/housing.htm) or by contacting the SEWRPC staff.

Appendix B

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MAPS

Map B.1
Projected Job/Housing Imbalances in Sewered Communities in the Southeastern Wisconsin Region: 2035