Alexandria Lake Area Sanitary District
2021 Comprehensive Wastewater Services Plan

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Hazen

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List of Acronyms

Abbreviation	Definition
ALASD	Alexandria Lake Area Sanitary District
MGD or mgd	Million gallons per day
WTEF	Wastewater Treatment Expansion Fee
TMDL	Total Maximum Daily Load
NPDES	National Pollutant Discharge Elimination System
CBOD	Carbonaceous Biochemical Oxygen Demand
TSS	Total Suspended Solids
LGU or LUG	Local Government Unit or Local Unit of Government
WQBEL	Water Quality Based Limits

List of Definitions

Word/Term	Definition
Interceptor sewer	Any sewer or necessary appurtenance, including but not limited to mains, pumping stations, flow regulating or monitoring stations, designed for or used to conduct wastewater flow originating in more than one local government unit, or which is designed or used to conduct all or substantially all the wastewater in a single local government unit from a point of collection in that unit to an interceptor or treatment works outside that unit, or which is determined by the board to be a major collector of wastewater.
Local sewer	All or part of any sanitary sewer system in the district other than the district system.
Influent flow	The raw or untreated wastewater entering the treatment facility
Effluent flow	Wastewater that flows out of the treatment facility
Load or Strength	Wastewater pollutant strength or load is expressed as mass per time for any particular parameter. Ie. the concentration of BOD or TSS can be used to calculate the BOD load per day being treated.
WQBEL	Standard designed to protect the quality of the receiving water by ensuring the State water quality standards are met.

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Executive Summary

This plan summarizes key issues facing the Alexandria Lake Area Sanitary District (ALASD) and provides an action plan in alignment with ALASD mission.

The mission of ALSAD is to provide sustainable, cost effective wastewater management and preserve the water quality of area lakes. This plan is reliant on collaboration with local units of government such as cities, townships, and county to provide consistent local and regional planning within their respective authority.

A significant amount of data and information has been utilized in developing this plan including the 2011 Douglas County Comprehensive Plan, the City of Alexandria Comprehensive Plan 2040, Alexandria Township Comprehensive Plan, various ALASD documents/reports, as well as other local and state agency documents/reports. In addition, information was provided during meetings held with various groups and stakeholders to inform this plan.

Summary of Plan Recommendations

- Collection system capital improvement costs resulting from the initial collection system condition assessment completed in 2020 are recommended to be included in Cost-of-Service Rate Study. This could add up to $3M annually or more to existing expenses. Replacement and reinvestment in the collection system is critical to the long-term planning and sustainability of the ALASD.

- Continue to evolve and invest in GIS system and asset management systems to manage ALASD assets. GIS systems are dynamic systems that need ongoing maintenance and continued evaluation of asset condition. Recommendations have been provided in the collections assessment for more aggressive schedule for CCTV and additional inspection/documentation for collection system assets to inform the collection assessment/GIS model. In addition it is recommended to include easement documentation in GIS.

- Obtain and record easements for all collection system assets. This may be most efficiently completed during improvement projects for collection system repair and/or replacement.

- Facility Plan for WWTF improvements is to be completed before 2025 in accordance with ALASD NPDES permit to address regulatory (i.e. phosphorus), previous unit process recommendations, and aging infrastructure needs at the WWTF. Estimated WWTF upgrade costs from past studies and estimated order of magnitude “opinion-of-probable-cost” are recommended to be included in 2021 Cost-of-Service Rate Study.

- Continuation of the lake management plan in accordance with ALASD NPDES permit.

- Continue Chloride Identification and Minimization Plan and Chloride Citizen Advisory Committee process per NPDES permit. Continued collaboration with ALP, City of Alexandria, and Townships will be necessary to meet future chloride regulations.

- Review and update Significant User Agreements in 2021 to determine if appropriate load and flow allocations are in alignment with the ALASD current WWTF capacity.

- Review and update ALASD ordinances and service contracts in 2021 or 2022.

- Review subdivision ordinance requirements with Townships/City/County to better understand process and provide feedback on the process for preliminary plat and utility planning at developer/LGU level.

- Consideration of planning grants to local units of government to provide feasibility level studies and/or commissioning of a Sanitary Sewer Interceptor Study for future urban service areas and near-future development areas identified by area planning authorities.

- Consideration of Integrated Planning efforts with ALP and City of Alexandria to integrate priorities and efforts related to Phosphorus and Chloride reduction to protect the area lake quality. The purpose of Integrated Planning is to maximize environmental benefits and optimize the costs/schedules across multiple entities, water needs, and pollutants of concern:
  ALP, City, ALASD – – Water, Wastewater, Stormwater – – Nutrient & Chloride Impairments.

1. Background and Plan Goals

The Alexandria Lake Area Sanitary District (ALASD) was established by the legislature for the protection of public health and preservation of the area lakes and was therefore assigned the responsibility of a continuous long-range program of planning for the collection, treatment, and discharge of wastewater in the district.

The purpose of this plan is to evaluate current and anticipated conditions to provide guidance and recommendations for water quality management, asset management and capital improvement planning (CIP) for the ALASD. This comprehensive planning process has involved extensive data collection, analysis, and discussions related to the key issues facing the ALASD.

1.1 ALASD Authority

In 1970, area citizens and public officials became concerned about the public health, safety, and the environment. The treatment facilities of the City of Alexandria, Holiday Inn and Arrowwood Resort were all in violation of their respective operating permits. The Minnesota State Legislature determined there were serious problems of water pollution and disposal of sewage in and around in the Alexandria, Minnesota lake area which could not be effectively or economically dealt with separately by existing local government units under existing laws. In April 1971, the Minnesota State Legislature established the sanitary sewer board with the jurisdiction in the ALASD as a political subdivision of the state (Appendix A):

> *"[F]or the protection of the public health, safety and welfare of the area, for the preservation and best use of waters and other natural resources of the state in the area, for the prevention, control and abatement of water pollution in the area, and for the efficient and economic collection, treatment and disposal of sewage, it was necessary to establish a sanitary sewer board assigned the responsibility of carrying on a continuous long range program of planning with respect thereto and given the authority to take over, acquire, construct, better, administer, operate and maintain any and all interceptors and treatment works needed for the collection, treatment and disposal of sewage in such area, as well as local sanitary sewer facilities over which the board assumes responsibility at the request of any local government unit."*

ALASD assumed responsibility for the existing treatment facilities and collection system on July 1, 1976. The advanced wastewater treatment facility constructed by ALASD became operational on October 1, 1977.

Current local units of government that are ALASD members are: The City of Alexandria and the Townships of Alexandria, Carlos, Hudson, Ida, LaGrand and Lake Mary. It should be noted that only portions of each township are located within the ALASD boundary. ALASD also provides contract collection system and treatment services to the city of Nelson, the City of Forada, a portion of Leaf Valley Township, the Carlos State Park and the two state rest areas located on Highways I-94.

1.2 Location and Planning Area

The ALASD service area covers 102 square miles including water bodies. ALASD operates and maintains 230 miles of gravity sewer, 60 miles of pressure sewer and 4,570 manholes. The ALASD has 21 employees who perform administration, operation, and maintenance of ALASD infrastructure, including: Wastewater Treatment Facility, 120 main lift stations, 51 mini-lift stations, and 121 residential grinder stations, and all collection conveyance system. Average influent flows to wastewater plant were 3.2 million gallons per day (mgd) in 2019 and 2.9 mgd in 2020.

1.3 ALASD Mission Statement

The mission of ALASD is to protect and preserve water for a healthy natural environment. Responsibilities of ALASD include:

- Preserve the natural environment.
- Protect the public health and welfare.
- Service to the public.
- Efficient and effective service.
- Maintain and follow high standards of achievement.
- Trust and respect for each individual.

1.4 Plan Goals

The goals of this Comprehensive Wastewater Services Plan strive to provide future development and growth while preserving the water quality of the area lakes. This section of the plan identifies the following goals for meeting the ALASD mission as well as state and federal regulations.

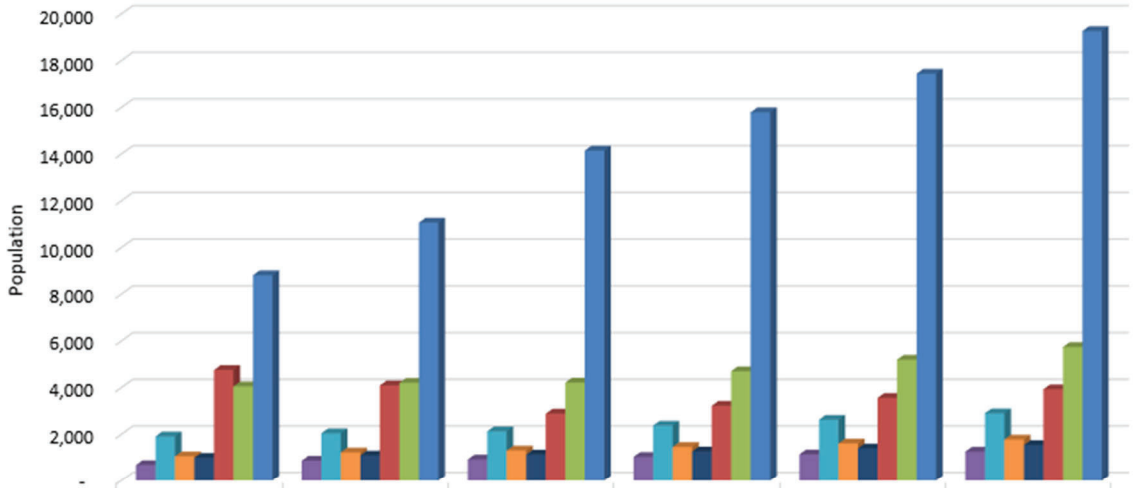
1. Compliance with the ALASD wastewater discharge (NPDES) permit.
2. Cost effective wastewater collection and treatment facilities for the ALASD service area for the preservation and best use of waters and other natural resources in the area.
3. Sustainable capital improvement plan to meet the long-term needs of the ALASD and its users.
4. Collaboration with appropriate agencies and local units of government in their planning efforts to provide coordination and compatibility with the ALASD Comprehensive Wastewater Services Plan.
5. Increased public knowledge and education regarding regional wastewater and water quality management.

2. Demographics and Land Use

2.1 Demographics of the Area

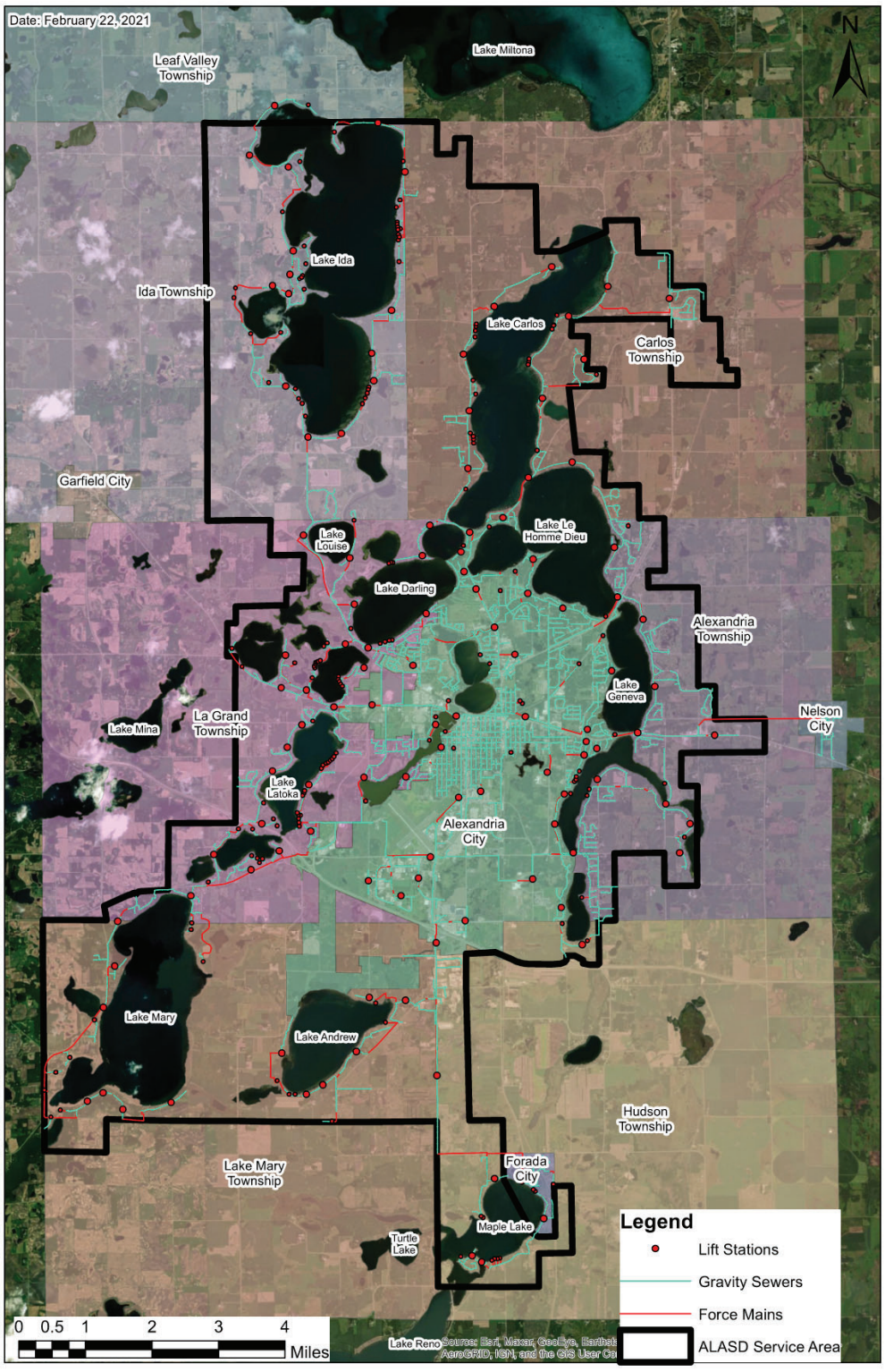
The estimated population served by ALASD is approximately 26,000. Based on data from the Minnesota State Demographic Center, the population of the ALASD service area and surrounding region will continue to grow at an approximate growth rate of 1% annually over the next 30 years (Figure 2-1). Growth in the City of Alexandria over the past decade was approximately 10% (2010-2020) while growth in Douglas County over the past decade was less than 6%. Using a 1.0% annual growth rate, ALASD service area population projection is projected to be 29,000 for 2030, 32,000 for 2040 and 35,000 for 2050. In addition to population growth, the ALASD must consider industrial and commercial growth resulting in expansions to the wastewater system.

For the purposes of this study, a 1.5% annual flow increase is assumed for both city and township areas. **Current population served by ALASD is approximately 26,000 and includes all of the City of Alexandria and portions of the townships shown in Figure 2.1. In addition, ALASD has sanitary sewer service contracts with the City of Forada, City of Nelson, a state park and 2 rest areas.* Growth from the City of Alexandria has had the most impact on the WWTF flows and loads in recent years due to multi-family residential and industrial increases.



	2000	2010	2019	2030	2040	2050
Hudson Township	686	876	928	1,035	1,144	1,263
Carlos Township	1,912	2,048	2,133	2,380	2,629	2,904
Ida Township	1,057	1,228	1,308	1,459	1,612	1,781
Lake Mary Township	997	1,098	1,135	1,266	1,399	1,545
Alexandria Township	4,760	4,098	2,892	3,227	3,564	3,937
LaGrande Township	4,056	4,210	4,218	4,706	5,198	5,742
Alexandria City	8,820	11,070	14,156	15,793	17,446	19,271

Figure 2-1: Past and Projected Regional Population Growth*Minnesota State Demographic Center



ALASD service area includes portions of six townships and the City of Alexandria. ALASD also serves the cities of Nelson and Forada, Leaf Valley Township, a state park and Interstate I-94 rest area through contract for sanitary sewer services. A full-size map of the service area is provided in Appendix B.

Figure 2-2: ALASD Service Boundary

2.2 Community Land Use Plans

ALASD provides sanitary sewer service to a portion of Douglas County including six townships and the City of Alexandria. The local units of government that comprise ALASD have the authority to plan, initiate and construct sanitary sewer within their township within the ALASD service area. The City of Alexandria, Alexandria Township and Douglas County are responsible for land use planning and regularly prepare comprehensive plans that provide the framework to guide land use planning and development activities over the future planning horizon. The remaining townships' planning authority is delegated to Douglas County. The following subsections summarize the existing Comprehensive Plans for the local units of government which comprise ALASD.

2.2.1 Douglas County

The most recent Douglas County Comprehensive Plan was published in September 2011. A future update to the Douglas County Comprehensive Plan is anticipated in 2021 or 2022. It is the official document which guides land use, roadways, parks/trails, and natural resource decisions along with zoning ordinances for the County. While the City of Alexandria and Alexandria Township are within the bounds of Douglas County, they are excluded from land use planning as separate Comprehensive Plans were developed independently for these two areas and are discussed in subsequent sections.

The population of Douglas County was estimated to be 36,390 in 2009 and predicted to reach 46,960 residents by 2035 based on the 2011 Comprehensive Plan. Growth in the county has been slower than previously predicted in the 2011 Douglas County Comprehensive Plan. Current county population is estimated at 38,240. Based on population projections from the Minnesota State Demographer, Douglas County is predicted to reach 40,400 by 2030, 41,900 by 2040 and 42,840 by 2050. Historically, areas with the highest population growth have been Alexandria Township, Carlos Township, and LaGrand Township.

Growth is occurring in Douglas County around natural amenities such as lakes and woodlands, while the population density is declining in more rural agricultural areas due to mechanized farming techniques and the conversion of farmland back to natural areas. There has been an 84% increase in arts, entertainment, recreation, accommodation, and food services, and the value of lakefront land has steadily increased in recent decades.

Figure 2-3 shows the Douglas County Comprehensive Plan Future Land Use map and is also provided in Appendix B of this report. Agricultural, Agricultural Limited, and Rural Residential Areas are not anticipated to be on public water/sewer. These areas are intended to remain rural in nature and preserve the agricultural or conservation land uses.

Residential areas shown in orange on the future land use map shall be limited to a density of 2 units per 1 acre and provide for residential development opportunities in areas that are served or can be served by public wastewater services. The goal for the Commercial/Light Industrial areas of Douglas County are for small-scale business such as retail, restaurants, gas stations, and light industrial to be developed which do not require a high level of water and sewer services.

The Douglas County Subdivision Ordinance adopted in 2006 states sanitary sewer shall be required as a condition of all new subdivisions located within public sanitary sewer district boundaries.

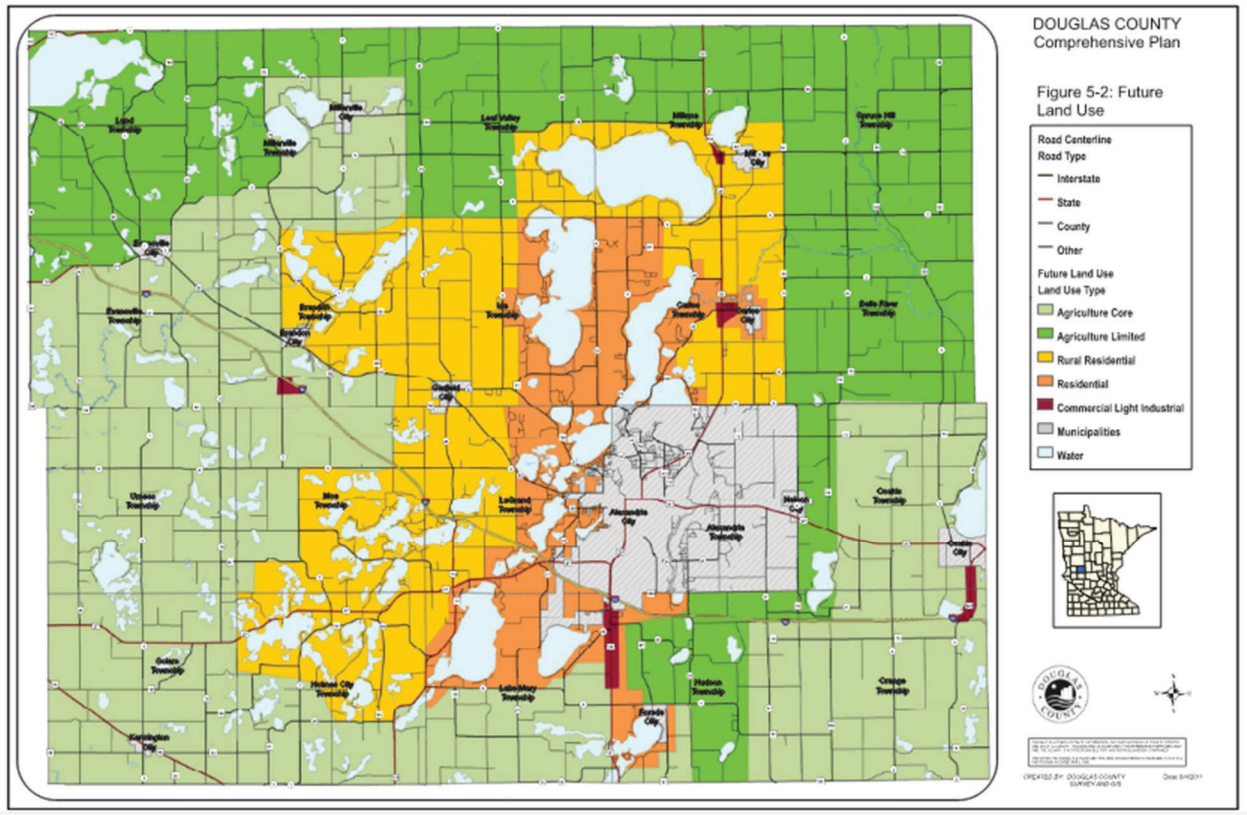


Figure 2-3: Douglas County Comprehensive Plan Future Land Use

2.2.2 City of Alexandria

The City of Alexandria's Comprehensive Plan was published in January 2020. It is based on local and regional data, historic information, trends and planning principals. Because the City of Alexandria does not have land available for greenfield site development, the focus of the plan is on redevelopment and reuse of existing infrastructure. In the plan, the City notes that existing land use is not precisely aggregated and there is a desire to maintain this pattern with some mix of land use activities and the continued expansion of a well-connected transportation system.

In January 2019, the City adopted the Housing Study, which confirms that Alexandria-area captures the majority new household growth in the region and is projected to do so in the future. The housing study area extended beyond the municipal boundaries of Alexandria including the City of Forada, and the Townships of Alexandria, Carlos, Hudson, Lake Mary and LaGrand. This Greater Alexandria area experienced average annual growth of up to 120 households each year during current decade with annual new construction exceeding 150 units in an average year. Greater Alexandria should expect demand for 775 to 850 housing units over next 5 years to keep pace with household growth. Many of these units will be within the City, but some growth will continue outside of the municipal boundaries as well.

The Plan also notes the potential redevelopment for the Viking Plaza Mall area, which has had recent closures making it largely vacant. It is suggested in the Plan that medium- to long-term plans for the area should consider redevelopment opportunities to add residential units throughout that neighborhood to

address the housing need mentioned above. This should be considered in ALASD future planning, as few sewers currently exist to serve this area of the City. Additional conveyance infrastructure including adding lift station capacity may need to be considered. In addition, changes to the quantity and quality of the additional flow anticipated from this redevelopment should be evaluated.

An overview of the City of Alexandria's future land use can be seen in Figure 2-4 while Table 2-1 shows the recommended vacant land use amounts that should be designated to provide for projected housing needs through 2034. With the aging population, residential growth after 2023 is anticipated to continue to shift toward more assisted living and multi-family needs, which are higher density developments that require less land per unit. However, the City estimates a continued need for additional housing of all types through the next 15 years.

Table 2-1: Projected Land Needed for Residential Use

	Net Densities	Vacant Acres 2023	Gross Acres 2029	Gross Acres 2034
Low to medium Density	3-5 dwelling.units/acre	45	35	30
Medium to High Density	8-20 dwelling.units/acre	65	65	60
General Mixed Use	10-20 dwelling.units./acre	50*	45	45
* 50 acres for housing, more will be needed for other uses				

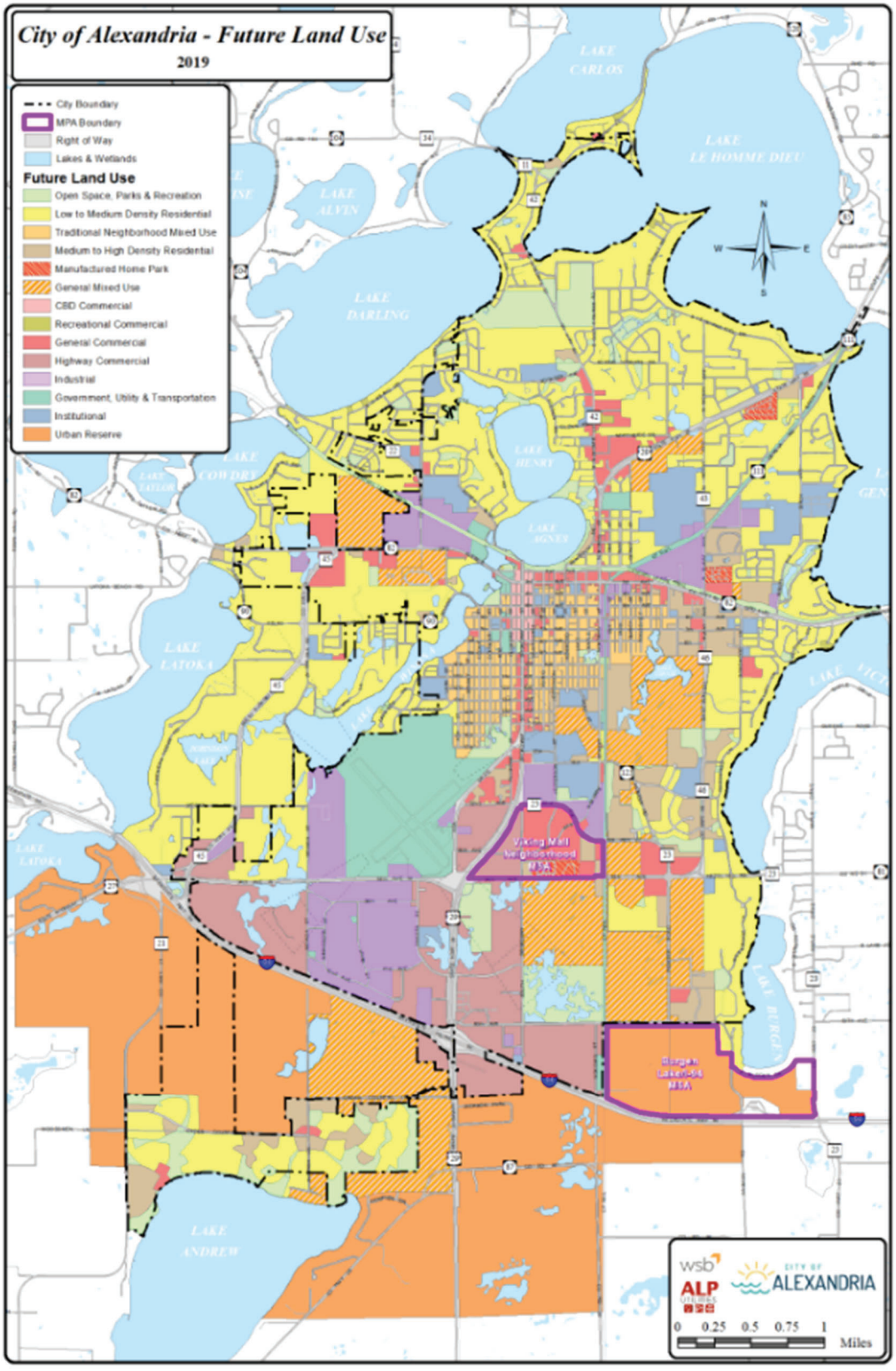


Figure 2-4: City of Alexandria - Future Land Use

2.2.3 Alexandria Township

Alexandria Township adopted its Comprehensive Plan in 2006 and is the land use and zoning authority for the township. Based on their Comprehensive Plan, the Township will maintain agricultural land where non-farm uses are kept to a minimum (so agriculture may continue to be productive and viable) and provide transition areas between urban development and agricultural areas to avoid conflict and keep higher property values.

Per the Alexandria Township Comprehensive Plan, new residential developments in the Urban Residential category are to be designed efficiently and orderly with public wastewater infrastructure and stormwater controls. ALASD serviced areas are expected to have a gross urban density of 2-3 dwelling units per acre or higher. The Plan indicates Urban Commercial/Light Industrial areas are intended to be served by public wastewater infrastructure as shown in Figure 2-5. Rural Commercial/Light Industrial areas outside of the urbanized area are not intended for heavy industrial use that would require large quantities of water or generate waste and are not intended to be served by public sewer or water infrastructure.

According to the Alexandria Township Subdivision Ordinance, sanitary sewer shall be required as a condition of all subdivisions located within public sanitary sewer district boundaries and the Urban Residential district. According to the subdivision ordinance, this requirement for sanitary sewer shall apply to all classes of subdivisions and requires the following: a) All plans shall be designed and approved in accordance with the rules, regulations, and standards of the public sanitary sewer district and other appropriate agencies. B) Sewers shall be installed to serve each lot and to grades and sizes required by approving officials and agencies. No individual disposal system or treatment plants (private or group disposal systems) shall be permitted in the Urban Residential district within the ALASD Service Area.

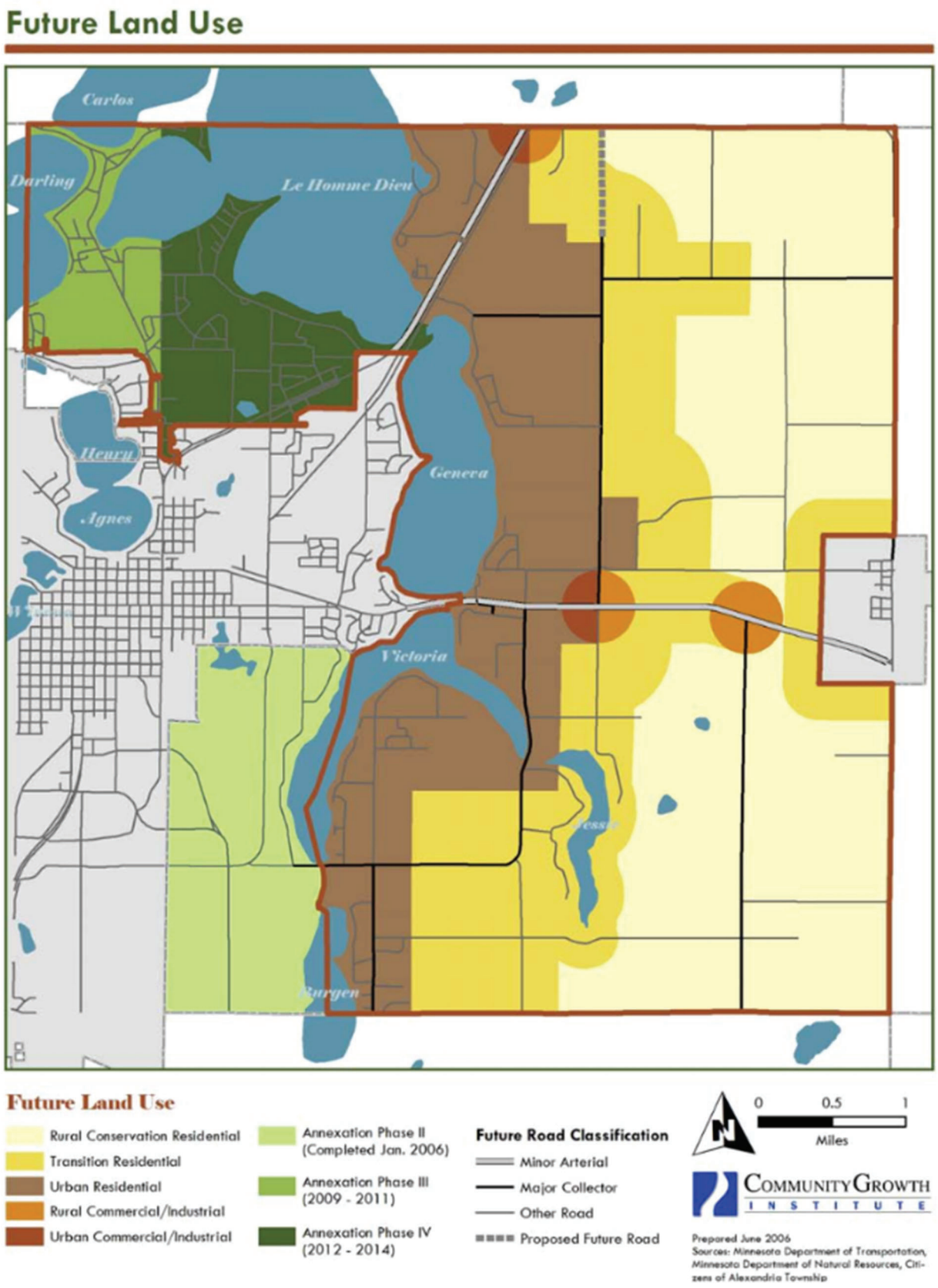


Figure 2-5: Alexandria Township Future Land Use

3. Existing and Future Service Area

3.1 ALASD Existing Service Area

ALASD service area consists of portions of six townships plus the City of Alexandria, in addition to providing contract services to other areas. The service area and existing sewers are shown in Figure 3-1. The City of Alexandria and Townships of Alexandria, Carlos, Hudson, and La Grande were original members in 1976 with local sanitary sewer systems planned or connected to the ALASD. Local sanitary sewer was constructed in Lake Mary and Ida Townships in 1998 and 2001 and are also within the ALASD service area. Additionally, ALASD provides contract service to the City of Nelson, Carlos State Park, the City of Forada, Leaf Valley Township and the two I-94 Rest Areas.

Not all land/parcels within the ALASD service boundary are connected to the ALASD system. Figure 3-2 shows parcels within the City of Alexandria that are not currently served by sanitary sewer. Areas served by sanitary sewer within the townships are generally around lakes or more densely developed areas adjacent to the lakes. Due to the topography and rural/agricultural land uses in some areas of the townships, it can be challenging to cost effectively connect all properties to the collection system.

The local units of government that comprise ALASD own their local sanitary sewer. The local units of government have the authority to plan, initiate, construct and own local sanitary sewer, ALASD operates and maintains the local sanitary sewer within the ALASD service area.

ALP Utilities is the City of Alexandria's municipal electric and water utility which provides city residents with water service in addition to providing electric and business communication services. Figure 3-3 shows the ALASD service area compared to ALP service area (i.e., centralized water supply). Currently it is estimated that approximately half of the residential flow that it is treated at the ALASD WWTF is contributed by the City of Alexandria/ALP Utilities. Properties served by ALASD outside the ALP Utilities service area are generally located in the townships and have their own private well/water supply.

