CITY OF St. Joseph

Drinking Water State Revolving Fund Project Plan Amendment

June 13, 2022

(original plan dated June 11, 2020)

Prepared By

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1.0 INTRODUCTION

1.1 INTRODUCTION

The City of St. Joseph (City) has retained Abonmarche Consultants, Inc. (Abonmarche) to complete this Drinking Water State Revolving Fund (DWSRF) Project Plan Amendment for Lead Water Service Replacements, Water Distribution System Improvements, and St. Joseph Water Treatment Plant (SJWTP) upgrades.

The purpose of this Project Plan is to meet the project planning requirements of the State of Michigan Department of Environment, Great Lakes & Energy (EGLE) DWSRF, to include updates to the previously approved Project Plan dated June 11, 2020 and another Project Plan from 2017.

The City's infrastructure has been the subject of multiple engineering studies focused on Drinking Water as well as Storm Water and Wastewater Systems. Those that will be referenced in the plan include:

- *Asset Management Plan (October 2017)*
- *Water System Reliability Study (January 2016)*
- *Strategic Capital Improvement Plan (May 2015)*
- *DWAMP (December 2017)*
- *Source Water Protection Plan (October 2017)*
- *DSMI (December 2019)*

1.2 ASSET MANAGEMENT PLAN (AMP)

The City's Asset Management Plan (AMP) for its Wastewater and Storm Water systems was completed using the funding made available through the SAW Grant program (Grant No. 1276-01). Please note that while the SAW Grant covered activities related to the preparation of this asset management plan for the City's wastewater and storm water systems, the City of St. Joseph invested its own resources to expand the AMP to include the City's water distribution system and roadway network so that all four major asset classes within the public right-of-way are covered under the initial version of this Asset Management Plan. This allows the city to be efficient in planning and executing infrastructure improvements. This integrated asset management approach will improve the level of service for users of all utility networks and presents long-term cost savings.

1.3 WATER SYSTEM RELIABILITY STUDY (WSRS)

St. Joseph's Water Reliability Study (WRS) evaluated the water system with an emphasis on water demand and fire flow. The system was evaluated using the number of service connections and Residential Equivalent Units (REUs). The City was determined to have 4,266 service connections and 5,053 total REUs. Of the 4,266 services, about 3,850 are residential service connections. An inventory of water mains based on age, diameter, and material was taken to determine the condition of the system and are summarized in Tables 1-3.

Table 1: Pipe Ages in the System

Approximate Year of Installation	Pipe Length (feet)	Percent of Pipe by Length
1890 - 1919	44,998	14.47%
1920 - 1949	96,635	31.07%
1950 - 1979	88,556	28.47%
1980-1999	13,392	4.31%
2000 - 2015	67,418	21.68%
Total Pipe Length	310,999	

Table 2: Pipe Diameters in the System

Pipe Diameter, inches	Pipe Length (feet)	Percent of Pipe by Length
4.0	28,335	9.11%
6.0	98,632	31.71%
8.0	69,187	22.25%
10.0	38,661	12.43%
12.0	42,420	13.64%
14.0	148	0.05%
16.0	11,880	3.82%
20.0	10,682	3.43%
24.0	10,319	3.32%
30.0	735	0.24%
Total Pipe Length	310,999	

Table 3: Pipe Materials in the System

Pipe Material	Pipe Length (feet)	Percent of Pipe by Length
Cast Iron	230,189	74.02%
Ductile Iron	78,405	25.21%
HDPE	2,405	0.77%
Total Pipe Length	310,999	

The water plant has adequate capacity to meet the average daily flow demand. The City's current average daily demand requires 26.3% of the water plant's firm capacity. However, several water distribution system improvements are recommended to replace mains which are undersized or beyond the end of their useful life as noted by the fact that 45% of the water distribution system was installed prior to 1950. The soils in the majority of the City are typically clays and silts which often result in a more corrosive environment, shortening a typical water main's useful life. Many mains have a history of main breaks and capacity issues, partly due to the corrosive environment in which they operate. A number of older mains have sustained excessive corrosion, compromising their structural integrity, and causing water to leak from the system. Replacement of these older mains will help reduce water loss throughout the system, which is approximately 10% higher than the EGLE recommended unaccounted water percentage. System improvements will also improve reliability of the system by replacing mains which are structurally compromised due to excessive corrosion.

1.4 STRATEGIC CAPITAL IMPROVEMENT PLAN (SCIP)

This Strategic Capital Improvement Plan (SCIP) is intended to provide a roadmap for water system improvements needed in the next 10 and 20 years. If the SJWTP were replaced today with a new water plant, the capital cost could be approximately $50 million. Completing the recommended projects as outlined in the SCIP over a 20 year period at an approximate cost of $25 million provides good value to water customers and should allow the SJWTP to operate efficiently for many more years.

Water distribution system improvement projects were determined through the Asset Management process. Through this analysis, numerous projects were identified to systematically address aging infrastructure. Asset management principles of reducing risk to provide excellent customer service were used to develop and prioritize the recommended improvement projects. An implementation plan was developed for the orderly implementation of projects through the 20 year planning period. For the purposes of this Project Plan, nine of the highest ranking projects were selected as a realistic balance between needs and available funding.

1.5 DRINKING WATER ASSET MANAGEMENT PLAN (DWAMP)

The Drinking Water Asset Management Plan (DWAMP) is intended to allow the City to provide safe drinking water, a reliable water distribution system, and sufficient fire flows for the protection of property. The City water distribution system shall be maintained in a safe and sound condition to provide safe and reliable distribution of potable water to all residents, businesses, and visitors in the City.

1.6 SOURCE WATER PROTECTION PLAN

The Source Water Protection Plan is intended to provide guidelines relating to the protection of surface waters such as Lake Michigan as it is the source for the City of St. Joseph's drinking water. The Source Water Protection Plan recognizes the importance of storm water management along with its effect on the environment. The City strives to provide a healthy and safe environment through their water quality and the protection of the City's water source.

1.7 DISTRIBUTION SERVICE MATERIAL INVENTORY (DSMI)

The State of Michigan issued a lead and copper rule that placed new requirements on water supply and distribution systems in 2018. It was required that a Distribution System Material Inventory (DSMI) be completed to replace lead water services on a set schedule. The DSMI is used to determine the extent of water service replacements. The State has established varying rates at which water suppliers must replace lead services. Because the City of St. Joseph is in compliance with the Safe Drinking Water Act for levels of lead, they are required to replace services at a rate of 5% per year which began in January 2021.

1.8 PROJECT OVERVIEW

This DWSRF Project Plan Amendment is being submitted to fund improvements to the SJWTP, water distribution system, and lead service lines as referenced in the 2020 DWSRF Project Plan. The improvements to the SJWTP will benefit all users in the City of St. Joseph and the Southwest Michigan Regional Sanitary Sewer and Water Authority which is composed of St. Joseph Charter Township, Lincoln Charter Township, and Royalton Township. The Water Authority services approximately 25,000 residents. The City distribution system serves the City's population of 7,856 along with many businesses and visitors to the City. Projects have been selected based upon all of the studies identified above.

2.0 PROJECT SERVICE AREA AND DESCRIPTION

The project service areas for the WTP improvements and distribution system improvements were approved in the 2017 and 2020 DWSRF project plans.

The Lead Water Service Replacements encompass the entire City of St. Joseph (See Figure 1 and Figure 3).

2.1 LAND USE IN STUDY AREA

Existing land uses in the study area, indicated on Figure 2, are residential, commercial, industrial, institutional, recreational, and vacant. The City's most recent master plan (2016) states that its future land use plan is intended to guide land use, policy decisions, and zoning ordinance within the City over the next 20 years.

The primary land use within the City is residential. Residential areas are divided into three zones: Single-Family Residence, Two-Family Residence, and Multiple-Family Residence. Single-Family units comprise most of the land south of the St. Joseph River. Multi-Family units are dispersed throughout the City with condominium developments primarily along the Lake and the River.

Land designated for commercial use is primarily confined to three zones: Commercial District, Commercial Office District, and Downtown District. The Downtown District is located just south of the St. Joseph River and is generally within the area bounded by Port Street, Lake Boulevard, Market Street, and southwest of Main Street. A portion of the area adjacent to the Downtown District is Commercial and Commercial Office. Another significant location of commercial

zoning is along the Niles Avenue corridor and Hilltop Road. These commercial zones include retail sales and services, offices, and non-industrial businesses.

The two industrial zones within the City are the Light Industrial District and the Heavy Industrial District and include current commercial harbor operations. Operations not detrimentally affecting surrounding districts are categorized as light industrial and are located primarily in the southwestern portion of the City.

Institutional and recreational lands are located in areas zoned Residential and Commercial. Government offices, schools, churches, emergency services, and similar uses are categorized as institutional. Parks, public and private beaches, natural woodlands, and vegetated areas are categorized as recreational. The majority of recreational lands are located along the Lake.

Undeveloped properties, unused former commercial and industrial lands, rights-of-way, and otherwise unclassified areas are categorized as vacant. In the Future Land Use Map, these areas are generally identified as Waterfront Mixed Use.

Future land use, as laid out by the City, will be more flexible where districts transition. For example, some corridors in the existing Residential Districts have been identified as potential locations for limited mixed-use and commercial development. The City anticipates an increased demand for condominiums, apartments, and smaller homes.

The City's current Land Use Map and its Future Land Use Map do not specifically identify wetlands. However, the City does recognize the existence of wetlands and the importance of protecting them. According to analysis conducted by the EGLE Water Division, wetlands exist in the northern portion of the City, which is zoned Water Recreation. There are also existing wetlands in areas zoned for commercial and residential uses. The City will take steps to protect these wetlands and take their locations into account when reviewing site plans and development proposals.