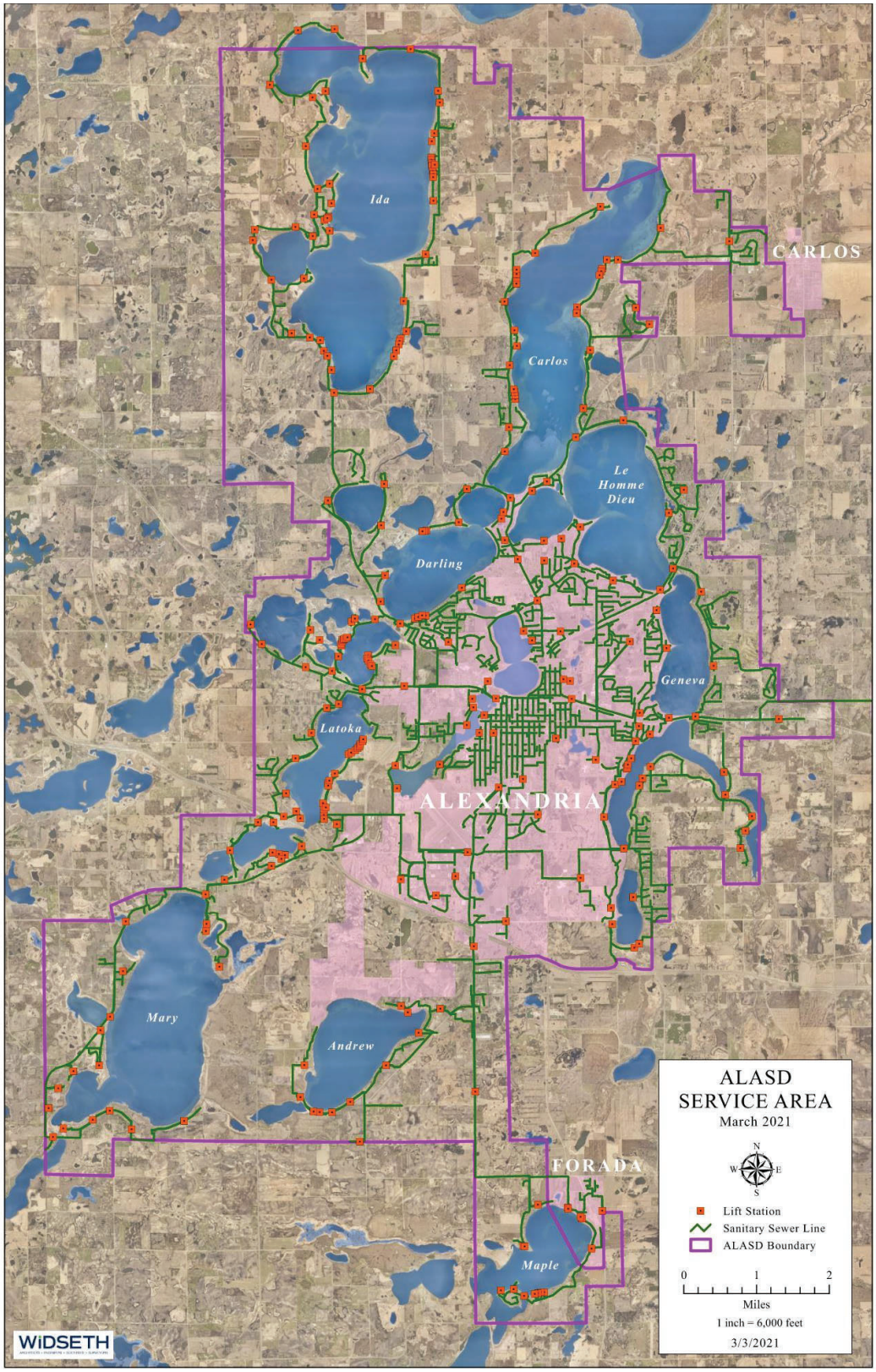


Figure 3-1: ALASD Service Area

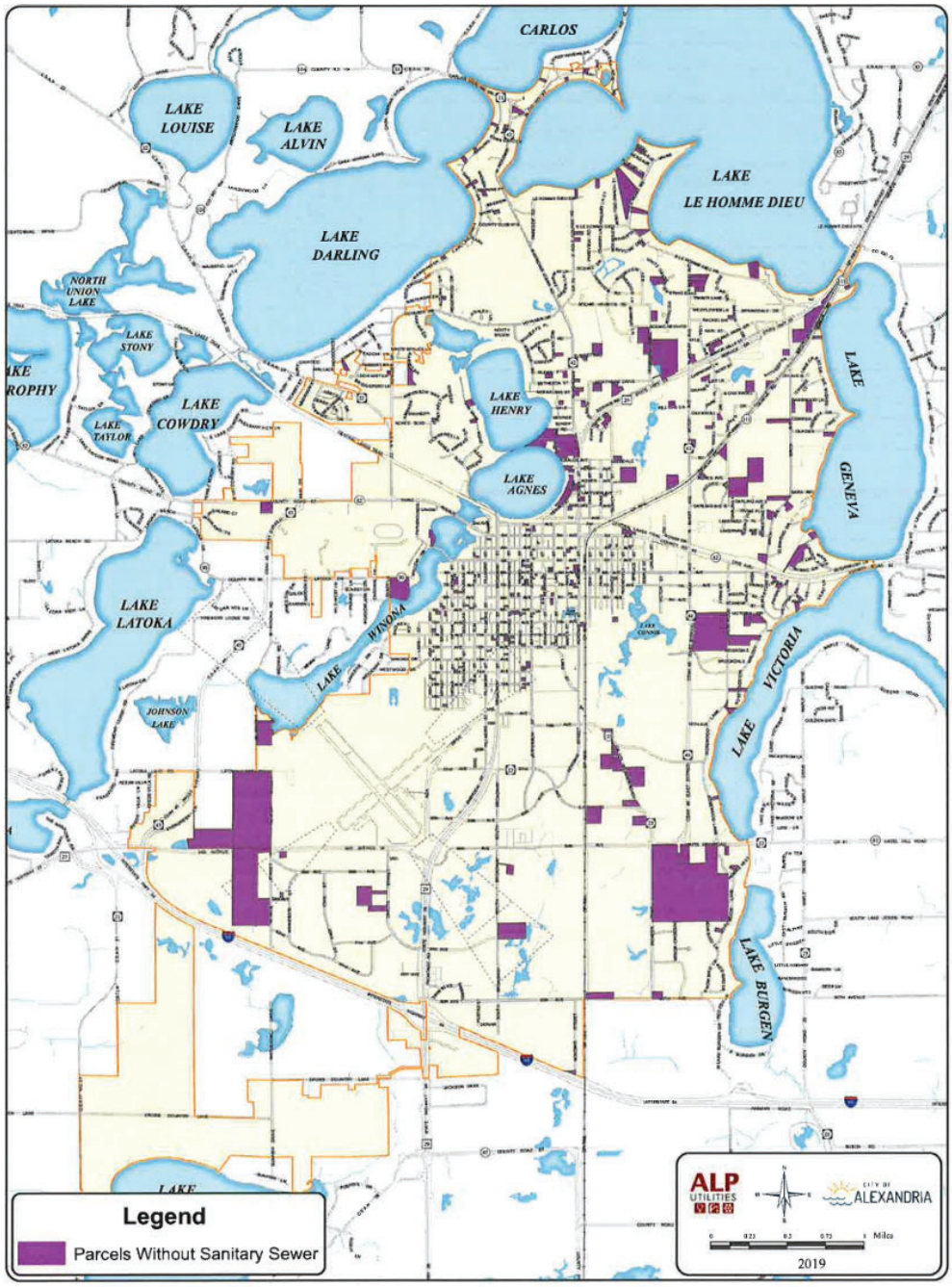


Figure 3-2: City of Alexandria Parcels with Water and no Sanitary Sewer

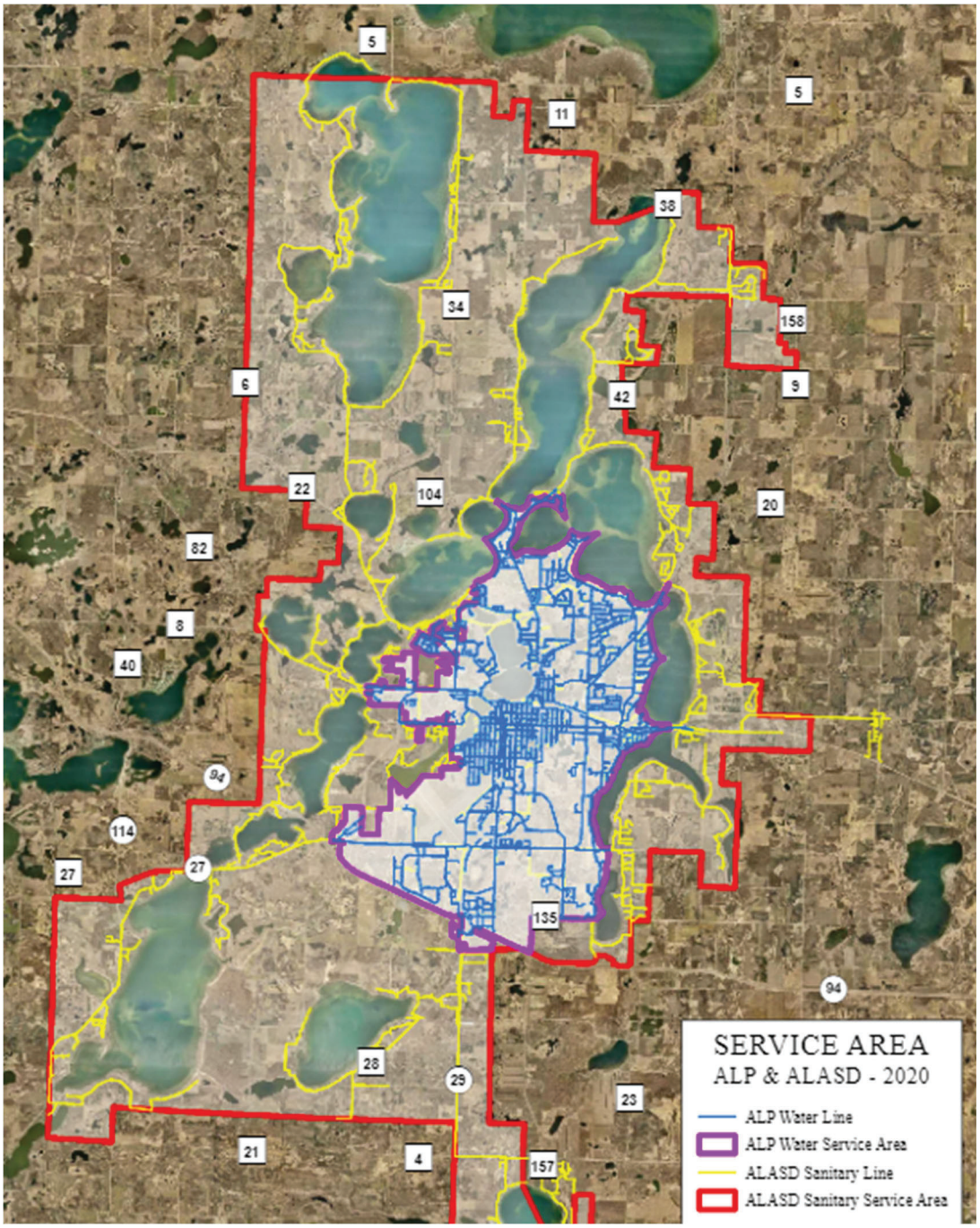


Figure 3-3: ALASD and ALP Service Areas

3.1.1 Residential and Commercial Users

There are approximately 9,190 residential accounts and 1,180 commercial accounts within the ALASD. The breakdown by local government unit is shown in Figure 3-4.

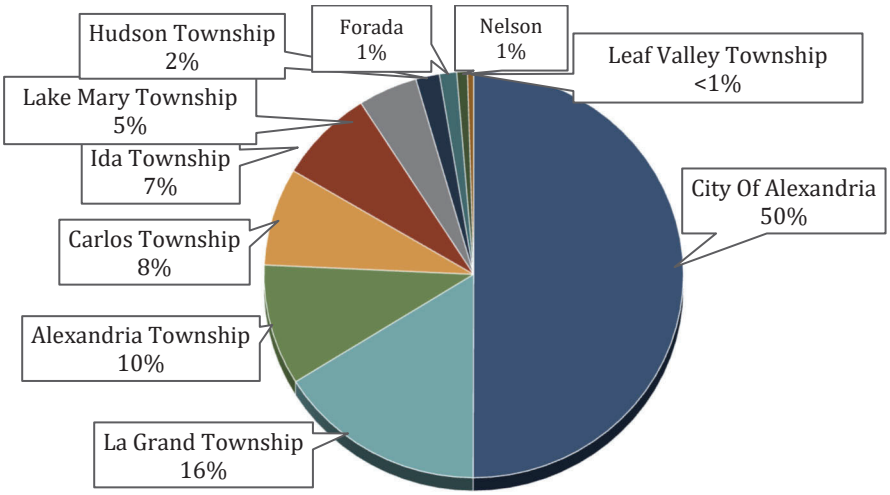


Figure 3-4: Breakdown of ALASD Residential and Commercial Users

3.1.2 Significant Industrial Users

ALASD receives process wastewater from significant industrial users (SIU). Table 3-1 contains a summary of SIUs average flow discharges. SIUs are regulated through SIU agreements with ALASD and are monitored for flow and load contributions.

Table 3-1: Significant Industrial User Discharges

Significant Industrial User (SIU)	Principal product or raw materials used	Daily Average Flow process wastewater (GPD)
3M	Sandpaper (Adhesives, Silica)	35,500
Douglas Finishing	Metal Plating (Cleaning, plating solutions)	35,000
SunOpta	SunOpta Aseptic (Oat Milk) SunOpta Ingredients (Soy)	350,000
TWF	Powder coating & Metal Plating	8,100
Alexandria Extrusion	Extruded Aluminum (lubricants, cleaners)	1,800

3.1.3 Contract Sanitary Sewer Service

The ALASD provides contract sewer services the City of Nelson, City of Forada, Lake Carlos State Park and two Interstate 94 rest areas. These contract users are connected to the ALASD system and own their local sanitary sewer system; however, they are located outside the ALASD service area.

3.2 Future Service Areas

3.2.1 Service Area Annexation

A local unit of government or local government unit (LGU) must petition the ALASD for annexation. Prior to taking any action on the petition, the executive director and engineer will review proposed development plans submitted by the LGU requesting annexation to evaluate the impact of such annexation on ALASD treatment and collection facilities. The Douglas County Planning Commission also reviews the proposed annexation. The resolution petitioning such annexation must be approved by a 4/5 vote of the LGU and then approved by a majority vote of the ALASD Board.

For ALASD to evaluate the annexation of land into the ALASD service area, development plans and a feasibility study should be submitted for the proposed development including potential future development in the area to be served by public utilities. The feasibility study may be commissioned by a developer and submitted to the LGU for subsequent submittal to ALASD or an LGU may determine the need and commission a feasibility study/plan per the enabling legislation for consideration by the ALASD board.

ALASD will consider appropriate interceptor sewer facilities that will be needed to serve future or adjacent undeveloped area within the service area. However, ALASD retains the right to require LGU or developer financing for interceptor facilities to service areas outside of the ALASD service area that are not in the best interests of the district. ALASD may also consider interceptor charges (also referred to as trunk sewer charges). Interceptor charges or other costs will be determined by ALASD's engineer based on feasibility studies for the proposed area.

3.2.2 New Sewer Within ALASD Service Area

An LGU can request to construct and connect local sanitary sewer for unsewered areas within the ALASD service area. It is the local planning authority and LGU's responsibility to plan, initiate, and request connection to ALASD. It is also the local planning authority and LGU's responsibility to plan appropriately for local roads, water supply, emergency services, etc. in addition to the local sanitary sewer.

ALASD will review proposed development plans and local sanitary sewer feasibility studies submitted by the LGU to evaluate the impact of such connection on ALASD collection and treatment facilities. It is also the LGU responsibility to construct and finance local sewer improvements. At the LGU request, ALASD may assume the responsibility for overseeing the design and construction of the local improvements with the LGU providing the financing. However, if the LGU or a developer retains the responsibility of design and construction, ALASD maintains the final approval authority for plans and specifications prepared by the LGU's engineer. ALASD also reserves the right to hire an independent

consulting engineer to review these plans and specifications at the LGU or developer's expense. Any general contractor or subcontractor selected by the developer to construct and install sanitary sewer shall be subject to the approval of ALASD.

To accommodate the planning and orderly growth of the service area, ALASD could consider providing planning grants or loans to local units of government to provide feasibility level studies for annexation of land into the ALASD. An alternative or additional approach could include the ALASD completing a Master Sanitary Sewer System Study to determine scenarios for future and ultimate sewer service area in future urban service areas.

3.2.3 Development Anticipated Within ALASD Service Area in Near Future

Section 2 included a discussion on the future land use for the communities served by ALASD. While the size of the ALASD service area is not expected to change significantly, areas within the service area are expected to become more densely populated making connection to public sewer service more economical.

Meetings held with local planning authorities as part of the development of this plan, indicated near-term development in the following locations:

- Alexandria Township – Urban Residential zone as shown on Township Future Land Use Map
- City of Alexandria –Burgen Lake area, potential annexations area directly south of Interstate 94, and Viking Mall redevelopment
- Douglas County – Areas between Lake Ida and Lake Carlos shown as Residential on the Douglas County Future Land Use Map

Feasibility studies for development and utility services should be completed by the appropriate LGU and submitted to ALASD to determine compatibility with the existing sanitary sewer system. Additional areas will be proposed for development and will likewise need appropriate study and evaluation to determine how to cost-effectively develop and serve with local utilities.

Proactive planning by LGUs is important to accommodate the orderly growth, construction, and use of utility resources. Updates to the 2011 Douglas County Comprehensive Plan and the 2006 Alexandria Township Comprehensive Plan are needed to inform these near-term development areas and appropriately plan for future developments that will require sanitary sewer services.

3.2.4 Build-out of ALASD Service Area

A broad planning exercise was completed to estimate the “near-future” additional sanitary sewer capacity needed in the ALASD service area. Using the Douglas County Residential Future Land Use area at a density of 2 units/acre and the Alexandria Township Urban Residential area at 2-3 units/acre, the estimated additional flow from these near-term future development areas noted in the previous section would be approximately 2 mgd (i.e., existing sewered parcels within these areas were subtracted from the total acreage to estimate near-future build-out). Comparing this with the anticipated annual population growth of 1.5%, the near-term future development areas identified in the township and county would become near fully developed between years 2020 and 2050. This exercise also demonstrates the need for

planning and orderly development for cost-effective construction of utilities based on the significant size of the ALASD service area and the time required to realize ultimate build-out. Development at "urban densities" near the existing urban areas and existing sanitary sewer will provide more cost-effective service. Since protecting the lake water quality is a priority, developments near lakeshore or with potential impacts to water quality will require higher priority and consideration.

3.2.5 Rural Residential Areas

Properties on the outer edge or just outside the ALASD service area are generally identified as Rural Residential by Douglas County and Transitional Residential or Rural Residential by Alexandria Township. Douglas County identifies land as rural residential that is not intended to be served by local utilities and is generally conservation land or agricultural land. Alexandria Township's transitional residential is intended to provide opportunities for residential development in areas not currently identified for provision of urban infrastructure, such as sewer, water, or storm drains, but that could efficiently accommodate urban housing densities in the next twenty-five years as the population of the area increases. These areas may be developed at rural or semi-rural densities and are intended to be designed in a manner than allows for a transition to urban densities as sewer, water, or other public infrastructure or services become available. This conversion of transitional (semi-rural) residential to future urban development may be difficult due to existing (sunk) infrastructure costs and reluctance of property owners. Servicing these transitional rural areas with local sanitary sewer is generally not cost-effective.

4. Environmental and Regulatory Compliance

The Alexandria lakes area has a wealth of high-quality lakes. Most land in the ALASD service area lies within the Long Prairie River watershed located in eastern half of Douglas County and. This area includes many medium to large and deeper lakes, a number of which have moderate to good water clarity. The higher quality of lakes in the Long Prairie watershed is due to extensive forest and grassland vegetation and greater lake depth, which makes lakes more resilient to nutrient enrichment. Douglas County is characterized as being in the North Central Hardwoods Forests ecoregion. The Northern Glaciated Plains ecoregion lies directly to the southwest. The western and southwestern portion of Douglas County is characterized by glaciated plains and smaller, shallower lakes.

ALASD discharges wastewater into Lake Winona under a wastewater discharge permit regulated by the Minnesota Pollution Control Agency (MPCA). Lake Winona is slightly south of the geographic center of Douglas County and is located in the City of Alexandria. Lake Winona is a small and shallow lake, with a surface area of 185 acres and mean depth of 4.5 feet. Lake Winona is part of the Long Prairie Watershed and the first in the Winona-Agnes-Henry chain of lakes that drain into Lake Carlos, the Long Prairie River, and eventually the Mississippi River.

In 2002, Lake Winona was listed as a nutrient-impaired water body for phosphorus per Section 303(d) of the federal Clean Water Act. More recently, Lake Agnes and Lake Henry were also listed as nutrient-impaired for phosphorus (Section 303(d) of the federal Clean Water Act) and all three lakes (Winona, Agnes and Henry) were also recently listed as chloride-impaired.

Extensive water quality information regarding the Long Prairie River Watershed and Lake Winona is contained on the Minnesota Pollution Control Agency (MPCA) website including the Long Prairie River Watershed Restoration and Protection Strategies (WRAPS), April 2017, the DRAFT Lake Winona Phosphorus Total Maximum Daily Load (TMDL), and Minnesota's 2020 Impaired Water List. This information is available on the MPCA website via the following links:

Final Long Prairie River Watershed Restoration and Protection Strategies (state.mn.us)

Draft Lake Winona Phosphorus Total Maximum Daily Load (TMDL) (state.mn.us)

Minnesota's Impaired Waters List | Minnesota Pollution Control Agency (state.mn.us)

4.1 Lake Quality Monitoring

Since 1976, the ALASD has performed lake monitoring and testing of area lakes served by public sanitary sewer. Testing includes total phosphorus, chlorophyll-A, transparency, pH, chlorides, dissolved oxygen profile and conductivity. The following lakes are sampled: Winona, Agnes, Henry, Le Homme Dieu, Carlos, Darling, Victoria, Brophy, Cowdry, North Latoka, South Latoka, Andrew, Mary and Ida.

4.2 NPDES Permit

The ALASD Wastewater Treatment Facility (WWTF) current NPDES permit was issued November 15, 2020 and expires October 31, 2025 (Appendix C). NPDES permits have five-year cycles.

The NPDES permit contains technology based effluent limits (TBELs) for CBOD5, TSS, percent removal, and potential of hydrogen (pH) limits for achieving secondary treatment standards. The total chloride and total phosphorus limits are water quality-based limits (WQBELs) based on current standards applicable under Minn. R. 7050.0222.

The WWTF has a continuous discharge to Lake Winona which is classified as a Class 2B (aquatic life and recreation uses), 3C (industrial consumption uses), 4A&B (agriculture and wildlife), 5 (aesthetic enjoyment and navigation), 6 (other uses) water. There are no endangered or threatened species living in the receiving water.

4.3 Phosphorus

Lake Winona was placed on the 2002 MPCA Clean Water Act Section 303(d) list of impaired waters due to excess nutrients, which impede designated uses such as recreation. Lake Winona is exceeding eutrophication standards for shallow lakes in the North Central Hardwood Forest Ecoregion. Therefore, a TMDL study was initiated for Lake Winona in 2006.

The previous NDPES permit included a 0.3 mg/L limit on phosphorus; however, the WWTF has consistently discharged at lower phosphorus levels to protect the environment and area waters.

Ferric sulfate is currently added at the secondary treatment process upstream of the tertiary treatment cloth media filters to reduce effluent total phosphorus (TP) in WWTF discharge. In order enhance treatment and achieve compliance with TP limits, WWTF staff have researched multiple operational scenarios and continue their efforts to further reduce effluent TP discharges. Increased addition of ferric sulfate and polymer upstream of the cloth media filter has been problematic as the combination of additional filter solids loadings, iron “retainage” on the back side of the filter media, and polymer results in almost continuous backwashing of the filters and excessive downtime for cleaning. Based upon historical plant operations and studies completed by ALASD and consultants, a low phosphorus removal technology will likely be required to achieve the target effluent TP discharge concentrations at full WWTF capacity, which is discussed further in Section 7.2.

4.3.1 Lake Management Plan

In addition to investigating phosphorus removal upgrades at the WWTF, ALASD has also studied alternatives that could achieve water quality standards in Lake Winona and Lake Agnes through implementing best practices for lake management. The Lake Management Plan (Appendix E) was developed with the goal of attaining state water quality standards in Lake Winona, Lake Agnes and other downstream lakes.

To address water quality in Lake Agnes which receives discharge from Lake Winona, the District intends to complete an alum treatment to reduce phosphorus loading from lake sediments. For deep lakes like Lake Agnes, the primary restoration approach is to reduce phosphorus load which in turn reduces algal

growth and increases water clarity. One of the major sources of phosphorus to lakes is often from lake sediments known as internal phosphorus loading. Monitoring data suggests that internal phosphorus loading provides as much as 1,400 pounds of phosphorus to Lake Agnes annually, approximately 35% of the annual phosphorus load to the lake. Reducing the internal phosphorus load will result in Lake Agnes meeting state water quality standards.

Restoring shallow lakes is more complex, because water quality is impacted by both biological conditions and phosphorus loading. Shallow lakes exist in either a clear, plant dominated state or a turbid, algae dominated state. Lake Winona currently exists in the turbid, algae dominated state with minimal aquatic plants. Carp are one of the major drivers of turbid water quality and must be managed before aquatic plants and the clear water state can be established. Therefore, this project focuses on carp management and plant establishment in Lake Winona to maximize the impacts of reducing phosphorus loading.

In early 2018 MPCA and representatives of the ALASD board of directors began developing a new permitting approach to protect water quality and remediate the impairments of two lakes, to delay or possibly minimize physical upgrades to the facility. Under the conditions of NPDES permit, adaptive lake management activities will be employed and will include removal of an invasive common carp species, prevention of carp repopulation, and application of alum in a second lake in the chain. ALASD discharges effluent into Lake Winona, which is classified as a shallow lake, having a maximum lake depth of seven feet. Lake Winona discharges into Lake Agnes, which discharges into Lake Henry. All three lakes are impaired for eutrophication – excessive algae growth. These impairments have required a phosphorus limit of 0.157 mg/L from the WWTF to address ALASD's part of the solution and to restore water quality to meet the lake eutrophication standards.

Through adaptive lake management, MPCA will allow ALASD the time necessary to study the carp behavior and attempt to remove a carp infestation from Lake Winona that continually uproots plants and suspends phosphorus-rich sediment. The absence of the carp will promote establishment of native aquatic plant species, leading to greater water clarity. A carp barrier was installed in spring 2021 where Lakes Winona and Agnes connect, to prevent carp from returning to Lake Winona. Lake Agnes was treated with alum to address excessive algae growth linked to ALASD's effluent. This chemical treatment causes the suspended phosphorus that leads to algae growth to precipitate out of the water column and be sequestered in the sediment below. If these activities prove to be successful, an alternate phosphorus limit of 0.25 mg/L from WWTF discharge and 665 kg/year could become effective in ALASD's NPDES permit.

However, if adaptive lake management practices are not successful, a lake drawdown may become necessary which requires a vote by the property owners. Ultimately if the carp management in Lake Winona does not achieve the desired effect of a net reduction in algae growth and is not sustainable, ALASD will be required to make investments in the physical infrastructure of the wastewater treatment facility.

4.4 Total Chlorides

Lake Winona was placed on the 2010 MPCA CWA Section 303(d) list of impaired waters due to excess chloride, which impedes the attainment of designated uses for Aquatic Life and Industrial Consumption. These exceedances in Lake Winona include:

- Exceeding the 230 milligram per Liter (mg/L) chronic standard intended to protect Class 2B waters for the propagation and maintenance of a healthy community of cool or warm water sport or commercial fish and associated aquatic life, and their habitats.
- Exceeding the 250 mg/L standard intended to protect Class 3C waters for industrial cooling and material transport without a high degree of treatment being necessary to avoid severe fouling, corrosion, scaling, or other unsatisfactory conditions.

A TMDL study has not yet been initiated to address Lake Winona's chloride impairments. The MPCA is in the process of evaluating revisions to the aquatic life and recreation and industrial consumption chloride standards.

Chloride is one of the components of salt, which is used in forms such as sodium chloride (table salt), calcium chloride and magnesium chloride (road salts). Sodium chloride is commonly used in home water softeners and by water treatment plants to treat "hard" water. Area groundwater has high levels of calcium and magnesium that are commonly treated/removed through "softening" to prevent lime scale buildup in appliances, pipes and water fixtures. Home water softeners use sodium chloride (NaCl) in a softening process that replaces calcium and magnesium ions with sodium, while the chloride ions are discharged in the wastewater and eventually end up at the WWTF and in the natural environment.

Total chloride is a soluble species which is not removed through conventional wastewater treatment plant processes. For ALASD, the effluent total chloride discharge concentrations are roughly equal to the plant influent concentration since metals salts such as ferric chloride or equal are not added to the treatment flow scheme. Total chloride influent and effluent concentrations typically range between 650 mg/L to 750 mg/L. As stated previously, Minnesota Rule 7050.0222 Subp. 2 sets chloride water quality standards for lakes and streams at 230 mg/L for Class 2B waters.

Based upon concerns of high chloride treatment costs throughout the State on Minnesota, the MPCA developed a Chloride Work Group in December 2016. The group consists of eight municipal permit holders, two environmental consulting firms, and MPCA staff to develop recommendations on chloride permitting strategies. Minnesota's DRAFT Statewide Chloride Management Plan was completed and provided to the public for comment from October to November 2020. Notice of availability of the Draft Minnesota Statewide Chloride Management Plan and request for comment is available on MPCA website

Based on available information as well as studies completed by ALASD, a chloride variance was issued and is included in the NPDES permit as a result of the following:

- The ALASD effluent chloride discharges are not within the defined attainable margin (100 mg/L) of the WQBEL standard.
- MPCA economical solutions suggest installing water softening technology at the drinking water source to eliminate the need for end of plant treatment systems at the ALASD WWTF. However, centralized ALP softening will not attain the target effluent chloride discharge concentrations without additional treatment at the WWTF since over half of ALASD customers use private well water with home softeners.
- Treatment for chloride at the end of the wastewater treatment plant is not economically feasible, according to MPCA's "alternatives for addressing chloride in wastewater effluent."

> The ALASD Phosphorus and Chloride Reduction Facility Plan (Executive Summary provided in Appendix F) indicates chloride treatment capital costs are excessive and would cause sewer rates to far exceed reasonable thresholds for affordability (i.e., > 1.4 % of the median household income according to the Minnesota Public Facilities Authority).

The initial variance request from ALASD was 15 years. The current NPDES permit includes an 8-year variance, however future variance terms may be considered based on continued improvements toward source reduction.

As required by the recently issued NPDES permit, ALASD completed a Chloride Identification and Minimization Plan in May 2021. This plan was initially submitted in May 2021 with updates required annually per the NPDES permit. Based on current information from the CIMP, it is unlikely that ALASD will be able to attain the 230 mg/l limit by the end of the 8-year variance.

5. Ownership of Assets and Revenue Sources

5.1 Ownership of Sanitary Sewer Assets

5.1.1 Interceptor and Wastewater Treatment Facilities

The ALASD enabling legislation (Minnesota Statutes Chapter 869) provides the framework, organization, and responsibilities of the ALASD and is provided in Appendix A. The ALASD assumed ownership of the existing treatment facilities and all interceptors within the service area when the district was created. An advanced wastewater treatment facility constructed and owned by the ALASD became operational on October 1, 1977. Additional interceptor and lift station infrastructure have also been constructed and are owned by the ALASD. Local collection system assets are owned by the local government units. ALASD may require any local government unit to transfer ownership of any collection or treatment system infrastructure which will be needed for the overall operation of ALASD's system. Additional interceptor facilities may be constructed and financed by the ALASD to provide for the collection of wastewater from new local sanitary sewer systems in the ALASD service area.

ALASD will consider appropriate interceptor sewer facilities needed to serve future or adjacent undeveloped area within the service area. However, ALASD retains the right to require LGU or developer financing for interceptor facilities to service areas outside of the ALASD service area that are not in the best interests of the district or aligned with the district's mission. ALASD may also consider interceptor charges (also referred to as trunk sewer charges) for serving areas outside the ALASD service area.

5.1.2 Construction and Ownership of Local Facilities

Local Government Units (LGU) such as townships and cities within the ALASD have the authority to plan, finance, and construct local sanitary sewer. LGU's may specially assess or levy connection charges in relation to the construction of local sanitary sewer. Additional information is provided in the enabling legislation on the creation of service regions and LGU responsibility to plan and provide the local collection system to serve their jurisdiction.

Before undertaking the construction of new sewer or improvement of any existing sewer system, an LGU shall prepare and adopt a plan and program for collection of wastewater for which the LGU is responsible and submit for review and approval to the ALASD board. The LGU shall retain responsibility for the planning, design, acquisition, betterment, operation, administration, and maintenance of all local sanitary sewer facilities. The ALASD board shall upon request of the LGU within the service area assume all or any part of the responsibility described above. However, the ownership of the system and all costs associated with the planning, design and construction of new local sanitary sewer shall remain the responsibility of the LGU.

5.1.3 Operation, Maintenance, and Replacement Responsibility

According to the enabling legislation, ALASD is responsible for the operation, maintenance and replacement or betterment of the interceptor system, wastewater treatment facilities, and local sanitary sewer within the ALASD service area. Requirements for contracted services are provided in service agreements between the LGU or customer and the ALASD.

Betterment, as defined in Minnesota Statutes Chapter 869 Section 2 (Definitions) Subdivision 6 of the enabling legislation, shall have the meanings given in accordance with Minnesota Statutes, Chapter 475, which states: "Betterment" includes reconstruction, extension, improvement, repair, remodeling, lighting, equipping, and furnishing.

5.1.4 Service Contracts, Agreements, Ordinances

The review or revision of service contracts, agreements, district ordinances or other policies was not provided as part of the scope of services for this comprehensive wastewater plan. However, a cursory review of documents was completed during the development of this plan. Based on this review, a more detailed review of all existing service contracts, agreements, and district ordinances is recommended. Revisions may be required for consistency and equity, and further legal review warranted.

5.2 Revenue Sources

ALASD has the following three revenue sources:

1. **Capital Debt Allocation on Local Government Unit (LGU)** – Capital debt allocations for treatment and interceptor facilities are levied in proportion to the tax capacity of that portion of the local unit of government that is within the boundaries of ALASD. The current annual capital debt is based on the debt service for bonds that were issued to complete past capital projects, including two projects recently completed at the wastewater treatment plant. The allocation of the annual capital debt retirement to each LGU is based on the previous years' respective tax capacity of the LGUs.
2. **Wastewater Treatment Expansion Fund (WTEF)** – This fee is charged to new users (residential and non-residential) who connect into the existing collection system in order offset the costs for the capacity created for their benefit that has been paid by existing customers.
3. **Monthly User Fees** – All properties (residential, commercial and industrial) generating wastewater that are connected to sanitary sewer are billed a monthly user charge. Monthly user fees fund the Enterprise Fund (unrestricted) for all District operations, labor, and transfers to Repair/Replacement fund for capital expenditures.

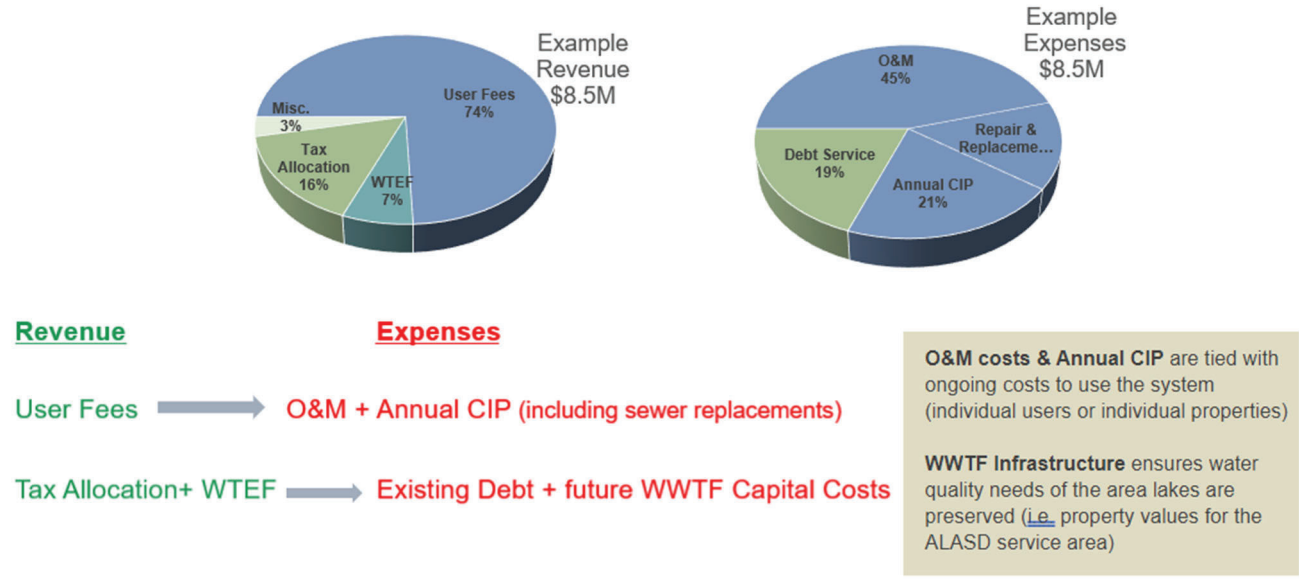


Figure 5-1: Operating Revenue and Expenses

5.3 Existing Rate Structure

The ALASD has three categories for its users: residential, commercial and industrial users. The rates used to charge these different categories are found in the ALASD User Charge Ordinance (Appendix H) which is determined by the ALASD Board of Directors. The residential users, who are single family dwellings that discharge normal domestic strength wastewater, are charged a flat rate fee of $30.50.

The non-residential/commercial users are divided into two categories, metered and non-metered users. The metered users are charged a usage charge of $6.38 per 1000 gallons, a $.50 billing charge plus a minimum monthly service charge based on the private sewer service pipe connection to their structure/property. The 2021 charges for these metered users are shown in Table 5-1.

Table 5-1: Commercial Metered Users Minimum Monthly Service Charge

Size of Connection Pipe	2021 Monthly Charge
<6”	$30.60
8”	$186.64
10”	$302.29
12”	$486.49

The non-residential/commercial accounts without a water meter are charged based on an assumed usage or M value which is based on the Equivalent Dwelling Unit (EDU) shown in the city’s ordinance and correlates to the type of business or size of facility. In addition, a minimum monthly service charge

which is determined based on the size of the private sewer service pipe connection the structure/property is charged.

Table 5-2: Commercial Non-Metered Users Minimum Monthly Service Charge

Size of Connection Pipe	2021 Monthly Charge
4”	$30.60
6”	$88.56
8”	$186.64
10”	$302.29
12”	$486.49

ALASD also charges its industrial users who exceed the parameters of the general municipal flow for BOD, P & SS with the following rates in addition to the flow charge based on metered usage.

- BOD: $0.37 per pound
- P: $10.93 per pound
- SS: $0.35 per pound

5.4 Cost of Service Rate Study

ALASD is completing a cost-of-service rate study in 2021. The cost-of-service rate study is used to determine the total costs incurred by ALASD for providing services to its users and the allocation of the costs to the different user rate classes based on the actual cost to serve each user class. System operating costs, maintenance costs and debt service obligations tend to be stable and predictable over time. It is the variable capital program requirements for future sustainability of the infrastructure/system that frequently drive the need for rate changes and contribute to rate instability.

The purpose of a cost-of-service rate study is to:

- Allocate cost of service in an equitable and defensible manner (i.e., based the cost to serve each category or type of users) and
- Project future net revenue (i.e., determine whether revenue collected will be sufficient to cover operations and maintenance costs as well as future capital costs.)

The cost-of-service rate study looks at both the revenue sources as well as the expenses/costs and allocates costs according to usage. Annual capital improvement costs are considered in this cost-of-service study. The WWTF debt is not a part of the user rate structure. However, the “impact” of the debt service currently paid through the tax allocation is also reviewed as a part of this study to determine general affordability of the user rates.

Outcomes of the Cost-of-Service Rate Study will be provided under separate report. Regular review of user rates is conducted in accordance with the enabling legislation to provide equitable basis for collecting revenue to offset costs.

6. Collection System Condition Assesment

The ALASD service area is 102 square miles. In addition to the WWTF, ALASD operates the collection system comprising approximately 230 miles of gravity sewer, 60 miles of force main, 120 lift stations as well as 170 additional mini lift stations and residential stations (also referred to as 'grinder stations'). The gravity sewers range in size from 6-in to 36-in with the majority being 8-inch. Most of the gravity sewers and force mains are constructed of PVC. The force mains range in size from 1.5-in to 18-in with the majority being 4-inch and 6-inch. The lift stations range in size from 50 gallons per minute (gpm) to 3,000 gpm, with over 70% being less than 200 gpm.

As part of a separate task for this Comprehensive Plan, a desktop Collection System Assessment was completed (Appendix D) using a risk-based analysis. This initial assessment did not include field inspection of utilities or capacity evaluation of the system. The analysis provided a theoretical Remaining Useful Life (RUL) of the collection system assets to support development of a rehabilitation and replacement plan and inform the cost-of-service rate study of long-term investments needed for infrastructure improvements. **The initial findings from this evaluation yielded the following results and recommendations for asset replacement over the next 10 years**:

- The quantity of **gravity sewers** that received an RUL of ≤ 10 years is approximately 134,000 feet (~10% of system total). **Using the developed cost curves, the 10-year replacement cost would be approximately $13.4 million.**
- The quantity of the **force mains** that received an RUL of ≤ 10 years is approximately 101,000 feet (~30% of the total). **Using the developed cost curves, the 10-year replacement cost would be approximately $6.1 million.**
- There are 7 **lift stations** that received an RUL of ≤ 10 years. These lift stations ranged in size from 120 gpm to 3,000 gpm and have low RULs due to a combination of age and reported problematic components (mostly mechanical or electrical). In addition to these 7 stations, there are another 9 stations that have an RUL between 10 and 15 years. Based on the risk scores, replacement or repair of 5 of these is also warranted over the next 10 years. This brings the total to 12 lift stations where replacement or repair is recommended. Depending on the level of replacement (full station replacement compared to targeted component replacement), the total replacement cost would be **approximately $3.6-$4.5 million over the next 10 years for all of these stations** (including 5 mini lift stations).

7. WWTF Assessment

The ALASD wastewater treatment facility (WWTF) is located at 2201 Nevada St SW, Alexandria, Minnesota. An ariel map of the WWTF site is provided in Appendix B of this report. The existing Facility consists of a main lift station, force main, influent screening, screenings washing and compaction, vortex grit removal and grit washing, two primary settling tanks, three fine bubble diffuser aeration tanks, three secondary clarifiers, cloth media tertiary filtration, chlorination tanks, dissolved air flotation thickening of waste activated sludge, four aerobic digesters, centrifuge dewatering, and outfall pipeline. This is a Class A Facility according to the State of Minnesota WWTF classifications.

The Facility has a continuous discharge to Lake Winona and has an average wet weather design flow of 4.7 mgd, with a five-day biochemical oxygen demand (BOD) loading of 7,100 pounds per day (lbs/d). The system is also designed to treat up to 6,000 lbs/d of total suspended solids (TSS), 210 lbs/d of total phosphorus, and 470 lbs/d of ammonia-nitrogen.

The current WWTF was constructed in 1976 and began operation in 1977. The average annual flow treated from 1976 to 2020 is shown in Figure 7-1. During this time flow has increased from 0.9 mgd to approximately 3 mgd. Flow projections are based on a 1.5% annual increase.

Figure 7-2 shows the annual phosphorus loading reductions. Phosphorus discharge was dramatically reduced when the ALSAD WWTF became operational in 1978 and continues to decrease due to operational excellence and continued expenditures for treatment facilities.

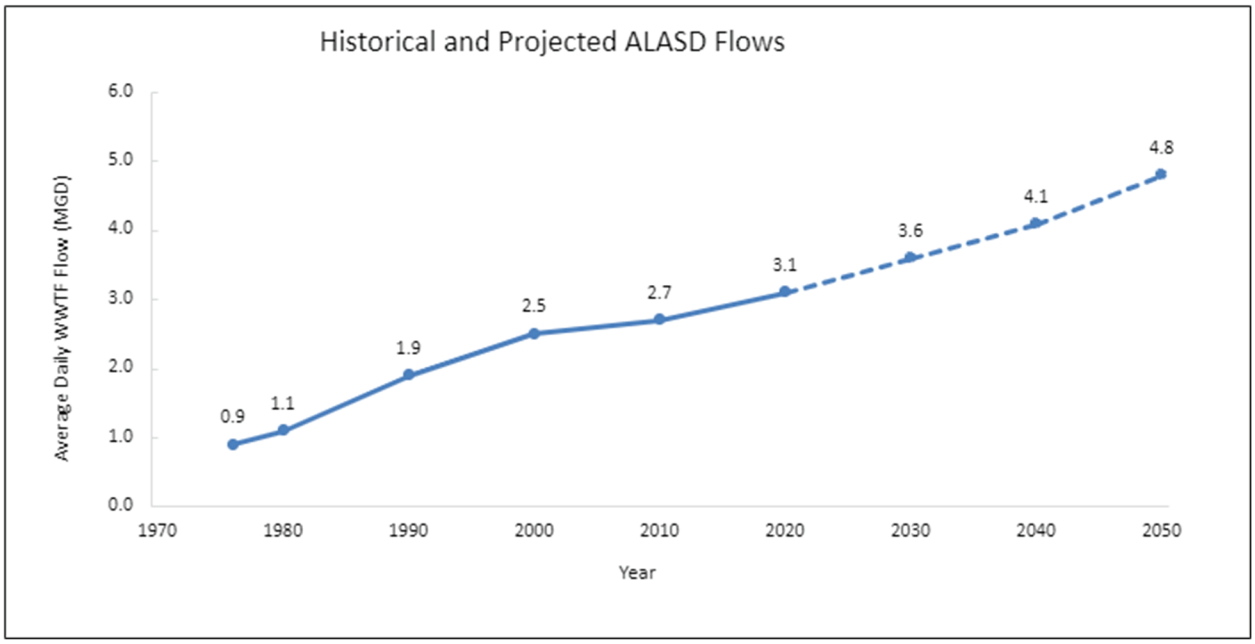


Figure 7-1: ALASD WWTF Flow

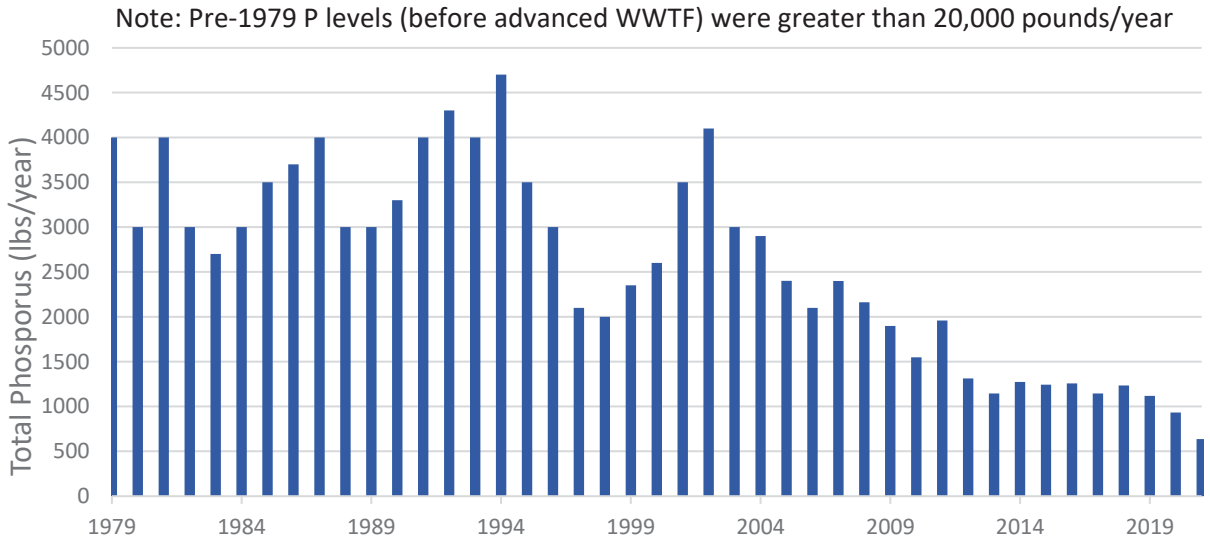


Figure 7-2: WWTF Total Phosphorus Discharge (pounds/year), 1979 – 2021

7.1 Existing Facilities

The WWTF provides pretreatment, conventional primary and secondary treatment, chemical treatment for phosphorus removal, followed by tertiary treatment and then disinfection. A summary of each component is included in the following subsections.

7.1.1 Main Pumping Station

The main pumping station is located on the west side of the treatment plant property and receives the wastewater flow from the entire Alexandria Lake Area Sanitary District. The main pump station conveys the raw wastewater influent to the Headworks Building for influent pretreatment, including screening and grit removal. This facility provides enough head to allow gravity flow through the primary and secondary treatment process.

The main pump station consists of three vertical variable speed non-clog centrifugal pumps. The main pump station pumps operate in response to the raw wastewater liquid level in the building wet well.

7.1.2 Preliminary Treatment

Preliminary treatment consists of automatic screening and grit removal of incoming wastewater. This process is carried out in the west end of the Headworks and Dissolved Air Flotation Thickener (DAFT)Building. Filter screens remove rags, debris and large solids from the wastewater stream entering the WWTF. Screening/removal and collection at this stage minimizes fouling and maintenance of downstream equipment. These solids are largely inorganic material and can be transported directly to a landfill.

Screening compactors wash, dewater and compact solid debris that are caught and raked from the filter screen. Dewatering of this material is required for acceptance of the material at a landfill and reduces volume, transportation cost, and odors of the screened materials.

7.1.3 Primary Treatment

Primary treatment is carried out in each of the two 45-foot diameter concrete tanks (clarifiers) that are located to the north of the Solids Handling and Blower Building. The primary treatment process in this facility is classified as a plain sedimentation process because it relies strictly on gravity settling of solids without the addition of any chemicals (coagulants) to accelerate settling. The purpose of the primary treatment process is to remove as much settleable material from the raw wastewater as possible.

7.1.4 Secondary Treatment

Secondary treatment includes the Aeration Tanks and Secondary Clarifiers. Aeration allows for biological degradation of organic material. During this process dissolved organic material is converted into biological solids. In addition, organic nitrogen and ammonia-nitrogen are oxidized into nitrate.

The non-settleable solids in the wastewater consist of both dissolved matter and matter which is so finely divided that they will not settle out of solution without additional treatment. The treatment method used to make these solids settleable is called the “activated sludge process”. This process is carried out in the Aeration Tanks.

Secondary Clarifiers separate and collect settleable secondary sludge for recirculation or wasting, remove floating scum, and direct the clear effluent stream to the filters.

7.1.5 Tertiary Treatment

The effluent limits required by the MPCA require the removal of phosphorous from the wastewater prior to discharge to Lake Winona. The WWTF currently uses a combination of ferric sulfate addition to the activated sludge process and tertiary cloth media filtration to reduce effluent TP discharge.

7.1.6 Chlorination System

The chlorination equipment is located in the Control and Filter Building. Effluent chlorination is provided to disinfect the wastewater effluent prior to discharge from the treatment plant. Chlorine disinfection kills harmful bacteria that may still be present in the treated wastewater before the water is discharged to downstream lakes. Sodium bisulfite is added to dechlorinate the wastewater to prevent harmful exposure of chlorine to aquatic life.

7.1.7 Solids Operation and Control

The wastewater treatment plant removes solids at three locations:

- Primary Clarifiers – Primary Sludge (PS)
- Secondary Clarifiers - Waste Activated Sludge (WAS)

- Filtration by Cloth Media Filters – Backwash

The purpose of the biosolids processing facilities is to process these solids into a useful source of nutrients and organic material for soil conditioning in agricultural areas. The biosolids processing facilities consist of the aerobic digesters, dewatering centrifuges, and biosolids storage pad.

ALASD has four (4) 0.41 million gallon aerobic digesters. Digester cells 1A and 1B are operated in parallel and cells 3 and 4 are operated in series. Plant staff splits the feed of primary sludge and thickened sludge from the DAFT system between cells 1A and 1B. Due to the high temperatures caused by microbes breaking down the solids in the digester process, the aerobic digesters require cooling. A closed loop cooling system consisting of a chiller and two heat exchangers provides the cooling necessary for cells 1A and 1B alternately through the system.

Located in the east end of the Headworks Building is the DAFT system. The DAFT receives waste activated sludge from the aeration tanks. This unit is designed to thicken sludge to a set percentage of solids that will, in turn, provide a consistent and metered flow to the aerobic digesters.

The function of the centrifuge is to increase the solids content of the biosolids from less than 2% to approximately 25%. This removes the extra weight and volume associated with entrained water, thereby, reducing hauling and spreading costs. The centrifuge converts the biosolids from a liquid to a semi-dry solid material with the consistency of moist soil. With the new centrifuge total dry solids concentrations have increased to approximately 25%.

Land application of biosolids is a seasonal operation occurring in the spring and fall. Since the WWTF continuously produces biosolids, a storage facility is required to accumulate the biosolids between the spring and fall application seasons. The onsite storage pad provides approximately 6 months of onsite storage capability.

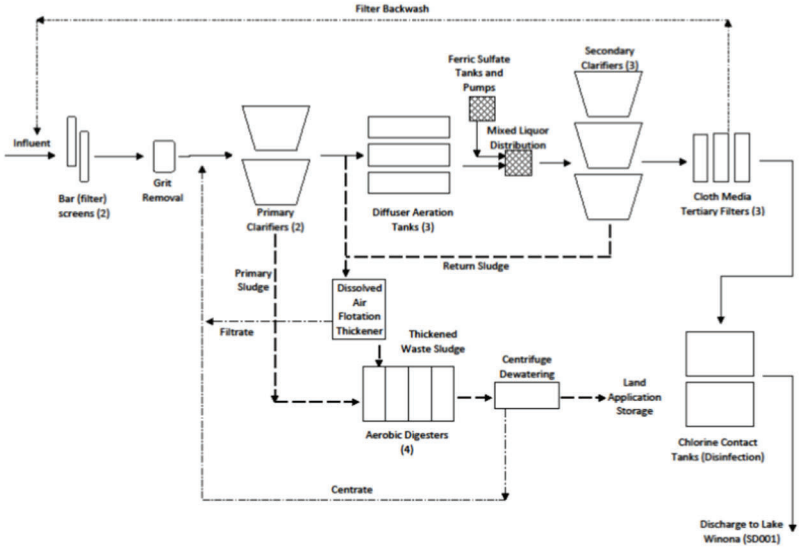


Figure 7-3: WWTF Flow Schematic

7.2 WWTF Capacity

Recommendations for capacity improvements were identified in the 2004 Final Wastewater Feasibility Study completed by Brown and Caldwell. Many of the improvements in the 2004 study were completed. Recommended improvements not completed include additional primary clarifier capacity, aeration and blower expansion, and additional secondary clarifier capacity (i.e. in addition to newly constructed 3rd clarifier). In addition to these capacity upgrades identified in 2004, some of the facilities at the WWTF have not been upgraded since 1976 and will need condition repair or replacement.

In preparation for the recent NPDES permit renewal, ALASD prepared the 2017 Phosphorus and Chloride Reduction Facility Plan (Appendix F) that identified alternative treatment technologies and/or other discharge locations/methods to further reduce effluent total phosphorus (TP) and total chloride to meet future anticipated final effluent limits.

In the plan, the WWTF design flow projections were included through Year 2040 and are included in Table 7-1. Plant influent flow and loading projections assumed the annual average flow increases at the historical growth rate of 1.5%/year with the same blend/contribution of residential, commercial, and industrial sources. Overall, the design flows increase by roughly 45 percent over the 20-year planning period.

Table 7-1: Flow and Loading Projections (Prepared in 2017)

Table ES-1. ALASD WWTF Projected Design Flows							
Item	Units	Current Conditions	2020	2025	2030	2035	2040
Flows							
Annual average	mgd	2.8	3.1	3.3	3.6	3.8	4.1
Average dry weather	mgd	2.4	2.6	2.8	3.0	3.2	3.5
Average wet weather	mgd	3.9	4.2	4.5	4.9	5.3	5.7
Maximum day	mgd	8.1	8.7	9.4	10.1	10.9	11.8
Peak hour wet weather	mgd	9.6	10.1	10.6	11.1	11.6	12.1
Peak instantaneous wet weather	mgd	11.4	11.9	12.4	12.9	13.4	13.9

ALASD's WWTF will require significant investment in the near future to address aging infrastructure and capacity concerns related to loading. In addition, ALASD will need to upgrade technology to treat TP in the near future. A past 2017 WWTF study completed by Brown and Caldwell identified that advanced treatment would be required resulting in a future improvement project at the WWTF (Appendix F). While TP and aging infrastructure will be addressed in the near future through a facility planning effort and subsequent capital improvement project, it is not likely that improvements to the WWTF will be feasible to reduce chloride discharge. Chloride influent and effluent monitoring has indicated a need to consider source control to reduce chloride loading to ALASD. These efforts are provided in the recently updated Chloride Identification and Minimization Plan provided in Appendix G.

7.3 WWTF Future Improvements

Capital improvements at the WWTF will be required due to condition, capacity and P upgrades. In addition, recommendations for chloride reductions are still in progress as part of the variance process. A facility plan is recommended within the next 2 to 3 years to evaluate improvement needs and better define future costs. Planning level estimates are provided for these improvements as an "order of magnitude" opinion-of-probable-cost. Estimates for phosphorus treatment alternatives identified in 2017 and updated to 2021 dollars are estimated at $15 million. General planning-level costs for condition and capacity upgrades are estimated at $15 million. The approximate total of $30 million WWTF improvements would be funded through a state revolving fund (SRF) loan and would completed be during 2025-2029 timeframe based on the NPDES compliance schedule. These costs do not include chloride reduction improvements which are not feasible at this time (i.e. more details are provided in the Chloride Identification and Minimization Plan in Appendix G).

8. ALASD 10-Year Action Plan and Long-Range Plan

- Collection system capital improvement costs resulting from the initial collection system condition assessment completed in 2020 are recommended to be included in Cost-of-Service Rate Study. This could add up to $3M annually or more to existing expenses. Replacement and reinvestment in the collection system is critical to the long-term planning and sustainability of the ALASD.

- Continue to evolve and invest in GIS system and asset management systems to manage ALASD assets. GIS systems are dynamic systems that need ongoing maintenance and continued evaluation of asset condition. Recommendations have been provided in the collections assessment for more aggressive schedule for CCTV and additional inspection/documentation for collection system assets to inform the collection assessment/GIS model. In addition, it is recommended to include easement documentation in GIS.

- Obtain and record easements for all collection system assets. This may be most efficiently completed during improvement projects for collection system repair and/or replacement.

- Facility Plan for WWTF improvements is to be completed before 2025 in accordance with ALASD NPDES permit to address regulatory (i.e. phosphorus), previous unit process recommendations, and aging infrastructure needs at the WWTF. Estimated WWTF upgrade costs from past studies and estimated "order of magnitude" opinion-of-probable-cost are recommended to be included in 2021 Cost-of-Service Rate Study.

- Continuation of the lake management plan in accordance with ALASD NPDES permit.

- Continue Chloride Identification and Minimization Plan and Chloride Citizen Advisory Committee process per NPDES permit. Continued collaboration with ALP, City of Alexandria, and Townships will be necessary to meet future chloride regulations.

- Review and update Significant User Agreements in 2021 to determine if appropriate load and flow allocations are in alignment with the ALASD current WWTF capacity.

- Review and update ALASD ordinances and service contracts in 2021 or 2022.

- Review subdivision ordinance requirements with Townships/City/County to better understand process and provide feedback on the process for preliminary plat and utility planning at developer/LGU level.

- Consideration of planning grants to local units of government to provide feasibility level studies and/or commissioning of a Sanitary Sewer Interceptor Study for future urban service areas and near-future development areas identified by area planning authorities.

- Consideration of Integrated Planning efforts with ALP and City of Alexandria to integrate priorities and efforts related to Phosphorus and Chloride reduction to protect the area lake quality. The purpose of Integrated Planning is to maximize environmental benefits and optimize the costs/schedules across multiple entities, water needs, and pollutants of concern:
ALP, City, ALASD – – Water, Wastewater, Stormwater – – Nutrient & Chloride Impairments.

Appendix A: ALASD Enabling Legislation

LAWS 1971 CHAPTER 869, SECTION 2, SUBDIVISION 2, AS AMENDED BY LAWS 1973, CHAPTER 632, SECTION 1, AS AMENDED BY LAWS 1996 CHAPTER 471.

Section 1. (LEGISLATIVE PURPOSE AND POLICY.) The legislature determines that in the lake area in and around the City of Alexandria, Minnesota, there are serious problems of water pollution and disposal of sewage which cannot be effectively or economically dealt with by existing government units under existing laws. The legislature, therefore, declares that for the protection of the public health, safety and welfare of the area, for the preservation and best use of waters and other natural resources of the state in the area, for the prevention, control and abatement of water pollution in the area, and for the efficient and economic collection, treatment and disposal of sewage, it is necessary to establish in Minnesota for said area a sanitary sewer board assigned the responsibility of carrying on a continuous long range program of planning with respect thereto and given the authority to take over, acquire, construct, better, administer, operate and maintain any and all interceptors and treatment works needed for the collection, treatment and disposal of sewage in such area, as well as local sanitary sewer facilities over which the board assumes responsibility at the request of any local government unit.

Section 2. (DEFINITIONS.) Subdivision 1. The terms defined in this section shall have the meaning given them unless otherwise provided or indicated by the context.

Subdivision 2. "Alexandria Lake Area Sanitary District" and "district" mean the area over which the sanitary sewer board has jurisdiction which shall include all that part of Douglas County, Minnesota, described as follows, to-wit:

(a) all of the City of Alexandria, Minnesota;

(b) the NW 1/4 of section 3, the SW 1/4 of section 3 except the SE 1/4 thereof, all of sections 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20 and 21, section 22 except the E 1/2 of the SE 1/4 thereof, the NW 1/4 and W 1/2 of the NE 1/4 of section 27, section 28 except the E 1/2 of the SE 1/4 thereof, all of sections 29, 30, 31 and 32, and section 33 except for the E 1/2 of the E 1/2 thereof all in township 128 north, range 37 west, excepting that part of the foregoing territory already included within the district by reason of its being within the corporate limits of the City of Alexandria;

(c) all that part of the W 1/2 of section 4 and all of section 5 lying north of the north right of way line of Interstate Highway I-94, and the N 1/2 of section 6 all in township 127 north, range 37 west, excepting that part of

the foregoing territory already included within the district by reason of its being within the corporate limits of the City of Alexandria;

(d) the SW 1/4 of Section 10, the SW 1/4 of Section 14, the NW 1/4 and the S 1/2 of Section 15, the S 1/2 and the NW 1/4 of Section 16, the S 1/2 of the NE 1/4 and the S 1/2 of section 17, the E 1/2 of the E 1/2 of section 19, all of section 20, the W 1/2 of section 21, the N 1/2 of the NW 1/4 of Section 23, the W 1/2 of section 28, all of section 29, the S 1/2 of the SE 1/4 and the E 1/2 of the E 1/2 of section 30, the E 1/2 of the NE 1/4 and all of the SE 1/4 of section 31, all of sections 32 and 33 and the SW 1/4 of section 34 all in township 129 north, range 37 west;

(e) all of sections 1 and 2, section 10 except the N 1/2 of the NW 1/4 and the NW 1/4 of the NE 1/4 thereof, all of sections 11, 12, 13 and 14, section 15 except the SW 1/4 and the W 1/2 of the SE 1/4 thereof, the E 1/2 of the NE 1/4 and all of the SE 1/4 of section 22, the SE 1/4 of the SW 1/4 of section 22, the SE 1/4 of the SW 1/4 of section 22, all of section 23,24, 25, and 26, section 27 except the W 1/2 of the NW 1/4 thereof, the SE 1/4 of section 28, the NE 1/4 of the SE 1/4 of Section 32, the SW 1/4, the NW 1/4, the NE 1/4 of section 33 except the SW 1/4 thereof, and the NW 1/4 and the NW 1/4 of the NE 1/4 of section 34 all in township 128 north range 38 west, excepting that part of the foregoing territory already included within the district by reason of its being within the corporate limits of the City of Alexandria;

(f) such other territory within or without Douglas County, Minnesota as may be included within the district pursuant to section 21.

Subdivision 3. "Sanitary sewer board" or "board" means the sanitary sewer board established for the Alexandria Lake Area Sanitary District as provided in Section 3.

Subdivision 4. "Person" means any individual, partnership, corporation, cooperative or other organization or entity, public or private.

Subdivision 5. "Local government unit" or "government unit" means any municipal or public corporation or governmental or political subdivision or agency located in whole or in part in the district, authorized by law to provide for the collection and disposal of sewage.

Subdivision 6. "Acquisition" and "betterment" shall have the meanings given to them in Minnesota Statutes, Chapter 475.

Subdivision 7. "Agency" means the Minnesota Pollution

Control Agency created and established by Minnesota Statutes, Chapter 116.

Subdivision 8. "Sewage" means all liquid or water-carried waste products from whatever sources derived, together with such ground water infiltration and surface water as may be present.

Subdivision 9. "Pollution" and "sewage system" shall have the meanings given them in Minnesota Statutes, Section 115.01.

Subdivision 10. "Treatment works" and "disposal system" shall have the meanings given them in Minnesota Statutes, Section 115.01.

Subdivision 11. "Interceptor" means any sewer and necessary appurtenances thereto, including but not limited to, mains, pumping stations, and sewage flow regulating and measuring stations, which is designed for or used to conduct sewage originating in more than one local government unit, or which is designed or used to conduct all or substantially all the sewage originating in a single local government unit from a point of collection in that unit to an interceptor or treatment works outside that unit, or which is determined by the board to be a major collector of sewage used or designed to serve a substantial area in the district.

Subdivision 12. "District disposal system" means any and all of the interceptors or treatment works owned, constructed or operated by the board unless designated by the board as local sanitary sewer facilities.

Subdivision 13. "Local sanitary sewer facilities" means all or any part of any disposal system in the district other than the district disposal system.

Subdivision 14 "Municipality" means any city or town located in whole or in part in the district.

Subdivision 15. "Total costs of acquisition and betterment" and "costs of acquisition and betterment" mean all acquisition and betterment expenses which are permitted to be financed out of bond proceeds issued in accordance with section 13, subdivision 4, whether or not such expenses are in fact financed out of such bond proceeds.

Subdivision 16. "Current costs of acquisition, betterment and debt service" means interest and principal estimated to be due during the budget year on bonds issued to finance said acquisition and betterment and all other costs of acquisition and betterment estimated to be paid during such year from funds other than bond proceeds and federal or state grants.

Subdivision 17. "Agricultural property" means land as is

classified agricultural land within the meaning of Minnesota Statutes, Section 273.13, Subdivision 23, paragraph (c).

Section 3. (SANITARY SEWER BOARD.) Subdivision 1. (ESTABLISHMENT.) A sanitary seer board with jurisdiction in the Alexandria Lake Area Sanitary District is established as a public corporation and political subdivision of the state with perpetual succession and all the rights, powers, privileges, immunities, and duties which may be validly granted to or imposed upon a municipal corporation, as provided in this act.

Subdivision 2. (MEMBERS AND SELECTION.) The number of board members and method by which they are selected shall be determined as follows: The elected chief executive of each municipality located in whole or part within the district shall select one member and one additional member for each full 3,000 population in the municipality according to the latest official census and shall designate the term of each such member according to subdivision 5, subject to the approval of the voting member of the governing body of such municipality.

Subdivision 3. (TIME LIMITS FOR SELECTION, ALTERNATIVE APPOINTMENT BY DISTRICT JUDGE.) The board members shall be selected as provided in subdivision 2 within 60 days after this act becomes effective. The successor to each board member shall be selected at any time within 60 days before the expiration of his term in the same manner as his predecessor was selected. Any vacancy on the board shall be filled within 60 days after it occurs. If any selection is not made as herein before provided within the time prescribed therefore, the chief Judge of the seventh judicial district of the Minnesota district court on application by any interested person shall forthwith appoint an eligible person to the board with like effect as if the selection were made as hereinabove otherwise provided.

Subdivision 4. (VACANCIES.) If the office of any board member becomes vacant, the vacancy shall be filled for the un-expired term in like manner as provided for selection of the member who vacated the office. The office shall be deemed vacant under the conditions specified in Minnesota Statutes, Section 351.02.

Subdivision 5. (TERMS OF OFFICE.) The terms of all board members shall be for one, two, three, or four calendar years to be determined in accordance with subdivision 2 by the governing body selecting such member. Terms shall expire on January 1 of a calendar year, except that each member shall serve until his successor has been duly selected and qualified.

Subdivision 6. (REMOVAL.) A board member may be removed by the unanimous vote of the appointing governing body with or without cause.

Subdivision 7. (QUALIFICATIONS.) Each board member may but need not be a resident of the district and may but need not be an elected public official.

Subdivision 8. (CERTIFICATES OF SELECTION, OATH OF OFFICE.) A certificate of selection of every board member selected under subdivision 2 stating the term for which he was selected, shall be made by the respective municipal clerks. Such certificates, with the approval appended by other authority, if required, shall be filled with the Secretary of State. Counterparts thereof shall be furnished to the board member and the secretary of the board. Each member shall qualify by taking and subscribing the oath of office prescribed by the Minnesota Constitution, Article 5, Section 8. Such oath, duly certified by the official administering the same, shall be filed with the Secretary of State and the secretary of the board.

Subdivision 9. (BOARD MEMBERS COMPENSATION.) Each board member shall be paid a per diem compensation for meetings and for such other services in such amount as may be specifically authorized by the board from time to time. Per diem compensation shall not exceed $4,000 in any one year. All members of the board shall be reimbursed for all reasonable expenses incurred in the performance of their duties as determined by the board.

Section 4. (GENERAL PROVISIONS FOR ORGANIZATION AND OPERATION OF BOARD.) Subdivision 1. (OFFICERS, MEETINGS, SEAL.) A majority of the members shall constitute a quorum at all meetings of the board, but a lesser number may meet and adjourn from time to time and compel the attendance of absent members. The board shall meet regularly at such time and place as the board shall by resolution designate. Special meetings may be held at any time upon call of the chair or any two member, upon written notice sent by mail to each member at least three days prior to the meeting, or upon such other notice as the board by resolution may provide, or without notice if each member is present or files with the secretary a written consent to the meeting either before or after the meeting. Except as otherwise provided in this act, any action within the authority of the board may be taken by the affirmative vote of a majority of the board at a regular or adjourned regular meeting or at a duly held special meeting, but in any case only if a quorum is present. All meetings of the board shall be open to the public. The board may adopt a seal, which shall be officially and judicially noticed, to authenticate instruments executed by its authority, but omission of the seal shall not affect the validity of any instrument.

Subdivision 2.(CHAIR.) The board shall elect a chair from its membership. The term of the chair shall expire on January 1 of each year. The chair shall preside at all meetings of the board, if present, and shall perform all other duties and functions usually incumbent upon such an officer, and all

administrative functions assigned to him by the board. The board shall elect a vice chair from its membership to act for the chair temporary absence or disability.

Subdivision 3. (SECRETARY AND TREASURER.) The board shall select a person or persons who may but need not be a member or members of the board, to act as its secretary and treasurer. The secretary and treasurer shall hold office at the pleasure of the board, subject to the terms of any contract of employment which the board may enter into with the secretary or treasurer. The secretary shall record the minutes of all meetings of the board, and shall be custodian of all books and records of the board except such as the board shall entrust to the custody of a designated employee. The board may appoint a deputy to perform any and all functions of either the secretary or the treasurer. No such secretary or treasurer who is not a member of the board or a deputy of either shall have any right to vote.

Subdivision 4. (EXECUTIVE DIRECTOR.) The board shall appoint an executive director who shall be selected solely upon the basis of his training, experience and other qualifications and who shall serve at the pleasure of the board and at a compensation to be determined by the board. The executive director need not be a resident of the district. He may also be selected by the board to serve as either secretary or treasurer, or both, of the board, as executive director, he shall attend all meetings of the board, but shall not vote, and shall have the following powers and duties:

(a) He shall see that all resolutions, rules, regulations, or orders of the board are enforced.

(b) He shall appoint and remove, upon the basis of merit and fitness, all subordinate officers and regular employees of the board except the secretary and the treasurer and their deputies.

(c) He shall present to the board plans, studies and other reports prepared for board purposes and recommend to the board for adoption such measures as he deems necessary to enforce or carry out the powers and duties of the board, or the efficient administration of the affairs of the board.

(d) He shall keep the board fully advised as to its financial condition, and he shall prepare and submit to the board, and to the governing bodies of the local government units, the board's annual budget and such other financial information as the board may request.

(e) He shall recommend to the board for adoption such rules and regulations as he deems necessary for the efficient operation of a district disposal system and all local sanitary sewer facilities over which the board may assume responsibility as provided in section 18.

(f) He shall perform such other duties as may be prescribed by the board.

Subdivision 5. (PUBLIC EMPLOYEES.) The executive director and all persons employed by the executive director shall be public employees, and shall have all the rights and duties conferred on public employees under Minnesota Statutes, Sections 179A.01 to 179A.25. The compensation and conditions of employment of such employees shall not be governed by any rule applicable to state employees in the classified service nor to any of the provisions of Minnesota Statutes, Chapter 15A, unless the board so provides.

Subdivision 6. (PROCEDURES.) The board shall adopt resolutions or bylaws establishing procedures for board action, personnel administration, keeping records, approving claims, authorizing or making disbursements, safekeeping funds, and audit of all financial operations of the board.

Subdivision 7. (SURETY BONDS AND INSURANCE.) The board may procure surety bonds for its officers and employees and in such amounts as are deemed necessary to assure proper performance of their duties and proper accounting for funds in their custody. It may procure insurance against such risks to property and such liability of the board and its officers, agents, and employees for
personal injuries or death and property damage and destruction and in such amounts as may be deemed necessary or desirable, with the force and effect stated in Minnesota Statutes, Chapter 466.

Section 5. (COMPREHENSIVE PLAN.) Subdivision 1. (BOARD PLAN AND PROGRAM.) The board shall adopt a comprehensive plan for the collection, treatment, and disposal of sewage in the district for such designated period as the board deems proper and reasonable. The board shall prepare and adopt subsequent comprehensive plans for the collection, treatment and disposal of sewage in the district for each such succeeding designated period as the board deems proper and reasonable. The plan shall take into account the preservation and best and most economic use of water and other natural resources in the area; the preservation, use and potential for use of lands adjoining waters of the state to be used for the disposal of sewage; and the impact such a disposal system will have on present and future land use in the area affected thereby. Such plans shall include the general location of needed interceptors and treatment works, a description of the area that is to be served by the various interceptors and treatment works, a long range capital improvements program and such other details as the board shall deem appropriate. In developing the plans, the board shall consult with persons designated for such purpose by governing bodies of any municipal or public corporation or governmental or political subdivision or agency within the district to represent

such entities and shall consider the data, resources and input offered to the board by such entities and any planning agency acting on behalf of one or more such entities. Each such plan, when adopted, shall be followed in the district and may be revised as often as the board deems necessary.

Subdivision 2. (COMPREHENSIVE PLANS: HEARING.) Before adopting any subsequent comprehensive plan the board shall hold a public hearing on such proposed plan at such time and place in the district as it shall determine. The hearing may be continued from time to time. Not less than 45 days before the hearing, the board shall publish notice thereof in a newspaper or newspapers having general circulation in the district, stating the date, time and place of the hearing, and the place where the proposed plan may be examined by any interested person. At the hearing, all interested persons shall be permitted to present their views on the plan.

Subdivision 3. (MUNICIPAL PLANS AND PROGRAMS: COORDINATION WITH BOARD'S RESPONSIBILITIES.) Before undertaking the construction of new sewers of other disposal facilities or the substantial alteration or improvement of any existing sewers or other disposal facilities, each local government unit may, and shall if the construction or alteration of any sewage disposal facilities is contemplated by such government unit, adopt a comprehensive plan and program for the collection, treatment and disposal of sewage for which the local government unit is responsible, coordinated with the board's comprehensive plan, and may revise the same as often as deems necessary. Each such local plan or revision thereof shall be submitted forthwith to the board for review and shall be subject to the approval of the board as to those features of the plan affecting the board's responsibilities as determined by the board. Any such features disapproved by the board shall be modified in accordance with the board's recommendations. No construction project involving such features shall be undertaken by the local government unit unless its governing body shall first find the project to be in accordance with the government unit's comprehensive plan and program as approved by the board. Prior to approval by the board of the comprehensive plan and program of any local government unit in the district, no construction project shall be undertaken by such government unit unless approval of the project is first secured from the board as to those features of the project affecting the board's responsibilities as determined by the board.