Figure 1: Study Area Overview Map

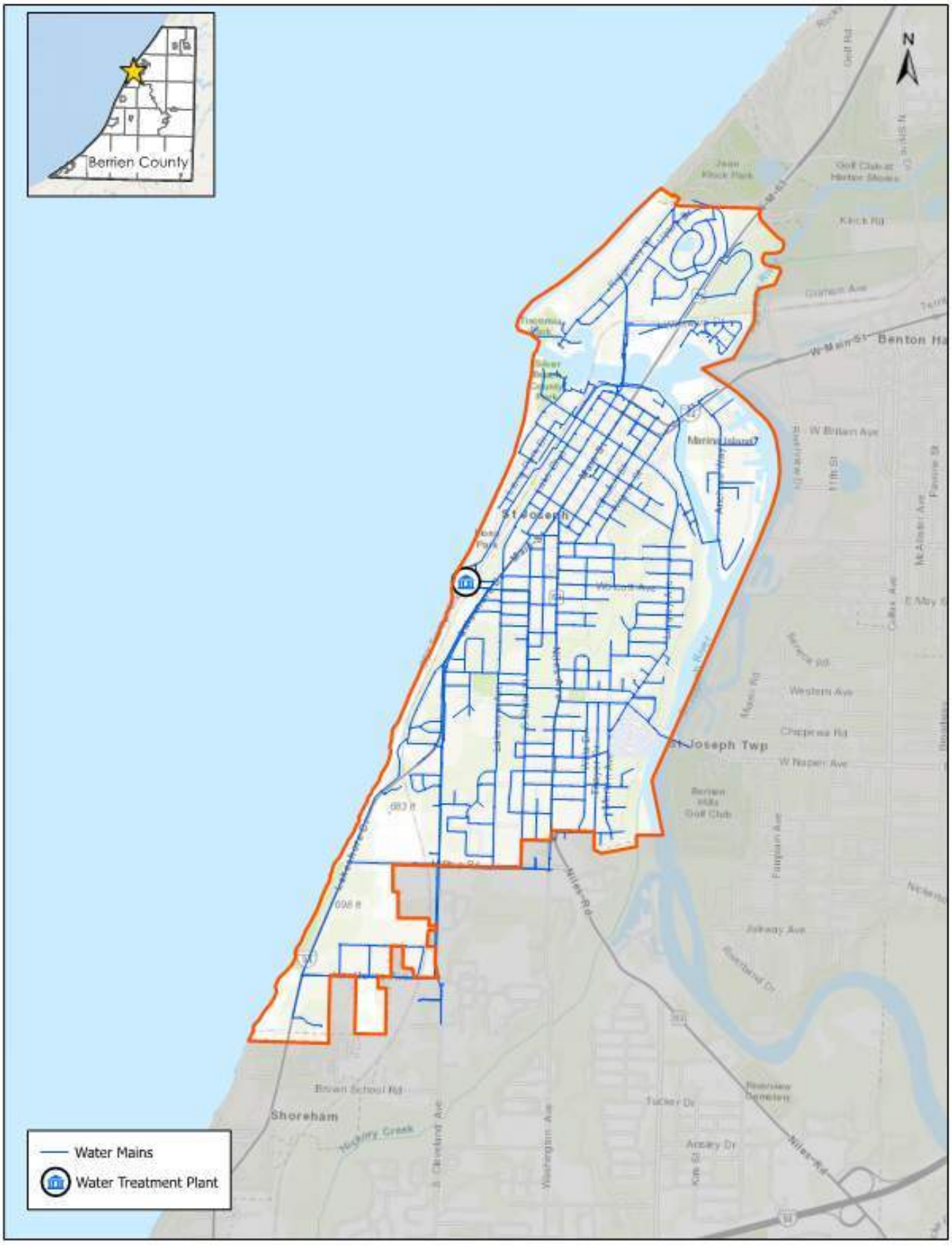
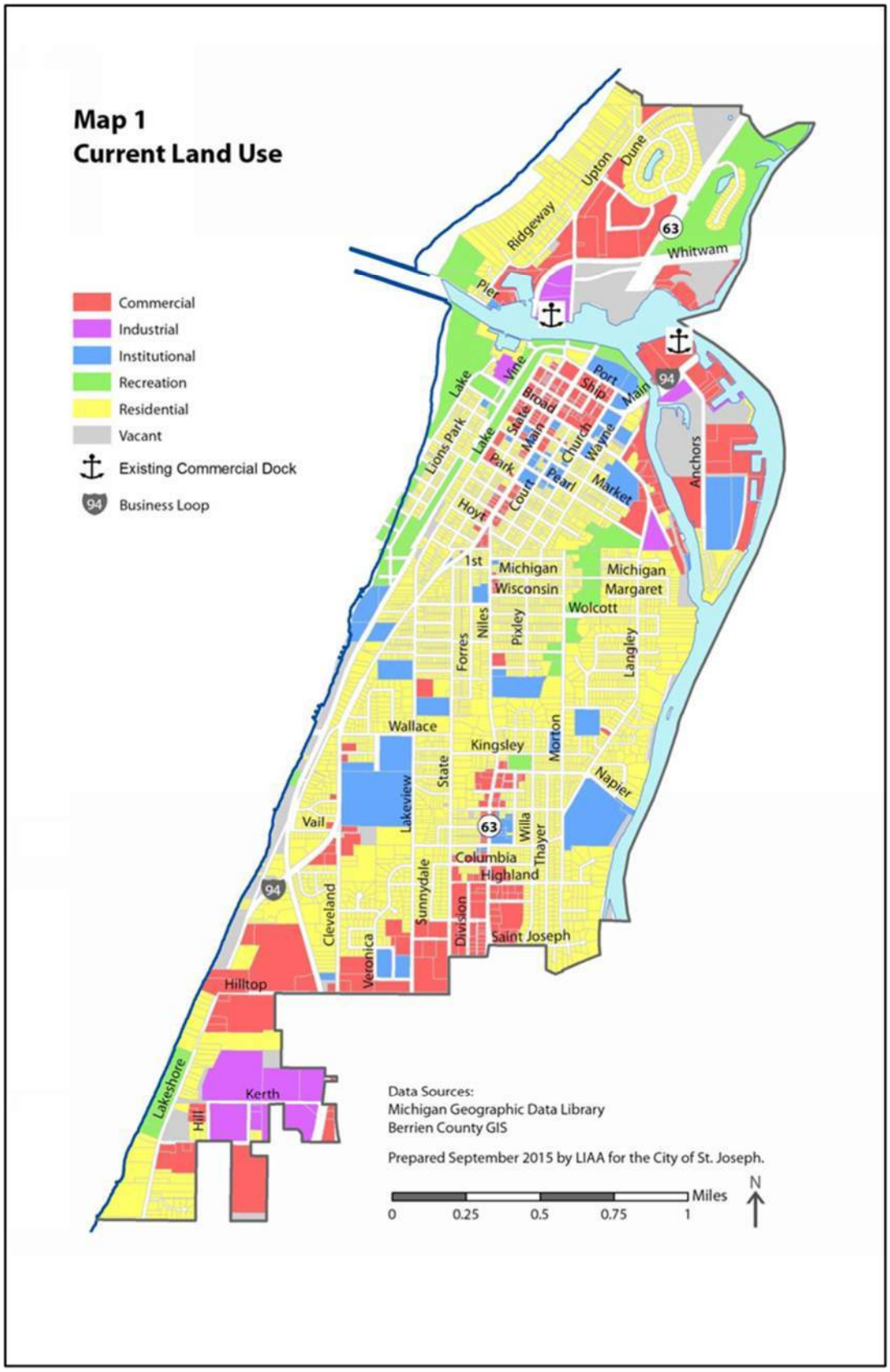


Figure 2: Current Land Use



Source: 2016 Master Plan for City of St. Joseph

2.2 LEAD SERVICE LINE REPLACEMENT

The City of Saint Joseph has a reported 3,941 water services. Of the 3,941 water services, it is estimated that 2,353 of them contain lead or likely contain lead and will need to be replaced with another 828 services classified as unknown. In order to remain in compliance with the Safe Drinking Water Act, the City plans on replacing an average of 150 lead service lines per year until the water services containing lead in any form are replaced. The water services to be replaced have been evaluated and categorized by priority based on the following criteria:

- **Priority 1:** LSLR's as part of upcoming reconstruction projects.
- **Priority 2:** Water services that leak or need to be replaced as part of water main breaks.
- **Priority 3:** Lead services that test high for lead.
- **Priority 4:** Future projects listed in the Asset Management Plan slated for reconstruction.
- **Priority 5:** Galvanized services previously connected to lead.

Initially, the City plans to address Priority 1 water services located on Upton Drive and continuing to address water services on future CIP projects. The City also plans to address water services that leak or need to be replaced as a water main breaks along with water services that test high for lead. Beginning in 2024, the City expects to focus on Priority 3 & 5 projects. Priority 5 projects are typically at locations where the watermains have been replaced and the public side of the water services is known to be copper. These projects will be pursued in reverse chronological order beginning with watermain replacement work completed in 2017 and going backward in time. While LSLR's associated with reconstruction projects will remain the higher priority projects, we expect those to dwindle because the Priority 4 LSLR projects will replace lead services in advance of the reconstruction work in many locations. In Table 4 below, the total number of each anticipated type of lead service replacement in each priority category is summarized. In 2026, the City expects to undertake the Priority 4 projects. The locations of these stand-alone LSLR projects will be determined as part of an Asset Management Update expected to be completed in late 2022 or early 2023. Figure 3 is the City's current DSMI map illustrating the status of lead service inventory.

Existing lead water service lines will be removed and replaced with copper service lines from the water main in the street to the meter at the home residence (or business building). At each location, construction will entail an open cut at the water main located in the street right-of-way (ROW) and at the curb box near the ROW line, with each open cut measuring approximately 5 feet deep by 3 feet wide by 10 feet long. As part of the work, the curb stop and box will be replaced.

For work on the privately-owned property, the existing service from the ROW line to the meter at the house (or business) will be replaced using one of several trenchless technology methods. Trenchless technology does not disturb the ground and will not disrupt lawns, unless local soil conditions or other site features cause problems, at which point a small trench would be dug to lay the new copper line.

Table 4: Proposed LSLR Projects

Priority	1	2	3	4	5				
Year	Water Services For Reconstruction Projects	Leaking/Broken Water Services	Lead Services That Test High For Lead	Water Services For CIP Projects	Galvanized Water Services Previously Connected To Lead	Total Service Replacements	Total Construction Cost	Engineering Cost	Total Project Cost
2023	9	30	50	130	0	219	$1,752,000	$262,800	$2,014,800
2024	0	30	50	0	70	150	$1,200,000	$180,000	$1,380,000
2025	0	30	50	0	70	150	$1,200,000	$180,000	$1,380,000
2026	0	30	50	70	0	150	$1,200,000	$180,000	$1,380,000
2027	0	30	50	0	70	150	$1,200,000	$180,000	$1,380,000
					Total FY 23-27	**819**	**$6,552,000**	**$982,800**	**$7,534.800**

Figure 3: DSMI Map

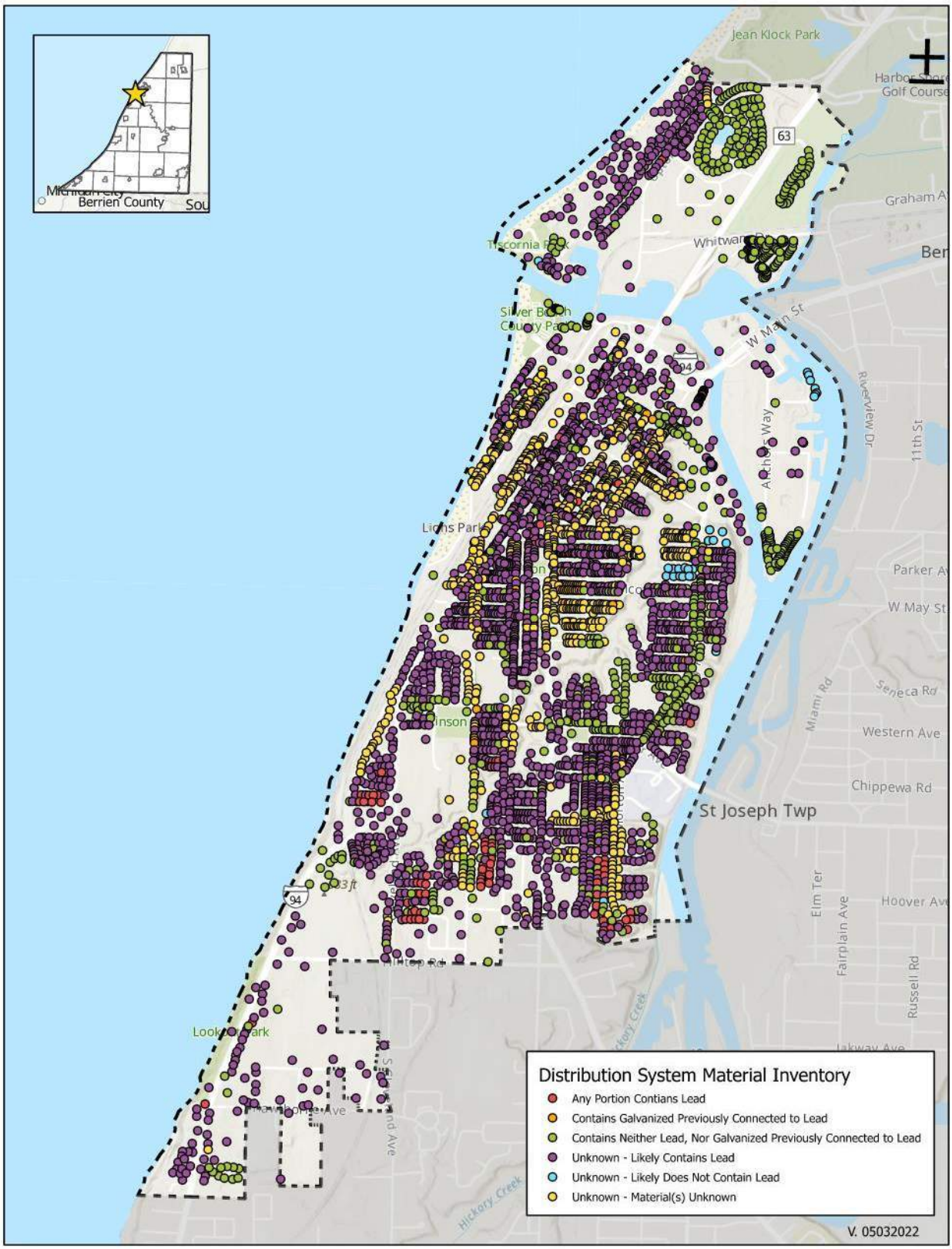
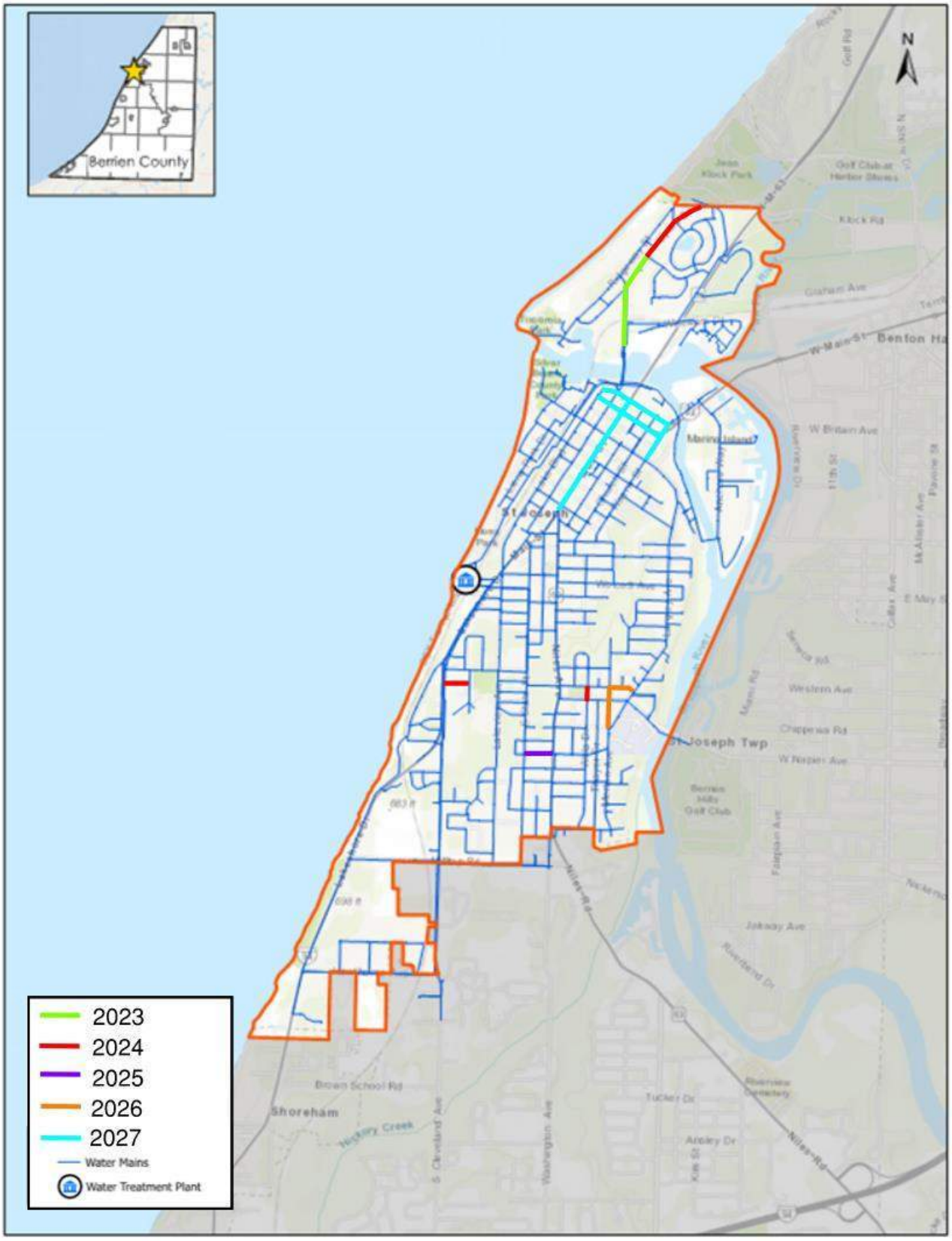