Section 6. (SEWER SERVICE FUNCTION.) Subdivision 1. (DUTY OF BOARD: ACQUISITION OF EXISTING FACILITIES: NEW FACILITIES.) At any time after the board has become organized it shall assume ownership of all existing interceptors and treatment works which will be needed to implement the board's comprehensive plan for the collection, treatment, and disposal of sewage in the district, in the manner and subject to the conditions prescribed

in subdivision 2, and shall design, acquire, construct, better, equip, operate and maintain all additional interceptors and treatment works which will be needed for such purpose. The board shall assume ownership of all treatment works owned by a local government unit if any part of such treatment works will be needed for such purpose.

Subdivision 2. (METHOD OF ACQUISITION: EXISTING DEBT.) The board may require any local government unit to transfer to the board, all of its right, title and interest in any interceptors or treatment works and all necessary appurtenances thereto owned by such local government unit which will be needed for the purpose stated in subdivision 1. Appropriate instruments of conveyance for all such property shall be executed and delivered to the board by the proper officers of each local government unit concerned. All persons regularly employed by a local government unit to operate and maintain any treatment works so transferred to the board, on the date on which the transfer becomes effective, shall be employees of the board, in the same manner and with the same options and rights as are reserved to employees of the joint powers board under subdivision 3. The board, upon assuming ownership of any such interceptors or treatment works, shall become obligated to pay to such local government unit amounts sufficient to pay when due all remaining principal of and interests on bonds issued by such local government unit for the acquisition or betterment of the interceptors or treatment works taken over. The board shall also assume the same obligation with respect to so much of any other existing disposal system owned by a local government unit as the board determines to have been replaced or rendered useless by the district disposal system. The amounts to be paid under this subdivision may be offset against any amount to be paid to the board by the local government unit as provided in section 9.

Subdivision 4. (CONTRACTS BETWEEN LOCAL GOVERNMENT UNITS.) The board may terminate upon 60 days mailed notice to the contracting parties, any existing contract between or among local government units requiring payments by a local government unit to any other local government unit, for the use of a disposal system, or as reimbursement of capital costs of such a disposal system, all or part of which will be needed to implement the board's comprehensive plan. All contracts between or among local government units for use of a disposal system entered into subsequent to the date on which this act becomes effective shall be submitted to the board for approval as to those features affecting the board's responsibilities as determined by the board and shall not become effective until such approval is given.

Section 7. (SEWAGE COLLECTION AND DISPOSAL: POWERS.) Subdivision 1. (POWERS.) In addition to all other powers conferred upon the board in this act, it shall have the powers specified in this section.

Subdivision 2. (DISCHARGE OF TREATED SEWAGE.) The board shall have the right to discharge the effluent from any treatment works operated by it into any waters of the state, subject to approval of the agency if required and in accordance with any effluent or water quality standards lawfully adopted by the agency, any interstate agency or any federal agency having jurisdiction.

Subdivision 3. (UTILIZATION OF DISTRICT SYSTEM.) The board may require any person or local government unit to provide for the discharge of any sewage, directly or indirectly, into the district disposal system, or to connect any disposal system or a part thereof with the district disposal system wherever reasonable opportunity therefore is provided; may regulate the manner in which such connections are made; may require any person or local government unit discharging sewage into the disposal system to provide preliminary treatment therefore; may prohibit the discharge into the district disposal system of any substance which it determines will or may be harmful to the system or any persons operating it; and my require any local government unit to discontinue the acquisition, betterment, or operation of any facility for such unit's disposal system wherever and so far as adequate service is or will be provided by the district disposal system.

Subdivision 4. (SYSTEM OF COST RECOVERY TO COMPLY WITH APPLICABLE REGULATIONS.) The board may require that any charges, connection fees or other cost recovery techniques imposed by a local government unit on persons discharging sewage directly or indirectly into the district disposal system, comply with applicable state and federal law, including but not limited to state and federal regulations governing grant applications.

Section 8. (BUDGET.) The board shall prepare and adopt, on or before October 1 of each year, a budget showing for the following calendar year or other fiscal year determined by the board, sometimes referred to in this act as the budget year, estimated receipts of money from all sources, including but not limited to payments by each local government unit, federal or state grants, taxes on property, and funds on hand at the beginning of the year, and estimated expenditures for:

(a) costs of operation, administration and maintenance of the district disposal system;

(b) cost acquisition and betterment of the district disposal system;

(c) debt service, including principal and interest, on general obligation bonds and certificates issued pursuant to section 13, obligations and debts assumed under section 6, subdivisions 2 and 3, and any money judgments entered by a

court of competent jurisdiction. Expenditures within these general categories, and such others as the board may from time to time determine, shall be itemized in such detail as the board shall prescribe. The board and its officers, agents and employees shall not spend money for any purpose other than debt service without having set forth such expense in the budget nor in excess of the amount set forth in the budget therefor, and no obligation to make sure an expenditure shall be enforceable except as the obligation of the person or persons incurring it; provided that the board may amend the budget at any time by transferring from one purpose to another any sums except money for debt service and bond proceeds or by increasing expenditures in any amount by which cash receipts during the budget year actually exceed the total amounts designated in the original budget. The creation of any obligation pursuant to section 13 or the receipts of any federal or state grant is a sufficient budget designation of the proceeds for the purpose for which it is authorized, and of the tax or other revenue pledged to pay the obligation and interest on it, whether or not specifically included in any annual budget.

Section 9. (ALLOCATION OF COSTS.) Subdivision 1. (DEFINITION OF CURRENT COSTS.) The estimated cost of administration, operation, maintenance and debt service of the district disposal system to be paid by the board in each fiscal year and the estimated costs of acquisition and betterment of the system which are to be paid during the year from funds other than state or federal grants and bond proceeds and all other previously unallocated payments made by the board pursuant to this act to be allocated in such year are referred to as current costs and shall be allocated by the board to the local government units as hereinafter provided in the budget for such year. If two or more government units form a service region in accordance with section 18, subdivision 5a of this act, all or a part of the current costs attributable to the service region shall at the request of its joint board be allocated to the service region as provided in the agreement establishing the region.

Subdivision 2a. (METHOD OF ALLOCATION OF CURRENT COSTS.) All current costs shall be allocated to local government units in the district on an equitable basis as the board may from time to time determine by resolution to be fair and reasonable and in the best interests of the district. In making the allocation the board may provide for the deferment of payment of all or part of current costs, the reallocation of deferred costs and the reimbursement of reallocated deferred costs on an equitable basis as the board may from time to time determine by resolution to be fair and reasonable and in the best interests of the district. The adoption or revision of a method of allocation, deferment, reallocation or reimbursement used by the board shall be made by the affirmative vote of at least two-thirds of the members of the board.

Section 10. (GOVERNMENT UNITS: PAYMENTS TO BOARD.) Subdivision 1. (OBLIGATIONS OF GOVERNMENT UNITS TO THE BOARD.) Each government unit shall pay to the board all sums charged to it as provided in section 9, at the times and in the manner determined by the board. The governing body of each such government unit shall take all action that may be necessary to provided the funds required for such payments and to make the same when due.

Subdivision 2. (AMOUNTS DUE BOARD: WHEN PAYABLE.) Charges payable to the board by local government units may be made payable at such times during each year as the board determines, after it has taken into account the dates on which taxes, assessments, revenue collections and other funds become available to the government unit required to pay such charges.

Subdivision 3. (GENERAL POWERS OF GOVERNMENT UNITS: LOCAL TAX LEVIES.) To accomplish any duty imposed on it by the board, the governing body of every government unit may, in addition to the powers granted in this act and in any other law or charter, exercise the powers granted any municipality by Minnesota Statutes, Chapters 117, 412, 429, 475, Sections 115.46, 444.075 and 471.59 with respect to the area of the government unit located in the district. In addition thereto, the governing body of every government unit located in whole or part in the district may levy taxes upon all taxable property in that part of the government unit located in the district for all or a part of the amount payable to the board, but if the levy is for only part of the amounts payable to the board, the governing body of the government unit may levy additional taxes on the entire assessed valuation of all taxable property for all or a part of the balance remaining payable. The taxes levied under this subdivision shall be assessed and extended as a tax upon such taxable property by the county auditor for the next calendar year, free from any limitation of rate or amount imposed by law or charter. The tax shall be collected and remitted in the same manner as other general taxes of the government unit.

Subdivision 3a. In lieu of levying taxes on all taxable property pursuant to subdivision 3, the governing body of the government unit may elect to levy taxes upon the assessed valuation of all taxable property, except agricultural property, and upon only 25 percent of the assessed valuation of all agricultural property, in that part of the government unit located in the district for all or a part of the amounts payable to the board. If the levy is for only part of the amounts payable to the board, the governing body may levy additional taxes on the entire assessed valuation of all such property, including agricultural property, for all or a part of the balance of such amounts. The taxes shall be assessed and extended as a tax upon such taxable property by the county auditor for the next calendar year, free from any limitation of rate or amount imposed

by law or charger, and shall be collected and remitted in the same manner as other general taxes of the government unit. In computing the mill rate pursuant to this subdivision the county auditor shall include only 25 percent of the assessed valuation of all taxable agricultural property and 100 percent of the assessed valuation of all other taxable property in that part of the government unit located within the district, and in spreading the levy he shall apply the mill rate upon the same percentages of agricultural and nonagricultural taxable property. If the government unit elects to levy taxes under this subdivision and any of the taxable agricultural property is reclassified so as to no longer qualify as agricultural property, it shall be subject to additional taxes. The additional taxes shall be in an amount which, together with any such additional taxes previously levied and the estimated collection of additional taxes subsequently levied on any other such reclassified property, is determined by the governing body of the government unit to be at least sufficient to reimburse each other government unit for any excess current costs reallocated to it as a result of the board deferring any current costs under Laws 1971, Chapter 869, Section 9, as amended, on account of the difference between the amount of such current costs initially allocated to each government unit based on the total assessed valuation of all taxable property in the district and the amount of such current costs reallocated to each government unit based on 25 percent of the assessed valuation of agricultural property and 100 percent of the assessed valuation of all other taxable property in the district. Any reimbursement shall be made on terms which the board determines to be just and reasonable. These additional taxes may be levied in any greater amount as the governing body of the government unit determines to be appropriate, provided that in no event shall the total amount of the additional taxes exceed (i) the difference between (a) the total amount of taxes which would have been levied upon such reclassified property to help pay current costs charged in each year to the government unit by the board of (1) that portion of such costs, if any, initially allocated by the board solely on the basis of 100 percent of the assessed valuation of all taxable property in the district and then reallocated on the basis of inclusion of only 25 percent of the assessed valuation of agricultural property in the district had not been reallocated and if (ii) the amount of taxes levied by the government unit each year under this subdivision to pay current costs had been based on such initial allocation and had been imposed upon 100 percent of the assessed valuation of all taxable property, including agricultural property, in that part of the government unit located in the district, and (b) the amount of taxes theretofore levied each year under this subdivision upon such reclassified property, plus (2) interest on the cumulative amount of such difference accruing each year at the approximate average annual rate borne by bonds issued by the board and outstanding at the beginning of such year or, if no bonds are then outstanding, at such rate of interest which may be determined by the board, but not exceeding the maximum rate of

interest which may then be paid on bonds issued by the board. The additional taxes shall be a lien upon the reclassified property assessed in the same manner and for the same duration as all other ad valorem taxes levied upon the property. The additional taxes shall be extended against the reclassified property on the tax list for the current year, provided however that no penalties or additional interest shall be levied on such additional taxes if timely paid, and shall be collected and remitted in the same manner as other general taxes of the government unit.

Subdivision 3b. Any ad valorem taxes levied under Laws 1971, Chapter 869, Section 10, Subdivision 3 or Section 5 of this act by the governing body of a government unit to pay any sums charged to it by the board under Laws 1971, Chapter 869, as amended, are not subject to, or counted towards, any limit imposed by law on the levy of taxes upon taxable property within any governmental unit.

Subdivision 4. (DEFICIENCY TAX LEVIES.) If the local government unit fails to make any payment to the board when due, the board may certify to the auditor of the county in which the government unit is located the amount required for payment of such amount with interest at not more than the maximum rate per annum authorized at that time on assessments pursuant to Minnesota Statutes, Section 429.061, subdivision 2. The auditor shall levy and extend such amount as a tax upon all taxable property in that part of the government unit located in the district, for the next calendar year, free from any limitation imposed by law or charter. Such tax shall be collected in the same manner as other general taxes of the government unit, and the proceeds thereof, when collected, shall be paid by the county treasurer to the treasurer of the board and credited to the government unit for which the tax was levied.

Section 11. (PUBLIC HEARING AND SPECIAL ASSESSMENTS.) Subdivision 1. (PUBLIC HEARING REQUIREMENT ON SPECIFIC PROJECT.) Before the board orders any project involving the acquisition or betterment of any interceptor or treatment works, all or a part of the cost of which will be allocated to local government units pursuant to section 9, as current costs, the board shall hold a public hearing on the proposed project following two publications in a newspaper or newspapers having general circulation in the district, stating the time and place of the hearing, the general nature and location of the project, the estimated total cost of acquisition and betterment, that portion of such costs estimated to be paid out of federal and state grants, and that portion of such costs estimated to be allocated to each local government unit affected thereby. The two publications shall be a week apart and the hearing shall be at least three days after the last publication. Not less than 45 days before the hearing notice thereof shall also be mailed to each clerk of all local government units in the district, but failure to give mailed

notice of any defects in the notice shall not invalidate the proceedings. The project may include all or part of one or more interceptors or treatment works. No such hearing shall be held on any project unless the project is within the area covered by a comprehensive plan adopted by the board pursuant to section 5, except that the hearing may be held simultaneously with a hearing on such a comprehensive plan. A hearing is not required with respect to a project, no part of the costs of which are to be allocated to local government units as the current costs of acquisition, betterment and debt service.

Subdivision 2. (NOTICE TO BENEFITTED PROPERTY OWNERS.) If the governing body of any local government unit in the district proposes to assess against benefitted property within such units all or any part of the allocable costs of the project as provided in subdivision 5, such governing body shall, not less than ten days prior to the hearing provided for in subdivision 1 cause mailed notice thereof to be given to the owner of each parcel within the area proposed to be specially assessed and shall also give one week's published notice of the hearing. The notice of hearing shall contain the same information provided in the notice published by the board pursuant to subdivision 1, and in addition, a description of the area proposed to be assessed by the local government unit. For the purpose of giving mailed notice, owners shall be those shown to be on the records o the county auditor or, in any county where tax statements are mailed by the county treasurer, on the records of the county treasurer; but other appropriate records may be used for this purpose. However, as to properties which are tax exempt or subject to taxation on a gross earnings basis and are not listed on the records of the county auditor or the county treasurer, the owners thereof shall be ascertained by any practicable means and mailed notice shall be given them as herein provided. Failure to give mailed notice or any defects in the notice shall not invalidate the proceedings of the board or the local governing body.

Subdivision 3. (BOARD PROCEEDINGS PERTAINING TO HEARING.) Prior to adoption of the resolution calling for such a hearing, the board shall secure from the district engineer or some other competent person of the board's selection a report advising it in a preliminary way as to whether the proposed project is feasible and as to whether it should best be made as proposed or in connection with some other project and the estimated costs of the project as recommended; but no error or omission in such report shall invalidate the proceeding. The board may also take such other steps prior to the hearing, as will in its judgment provide helpful information in determining the desirability and feasibility of the project, including but not limited to preparation of plans and specifications and advertisement for bids thereon. The hearing may be adjourned from time to time and a resolution ordering the project may be adopted at any time within six months after the date of hearing. In ordering the project the board may reduce but not increase the extent of the

project as stated in the notice of hearing and shall find that the project as ordered is in accordance with the comprehensive plan and program adopted by the board pursuant to section 5.

Subdivision 4. (EMERGENCY ACTION.) If the board by resolution adopted by the affirmative vote of not less than two-thirds of its members determines that an emergency exists requiring the immediate purchase of materials or supplies or the making of emergency repairs, it may order the purchase of such supplies and materials and the making of such repairs prior to any hearing required under this section, provided that the board shall set as early a date as practicable for such hearing at the time it declares such emergency. All other provisions of this section shall be followed in giving notice of and conducting such hearing. Nothing herein shall be construed as preventing the board or its agents from purchasing maintenance supplies or incurring maintenance costs without regard to the requirements of this section.

Subdivision 5. (POWER OF GOVERNMENT UNIT TO SPECIALLY ASSESS.) A local government unit may specially assess all or any part of the costs of acquisition and betterment as herein provided, of any project ordered by the board pursuant to this section. Such special assessments shall be levied in accordance with the provisions of Minnesota Statutes, Sections 429.051 to 429.081, except as otherwise provided in this subdivision. No other provisions of Minnesota Statutes, Chapter 429 shall apply. For purposes of levying such special assessments, the hearing on such project required in subdivision 1 shall serve as the hearing on the making of the original improvement provided for by Minnesota Statutes, Section 429.051. The area assessed may be less than but may not exceed the area proposed to be assessed as stated in the notice of hearing on the project provided for in subdivision 2. For the purpose of determining the allocable cost of the project, or part thereof, to the local government unit, the government unit may adopt one of the following two procedures:

(a) At any time after a contract is let for the project, the local government unit may obtain from the board a current written estimate, on the basis of such historical and reasonably projected data as may be available, of that part of the total costs of acquisition and betterment of such project or of some portion of the project which the government unit shall designate, which will be allocated to the government unit and the number of years over which such costs will be allocated as current costs of acquisition, betterment and debt service pursuant to section 9. The board shall not in any way be bound by this estimate for the purpose of allocating the costs of such project to local government units.

(b) The governing body may obtain from the board a written

statement setting forth, for such prior period as the governing body designates, that portion of the costs previously allocated to the local government unit as current costs of acquisition, betterment and debt service only, of all or any part of the project designated by the governing body. In addition to the allocable costs so ascertained, the local government unit may include in the total expense it will pay, as a basis for levying assessments, all other expenses incurred directly by the government unit in connection with said project, or any part thereof. Special assessments levied by the government unit with respect to previously allocated costs ascertained under the second procedure above shall be payable in equal annual installments extending over a period not exceeding by more than one year the number of years which such costs have been allocated to the government unit or the estimated useful life of said project, or part thereof, which ever number of years is the lesser. No limitation is placed upon the number of times the governing body of a government unit may assess such previously allocated costs not previously assessed by the government unit. The power to specially assess provided for in this section shall be in addition and supplemental to all other powers of government units to levy special assessments.

Section 12. (INITIAL COSTS.) Subdivision 1. (CONTRIBUTIONS OR ADVANCES FROM LOCAL GOVERNMENT UNITS.) The board may, at such time as it deems necessary and proper, request from all or some of the local government units necessary moneys to defray the costs of any obligations assumed under section 6 and the costs of administration, operation and maintenance. Before making such request the board shall, by formal resolution, determine the necessity for such moneys, setting forth in such resolution the purposes for which such moneys are needed and the estimated amount for each such purpose. Upon receiving such request, the governing body of each such government unit may provide for payment of the amount requested or such part thereof as it deems fair and reasonable. Such moneys may be paid out of general revenue funds or any other available funds of any local government unit and the governing bodies thereof may levy taxes to provide funds therefor, free from any existing limitations imposed by law or charter. Such moneys may be provided by such government units with or without interest but if interest is charged it shall not exceed five percent per annum. The board shall credit the local government units for such payments in allocating current costs pursuant to section 9, on such terms and at such times as it may agree with the unit furnishing the same.

Subdivision 2. (LIMITED TAX LEVY.) The board may levy ad valorem taxes on all taxable property in the district to defray any of the costs described in subdivision 1, provided that such costs have not been defrayed by contribution under subdivision 1 and (b) and such tax levy in any year shall not exceed a tax

capacity rate of four percent annually;

Before certification of such levy to the county auditor, the board shall determine the need for the money to be derived from such levy by formal resolution setting forth in said resolution the purposes for which the tax moneys will be used and the amount proposed to be used for each such purpose. In allocating current costs pursuant to section 9 the board shall credit the government units for taxes collected pursuant to levy made under this subdivision on such terms and at such time or times as the board deems fair and reasonable and upon such terms as are consistent with the provisions of section 9, subdivision 2.

Section 13. (BONDS, CERTIFICATES AND OTHER OBLIGATIONS) Subdivision 1. (BUDGET ANTICIPATION CERTIFICATES OF INDEBTEDNESS.) At any time or times after adoption of its annual budget and in anticipation of the collection of tax and other revenues estimated and set forth by the board in such budget, except:

(a) Taxes already anticipated by the issuance of certificates under subdivision 2;

(b) Deficiency taxes levied pursuant to this subdivision, and

(c) Taxes levied for the payment of certificates issued pursuant to subdivision 3, the board may be resolution, authorize the issuance, negotiation and sale in accordance with subdivision 5 in such form and manner and upon such terms as it may determine of its negotiable general obligation certificates of indebtedness in aggregate principal amounts not exceeding 50 percent of the total amount of such tax collections and other revenues and maturing not later than three months after the close of the budget year in which issued. The proceeds of the sale of such certificates shall be used solely for the purposes for which such tax collections and other revenues are to be expended pursuant to such budget.

All such tax collections and other revenues included in the budget for such budget year, after the expenditures of such tax collections and other revenues in accordance with the budget, shall be irrevocably pledged and appropriated to a special fund to pay the principal and interest on the certificates when due. If for any reason such tax collections and other revenues are insufficient to pay the certificates and interest when due, the board shall levy a tax in the amount of the deficiency on all taxable property in the district and shall appropriate this amount when received to the special fund.

Subdivision 2. (TAX LEVY ANTICIPATION CERTIFICATES OF INDEBTEDNESS.) At any time or times after a tax is levied by the

board pursuant to section 12, subdivision 2, and certified to the county auditors in anticipation of the collection of such tax, provided that such tax has not been anticipated by the issuance of certificates under subdivision 1, the board may, by resolution, authorize the issuance, negotiation and sale in accordance with subdivision 5 in such form and manner and upon such terms and conditions as it may determine of its negotiable general obligation tax levy anticipation certificates of indebtedness in aggregate principal amounts not exceeding 50 percent of such uncollected tax as to which no penalty for nonpayment or delinquency has attached. Such certificates shall mature not later than April 1 in the year following the year in which such tax is collectible. The proceeds of the tax in anticipation of which such certificates were issued and other funds which may become available shall be applied to the extent necessary to repay such certificates.

Subdivision 3. (EMERGENCY CERTIFICATES OF INDEBTEDNESS.) If in any budget year the receipts of tax and other revenues should for some unforeseen cause become insufficient to pay the board's current expenses, or if any calamity or other public emergency should subject it to the necessity of making extraordinary expenditures, the board may be resolution authorize the issuance, negotiation, and sale in accordance with subdivision 5 in such form and manner and upon such terms and conditions as it may determine of its negotiable general obligation certificates of indebtedness in an amount sufficient to meet such deficiency, and the board shall forthwith levy on all taxable property in the district a tax sufficient to pay the certificates and interest thereon and shall appropriate all collections of such tax to a special fund created for the payment of such certificates and the interest thereon. Certificates issued under this subdivision shall mature not later than April 1 in the year following the year in which such tax is collectible.

Subdivision 4. (GENERAL OBLIGATION BONDS.) The board may by resolution authorize the issuance of general obligation bonds maturing serially in one or more annual or semiannual installments, for the acquisition or betterment of any part of the district disposal system, including but without limitation the payment of interest during construction and for a reasonable period thereafter, or for the refunding of outstanding bonds, certificates of indebtedness or judgments. The board shall pledge its full faith and credit and taxing power for the payment of such bonds and shall provide for the issuance and sale and for the security of such bonds in the manner provided in Minnesota Statutes, Chapter 475, and shall have the same powers and duties as a municipality issuing bonds under that law. No election shall be required to authorize the issuance of such bonds and the debt limitations of Minnesota Statutes, Chapter 475, shall not a apply to such bonds. The board may also pledge for the payment of such bonds and deduct from the amount of any tax levy required under Minnesota Statutes, Section 475.61, subdivision 1, any sums

receivable under section 10 or any sate and federal grants anticipated by the board and may covenant to refund such bonds if and when and to the extent that for any reasons such revenues, together with other funds properly available and appropriated for such purpose, are not sufficient to pay all principal and interest due or about to become due thereon, provided that such revenues have not been anticipated by the issuance of certificates under subdivision 1. All bonds which have been or shall hereafter be issued and sold in conformity with the provisions of this subdivision, and otherwise in conformity with law, are hereby authorized, legalized and validated.

Subdivision 5. (MANNER OF SALE AND ISSUANCE OF CERTIFICATES.) Certificates issued under subdivision 1, 2, and 3 may be issued and sold by negotiation, without public sale, and may be sold at a price equal to such percentage of the par value thereof, plus accrued interest, and bearing interest at such rate or rates as may be determined by the board. No election shall be required to authorize the issuance of such certificates. Such certificates shall bear the same rate of interest after maturity as before and the full faith and credit and taxing power of the board shall be pledged to the payment of such certificates.

Section 14. (TAX LEVIES) The board shall have power to levy taxes for the payment of bonds or other obligations assumed by the district under Section 6 and for debt service of the district disposal system authorized in Section 13 upon all taxable property within the district without limitation of rate or amount and without effecting the amount or rate of taxes which may be levied by the board for other purposes or by any local government unit in the district. No other provision of law relating to debt limit shall restrict or in any way limit the power of the board to issue the bonds and certificates authorized in section 13. The board shall also have power to levy taxes as provided in sections 10 and 12. The county auditor shall annually assess and extend upon the tax rolls in his county the portion of the taxes levied by the board in each year which is certified to him by the board. The county treasurer shall collect and make settlement of such taxes with the treasurer of the board.

Section 15. (DEPOSITORIES) The board shall from time to time designate one or more national or state banks, or trust companies authorized to do a banking business, as official depositories for moneys of the board, and thereupon shall require the treasurer to deposit all or a part of such moneys in such institutions. Such designation shall be in writing and shall set forth all the terms and conditions upon which the deposits are made, and shall be signed by the chairman and treasurer, and made a part of the minutes of the board. Any bank or trust company so designated shall qualify as a depository by furnishing a corporate surety bond or collateral in the amounts required by Minnesota Statutes, Section 118.01. However, no bond or

collateral shall be required to secure any deposit insofar as it is insured under federal law.

Section 16. (MONEYS, ACCOUNTS AND INVESTMENTS.) Subdivision 1. RECEIPT AND APPLICATION.) All moneys received by the board shall be deposited or invested by the treasurer and disposed of as the board may direct in accordance with its budget; provided that any moneys that have been pledged or dedicated by the board to the payment of obligations or interest thereon or expenses incident thereto, or for any other specific purpose authorized by law, shall be paid by the treasurer into the fund to which they have been pledge.

Subdivision 2. (FUNDS AND ACCOUNTS) The board's treasurer shall establish such funds and accounts as may be necessary or convenient to handle the receipts and disbursements of the board in an orderly fashion.

Subdivision 3. (DEPOSIT AND INVESTMENT) The moneys on hand in said funds and accounts may be deposited in the official depositories of the board or invested as hereinafter provided. The amount thereof not currently needed or required by law to be kept in cash on deposit may be invested in obligations authorized for the investment of municipal sinking funds by Minnesota Statutes, Section 475.66. Such moneys may also be held under certificates of deposit issued by any official depository of the board.

Subdivision 4. (BONDS PROCEEDS) The use of proceeds of all bonds issued by the board for the acquisition and betterment of the district disposal system, and the use, other than investment, of all moneys on hand in any sinking fund or funds of the board, shall be governed by the provisions of Minnesota Statutes, Chapter 475, the provisions of this act and the provisions of resolutions authorizing the issuance of such bonds. Such bond proceeds when received shall be transferred to the treasurer of the board for safekeeping, investment and payment of the costs for which they were issued.

Subdivisions 5. (AUDIT) The board shall provide for and pay the cost of an independent annual audit of its official books and records by the state public examiner or a certified public accountant.

Section 17. (GENERAL POWERS OF BOARD) Subdivision 1. The board shall have all powers which may be necessary or convenient to discharge the duties imposed upon it by law. Such powers shall include those herein specified, but the express grant or enumeration of powers shall not be deemed to limit the generality or scope of the grant of power contained in this subdivision.

Subdivision 2. The board may sue or be sued.

Subdivision 3. The board may enter into any contract necessary or proper for the exercise of its powers of the accomplishment of its purposes.

Subdivision 4. The board shall have the power to adopt rules and regulations relating to the boards responsibilities and may provide penalties for the violation thereof not exceeding the maximum which may be specified for a misdemeanor, and the cost of prosecution may be added to the penalties imposed. Any rule or regulation prescribing a penalty for violation shall be published at least once in a newspaper having general circulation in the district. Such violations may be prosecuted before any court in the district having jurisdiction of misdemeanor, and every such court shall have jurisdiction of such violations. Any constable or other peace officer of any municipality in the district may make arrests for such violations committed anywhere in the district in like manner and with like effect as for violations of village ordinances or for statutory misdemeanors. All fines collected in such cases shall be deposited in the treasury of the board, or may be allocated between the board and the municipality in which such prosecution occurs on such basis as the board and the municipality agree.

Subdivision 5. The board may accept gifts, may apply for and accept grants or loans of money or other property from the United States, the state, or any person for any of its purposes, may enter into any agreement required in connection herewith, and may hold, use and dispose of such money or property in accordance with the terms of the gift, grant, loan, or agreement relating thereto; and, with respect to any loans or grants of funds or real or personal property or other assistance from any state or federal government or any agency or instrumentality thereof, the board may contract to do and perform all acts and things required as a condition or consideration therefore pursuant to state or federal law or regulations, whether or not included among the powers expressly granted to the board in this act.

Subdivision 6. The board may act under the provisions of Minnesota Statutes, Section 471.59, or any other appropriate law providing for joint or cooperative action between government units.

Subdivision 7. The board may conduct research studies and programs, collect and analyze data, prepare reports, maps, charts, and tables, and conduct all necessary hearings and investigations in connection with the design, construction and operation of the district disposal system; and may advise and assist other government units on system planning matters within the scope of its powers, duties and objectives and may provide at the request of any such governmental unit such other technical and administrative assistance as the board deems appropriate for the government unit to carry out the powers and duties vested in the government unit under this act or imposed on by the board.

Subdivision 8. The board may employ on such terms as it deems advisable, persons or firms performing engineering, legal or other services of a professional nature; require any employee to obtain and file with it an individual bond or fidelity insurance policy; and procure insurance in such amounts as it deems necessary against liability of the board or its officers or both, for personal injury or death and property damage or destruction, with the force and effect stated in Minnesota Statutes, Chapter 466, and against risks of damage to or destruction of any of its facilities, equipment, or other property as it deems necessary.

Subdivision 9. The board may acquire by purchase, lease, condemnation, gift or grant, and real personal property including positive and negative easements and water and air rights, and it may construct, enlarge, improve, replace, repair, maintain, and operate any interceptor, treatment works, or water facility determined to be necessary or convenient for the collection and disposal of sewage in district. Any local government unit and the commissioners of highways and natural resources are authorized to convey to or permit the use of any such facilities owned or controlled by it, by the board, subject to the rights of the holders of any bonds issued with respect thereto, with or without compensation, without an election or approval by any other government unit or agency. All powers conferred by this subdivision may be exercised both within or without the district as may be necessary for the exercise by the board of its powers or the accomplishment of its purposes. The board may hold, lease, convey or otherwise dispose of such property for its purposes upon such terms and in such manner as it shall deem advisable. Unless otherwise provided, the right to acquire lands and property rights by condemnation shall be exercised in accordance with Minnesota Statues, Sections 117.01 to 117.202, and shall apply to any property or interest therein owned by any local government unit; provided, that no such property devoted to an actual public use at the time, or held to be devoted to such use within a reasonable time, shall be so acquired unless a court of competent jurisdiction shall determine that the use proposed by the board is paramount to such use. Except in case of property in actual public use, the board may take possession of any property of which condemnation proceedings have been commenced at any time after the issuance of a court order appointing commissioners for its condemnation.

Subdivision 10. The board may construct or maintain its systems or facilities in, along, on, under, over, or through public waters, streets, bridges, viaducts, and other public right-of-way without first obtaining a franchise from any county or local government unit having jurisdiction over them; but such facilities shall be constructed an maintained in accordance with the ordinances and resolutions of any such county or government unit relating to construction, installation, and maintenance of

similar facilities on such public properties and shall not unnecessarily obstruct the public use of such rights of way.

Subdivision 11. The board may sell, lease or otherwise dispose of any real or personal property acquired by it which is no longer required for accomplishment of its purposes. Such property may be sold in the manner provided by Minnesota Statutes, Section 469.065, insofar as practical. The board may give such notice of sale as it shall deem appropriate. When the board determines that any property or any part of the district disposal system which has been acquired from a local government unit without compensation is no longer required but is required as a local facility by the government unit from which it was acquired, the board may be resolution transfer it to such government unit.

Subdivision 12. The board may contract with the United Sates or any agency thereof, any state or agency thereof, or any regional public planning body in the state with jurisdiction over any part of the district, or any other municipal or public corporation, or governmental subdivision in any state, for the joint use of any facility owned by the board or such entity, for the operation by such entity of any system or facility of the board, or for the performance on the board's behalf of any service, including but not limited to planning, on such terms as may be agreed upon by the contracting parties. Unless designated by the board as a local sanitary sewer facility, any treatment works or interceptor jointly used, or operated on behalf of the board, as provided in this subdivision, shall be deemed to be operated by the board for purposes of including said facilities in the district disposal system.

Section 18. (LOCAL FACILITIES.) Subdivision 1. (SANITARY SEWER FACILITIES) Except as otherwise provided in this act, local government units shall retain responsibility for the planning, design, acquisition, betterment, operation, administration, and maintenance of all local sanitary sewer facilities as provided by law.

Subdivision 2. (ASSUMPTION OF RESPONSIBILITY OVER LOCAL SANITARY SEWER FACILITIES.) The board shall upon request of any government unit or units assume either alone or jointly with the local government unit all or any part of the responsibility of the local government unit described in subdivision 1. Except as provided in subdivision 4 and for the purpose of exercising such responsibility the board shall have all the powers and duties elsewhere conferred in this act with the same force and effect as if such local sanitary sewer facilities were a part of the district disposal system.

Subdivision 3. (WATER AND STREET FACILITIES.) The board may, upon request of and government unit or units enter into an agreement under which the board may assume either alone or

jointly with such unit or units, the responsibility for the acquisition and construction of water an street facilities in conjunction with (a) any project for the acquisition or betterment of the district disposal system, or (b) any project undertaken by the board under subdivision 2 above. Except as provided in subdivision 4, and for the purpose of exercising any responsibilities pursuant to this subdivision the board shall have all the powers and duties elsewhere conferred in this act with the same force and effects as if such water or street facilities were a part of the district disposal system.

Subdivision 4. (ALLOCATION OF CURRENT COSTS.) All current costs attributable to responsibilities assumed by the board over local sanitary sewer facilities and water and street facilities as provided in this section shall be allocated solely to the local unit for or with whom such responsibilities are assumed on such terms and over such period as the board determines to be equitable and in the best interest of the district, provided that if two or more government units form a region in accordance with section 18, of this act all or part of such current costs attributable to the region shall at the request of its joint board be allocated to the region and provided in the agreement establishing the region.

Subdivision 5. (INCLUSION AS A PART OF THE DISTRICT DISPOSAL SYSTEM). Nothing contained in this section or in any other part of this act shall be construed to prevent the board from including, where appropriate, treatment works or interceptors, previously designated or treated as local sanitary sewer facilities as a part of the district disposal system.

Subdivision 5a. (JOINT ACTION.) The legislature determines that the purpose and policies o Laws 1971, Chapter 869, as amended, can best be achieved by joint action of local units of government through either the formation of a service region or execution of a joint powers agreement as provided in this subdivision. Two or more government units, in addition to and not in substitution for any other power granted to them by law, may be agreement elect to either form a service region or enter into a joint powers agreement for the purposes set forth in this subdivision upon determination by resolution of the governing bodies of the government units that the course of action will be mutually beneficial to the participating government units. If the government units elect to form a service region, the region shall be governed by a joint board on which each participating government unit shall be equally represented by one or more members of its governing body. The number of members on the board shall be determined by the participating units in the agreement. A service region may be formed pursuant to this subdivision only for the purpose of assuming and thereby relieving the local government units of all or some of their responsibilities as set forth in Laws 1971, Chapter 869, as

amended. The agreement shall specify the responsibilities to be delegated to the region, and for such limited purpose the region shall be deemed a public corporation and political subdivision of the state and government unit with the meaning of Laws 197, Chapter 869, Section 2, Subdivision 5, and both the service region and the joint board shall have the powers and duties accorded a government unit and its governing body under Laws 1971, Chapter 869, as amended, or any other law incidental to carrying out the responsibilities delegated to the service region under the agreement forming the service region, including but not limited to the power to levy taxes upon all taxable property within the service region, to levy special assessments, to impose utility charges, and to issue general obligation bonds and certificates of indebtedness of the service region, supported by an irrevocable pledge of its power to tax property, without limitation of rate or amount and without affecting the amount of the debt to be incurred or the taxes to be levied by any government units, except that no action taken by the joint board on behalf of the service region to incur any indebtedness, enter into any contract, levy any taxes, levy special assessments or impose any utility charge, other than action which the joint board is previously obligated by law or contract to take, shall be effective until the governing bodies of each government unit concurs in the action. The participating government units shall be secondarily but not primarily, and jointly but not severally, liable for indebtedness and other contractual obligations incurred by the service region. The boundaries of the service region shall be coextensive with the boundaries of that part of the participating government units which are located within the boundaries of the region. The duration of the service region may be continued until dissolved as provided in the agreement, provided that the service region may not be dissolved until all outstanding indebtedness of the service region has been duly discharged. The agreement shall also provide for disposition of any property acquired by the region, and the return of any surplus funds to the government units in the event of dissolution of the service region. The formation of the service region shall not be effective until a copy of the agreement is filed in the office of the secretary of state and the office of the county auditor of each county in which the region is located. If the government units elect to enter into a joint powers agreement, the provisions of Minnesota Statutes, Section 471.59 shall apply.

Subdivision 6. (LOCAL POWERS.) Any local government unit or service region may assume by itself, jointly with a service region or one or more other local government units, or jointly with the board all or any part of the responsibility given to the local government unit or service region by subdivisions 1, 2, 3, or 5A and may exercise the powers granted any municipality by Minnesota Statutes, Chapters 117, 412, 429, 475, Sections 115, 46, 444, 075, and 471.59, except as qualified in Section 18, Subdivision 5a, in order to perform all acts and things required for the purpose of exercising such responsibility, whether or not

included in the powers otherwise granted to such local government unit or service region by Laws 1971, Chapter 869, as amended, or any other law or charter, including but not limited to the power to levy taxes as provided in Section 10 of this act.

Section 19. (SERVICE CONTRACTS WITH GOVERNMENTAL ENTITIES OUTSIDE THE JURISDICTION OF THE BOARD.) The board may contract with the United States or any agency thereof, any state or any agency thereof, or any municipal or public corporation, governmental subdivision or agency or political subdivision in any state, outside the jurisdiction of the board, for furnishing to such entities any services which the board may furnish to local government units in the district under this act, including but not limited to planning for and the acquisition, betterment, operation, administration and maintenance of any or all interceptors, treatment works and local sanitary sewer facilities, provided that the board may further include as one of the terms of the contract that such entity also pay to the board such amount as may be agreed upon as a reasonable estimate of the proportionate share properly allocable to the entity of costs of acquisition, betterment and debt service previously allocated to local government units in the district. When such payments are made by such entities to the board, they shall be applied in reduction of the total amount of costs thereafter allocated to each local government unit in the district, on such equitable basis as the board deems to be in the best interest of the district, applying so far as practicable and appropriate the criteria set forth in section 9, subdivision 2a. Any municipality in the State of Minnesota may enter into such contract and perform all acts and things required as a condition or consideration therefore consistent with the purpose of this act, whether or not included among the powers otherwise granted to such municipality by law or charter, such powers to include those powers set out in section 10, subdivisions 3, 3a, 3b, and 4.

Section 20. (CONTRACTS FOR CONSTRUCTION, MATERIALS, SUPPLIES, AND EQUIPMENT.) Subdivision 1. (PLANS AND SPECIFICATIONS.) When the board orders a project involving the acquisition or betterment of a part of the district disposal system it shall cause plans and specifications of this project to be made, or if previously made, to be modified, if necessary, and to be approved by the agency if required, and after any required approval by the agency, one or more contracts for work and materials called for by such plans and specification may be awarded as provided in this section.

Subdivision 2. (UNIFORM MUNICIPAL CONTRACTING LAW.) All contracts for work to be done or for purchases of materials, supplies or equipment shall be done in accordance with the Minnesota Statutes, Section 471.345.

Subdivision 3. (CONTRACTS OR PURCHASES FOR $5,000 OR LESS.)

The board may, without advertising for bids, enter into any contract or purchase any materials, supplies or equipment of the type referred to in subdivision 2 the cost of which is estimated to be $5,000 or less, or it may in the alternative authorize the executive director to enter into a contract on behalf of the board for such work or to make such purchases without prior approval of the board and without advertising for bids.

Subdivision 4. (UNIFORM MUNICIPAL CONTRACTING LAW.) Except as otherwise provided in this section, Minnesota Statutes, Section 471.345 shall apply.

Section 21. (ANNEXATION OF TERRITORY.) Subdivision 1. (METHOD AND CONDITIONS FOR ANNEXATION.) Any municipality in Douglas County, Minnesota upon resolution adopted by a four-fifths vote of its governing body may petition the board for annexation to the district of the area then comprising the municipality, or any part thereof and, if accepted by the board, such area shall be deemed annexed to the district and subject to the jurisdiction of the board under the terms and provisions of this act. The territory so annexed shall be subject to taxation and assessment pursuant to the provisions of this act and shall be subject to taxation by the board like other property in the district for the payment of principal and interest thereafter becoming due on general obligations of the board, whether authorized or issued before or after such annexation. The board may in its discretion condition approval of the annexation upon (a) the contribution, by or on behalf of the municipality petitioning for annexation, to the board of such amount as may be agreed upon as being a reasonable estimate of the proportionate share, properly allocable to the municipality, of costs or acquisition, betterment and debt service previously allocated to local government units in the district, on such terms as may be agreed upon; and in lieu of (a) or in addition thereto (b) such other and further conditions as the board deems in the best interests of the district. Notwithstanding any other provisions of this act to the contrary, the conditions established for annexation may include the requirement that the annexed municipality pay for, contract for and oversee the construction of local sanitary sewer facilities and interceptor sewers as those terms are defined in Section 2. For the purpose of paying such contribution or of satisfying any other condition established by the board, the municipality petitioning annexation may exercise the powers conferred in section 10. When such contributions are made by the municipality to the board, they shall be applied in reduction of the total amount of costs thereafter allocated to each local government unit in the district, on such equitable basis as the board deems to be in the best interests of the district, applying so far as practicable and appropriate the criteria set forth in section 9, subdivision 2a. Upon annexation of such territory, the secretary of the board shall certify to the auditor and treasurer of the county in which the municipality is located the fact of such annexation and

a legal description of the territory annexed.

Subdivision 2. (LAKE MARY AND IDA TOWNSHIPS.) If Lake Mary or Ida Townships, or both of them, petition to annex all or any part or parts of their townships to the district, upon acceptance by the board, such township shall have all powers set out in section 18, subdivision 6.

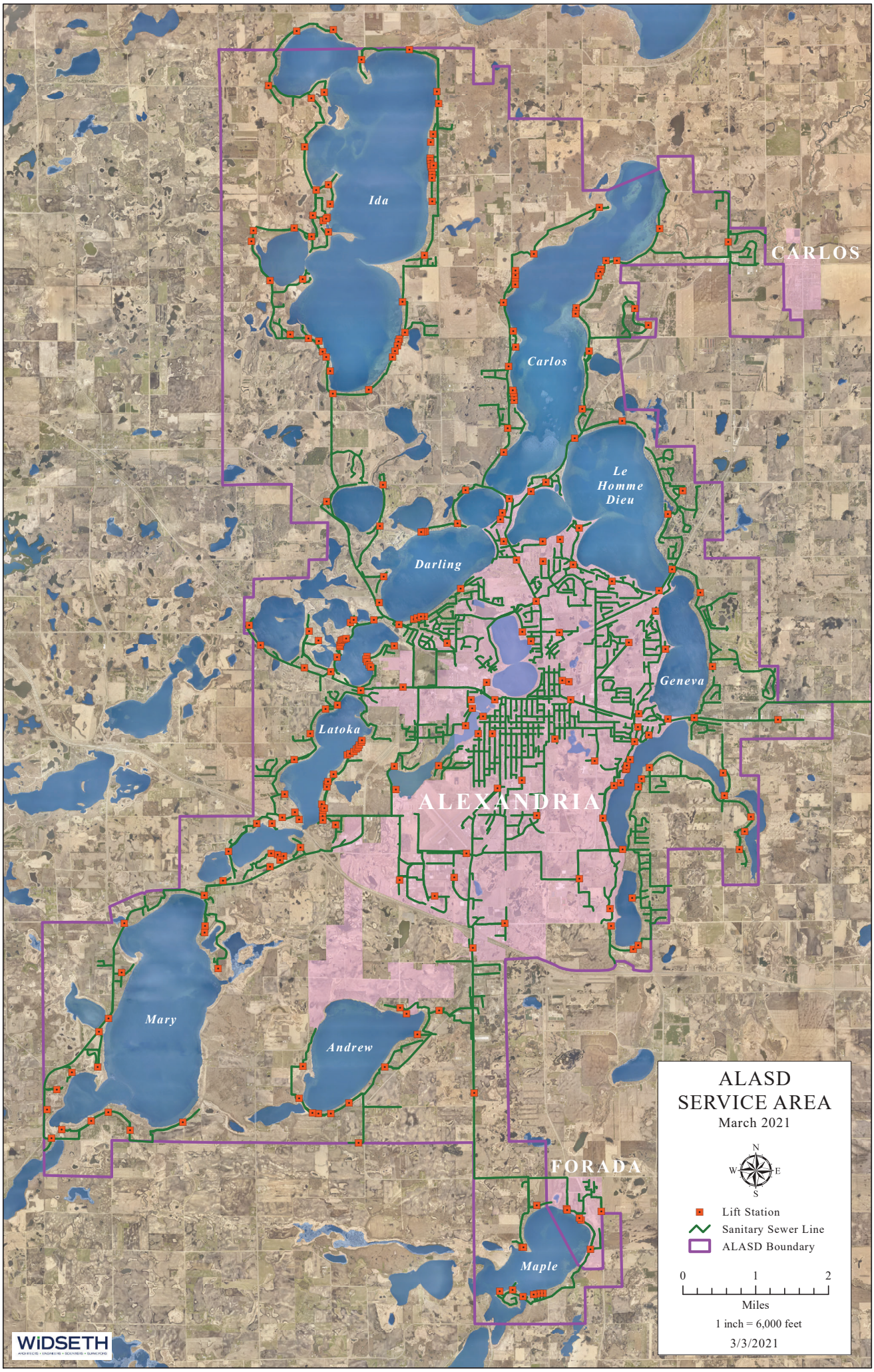
Section 22. (PROPERTY EXEMPT FROM TAXATION.) Any properties, real or personal, owned, leased, controlled, used, or occupied by the sanitary sewer board for any purpose under this act are declared to be acquired, owned, leased, controlled used and occupied for public, governmental, and municipal purposes, and shall be exempt from taxation by the state or any political subdivision of the state, provided that such properties shall be subject to special assessments levied by a political subdivision for a local improvement in amounts proportionate to and not exceeding the special benefit received by the properties from such improvement. No possible use of any such properties in any manner different from their use as part of the disposal system at the time shall be considered in determining the special benefit received by such properties. All such assessments shall be subject to final approval by the board, whose determination of the benefits shall be conclusive upon the political subdivision levying the assessment. All bonds, certificates of indebtedness or other obligations of the board, and the interest thereon, shall be exempt from taxation by the state or any political subdivision of the state.

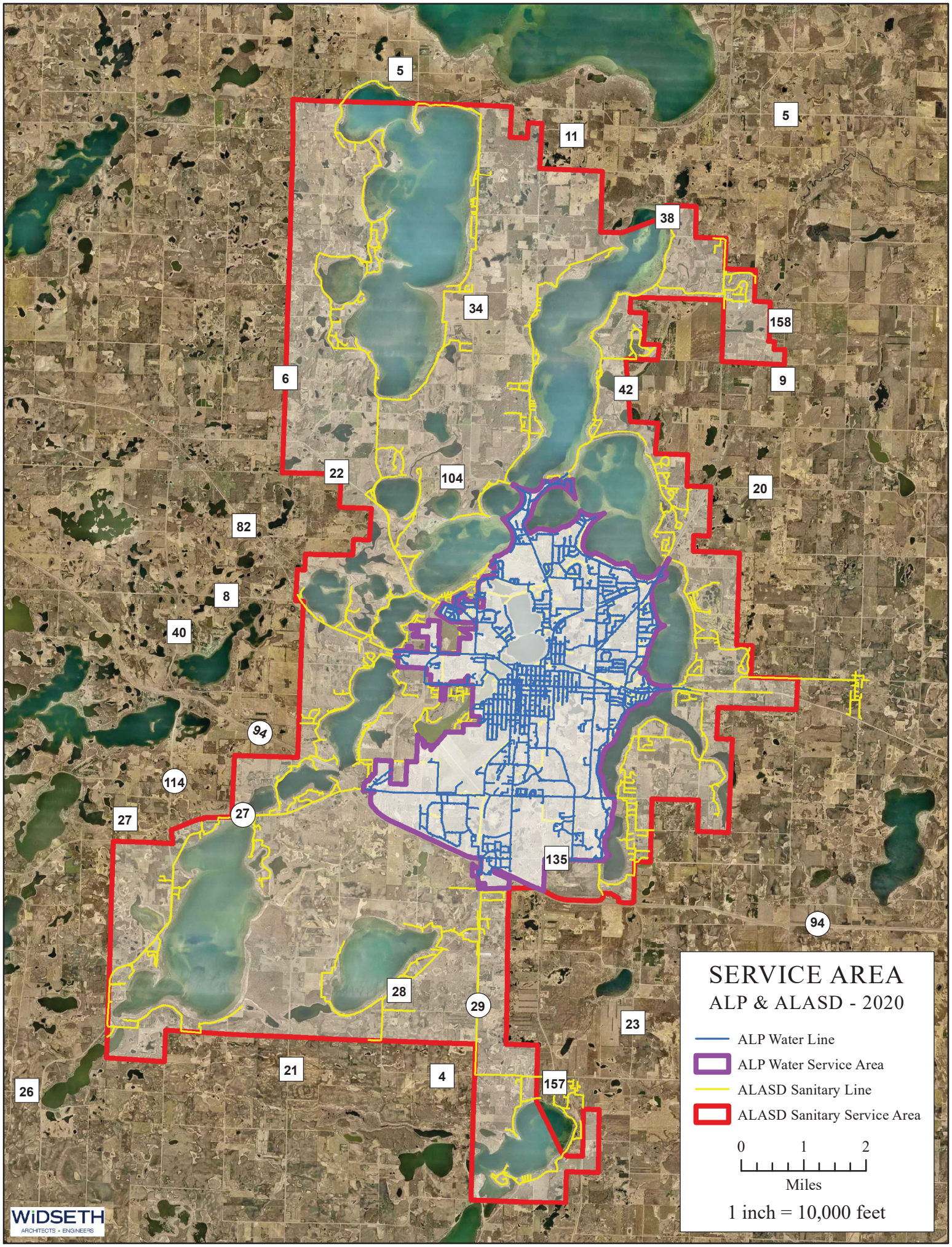
Section 23. (RELATION TO EXISTING LAWS.) The provisions of this act shall be given full effect notwithstanding the provisions of any law or charter inconsistent therewith. The powers conferred on the board under this act shall in no way diminish or supersede the powers conferred on the agency by Minnesota Statutes, Chapter 115 and 116.

Section 24. (AFFECTED LOCAL GOVERNMENT UNITS.) The City of Alexandria and the townships of Alexandria, Carlos, Hudson, La Grande, Lake Mary, and Ida, in the County of Douglas, are affected by this act. Local consent shall not be required.

Appendix B: Maps and Figures


ALASD FACILITIES
Spring 2019
N
W
E
S
0
50
100
Yards
3/3/2021
Nevada St
WIDSETH


Ida
CARLOS
Carlos
Le
Homme
Dieu
Darling
Geneva
Latoka
ALEXANDRIA
Mary
Andrew
FORADA
Maple
ALASD
SERVICE AREA
March 2021
N
W
E
S
Lift Station
Sanitary Sewer Line
ALASD Boundary
0
1
2
Miles
1 inch = 6,000 feet
3/3/2021
WIDSETH


5
11
5
38
34
158
6
42
9
22
104
20
82
8
40
94
114
27
27
135
94
28
29
23
21
4
157
26
SERVICE AREA
ALP & ALASD - 2020
ALP Water Line
ALP Water Service Area
ALASD Sanitary Line
ALASD Sanitary Service Area
0
1
2
Miles
1 inch = 10,000 feet
WiDSETH
ARCHITECTS • ENGINEERS

VI. Future Land Use

A future land use map was prepared as part of implementing the policies and strategies identified earlier in this Comprehensive Plan. The map contains the following land use designations that will serve as a guideline for making future zoning-related decisions. Under each land use designation is a description of its purpose and of general policies that would apply to that designation.

Urban Residential

The purpose of this land use category is to provide opportunities for urban density housing in areas that are most readily served by urban infrastructure and services. This category is intended for areas that are currently served by Alexandria Area Sanitary Sewer District (ALASD) infrastructure or are within the identified future service area of ALASD. Within these areas, new residential development will be reviewed to ensure that the proposed density, dimensions, and layout of lots will allow for the efficient use of public infrastructure and the cost-effective provision of public services. A gross urban density of two to three dwelling units per acre or higher is intended for these areas. Proposed subdivisions that would create oversized lots would be reviewed to allow for a transition to urban densities of housing in an orderly and efficient manner. This may be accomplished through ghost platting, conservation subdivision designs that cluster homes on urban-sized lots, provision of urban sewer or road infrastructure at the time of development, or by other appropriate means.

Typical "lot-block" or "conservation" subdivision designs are both considered appropriate in these areas. Where sensitive or unique natural or cultural resources, such as wetlands, shoreland, etc. are present, a conservation subdivision design with lower densities that protects these resources may be required. Long-term commercial/industrial uses that are incompatible with residential uses should not be allowed in this district.

Transition Residential

The purpose of this land use category is to provide opportunities for residential development in areas not currently identified for provision of urban infrastructure, such as sewer, water, or storm drains, but that could efficiently accommodate urban housing densities within the next twenty-five (25) years as the population of the area increases. These areas may be developed at rural or semi-rural densities, but are intended to be designed in a manner than allows for a transition to urban densities of housing in an orderly and efficient manner as sewer, water, or other public infrastructure or services become available. This may be accomplished through ghost platting, conservation subdivision designs that cluster homes on urban-sized lots, provision of urban sewer or road infrastructure at the time of development, or by other appropriate means.

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Rural Conservation Residential

The purpose of this land use category is to provide opportunities for residential development in areas of the Township not expected to be consistent with urban densities of housing within the next twenty-five (25) years, but that may be consistent over a fifty (50) year time frame. These areas may be developed at rural or semi-rural densities, but are intended to be designed in a manner than protects sensitive or unique natural or cultural resources that exist on or near the property. As such, any residential subdivision in this area at a density inconsistent with the protection of sensitive or unique natural or cultural resources must be developed with a conservation subdivision design (typical "lot-block" designs are not considered appropriate).

Residential subdivisions in this district shall also allow for a transition to urban densities of housing in an

orderly and efficient manner as sewer, water, or other public infrastructure or services become available. This may be accomplished through ghost platting, conservation subdivision designs that cluster homes on urban-sized lots, provision of urban sewer or road infrastructure at the time of development, or by other appropriate means.

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Urban Commercial/Light Industrial

The purpose of this land use category is to provide opportunities for commercial and light-industrial uses that are best served by urban sewer infrastructure due to the types and/or amount of wastewater produced. Examples of such uses include those that generate high-strength or problem wastes not typically found in residential wastewater, such as facilities serving food or drinks, those generating large amounts of wastewater such as laundry operations, or facilities that discharge chemical or other non-organic wastes in amounts not suitable for treatment in an individual sewage treatment system. This category is intended for areas that are inside of the identified future service area of ALASD that are visible or easily accessible from State highways at major intersections. These areas are intended to be located in "nodes" at major intersections rather than in a "strip" design along long sections of a road corridor. Heavy industrial uses which require significant water supply or that generate nuisance characteristics inconsistent with residential uses are not intended within this district. Long-term residential uses that are incompatible with commercial/industrial uses should not be allowed in this district.

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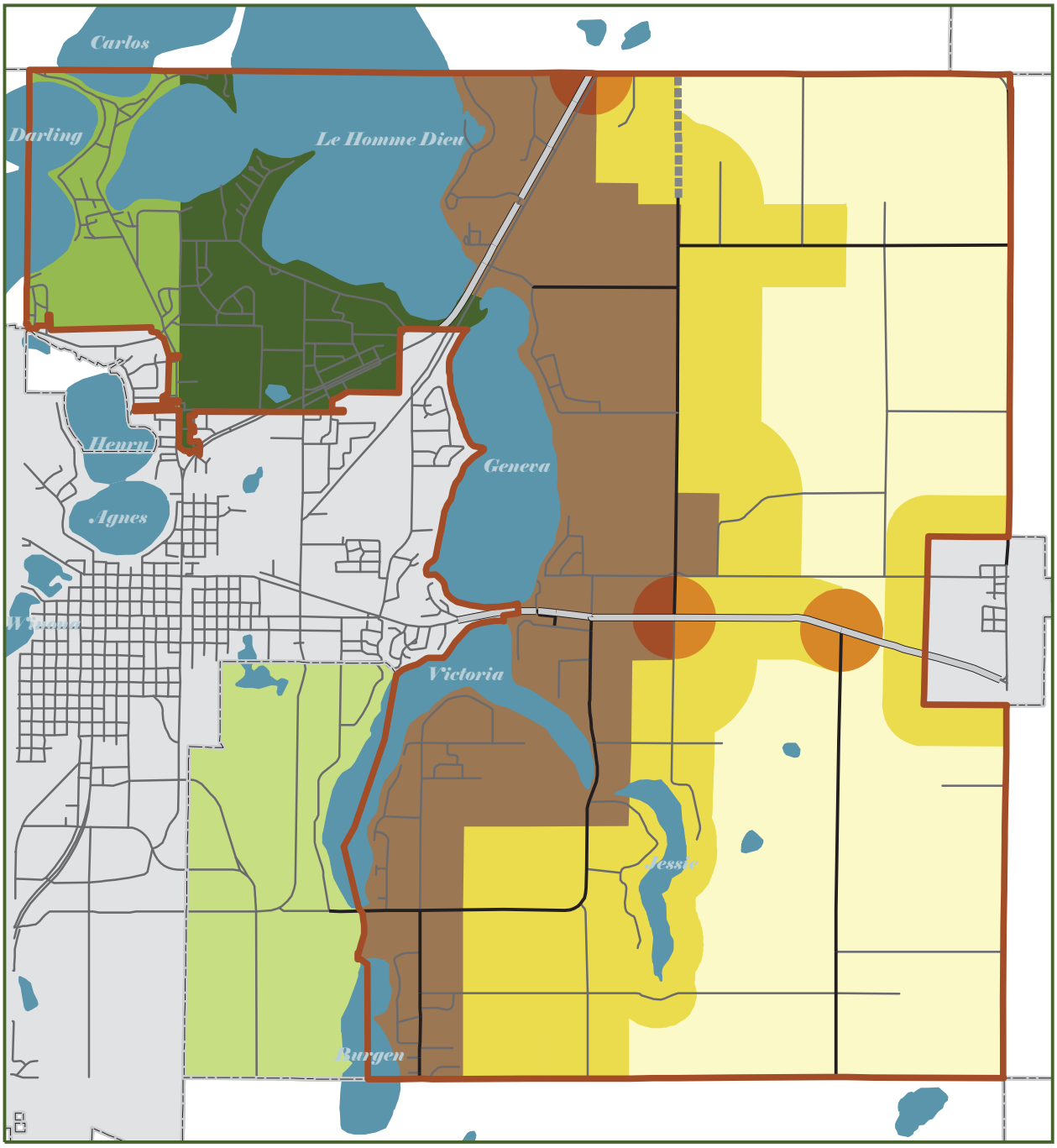
What is a conservation subdivision?

The basic premise of a conservation subdivision is to place homes on relatively small parcels of land on a relatively small portion of the property, while preserving the unique natural and cultural features of the property. By contrast, a traditional "lot/block" subdivision lays a "grid" of private lots and roads over the entire property that is more likely to degrade the unique features that made the property desirable in the first place. A conservation subdivision can have several advantages:

- Allowing homes to be placed on smaller lots that do not require as much upkeep
- Reduced road and infrastructure construction and maintenance costs
- The ability to preserve the most desirable portions of the property as a scenic amenity
- Protection of sensitive natural resources

Future Land Use



Future Land Use

- Rural Conservation Residential
- Transition Residential
- Urban Residential
- Rural Commercial/Industrial
- Urban Commercial/Industrial
- Annexation Phase II (Completed Jan. 2006)
- Annexation Phase III (2009 - 2011)
- Annexation Phase IV (2012 - 2014)

Future Road Classification

- Minor Arterial
- Major Collector
- Other Road
- Proposed Future Road

0 0.5 1
Miles

COMMUNITY GROWTH INSTITUTE

Prepared June 2006
Sources: Minnesota Department of Transportation, Minnesota Department of Natural Resources, Citizens of Alexandria Township

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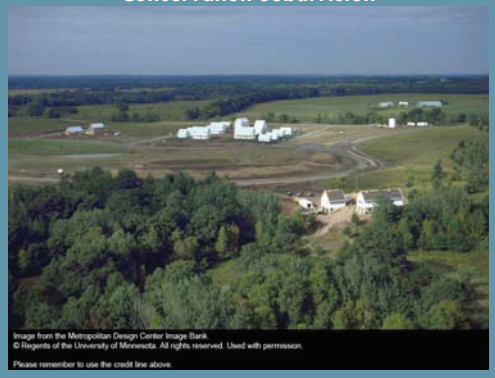
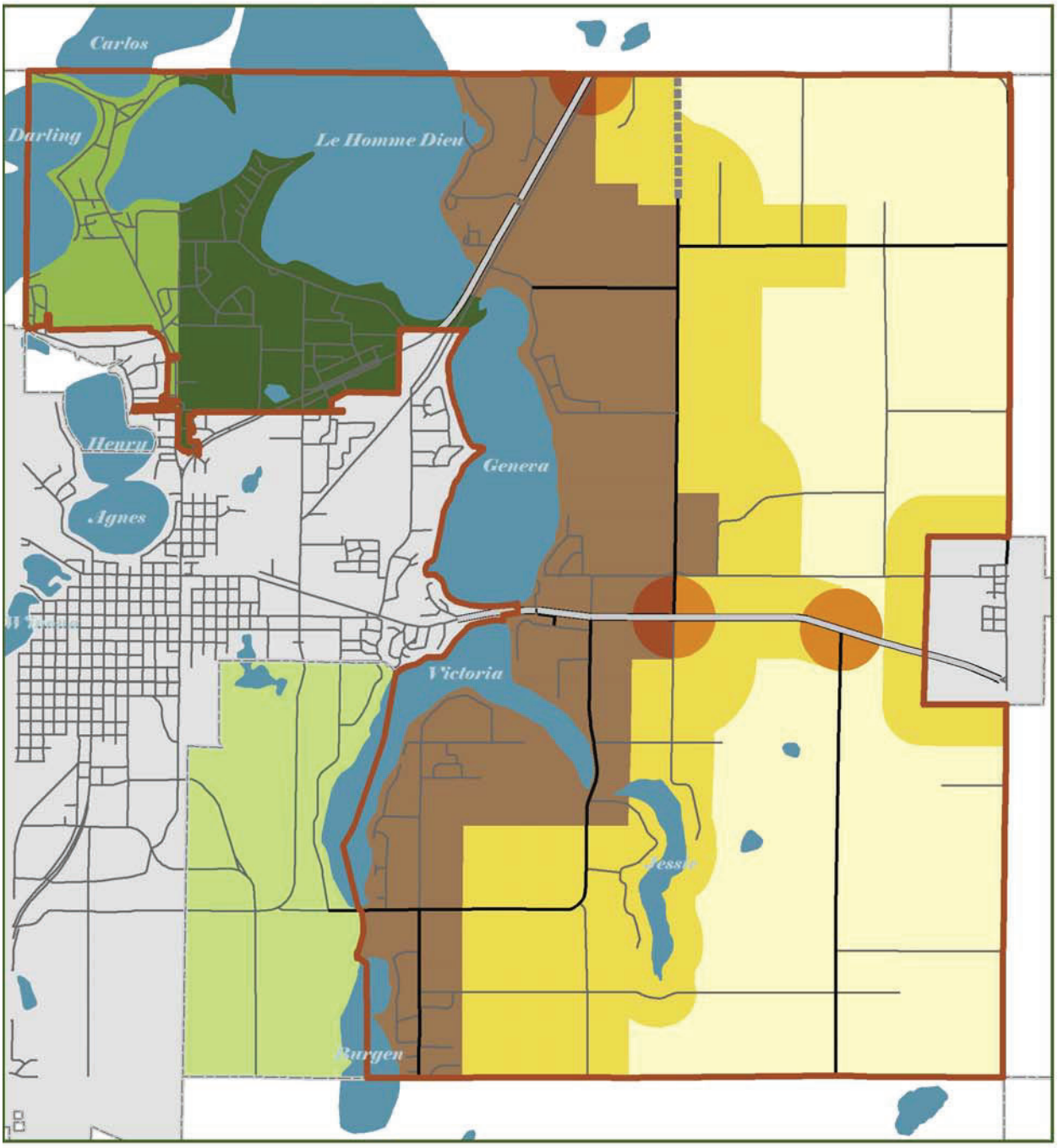
Traditional Subdivision

Conservation Subdivision



Future Land Use



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- Major Collector
- Other Road
- Proposed Future Road

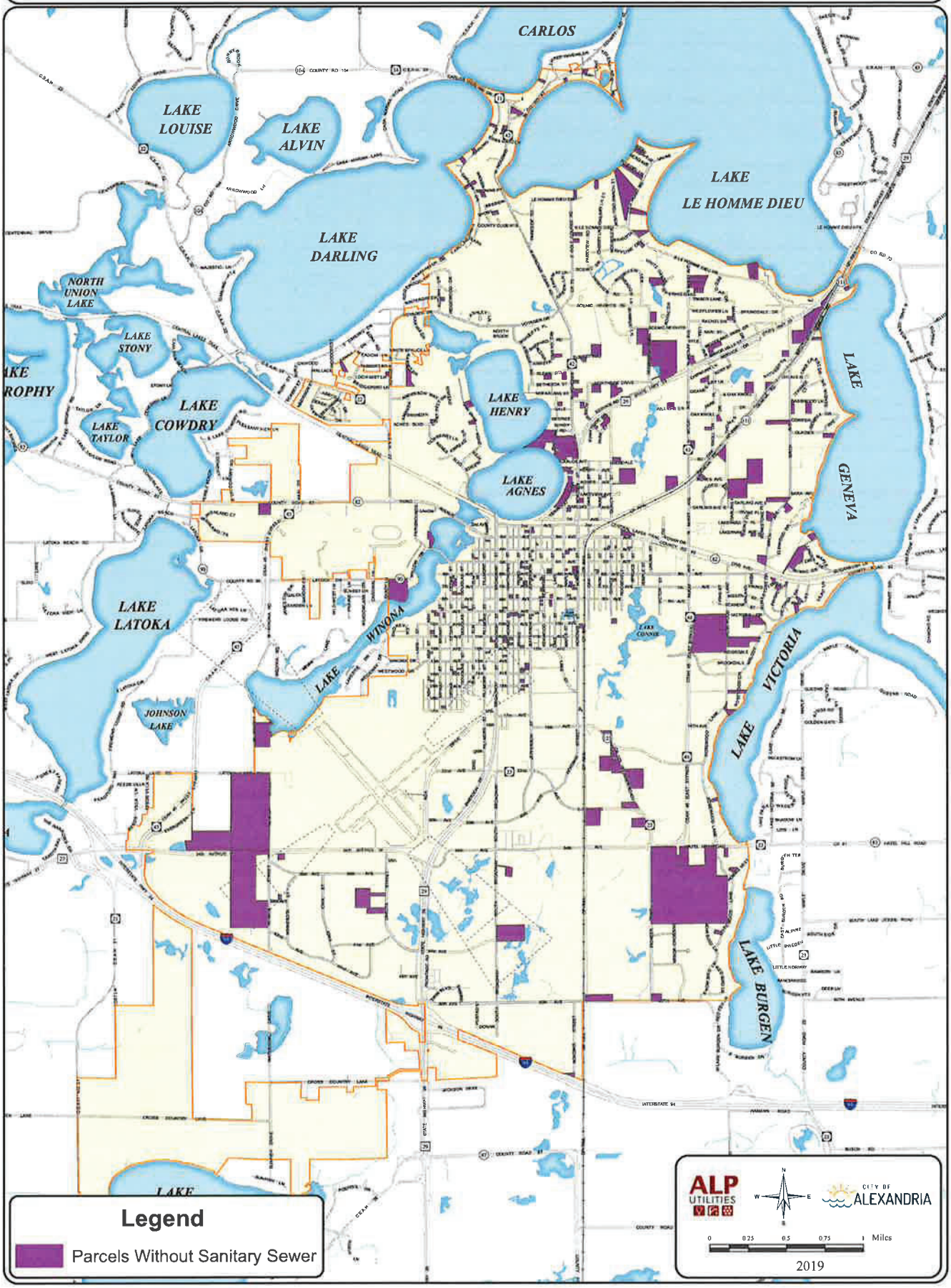
0 0.5 1
Miles

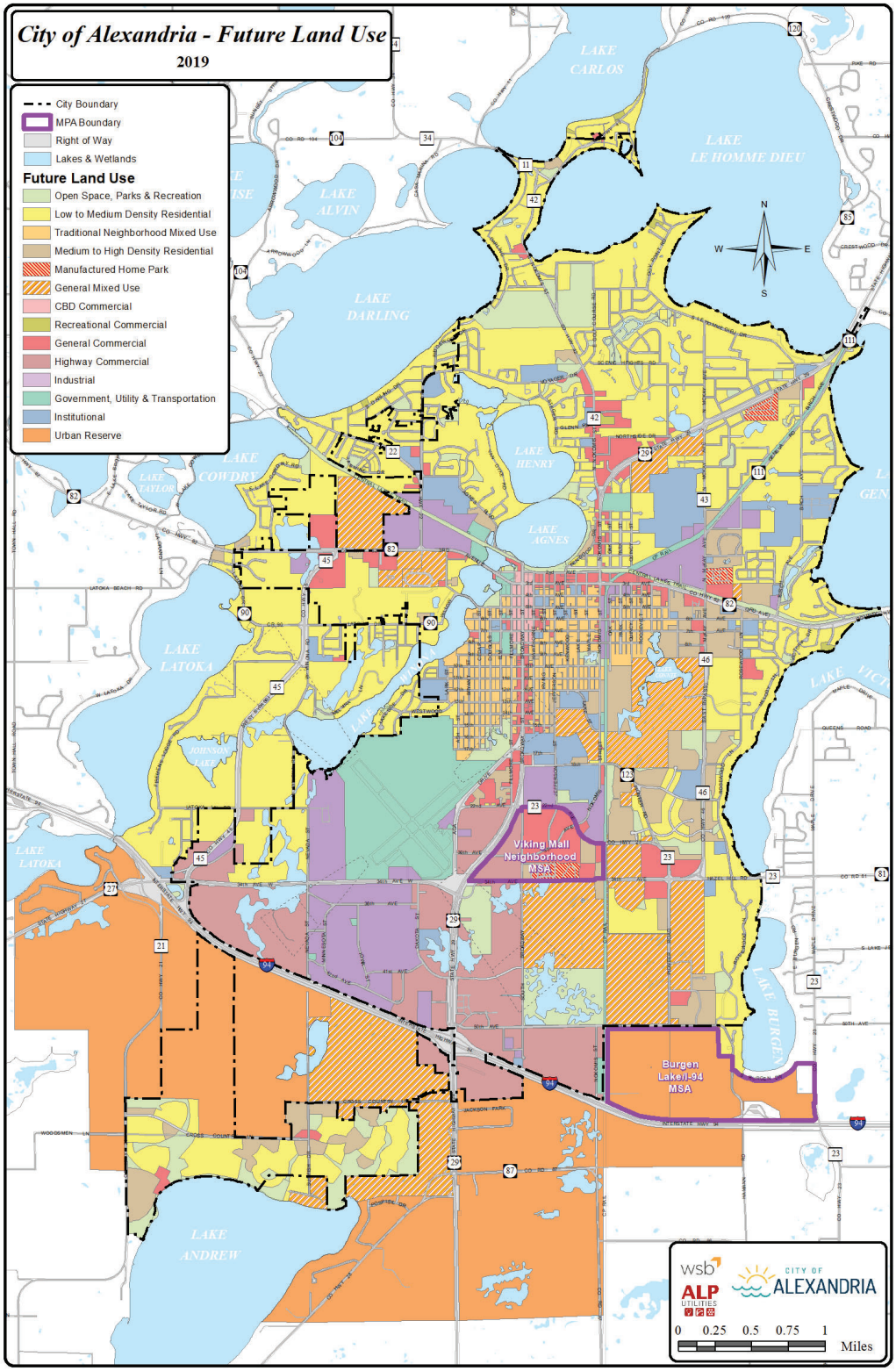
Community Growth Institute

Prepared June 2006
Sources: Minnesota Department of Transportation, Minnesota Department of Natural Resources, Citizens of Alexandria Township

City of Alexandria

Parcels with Electric but without Sanitary Sewer




City of Alexandria - Future Land Use
2019
City Boundary
MPA Boundary
Right of Way
Lakes & Wetlands
Future Land Use
Open Space, Parks & Recreation
Low to Medium Density Residential
Traditional Neighborhood Mixed Use
Medium to High Density Residential
Manufactured Home Park
General Mixed Use
CBD Commercial
Recreational Commercial
General Commercial
Highway Commercial
Industrial
Government, Utility & Transportation
Institutional
Urban Reserve
LAKE CARLOS
LAKE LE HOMME DIEU
LAKE ALVIN
LAKE DARLING
LAKE HENRY
LAKE COWDRY
LAKE AGNES
LAKE LATOKA
LAKE ANDREW
LAKE BURGEN
Viking Mall Neighborhood MSA
Burgen Lake/I-94 MSA
N
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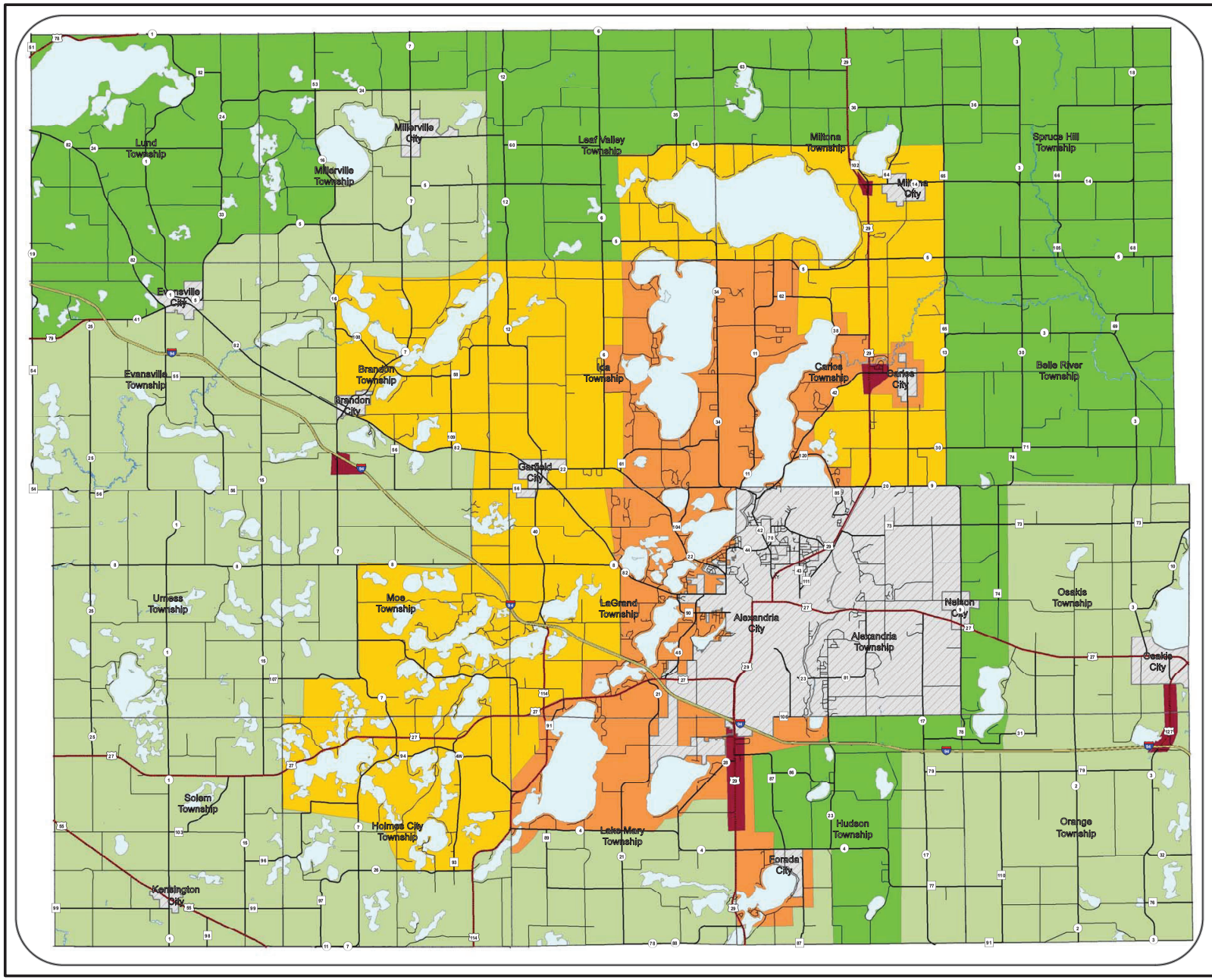
ALP UTILITIES
CITY OF ALEXANDRIA
0 0.25 0.5 0.75 1
Miles

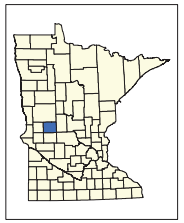


DOUGLAS COUNTY
Comprehensive Plan

Figure 5-2: Future Land Use

Road Centerline
Road Type
- Interstate
- State
- County
- Other

Future Land Use
Land Use Type
- Agriculture Core
- Agriculture Limited
- Rural Residential
- Residential
- Commercial Light Industrial
- Municipalities
- Water



CREATED BY: DOUGLAS COUNTY SURVEY AND GIS

Date: 8/4/2011

Appendix C: NPDES Permit

MINNESOTA POLLUTION CONTROL AGENCY

National Pollutant Discharge Elimination System/State Disposal System

MN0040738

Permittee:	Alexandria Lake Area Sanitary District
Facility name:	Alexandria Lakes Area Sanitary District Wastewater Treatment Facility
Receiving water:	Lake Winona - Class 2B, 3C, 4A, 4B, 5, 6 water
City:	Alexandria **County:** Douglas
Issuance date:	November 15, 2020
Expiration date:	October 31, 2025

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with the U.S. Clean Water Act, Minnesota statutes and rules, and federal laws and regulations.