Figure 4: FY 23-27 Water Distribution Project Locations



2.3 WATER DISTRIBUTION SYSTEM IMPROVEMENTS

A number of distribution system improvements were developed for the next 20 years in response to concerns raised in Section 1. The proposed five-year improvements are listed in Table 5. Most of the projects will be completed in conjunction with roadway, sanitary sewer, and storm sewer improvements. The distribution system improvements were developed as part of the City's 2017 asset management plan for the City's utilities with significant consideration given to the 2016 Water Reliability Study. The first project listed on Table 5 is intended to be completed in the initial project term 2023.

The 5-year plan includes 7 projects totaling $21,402,107 in estimated costs with the water distribution portion of the costs estimated at $6,490,387. Proposed work in this DWRF Project Plan has a secondary benefit of improving fire flow capacities. The 20-year plan includes 40 projects totaling $96,368,782 in estimated costs with the water distribution portion of the costs estimated at $32,728,723. The projects selected have been coordinated with those included in the CWSRF Project Plan to efficiently complete the utility improvements in accordance with sound Asset Management Principles.

Table 5: Cost Summary - Proposed Water Distribution System Improvement Projects

Project No.	Year	Project Name	From	To	Length (feet)	Estimated Cost	Water Distribution Estimated Cost
1	2023	Upton Drive Reconstruction	St. Joseph River	Momany Dr	2300	$6,640,857	$1,323,949
		Near Term (1 Year) Total Estimated Costs				**$6,640,857**	**$1,323,949**
2	2024	Kinglsey Avenue	Stadium Dr	Lakeshore Dr	630	$1,100,000	$385,000
3	2024	Willa Drive 3	Napier Ave	Kingsley Ave	330	$315,000	$110,250
4	2024	Upton Drive 2	Momany Dr	N. City Limits	2015	$2,925,000	$1,023,750
5	2025	Botham Ave	S State St	Niles Ave	690	$1,285,000	$449,750
6	2026	Morton Avenue	Kingsley Ave	Van Brunt Ave	975	$2,200,000	$770,000
		Kingsley Avenue	Morton Ave	Langley Ave	600		
7	2027	Main Street, Ship St, Port St	Niles Ave	Port St	3200	$5,800,000	$2,030,000
8	2027	Wayne Street	Broad St	Port St	1010	$1,136,250	$397,688
		Near Term (5 Years) Total Estimated Costs				**$21,402,107**	**$6,490,387**
9	2028	Wolcott Avenue Reconstruction	Pixley Ave	Langley Ave	2000	$2,850,000	$997,500
10	2028	State Street Reconstruction	Sutherland Ave	Elm St	2650	$3,146,000	$1,101,100
11	2029	S. State Street Reconstruction	Wallace Ave	WinchesterAve	2325	$6,210,000	$2,173,500
12	2030	Lane Drive	Langley Ave	Dead End	275	$1,250,000	$437,500
13	2032	Willa Drive 2	Botham Ave	Van Brunt Ave	650	$1,100,000	$385,000
		Long Term (10 Years) Total Estimated Costs				**$35,958,107**	**$11,584,987**
14	2033	Lane Drive	Morton Ave	Niles Ave	1225	$1,378,125	$482,344
15	2033	Mohawk Lane	Langley Ave	Sunset Dr	800	$900,000	$315,000
16	2033	Napier Avenue	Niles Ave	Langley Ave	1600	$1,862,000	$651,700
17	2033	Division Street	St. Joseph Dr	Gard Ave	1325	$1,655,050	$579,268
18	2033	Riverwood Terrace	Langley Ave	Riverwood Ter N/S	530	$480,000	$168,000
19	2033	Sunnydale Drive	S State St	S State St	1600	$1,440,000	$504,000
20	2034	Forres Avenue	Main St	Winchester Ave	1000	$1,100,500	$385,175
21	2034	Veronica Drive & Veronica Court	Lakeview Ave	Lakeview Ave	4300	$3,700,000	$1,295,000
22	2035	Columbia Avenue	Niles Ave	Willa Dr	775	$715,000	$250,250
23	2035	Hillcrest Avenue	Sunset Dr	Langley Ave	875	$820,000	$287,000
24	2035	Hawthorne Avenue	Lakeshore Dr	Cleveland Ave	3225	$3,500,000	$1,225,000
25	2036	Wisconson Avenue	Niles Ave	Morton Ave	1300	$1,250,000	$437,500
26	2036	Winwood Avenue	Cleveland Ave	Veronica Dr	750	$720,000	$252,000
27	2037	St. Joseph Drive	W of Willa Dr	Morton Ave	1110	$1,050,000	$367,500
28	2037	Sunset Drive	Lewis Ave	Orchard Ave	1375	$1,250,000	$437,500
29	2038	Niles Avenue	Main St	S City Limits	7800	$12,060,000	$4,221,000
30	2039	Petrie Avenue	S State St	Niles Ave	700	$650,000	$227,500
31	2039	Thayer Drive	St. Joseph Dr	Napier Ave	3100	$2,920,000	$1,022,000
32	2040	Highland Court	Highland Ave	Interceptor	530	$775,000	$271,250
33	2040	Napier Avenue	Langley Ave	River Crossing	1325	$2,500,000	$875,000
34	2040	Pioneer Road	Wallace Ave	North St	800	$720,000	$252,000
35	2041	Ridgeway Street	N Pier St	N Upton Dr	5850	$3,000,000	$1,050,000
36	2041	Lake Street	Park St	Market St	800	$450,000	$157,500
37	2041	Market Street	Church St	Olive St	920	$845,000	$295,750
38	2041	Whitllesey Avenue	Lakeview Ave	S State St	700	$670,000	$234,500
39	2042	Lakeshore Dr	Winchester Ave	S City Limits	12400	$14,000,000	$4,900,000
		Long Term (20 Years) Total Estimated Costs				**$96,368,782**	**$32,728,723**

2.4 WATER PLANT IMPROVEMENTS

Phase 2 and carryover projects from Phase 1 of the Water Plant SCIP will begin in 2023 with construction expected to be completed over the following two to three years. These projects include improvements to clarifiers #2 and #3, HVAC upgrades, architectural improvements, lab improvements, and south low lift pump station upgrades. Please refer to the 2017 DWSRF Project Plan for further detail on the proposed water plant improvements. All Water Plant improvements included in this plan will be confined within the building limits. No site work is expected that will cause any impacts to shoreline, dewatering, or wetlands.

The clarifier and architectural improvements are planned for 2023. The HVAC upgrades, lab improvements, and low lift station improvements are planned for 2027. A summarized cost of the proposed Water Plant Improvements are identified in Table 6 below.

2.4.1 CLARIFIER IMPROVEMENTS

Clarifiers #2 and #3 were constructed in 1975 and have a rated capacity of 6 mgd at 0.9 gpm/sf and 2 hours of detention time. As currently rated, total clarification capacity is 16 mgd total, and 10 mgd firm. This limits the plant capacity if one of the clarifiers is out of service for maintenance.

Each clarifier will be retrofitted with horizontal flocculators, inclined plate settler basins, sludge removal mechanisms and automated flow split control between clarifiers. The capacity of each new clarifier will be 9 mgd for a total capacity of 18 mgd between the two.

2.4.2 HVAC UPGRADES

In the existing control room, lab and office, moisture from the basins and filters is being drawn into the space above the ceilings. HVAC upgrades will be made to pressurize this area, preventing moisture from entering. The existing laboratory also needs a ventilating hood and other upgrades to its existing HVAC system. The HVAC upgrades also include the installation of dehumidification units in the pipe galleries.

2.4.3 ARCHITECTURAL IMPROVEMENTS

Architectural improvements include renovating alum and fluoride feed rooms to incorporate an office and conference rooms, replacing windows and handrails, repairing cracks in walls and repainting, replacing the roof, and HVAC upgrades.

2.4.4 LAB IMPROVEMENTS

Lab improvement items include replacing countertops and cabinets, upgrading electrical facilities, and instrumentation for process lab capability.

2.4.5 SOUTH LOW LIFT PUMP STATION (ELECTRICAL) UPGRADES

Work for the electrical upgrades at the South Low Lift Pump Station include replacing MCC and switch gear, replacing pump packing, replacing the traveling screen, and replacement of the isolation gate.

Table 6: Proposed Water Plant Improvements - 2023

Water Treatment Plant Projects	
Project	**Estimated Cost**
Clarifier #2 and #3 Improvements	$6,600,000
Architectural Improvements	$1,095,000
Water Treatment Plant Projects	**$7,695,000**
Contingency (10%)	**$769,500**
Engineering (15%)	**$1,154,250**
Subtotal Water Treatment Plant Projects	**$9,618,750**

3.0 PROJECT NEED

Lead in drinking water is widely known to pose a public health risk, and the Michigan Lead and Copper Rule promulgated in 2018 required municipal water suppliers to create an initial distribution system materials inventory (DSMI) by January 1, 2020. A final DSMI is required by January 1, 2025. Starting in 2021, water suppliers were to begin removing all lead service lines at a rate averaging 5 percent per year, not to exceed 20 years for replacing lead components within the water system.

Much of the infrastructure dates to the early 1900's, meaning that the facilities are operating beyond their useful lives and represent a high probability of failure and service disruption. Aging and undersized infrastructure means low water pressure, poor water quality, and inadequate fire flow in the drinking water system. Aging and unreliable infrastructure includes leaky water mains and additional costs associated with these deteriorating system components.

A detailed evaluation of the water plant was conducted in a SCIP Study in 2017. The study includes several recommendations for improvements to the existing plant. Although many improvements have been made to the plant, further improvements to the facilities are needed to address reliability and performance issues associated with the aging equipment. Additionally, there are some treatment processes that are not suited to the raw water conditions for the plant. This includes the solids contact clarification process, which is prone to clarifier upsets during conditions of rapidly changing water temperatures in the lake.

4.0 POPULATION DATA

The City of St. Joseph population according to the 2020 U.S. Census was 7,856. The population served by the SJWTP is approximately 33,000.

5.0 ENVIRONMENTAL SETTING

5.1 FLOODPLAINS AND WETLANDS

Sensitive areas in the City consist of beaches and wetlands. Along much of Lake Michigan's shoreline are vast stretches of sandy beaches. These beaches require special attention to minimize erosion from wind and wave action. Wetlands are also present in the City. The majority of wetlands in the City are adjacent to the River, but others exist in both the northern and southern portions of the City Floodplains.