Although this permit is effective on the issuance date identified above, the limits and monitoring requirements are not effective until December 01, 2020. This permit expires at midnight on the expiration date identified above.

Signature: Paul C. Scheirer

This document has been electronically signed.

for the Minnesota Pollution Control Agency

Paul C. Scheirer
Supervisor
Northeast/Northwest Regional Unit
Municipal Division

Submit eDMRs
Submit via the MPCA e-Services at
https://rsp.pca.state.mn.us/TEMPO_RSP/Orchestrate.do?initiate=true

Submit WQ reports to:

Electronically: wq.submittals.mpca@state.mn.us
Include *Water quality submittals form*:
https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-71.docx

Or, by mail:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Whole Effluent Testing (WET) and Pretreatment Annual Reports must be mailed to the WQ Submittals Center

Questions on this permit?
For eDMR and other permit reporting issues, use the directory listed at the bottom of the DMR page:
https://www.pca.state.mn.us/water/discharge-monitoring-reports

For specific permit requirements, contact your compliance staff:
https://www.pca.state.mn.us/water/wastewater-compliance-and-enforcement-staff-contacts

Wastewater Permit Program general questions, contact:
MPCA, 651-282-6143 or 1-800-657-3938.

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1. Permitted facility description

The Alexandria Lake Area Sanitary District Facility (Facility) is located at 2201 Nevada St SW, Alexandria, Minnesota 56308-9152, Douglas County.

The existing Facility consists of a main lift station, force main, influent screening, screenings washing and compaction, vortex grit removal and grit washing, two primary settling tanks, three fine pore ceramic diffuser aeration tanks, three secondary clarifiers, cloth media tertiary filtration, chlorination tanks, dissolved air flotation thickening of waste activated sludge, four aerobic digesters, centrifuge dewatering, and outfall pipeline. There are no known bypass points for the wastewater collection/treatment system. This is a Class A Facility.

The Facility has a continuous discharge (SD 001) to Lake Winona (Class 2B, 3C, 4A, 4B, 5, 6 water), and has an average wet weather design flow of 4,700,000 gallons per day (gpd), with a five-day carbonaceous biochemical oxygen demand strength of 7,100 pounds per day (lbs/d). The system is also designed to treat up to 6,000 lbs/d of total suspended solids, 210 lbs/d of total phosphorus, and 470 lbs/d of ammonia nitrogen.

The collection system has 222 miles of gravity sewer, 52 miles of force main sewer, 119 lift stations, 48 grinder stations and 124 grinder residential systems.

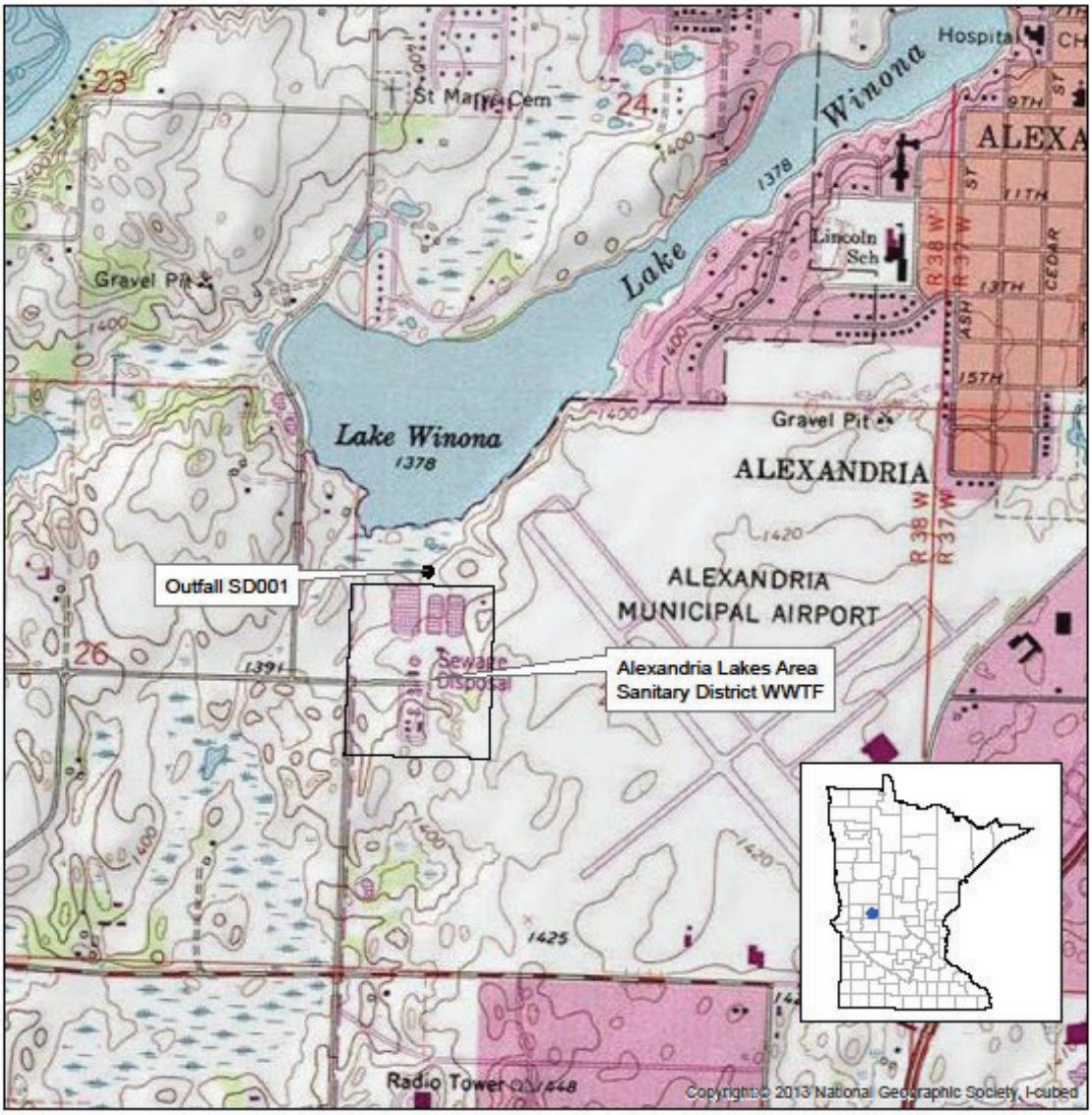
Changes to the facility may result in an increase in pollutant loading to surface waters or other causes of degradation to surface waters. If a change to the facility will result in a net increase in pollutant loading or other causes of degradation that exceed the maximum loading authorized through conditions specified in the existing permit, the changes to the facility are subject to antidegradation requirements found in Minn. R. 7050.0250 to 7050.0335.

This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by Minn. R. 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.]

2. Location map of permitted facility

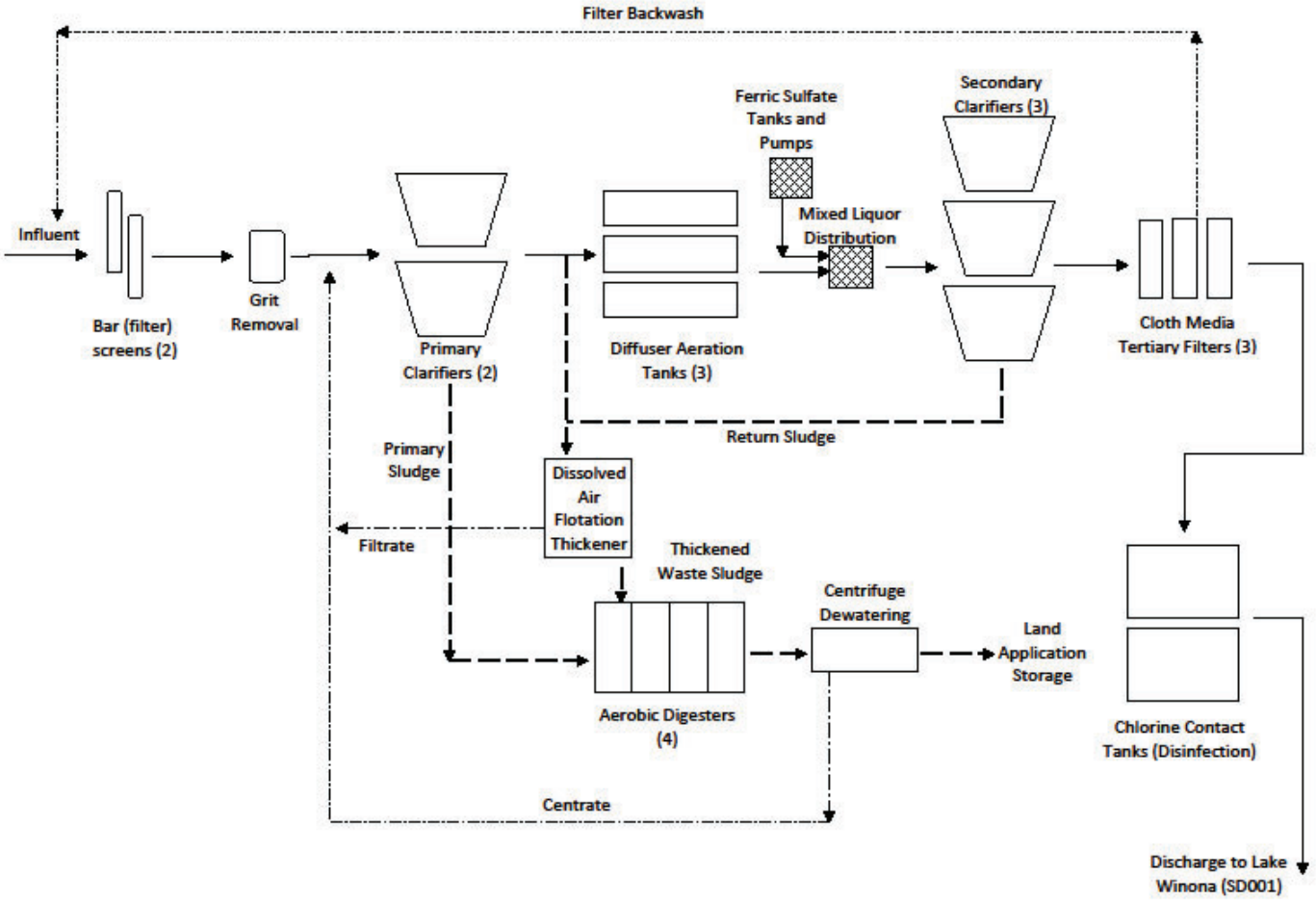
Topographic Map of Permitted Facility
MN0040738: ALASD Wastewater Treatment Facility
T128N, R38W, Section 25
Alexandria, Douglas County, Minnesota



Map produced by: MPCA Staff, 1/17/2018
Scale: 1:15,854

0 0.15 0.3 0.6 Miles

3. Flow diagram



4. Summary of stations and station locations

Station	Type of station	Local name	PLS location
SD 001	Effluent To Surface Water	Surface Water Discharge	T128N, R38W, S25, NW Quarter
SW 001	Lake/Reservoir	Lake Winona - Northeast Site	T128N, R38W, S24
SW 002	Lake/Reservoir	Lake Winona - Southwest Site	T128N, R38W, S25
SW 003	Lake/Reservoir	Lake Agnes	T128N, R38W, S25
WS 001	Influent Waste	Influent Waste Stream	T128N, R38W, S25, NE Quarter of the SW Quarter

5. Permit requirements

SD 001	Effluent To Surface Water	
		Surface Discharge: Class A Major Facility Effluent Requirements
	5.1.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.3	Samples for Station SD 001 shall be collected from the outlet control structure prior to mixing with the receiving water. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
		Priority Pollutant Requirements
	5.2.5	The Permittee shall monitor the effluent three times in the life of the permit for the following specified priority pollutants. Sampling events shall occur before the second, third, and fourth year following permit issuance and shall not be less than one year apart. Monitoring shall be for the organic priority pollutants identified under the volatile, acid, base/neutral, and pesticide fractions using EPA methods 624, 625 and 608 (40 CFR Part 136, October 25, 1984) as listed in Table II of 40 CFR Part 122, Appendix D or any updates to those methods. The following priority pollutant total metals shall also be monitored using EPA methods found in Table IB of the current version of 40 CFR Part 136: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, and zinc. In addition, the Permittee shall monitor for total cyanide, total phenolic compounds, and hardness (total as CaCO3) using methods approved in the most recent update of 40 CFR part 136. Total Mercury shall be monitored by EPA method 1631E or the most recent update to this method, if not already required by the permit. Reporting limits for Priority Pollutant analyses shall be as close as analytically possible to the Class 2B chronic water quality standards. Total cyanide shall be monitored to the free cyanide water quality standard. The chromium reporting limit shall meet the chromium +6 water quality standard. [Minn. R. 7001]
	5.2.6	The Permittee shall submit the first priority pollutant monitoring report : Due 1095 calendar days before Permit Expiration Date. (By two years after permit issuance date). [Minn. R. 7001]
	5.2.7	The Permittee shall submit the second priority pollutant monitoring report : Due 730 calendar days before Permit Expiration Date. (By three years after permit issuance date). [Minn. R. 7001]
	5.2.8	The Permittee shall submit the third priority pollutant monitoring report : Due 365 calendar days before Permit Expiration Date. (By four years after permit issuance date). [Minn. R. 7001]
		Chronic Toxicity Requirements
	5.3.9	General Requirements. [Minn. R. 7001]
	5.3.10	This permit does not include a chronic whole effluent toxicity limit; however the facility has a whole effluent toxicity testing monitoring requirement is required to conduct chronic toxicity tests for Surface Discharge Station SD 001. Results of chronic toxicity tests will be evaluated against a monitoring threshold value of 1.0 TUc. [Minn. R. 7001]

	5.3.11	The Permittee shall submit annual chronic test battery results, the first test is due 6 months after Permit issuance and annually thereafter. The Permittee shall submit annual chronic toxicity test battery results : Due 180 calendar days after Permit Issuance Date annually. [Minn. R. 7001]
	5.3.12	Any test that exceeds 1.0 TUc shall be re-tested according to the Positive Toxicity Results requirement(s) that follow to determine if toxicity is still present above 1.0 TUc (RWC< 100). [Minn. R. 7001]
	5.3.13	Species and Procedural Requirements. [Minn. R. 7001]
	5.3.14	Any test that is begun with an effluent sample that exceeds a total ammonia concentration of 5 mg/l may use the carbon dioxide-controlled atmosphere technique to control pH drift. [Minn. R. 7001]
	5.3.15	Test organisms for each test battery shall include the fathead minnow (Pimephales promelas)-Method 1000.0 and Ceriodaphnia dubia-Method 1002.0. [Minn. R. 7001]
	5.3.16	Static renewal chronic serial dilution tests of the effluent shall consist of a control 6, 12, 25, 50 and 100% effluent. A 100% Receiving Water Concentration (RWC) may be substituted for the 100% effluent concentration or provided in addition to the above dilution series. [Minn. R. 7001]
	5.3.17	All effluent samples shall be flow proportioned 24-hour composite samples. Test solutions shall be renewed daily. Testing of the effluent shall begin within 36 hours of sample collection. Receiving water collected outside of the influence of discharge shall be used for dilution and controls. Chronic toxicity tests shall be conducted in accordance with procedures outlined in EPA-821-R-02-013 "Short-term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" - Fourth Edition (Chronic Manual) and any revisions to the Manual. [Minn. R. 7001]
	5.3.18	Any other circumstances not addressed in the previous requirements or that require deviation from that specified in the previous requirements shall first be approved by the MPCA. [Minn. R. 7001]
	5.3.19	Quality Control and Report Submittals. [Minn. R. 7001]
	5.3.20	Any test that does not meet quality control measures, or results which the Permittee believes reflect an artifact of testing shall be repeated within two (2) weeks. These reports shall contain information consistent with the report preparation section of the Chronic Manual. The MPCA shall make the final determination regarding test validity. [Minn. R. 7001]
	5.3.21	Positive Toxicity Result for WET. [Minn. R. 7001]
	5.3.22	Should a test exceed 1.0 TUc for whole effluent toxicity based on results from the most sensitive test species, the Permittee shall conduct two repeat test batteries on all species. The repeat tests are to be completed within forty-five (45) days after completion of the positive test. These tests will be used to determine if toxicity exceeding 1.0 TUc remains present for any test species. For both retests, if no toxicity is present above 1.0 TUc for any test species, the Permittee shall return to the test frequency specified by the permit. If either of the repeat test batteries indicate toxicity above 1.0 TUc for any test species, the Permittee shall submit for MPCA review and approval a plan for conducting a Toxicity Reduction Evaluation (TRE), including the Facility Performance Review within 60 days after toxicity discovery date. Upon approval of the TRE Plan, the Permittee shall implement the plan or subsequent amendments in its entirety. Any violations of the plan are violations of this permit. In addition, the Permittee shall provide quarterly reports, starting from the date of the TRE plan submittal. The quarterly reports shall include but not be limited to, a complete description of all progress made towards the identification of the source(s) of toxicity, and the Permittee's plans for the removal of the toxicity. The TRE shall be consistent with EPA guidance or subsequent procedures approved by the MPCA in attempting to identify and remove the source of the toxicity. Routinely scheduled chronic toxicity test batteries required in this permit section shall be suspended for the duration of the TRE. At the conclusion of the TRE process, the Permittee must submit a request to the MPCA to discontinue the TRE. The MPCA shall review the request and decide whether or not the TRE will be discontinued. If the MPCA discontinues a TRE, the MPCA may set conditions to be met by the Permittee based on the TRE results. [Minn. R. 7001]

	5.3.23	Following successful completion of the TRE the Permittee shall conduct biannual testing for the next five year permit cycle. [Minn. R. 7001]
	5.3.24	WET Data and Test Acceptability Criteria (TAC) Submittal. [Minn. R. 7001]
	5.3.25	All WET test data and TAC must be submitted to the MPCA by the dates required by this section of the permit using both the Minnesota Pollution Control Agency Ceriodaphnia dubia Chronic Toxicity Test Report and the Minnesota Pollution Control Agency Fathead Minnow Chronic Toxicity Test Report and associated instruction forms. Data not submitted on the correct form(s), or submitted incomplete, will be returned to the permittee and deemed incomplete until adequately submitted on the designated form (identified above). These are legal forms and must be signed and dated by the Permittee. Data should be submitted to: MPCA Attn: WQ Submittals Center 520 Lafayette Road North St. Paul, Minnesota 55155-4194. [Minn. R. 7001]
	5.3.26	Permit Re-opening for WET. [Minn. R. 7001]
	5.3.27	Based on the results of the testing, the permit may be modified to include additional toxicity testing and a whole effluent toxicity limit. [Minn. R. 7001]
	5.3.28	Whole Effluent Toxicity Requirement Definitions. [Minn. R. 7001]
	5.3.29	"Chronic Whole Effluent Toxicity (WET) Test is a static renewal test conducted on an exponentially diluted series of effluent. The purpose is to calculate appropriate biological effect endpoints (NOEC or IC25), specified in the referenced chronic manual. A statistical effect level less than the Receiving Water Concentration (RWC) constitutes a positive test for chronic toxicity. The RWC equals the 100 percent effluent concentration or 1.0 TUc. [Minn. R. 7001]
	5.3.30	"Chronic toxic unit (TUc)" is the reciprocal of the effluent dilution that causes no unacceptable effect on the test organisms by the end of the chronic exposure period. For example, a TUc equals [7Q10flow (mgd) + effluent average dry weather flow (mgd)]/[effluent average dry weather flow (mgd)]. [Minn. R. 7001]
	5.3.31	"Test" refers to an individual species. [Minn. R. 7001]
	5.3.32	"Test Battery" consists of WET testing of all test species for the specified test. For chronic WET testing, all test species includes fathead minnows and Ceriodaphnia Dubia. [Minn. R. 7001]
		Facility Specific Requirements
	5.4.33	The mass limits for BOD, carbonaceous 05 day (20 Deg C) and solids, total suspended (TSS) are based on the 1988 design flow of 2.987 million gallons per day (mgd). These limits are subject to antidegradation requirements found in Minn. R. 7050.0250 to Minn. R. 7050.0335. [Minn. R. 7001]
	5.4.34	Parameters that have a monitoring frequency of once per quarter and an effective period of Mar, Jun, Sep, Dec may be taken any time during that calendar quarter but must be reported on the designated month's eDMR (e.g. the sample for the first calendar quarter of Jan-Mar will be reported on the March eDMR). The interim and final total phosphorus limits as well as the alternate and final total chloride limits have been assigned phases in the limits and monitoring table. These phases are assigned to trigger and turn off the effective start and end dates of the interim/alternate and final effluent limits for eDMR reporting purposes. Because there are multiple date possibilities associated with the total phosphorus limits, combined with the alternate and final chloride limit effective dates, multiple phases have been assigned. [Minn. R. 7001]
	5.4.35	**Salty Discharge Monitoring Requirements** Industrial and municipal facilities that have a stream to effluent dilution ratio of less than 5:1 or that have salty waste streams from concentrated treatment technologies (e.g. reverse osmosis, ion exchange, membrane filtration, cooling tower blowdown, etc.) or that have food processing industries using density based (saline) sorting processes are required to complete the analyses for

		the following salty discharge parameters: chloride, calcium and magnesium hardness as $CaCO_3$, specific conductance, total dissolved salts (solids), sulfates as SO_4 , bicarbonates (HCO_3), sodium, calcium, magnesium, and potassium. The Facility receives process wastewater from six significant industrial users of which the principal product or raw materials being used triggers the requirement to monitor for salty discharge parameters. A reasonable potential analysis was completed as part of this permit reissuance process and determined that the Facility's effluent has reasonable potential to exceed water quality standards for total chloride, total dissolved solids (TDS), specific conductance, and bicarbonates (HCO_3). The data review concluded that the Facility is a good candidate for chloride linkage; by using chloride linkage, the Facility will receive alternate and final effluent limits for total chloride only. Compliance with total chloride effluent limits will be protective of all other salty parameter final effluent limits. A variance schedule addressing the total chloride limits is included below in the permit. Continued monitoring for the remaining parameters, excluding sulfate, has been included in the permit at a frequency of once per quarter (previous monitoring was required on a monthly basis). Monitoring for sulfate has been discontinued. [Minn. R. 7001]
	5.4.36	The total residual chlorine limit is applicable whenever chlorine is added. Samples shall be analyzed immediately (within 15 minutes or less of sample collection). [Minn. R. 7001]
SW 001	Lake/Reservoir	
		Facility Specific Limit and Monitoring Requirements
	5.5.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.3	Samples for Station SW 001 shall be collected at the Northeast Site of Lake Winona. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 002	Lake/Reservoir	
		Facility Specific Limit and Monitoring Requirements
	5.6.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.3	Samples for Station SW 002 shall be collected at the Southwest Site of Lake Winona. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 003	Lake/Reservoir	
		Facility Specific Limit and Monitoring Requirements
	5.7.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.7.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.7.3	Samples for Station SW 003 shall be collected from the center of Lake Agnes. [Minn. R. 7001.0150, Subp. 2(B)]

	5.7.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
WS 001	Influent Waste	
		Waste Stream: Class A Major Facility Influent Requirements
	5.8.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.8.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.8.3	Samples for Station WS 001 shall be collected at a point representative of total influent flow to the system. [Minn. R. 7001.0150, Subp. 2(B)]
	5.8.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
		Facility Specific Requirements
	5.9.5	Parameters that have a monitoring frequency of once per quarter and an effective period of Mar, Jun, Sep, Dec may be taken any time during that calendar quarter but must be reported on the designated month's eDMR (e.g. the sample for the first calendar quarter of Jan-Mar will be reported on the March eDMR). [Minn. R. 7001]
MN0040738	Alexandria Lake Area Sanitary District	
		Surface Discharge Station General Requirements
	5.10.1	Analysis Requirements. [Minn. R. 7001]
	5.10.2	If the Permittee is required to monitor for the following parameters, dissolved oxygen, pH, temperature and total residual chlorine, the analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7053]
	5.10.3	Representative Samples. [Minn. R. 7001]
	5.10.4	Samples and measurements required by this permit shall be representative of the monitored activity. [Minn. R. 7001]
	5.10.5	Surface Discharge Prohibitions. [Minn. R. 7001]
	5.10.6	Floating solids or visible foam shall not be discharged in other than trace amounts. [Minn. R. 7001]
	5.10.7	Oil or other substances shall not be discharged in amounts that create a visible color film. [Minn. R. 7001]
	5.10.8	The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion. [Minn. R. 7001]
	5.10.9	Winter Sampling Conditions. [Minn. R. 7001]
	5.10.10	The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR. [Minn. R. 7001]
	5.10.11	Chlorine Addition Requirements. [Minn. R. 7001]
	5.10.12	If chlorine is added for any purpose, the Permittee shall monitor the discharge for Total Residual Chlorine once per day during chlorine usage. The Permittee shall report the monitoring data as a comment on the next submitted Discharge Monitoring Report for the affected station. The discharge shall not exceed a 0.038 mg/L Total Residual Chlorine limit. [Minn. R. 7001]
	5.10.13	Phosphorus Limits and Monitoring Requirements. [Minn. R. 7001]

	5.10.14	Phosphorus Calculation Definitions. [Minn. R. 7001]
	5.10.15	"12-Month Moving Total" is a rolling total. To calculate, for each month multiply the total volume of effluent flow (MG) by the monthly average concentration and by a 3.785 conversion factor to get kg/month. Then add all of the monthly values (kg/mo) during the last twelve months, starting with the monthly total for the month of the current reporting period. [Minn. R. 7001]
	5.10.16	Mercury Limits and Monitoring Requirements. [Minn. R. 7001]
	5.10.17	Permittees are required to sample for TSS (grab sample) at the same time that Total/Dissolved Mercury samples are taken. Total Mercury, Dissolved Mercury, and TSS (grab sample) samples shall be collected via grab samples. All results shall be recorded on DMRs. [Minn. R. 7001]
	5.10.18	Total and Dissolved Mercury samples shall be analyzed using the most current versions of EPA Method 1631 with clean techniques method 1669. Should another mercury analytical method that has a reportable quantitation level of <0.5 ng/L that allows for low-level sample characterization be approved by the EPA and certified by an MPCA recognized accreditation body, the method may be used in place of 1631/1669. [Minn. R. 7001]
	5.10.19	Mercury monitoring with a frequency of once per month and an effective period of May, Sep, are to be taken once during the month of May and once during the month of September for a total of two samples per year. [Minn. R. 7001]
	5.10.20	Nitrogen Limits and Monitoring Requirements. [Minn. R. 7001]
	5.10.21	"Total Nitrogen" is to be reported as the summation of the Total Kjeldahl Nitrogen and Total Nitrite plus Nitrate Nitrogen values. [Minn. R. 7001]
		Surface Water Station General Requirements
	5.11.22	Analysis Requirements. [Minn. R. 7001]
	5.11.23	If the Permittee is required to monitor for the following parameters, dissolved oxygen, pH, temperature and total residual chlorine, the analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7053]
	5.11.24	Sampling Protocol. [Minn. R. 7001]
	5.11.25	Samples shall be taken at mid-stream, mid-depth. Record location, date, time and results for each sample on the supplemental Discharge Monitoring Report form. [Minn. R. 7001]
	5.11.26	All instruments used for field measurements shall be maintained and calibrated to insure accuracy of measurements. [Minn. R. 7001]
	5.11.27	Sample water shall be preserved according to lab instructions and delivered to a certified lab within the maximum holding times. [Minn. R. 7001]
	5.11.28	Winter Sampling Conditions. [Minn. R. 7001]
	5.11.29	The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Flow" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR. [Minn. R. 7001]
		Waste Stream Station General Requirements
	5.12.30	Analysis Requirements. [Minn. R. 7001]
	5.12.31	If the Permittee is required to monitor for the following parameters, dissolved oxygen, pH, temperature and total residual chlorine, the analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7053]
	5.12.32	Representative Samples. [Minn. R. 7001]
	5.12.33	Grab and composite samples shall be collected at a point representative of total influent flow to the system. [Minn. R. 7001]
	5.12.34	Nitrogen Limits and Monitoring Requirements. [Minn. R. 7001]
	5.12.35	"Total Nitrogen" is to be reported as the summation of the Total Kjeldahl Nitrogen and Total Nitrite plus Nitrate Nitrogen values. [Minn. R. 7001]
		Compliance Construction Schedule
	5.13.36	Definitions. [Minn. R. 7001]

	5.13.37	"Initiation of operation" means the date that MPCA determines all components of the wastewater treatment system are complete and functioning and the project begins operating for the purposes for which it was planned, designed, and built. [State Definitions]
	5.13.38	"Completion of construction" means all the construction is complete except for minor weather-related components and conforms to the approved plans and specifications and change orders. [State Definitions]
	5.13.39	"Notice to proceed" means a written notice given by the Permittee to the contractor that affixes the contract effective date and the date that the contractor begins performing the work specified in the contract documents. [State Definitions]
	5.13.40	**Background Information: Water Quality Based Effluent Limit (WQBEL) for Total Phosphorus.** [Minn. R. 7001]
	5.13.41	The MPCA previously calculated the effluent limits for total phosphorus (TP) for this Facility based on the existing state water quality standard for shallow lakes under Minn. R. 7050.0222, subp. 3. As a result, the final total phosphorus effluent limits established in the previous permit were 0.121 milligrams per liter (mg/L) and 526 kilograms per year (kg/yr). Following the U.S. Environmental Protection Agency's (U.S. EPA) June 12, 2014, approval of a new Site Specific Standard (SSS) for Lake Winona, the final total phosphorus effluent limits have been updated to 0.157 mg/L and 665 kg/yr. If all lake management activities are unsuccessful and/or a determination of construction is needed, or desired by the Permittee, the final limits must be met as soon as possible, but no later than December 31, 2032. Depending on actions taken by the Permittee, the permit will be modified or reissued to remove or replace interim or final limits as described below. Upon permit issuance, the Permittee is required to meet an interim total phosphorus effluent limit of 0.25 mg/L as a calendar month average and 1087 kg/yr. The interim limit was calculated to ensure there is not an increase in total phosphorus concentrations during the term of the schedule of compliance. In lieu of constructing to meet the total phosphorus effluent limit, the Permittee has agreed, and obtained funding through the 2018 Minnesota Legislative Session to perform Adaptive Lake Management Plan activities which are intended to control the carp population and achieve water quality targets for Chlorophyll-a and transparency in Lake Winona and downstream in Lake Agnes. Adaptive Lake Management Plan activities include the tracking, tagging, and removal of common carp from Lake Winona and, if necessary, a drawdown of Lake Winona to promote the re-establishment of rooted aquatic vegetation. If re-vegetation is not occurring naturally and/or if carp bioturbation remains excessive, the Permittee plans to hold a public meeting during this permit cycle to vote on a drawdown of Lake Winona in order to promote the growth of rooted aquatic vegetation, with the ultimate goal of achieving in-lake attainment of chlorophyll-a and transparency water quality standards. Should the Lake Winona lakeshore property owners approve of a drawdown of Lake Winona, drawdown work would begin during the next permit cycle. Should the Lake Winona lakeshore property owners not approve of a drawdown of Lake Winona, the Permittee shall either begin construction of a new Facility or perform capital improvements to the existing Facility during the next permit cycle. Adaptive Lake Management Plan activities proposed for Lake Agnes include funding and performing an alum treatment. [Minn. R. 7001]
	5.13.42	During the first five-year permit cycle, the Permittee is required to concurrently continue the steps necessary to implement the Adaptive Lake Management Plan activities as well as prepare for a Facility upgrade as identified in the steps below. This will ensure that the Permittee is ready to proceed with and complete construction as soon as possible if it is found that the Adaptive Lake Management Plan activities will not result in the attainment of water quality standards in Lake Winona. If Adaptive Lake Management Plan activities are successful and there is confirmation that Lake Winona is meeting applicable water quality standards in a manner consistent with applicable regulations, the MPCA shall modify or reissue the permit to remove the limits and schedule of compliance established to comply with the draft Lake Winona Total Maximum Daily Load (TMDL) study (0.157 mg/L and 665 kg/yr) and instead make the interim total phosphorus effluent limits

		(0.25 mg/L and 1087 kg/yr) the final total phosphorus limit. The final total phosphorus effluent limits of 0.157 mg/L as a calendar month average and 665 kg/yr limit as a 12-month moving total will become effective as soon as possible, but in any case no later than December 31, 2032. The final phosphorus limits will become effective before December 31, 2032 if any of the following items occur: 1) if, after the first compliance schedule term, the Adaptive Lake Management activities are completed but water quality standards in Lake Winona are not met, the vote on a lake drawdown results in a "no", and the Permittee is required to either construct a new Facility or perform capital improvements to the existing Facility; OR if the Permittee chooses to bypass a public vote, thus not performing the drawdown and be required to either construct a new Facility or perform capital improvements to the existing Facility; then the final total phosphorus effluent limits shall be met by no later than December 31, 2030; or, 2) if the vote on a lake drawdown results in a "yes" and the Adaptive Lake Management activities are completed but water quality standards in Lake Winona are not met, then the final total phosphorus effluent limits shall be met by no later than December 31, 2032 by either construction of a new facility or capital improvements to the existing Facility. 3) should future water quality conditions in Lake Winona decline and the lake is no longer meeting applicable water quality standards, total phosphorus effluent limits may be re-evaluated and placed in a future reissued permit. In any case of items 1), 2), or 3), the permit will be modified or reissued to reflect the final effluent limits of 0.157 mg/L and 665 kg/yr or potentially in the case of 3) re-evaluated phosphorus limits. [Minn. R. 7001]
	5.13.43	**Schedule of Compliance.** [Minn. R. 7001]
	5.13.44	According to this schedule of compliance, the Permittee shall implement the Adaptive Lake Management Plan (Plan) submitted to MPCA on March 28, 2018. The Plan, for both Lake Winona and Lake Agnes, includes but is not limited to: 1) locations of monitoring, frequency, and parameters; and 2) a list of best management practices (BMPs) reviewed and approved by the MPCA; and 3) an operations and maintenance (O&M) manual for the BMPs with identification of who will be responsible for long-term monitoring and upkeep of the BMPs; and 4) an O&M budget for the adaptive management work upkeep for the next five, ten, and fifteen years after the lake management work is completed. The BMP monitoring records shall be kept on site for a minimum of three (3) years and be available upon request. BMPs being implemented for the purpose of the Plan are specific to the required phosphorus reductions needed to comply with this NPDES/SDS permit and are not available to generate potential phosphorus credits for any other environmental offset program. BMPs that have the potential to generate credits for other environmental services program such as carbon sequestration or wildlife habitat markets, may, subject to applicable policies and regulations, generate non-phosphorus credits. [Minn. R. 7001]
	5.13.45	Any BMPs not identified in the initial Plan submittal shall be incorporated into a Plan update and submitted to the MPCA for review prior to implementation and will be required to receive continual monitoring, maintenance, and record keeping. [Minn. R. 7001]
	5.13.46	The Permittee shall begin common carp population work which includes but may not be limited to capturing, tagging, and starting population estimates by December 1, 2019. [Minn. R. 7001]
	5.13.47	The Permittee shall initiate an alum treatment on Lake Agnes by December 1, 2020. [Minn. R. 7001]
	5.13.48	The Permittee shall submit to the MPCA a report on carp population estimates by December 1, 2020. [Minn. R. 7001]

	5.13.49	The Permittee shall design carp barriers for Lake Winona as soon as possible but no later than December 1, 2021. [Minn. R. 7001]
	5.13.50	The Permittee shall install carp barriers for Lake Winona as soon as possible but no later than December 1, 2022. [Minn. R. 7001]
	5.13.51	The Permittee shall complete the alum treatment on Lake Agnes as soon as possible but no later than December 1, 2023. [Minn. R. 7001]
	5.13.52	The Permittee shall complete planned removal of common carp from Lake Winona as soon as possible, but no later than March 31, 2023. Removal of carp may also occur in Lake Agnes depending on the locations of the carp during the winter months. [Minn. R. 7001]
	5.13.53	The Permittee shall begin vegetation monitoring in Lake Winona as soon as early spring ice-out of 2023. [Minn. R. 7001]
	5.13.54	The Permittee shall request placement on the Priority Project List for a potential facility upgrade as soon as possible, but no later than July 31, 2024. [Minn. R. 7001]
	5.13.55	If re-vegetation is not occurring naturally and/or if carp populations are still at an elevated level and a lake drawdown is necessary, the Permittee is to hold a public meeting with a vote on the drawdown of Lake Winona by the permit expiration date. The Permittee shall hold a meeting : Due by permit expiration. [Minn. R. 7001]
	5.13.56	The Permittee shall request placement on the Intended Use Plan (IUP) with the submittal of an amended Facility Plan per Minn. R. 7077, if seeking public funding, no later than March 1, 2025. If the Permittee is seeking public funding through other sources, a copy of any preliminary engineer report similar to a Facility Plan shall be submitted by the same time frame. Facility Plan amendment shall include a proposed schedule for construction for MPCA review and approval. This schedule for completion of plans and specifications and construction will be included in the future permit (2nd permit cycle). [Minn. R. 7001]
	5.13.57	The Permittee shall submit water quality monitoring data to determine compliance with the draft TMDL for Lake Winona as soon as possible, but no later than October 31, 2025. Water quality monitoring data should indicate whether the lake has met applicable water quality standards. If the lake has not met applicable water quality standards, the Permittee shall continue with the Route 2 construction work. The Permittee shall submit monitoring reports : Due by permit expiration. [Minn. R. 7001]
	5.13.58	The Permittee shall amend the previously submitted permit application for reissuance (that was submitted 180 days prior to permit expiration) with information identifying the selected route for compliance with the water quality standard, and submit by the permit expiration date. If at any time the Permittee selects either construction of a new Facility or capital improvements to the existing Facility as the chosen alternative, the Permittee can submit a permit application for a major modification to reflect a construction schedule and the previously required Adaptive Lake Management activity requirements will no longer be applicable and removed as permit requirements. If the Permittee elects to either construct a new Facility or perform capital improvements to the existing Facility to achieve the draft Lake Winona TMDL waste load allocations (WLA), any lake management activities and related requirements previously imposed via the permit or related plans, including any previously agreed to long-term monitoring, upkeep for BMPs or other lake management related activities identified and/or undertaken by the Permittee, will no longer be required or enforced through the Permit. The permit application documents shall identify the new facility components, if possible. If facility components are not known at the time of application submittal, an application for a major permit modification will be required six months prior to construction. If it has been determined that applicable water quality standards have been achieved without the need for a lake drawdown, the MPCA shall modify or reissue the permit to remove the 0.157 mg/L and 665 kg/yr to comply with the draft Lake Winona TMDL WLAs, and make the total phosphorus limits of 0.25 mg/L and 1087 kg/yr the new final total phosphorus limits. By successfully completing the Adaptive Lake Management Plan and Lake Winona meeting the applicable water quality standards, the total phosphorus limits outlined in the draft Lake Winona TMDL will no longer be reflective of the current water quality state resulting in the continuation of the 0.25

		mg/L and 1087 kg/yr total phosphorus limits. A major modification will be completed to remove the proposed final limits outlined in the draft Lake Winona TMDL and the permit will reflect the final limits of 0.25 mg/L and 1087 kg/yr. The Permittee shall submit permit application revisions : Due by permit expiration. [Minn. R. 7001]
	5.13.59	**Route 1: (2nd permit cycle) - If Lake Winona has not met applicable WQS the Permittee may proceed with this route:** If the result of the lake drawdown vote [requirement 5.13.55 above] is a "yes", the Permittee shall submit an update to the feasibility and cost analysis study, originally submitted on November 9, 2013, for the drawdown operation of Lake Winona, as soon as possible, but no later than one year after the permit issuance date. [Minn. R. 7001]
	5.13.60	If the result of the lake drawdown majority vote [completed as part of requirement 5.13.55 of this permit] is "yes" and determination of the need for a drawdown is justified, the Permittee shall complete installation of drawdown infrastructure and have obtained appropriate local, state, and federal permits as soon as possible, but no later than December 31, 2026. [Minn. R. 7001]
	5.13.61	The Permittee shall conduct the lake drawdown of Lake Winona no later than December 31, 2027. If documented conditions do not allow for a lake drawdown, the Permittee shall submit a report to the MPCA with a detailed explanation of why conditions did not support the drawdown no later than December 31, 2027. [Minn. R. 7001]
	5.13.62	If necessary, the Permittee shall conduct a second attempt at a drawdown no later than December 31, 2028. [Minn. R. 7001]
	5.13.63	If documented conditions for the first attempt at drawdown are successful, the Permittee shall submit annual drawdown and Adaptive Lake Management Plan progress reports within six (6) months following completion and again by June 30, 2029. If the second attempt is necessary, the Permittee shall submit annual drawdown and Adaptive Lake Management Plan progress reports within six (6) months following completion of the second drawdown effort. [Minn. R. 7001]
	5.13.64	The Permittee shall notify the MPCA by 6 months prior to permit expiration if the SSS for Lake Winona cannot be met and construction may be required. [Minn. R. 7001]
	5.13.65	If the Permittee demonstrates with data in a manner consistent with applicable regulations that the SSS for Lake Winona has been met, as soon as possible, but no later than December 31, 2030, then the MPCA shall modify or reissue the permit in the second permit cycle to remove the limits of 0.157 mg/L and 665 kg/yr associated with the draft Lake Winona TMDL and the total phosphorus limits of 0.25 mg/L and 1087 kg/yr will become the new final total phosphorus limit. Verification of this achievement shall be demonstrated in the form of a report submitted for review and approval by the MPCA by December 31, 2030. By successfully completing the Adaptive Lake Management Plan and Lake Winona meeting the applicable water quality standards, the total phosphorus limits outlined in the draft Lake Winona TMDL will no longer be reflective of the current water quality state resulting in the continuation of the 0.25 mg/L total phosphorus limit. [Minn. R. 7001]
	5.13.66	Note: If at any time the Permittee selects to either perform capital improvements to the existing Facility or construct a new Facility as the chosen compliance alternative, the Permittee shall submit a permit application for a major modification. The permit may then be modified to include a construction schedule and the previously permitted Adaptive Lake Management Activity requirements will no longer be applicable and removed as permit requirements. If the Permittee elects to either perform capital improvements to the existing Facility or construct a new Facility to achieve the SSS, any lake management activities and related requirements previously imposed via the permit or related plans, including any previously agreed to long-term monitoring, upkeep for BMPs or other lake management related activities and/or undertaken by the Permittee, will no longer be required or enforced through the permit. [Minn. R. 7001]
	5.13.67	**Route 2: Construction Option (2nd permit cycle)** If the result of the lake drawdown majority vote [completed as part of requirement 5.13.55 of this permit] is "no" or Adaptive Lake Management Activities cannot be completed or do not meet applicable water quality standards, the Permittee shall proceed per the MPCA approved Facility Plan amendment schedule for construction as identified in Section 5.13.56 of this Permit. Plans and specifications shall be submitted to the MPCA for the selected alternative 180 days after a

		final Intended Use Plan is available during the first year of the second permit cycle, or March 30, 2027. [Minn. R. 7001]
	5.13.68	If, at any time during the course of Route 2, it is found that water quality in Lake Winona is improving and the improvement is holding stable, the Permittee may opt out of the planned construction work and continue the Adaptive Lake Management Plan activities and maintenance work (described below in the Special Requirements section). A report summarizing the water quality improvement and lake stability shall be submitted to the MPCA for review and approval within 14 days after the reassessment. Ongoing monitoring of Lake Winona is necessary to evaluate continued improvement and stability of the lake; if at any point the water quality in the lake declines to a point MPCA staff determine the Adaptive Lake Management Plan work is unsuccessful, the Permittee must continue with previously planned construction work. An application for a permit modification to extend interim compliance schedule dates related to construction work may be necessary. [Minn. R. 7001]
	5.13.69	The Permittee shall begin construction of the chosen alternative as soon as possible but no later than March 30, 2028. Construction shall proceed for the selected alternative per the MPCA approved Facility Plan and schedule. Written notification shall be submitted to the MPCA within 14 days after the start of construction. [Minn. R. 7001]
	5.13.70	The Permittee shall submit a construction progress report by March 30, 2029, one year after construction begins. [Minn. R. 7001]
	5.13.71	The Permittee shall initiate operation of the upgraded Facility as soon as possible but no later than two years after the start of construction work. Written notification shall be submitted to the MPCA within 14 days of initiation of operation. [Minn. R. 7001]
	5.13.72	If the Permittee takes Route 2 for construction at the beginning of the second permit cycle, the Permittee shall attain compliance with the final total phosphorus effluent limits of 0.157 mg/L calendar month average and 665 kg/yr, 12-month moving total as identified in the draft Lake Winona TMDL as soon as possible but no later than December 31, 2030. Because the Permittee shall complete construction and initiate operation of the upgraded Facility by March 30, 2030, the Permittee should be complying with the effluent limits sooner than December 31, 2030. The permit will be modified or reissued to reflect the final limit of 0.157 mg/L. [Minn. R. 7001]
	5.13.73	**Special Requirements relating to the Adaptive Lake Management Plan and Total Phosphorus WQBEL.** [Minn. R. 7001]
	5.13.74	**Long-term Lake Winona Maintenance** A condition of the Adaptive Lake Management Plan is continued long-term maintenance of the adaptive lake management work. The Permittee shall retain responsibility for and documentation of the proper long-term maintenance of Lake Winona including but not limited to: 1) description of the conditions of Lake Winona noting any improvements or decline in lake water quality; 2) photographic documentation of any listed improvements or declines; 3) list of active BMPs in place; 4) conditions and effectiveness of current BMPs; 5) improvements made to existing BMPs and the need for any additional or different BMPs; 6) continued surface water monitoring and reporting of Lake Winona ensuring the lake continues to comply with the applicable water quality standards; 7) continued monitoring of lake vegetation to ensure vegetation remains established, and; 8) the common carp population remains sufficiently low such that resulting water quality complies with applicable water quality standards. The ultimate target density of carp will be based on an analysis of water quality and carp monitoring data. Literature based values indicate densities ranging from 40 to 100 kilograms per hectare (kg/ha) will be needed to achieve water quality standards. Summaries and monitoring results of the above listed items shall be combined into a Lake Winona Long-term Maintenance Plan that shall be submitted to the MPCA upon completion of the

		Adaptive Lake Management Plan activities identified in the permit as soon as possible but no later than December 31, 2030. Additionally, the Lake Winona Long-term Maintenance Plan must include a budget for the continued maintenance work for the next five, ten, and fifteen years to ensure adequate resources are available for the long-term maintenance work. Updates to the budget shall be submitted to the MPCA in the next annual report submittal following the conclusion of each of the Permittee's normal budgeting cycle. If the Adaptive Lake Management Plan activities described in the schedule above are not successful or are not completed, resulting in required construction to the Facility, the Permittee is not required to provide long-term maintenance of Lake Winona. [Minn. R. 7001]
	5.13.75	If the Permittee chooses to enter into a contractual agreement with a designated local unit of government for the long-term maintenance work described above, the Permittee shall submit a copy of the contract to the MPCA by 60 days prior to the planned contract start date. The contract should be for a time period sufficient to cover the long-term maintenance activities. The Permittee shall retain responsibility for ensuring the long-term maintenance activities are completed even if the Permittee enters into a contractual agreement with another local unit of government. [Minn. R. 7001]
	5.13.76	The Permittee is required to ensure Lake Winona maintains applicable water quality standards upon completion of the Adaptive Lake Management Plan activities and through the long-term maintenance work. If upon review of the annual report or site inspections, the MPCA finds that the water quality of Lake Winona has not been maintained, the MPCA may open the permit and make adjustments to the limits and/or monitoring requirements to ensure the applicable water quality standards are being met. [Minn. R. 7001]
	5.13.77	Notification of any modifications to the conditions or contents of the Adaptive Lake Management Plan, the Lake Winona Long-term Maintenance Plan, or the contractual agreement (if applicable) shall be submitted to the MPCA no later than 30 days before completion of the modification. The permit may be modified based on MPCA review of the changes. [Minn. R. 7001]
	5.13.78	**Surface Water Monitoring Stations** The Permittee shall conduct surface water monitoring to provide data regarding the effects of total phosphorus reductions that have been achieved to date as affected by changes required under this permit. Monitoring will be for total phosphorus, chlorophyll-a, and transparency at a frequency of once per month in the months of May and October and twice per month for the months of June through September each year. Surface water monitoring stations SW 001 and SW 002 will continue to monitor the northeast and southwest sites, respectively, on Lake Winona. A new surface water monitoring station, SW 003, has been added to the permit to monitor Lake Agnes. Monitoring on Lake Agnes will be for the same parameters as Lake Winona and at the same frequency. [Minn. R. 7001]
		Special Requirements
	5.14.79	**Total Chloride Water Quality Based Effluent Limit Variance General Requirements**. [Minn. R. 7001]
	5.14.80	The Alexandria Lake Area Sanitary District Wastewater Treatment Facility (Facility) (MN0040738) has applied for a variance from the chloride water quality standard in Minnesota Rule 7050, designed to protect the Class 2 beneficial use of the receiving water. EPA authorizes States and Tribes to include variance provisions in their water quality standards (40 CFR 131.14). In accordance with Minn. R. 7000.7000, permitted facilities are authorized to apply for a variance from standards. A variance is a temporary change in the applicable water quality standards. During the term of the

		variance the Facility is required to comply with the highest attainable condition (HAC) for the pollutant which the variance is granted (40 CFR 131.14(b)(ii)(A)(3)). To ensure this is met, an alternate effluent limit is developed and becomes effective at permit issuance as outlined in requirement 5.14.83. In addition, the Permittee is required to complete chloride source investigation and minimization, as well as an evaluation of the feasibility of water treatment (which must include the evaluation of lime softening) or other applicable treatment technologies in an effort to control sources of chloride. Upon expiration of the variance, the Permittee is required to comply with the final effluent limits outlined in requirement 5.14.84. As applied for by the Permittee, the basis of the variance is 'controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act (CWA) would result in substantial and widespread economic and social impact' (Minn. R. 7050.0191, subp.4(6)). The MPCA has determined that the Permittee has satisfied the conditions necessary to grant a variance and as a result supports the inclusion of the variance in the permit. [Minn. R. 7001]
	5.14.81	During the reasonable potential analysis it was determined the Facility has reasonable potential to exceed water quality standards for chloride, total dissolved solids (TDS), specific conductance, and total bicarbonates (HCO_3). When reasonable potential is indicated for a particular pollutant, the permit must contain a WQBEL for that pollutant. While reviewing the Facility's salty parameter monitoring data, MPCA staff determined the Facility is a good candidate for chloride linkage to meet the salty parameter WQBELs needed for the reissued permit. By using the chloride linkage, the Facility will receive alternate and final effluent limitations for total chloride only. Compliance with the chloride effluent limit will be protective of all the other salty parameter final effluent limits. In the July 16, 2013 reissued permit for the Facility, a final total chloride WQBEL of 252 mg/L was included with a final attainment date of March 30, 2021. This final limit was based on the existing state standard of 230 mg/L under Minn. R. 7050.0222, subp. 3. [Minn. R. 7001]
	5.14.82	This variance is approved for an 8-year term; an explanation of the term is provided in the chloride preliminary determination on file with the MPCA. The variance effective date is November 15, 2020, upon receiving EPA approval, and the expiration date is November 15, 2028. [Minn. R. 7001]
	5.14.83	An alternate effluent limit for total chloride of 839 mg/L, daily maximum, (identified as Phases 1, 2, and 3 in the limits and monitoring table) was assigned to the Facility (SD 001) and becomes effective upon permit issuance after EPA approval. The alternate effluent limit was calculated and intended to result in a discharge of the highest quality wastewater, or HAC, throughout the variance term. The alternate limit will be re-evaluated after five years in accordance with Minn. R. 7050.0190, subp. 8 and adjusted accordingly to ensure that the highest quality wastewater is required to be achieved throughout the term of the variance. [Minn. R. 7001]
	5.14.84	The Permittee is required to meet the final effluent limits for total chloride of 230 mg/L calendar month average, and 252 mg/L daily maximum (identified as Phase 4 in the limits and monitoring table) at variance expiration. The final effluent limits are sufficient to meet the underlying water quality standard. The action tree (found at https://www.pca.state.mn.us/sites/default/files/wq-wwprm2-88.pdf) is the PMP and the Facility will be completing the Plan below to sequence and define the specific activities. The Permittee shall use the MPCA's *"Streamlined Chloride Variance Action Tree"* and implement that Plan as described in section 5.14.88 below. [Minn. R. 7001]
	5.14.85	The Permittee shall maintain compliance with the conditions of the variance as outlined in this permit and Minn. R. 7000.7000 & 7050.0190. The MPCA reserves the right to review and terminate the variance if the Permittee demonstrates noncompliance with any of the conditions of the variance. [Minn. R. 7001]
	5.14.86	The MPCA may reopen and modify the permit based on MPCA triennial water quality standards revisions applicable to the chloride variance. [Minn. R. 7001]
	5.14.87	**Chloride Investigation & Minimization Plan.** [Minn. R. 7001]
	5.14.88	Previously, the Permittee submitted a Chloride Management Plan on July 16, 2014 (approved by the MPCA on August 27, 2014) and a subsequent progress report dated July 16, 2016. Until a new

		plan is developed, the current plan (as updated through July 16, 2016) is the effective pollutant management plan (PMP). Due to the length of time since the last progress report was submitted to the MPCA, and as required by the Chloride Variance process, to implement the PMP, the Permittee is required to complete, submit, and implement a Chloride Investigation and Minimization Plan (Plan) as detailed in sections 5.14.90 and 5.19.91 below. The Plan shall incorporate information from the previously submitted Chloride Management Plan and associated progress report into this new Plan but must also include all specific source reductions and other activities necessary to reduce chloride to the maximum extent possible during this 8-year variance term and a schedule for implementing the activities. The Permittee shall also consider any relevant information from the development of the Long Prairie Watershed Restoration and Protection report in the updated plan. The Permittee will be required to submit annual progress reports, in accordance with 5.14.93 below, to report on actions taken, chloride reductions made, and to update the Plan as more information on the sources, source reduction, and centralized water treatment plant options are known. When updating the Plan, the Permittee shall consider the results of previous actions taken and reductions made in order to evaluate and plan for future chloride minimization efforts. Because the Permittee is in a unique situation in that it operates outside of City of Alexandria (City) jurisdiction and therefore does not have authority to regulate activity within the City or the City entity, Alexandria Light and Power (the municipal water supplier for residents of the City), or to make process changes to their water treatment plant, the Permittee shall make good faith efforts to collaborate with the City and Alexandria Light and Power officials throughout the development and implementation of the Plan to ensure all requirements are satisfied to the maximum extent possible. [Minn. R. 7001]
	5.14.89	The Permittee shall submit a plan : Due by 180 days after permit issuance. This Plan corresponds to the initial phase of the *Streamlined Chloride Variance Action Tree*. [Minn. R. 7001]
	5.14.90	At a minimum, the Plan must include, but is not limited to (items a through d in the next two requirements): a) Acknowledgement that chloride influent and effluent concentrations have been reviewed, using the most recent five years of monitoring data, and identify trends and relationships between actions taken, if applicable. i) In the July 2014 Chloride Management Plan, reference to a preliminary chloride mass balance was developed by Wenck and Associates to estimate the sources and levels of chloride present in the wastewater influent. In the July 2016 progress report, it was indicated that the updates to this mass balance were made. This mass balance can be used in the Plan; however, as stated above, the most recent five years of data shall be used. b) A summary of any chloride source reduction activities implemented and a schedule of chloride source reduction activities that will be completed to identify, evaluate, and complete chloride reduction, elimination, and prevention activities. These source reduction activities shall begin immediately unless the Plan is disapproved by the MPCA and shall include, but are not limited to: 1) Identification and quantification of existing and potential sources of chloride concentrations and/or loading to the Facility. Investigate the following categories of sources, at a minimum: i. Industrial; ii. Institutional; iii. Municipal; iv. Commercial; and v. Residential For each source of a chloride identified, the Permittee shall propose a control strategy by working with the source to develop an implementation plan and schedule for reducing the chloride

		concentrations from that source. Any sources identified and control strategies developed shall be included in future progress reports; and all progress reports must update the information required under the Plan; 2) Reduction activities must include actions focused on residential sources, if applicable. This may include continued education and working with homeowners using methods shown to be effective on the impact of chloride from residential softeners, making contact with the local water softening businesses regarding opportunities for chloride reduction within the community, and options available for increasing softener salt efficiency, which may include water softener tune-ups or replacement; i. In the July 2014 Chloride Management Plan, it was noted that a Chloride Reduction Citizen's Advisory Committee (Advisory Committee) to represent affected stakeholders was established in November of 2014 to discuss chloride issues and work towards developing an Attainment Plan for chloride reduction. In the July 2016 progress report it was noted that three meetings of the Advisory Committee were held before a March 11, 2015 decision was made to end the meetings and to continue developing and implementing public outreach and education plans. Due to the Permittee operating separately from the City and needing to collaborate with the City on several factors pertaining to chloride education, investigation, and reduction; the re-establishment and continued actions of the Advisory Committee may be used to satisfy this requirement. [Minn. R. 7001]
	5.14.91	3) Within three years of Plan development, the Permittee shall reduce nonpoint source discharges of chloride that the Permittee can control, such as road salt application and the use of de-icing products on the Permittee's property. One option is to utilize MPCA's Smart Salting Assessment tool (https://www.wintermaintenancetool.com). This web-based tool will help winter maintenance organizations assess operations, identify opportunities to reduce salt using proven best management practices (BMPs), and track progress. Along with this tool are Smart Salting training opportunities. i) The Permittee shall work with and provide funding for one City of Alexandria staff member to attend at least one of these trainings and submit documentation of completion to the MPCA. The preferred City staff to attend should be a staff member whom is considered a decision-maker in road maintenance. This will satisfy the requirement that Permittees with a variance will implement cost-effective and reasonable BMPs for nonpoint source control (Minn. R. 7050.0190 subp 1(B)). c) The Permittee shall identify the appropriate quantifiable sampling and reporting methods necessary to determine if the chloride source reduction activities are resulting in a reduction, or if changes are needed. As an example, the Permittee could use qualitative field equipment to measure specific conductance in specific areas throughout the collection system where known sources are being targeted, or utilize questionnaires to determine the age of residential water softeners. The goal is to gather data that will show what actions have led to reductions and to target future activities. The Permittee shall use the data to summarize effectiveness, re-evaluate next year's schedule, and modify the Plan as needed. If the monitoring does not indicate progress the Permittee must identify the barriers to achieving reductions, actions that will be taken to overcome them and supplemental actions that will be completed to ensure future progress. d) A summary of how the Permittee and City will evaluate centralized water treatment (which must include the evaluation of lime softening) or other applicable treatment technology options to reduce chloride concentrations, along with feasibility and associated costs. The Permittee shall use this information to complete the 5-year re-evaluation as outlined in section 5.14.96 below. [Minn. R. 7001]
	5.14.92	Unless the Plan is disapproved by the MPCA, the Permittee must complete the activities in accordance with the schedule outlined in the Plan. Updates on completion of the activities and the resulting reductions of chloride shall be submitted with the annual progress reports, as well as interim actions (i.e. the number of water softeners adjusted). As more information is known

		through completion of the investigation and reduction work, the activities and schedule shall be updated in the annual progress reports throughout the term of the variance in sufficient detail for MPCA to determine progress. [Minn. R. 7001]
	5.14.93	The Permittee shall submit an annual progress report to the MPCA for review and approval by January 31 of each calendar year following submittal of the Plan. The annual progress report shall include, but is not limited to: a) All chloride influent and effluent monitoring results for the previous year and a summary of any chloride reductions made; b) A list of potential sources of chloride found and any implementation plans and source reduction schedules developed; c) An update on the completion of source reduction activities based on the associated metrics; d) An evaluation of reductions achieved or not achieved through activities. If not achieved, explain the barriers to achievement; e) All sampling and reporting results collected to determine if activities are resulting in a chloride reduction; f) Any updates to the Plan's activities and schedule; and g) The schedule of activities that the Permittee plans to complete within the next 12-month period, as well as the metrics and associated sampling and reporting to record reductions. In the event that the permit is administratively continued, the Permittee shall continue to submit an annual progress report each year until the permit is reissued. The Permittee shall submit an annual progress report : Due annually, by the 31st of January. [Minn. R. 7001]
	5.14.94	**Variance 5-year Re-evaluation Requirements.** [Minn. R. 7001]
	5.14.95	Although the approved variance is for an 8-year term, variances are subject to re-evaluation every five years in accordance with Minn. R. 7050.0190, subp. 8. One year prior to permit expiration, the Permittee shall, in concert with the MPCA, determine if exhaustive implementation of the Chloride Investigation and Minimization Plan activities will lead to compliance with the final effluent limitation sufficient to meet the underlying water quality standard by permit expiration. If it is determined that compliance is not feasible, the Permittee shall submit a written request for re-evaluation of the variance no later than 180 days prior to permit expiration. The re-evaluation shall be part of the permit reissuance and shall be available for public comment. [Minn. R. 7001]
	5.14.96	If applicable, the Permittee shall submit a request for re-evaluation of the variance 180 days prior to permit expiration (or five years from approval of the variance). This request shall include: a) A re-evaluation of the HAC achieved during the previous five years; b) A re-evaluation of the Chloride Investigation and Minimization Plan; c) An evaluation of the feasibility of centralized water treatment (which must include the evaluation of lime softening) or other applicable treatment technologies to reduce chloride concentrations, and the associated costs to the Permittee; d) An evaluation of the economic basis of the variance (controls more stringent than those required by sections 301(b) and 306 of review and determine if continuance of the variance for the remainder of the variance term is appropriate. e) If determined by the Permittee that compliance with final effluent limits are known and economically feasible, the Permittee shall submit necessary actions to comply. The variance will be terminated and a schedule of compliance will be included in the reissued permit. (Permittee must include the schedule details at the time of re-evaluation); OR, if the re-evaluation of available treatment technologies demonstrates that compliance with the final limit remains a social and economic hardship, the Permittee shall indicate such in the re-evaluation request. f) If continuation of the variance is determined to be appropriate, the alternate limit (or HAC) will be re-calculated using the most recent five years of data. The limit will be adjusted down to ensure that the chloride reductions achieved over the previous five years are factored in and that the alternate effluent limit included in the reissued permit continues to result in a discharge of the highest quality wastewater throughout the remainder of the variance term. [Minn. R. 7001]

	5.14.97	If a variance re-evaluation request is submitted, the alternate limit shall continue until MPCA takes final action on the request. If a re-evaluation is not requested, the variance will expire and the final effluent limit will become effective at permit expiration. In accordance with permit requirement 5.14.87, the MPCA reserves the right to terminate the variance if it is found that the Permittee does not complete the required actions. [Minn. R. 7001]
		Mercury Minimization Plan
	5.15.98	The Permittee is required to complete and submit a Mercury Pollutant Minimization Plan (MMP) to the MPCA as detailed in this section. If the Permittee has previously submitted a MMP, it shall update its MMP and submit the updated MMP to the MPCA. The purpose of the MMP is to evaluate collection and treatment systems to determine possible sources of mercury as well as potential mercury reduction options. Guidelines for developing a MMP are detailed in this section. [Minn. R. 7001]
	5.15.99	The specific mercury monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the MMP process can be used to reduce mercury concentrations. As part of its mercury control strategy, the Permittee should consider selecting activities based on the potential of those activities to reduce mercury loadings to the wastewater treatment facility. [Minn. R. 7001]
	5.15.100	The Permittee shall submit a mercury pollutant minimization plan : Due by 180 days after permit issuance. [Minn. R. 7001]
	5.15.101	At a minimum, the MMP shall include the following: a. A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available. b. Identification of existing and potential sources of mercury concentrations and/or loading to the facility. As appropriate for your facility, you should consider residential, institutional, municipal, and commercial sources (such as dental clinics, hospitals, medical clinics, nursing homes, schools, laundries, and industries with potential for mercury contributions). You should also consider other influent mercury sources, such as stormwater inputs, ground water (inflow & infiltration) inputs, lift station components, and waste streams or sewer tributaries to the wastewater treatment facility. c. An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal. d. A summary of any mercury reduction activities implemented during the last five years. e. A plan to implement mercury management and reduction measures during the next five years. [Minn. R. 7001]
		Mechanical System
	5.16.102	Bypass Structures. [Minn. R. 7001]
	5.16.103	All structures capable of bypassing the treatment system shall be manually controlled and kept locked at all times. [Minn. R. 7001.0030]
	5.16.104	Sanitary Sewer Extension Permit. [Minn. R. 7001]
	5.16.105	The Permittee may be required to obtain a Sanitary Sewer Extension Permit from the MPCA for any addition, extension or replacement to the sanitary sewer. If a sewer extension permit is required, construction may not begin until plans and specifications have been submitted and a written permit is granted except as allowed in Minn. Stat. 115.07, Subd. 3(b). [Minn. R. 7001.0020, D]
	5.16.106	Operator Certification. [Minn. R. 7001]
	5.16.107	The Permittee shall provide a Class A state certified operator who is in direct responsible charge of the operation, maintenance and testing functions required to ensure compliance with the terms and conditions of this permit. [Minn. R. 9400]

	5.16.108	The Permittee shall provide the appropriate number of operators with a Type IV certification to be responsible for the land application of biosolids or semisolids from commercial or industrial operations. [Minn. R. 7001]
	5.16.109	If the Permittee chooses to meet operator certification requirements through a contractual agreement, the Permittee shall provide a copy of the contract to the MPCA, WQ Submittals Center. The contract shall include the certified operator's name, certificate number, company name if appropriate, the period covered by the contract and provisions for renewal; the duties and responsibilities of the certified operator; the duties and responsibilities of the permittee; and provisions for notifying the MPCA 30 days in advance of termination if the contract is terminated prior to the expiration date. [Minn. R. 9400]
	5.16.110	The Permittee shall notify the MPCA within 30 days of a change in operator certification or contract status. [Minn. R. 9400]
		Pretreatment: Undelegated Requirements
	5.17.111	Pretreatment - Definitions. [Minn. R. 7049]
	5.17.112	An "Individual Control Mechanism" is a document, such as an agreement or permit, that imposes limitations or requirements on an individual industrial user of the POTW. [Minn. R. 7049]
	5.17.113	"Significant Industrial User" (SIU) means any industrial user that: a. discharges 25,000 gallons per day or more of process wastewater; b. contributes a load of five (5) % or more of the capacity of the POTW; or c. is designated as significant by the Permittee or the MPCA on the basis that the SIU has a reasonable potential to adversely impact the POTW, or the quality of its effluent or residuals. [Minn. R. 7049]
	5.17.114	Pretreatment - Permittee Responsibility to Control Users. [Minn. R. 7049]
	5.17.115	It is the Permittee's responsibility to regulate the discharge from users of its wastewater treatment facility. The Permittee shall prevent any pass through of pollutants or any inhibition or disruption of the Permittee's facility, its treatment processes, or its sludge processes or disposal that contribute to the violation of the conditions of this permit or any federal or state law or regulation limiting the release of pollutants from the POTW. [Minn. R. 7049]
	5.17.116	The Permittee shall prohibit the discharge of the following to its wastewater treatment facility: a. pollutants which create a fire or explosion hazard, including any discharge with a flash point less than 60 degrees C (140 degrees F); b. pollutants which would cause corrosive structural damage to the POTW, including any waste stream with a pH of less than 5.0; c. solid or viscous pollutants which would obstruct flow; d. heat that would inhibit biological activity, including any discharge that would cause the temperature of the waste stream at the POTW treatment plant headwork's to exceed 40 degrees C (104 degrees F); e. pollutants which produce toxic gases, vapors, or fumes that may endanger the health or safety of workers; or f. any pollutant, including oxygen demanding pollutants such as biochemical oxygen demand, released at a flow rate or pollutant concentration that will cause interference or pass through. [Minn. R. 7049]
	5.17.117	The Permittee shall prohibit new discharges of non-contact cooling waters unless there is no cost effective alternative. Existing discharges of non-contact cooling water to the Permittee's wastewater treatment facility shall be eliminated, where elimination is cost-effective, or where an infiltration/inflow analysis and sewer system evaluation survey indicates the need for such removal. [Minn. R. 7049]
	5.17.118	If the Permittee accepts trucked-in wastes, the Permittee shall evaluate the trucked in wastes prior to acceptance in the same manner as it monitors sewered wastes. The Permittee shall accept trucked-in wastes only at specifically designated points. [Minn. R. 7049]