The extent of the 500-year flood boundary as defined by the National Flood Insurance Program consist primarily of the areas immediately adjacent to the St. Joseph River, the Paw Paw River, and their tributaries. A river, stream, lake, or drain may on occasion overflow their banks and inundate adjacent land areas. As defined by the Federal Emergency Management Agency (FEMA), the term floodplain has come to be commonly understood as the land area having a 1% chance of being inundated by the overflow of water in any given year. There may have been many Letter of Map Amendments (LOMA) made to the flood plain limits. The largest areas that are in the floodplain are along the St. Joseph and Paw Paw Rivers, which are more susceptible to short term fluctuations than the lake. The majority of Marina Island is in the floodplain as is the area between M-63 and the Paw Paw River. The 100-year floodplain also includes a narrow band of land along Lake Michigan's shoreline. The City also has a ravine, which cuts through the City from the southwest to the northeast.

The ravine contains many flood-prone areas that are not directly related to either thee lake or the rivers. The only project that is expected to impact the floodplain is the Upton Drive Reconstruction Project, which would include limited excavation and grading within the floodplain as it is expected that the proposed roadway will be constructed to closely match existing roadway elevations. Floodplain limits for the Upton Drive Project are shown in Appendix D.

5.2 COASTAL ZONE

The City's entire western boundary is Lake Michigan, a coastal zone. The nearest National Natural Landmarks to the project site are the Grand Mere Lakes and Warren Woods Natural Area. These landmarks are located on the lakeshore six and ten miles south of St. Joseph, respectively, and will not be affected by the selected alternatives.

5.3 AGRICULTURAL RESOURCES

The National Environmental Policy Act defines several classifications of farmland including Prime and Unique farmland. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

There are 332 million acres of prime farmland in the United States. There are no prime and unique agricultural parcels located within or adjacent to the selected alternatives.

5.4 PROTECTED PLANTS, ANIMALS, AND HABITAT

Currently, eight species are listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) in Berrien County. Endangered or threatened designated species are protected under the Endangered Species Act. The projects proposed within this Plan take place within already developed areas and are not expected to impact any habitat. Where tree trimming or removal is necessary, this work will be scheduled to mitigate impacts on threatened or endangered species (Indiana Bat).

7 indicates the species listed as endangered or threatened in Berrien County:

Table 7: Threatened and Endangered Species in Berrien County, MI

Species	Status	Habitat
Mammals		
Indiana Bat (*Myotis sodalis*)	endangered	Summer habitat includes small to medium river and stream corridors with well-developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
Northern Long-Eared Bat (*Myotis septentrionalis*)	threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Birds		
Piping Plover (*Charadrius melodus*)	endangered	Beaches along shorelines of the Great Lakes
Rufa Red Knot (*Calidris canutus rufa*)	threatened	Only actions that occur along coastal areas during the red knot migratory window of May 1 - September 30
Reptiles		
Eastern Massasauga (*Sistrurus catenatus*)	threatened	Wet prairies, marshes and low areas along rivers and lakes. They often hibernate in burrows, under logs, and tree roots
Insects		
Mitchell's Satyr Butterfly (*Neonympha mitchellii mitchellii*)	endangered	Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs
Pitcher's Thistle (*Cirsium pitcher*)	threatened	Stabilized dunes and blowout areas
Plants		
Small whorled pogonia (*Myotis sodalist*)	threatened	Dry woodland; upland sites in mixed forests (second or third growth stage)

5.5 QUALITY OF LIFE

Based upon the locations of the distribution system projects in existing Rights-of-Way, WTP improvements within the building and lead service line replacements being bored from existing mains in the ROW into the homes, we do not expect any significant impact to Recreational Uses, Water Quality, Surface Water, Air Quality, Wild and Scenic Rivers, Land Uses, or Development and Transportation trends.

6.0 EXISTING FACILITIES

Please refer to the 2017 DWSRF Project Plan for a description of existing facilities for the water treatment plant and distribution system.

6.1 LEAD SERVICE REPLACEMENT

The City of St. Joseph received grant funding as part of a pilot program to improve their water supply system by reviewing and identifying existing water service lines to determine if lead materials are present within the municipal water system. The study provided confirmation by identifying both sides of a water service. The water service material from the distribution main to the shutoff at the right of way, has always been the responsibility of the City. The homeowner owns the portion of the service line from the right or way to inside the home. As part of the lead service pilot grant, the City of St. Joseph was able to identify areas of the system that contained lead services or galvanized fittings, to update their DSMI from the main to the home. While only a small number of the existing services were physically inspected as part of the pilot grant, the City was able to extrapolate this data to project an anticipated amount of water service lines that would be required to be replaced in the next 20 years as part of the new lead and copper rule requirements. The pilot grant allowed the City of St. Joseph to receive a head start to manage the lead service replacements that will be required by the State of Michigan in the future.

7.0 ALTERNATIVES ANALYSIS

Please refer to the 2017 DWSRF Project Plan for alternative analysis for water treatment plant and water distribution improvements. The following sections provide alternatives analysis for the lead service line replacements only.

7.1 NO ACTION TAKEN

The No-Action alternative was not considered a feasible option because it would not address the public health risk posed by water service lines made of lead or galvanized steel or meet the requirements of the Lead and Copper Rule.

7.2 PARTIAL REPLACEMENT

Partial replacements of lead service lines (only up to the private property boundary) are not feasible because partial replacement is prohibited under the Michigan Lead and Copper Rule.

7.3 REGIONALIZATION

Regionalization is not applicable, because the St. Joseph water system already serves customers in multiple communities and the lead services in question are entirely within the City of St. Joseph.

7.4 SUMMARY

For planning purposes, the only feasible alternative is full replacement of lead water service lines from the public water main to the customer's water meter. Assessments of different pipe materials, excavation methods, and details of meter installation are design and construction considerations, which are beyond the scope of this planning-phase alternatives analysis.

Furthermore, because a city of St. Joseph standard policy allows only copper to be used in service lines within the public right of way, a DWSRF planning assessment of other material options is not applicable. Consequently, when only one feasible alternative exists, a cost-effectiveness comparison between two or more feasible alternatives is not required by the DWSRF loan program.

8.0 ENVIRONMENTAL AND OTHER IMPACTS

The projects will be constructed in already developed areas and road right-of-ways minimizing environmental impacts.

8.1 PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT

Primary impacts on the environment would be both long-term and short-term. The expenditure of monetary resources for construction, the use of energy for construction, and the short-term disturbance to the community due to construction are all primary direct impacts.

Long-term effects of the proposed alternative would include the benefit of decreased risk of health issues related to water quality that could worsen without the proposed projects.

Short-term impact will be related to construction. Minor impacts will include the increase in noise and dust at the construction sites, along with emissions from both gasoline and diesel engines. Impacts resulting from construction practices will cease or be repaired at the completion of the project.

Adverse impacts upon sensitive environmental areas will be either non-existent or minimal. Construction of work will take place within existing road right-of-ways and facilities in the city. There are no historical or archeological sites anticipated to be disturbed within the proposed plan area.

8.2 WATER CUSTOMER IMPACTS

The impacted locations to water customers can be seen on Figure 2 and 3, unless a water main break or high lead testing results in the replacement of the water service as described. Most service replacements will occur in locations of planned future water distribution and capital improvement projects as identified on this and prior approved plans. Service replacements will be made adjacent to these project locations. The impact during construction will include removing existing pavement, installing a new water service from the existing water main, providing a new water shutoff, and replacing the existing water service from the right of way to the residence.

8.3 MITIGATION

The Water Distribution System within the City of St. Joseph has existed for over 100 years. The projects suggested by this Project Plan are predominately that of replacement and rehabilitation of existing facilities. Generally, these projects are not anticipated to create significant environmental impact.

Environmental impacts of construction are limited to the potential for those stemming from tree trimming or removal. Where tree trimming or removal is necessary, this work will be scheduled to mitigate impacts on threatened or endangered species (Indiana Bat).

The primary adverse impacts are related to the construction work required for water main and service construction. These impacts can be minimized through efficient and cost effective design and construction practices, soil erosion control procedures, air pollution control equipment, noise control, mufflers and limitations to the allowed hours of work. The project will also be segmented to allow a balanced construction cycle to minimize inconvenience to the community as a whole.

Soil erosion control procedures, such as the use of silt fence, erosion control blanket, watering, and the immediate seeding of disturbed areas with help to control erosion caused by rainfall and wind. Air pollution can be minimized by proper maintenance through proper muffling of equipment and through limiting construction to acceptable times during the daytime hours.

The following measures could be taken to avoid, eliminate, or mitigate potential adverse impacts on the environment:

- Traffic Control – Flagmen, Warning Signs, Barricades, Cones, etc.
- Dust Control – Calcium Chloride and Water.
- Noise Control – Designate Work Hours, Mufflers, No Work on Weekends, Holidays, Religious Observance Times.
- Soil Erosion and Sedimentation Control – Seeding, Sodding, Rip Rap, Erosion-Control Blankets, Silt Fence, etc.
- Restoration – Pavement, Gravel, Topsoil, Seed, Fertilizer, Mulch, Sod.

9.0 PROJECT FUNDING AND SCHEDULE

9.1 PROJECT FUNDING

Funding for Upton Drive is expected to come from the DWSRF, CWSRF, MDOT Transportation Economic Development Fund (TEDF - $1M commitment received), and possibly EDA (application submitted for $2.5M in Q1 2022). Lead service line replacement loans will be repaid with city water funds. Water plant improvement loans will be repaid with system water funds. The money from the DWSRF loans could cover the water system replacement work as well as the cost of replacing sections of roadway and sidewalk that will need to be removed as a result of watermain construction. Other/Local funds will be necessary to complete additional infrastructure/roadway improvements outside of the influence of the watermain trench. However, the 2023 project on Upton Drive has been estimated to include a loan for only the watermain items since the other funding sources can provide funds for pavement restoration. It is expected that the DSWRF loan will be payable over 30 years. The current interest rate is 2.125%. Therefore, the expected annual debt repayment is $592,744 per year for the 2023 loan. Expected funding for the 2023 projects is summarized below in Table 8.

Table 8: 2023 Project Funding

Project	Total Cost	DWSRF	CWSRF	TIP	CMAQ	TEDF	EDA	City
Lead Service Line Replacements	$2,014,800	$2,014,800						
WTP	$9,618,750	$9,618,750						
Distribution System	$6,640,857	$1,323,949	$1,008,900			$1,000,000	$2,500,000	$808,008
Cost of Issuance	$92,501	$92,501						
	$18,366,908	**$13,050,000**	**$1,008,900**			**$1,000,000**	**$2,500,000**	**$808,008**

9.2 CONSTRUCTION COST

The estimated construction costs for all projects through FY 2027 is $41,101,720. Of this total, $26,190,000 is eligible for DWSRF Loan (See Table 9). A detailed summary of the estimated project costs is included in Appendix A.

Table 9: Project Cost Summary 2023-2027

Year	Project	DWSRF Project Cost	DWSRF
2023	Lead Service Replacements	$2,014,800	$13,050,000
	WTP	$9,618,750	
	Distribution System Projects	$1,323,949	
	Cost of Issuance	$92,501	
2024	Lead Service Replacements	$1,380,000	$2,950,000
	Distribution System Projects	$1,519,000	
	Cost of Issuance	$51,000	
2025	Lead Service Replacements	$1,380,000	$1,875,000
	Distribution System Projects	$449,750	
	Cost of Issuance	$45,250	
2026	Lead Service Replacements	$1,380,000	$2,200,000
	Distribution System Projects	$770,000	
	Cost of Issuance	$50,000	
2027	Lead Service Replacements	$1,380,000	$6,115,000
	WTP	$2,250,000	
	Distribution System Projects	$2,427,688	
	Cost of Issuance	$57,312	
	Total Cost	**$26,190,000**	**$26,190,000**

9.3 CONSTRUCTION SCHEDULE

Construction of the first phase is proposed to start in October 2023 with a completion date in November 2025. Each following year is expected to follow a similar commencement date.

9.4 COST TO USERS

The expected annual debt repayment for the FY 2023 Loan is $49,395 per month for 30 years. With 3,954 users in the city system and 11,519 in the Authority (Water Plant system) it is expected that the necessary increase in rates to finance the remaining cost will be an average of $3.82/month per city user and $2.51/month for Authority user. However, we expect the increase for city residents to be lower if loan forgiveness is provided for the lead service line replacements as it has been in the recent past. If we assume $2M loan forgiveness the rate increase for city users would be $3.55/month.

10.0 PUBLIC INVOLVEMENT

Throughout the process of the SAW Grant, Water Asset Management Plans, and Water Reliability Study, the Community has been involved with the process of reviewing and approving of the reports and recommendations contained therein. The findings, recommendations, and impacts of the proposed plans have been presented to the public at the City Commission meetings.

A public hearing was held on June 13, 2022. Documents related to the hearing and a transcript can be found in Appendix H.

APPENDIX A

YEARLY COST SUMMARY (FY 2023-2027)

FY 2023			
Lead Service Replacement Projects			
Description	**No. of Replacements**	**Estimated Cost**	**DWSRF**
Upton Drive, Main Street/BL94, Ship Street	9	$72,000	$72,000
Water Services for CIP Projects	130	$1,040,000	$1,040,000
Leaking/Broken Water Services	30	$240,000	$240,000
Water Services Testing High for Lead	50	$400,000	$400,000
Lead Service Replacement Projects		**$1,752,000**	**$1,752,000**
Contingency (0%)		**$0**	**$0**
Engineering (15%)		**$262,800**	**$262,800**
Subtotal LSRL Projects		**$2,014,800**	**$2,014,800**
Distribution System Projects			
Project	**Length (Feet)**	**Estimated Cost**	**DWSRF**
Upton Drive Reconstruction	2300	$6,640,857	$1,323,949
Subtotal Distribution System Projects		**$6,640,857**	**$1,323,949**
Water Treatment Plant Projects			
Project		**Estimated Cost**	**DWSRF**
Clarifier #2 and #3 Improvements		$6,600,000	$6,600,000
Arhcitectural Improvements		$1,095,000	$1,095,000
Water Treatment Plant Projects		**$7,695,000**	**$7,695,000**
Contingency (10%)		**$769,500**	**$769,500**
Engineering (15%)		**$1,154,250**	**$1,154,250**
Subtotal Distribution System Projects		**$9,618,750**	**$9,618,750**
Total Cost			
Subtotal All Projects		**$18,274,407**	**$12,957,499**
Cost of Issuance		$92,501	$92,501
Total FY 2023 Loan Amount		**$18,366,908**	**$13,050,000**

FY 2024			
Lead Service Replacement Projects			
Description	**No. of Replacements**	**Estimated Cost**	**DWSRF**
Water Services for CIP Projects	30	$240,000	$240,000
Leaking/Broken Water Services	30	$240,000	$240,000
Water Services Testing High for Lead	50	$400,000	$400,000
Galvanized Services Previously Connected to Lead	40	$320,000	$320,000
Lead Service Replacement Projects		**$1,200,000**	**$1,200,000**
Contingency (0%)		**$0**	**$0**
Engineering (15%)		**$180,000**	**$180,000**
Subtotal LSRL Projects		**$1,380,000**	**$1,380,000**
Distribution System Projects			
Project	**Length (Feet)**	**Estimated Cost**	**DWSRF**
Kingsley Avenue	630	$1,100,000	$385,000
Willa Drive 3	330	$315,000	$110,250
Upton Drive 2	2015	$2,925,000	$1,023,750
Subtotal Distribution System Projects		**$4,340,000**	**$1,519,000**
Total Cost			
Subtotal All Projects		**$5,720,000**	**$2,899,000**
Cost of Issuance		$51,000	$51,000
Total FY 2024 Loan Amount		**$5,771,000**	**$2,950,000**

FY 2025			
Lead Service Replacement Projects			
Description	**No. of Replacements**	**Estimated Cost**	**DWSRF**
Water Services for CIP Projects	30	$240,000	$240,000
Leaking/Broken Water Services	30	$240,000	$240,000
Water Services Testing High for Lead	50	$400,000	$400,000
Galvanized Services Previously Connected to Lead	40	$320,000	$320,000
Lead Service Replacement Projects		**$1,200,000**	**$1,200,000**
Contingency (0%)		**$0**	**$0**
Engineering (15%)		**$180,000**	**$180,000**
Subtotal LSRL Projects		**$1,380,000**	**$1,380,000**
Distribution System Projects			
Project	**Length (Feet)**	**Estimated Cost**	**DWSRF**
Botham Avenue	690	$1,285,000	$449,750
Subtotal Distribution System Projects		**$1,285,000**	**$449,750**
Total Cost			
Subtotal All Projects		**$2,665,000**	**$1,829,750**
Cost of Issuance		$45,250	$45,250
Total FY 2025 Loan Amount		**$2,710,250**	**$1,875,000**

FY 2026			
Lead Service Replacement Projects			
Description	**No. of Replacements**	**Estimated Cost**	**DWSRF**
Water Services for CIP Projects	30	$240,000	$240,000
Leaking/Broken Water Services	30	$240,000	$240,000
Water Services Testing High for Lead	50	$400,000	$400,000
Galvanized Services Previously Connected to Lead	40	$320,000	$320,000
Lead Service Replacement Projects		**$1,200,000**	**$1,200,000**
Contingency (0%)		**$0**	**$0**
Engineering (15%)		**$180,000**	**$180,000**
Subtotal LSRL Projects		**$1,380,000**	**$1,380,000**
Distribution System Projects			
Project	**Length (Feet)**	**Estimated Cost**	**DWSRF**
Morton Avenue & Kingsley Avenue	1575	$2,200,000	$770,000
Subtotal Distribution System Projects		**$2,200,000**	**$770,000**
Total Cost			
Subtotal All Projects		**$3,580,000**	**$2,150,000**
Cost of Issuance		$50,000	$50,000
Total FY 2026 Loan Amount		**$3,630,000**	**$2,200,000**

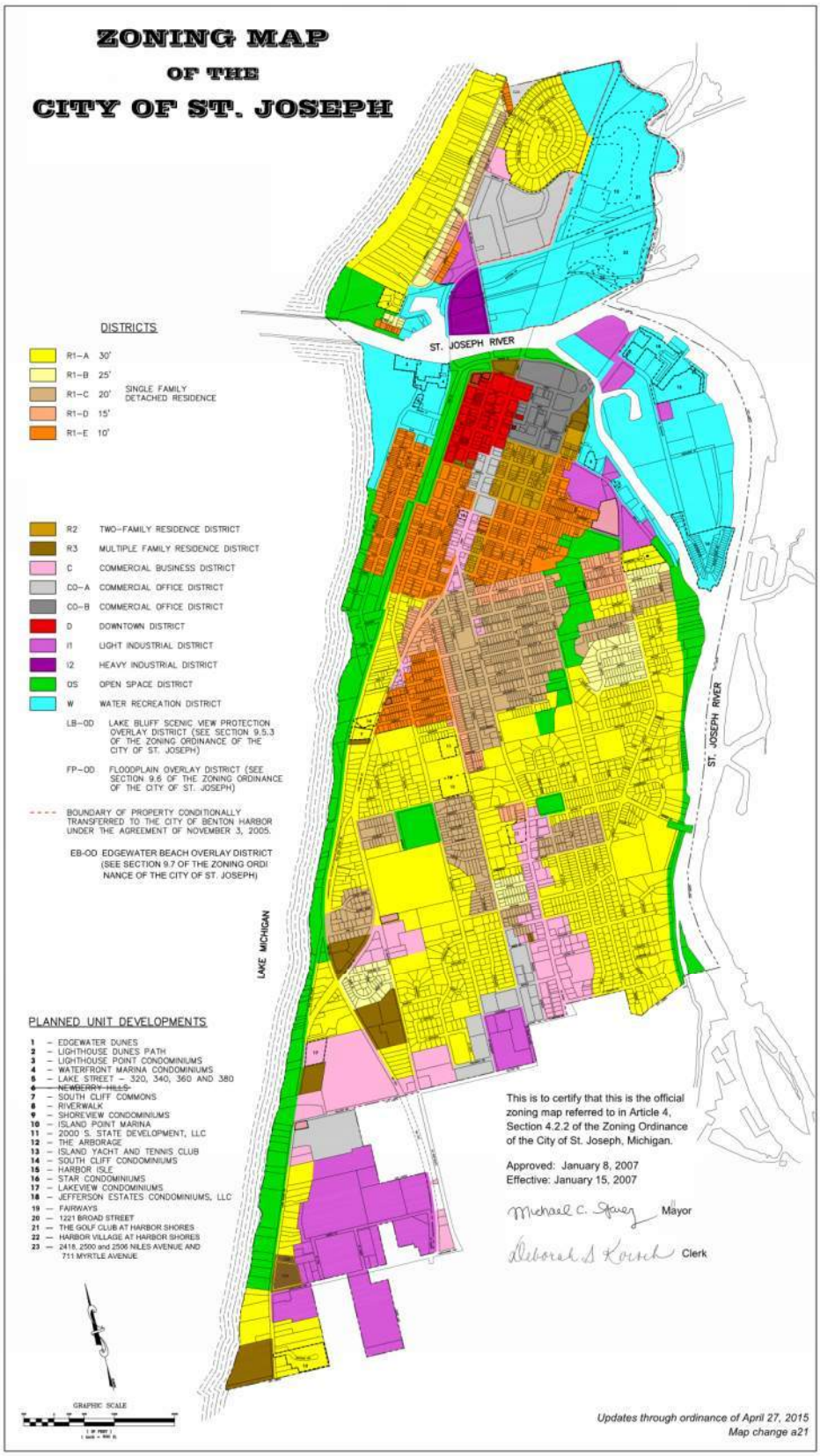
FY 2027			
Lead Service Replacement Projects			
Description	**No. of Replacements**	**Estimated Cost**	**DWSRF**
Water Services for CIP Projects	30	$240,000	$240,000
Leaking/Broken Water Services	30	$240,000	$240,000
Water Services Testing High for Lead	50	$400,000	$400,000
Galvanized Services Previously Connected to Lead	40	$320,000	$320,000
Lead Service Replacement Projects		**$1,200,000**	**$1,200,000**
Contingency (0%)		**$0**	**$0**
Engineering (15%)		**$180,000**	**$180,000**
Subtotal LSRL Projects		**$1,380,000**	**$1,380,000**
Distribution System Projects			
Project	**Length (Feet)**	**Estimated Cost**	**DWSRF**
Main Street, Ship Street, Port Street	3200	$5,800,000	$2,030,000
Wayne Street	1010	$1,136,250	$397,688
Subtotal Distribution System Projects		**$6,936,250**	**$2,427,688**
Water Treatment Plant Projects			
Project		**Estimated Cost**	**DWSRF**
HVAC Upgrades		$450,000	$450,000
Lab Improvements		$600,000	$600,000
South Low Lift Pump Station (Electrical)		$750,000	$750,000
Water Treatment Plant Projects		**$1,800,000**	**$1,800,000**
Contingency (10%)		**$180,000**	**$180,000**
Engineering (15%)		**$270,000**	**$270,000**
Subtotal Distribution System Projects		**$2,250,000**	**$2,250,000**
Total Cost			
Subtotal All Projects		**$10,566,250**	**$6,057,688**
Cost of Issuance		$57,312	$57,312
Total FY 2027 Loan Amount		**$10,623,562**	**$6,115,000**

Cost Summary FY 2021-2027		
Year	**Estimated Cost**	**DWSRF**
Total FY 2023 Loan Amount	$18,366,908	$13,050,000
Total FY 2024 Loan Amount	$5,771,000	$2,950,000
Total FY 2025 Loan Amount	$2,710,250	$1,875,000
Total FY 2026 Loan Amount	$3,630,000	$2,200,000
Total FY 2027 Loan Amount	$10,623,562	$6,115,000
Total	**$41,101,720**	**$26,190,000**

APPENDIX B

CITY OF ST. JOSEPH ZONING MAP

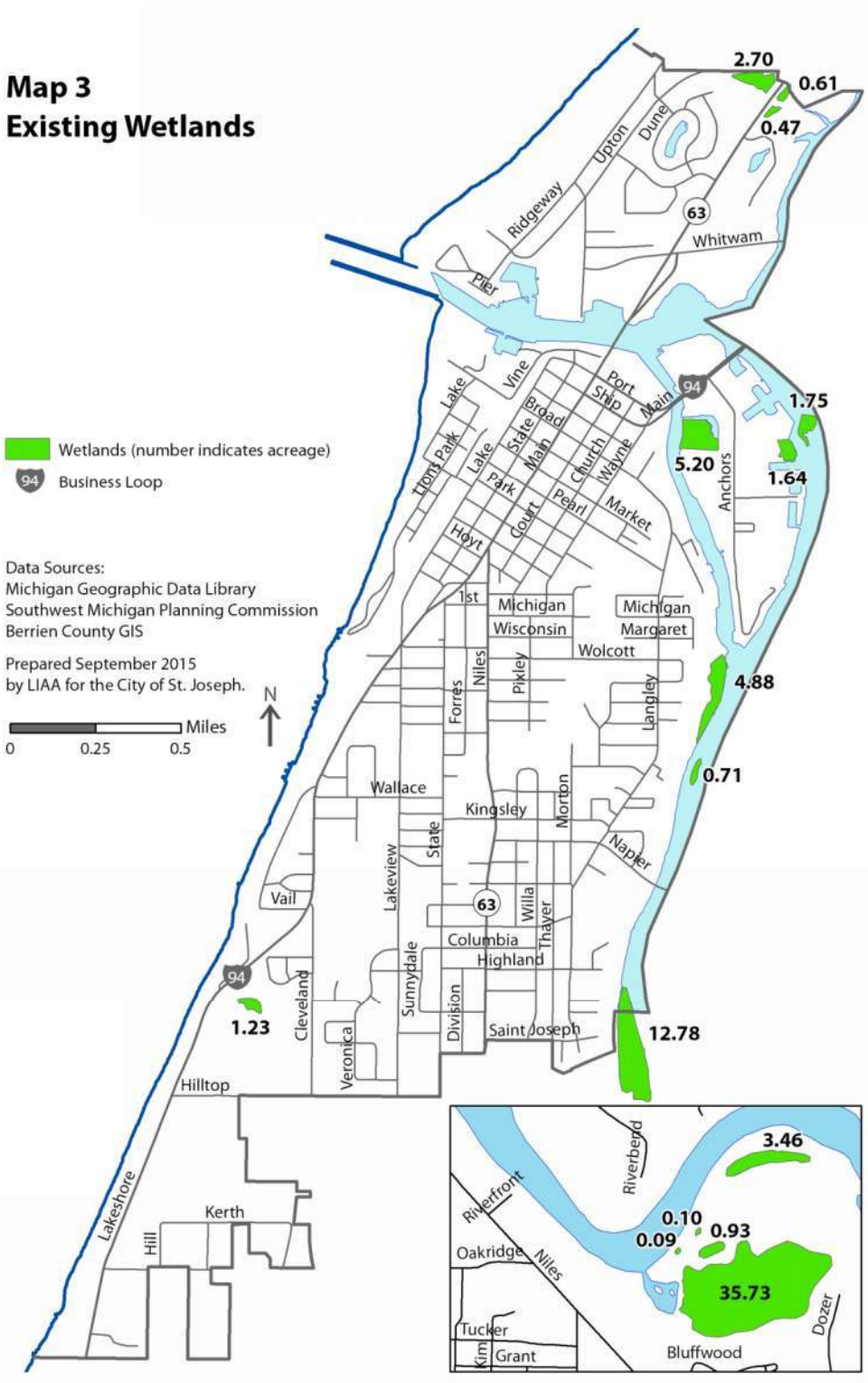
(ST. JOSEPH 2016 MASTER PLAN)


ZONING MAP
OF THE
CITY OF ST. JOSEPH
DISTRICTS
R1-A 30'
R1-B 25'
R1-C 20' SINGLE FAMILY DETACHED RESIDENCE
R1-D 15'
R1-E 10'
R2 TWO-FAMILY RESIDENCE DISTRICT
R3 MULTIPLE FAMILY RESIDENCE DISTRICT
C COMMERCIAL BUSINESS DISTRICT
CO-A COMMERCIAL OFFICE DISTRICT
CO-B COMMERCIAL OFFICE DISTRICT
D DOWNTOWN DISTRICT
I1 LIGHT INDUSTRIAL DISTRICT
I2 HEAVY INDUSTRIAL DISTRICT
OS OPEN SPACE DISTRICT
W WATER RECREATION DISTRICT
LB-OD LAKE BLUFF SCENIC VIEW PROTECTION OVERLAY DISTRICT (SEE SECTION 9.5.3 OF THE ZONING ORDINANCE OF THE CITY OF ST. JOSEPH)
FP-OD FLOODPLAIN OVERLAY DISTRICT (SEE SECTION 9.6 OF THE ZONING ORDINANCE OF THE CITY OF ST. JOSEPH)
BOUNDARY OF PROPERTY CONDITIONALLY TRANSFERRED TO THE CITY OF BENTON HARBOR UNDER THE AGREEMENT OF NOVEMBER 3, 2005.
EB-OD EDGEWATER BEACH OVERLAY DISTRICT (SEE SECTION 9.7 OF THE ZONING ORDINANCE OF THE CITY OF ST. JOSEPH)
PLANNED UNIT DEVELOPMENTS
1 – EDGEWATER DUNES
2 – LIGHTHOUSE DUNES PATH
3 – LIGHTHOUSE POINT CONDOMINIUMS
4 – WATERFRONT MARINA CONDOMINIUMS
5 – LAKE STREET – 320, 340, 360 AND 380
6 – ~~NEWBERRY HILLS~~
7 – SOUTH CLIFF COMMONS
8 – RIVERWALK
9 – SHOREVIEW CONDOMINIUMS
10 – ISLAND POINT MARINA
11 – 2000 S. STATE DEVELOPMENT, LLC
12 – THE ARBORAGE
13 – ISLAND YACHT AND TENNIS CLUB
14 – SOUTH CLIFF CONDOMINIUMS
15 – HARBOR ISLE
16 – STAR CONDOMINIUMS
17 – LAKEVIEW CONDOMINIUMS
18 – JEFFERSON ESTATES CONDOMINIUMS, LLC
19 – FAIRWAYS
20 – 1221 BROAD STREET
21 – THE GOLF CLUB AT HARBOR SHORES
22 – HARBOR VILLAGE AT HARBOR SHORES
23 – 2418, 2500 and 2506 NILES AVENUE AND 711 MYRTLE AVENUE
GRAPHIC SCALE
ST. JOSEPH RIVER
ST. JOSEPH RIVER
LAKE MICHIGAN
This is to certify that this is the official zoning map referred to in Article 4, Section 4.2.2 of the Zoning Ordinance of the City of St. Joseph, Michigan.
Approved: January 8, 2007
Effective: January 15, 2007
Michael C. Storey Mayor
Deborah S Kovach Clerk
Updates through ordinance of April 27, 2015
Map change a21

APPENDIX C

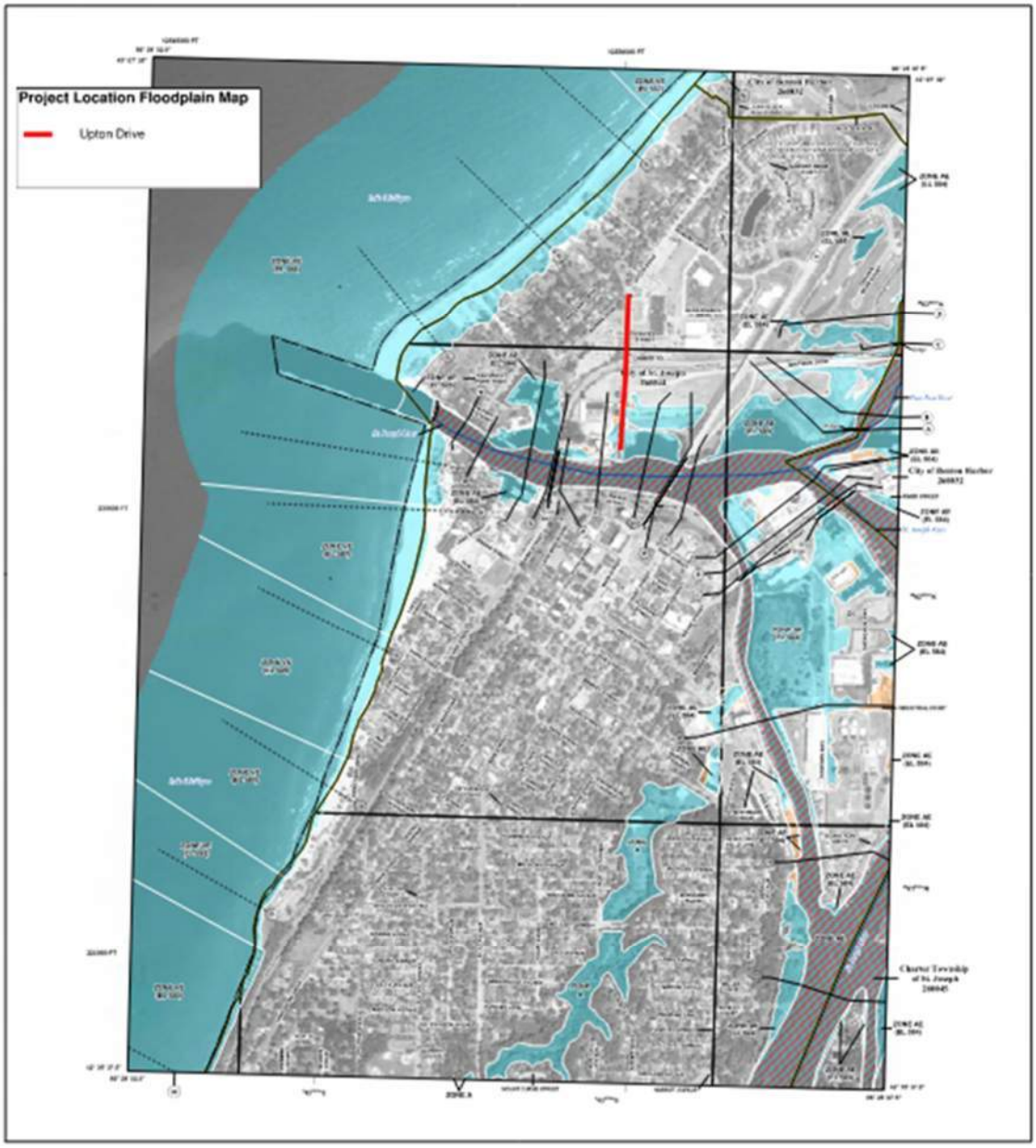
CITY OF ST. JOSEPH WETLAND MAP

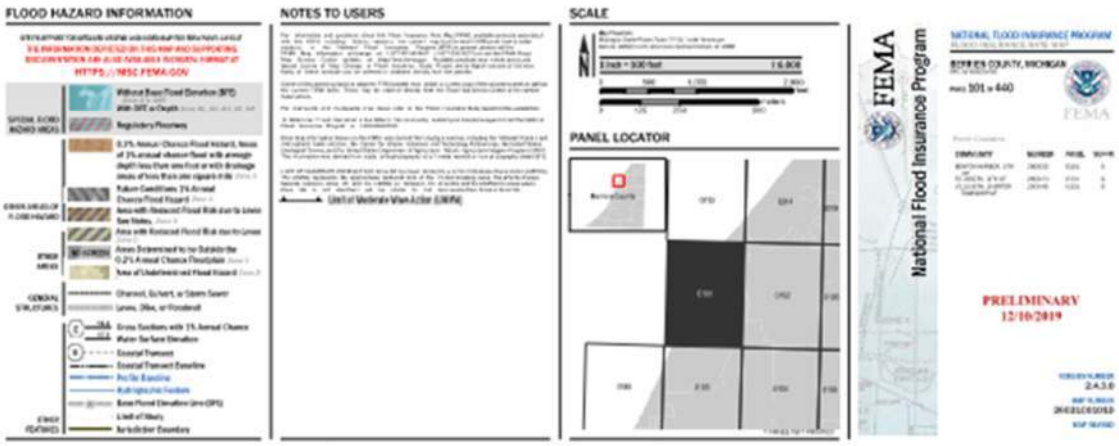
(PROVIDED BY LIAA FOR ST. JOSEPH ON 2016 MASTER PLAN)


Map 3
Existing Wetlands
Wetlands (number indicates acreage)
Business Loop
Data Sources:
Michigan Geographic Data Library
Southwest Michigan Planning Commission
Berrien County GIS
Prepared September 2015
by LIAA for the City of St. Joseph.
N
Miles
0
0.25
0.5
2.70
0.61
0.47
1.75
5.20
1.64
4.88
0.71
1.23
12.78
3.46
0.10
0.09
0.93
35.73
Upton
Dune
Ridgeway
Whitwam
Pier
Vine
Port
Ship
Main
Lake
Broad
State
Main
Church
Wayne
Lions Park
Lake
Park
Court
Pearl
Market
Hoyt
Anchors
1st
Michigan
Wisconsin
Michigan
Margaret
Wolcott
Niles
Pixley
Forres
Langley
Wallace
Kingsley
Morton
State
Napier
Lakeview
Vail
Willa
Thayer
Columbia
Highland
Cleveland
Sunnydale
Division
Saint Joseph
Veronica
Hilltop
Lakeshore
Hill
Kerth
Riverbend
Riverfront
Oakridge
Niles
Tucker
Kim
Grant
Bluffwood
Dozer

APPENDIX D

UPTON DRIVE FLOODPLAIN MAP


Project Location Floodplain Map
Upton Drive


FLOOD HAZARD INFORMATION
NOTES TO USERS
SCALE
PANEL LOCATOR
FEMA
National Flood Insurance Program
PRELIMINARY
12/10/2019

APPENDIX E

PUBLIC HEARING DOCUMENTS

(NOTICE OF PUBLIC HEARING)

(TRANSCRIPT OF PUBLIC HEARING)

(ATTENDEES)

NOTICE OF PROJECT PLAN PUBLIC HEARING

The City of St. Joseph will hold a public hearing on the proposed Drinking Water State Revolving Loan Fund project for the purpose of receiving comments from interested persons. The hearing will be held at 6:00 p.m. on June 13, 2022 at St. Joseph City Hall, 700 Broad Street, St. Joseph, MI 49085.

The purpose of the proposed project plan is to meet the project planning requirements of the State of Michigan Department of Environment, Great Lakes & Energy (EGLE) DWSRF, to include updates to the previously approved Project Plan dated June 11, 2020 and another Project Plan from 2017.

Project construction is expected to include improvements to the St. Joseph Water Treatment Plant (SJWTP), replacement of water mains on Upton Drive, Kingsley Avenue, Willa Drive, Botham Avenue, Morton Avenue, Main Street, Ship Street, Port Street, and Wayne Street, and replacement of lead service lines throughout the City.

Impacts of the proposed project include improving the drinking water quality due to the elimination of lead water services, construction of water distribution systems and improvements to the SJWTP. Impacts will also include normal construction disturbances.

The estimated cost to users for the proposed project is expected to be a rate increase of $3.82/month per city user and $2.51/month for Authority users served by the SJWTP. This estimated cost to users may vary depending upon the final selection of project scope, construction costs, and available grants.

Copies of the plan detailing the proposed project are available for inspection at the following location(s):
St. Joseph City Hall
St. Joseph Public Library
St. Joseph City Website
Abonmarche Consultants, Inc.

Written comments received before the hearing record is closed on June 20, 2022 will receive responses in the final project plan. Written comments should be sent to:
Christopher J. Cook, PE at Abonmarche Consultants, Inc., 95 West Main Street, Benton Harbor, MI 49022.

STATE OF MICHIGAN

PUBLIC HEARING - ST. JOSEPH, MICHIGAN

DRINKING WATER STATE REVOLVING LOAN FUND

June 13, 2022

St. Joseph City Hall

700 Broad Street

St. Joseph, Michigan 49085

APPEARANCES:

City Clerk Bishop

City Attorney Schmidt

City Manager Hodgson

Mayor Goos

Mayor Pro Tem Todman

Commissioner Binkley

Commissioner Sarola

Commissioner Thomas

Timothy Zebell, City Engineer

Christopher J. Cook, PE, Abonmarche

Reporter: Rebecca S. Renzema, CSR-1435

St. Joseph, Michigan

Monday, June 13, 2022; 6:00 p.m.

(At about 8:04 p.m. Agenda Item 16 discussion begins.)

MAYOR GOOS: Tim, we're going to talk public hearing, yes?

MR. TIMOTHY ZEBELL: Yes. Is this on now?

(Overlapping and/or inaudible discussion.)

MAYOR GOOS: Do I need to open the public hearing?

(Overlapping and/or inaudible discussion.)

MR. TIMOTHY ZEBELL: Okay. So staff is requesting the commission to hold a public hearing and adopt a resolution in order to apply for Drinking Water State Revolving Fund or DWSRF funding to complete water improvements in the water distribution plan -- I'm sorry -- system and that includes lead service line replacements and at the drinking water treatment plant. Do you want me to hold that (inaudible) --

(Overlapping and/or inaudible discussion.)

REPORTER: And if you could really announce because there's --

MR. TIMOTHY ZEBELL: Okay. I still don't think this is --

UNIDENTIFIED SPEAKER: It was on at the beginning of the meeting.

MR. TIMOTHY ZEBELL: I'm showing it on, so -- okay.

(Overlapping and/or inaudible discussion.)

MAYOR GOOS: This is on, yeah? That's on.

(Overlapping and/or inaudible discussion.)

MR. TIMOTHY ZEBELL: It just seems quiet. Okay.

MAYOR GOOS: Maybe it's not working.

MR. TIMOTHY ZEBELL: All right. So we want to hold a public meeting for the DWSRF project plan and this is very similar to the public hearing that we held at the first meeting in May for the sewer side of things. The only difference is this is, of course, water and the DWSRF is --

REPORTER: Is what? I'm having a hard time hearing. I'm sorry.

MR. TIMOTHY ZEBELL: It's like it's going off, but it shows (inaudible).

MAYOR GOOS: Do you want to come over to the table, Tim, and just talk into one of ours?

(Overlapping and/or inaudible discussion.)

MR. TIMOTHY ZEBELL: Now can you hear it?

REPORTER: It's a little louder.

(Overlapping and/or inaudible discussion.)

MR. TIMOTHY ZEBELL: Where was I? So it's definitely worth pursuing the SRF loans because we received a DWI or Drinking Water Infrastructure grant of 1.2 million dollars for the loan that we just closed on in late March for the projects that are underway now. So that took a 4 million

dollar loan and it reduced it to 2.8 million dollars.

One final item that I'd like to note is based on the draft project priority list, we placed 12th out of 132 applicants. And what that means is we look really good for being in the fundable range for the project. So, Mayor, if you want to open the public meeting --

MAYOR GOOS: Yep.

MR. TIMOTHY ZEBELL: -- and then Chris Cook will come up and cover the project plan. So good luck with the mic.

MAYOR GOOS: I'm opening the public hearing at 8:04 p.m.

MR. CHRISTOPHER COOK: I probably don't need a mic.

MAYOR GOOS: Oh, listen to that booming voice by Chris Cook.

MR. CHRISTOPHER COOK: So good evening everyone. As Tim introduced, this is a public hearing. We're required to do a public hearing as part of the state revolving loan process. Those of you that went through the one for sewer know exactly what I'm talking about. We have a court reporter here, Rebecca Renzema, who is taking a verbatim transcript which gets submitted with the project plan.

We also have a sign-in sheet in the back. So anyone that's here from the public and you listen to this public hearing, please sign in when we're done. We'd like to have a

record of everyone that's here, especially those that speak. Is there a thing --

MAYOR GOOS: I think we're still --

MR. TIMOTHY ZEBELL: Hey, Chris, it's sitting right on the board there to your right.

MAYOR GOOS: I think we're still waiting for it to queue up, yeah?

(Overlapping and/or inaudible discussion.)

MR. CHRISTOPHER COOK: It looks like John is queuing it up.

CITY MANAGER HODGSON: Hey, Tim, do you want to come find the file?

MR. TIMOTHY ZEBELL: What's that?

CITY MANAGER HODGSON: Is it on the USB?

MR. TIMOTHY ZEBELL: No. It's on the D drive. I'm sorry, the --

(Overlapping and/or inaudible discussion.)

MAYOR GOOS: We're just (inaudible) because of the power loss.

CITY MANAGER HODGSON: And no internet, so the Zoom it out.

MR. CHRISTOPHER COOK: I do have hard copies if that will help us to just move it along. We can do that, too. There it is.

MAYOR GOOS: We also have it in our packet.

MR. TIMOTHY ZEBELL: There you go.

MR. CHRISTOPHER COOK: Perfect. It's not moving.

MR. TIMOTHY ZEBELL: It's slow. Hit the gray trigger on the bottom and then hit it once and it should go.

MR. CHRISTOPHER COOK: All right. So what we're going to cover tonight is looking at the project need, an alternatives analysis, cost estimates, a schedule for the projects, some financing details, and then some environmental considerations. Those are again the required topics that we must cover in a public hearing like this.

As Tim mentioned, it is to make a low-interest loan application through EGLE and it is through the Drinking Water State Revolving Loan Fund. This year there was 256 million in funds, thereabouts, and a billion dollars in requests. So the City's ranking at number 12 is very important. It looks like we're in good shape there.

These loans will help fund the improvements for the lead service line replacement, the water treatment plant improvements. There's some water main work on Upton Drive and some other distribution system projects and some other grants and local funds will also be included to fund those improvements on Upton Drive.

So the project need is that first topic. The lead and copper rule, which was promulgated in 2018, requires the City to replace lead service lines within the city at a rate

of five percent per year. You've heard a lot about that in the past.

We also know that within the water system there is roughly 100-year-old pipes. Those were operating beyond their useful lives, which makes them at a high likelihood for failure and that could lead to disruptions and service emergencies and those sorts of things that we don't like to have to deal with.

We also know that some of the mains are undersized and that creates low pressure, poor water quality, and inadequate flow. So it's a safety concern as well as a water quality concern.

Also, the strategic capital improvement plan which was completed in 2015 identified some very important improvements to the water plant. Some of those have been completed with a prior loan, but some more items remain to address the clarification process at the plant which is prone to upsets due to the rapidly changing water temperature in Lake Michigan. It's also at the end of its life. Those clarifiers are from 1974 and so, therefore, they're more likely to fail.

We have to look at alternatives for various projects within this project plan. For clarifiers 2 and 3, there really is no other option than to retrofit those with horizontal flocculators, inclined plate settlers, and sludge

removal mechanisms, which will help improve that reliability and water quality that we mentioned earlier and also will, as a byproduct, increase the capacity to 18 mgd or million gallons per day. Right now it's 16.

A couple other alternatives that were dismissed are the no action alternative. That's not a viable alternative. We have a public health risk related to the lead service lines and we have to meet the requirements of the lead and copper rule and that would not allow us to address those aging water system needs.

Regional alternatives are another one that gets considered. The City is already a supplier to other communities and multiple communities as part of the authority. And so, therefore, we're already doing a regional alternative to the best that we can. And those lead service lines are entirely the responsibility of the City. Not other communities' problem. They have their own lead service lines to deal with.

Partial replacement of those lead service lines is not allowed under the lead and copper rule, so that's prohibited. So we must replace them from the main line into the home. You can't go short of that. And then there will be various other engineering considerations during final design, such as what materials to use, what sort of excavation methods or boring if we can't excavate and then the various meters.

Those can be saved for a later day when engineering occurs.

So our estimated costs are shown on this screen and they total $18,000,000.366. It's made up of the lead service line replacements. And this is for the year 2023, by the way, our first phase. Lead service line replacements for 2 million dollars, the water treatment plant work, those clarifiers, 9.6 million, water distribution work, that's 6.6 million. That's entirely the Upton Drive project.

Then you see there that we have a million 3 [sic] from the Drinking Water State Revolving Loan Fund. A little over a million dollars was approved as part of the loan plan for the sewer work or the Clean Water SRF. That's what that acronym is. And then we also have been told by MDOT through their transportation economic development fund that we will be getting close to a million dollars and then we're still waiting to hear from EDA on 2.5 million dollars. So that would be -- if approved tonight for the drinking water, that would be the last piece of this puzzle, and then City funds of about 800,000 to make that project happen.

Then we have some costs of issuance. Those are roughly put in there just to kind of make it come out to 13.05, a roundish number. We know that there are some costs related to the bonding process. So that's how we landed on those numbers.

We do have some future projects identified in the

project plan. Those are on this map, which are really hard to see at this scale, sorry about that, but I'll read them off for you. In 2024 we're looking at Kingsley Avenue, Willa Drive, and extending the Upton Drive project from Mauminee(ph) all the way up around where it meets back at the north city limits.

In 2025 Botham Avenue, in 2026 Morton and Kingsley in the south part of town, and then in 2027 the Main, Ship, and Port Street area, along with Wayne Street. And that's scheduled to time up with a proposed project that MDOT has in mind.

So here are the costs of those future year projects outlined for you. Every year of the plan we have lead service replacements. As I indicated earlier, trying to meet the requirements of the lead and copper rule by doing at least five percent per year. That will cost $1,380,000 per year for each of those remaining four years. And then those distribution system projects, those are the streets I just listed, and then that cost of issuance for the bonds every year.

You'll see out in 2027 some of the remaining water treatment plant work for 2-1/4 million. So there's another $13,000,000 on the heels of this first year that we'd be looking at in future years.

The schedule as we look at it just for this year one

or 2023 begin of construction follows the lead service lines where we would do planning and design starting this fall. And the reason for that date is that that's when we would know whether or not the loan has been approved. And then start design then and work through the spring of 2023 and then start construction through the season of 2023 and even into 2024.

Upton Drive, we hope to start a little sooner than that on the engineering just because that has a longer lead time. So if we are fortunate enough to hear from EDA on that 2-1/2 million and we feel confident enough that we rank high enough on the water list that we have all the funding pooled together, perhaps we can start some of the planning and engineering in the late summer this year, maybe even in July. That would take us through May of 2023 as well and then start construction summer of '23, through the final end of the construction season in 2024.

Those water plant improvements at those clarifiers, we expect to start that design engineering in the fall of 2022, again after word on the loan. It will probably take about a year for that design process and then that construction could start in the fall of 2023 and could run two seasons into the fall of 2025. With some luck we'll be able to package these projects together for some efficiency and we certainly hope to do that.

So some of those project financing details through

the loan program, again, the City ranks number 12. We feel pretty confident that we're going to succeed in this loan application. It's a $13,000,000 loan. It would close in the fall of 2023 when that construction starts. During that time when construction is underway, only interest-only payments are due. And then at the completion of initiation of operation is the term by the fall of 2025 is when principal and interest payments begin.

The loan is expected to be at 2.125 percent. Even with the recent uptick in interest rates, we're expecting that rate to remain low. And the total cost to City users for the 2023 project, a $13,000,000 project, is expected to be about $3.82 a month. It would be reduced to $3.49 a month if we receive $2,000,000 in loan forgiveness for the lead services.

It has been past practice to grant that money as far as loan forgiveness for the lead services. That's one of the primary reasons we're going after this loan is to get some help with that work. So we expect that to occur. It's not for sure yet, though, until the list is finalized in October. And then the total cost to all the authority users for the water plant work, since it does serve them as well, would be $1.73 per month.

So the environmental impacts are another thing that we studied. Really, there are a lot of positive impacts to this; decreased risk of health issues related to those lead

services, the improved water quality resulting from the clarifier upgrades at the plant, and then an increase in construction-related jobs.

The adverse impacts are really limited to those that we would normally find during construction, any construction project. And those are reduced through what we have as far as soil erosion control, pollution and noise control, limited working hours for the contractors, and then the limited season that we have which generally falls during the good weather.

And then energy use is sort of something that happens during construction and you can't get back once it's used. And then we also have some more social issues related to roadway closures and access to property when the road is torn up. We manage that through detours and traffic control and some temporary roadways and try to do everything we can to address resident concerns during that construction season. There are no really other potential environmental impacts because construction is taking place in already developed right-a-ways or inside of a water plant building, for example.

So that concludes the presentation on this Drinking Water State Revolving Fund Project Plan Amendment. The prior plan was approved in 2020. This really adds the new projects to the prior plan. And so I look forward to any questions that you may have.

MAYOR GOOS: And as a matter of just a reminder

because it's a public meeting, if there are any questions from the public, you can say your name and address for the record, please. But I'll open it first to the commission. Any questions?

COMMISSIONER BINKLEY: No questions. Very thorough as always.

MAYOR GOOS: Any other questions? What about from the public? Any questions from the public? All right. Is there a -- do I take a motion?

MR. CHRISTOPHER COOK: Thank you. So there is some action that we would love to see tonight if you're so inclined, which would be there's a resolution, I believe, in your packet and that resolution would then allow City staff and us to put together the final plan, inclusive of the minutes, the transcript rather, and then that gets submitted by July 1.

MAYOR GOOS: I need a motion to close the public hearing.

MR. CHRISTOPHER COOK: Sure.

COMMISSIONER TODMAN: I move to close the hearing.

COMMISSIONER BINKLEY: Support.

MAYOR GOOS: Abbie(ph), call the roll.

CITY CLERK BISHOP: Commissioner Todman?

(Overlapping and/or inaudible discussion.)

MAYOR GOOS: No, this is closing. This is just to

close.

COMMISSIONER TODMAN: Yes.

CITY CLERK BISHOP: Commissioner Binkley?

COMMISSIONER BINKLEY: Yes.

CITY CLERK BISHOP: Commissioner Sarola?

COMMISSIONER SAROLA: Yes.

CITY CLERK BISHOP: Commissioner Thomas?

COMMISSIONER THOMAS: Yes.

CITY CLERK BISHOP: Mayor Goos?

MAYOR GOOS: Yes. Public meeting is closed. All right. Now, we do have an action before us now that the public hearing is complete. What is the pleasure of the commission?

COMMISSIONER BINKLEY: I move -- oh, go ahead.

COMMISSIONER THOMAS: I move to adopt the 2022 Drinking Water Revolving Fund Project Plan Amendment for water system improvements and designate the City Finance Director and City Engineer as authorized project representatives for this project.

COMMISSIONER TODMAN: Support.

CITY MANAGER HODGSON: Can I clarify? That would be adopting the resolution that's attached taking those actions? Do I understand that correctly?

COMMISSIONER THOMAS: That's correct.

CITY MANAGER HODGSON: Thank you.

MAYOR GOOS: Any other questions or comments? Abbie, call the roll.

CITY CLERK BISHOP: Commissioner Binkley?

COMMISSIONER BINKLEY: Yes.

CITY CLERK BISHOP: Commissioner Sarola?

COMMISSIONER SAROLA: Yes.

CITY CLERK BISHOP: Commissioner Thomas?

COMMISSIONER THOMAS: Yes.

CITY CLERK BISHOP: Mayor Goos?

MAYOR GOOS: Yes.

CITY CLERK BISHOP: Commissioner Todman?

COMMISSIONER TODMAN: Yes.

MAYOR GOOS: Thank you very much. I appreciate it.

MR. CHRISTOPHER COOK: Thank you.

MAYOR GOOS: And thanks for all the hard work from both Abonmarche and our engineering team. Thank you so much. Appreciate it.

(Agenda Item 16 discussion concluded at approximately 8:25 p.m.)

* * *

CERTIFICATE

STATE OF MICHIGAN)
)
COUNTY OF KENT)

I, REBECCA S. RENZEMA, Certified Shorthand Reporter and Notary Public, do hereby certify that the foregoing matter was taken before me at the time and place hereinbefore set forth.

I FURTHER CERTIFY that this matter was taken in shorthand and thereafter transcribed by me to the best of my ability.

IN WITNESS WHEREOF, I have hereunto set my hand this 23rd day of June of 2022 at Allegan, Michigan.

Rebecca S. Renzema

_____

REBECCA S. RENZEMA, CSR-1435
Notary Public for Kent County,
Acting in Allegan County.
My Commission Expires: 12-31-2022

ABONMARCHE

SIGN-IN SHEET

95 West Main Street
P.O. Box 1088
Benton Harbor, MI 49023
T 269.927.2295
F 269.927.1017
www.abonmarche.com

City of St. Joseph
DWSRF Public Hearing
June 13, 2022
6:00 P.M.

Name	Address	Phone	E-mail
Laura Goos	700 Broad Street	(269) 983-5541	lagoos@sjcity.com
Lynn Todman	700 Broad Street	(269) 983-5541	ltodman@sjcity.com
Michele Binkley	700 Broad Street	(269) 983-5541	mbinkley@sjcity.com
Mike Sarola	700 Broad Street	(269) 983-5541	msarola@sjcity.com
Brook Thomas	700 Broad Street	(269) 983-5541	bthomas@sjcity.com
John Hodgson	700 Broad Street	(269) 983-5541	jhodgson@sjcity.com
Tim Zebell	700 Broad Street	(269) 983-5541	tzebell@sjcity.com
Greg Alimenti	2301 S State Street	(269) 363-2179	galimenti@sjcity.com
Eric Heaton	1205 Lake Blvd	(269) 983-6647	ericheaton@yahoo.com
Sue Bartkus	213 Pearl St		bartkus215@comcast.net
Tom Bartkus	213 Pearl St		bartkus215@comcast.net
Larry Obrian	1804 S State St	(614) 966-6614	ldobrian@yahoo.com
Marge Rivera	Glenlord Rd	(269) 363-6296	margerivera2008@yahoo.com

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City of St. Joseph
DWSRF Public Hearing
June 13, 2022
6:00 P.M.

Name	Address	Phone	E-mail
Chris Lanhert	420 Main St	(630) 881-8338	tl6@lanhert.com
June Bowman	360 Lake St	(269) 313-2871	bowman.june@gmail.com
Larry Bowman	360 Lake St	(269) 208-7654	moosebowman@gmail.com
Chris Cook	95 W Main St	(269) 927-2295	ccook@abonmarche.com
Conner Eyerly	95 W Main St	(269) 927-2295	ceyerly@abonmarche.com

APPENDIX F

RESOLUTION OF ADOPTION

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
FINANCE DIVISION

DRINKING WATER STATE REVOLVING FUND
PROJECT PLAN SUBMITTAL

Part 54, Safe Drinking Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended

Name of the Project
City of St. Joseph Drinking Water State Revolving Fund Project Plan Amendment

Applicant's Federal Employer Identification Number (EIN)

Legal Name of Applicant (The legal name of the applicant may be different than the name of the project. For example, a county may be the applicant for bonding purposes, while the project may be named for the particular village or township it serves.)
City of St. Joseph

Areas Served by this Project
Counties
Berrien County
Congressional Districts
6
State Senate Districts
21
State House Districts
79

Address of Applicant

Street Address
700 Broad Street
PO Box

City	State	Zip
St. Joseph	**MI**	**49085**

Population Served by the Water Supplier
33,000

Water Supply Serial Number (WSSN)
06310

Brief Description of the Project
Improvements to the St. Joseph Water Treatment Plant, replacement of water mains on Upton Drive, Kingsley Avenue, Willa Drive, Botham Avenue, Morton Avenue, Main Street, Ship Street, Port Street, and Wayne Street, and replacement of lead service lines throughout the City.

Estimated Total Cost of the Project
$26,190,000

Construction Start Target Date
October 2023

Name and Title of Applicant's Authorized Representative
Name
Tim Zebell, P.E.

Title
City Engineer

Telephone
(269) 983-5541

E-mail Address
tzebell@sjcity.com

Address of Authorized Representative - if same as address above, check here [X]

Street Address

PO Box

City State Zip

Signature of Authorized Representative	**Date**
	JUNE 27, 2022

State approval of the water supplier's Surface Water Intake Protection Program is attached (if applicable) check here [X]

State approval of the water supplier's Wellhead Protection Program is attached (if applicable) check here [ ]

Joint Resolution of Project Plan Adoption/Authorized Representative Designation is attached check here [X]

A final project plan, prepared and adopted in accordance with the Department's *Drinking Water State Revolving Fund Program Project Plan Preparation Guidance*, must be submitted by July 1st in order for a proposed project to be considered for placement on Michigan's Project Priority List for the next fiscal year.

Please send your final project plan with this form to your EGLE Water Infrastructure Financing Section Project Manager. Electronic submittal to Project Manager is acceptable.

WATER INFRASTRUCTURE FINANCING SECTION
FINANCE DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
P O BOX 30457
LANSING MI 48909-7957

For information or assistance on this publication, please contact the Drinking Water State Revolving Fund, through EGLE Environmental Assistance Center at 800-662-9278. This publication is available in alternative formats upon request.

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

This form and its contents are subject to the Freedom of Information Act and may be released to the public.

PUBLIC HEARING AND RESOLUTION - 2022 DWSRF PROJECT PLAN AMENDMENT

A RESOLUTION ADOPTING A FINAL PROJECT PLAN FOR WATER SYSTEM IMPROVEMENTS AND DESIGNATING AN AUTHORIZED PROJECT REPRESENTATIVE

WHEREAS, the City of St. Joseph recognizes the need to make improvements to its existing water treatment and distribution systems; and

WHEREAS, the City of St. Joseph authorized Abonmarche to prepare a Project Plan, which recommends the Water System improvements indicated in Tables 4, 5, 6, 8 and 9 of the DWSRF Project Plan; and

WHEREAS, said Project Plan was presented at a Public Hearing held during a regular meeting of the St. Joseph City Commission on June 13, 2022 and all public comments have been considered and addressed;

NOW THEREFORE BE IT RESOLVED, that the City of St. Joseph formally adopts said Project Plan and agrees to implement the selected alternatives.

BE IT FURTHER RESOLVED, that the Finance Director and City Engineer, positions currently held by Joe Mangan and Tim Zebell, respectively, are designated as authorized representatives for all activities associated with the project referenced above, including the submittal of said Project Plan as the first step in applying to the State of Michigan for a Drinking Water State Revolving Fund Loan to assist in the implementation of the selected alternative.

Yeas: 5

Nays: 0

I certify that the above Resolution was adopted by the St. Joseph City Commission on June 13, 2022.

BY: Abby Bishop City Clerk
Name and Title

Abby Bishop 6-13-22
Signature Date

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Brook Thomas, Commissioner
SECONDER:	Lynn Todman, Mayor Pro Tem
AYES:	Goos, Todman, Binkley, Thomas, Sarola

STATE OF MICHIGAN)
) ss.
COUNTY OF BERRIEN)

I, Abby Bishop, the duly qualified and appointed Clerk of the City of St. Joseph, Berrien County, Michigan do hereby certify that the foregoing is a true and complete copy of action adopted by the City Commission at a meeting held on June 13, 2022 the original of which is on file in my office. Public notice of said meeting was given pursuant to and in compliance with Act No. 267 of the Public Acts of Michigan of 1976, as amended.

IN WITNESS WHEREOF, I have hereunto affixed my signature this June 13, 2022.

Abby Bishop, City Clerk
City of St. Joseph

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

August 25, 2017

Mr. Greg Alimenti
City of St. Joseph
700 Broad Street
St. Joseph, Michigan 49085-1276

Dear Mr. Alimenti:

SUBJECT: Surface Water Intake Protection Plan
City of St. Joseph, WSSN 06310

Congratulations! The city of St. Joseph's Surface Water Intake Protection Plan has been approved. We commend you on your efforts and encourage you to keep the program viable by updating it as changes occur within the intake protection area or, at a minimum, every six years.

As mentioned in previous correspondence, the priority "Zone – A" can be delineated more closely to the defined state source water area to focus on the streams and rivers along with the associated 300 foot buffer zone. This is also defined in the source water assessment completed in 2004 and can be done for the next program update within six years.

If you have any questions or need assistance implementing the program, please contact me at 989-705-3420; berndtj1@michigan.gov; or by mail at Department of Environmental Quality, Gaylord Field Office, 2100 West M-32, Gaylord, Michigan 49735.

Sincerely,

Jason Berndt
Environmental Quality Specialist
Source Water Unit
Environmental Health Section
Drinking Water and Municipal Assistance Division

jb:sw

cc: Mr. Matt Gamble, DEQ
Mr. Ernie Sarkipato, DEQ
Ms. Cynthia Clendenon, DEQ
Ms. Izabel Hartman, DEQ