	5.17.119	Pollutant of concern means a pollutant that is or may be discharged by an industrial user that is, or reasonably should be of concern on the basis that it may cause the permittee to violate any permit limits on the release of pollutants. The following pollutants shall be evaluated to determine if they should be pollutants of concern: pollutants limited in this permit, pollutants for which monitoring is required in this permit, pollutants that are likely to cause inhibition of the Permittee's POTW, pollutants which may interfere with sludge disposal, and pollutants for which the Permittee's treatment facility has limited capacity. [Minn. R. 7049]
	5.17.120	Control of Significant Industrial Users. [Minn. R. 7049]
	5.17.121	The Permittee shall impose pretreatment requirements on SIUs which will ensure compliance with all applicable effluent limitations and other requirements set forth in this permit or any federal or state law or regulation limiting the release of pollutants from the POTW. These requirements shall be applied to SIUs by means of an individual control mechanism. [Minn. R. 7049]
	5.17.122	The Permittee shall not knowingly enter into an individual control mechanism with any user that would allow the user to contribute an amount or strength of wastewater that would cause violation of any limitation or requirement in the permit, or any applicable federal, state or local law or regulation. [Minn. R. 7049]
	5.17.123	Monitoring of Significant Industrial Users. [Minn. R. 7049]
	5.17.124	The Permittee shall obtain from SIUs specific information on the quality and quantity of the SIU's discharges to the Permittee's POTW. Except where specifically requested by the Permittee and approved by the MPCA, this information shall be obtained by means of representative monitoring conducted by the Permittee or by the SIU under requirements imposed by the Permittee in the SIU's individual control mechanism. Monitoring performed to comply with this requirement shall include all pollutants for which the SIU is significant and shall be done at a frequency commensurate with the significance of the SIU. [Minn. R. 7049]
	5.17.125	Reporting and Notification. [Minn. R. 7049]
	5.17.126	The Permittee shall submit a pretreatment annual report : Due by 31 days after the end of each calendar year following permit issuance if a SIU discharges to the POTW during a given calendar year. [Minn. R. 7049]
	5.17.127	The Pretreatment Annual Report shall be submitted on forms provided by the agency or shall provide equivalent information. The Permittee shall submit the pre-treatment report to the following address: MPCA Attn: WQ Submittals Center 520 Lafayette Road North St. Paul, Minnesota 55155-4194. [Minn. R. 7049]
	5.17.128	The Permittee shall notify the MPCA in writing of any: a. SIU of the Permittee's POTW which has not been previously disclosed to the MPCA; b. anticipated or actual changes in the volume or quality of discharge by an industrial user that could result in the industrial user becoming an SIU as defined in this chapter; or c. anticipated or actual changes in the volume or quality of discharges by a SIU that would require changes to the SIU's required local limits. This notification shall be submitted within 30 days of identifying the IU as a SIU. Where changes are proposed, they shall be submitted prior to changes being made. [Minn. R. 7049]
	5.17.129	Upon notifying the MPCA of a SIU or change in a SIU discharge as required above, the Permittee shall submit the following information on forms provided by the agency or in a comparable format: a. the identity of the SIU and a description of the SIU's operation and process; b. a characterization of the SIU's discharge; c. the required local limits that will be imposed on the SIU; d. a technical justification of the required local limits; and

		e. a plan for monitoring the SIU which is consistent with monitoring requirements in this chapter. [Minn. R. 7049]
	5.17.130	In addition, the Permittee shall, upon request, submit the following to the MPCA for approval: a. additional information on the SIU, its processes and discharge; b. a copy of the individual control mechanism used to control the SIU; c. the Permittee's legal authority to be used for regulating the SIU; and d. the Permittee's procedures for enforcing the requirements imposed on the SIU. [Minn. R. 7049]
	5.17.131	The permittee shall notify MPCA of any of its industrial users that may be subject to national categorical pretreatment standards. [Minn. R. 7049]
	5.17.132	This permit may be modified in accordance with Minnesota Rules, ch. 7001 to require development of a pretreatment program approvable under the Federal General Pretreatment Regulation (40 CFR 403). [Minn. R. 7049]
		Biosolids: Land Application
	5.18.133	Authorization. [Minn. R. 7041]
	5.18.134	This permit authorizes the Permittee to store and land apply domestic wastewater treatment biosolids in accordance with the provisions in this chapter and Minnesota Rules, ch. 7041. [Minn. R. 7041]
	5.18.135	Permittees who prepare bulk biosolids shall obtain approval of the sites on which bulk biosolids are applied before they are applied unless they are Exceptional Quality Biosolids. Site application procedures are set forth in Minn. R. ch. 7041.0800. [Minn. R. 7041.0800]
	5.18.136	Compliance Responsibility. [Minn. R. 7041]
	5.18.137	The Permittee is responsible for ensuring that the applicable requirements in this chapter and Minn. R. ch. 7041 are met when biosolids are prepared, distributed, or applied to the land. [Minn. R. 7041]
	5.18.138	Notification Requirements. [Minn. R. 7041]
	5.18.139	The Permittee shall provide information needed to comply with the biosolids requirements of Minn. R. ch. 7041 to others who prepare or use the biosolids. [Minn. R. 7041]
	5.18.140	Pollutant Limits. [Minn. R. 7041]
	5.18.141	Biosolids which are applied to the land shall not exceed the ceiling concentrations in Table 1 and shall not be applied so that the cumulative amounts of pollutant in Table 2 are exceeded. Table 1 Ceiling Concentrations (dry weight basis) Parameter in units mg/kg Arsenic 75 Cadmium 85 Copper 4300 Lead 840 Mercury 57 Molybdenum 75 Nickel 420 Selenium 100 Zinc 7500 Table 2 Cumulative Loading Limits Parameter in units lbs/acre Arsenic 37 Cadmium 35 Copper 1339 Lead 268 Mercury 15 Molybdenum not established* Nickel 375

		Selenium 89 Zinc 2500 *The cumulative limit for molybdenum has not been established at the time of permit issuance. [Minn. R. 7041.1100]
	5.18.142	Pathogen and Vector Attraction Reduction. [Minn. R. 7041]
	5.18.143	Biosolids shall be processed, treated, or be incorporated or injected into the soil to meet one of the vector attraction reduction requirements in Minnesota Rules, pt. 7041.1400. [Minn. R. 7041.1400]
	5.18.144	Biosolids shall be processed or treated by one of the alternatives in Minnesota Rules, pt. 7041.1300 to meet the Class A or Class B standards for the reduction of pathogens. When Class B biosolids are applied to the land, the site restrictions in Minnesota Rules, pt. 7041.1300 shall also be met. [Minn. R. 7041.1300]
	5.18.145	The minimum duration between application and harvest, grazing or public access to areas where Class B biosolids have been applied to the land is as follows: a. 14 months for food crops whose harvested parts may touch the soil/biosolids mixture (such as melons, squash, tomatoes, etc.), when biosolids are surface applied, incorporated or injected. b. 20 months or 38 months depending on the application method for food crops whose harvested parts grow in the soil (such as potatoes, carrots, onions, etc.). The 20 month time period is required when biosolids are surface applied or surface applied and incorporated after they have been on the soil surface for at least four (4) months. The 38 month time period is required when the biosolids are injected or surface applied and incorporated within four (4) months of application. c. 30 days for feed crops, other food crops (such as field corn, sweet corn, etc.), hay or fiber crops when biosolids are surface applied, incorporated or injected. d. 30 days for grazing of animals when biosolids are surface applied, incorporated or injected. e. One year where there is a high potential for public contact with the site, (such as a reclamation site located in populated areas, a construction site located in a city, turf farms, plant nurseries, etc.) and 30 days where there is low potential for public contact (such as agricultural land, forest, a reclamation site located in an unpopulated area, etc.) when biosolids are surface applied, incorporated, or injected. [Minn. R. 7041]
	5.18.146	Management Practices. [Minn. R. 7041]
	5.18.147	The management practices for the land application of biosolids are described in detail in Minn. R. ch. 7041.1200 and shall be followed unless specified otherwise in a site approval letter or a permit issued by the MPCA. [Minn. R. 7041.1200]
	5.18.148	Overall management requirements: a. Biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat. b. Biosolids shall not be applied to flooded, frozen or snow covered ground so that the biosolids enter wetlands or other waters of the state. c. Biosolids shall be applied at an agronomic rate unless specified otherwise by the MPCA in a permit. d. Biosolids shall not be applied within 33 feet of a wetland or waters of the state unless specified otherwise by the MPCA in a permit. [Minn. R. 7041]
	5.18.149	Monitoring Requirements. [Minn. R. 7041]
	5.18.150	Representative samples of biosolids applied to the land shall be analyzed by methods specified in Minnesota Rule pt. 7041.3200 for the following parameters: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, Kjeldahl nitrogen, ammonia nitrogen, total solids, volatile solids, phosphorus, potassium and pH. [Minn. R. 7041.3200]
	5.18.151	At a minimum, biosolids shall be monitored at the frequencies specified in Table 3 for the parameters listed above, and any pathogen or vector attraction reduction requirements in Minnesota Rules, pts. 7041.1300 and 7041.1400 if used to determine compliance with those parts.

		Table 3 Minimum Sampling Frequencies Biosolids Applied* (metric tons/365-day period) / Biosolids Applied* (tons/365-day period) / Frequency (times/365-day period) >0 but <290 / >0 but <320 / 1 >=290 but <1,500 / >=320 but <1,650 / 4 >=1,500 but <15,000 / >=1,650 but <16,500 / 6 >=15,000 / >=16,500 / 12 * Either the amount of bulk biosolids applied to the land or the amount of biosolids received by a person who prepares biosolids that are sold or given away in a bag or other container for application to the land (dry weight basis). [Minn. R. 7041.1300, Minn. R. 7041.1400]
	5.18.152	Representative samples of biosolids that are transferred to storage units and are stored for more than two years shall be analyzed by methods specified in Minnesota Rule pt. 7041.3200 for each cropping year they are stored for the following parameters: arsenic, cadmium, copper, lead, molybdenum, nickel, selenium, and zinc. Mercury is specifically NOT included in the stored biosolids analysis because of the short holding time [28 days] required between sampling and analysis. [Minn. R. 7041.3200]
	5.18.153	Increased sampling frequencies are specified for the parameters listed in Table 4. Sampling at a frequency at twice the minimum frequencies in Table 3 is required if concentrations listed in Table 4 are exceeded (based on the average of all analyses made during the previous cropping year). Table 4 Increased Frequency of Sampling Parameter (mg/kg dry weight basis) Arsenic 38 Cadmium 43 Copper 2150 Lead 420 Mercury 28 Molybdenum 38 Nickel 210 Selenium 50 Zinc 3750. [Minn. R. 7041]
	5.18.154	Records. [Minn. R. 7041]
	5.18.155	The Permittee shall keep records of the information necessary to show compliance with pollutant concentrations and loadings, pathogen reduction requirements, vector attraction reduction requirements and management practices as specified in Minnesota Rules, pt. 7041.1600, as applicable to the quality of biosolids produced. [Minn. R. 7041.1600]
	5.18.156	Reporting Requirements. [Minn. R. 7041]
	5.18.157	The Permittee shall submit a biosolids annual report : Due annually, by the 31st of December on a form provided by or approved by the MPCA. The report shall include the requirements in Minnesota Rules, part 7041.1700. [Minn. R. 7041.1700]
	5.18.158	The permittee shall submit a Biosolids Annual Report by December 31 of each year for biosolids storage and/or transfer activities occurring during the cropping year previous to December 31. The report shall indicate whether or not biosolids were transferred and/or stored. If biosolids were transferred, the report shall describe how much was transferred, where it was transferred to, the name of the facility that accepted the transfer and the contact person at that facility. "Cropping year" means a year beginning on September 1 of the year prior to the growing season and ending August 31 the year the crop is harvested. For example, the 2012 cropping year began September 1, 2011, and ended August 31, 2012. [Minn. R. 7041]

	5.18.159	For biosolids that are stored for more than two years, the Biosolids Annual Report shall also include the analytical data from the representative sample of the biosolids generated during the cropping year. [Minn. R. 7041]
	5.18.160	The Permittee shall submit the Biosolids Annual Report to: MPCA Submittals Center, Minnesota Pollution Control Agency, 520 Lafayette Road North, St Paul Minnesota 551554194. [Minn. R. 7041]
	5.18.161	The Permittee shall notify the MPCA in writing when 90 percent or more of any of the cumulative pollutant loading rates listed for any Land Application Sites has been reached for a site. [Minn. R. 7041]
		Industrial Stormwater No Exposure Exclusion
	5.19.162	Conditional Exclusion for No Exposure. [Minn. R. 7001]
	5.19.163	No exposure means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt, and/or runoff. Industrial activities or materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. [Minn. R. 7090]
	5.19.164	The conditional exclusion for No Exposure is available on a facility-wide basis in accordance with Minn. R. 7090.3060, subp. 5(B). [Minn. R. 7090]
	5.19.165	The no exposure certification is non-transferrable in accordance with Minn. R. 7090.3060, subp. 5(D). In the event that the facility operator changes, then the new operator shall submit written notification of the change to the MPCA, Attn: WQ Submittal Center, 520 Lafayette Road North, St Paul, Minnesota 55155-4194. [Minn. R. 7090]
	5.19.166	The MPCA retains the authority to require the facility operator to apply for a permit modification to this permit for stormwater coverage or to apply for coverage under the Industrial Stormwater General Permit (MNR050000), even when an industrial operator certifies No Exposure, if the MPCA has determined that the discharge is contributing to the violation of, or interfering with the attainment or maintenance of water quality standards, including designated uses. [Minn. R. 7090]
	5.19.167	Any facility that has previously obtained a conditional exclusion for No Exposure shall recertify for the exclusion no later than five years from the effective date of the most recent No Exposure certificate issued to the facility by the Agency. [Minn. R. 7090]
	5.19.168	The No Exposure exclusion is conditional. The facility shall maintain a condition of No Exposure at the facility in order for the No Exposure exclusion to remain applicable. In the event of any change or circumstance that causes exposure of industrial activities or materials to stormwater, the facility shall comply with the stormwater requirements of this chapter. [Minn. R. 7090]
	5.19.169	Based on the information submitted with the permit application, the Agency has determined the Permittee meets the exclusion criteria for "No Exposure" in accordance with Minnesota Rules Chapter 7090.3060. [Minn. R. 7090]
		Total Residual Oxidants
	5.20.170	General Requirements. [Minn. R. 7001]
	5.20.171	"Daily Maximum" for Total Residual Chlorine (TRC) concentration limits means: a. The value of a single sample in a 24-hour period if the concentration of TRC in that sample is 0.038 mg/L or less. b. If the concentration of TRC in the first sample is greater than 0.038 mg/L reporting the average of two to twelve samples analyzed in a 24-hour period is allowed. The second sample shall be taken two hours after the first sample and subsequent samples are to be taken at one-hour intervals thereafter, not to exceed a total of twelve samples in a 24-hour period. Values below the Reportable Limit for TRC are assumed to be zero for averaging purposes only. c. The average value of multiple daily TRC effluent sample analyses shall meet the 0.038 mg/L limit to be in compliance. [State Definitions]
	5.20.172	Total Residual Chlorine shall be analyzed immediately. This means within 15 minutes or less of sample collection. [Minn. R. 7001]
	5.20.173	A Method Detection Limit (MDL) shall be established for this parameter. [Minn. R. 7001]

	5.20.174	The Reportable Limit shall be established for this parameter. This should be based on the Method Detection Limit and laboratory, analyst, and equipment used in the analysis. The Reportable Limit cannot be greater than 0.1 mg/L. [Minn. R. 7001]
	5.20.175	The Method Detection Limit and Reportable Limit should be reassessed when the method, equipment, laboratory, or analyst changes. [Minn. R. 7001]
	5.20.176	Monitoring results below the Reportable Limit should be reported as "<" the Reportable Limit. For example, if the Reportable Limit is 0.01 mg/L and a parameter is not detected at a value of 0.01 mg/L or greater, the concentration shall be reported as "<0.01 mg/L." The symbol "<" means "less than.". [Minn. R. 7001]
	5.20.177	The equipment should be checked against a known standard at least quarterly. [Minn. R. 7001]
		Total Facility Requirements (NPDES/SDS)
	5.21.178	Definitions. Refer to the 'Permit Users Manual' found on the MPCA website (www.pca.state.mn.us) for standard definitions. [Minn. R. 7001.]
	5.21.179	Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. ch. 115 and 116. [Minn. R. 7001]
	5.21.180	Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. [Minn. R. 7001.0150, subp. 3(E)]
	5.21.181	Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules 7050, 7052, 7053 and any other applicable MPCA rules. [Minn. R. 7001.1090, subp. 1(A)]
	5.21.182	Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. [Minn. R. 7050.0210, subp. 2]
	5.21.183	Property Rights. This permit does not convey a property right or an exclusive privilege. [Minn. R. 7001.0150, subp. 3(C)]
	5.21.184	Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. [Minn. R. 7001.0150, subp. 3(O)]
	5.21.185	The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. [Minn. R. 7001.0150, subp. 3(D)]
	5.21.186	Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. [Minn. R. 7001.0150, subp. 3(A)]
	5.21.187	The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. [Minn. R. 7001.0150, subp. 3(B)]
	5.21.188	Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. [Minn. R. 7001]
	5.21.189	Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility. [Minn. R. 7001]

	5.21.190	Inspection and Entry. When authorized by Minn. Stat. ch. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. [Minn. R. 7001.0150, subp. 3(I)]
	5.21.191	Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation. [Minn. R. 7001.0150, subp. 3(F)]
	5.21.192	Sampling. [Minn. R. 7001]
	5.21.193	Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. [40 CFR 122.41(j)(1)]
	5.21.194	Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. [Minn. R. 7001.1090, subp. 1(E)]
	5.21.195	Certified Laboratory. A laboratory certified by the Minnesota Department of Health and/or registered by the MPCA shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature, specific conductance, and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. [Minn. R. 4740.2010, Minn. R. 4740.2050 through 2120]
	5.21.196	Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200. [40 CFR 136, Minn. R. 7041.3200]
	5.21.197	Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. [Minn. R. 7001.0150, 2(B and C)]
	5.21.198	Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information: a. the exact place, date, and time of the sample or measurement; b. the date of analysis; c. the name of the person who performed the sample collection, measurement, analysis, or calculation; d. the analytical techniques, procedures and methods used; and e. the results of the analysis. [Minn. R. 7001.0150, 2(C)]
	5.21.199	Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. Required forms may include DMR Supplemental/Sample Value Form Individual values for each sample and measurement shall be recorded on the DMR Supplemental/Sample Value Form which, if required, will be provided by the MPCA. DMR Supplemental/Sample Value Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it shall be approved by the MPCA. Note: Required summary information shall also be recorded on the DMR. Summary information that is submitted ONLY on the DMR

		Supplemental/Sample Value Form does not comply with the reporting requirements. [Minn. R. 7001.1090, 1(D), Minn. R. 7001.150, 2(B)]
	5.21.200	Submitting Reports. DMRs, DMR supplemental forms and related attachments must be electronically submitted via MPCA e-Services after authorization is approved. DMRs and DMR Supplemental Forms shall be electronically submitted by the 21st day of the month following the sampling period or otherwise as specified in this permit. Electronic DMR submittal shall be complete on or before 11:59 PM of the 21st day of the month following the sampling period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the reporting period. Other reports required by this permit shall be postmarked by the date specified in the permit to: MPCA, Attn: WQ Submittals Center, 520 Lafayette Road North, St Paul Minnesota 551554194. [Minn. R. 7001.0150, 2(B), Minn. R. 7001.0150, 3(H)]
	5.21.201	Incomplete or Incorrect Reports. The Permittee shall immediately submit an electronically amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. If it is impossible to electronically amend the report or DMR, the Permittee shall immediately notify the MPCA and the MPCA will provide direction for the amendment submittals. [Minn. R. 7001.0150, 3(G)]
	5.21.202	Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents shall certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, shall be certified by a registered professional engineer. [Minn. R. 7001.0540]
	5.21.203	Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows: a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation. b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection. c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. [Minn. R. 7001.0150, 2(B)]
	5.21.204	Records. The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. [Minn. R. 7001.0150, 3(H)]
	5.21.205	Confidential Information. Except for data determined to be confidential according to Minn. Stat. ch. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee shall follow Minn. R. 7000.1300. [Minn. R. 7000.1300]
	5.21.206	Noncompliance and Enforcement. [Minn. R. 7001]

	5.21.207	Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. ch. 115.071 and 116.072, including monetary penalties, imprisonment, or both. [Minn. R. 7001.1090, 1(B)]
	5.21.208	Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. [Minn. R. 7001.0150, 3(G), Minn. R. 7001.1090, 1(G and H), Minn. Stat. ch. 609.671, 1]
	5.21.209	Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [40 CFR 122.41(c)]
	5.21.210	Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. If the permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the Permittee shall within 24 hours of the discovery of the noncompliance, orally notify the commissioner and submit a written description of the noncompliance within 5 days of the discovery. The written description shall include items a. through e., as listed below. If the Permittee discovers other non-compliance that does not explicitly endanger human health, public drinking water supplies, or the environment, the non-compliance shall be reported during the next reporting period to the MPCA with its Discharge Monitoring Report (DMR). If no DMR is required within 30 days, the Permittee shall submit a written report within 30 days of the discovery of the noncompliance. This description shall include the following information: a. a description of the event including volume, duration, monitoring results and receiving waters; b. the cause of the event; c. the steps taken to reduce, eliminate and prevent reoccurrence of the event; d. the exact dates and times of the event; and e. steps taken to reduce any adverse impact resulting from the event. [Minn. R. 7001.150, 3(K)]
	5.21.211	Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence: a. the specific cause of the upset; b. that the upset was unintentional; c. that the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities; d. that at the time of the upset the facility was being properly operated; e. that the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and f. that the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J. [Minn. R. 7001.1090]
	5.21.212	Release. [Minn. R. 7001]
	5.21.213	Unauthorized Releases of Wastewater Prohibited. Except for discharges from outfalls specifically authorized by this permit, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will

		consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. [40 CFR 122.41, Minn. Stat. ch. 115.061]
	5.21.214	Discovery of a release. Upon discovery of a release, the Permittee shall: a. Take all reasonable steps to immediately end the release. b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area). c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas. [Minn. R. 7001.1090]
	5.21.215	Sampling of a release. Upon discovery of a release, the Permittee shall: a. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues. b. Submit the sampling results on the Release Sampling Form (http://www.pca.state.mn.us/index.php/view-document.html?gid=18867). The Release Sampling Form shall be submitted to the MPCA with the next DMR or within 30 days whichever is sooner. [Minn. R. 7001.1090]
	5.21.216	Bypass. [Minn. R. 7001]
	5.21.217	Anticipated bypass. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if the bypass is for essential maintenance to assure efficient operation of the facility. The permittee shall submit prior notice, if possible at least ten days before the date of the bypass to the MPCA. The notice of the need for an anticipated bypass shall include the following information: a. the proposed date and estimated duration of the bypass; b. the alternatives to bypassing; and c. a proposal for effluent sampling during the bypass. Any bypass wastewater shall enter waters of the state from outfalls specifically authorized by this permit. Therefore, samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. [40 CFR 122.41(m)(2 and 3), Minn. R. 7001.1090, 1(J)]
	5.21.218	All other bypasses are prohibited. The MPCA may take enforcement action against the Permittee for a bypass, unless the specific conditions described in Minn. R. Ch. 7001.1090 subp. 1, K and 122.41(m)(4)(i) are met. In the event of an unanticipated bypass, the permittee shall: a. Take all reasonable steps to immediately end the bypass. b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon commencement of the bypass. You may contact the MPCA

		during business hours at 1(800)657-3864 or (651)296-6300 (metro area). c. Immediately take action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies for implementation of abatement, clean-up, or remediation activities. d. Only allow bypass wastewater as specified in this section to enter waters of the state from outfalls specifically authorized by this permit. Samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. The permittee shall also follow the reporting requirements for effluent violations as specified in this permit. [40 CFR 122.41(m)(4)(i), Minn. R. 7001.1090, 1(K), Minn. Stat. ch. 115.061]
	5.21.219	Operation and Maintenance. [Minn. R. 7001]
	5.21.220	The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150. subp. 3, item F. [Minn. R. 7001.0150, 3(F)]
	5.21.221	In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. [Minn. R. 7001.1090, 1(C)]
	5.21.222	Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. [40 CFR 503, Minn. R. 7041]
	5.21.223	Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. [Minn. R. 7001.0150, 3(F), Minn. R. 7001.150, 2(B)]
	5.21.224	Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. [Minn. R. 7001.0150, 3(F), Minn. R. 7001.150, 2(B)]
	5.21.225	Changes to the Facility or Permit. [Minn. R. 7001]
	5.21.226	Permit Modifications. Except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, no person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the agency has issued a written permit for the facility or activity. Permittees that propose to make a change to the facility or discharge that requires a permit modification shall follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee shall contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change. [Minn. R. 7001.0030]
	5.21.227	Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval. If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under

		Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented. [Minn. R. 7001.0030]
	5.21.228	Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit. [Minn. R. 7001.0150, 3(M)]
	5.21.229	Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge. The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use. This written request shall include at least the following information for the proposed additive: a. The process for which the additive will be used; b. Safety Data Sheet (SDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive. The aquatic toxicity information shall include at minimum the results of: a) a 48-hour LC50 or EC50 acute study for a North American freshwater planktonic crustacean (either Ceriodaphnia or Daphnia sp.) and b) a 96-hour LC50 acute study for rainbow trout, bluegill or fathead minnow or another North American freshwater aquatic species other than a planktonic crustacean; c. a complete product use and instruction label; d. the commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use. Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements. Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard. [Minn. R. 7001.0170]
	5.21.230	MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180. [Minn. R. 7001.0170, Minn. R. 7001.0180]
	5.21.231	TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required to comply with additional permits or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR 122.44.l.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies. [40 CFR 122.44(l)(2)(i)]
	5.21.232	Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. [Minn. R. 7001.0150, 3(N)]
	5.21.233	Facility Closure. The Permittee is responsible for closure and post-closure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

		Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance. The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, post-closure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA. [Minn. Stat. ch. 116.07, 4]
	5.21.234	Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for permit reissuance : Due by 180 days prior to permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration. If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160): a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit; b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit; c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies. [Minn. R. 7001.0160]

6. Submittal action summary

SD 001	**Effluent To Surface Water**	
		Surface Discharge: Class A Major Facility Effluent Requirements
	6.1.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
		Priority Pollutant Requirements
	6.2.2	The Permittee shall submit the first priority pollutant monitoring report : Due 1095 calendar days before Permit Expiration Date. (By two years after permit issuance date). [Minn. R. 7001]
	6.2.3	The Permittee shall submit the second priority pollutant monitoring report : Due 730 calendar days before Permit Expiration Date. (By three years after permit issuance date). [Minn. R. 7001]
	6.2.4	The Permittee shall submit the third priority pollutant monitoring report : Due 365 calendar days before Permit Expiration Date. (By four years after permit issuance date). [Minn. R. 7001]
		Chronic Toxicity Requirements
	6.3.5	The Permittee shall submit annual chronic test battery results, the first test is due 6 months after Permit issuance and annually thereafter. The Permittee shall submit annual chronic toxicity test battery results : Due 180 calendar days after Permit Issuance Date annually. [Minn. R. 7001]
SW 001	**Lake/Reservoir**	
		Facility Specific Limit and Monitoring Requirements
	6.4.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 002	**Lake/Reservoir**	
		Facility Specific Limit and Monitoring Requirements
	6.5.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 003	**Lake/Reservoir**	
		Facility Specific Limit and Monitoring Requirements
	6.6.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
WS 001	**Influent Waste**	
		Waste Stream: Class A Major Facility Influent Requirements
	6.7.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
MN0040738	**Alexandria Lake Area Sanitary District**	
		Compliance Construction Schedule
	6.8.1	If re-vegetation is not occurring naturally and/or if carp populations are still at an elevated level and a lake drawdown is necessary, the Permittee is to hold a public meeting with a vote on the drawdown of Lake Winona by the permit expiration date. The Permittee shall hold a meeting : Due by permit expiration. [Minn. R. 7001]

	6.8.2	The Permittee shall submit water quality monitoring data to determine compliance with the draft TMDL for Lake Winona as soon as possible, but no later than (permit expiration - insert hard date after public notice) . Water quality monitoring data should indicate whether the lake has met applicable water quality standards. If the lake has not met applicable water quality standards, the Permittee shall continue with the Route 2 construction work. The Permittee shall submit monitoring reports : Due by permit expiration. [Minn. R. 7001]
	6.8.3	The Permittee shall amend the previously submitted permit application for reissuance (that was submitted 180 days prior to permit expiration) with information identifying the selected route for compliance with the water quality standard, and submit by the permit expiration date. If at any time the Permittee selects either construction of a new Facility or capital improvements to the existing Facility as the chosen alternative, the Permittee can submit a permit application for a major modification to reflect a construction schedule and the previously required Adaptive Lake Management activity requirements will no longer be applicable and removed as permit requirements. If the Permittee elects to either construct a new Facility or perform capital improvements to the existing Facility to achieve the draft Lake Winona TMDL waste load allocations (WLA), any lake management activities and related requirements previously imposed via the permit or related plans, including any previously agreed to long-term monitoring, upkeep for BMPs or other lake management related activities identified and/or undertaken by the Permittee, will no longer be required or enforced through the Permit. The permit application documents shall identify the new facility components, if possible. If facility components are not known at the time of application submittal, an application for a major permit modification will be required six months prior to construction. The Permittee shall submit permit application revisions : Due by permit expiration. [Minn. R. 7001]
		Special Requirements
	6.9.4	The Permittee shall submit a plan : Due by 180 days after permit issuance. This Plan corresponds to the initial phase of the *Streamlined Chloride Variance Action Tree*. [Minn. R. 7001]
	6.9.5	The Permittee shall submit an annual progress report to the MPCA for review and approval by January 31 of each calendar year following submittal of the Plan. The annual progress report shall include, but is not limited to: a) All chloride influent and effluent monitoring results for the previous year and a summary of any chloride reductions made; b) A list of potential sources of chloride found and any implementation plans and source reduction schedules developed; c) An update on the completion of source reduction activities based on the associated metrics; d) An evaluation of reductions achieved or not achieved through activities. If not achieved, explain the barriers to achievement; e) All sampling and reporting results collected to determine if activities are resulting in a chloride reduction; f) Any updates to the Plan's activities and schedule; and g) The schedule of activities that the Permittee plans to complete within the next 12-month period, as well as the metrics and associated sampling and reporting to record reductions. In the event that the permit is administratively continued, the Permittee shall continue to submit an annual progress report each year until the permit is reissued. The Permittee shall submit an annual progress report : Due annually, by the 31st of January. [Minn. R. 7001]
		Mercury Minimization Plan

	6.10.6	The Permittee shall submit a mercury pollutant minimization plan : Due by 180 days after permit issuance. [Minn. R. 7001]
		Pretreatment: Undelegated Requirements
	6.11.7	The Permittee shall submit a pretreatment annual report : Due by 31 days after the end of each calendar year following permit issuance if a SIU discharges to the POTW during a given calendar year. [Minn. R. 7049]
		Biosolids: Land Application
	6.12.8	The Permittee shall submit a biosolids annual report : Due annually, by the 31st of December on a form provided by or approved by the MPCA. The report shall include the requirements in Minnesota Rules, part 7041.1700. [Minn. R. 7041.1700]
		Total Facility Requirements (NPDES/SDS)
	6.13.9	Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for permit reissuance : Due by 180 days prior to permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration. If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160): a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit; b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit; c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies. [Minn. R. 7001.0160]

7. Limits and monitoring

		Discharge limitations							Monitoring requirements			
Subject item	Parameter	Quantity /Loading avg.	Quantity /Loading max.	Quantity /Loading units	Quality /Conc. min.	Quality /Conc. avg.	Quality /Conc. max.	Quality/ Conc. units	Frequency	Sample type	Effective period	Notes
SD 001 Surface Water Discharge	Bicarbonates (HCO3)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	BOD, Carbonaceous 05 Day (20 Deg C)	282 calendar month average	452 maximum calendar week average	kilograms per day		25 calendar month average	40 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge	BOD, Carbonaceous 05 Day (20 Deg C) Percent Removal				85 minimum calendar month average			percent	once per month	Calculation	Jan-Dec	
SD 001 Surface Water Discharge	Calcium, Total (as Ca)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge Phase 1, Phase 2, Phase 3	Chloride, Total						839 daily maximum	milligrams per liter	twice per month	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge Phase 4	Chloride, Total					230 calendar month average	252 daily maximum	milligrams per liter	twice per month	24-Hour Flow Composite	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	Parameter	Quantity /Loading avg.	Quantity /Loading max.	Quantity /Loading units	Quality /Conc. min.	Quality /Conc. avg.	Quality /Conc. max.	Quality/ Conc. units	Frequency	Sample type	Effective period	Notes
SD 001 Surface Water Discharge	Chlorine, Total Residual						0.038 daily maximum	milligrams per liter	once per day	Grab	Jan-Dec	
SD 001 Surface Water Discharge	Copper, Total (as Cu)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Fecal Coliform, MPN or Membrane Filter 44.5C					200 calendar month geometric mean		organisms per 100 milliliter	3 times per week	Grab	Apr-Oct	
SD 001 Surface Water Discharge	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. calendar month maximum	million gallons per day	once per day	Measurement, Continuous	Jan-Dec	
SD 001 Surface Water Discharge	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Magnesium, Total (as Mg)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Mercury, Dissolved (as Hg)						Monitor only. calendar month maximum	nanograms per liter	once per month	Grab	May, Sep	

		Discharge limitations							Monitoring requirements			
Subject item	Parameter	Quantity /Loading avg.	Quantity /Loading max.	Quantity /Loading units	Quality /Conc. min.	Quality /Conc. avg.	Quality /Conc. max.	Quality/ Conc. units	Frequency	Sample type	Effective period	Notes
SD 001 Surface Water Discharge	Mercury, Total (as Hg)						Monitor only. calendar month maximum	nanograms per liter	once per month	Grab	May, Sep	
SD 001 Surface Water Discharge	Nitrite Plus Nitrate, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge	Nitrogen, Kjeldahl, Total					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge	Nitrogen, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	Calculation	Jan-Dec	
SD 001 Surface Water Discharge	Oxygen, Dissolved				Monitor only. calendar month minimum			milligrams per liter	once per day	Grab	Jan-Dec	
SD 001 Surface Water Discharge	pH				6.0 calendar month minimum		9.0 calendar month maximum	standard units	once per day	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SD 001 Surface Water Discharge Phase 1, Phase 2	Phosphorus, Total (as P)		1087 12-month moving total	kilograms per year					once per month	Calculation	Jan-Dec	Upon successful completion of Adaptive Lake Management Plan activities and Lake Winona meeting the applicable water quality standards, the total phosphorus effluent limit of 1087 kg/yr will become the final effluent limit.
SD 001 Surface Water Discharge Phase 1, Phase 2	Phosphorus, Total (as P)	Monitor only. calendar month average		kilograms per day		0.25 calendar month average		milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	Upon successful completion of Adaptive Lake Management Plan activities and Lake Winona meeting the applicable water quality standards, the total phosphorus effluent limit of 0.25 mg/L will become the final effluent limit.
SD 001 Surface Water Discharge Phase 3, Phase 4	Phosphorus, Total (as P)		665 12-month moving total	kilograms per year					once per month	Calculation	Jan-Dec	Upon conclusion of the second compliance schedule term, should either the Permittee perform capital improvements to the existing Facility or construct a new Facility OR should Lake Winona not meet applicable water quality standards, the 665 kg/yr total phosphorus limit will be the final effluent limit.

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SD 001 Surface Water Discharge Phase 3, Phase 4	Phosphorus, Total (as P)	Monitor only. calendar month average		kilograms per day		0.157 calendar month average		milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	Upon conclusion of the second compliance schedule term, should either the Permittee perform capital improvements to the existing Facility or construct a new Facility OR should Lake Winona not meet applicable water quality standards, the 0.157 mg/L total phosphorus limit will be the final effluent limit.
SD 001 Surface Water Discharge	Potassium, Total (as K)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Sodium, Total (as Na)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Solids, Total Dissolved (TDS)						Monitor only. calendar quarter maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Solids, Total Suspended (TSS)	339 calendar month average	508 maximum calendar week average	kilograms per day		30 calendar month average	45 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec	
SD 001 Surface Water Discharge	Solids, Total Suspended (TSS) Percent Removal				85 minimum calendar month average			percent	once per month	Calculation	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SD 001 Surface Water Discharge	Solids, Total Suspended (TSS), grab (Mercury)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	May, Sep	
SD 001 Surface Water Discharge	Specific Conductance						Monitor only. calendar quarter maximum	micromhos per cm	once per quarter	Measurement	Mar, Jun, Sep, Dec	
SD 001 Surface Water Discharge	Zinc, Total (as Zn)					Monitor only. calendar quarter average		milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
SW 001 Lake Winona - Northeast Site	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 001 Lake Winona - Northeast Site	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	
SW 001 Lake Winona - Northeast Site	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 001 Lake Winona - Northeast Site	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	Parameter	Quantity /Loading avg.	Quantity /Loading max.	Quantity /Loading units	Quality /Conc. min.	Quality /Conc. avg.	Quality /Conc. max.	Quality/ Conc. units	Frequency	Sample type	Effective period	Notes
SW 001 Lake Winona - Northeast Site	Transparency, Secchi Disc	Monitor only. calendar month average		meters					once per month	Grab	May, Oct	
SW 001 Lake Winona - Northeast Site	Transparency, Secchi Disc	Monitor only. calendar month average		meters					twice per month	Grab	Jun-Sep	
SW 002 Lake Winona - Southwest Site	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	
SW 002 Lake Winona - Southwest Site	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 002 Lake Winona - Southwest Site	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 002 Lake Winona - Southwest Site	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	
SW 002 Lake Winona - Southwest Site	Transparency, Secchi Disc	Monitor only. calendar month average		meters					once per month	Grab	May, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SW 002 Lake Winona - Southwest Site	Transparency, Secchi Disc	Monitor only. calendar month average		meters					twice per month	Grab	Jun-Sep	
SW 003 Lake Agnes	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	
SW 003 Lake Agnes	Chlorophyll a, corrected					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 003 Lake Agnes	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	twice per month	Grab	Jun-Sep	
SW 003 Lake Agnes	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	May, Oct	
SW 003 Lake Agnes	Transparency, Secchi Disc	Monitor only. calendar month average		meters					once per month	Grab	May, Oct	
SW 003 Lake Agnes	Transparency, Secchi Disc	Monitor only. calendar month average		meters					twice per month	Grab	Jun-Sep	

		Discharge limitations							Monitoring requirements			
Subject item	Parameter	Quantity /Loading avg.	Quantity /Loading max.	Quantity /Loading units	Quality /Conc. min.	Quality /Conc. avg.	Quality /Conc. max.	Quality/ Conc. units	Frequency	Sample type	Effective period	Notes
WS 001 Influent Waste Stream	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec	
WS 001 Influent Waste Stream	Copper, Total (as Cu)					Monitor only. calendar quarter average		milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec	
WS 001 Influent Waste Stream	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. calendar month maximum	million gallons per day	once per day	Measurement, Continuous	Jan-Dec	
WS 001 Influent Waste Stream	Nitrite Plus Nitrate, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec	
WS 001 Influent Waste Stream	Nitrogen, Kjeldahl, Total					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec	
WS 001 Influent Waste Stream	Nitrogen, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	Calculation	Jan-Dec	
WS 001 Influent Waste Stream	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per day	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
WS 001 Influent Waste Stream	Phosphorus, Total (as P)					Monitor only. calendar month average		milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 001 Influent Waste Stream	Precipitation		Monitor only. calendar month total	inches					once per day	Measurement	Jan-Dec	
WS 001 Influent Waste Stream	Solids, Total Suspended (TSS)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec	