Appendices

Appendix A: Environmental Information Worksheet (Placeholder)

Appendix B: 2022 SIU Permits

Appendix C: Flows and Loads TM

Appendix D: NPDES Permit

Appendix E: PEL Letter

Appendix F: Condition Assessment TM

Appendix G: Headworks TM

Appendix H: Liquids Treatment TM

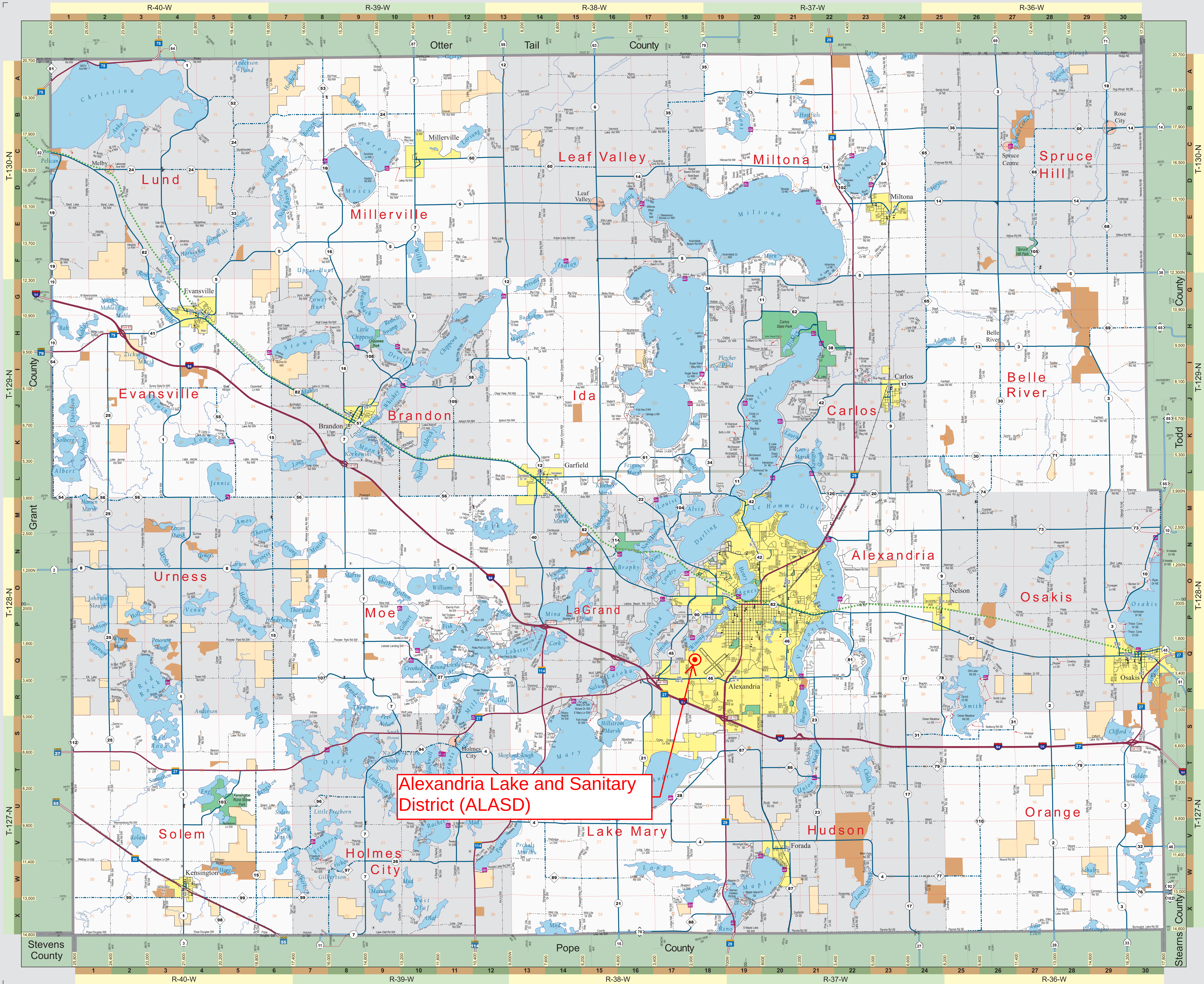
Appendix I: Solids Processing TM

Appendix J: Disinfection TM

Appendix K: Supplemental Documents (Placeholder)

Appendix A: Environmental Information Worksheet

EIW to be included in Final Facility Plan. The following Figures are provided:



2018 DOUGLAS COUNTY ROAD MAP

Rural Roads

State Highway 29
Interstate 94
Municipal State Aid Hwy Paved
City Street
Private Access
Other County Jurisdiction Road
Paved County Road 45
Gravel County Road 87
Township Road Paved
Township Road Gravel
Central Lakes Trail
RailRoad
Cemeteries
Schools
Churches
Lake Access
Lakes
Parks
Waterfowl Production
Wildlife Management
Detail on Other Side
13,000 Address Ranges
Incorporated Cities
Unincorporated Cities

Prepared by:
Douglas County Public Works
526 Willow Dr
PO Box 398
Alexandria MN 56308

320-762-2999
Date: 1/2/2018

Miles 0 0.5 1 2

Disclaimer Statement
THE DATA ARE PROVIDED "AS IS" WITH NO GUARANTEE OR REPRESENTATION ABOUT THE ACCURACY, CURRENCY, SUITABILITY, PERFORMANCE, MERCHANTABILITY, RELIABILITY, OR FITNESS OF THIS DATA FOR ANY PARTICULAR PURPOSE.
All boundaries shown are approximate. This is not legal descriptions and errors may exist. Public lands shown are not open to unlimited access, you must obey access rules and boundary signs, know local regulations and stay off private property. For more information on WPAs go to http://www.fws.gov/GIS/data/CadastralDB/index.htm.
For WMAs go to http://www.dnr.state.mn.us/wmas/index.html.

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map OnDemand Topo

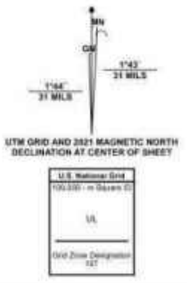
7.5-MINUTE TOPO 2 QUADRANGLE
Custom Extent
7.5-MINUTE TOPO

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 15T

Data is provided by The National Map (TNM), is the best available at the time of map generation., and includes data content from supporting themes of Elevation, Hydrography, Geographic Names, Boundaries, Transportation, Structures, Land Cover, and Orthoimagery. Refer to associated Federal Geographic Data Committee (FGDC) Metadata for additional source data information.

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands. Temporal changes may have occurred since these data were collected and some data may no longer represent actual surface conditions.

Learn About The National Map: https://nationalmap.gov



UTM GRID AND 2021 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

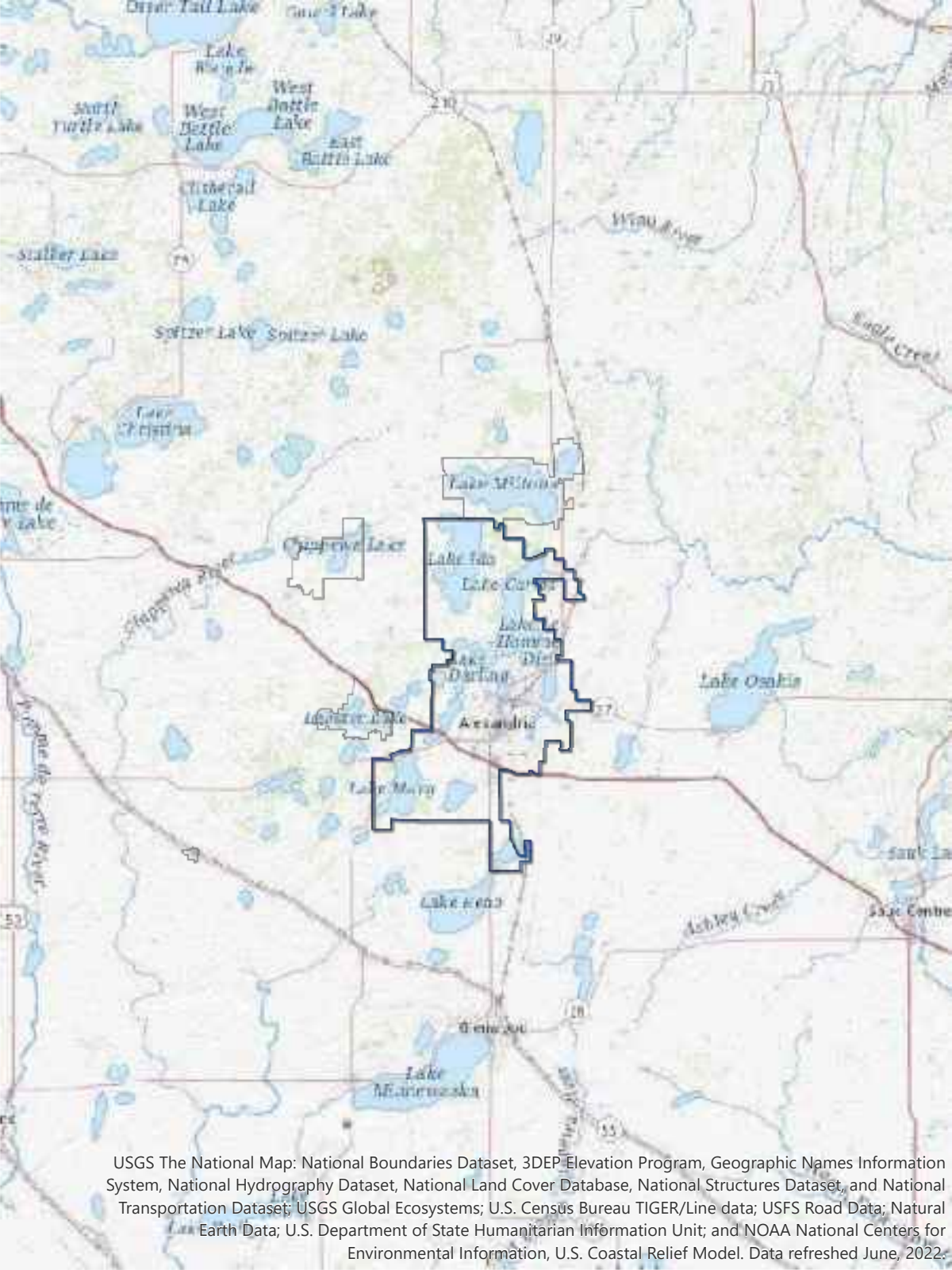
SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
CONTOUR SMOOTHNESS = Medium

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

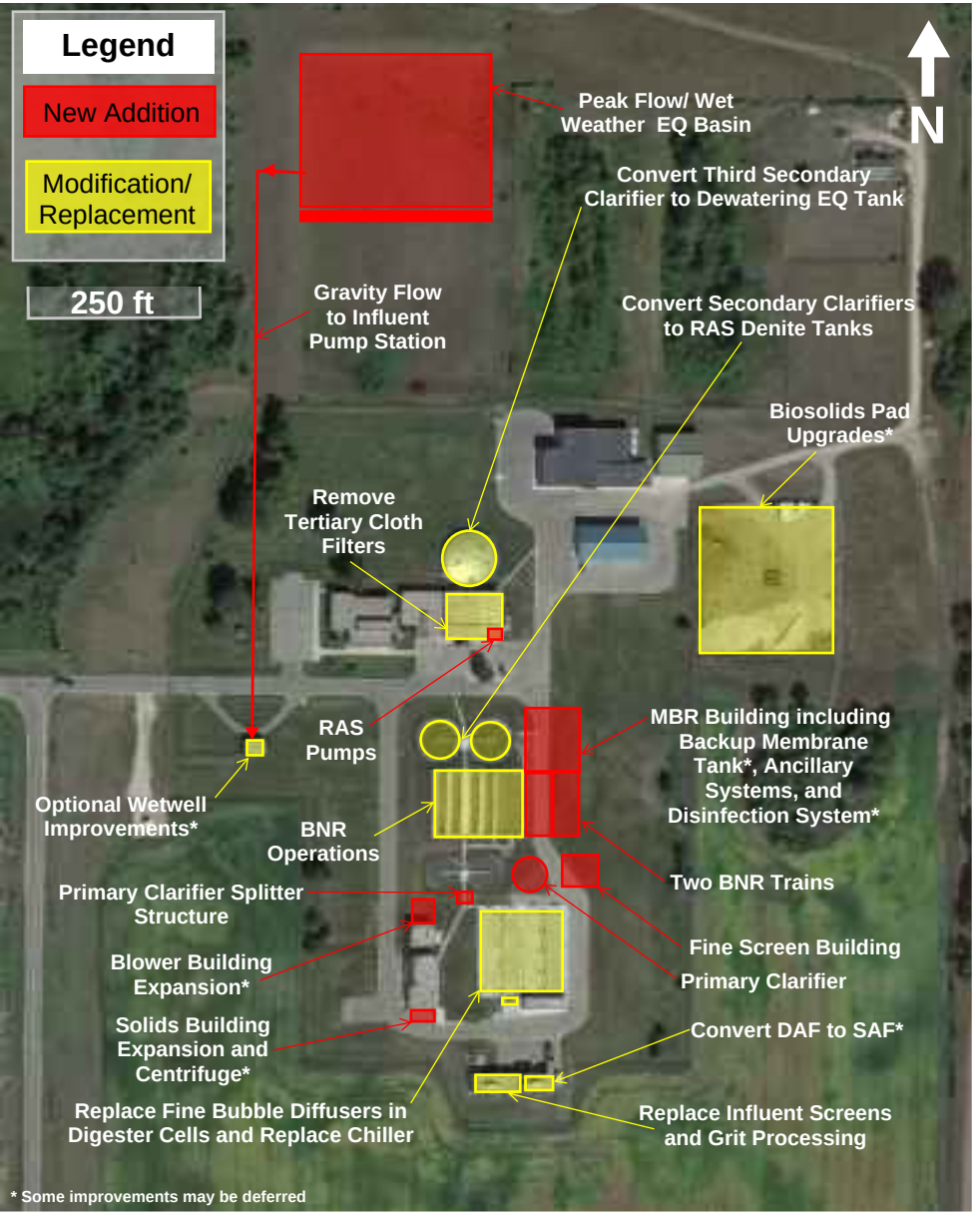
7.5-MINUTE TOPO 2, MN
2022



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.


ALASD Site Map
Legend
Alexandria Lake Area Sanitary District
Google Earth
N
1000 ft

ALASD Proposed Site Improvements



* Some improvements may be deferred

City of Alexandria Zoning Map

Zoning Classifications

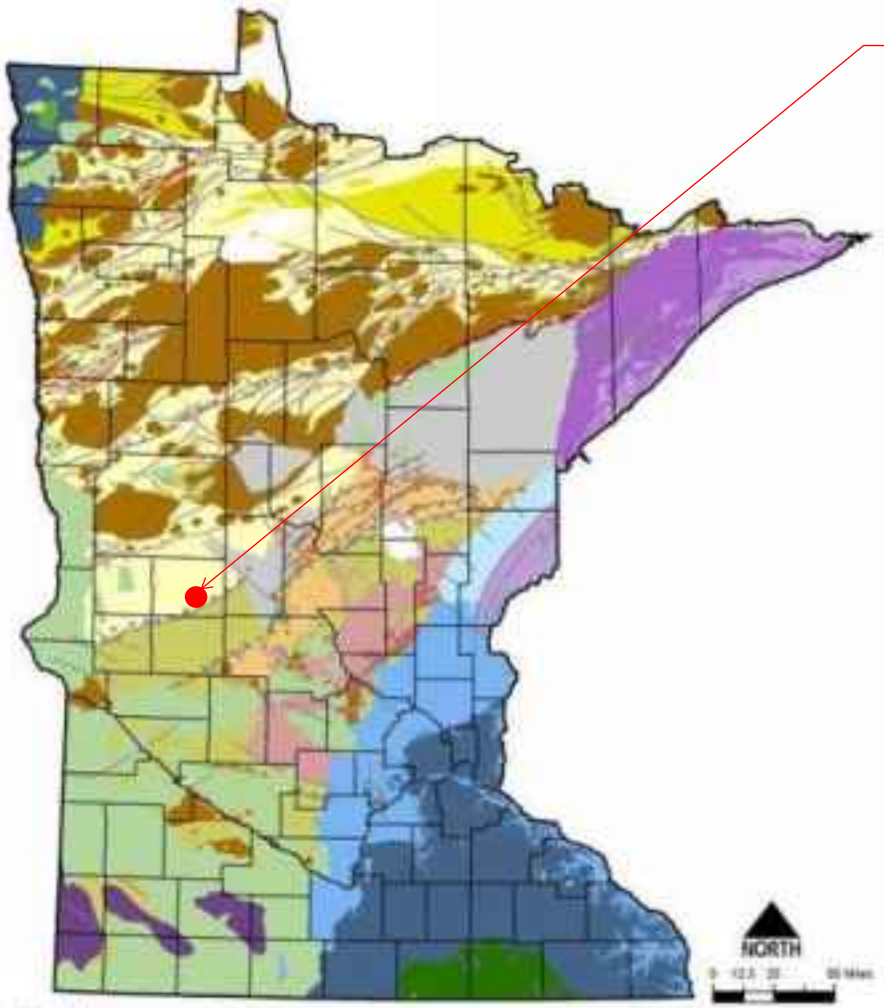
- A-O Agriculture/Open Space
- A-P Airport Business
- B-1 General Business
- B-2 Regional Business
- I-1 Light Industrial
- I-B Industrial Business
- R-1 Single Family Residential
- R-2 Single & Two Family Residential
- R-3 Medium Density Residential
- R-4 Mobile Home Residential
- R-B Residential Business
- R-V/A Vacant/Agricultural Residential
- Alexandria City Limits

LAKE LE HOMME DIEU
LAKE DARLING
LAKE STONY
LAKE TAYLOR
LAKE COWDRY
LAKE HENRY
LAKE AGNES
LAKE LATOKA
LAKE WINONA
JOHNSON LAKE
LAKE VICTORIA
LAKE GENEVA
LAKE BURGEN
LAKE ANDREW

ALEXANDRIA 2022 ALP UTILITIES

0 0.125 0.25 0.5 0.75 1 Miles

m:\pdf_maps\zoning_b.pdf



Facility located in extrusive rocks of mafic to felsic composition, associated volcanogenic rocks and derivative graywacke

Description of Map Units

- Mudstone, siltstone, and some sandstone
- Red shale
- Limestone and dolostone
- Limestone, dolostone, and some sandstone and shale
- Sandstone, shale, and some carbonate
- Shale and arkosic sandstone overlain by quartz arenite
- Extrusive rocks of dominantly mafic composition
- Intrusive rocks of dominantly mafic composition
- Quartz arenite
- Intrusive rocks of dominantly granitic composition
- Extrusive and hypabyssal rocks of mafic and felsic composition. Includes volcaniclastic rocks of felsic composition
- Iron-formation with a basal quartz arenite
- Graywacke, siltstone, and shale
- Quartz arenite and siltstone intercalated with mafic volcanic rocks, carbonaceous shale and iron-formation
- Intrusive rocks of dominantly tonalitic to quartz monzonitic composition
- Schist and granite-rich migmatite
- Extrusive rocks of mafic to felsic composition, associated volcanogenic rocks and derivative graywacke
- Quartzofeldspathic gneiss, amphibolite and other high-grade metamorphic rocks
- Inferred trace of a steeply dipping fault
- Iron-formation
- Inferred trace of a thrust fault

Soil Map—Douglas County, Minnesota
(ALASD NRCS Soil Classifications)

Map Scale: 1:3,330 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Douglas County, Minnesota
Survey Area Data: Version 20, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2021—Aug 13, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1113	Haslie, Seelyeville, and Cathro soils, frequently ponded, 0 to 1 percent slopes	3.8	7.1%
AsB	Arvilla sandy loam, 2 to 6 percent slopes	14.6	27.6%
D8B	Sandberg loamy sand, 1 to 6 percent slopes	10.9	20.6%
D8C	Sandberg loamy sand, 2 to 12 percent slopes	6.8	12.8%
M-W	Water, miscellaneous	5.1	9.7%
Ud	Udipsamments (cut and fill land)	11.7	22.1%
W	Water	0.0	0.0%
Totals for Area of Interest		**53.0**	**100.0%**

U.S. Fish and Wildlife Service
National Wetlands Inventory

ALASD Wetlands Inventory

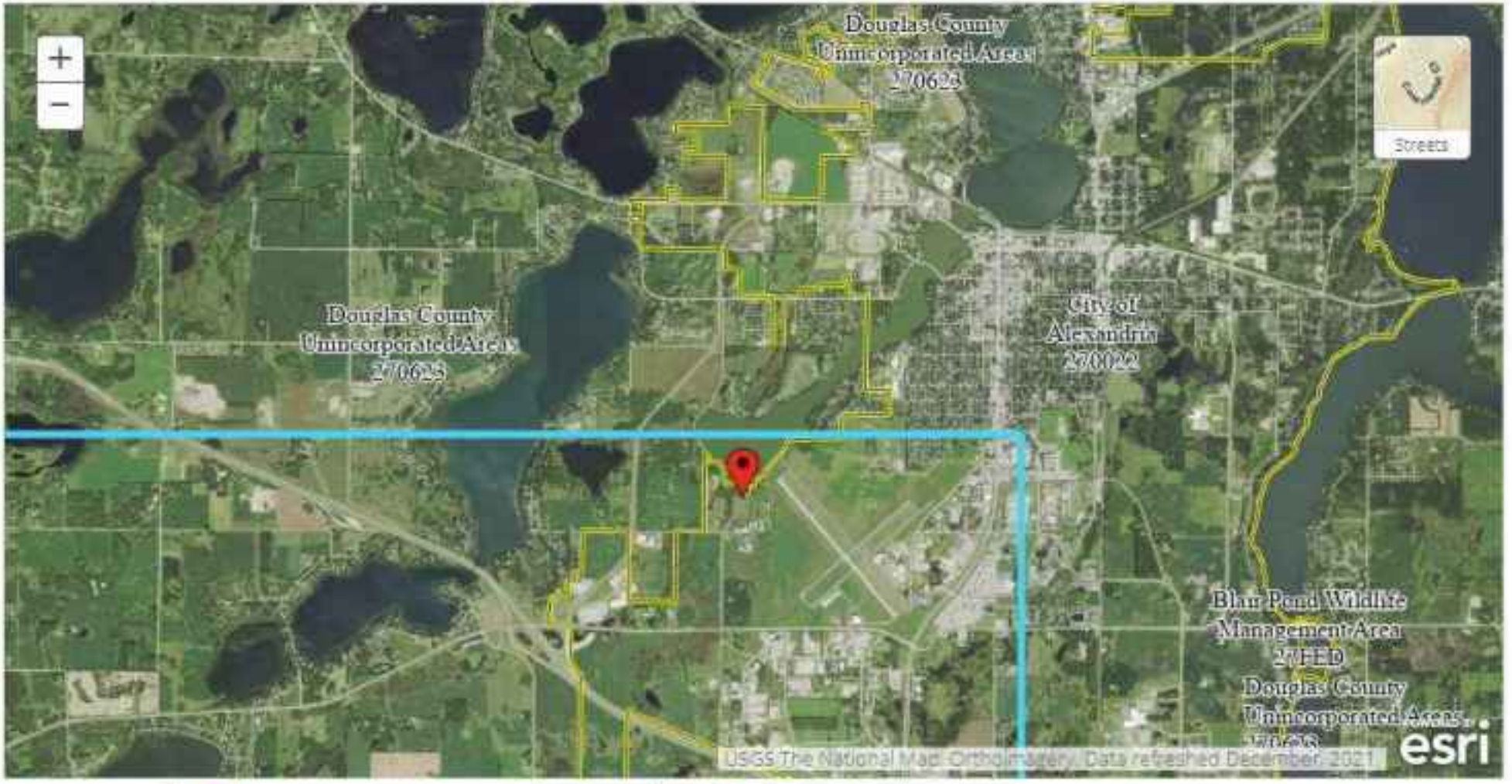
November 30, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.


MDH
Minnesota Department of Health
Minnesota Well Index
ALASD Site



PIN
Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
Selected FloodMap Boundary
Digital Data Available
No Digital Data Available
Unmapped

OTHER AREAS
NO SCREEN Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D
Otherwise Protected Area
Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth
Regulatory Floodway Zone AE, AH, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee. See Notes. Zone X
Area with Flood Risk due to Levee Zone D

OTHER FEATURES
Cross Sections with 1% Annual Chance
Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature

GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

USDHS FEMA 100-Year Flood Zones

FEMA 100 Year Flood Zones in the U.S.A

FEMA 100 year Flood Zones

100 Year Flood Zones

Counties with Flood Data Available

No

Yes

FEMA 100 Year Flood Zones in the U.S.A

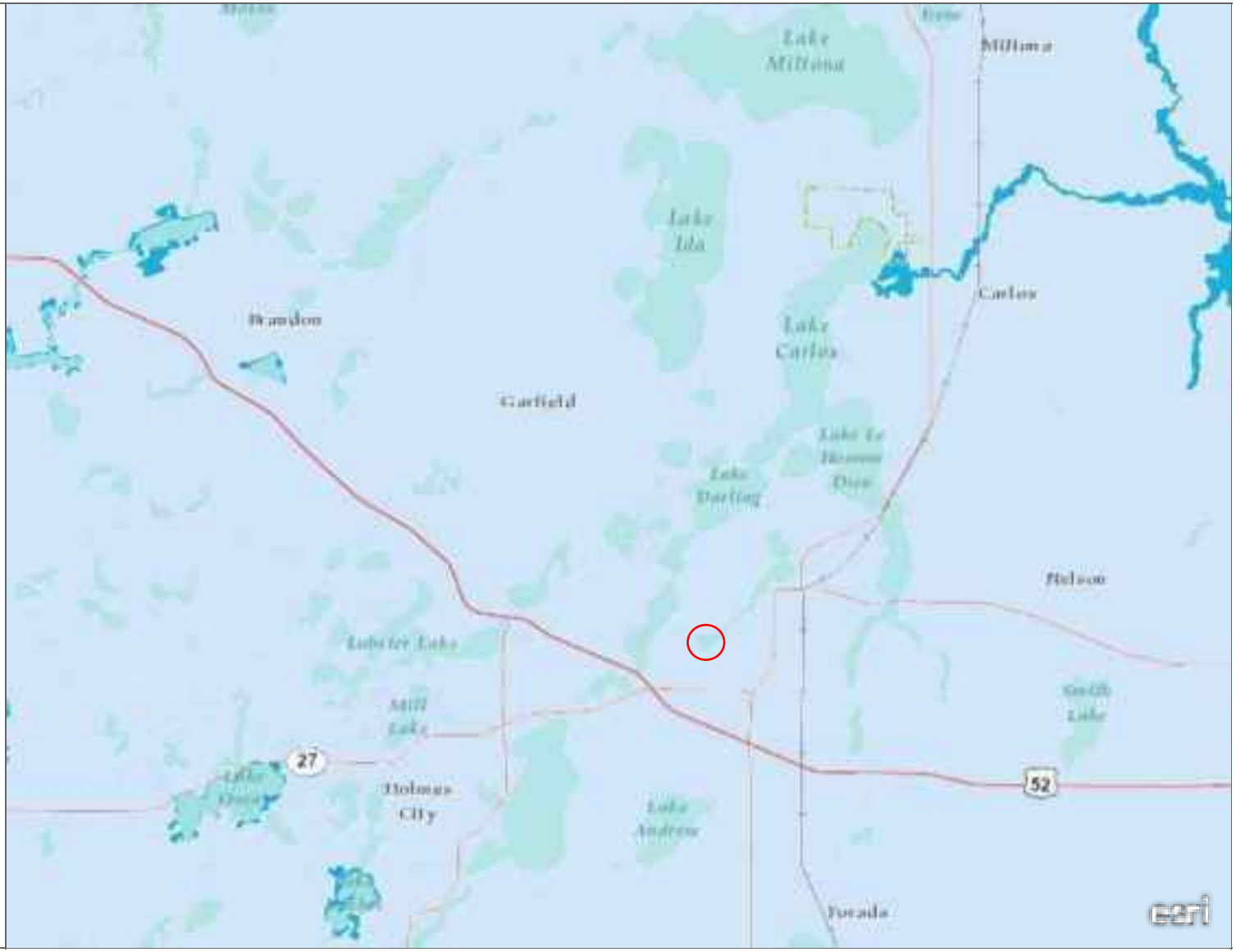
FEMA 100 year Flood Zones

100 Year Flood Zones

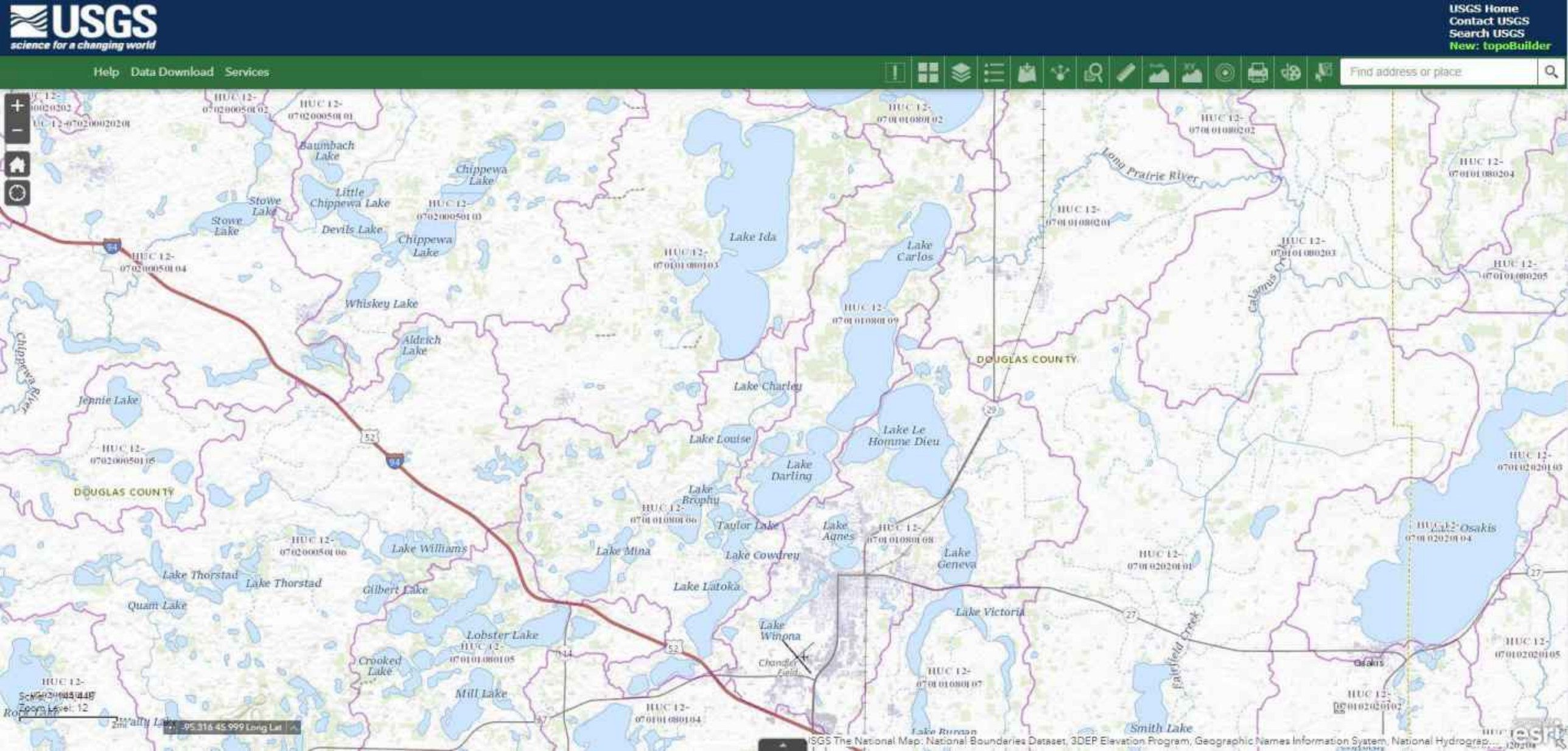
Counties with Flood Data Available

No

Yes



USDHS FEMA 100 Year Flood Zones


USGS
science for a changing world
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Contact USGS
Search USGS
New: topoBuilder
Help
Data Download
Services
Find address or place
Baumbach Lake
Chippewa Lake
Little Chippewa Lake
Stowe Lake
Devils Lake
Whiskey Lake
Aldrich Lake
Jennie Lake
Lake Ida
Lake Carlos
Lake Charley
Lake Louise
Lake Darling
Lake Le Homme Dieu
Lake Brophy
Taylor Lake
Lake Agnes
Lake Mina
Lake Cowdrey
Lake Latoka
Lake Geneva
Lake Victoria
Lake Winona
Lake Williams
Lake Thorstad
Quam Lake
Gilbert Lake
Lobster Lake
Crooked Lake
Mill Lake
Smith Lake
Long Prairie River
Fairfield Creek
DOUGLAS COUNTY
HUC 12-070200050102
HUC 12-070200050101
HUC 12-070200050103
HUC 12-070200050104
HUC 12-070200050105
HUC 12-070200050106
HUC 12-070101080102
HUC 12-070101080202
HUC 12-070101080204
HUC 12-070101080201
HUC 12-070101080203
HUC 12-070101080205
HUC 12-070101080103
HUC 12-070101080109
HUC 12-070101080106
HUC 12-070101080108
HUC 12-070102020103
HUC 12-070102020104
HUC 12-070102020101
HUC 12-070102020105
HUC 12-070102020102
HUC 12-070101080105
HUC 12-070101080104
HUC 12-070101080107
Zoom Level: 12
-95.316 45.999 Long Lat
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrogra...
esri

Kellie Schaefer

From: MN_MNIT_Data Request SHPO <DataRequestSHPO@state.mn.us>
Sent: Monday, December 12, 2022 4:24 PM
To: Kellie Schaefer
Subject: RE: Database Review Request for Alexandria Lake and Sanitary District
Attachments: History.xls

Hello Kellie,

Please see attached. Our database has no archaeological records for the given project area.

Jim

DEPARTMENT OF ADMINISTRATION
STATE HISTORIC PRESERVATION OFFICE

SHPO Data Requests
Minnesota State Historic Preservation Office
50 Sherburne Avenue, Suite 203
Saint Paul, MN 55155
(651) 201-3299
datarequestshpo@state.mn.us

Notice: This email message simply reports the results of the cultural resources database search you requested. The database search is only for previously known archaeological sites and historic properties. **IN NO CASE DOES THIS DATABASE SEARCH OR EMAIL MESSAGE CONSTITUTE A PROJECT REVIEW UNDER STATE OR FEDERAL PRESERVATION LAWS –** please see our website at https://mn.gov/admin/shpo/protection/ for further information regarding our Environmental Review Process.
Because the majority of archaeological sites in the state and many historic/architectural properties have not been recorded, important sites or properties may exist within the search area and may be affected by development projects within that area. Additional research, including field surveys, may be necessary to adequately assess the area's potential to contain historic properties or archaeological sites.
Properties that are listed in the National Register of Historic Places (NRHP) or have been determined eligible for listing in the NRHP are indicated on the reports you have received, if any. The following codes may be on those reports:
NR – National Register listed. The properties may be individually listed or may be within the boundaries of a National Register District.
CEF – Considered Eligible Findings are made when a federal agency has recommended that a property is eligible for listing in the National Register and MN SHPO has accepted the recommendation for the purposes of the Environmental Review Process. These properties need to be further assessed before they are officially listed in the National Register.
SEF – Staff eligible Findings are those properties the MN SHPO staff considers eligible for listing in the National Register, in circumstances other than the Environmental Review Process.
DOE – Determination of Eligibility is made by the National Park Service and are those properties that are eligible for listing in the National Register, but have not been officially listed.
CNEF – Considered Not Eligible Findings are made during the course of the Environmental Review Process. For the purposes of the review a property is considered not eligible for listing in the National Register. These properties may need to be reassessed for eligibility under additional or alternate contexts.
Properties without NR, CEF, SEF, DOE, or CNEF designations in the reports may not have been evaluated and therefore no assumption to their eligibility can be made. Integrity and contexts change over time, therefore any eligibility determination made ten (10) or more years from the date of the current survey are considered out of date and the property will need to be reassessed.
If you require a comprehensive assessment of a project's potential to impact archaeological sites or historic/architectural properties, you may need to hire a qualified archaeologist and/or historian. If you need assistance with a project review, please contact Kelly Gragg-Johnson, Environmental Review Specialist @ 651-201-3285 or by email at kelly.graggjohnson@state.mn.us.

The Minnesota SHPO Archaeology and Historic/Architectural Survey Manuals can be found at https://mn.gov/admin/shpo/identification-evaluation/.

Please subscribe to receive SHPO notices for the most current updates regarding office hours, accessing research files, or changes in submitting materials to the SHPO.

To access historic resource information please visit our webpage on Using SHPO's Files.

From: Kellie Schaefer <Kschaefer@BrwnCald.com>
Sent: Wednesday, December 7, 2022 4:12 PM
To: MN_MNIT_Data Request SHPO <DataRequestSHPO@state.mn.us>
Subject: Database Review Request for Alexandria Lake and Sanitary District

---

Hello,

I am requesting a database review for the ALASD wastewater treatment plant expansion project in Alexandria, MN, as required per the MPCA's Environmental Information Worksheet.

I have attached a map of the proposed site expansion. The address is 2201 Nevada St SW, Alexandria, MN 56308.

Please let me know if there is anything else needed.

Thanks,

Kellie E Schaefer
Staff, Environmental Engineer
Brown and Caldwell | Saint Paul
T 651.724.9914 | C 715.220.3299 | KSchaefer@brwncald.com

DEPARTMENT OF NATURAL RESOURCES

Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Alexandria Lake and Sanitary District (ALASD) WWTF Expansion

Project Proposer: ALASD

Project Type: Utilities, Sewage Treatment Plant

Project Type Activities: Waterbody, watercourse, streambed impacts (e.g., discharge, runoff, sedimentation, fill, excavation)

TRS: T128 R38 S23, T128 R38 S25, T128 R38 S26

County(s): Douglas

DNR Admin Region(s): Northwest

Reason Requested: State EAW

Project Description: ALASD is currently in the Facility Plan process of expanding the WWTF to treat projected 2045 flows and replace outdated/old equipment. Expansion includes ...

Existing Land Uses: The existing site has an average wet weather design capacity of 4.7 mgd and treats wastewater from a service area that is approximately 100 sq miles. The ...

Landcover / Habitat Impacted: The existing WWTF discharges treated wastewater into Lake Winona, and future expansion of the site will occur within the existing facility boundary. The ...

Waterbodies Affected: Construction for the LS1 forcemain may affect surface water runoff into Lake Winona. Dewatering measures will be implemented during construction to minimize impacts to Lake Winona.

Groundwater Resources Affected: Previous groundwater tests show the groundwater to be approximately 21' below grade. Excavation will not affect the existing groundwater table. The NRCS ...

Previous Natural Heritage Review: No

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	No Comments	No Further Review Required
Ecologically Significant Area	No Comments	No Further Review Required
State-Listed Endangered or Threatened Species	No Comments	No Further Review Required
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review

DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155-4025

December 30, 2022

Project ID: MCE #2022-00896

Kellie Schaefer
Brown and Caldwell
370 Wabasha St N
St. Paul, MN 55102

RE: Automated Natural Heritage Review of the proposed Alexandria Lake and Sanitary District (ALASD) WWTF Expansion
See Cover Page for location and project details.

Dear Kellie Schaefer,

As requested, the above project has been reviewed for potential effects to rare features. Based on this review, the following rare features may be adversely affected by the proposed project:

Ecologically Significant Area

No ecologically significant areas have been documented in the vicinity of the project.

State-Listed Endangered or Threatened Species

No state-listed endangered or threatened species have been documented in the vicinity of the project.

State-Listed Species of Special Concern

Taxonomic Group	Common Name	Scientific Name	Water Regime	Habitat	Federal Status
Vertebrate Animal	Mudpuppy	Necturus maculosus		Deep Water Zone of Lake, Littoral Zone of Lake, Large Rivers, Medium Rivers and Streams	

- The above table identifies state-listed species of special concern that have been documented in the vicinity of your project. If suitable habitat for any of these species occurs within your project footprint or activity impact area, the project may negatively impact those species. To avoid impacting state-listed species of special concern, the DNR recommends modifying the location of project activities to avoid suitable habitat or modifying the timing of project activities to avoid the presence of the

species. Please visit the DNR Rare Species Guide for more information on the habitat use of these species and recommended measures to avoid or minimize impacts. For further assistance, please contact the appropriate DNR Regional Nongame Specialist or Regional Ecologist. Species-specific comments, if any, appear below.

Federally Listed Species

The Natural Heritage Information System does not contain any records for federally listed species within one mile of the proposed project. However, to ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online Information for Planning and Consultation (IPaC) tool.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and the project description provided on the cover page. If project details change or construction has not occurred within one year, please resubmit the project for review.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. For information on the environmental review process or other natural resource concerns, you may contact your DNR Regional Environmental Assessment Ecologist.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Jim Drake Jim Drake
Natural Heritage Review Specialist
James.F.Drake@state.mn.us

Links: USFWS Information for Planning and Consultation (IPaC) tool
Information for Planning and Consultation (IPaC) tool
DNR Regional Environmental Assessment Ecologist Contact Info
https://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html

xandria Lake and Sanitary District (ALASD) WWTF Expans

Aerial Imagery With Locator Map

N
W E
S

0 0.17 0.35 0.7 1.05 1.4 Miles

Project Boundary

Project Type: Utilities, Sewage Treatment Plant

Project Size (acres): 116.88

County(s): Douglas

TRS: T128 R38 S23, T128 R38 S25, T128 R38 S26

Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Earthstar Geographics

xandria Lake and Sanitary District (ALASD) WWTF Expans

USA Topo Basemap With Locator Map

0 0.17 0.35 0.7 1.05 1.4 Miles

Project Boundary

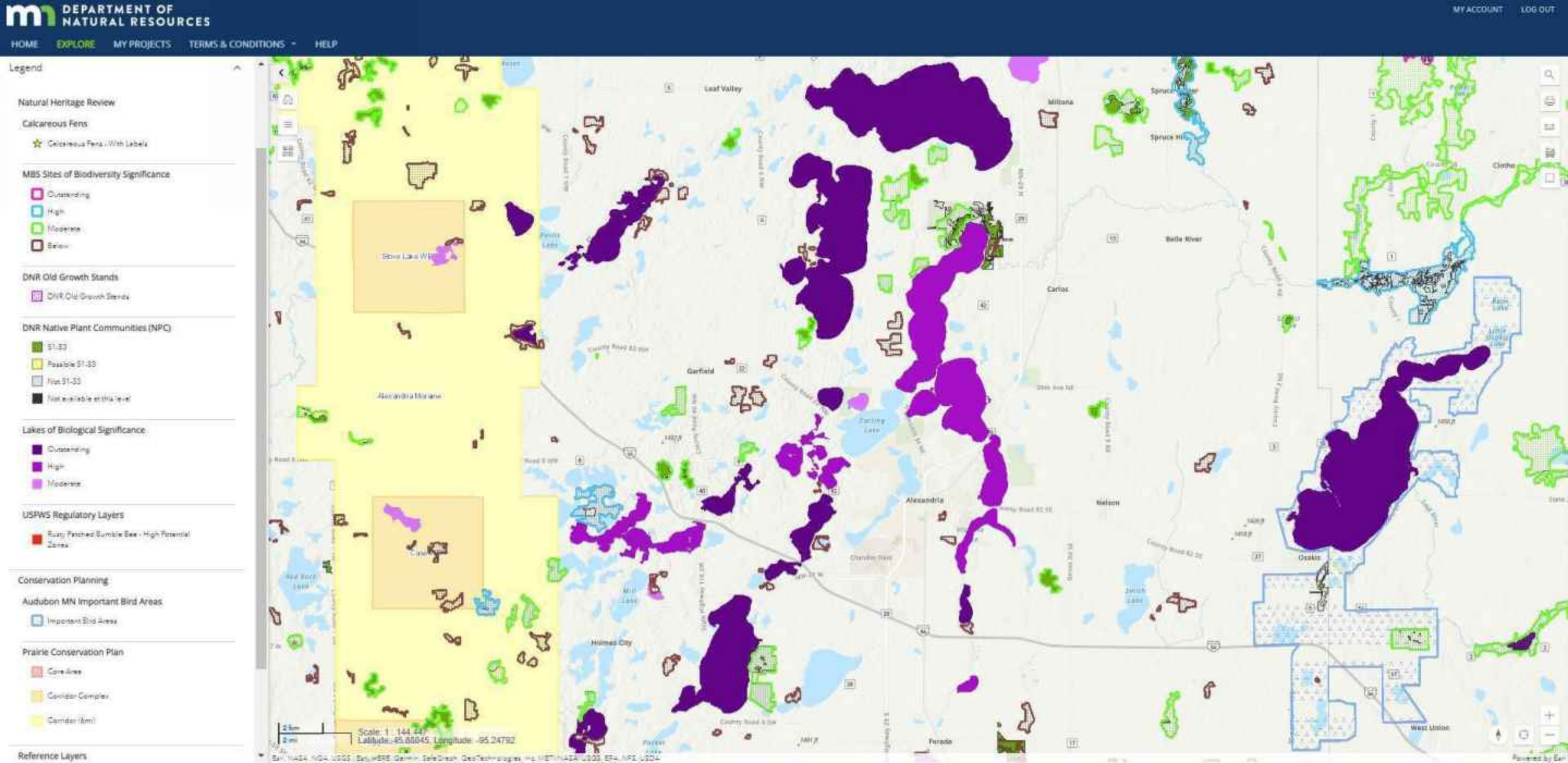
Project Type: Utilities, Sewage Treatment Plant

Project Size (acres): 116.88

County(s): Douglas

TRS: T128 R38 S23, T128 R38 S25, T128 R38 S26

Esri, NASA, NGA, USGS, FEMA
Esri, HERE, Garmin, StreetGraph, GeoTechnologies, Inc, METI/NASA, USGS,
EPA, NPS, US Census Bureau, USDA


DEPARTMENT OF NATURAL RESOURCES
MY ACCOUNT
LOG OUT
HOME
EXPLORE
MY PROJECTS
TERMS & CONDITIONS
HELP
Legend
Natural Heritage Review
Calcareous Fens
Calcareous Fens - With Labels
MBS Sites of Biodiversity Significance
Outstanding
High
Moderate
Below
DNR Old Growth Stands
DNR Old Growth Stands
DNR Native Plant Communities (NPC)
S1-S3
Possible S1-S3
Not S1-S3
Not available at this level
Lakes of Biological Significance
Outstanding
High
Moderate
USFWS Regulatory Layers
Rusty Patched Bumble Bee - High Potential Zones
Conservation Planning
Audubon MN Important Bird Areas
Important Bird Areas
Prairie Conservation Plan
Core Area
Corridor Complex
Corridor (6mi)
Reference Layers
Leaf Valley
Millana
Spruce Hill
Clotho
Bella River
Carlos
Garfield
Alexandria
Nelson
Osakis
Holmes City
Forada
West Union
Scale: 1 : 144,447
Latitude: 45.88645 Longitude: -95.24792

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793 Fax: (952) 646-2873

In Reply Refer To: December 30, 2022
Project Code: 2023-0029405
Project Name: ALASD WWTF Expansion

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

Threatened and Endangered Species
The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance
Please refer to refer to our Section 7 website for guidance and technical assistance, including step-by-step instructions for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of "There are no listed species found within the vicinity of the project," then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

Northern Long-Eared Bats
Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

This species hibernates in caves or mines only during the winter. In Minnesota and Wisconsin, the hibernation season is considered to be November 1 to March 31. During the active season (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),

- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:

- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or
- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

If any of the above activities are proposed, please use the northern long-eared bat determination key in IPaC. This tool streamlines consultation under the 2016 rangewide programmatic biological opinion for the 4(d) rule. The key helps to determine if prohibited take might occur and, if not, will generate an automated verification letter. No further review by us is necessary.

Please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the bat by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of northern long-eared bats after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Whooping Crane

Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "Establishment of a Nonessential Experimental Population of

Whooping Cranes in the Eastern United States."

Other Trust Resources and Activities
Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

State Department of Natural Resources Coordination
While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.

Minnesota
Minnesota Department of Natural Resources - Endangered Resources Review Homepage
Email: Review.NHIS@state.mn.us

Wisconsin
Wisconsin Department of Natural Resources - Endangered Resources Review Homepage
Email: DNRERReview@wi.gov

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
(952) 858-0793

Project Summary

Project Code: 2023-0029405
Project Name: ALASD WWTF Expansion
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: Expansion of the ALASD WWTF for 2045 projected flows.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@45.87247105,-95.40940997151793,14z

Counties: Douglas County, Minnesota

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds May 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee

was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

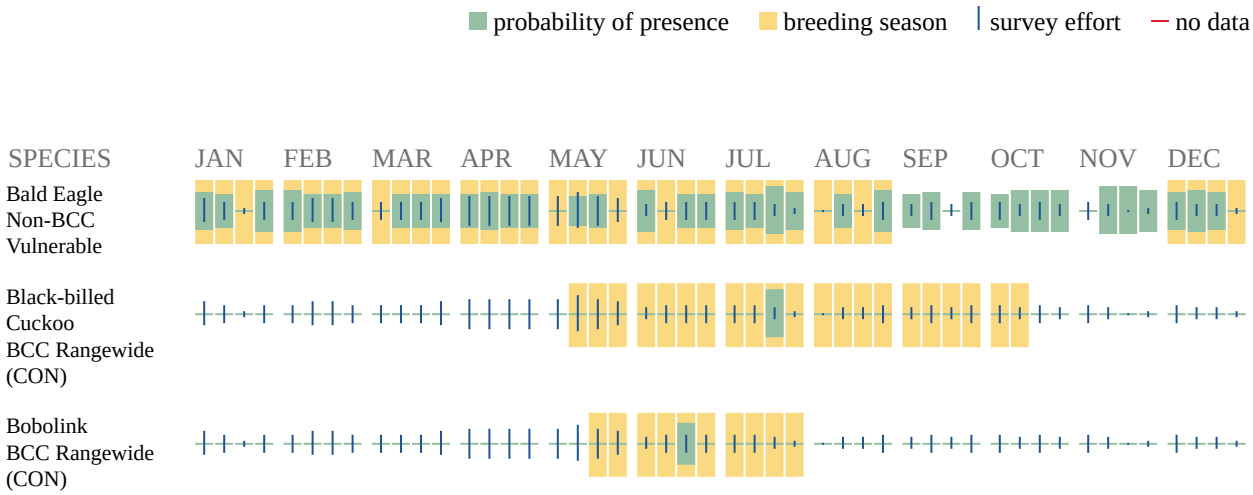
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

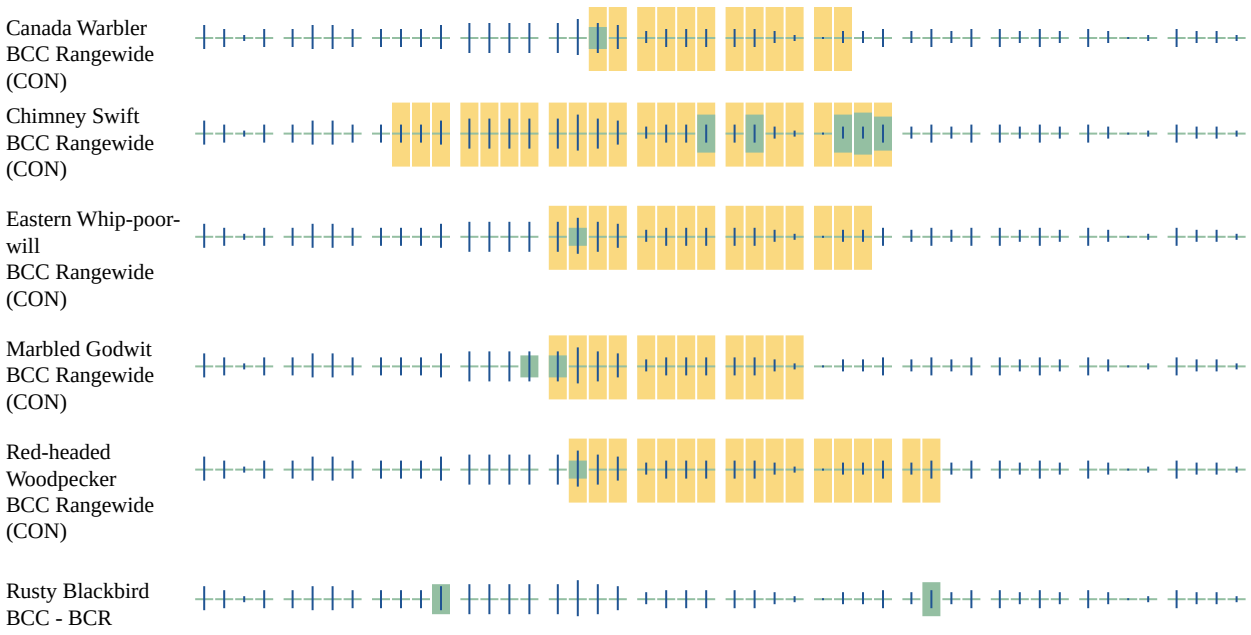
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1Ax
- PEM1C

LAKE

- L2UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PSS1A

FRESHWATER POND

- PUBFx

IPaC User Contact Information

Agency:	Alexandria Lake and Sanitary District
Name:	Kellie Schaefer
Address:	302 Wabasha St. N
Address Line 2:	STE 500
City:	St. Paul
State:	MN
Zip:	55102
Email	kschaefer@brwncald.com
Phone:	7152203299

United States Department of the Interior

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Phone: (952) 858-0793 Fax: (952) 646-2873

In Reply Refer To: December 30, 2022
Project code: 2023-0029405
Project Name: ALASD WWTF Expansion

Subject: Consistency letter for the 'ALASD WWTF Expansion' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Kellie Schaefer:

The U.S. Fish and Wildlife Service (Service) received on December 30, 2022 your effects determination for the 'ALASD WWTF Expansion' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If

your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

ALASD WWTF Expansion

2. Description

The following description was provided for the project 'ALASD WWTF Expansion':

> Expansion of the ALASD WWTF for 2045 projected flows.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@45.87247105,-95.40940997151793,14z

Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

6. Will the action involve Tree Removal?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency:	Alexandria Lake and Sanitary District
Name:	Kellie Schaefer
Address:	302 Wabasha St. N
Address Line 2:	STE 500
City:	St. Paul
State:	MN
Zip:	55102
Email	kschaefer@brwncald.com
Phone:	7152203299

Appendix B: 2022 SIU Permits

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to 3M and permits the discharge of industrial wastes to the Alexandria Lake Area Sanitary District (ALASD) Sanitary Sewer System. Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: _____
Name & Scott D Gilbertson, Executive Director, ALASD

Date: 12-27-21

Acknowledged By: _____
Name & 3M title:

Date: 1/11/22

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from 3M to the public sanitary sewer system. 3M must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify 3M of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

ATTACHMENT A
TO
ALASD INDUSTRIAL USER DISCHARGE PERMIT

A. Permit Application Data.

1. Company Name: 3M
   Mailing Address: 2115 South Broadway
   Alexandria, MN 56308

   Address of Premises: **Same as above**
   Contact Name: Paul Fernholz
   Title: EHS Supervisor
   Phone: 320-759-0354

2. Standard Industrial Classification Code: 3291 (NAICS 327910) Abrasive Products

3. Product(s)/Raw Material(s):Refer to (current) copy of the SARA 311/312 report.

4. Description of Pretreatment Provided, if any: Settling tanks in treaters and coaters with pH neutralization if necessary and addition of sodium permanganate for phenol removal.

5 Waste Characterization and Limits: Mix wash/rinse water containing trace amounts of dyes, resin and latex from the treating process, boiler blow down water and sanitary wastewater.

	Daily Average	Maximum Day
Flow, gallons per day	35,480 gpd	53,000 gpd
BOD5, lb./day	80 lbs/day	160.0 lbs/day
Total Suspended Solids, lb./day	34 lbs/day	118.0lbs/day
Total Phosphorus, lb./day	0.85 lbs/day	2.10 lbs/day
Toxic Pollutants	See # 10	See #10

Ammonia, Nitrogen - Future limits ll be determined by ALASD WET results or future NPDES Permit limits.

6.	Peak hourly flow contribution	2210	gallons per hour
7.	Range of pH levels in discharge waste	6 1-9.5	grab sample
8.	Hours of operation during peak day	24	hours
9.	Number of days of operation per week	7*	days

10. Other waste characteristics (list): Employee washroom wastes, trace amounts of chromium, copper, zinc, mercury, cadmium, phenol, lead and nickel may be found in the process rinse waters.

11. Batch or periodic discharges:
    Production cycle variations may produce a batch-like or periodic increase of discharge to the sanitary sewer.

12. Source and volume of existing non-contact cooling water to be discharged to the ALASD treatment facility: Boiler blow-down, chilled rolls in WMT, Process chiller in Trizact, Plant Chiller, Cooling Tower.

13. Toxic chemicals that are stored and/or used on the site: Refer to the (current) copy of the SARA 311/312 Report.

B. Permit Limitations and Monitoring Requirements

1. 3M is authorized to discharge process wastewater in compliance with the limits and monitoring requirements specified on Table B-7 of this permit. 3M is not authorized to discharge any new sources of non-contact cooling water to the sanitary sewer per federal pretreatment standards. 3M shall also comply with Specific Prohibitions per 40 CFR Part 403.5(b) included in section H of this appendix.

2. Sample collection and testing shall be completed in compliance with the requirements specified on Table B-7 and shall be taken at the following location(s): Samples shall be taken from the sampling manholes located on the west side of the main 3M building entrance and also on the west side of the north building addition. These manholes provide year-round access. All wastewater flow from 3M passes through these manholes and no change shall be made without written approval from the ALASD.

3 3M shall comply with the provisions of this permit, ALASD Ordinances, and Federal Pretreatment Standards for significant industrial users (SIU). SIU discharge shall also comply with effluent limits listed in Table B-7 of this permit.

4. **3M shall notify the ALASD Plant Superintendent upon detection of any violations of the Maximum Daily limits specified in this permit and Table B-7 as soon as the test results are obtained.** Detection shall include all permit required and any other self-monitoring pollutants. In addition, 3M shall provide in writing the reason for the violation and remedy to alleviate future violations associated with similar occurrences. **The reason for the violation and future remedy must be provided to ALASD Plant Superintendent within one week (7 calendar days) upon detection of the violation.**

5. For the purposes of the monitoring requirements specified on Table B-7, a 24-hour composite flow-based sample shall consist of a series of discrete samples taken at fixed / uniform increments of volume metered past a flow measurement point.

6. Test procedures for sample analyses required by this permit shall conform to the guidelines established on Code of Federal Regulations, title 40, part 135 and Code of Federal Regulations, title 40, section 403.12 of the general pretreatment regulation. 3M or the contracted monitoring service and/or commercial analytical laboratory shall document analytical procedures including, but not limited to, the quality control and, if applicable, chain of custody procedures conducted on each sample.

7. 3M may monitor its discharge more frequently than the minimum set forth in this Permit, the Sewer Use Ordinance, or as otherwise required. If 3M monitors any pollutant more frequently than required by the ALASD, or additional pollutants not required by the ALASD, the results of this monitoring shall be included in the reports required by this discharge Permit.

Table B-7: Effluent Limits and Monitoring Requirements

Effluent Parameter	Annual Average	[1]Daily Average	[2]Daily Maximum	Minimum Frequency	[4]Sample Type
Flow (gallons)		60,000 gpd	75,000 gpd	Continuous	Recorder
BOD5 (lb/day)		150	210	Monthly	Composite
TSS (lb/day)		180	252	Monthly	Composite
TP (lb/day)		4	6	Monthly	Composite
pH		5 .5 - 9.5**		Continuous	Recorder
Total Phenols[5]	15 mg/l	30.0 mg/l	30.0 mg/l	Quarterly	Grab
PCB			Detectable	Annually	Composite
NTU			No limit ***	Continuous	

Quarterly monitoring is required (composite samples) for cadmium, copper, total chromium, total cyanide, lead, mercury, nickel, and zinc.

Quarterly monitoring is required (composite samples) for chloride, calcium and magnesium hardness as CaCO3, specific conductance, total dissolved salts (solids), sulfates as SO4, bicarbonates (HCO3), sodium, calcium, magnesium, and potassium.

Periodic monitoring for quaternary ammonium compounds as deemed necessary by ALASD in conjunction with ALASD WWTF whole effluent toxicity (WET) evaluation.

Quarterly PFAS monitoring requirements to be determined and provided via future correspondence (i.e for reference only see November 2021 MPCA Draft PFAS Monitoring Plan currently under review).

[1]Daily Average flow and loads amounts are sustainable by the ALASD wastewater treatment facility on a continuous basis.
[2] Flow and load in excess of the Daily Maximum amounts have the potential to cause overload or upset conditions at the ALASD wastewater treatment facility and are considered violations of this permit. This Permit does not provide the ability to discharge at Daily Maximum limits on a consistent or even periodic basis. Any discharge in excess of the Daily Maximum is a violation of this Permit. Maximum day limit exceedances will be reported to MPCA as permit violation of this agreement and included in the Annual Pretreatment Report to MPCA.
[3]Only on days when in operation.
[4]All required monitoring shall be done at the sample location specified in this permit.
[5]Conformance to Total Phenol will be based on the weighted flow from the main 3M building and the north addition.
** Any pH result lower than 5.5 or higher than 9.5 is permit violation.

The permittee is responsible for the cost of all sampling and testing. If the Effluent Limits are exceeded by 3M, all associated costs and necessary corrective actions to abate nuisances and comply with Federal, State, and Local laws will be the responsibility of 3M. If pretreatment facility or ALASD Wastewater Treatment Facility becomes

overloaded or upset because of 3M actions or inaction, 3M, at the request of the ALASD, will reduce or cease the discharge of wastewater into the ALASD Wastewater Treatment Facility until the upset condition is corrected. This does not include discharge of non-contact water or bathroom water. The ALASD will provide 3M notice when the ALASD plant has been overloaded or upset. This notice will precede any request to reduce or cease the discharge of wastewater.

C. Submission of Reports and Information to ALASD

1. 3M shall notify the ALASD in writing, of any discharge of a substance that would, if otherwise disposed of, be considered a hazardous waste under 40CFR Part 261. Notification shall take place at least 30 days before the date of discharge and conform to 40 CFR Section 403.12(p). No discharge of any hazardous wastes may take place without prior written approval of the ALASD.

2. 3M shall submit a written monthly report to the ALASD of all discharge monitoring performed. This report shall be submitted by the 15th day of the following month.

3. All pollutant and discharge sampling results as monitored by or known to 3M or shall be provided to ALASD within 30 days of 3M receiving such information or sampling results. However, violations to Maximum Daily limits shall be reported upon detection as outlined in this permit.

D. General Conditions

1. Industrial wastewater discharges from 3M shall be in accordance with applicable provisions of the ALASD Ordinances, this Permit and Federal Pretreatment Standards [40 CFR Part 403].

2. 3M shall not knowingly make a false statement, representation or certification in any record, report, or plan required to be submitted to the ALASD.

3 This Permit is non-transferable.

4. 3M shall maintain and retain plant records relating to wastewater discharge as specified by the ALASD for a minimum of three years.

5. **3M shall notify the ALASD immediately of any slug or accidental discharge of a substance, pollutant, or wastewater in violation of the ALASD Ordinances or this Permit.**

6. 3M shall install, operate, and maintain sampling and monitoring devices in proper working order at its own expense. This shall include the cost of testing by 3M, or a certified independent, laboratory in accordance with Table B-7.

7. The ALASD may collect and test samples at random. The testing of these samples may be performed by the ALASD laboratory or an independent, certified laboratory. The permittee may be required to pay this cost of sampling.

8. 3M shall allow ALASD personnel to enter upon 3M premise to inspect any monitoring point, collect samples, and determine compliance with ALASD Ordinances, the Federal Pretreatment Regulations, and this permit. This inspection shall commence after contacting 3M management and following the 3M visitor policy.

9. The ALASD may revoke the permit of any industrial user upon occurrence of any of the following events: (a) if it fails to comply with the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations, (b) for just cause based upon the non-compliance of the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations. Revocation of the permit must be by action of the ALASD Board of Directors. Prior to such revocation 3M, upon written request, may present to the Board any information relevant to such proposed action

10. 3M shall pay all monthly fees including service fee, usage charges, surcharges, additional surcharges and penalties in accordance with ALASD Ordinances and as described in Part E.

11. Any significant change in volume or characteristic of industrial wastewater introduced into the ALASD Wastewater Treatment Plant system shall immediately be reported to the Plant Superintendent or the Executive Director of the ALASD. In such cases this permit may be subject to modification.

12. Notice of any anticipated significant increase in pollutant contributed shall be given to the ALASD 180 days in advance of such increase, in the form of a new permit application. The ALASD may decide not to approve an increase of flow or loading in which case 3M must install pretreatment, equalization storage at their own cost or determine an alternate method of disposal.

13. The terms and conditions of the permit may be subject to modifications by the ALASD during the term of the permit as limitations or requirements are modified or other just cause exists.

14. 3M shall submit within 90 days of permit approval an updated Spill Prevention Plan. This plan shall include a step-by-step sequence and protocol to be followed to prevent a slug or accidental discharge occurs into the sanitary sewer. The plan all certify that all employees have been trained in the spill prevention plan. This training shall be continued on an annual basis and at the time of hire for a new employee. The plan shall be posted on the permittee bulletin board or other prominent place.

E. Treatment Rate and Fees

1. The **monthly fee** includes a service fee and usage charge plus all surcharge fees and penalties for exceeding l mits for CBOD5, TSS, TP and NH^3. Additional fees not included in this agreement may be incorporated based on changes in industrial user wastewater constituents or condi . The **minimum monthly fee** shall be calculated based on the average daily discharge limits in this permit. All fees must be paid monthly.

2. **Service fee** and **Usage rate** per the ALASD User Rate Ordinance for 2022:

Service fee (8"or larger service line)	$68.00
Usage Rate per 1,000 gallons (<5,000 gallons)	$9.00
Usage Rate per 1,000 gallons (>5,000 gallons)	$6.74

3. Discharges of wastewater that exceed the typical level of the domest c wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 shall pay a Surcharge fee for the amount (lbs) of each parameter that exceeds these concentrations. Surcharge fee for BOD, TSS, TP, NH^3 based on the additional cost for treating wastewater exceeding typical domestic strength are as follows for 2022:

Parameter	Surcharge Fee
CBOD5	$ 0.3794/lb
TSS	$ 0.3533/lb
TP	$10.94/lbs
NH3	$0.4419/lb

4. Discharges of wastewater that exceed the **Daily Average** limits as established in Table B-7 of this permit shall pay an additional surcharge fee for the amount (lbs) of each parameter that exceeds the Daily Average limits.

5. Discharges of wastewater that exceed the M **imum Daily** limits as established in Table B-7 of this permit shall pay, in addition to the surcharge and additional surcharge fees, a fee for the amount (lbs) of each parameter that exceeds the mum Daily limits.

6. Services fees, usage rates, surcharge rates and penalties shall be reviewed annually by the ALASD and amended as needed.

F. SEVERABILITY

If any provision, paragraph, word, section, or article of this permit is held unconstitutional or invalidated by a court of competence jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

G. Compliance Schedule

Submit the following to ALASD with executed permit:

a. Current o of the
b. Most recent spill prevention plan - if revisions are needed, submit within 60 days of executed permit.

H. Definitions

Industrial users — non-domestic sources of wastewater with discharges large enough to potentially affect a POTW

Significant industrial users (SIUs) are industrial users that discharge:

- An average of 25,000 gallons/day or more of process wastewater to the receiving POTW,
- Up to 5% or more of the POTWs' capacity for a constituent or permitted parameter,
- Or designated by the MPCA or POTW as significant, based on potential to affect the POTW or violate pretreatment standards or POTW's NPDES requirements.

Bypass – the intentional diversion wastes from any portion of the facility

Carbonaceous Biochemical Oxygen Demand (CBOD5)—A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample· it is used as a measurement of the readily decomposable organic content of a wastewater.

Composite sample – A combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to flow rate during the sample period (flow composite) or constant volume samples are collected at equal time intervals during the composite period (time composite).

Cooling water – Water used for cooling purposes only which has no direct contact with any raw material intermediate, or final product and which does not contain a level of contaminants detectably higher than that of intake water.

Daily Discharge or Daily Average Discharge – The flow or discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling/measuring. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged the day. For pollutants with limitations expressed in other units (e.g. concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day [40 CFR §122.2].

Daily Maximum or Maximum Daily Limit – The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Effluent Limitation—Any restriction imposed by the ALASD on quantities, discharge rates, discharge amounts or concentrations of pollutants which are discharged to the sewer.

Grab Sample – An individual sample collected in less than 15 minutes.

Hazardous waste – a waste that is dangerous or potentially harmful to health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges.

Interference — a discharge from an industrial user that, alone or in conjunction with other sources a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes a violation — including increasing a violation's magnitude or duration — of any permit or rule that controls release of pollutants from the POTW.

MGD or mgd – million gallons per day is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

NPDES or National Pollutant Discharge Elimination System—The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Overload – result from high strength discharge from an industrial user that, alone or in conjunction with other sources, a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or dispo and b) therefore causes an upset plant condition that has the potential to cause a violation of any permit or rule that controls release of pollutants from the POTW.

Pass-through — a POTW has a violation of its limits caused by an industrial users discharge that passes through the public facility without being adequately treated. The pollutant limit violated must be a pollutant discharged by the industrial user, but it's not necessary to demonstrate impact on the POTW operation.

Process Wastewater—Any water which, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Prohibited discharges – include both general and specific prohibitions, as described below: General prohibitions [40 CFR 403.5(a)] forbid the discharge to a POTW of any pollutant that causes pass through or interference. Specific prohibitions [40 CFR 403.5(b)(1) to (8)] forbid eight categories of pollutant discharges to POTWs. Specific Prohibitions per CFR 403.5 (b) – are listed at the end of definitions section of this attachment.

Publicly Owned Treatment Works (POTW)—A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR §403.3].

Sewer or Sanitary Sewer—A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Self-Monitoring—Sampling and analyses performed by an industrial facility.

Slug discharge – Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b).

Spill Prevention Control and Countermeasure Plan (SPCC)—A plan prepared by an industrial user to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

Standard Industrial Classification (SIC) Code—A code number system used to dentify various types of industries. The code numbers are published by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A particular industry may have more than one SIC code if it conducts several types of commercial or manufacturing activities onsite.

Total Suspended Solids (TSS)—A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Upset – An incident in which there is unintentional and temporary noncompliance with Permit effluent limitations because of factors beyond reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

Violation – Exceeding the Daily Maximum limit as listed in Table B-7 of this Permit is considered a violation of this Permit.

Whole Effluent Toxicity (WET) Test – is the aggregate toxic effect of an effluent measured directly by an aquatic toxicity test. Aquatic toxicity methods designed specifically for measuring WET have been codified in 40 CFR 136. WET test methods employ a suite of standardized freshwater, marine, and estuarine plants, invertebrates, and vertebrates to estimate acute and short-term chronic toxicity of effluents and receiving waters.

Code of Federal Regulations § 403.5 Specific prohibitions.
The following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

2. Pollutants which will cause corrosive structural damage to the POTW but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;

3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.

5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to **Alexandria Extrusion Company (AEC)** and permits the discharge of industrial wastes to the **Alexandria Lake Area Sanitary District (ALASD)** Sanitary Sewer System. Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: _____
Scott D Gilbertson, Executive Director, ALASD

Date: 12-27-2021

Acknowledged By: _____ Corporate EHS Coordinator
Print Name & title:

Date: 1/12/2022

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from AEC to the public sanitary sewer system. AEC must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify AEC of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to **Alexandria Extrusion Company (AEC)** and permits the discharge of industrial wastes to the **Alexandria Lake Area Sanitary District (ALASD)** Sanitary Sewer System. Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By _____
Scott D Gilbertson, Executive Director, ALASD

Date: 12-27-2021

Acknowledged By: _____
Print Name & title:

Date: _____

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from AEC to the public sanitary sewer system. AEC must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify AEC of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

ATTACHMENT A
TO
ALASD INDUSTRIAL USER DISCHARGE PERMIT

A. Initial Permit Application Data

1. Company Name: Alexandria Extrusion Co.
   Mailing Address: 401 Co Rd 22 NW
   Alexandria, Mn 56308

   Address of Premises: Same as Above
   Contact Name: Amber Koep
   Title: Corporate Environmental, Health and Safety Coordinator
   Phone: 320-762-6749

2. Standard Industrial Classification Code:
   NAICS: 331316 Aluminum Extruded Product & 332710 Machine Sho

3. Product(s)/Raw Material(s) extruded aluminum, polyurethane moldings

4. Description of Pretreatment Provided, if any: Not Applicable

5. Waste Characterization and Limits:

	Daily Average	Maximum Da
Flow, gallons per day	1,806	3,600
BOD5, lb./day	2.68	2.68
Total Suspended Solids, lb./day	1.65	1.65
Total Phosphorus, lb./day	0.09	0.09
Toxic Pollutants kg/day	0.0055	0.0055

6. Peak hourly flow contribution 5,833 gallons per hour
7. Range of pH levels in discharge waste 5.5-9.5 grab sample
8. Hours of operation during peak day 24 hours
9. Number of days of operation per week 7 days
10. Other waste characteristics (list) Oil and hydraulic fluid alt recycled.

11. Batch or periodic discharges: Cooling Tower 1,800 gal/year

12. Source and volume of any non-contact cooling water to be discharged to the ALASD treatment facility: Process waste discharge average 1,283 gal/day.
    Cooling water discharge average 80 gal/day.
    RO wastewater discharge averages 950 gal/day.

13. Toxic chemicals that are stored and/or used on the site:
    Sodium Hydroxide

B. Permit Limitations and Monitoring Requirements

1. AEC is authorized to discharge process wastewater in compliance with the limits and monitoring requirements specified on Table B-7 of this permit. AEC shall also comply with Specific Prohibitions per 40 CFR Part 403.5(b) included in section H of this appendix.

2. Sample collection and testing shall be completed in compliance with the requirements specified on Table B-7 and shall be taken at the following location(s):

Manhole on the north side of the building outside door eleven.

3 AEC shall comply with the provisions of this permit, ALASD Ordinances, and Federal Pretreatment Standards for significant industrial users (SIU). SIU discharge shall also comply with effluent limits listed in Table B-7 of this permit.

4. **AEC shall notify the ALASD Plant Superintendent upon detection of any violations of the Maximum Daily limits specified in this permit and Table B-7 as soon as the test results are obtained.** Detection shall include all permit required and any other self-monitoring pollutants. In addition, AEC shall provide in writing the reason for the violation and remedy to alleviate future violations associated with similar occurrences. **The reason for the violation and future remedy must be provided to ALASD Plant Superintendent within one week (7 calendar days) upon detection of the violation.**

5. For the purposes of the monitoring requirements specified on Table B-7, a 24-hour composite flow-based sample shall consist of a series of discrete samples taken at fixed / uniform increments of volume metered past a flow measurement point.

6. Test procedures for sample analyses required by this permit shall conform to the guidelines established on Code of Federal Regulations, title 40, part 135 and Code of Federal Regulations, title 40, section 403.12 of the general pretreatment regulation. AEC or the contracted monitoring service and/or commercial analytical laboratory shall document analytical procedures including, but not limited to, the quality control and, if applicable, chain of custody procedures conducted on each sample.

7. AEC may monitor its discharge more frequently than the minimum set forth in this Permit, the Sewer Use Ordinance, or as otherwise required. If AEC monitors any pollutant more frequently than required by the ALASD, or additional pollutants not required by the ALASD, the results of this monitoring shall be included in the reports required by this discharge Permit.

Table B-7: Effluent Limits and Monitoring Requirements

Effluent Parameter	[1]Daily Average	[2]Daily Maximum	Minimum Frequency	[4]Sample Type
Flow (gallons)	3800	3600	Continuous	Recorder
BOD5	350 mg/l	230 mg/l	Quarterly	Composite
TSS	180 mg/l	250 mg/l	Quarterly	Composite
TP	6 mg/l	6 mg/l	Quarterly	Composite
pH		5.5 - 9.5**	Monthly	Grab
Total Chromium	0.0017 kg/day	0.0043 kg/day	Monthly	Composite
Total Cyanide		0.07 mg/l	Annually	Composite
Mercury		0.01 mg/l	Quarterly	Composite
TTO		0.0055 kg/day	Semi-Annual	Composite

Quarterly monitoring is also required for (composite samples) chloride, calcium and magnesium hardness as CaCO3, specific conductance, total dissolved solids (solids), sulfates as SO4, bicarbonates (HCO3), sodium, calcium, magnesium, and potassium.
Periodic monitoring may be required for quaternary ammonium compounds as deemed necessary by ALASD in conjunction with ALASD WWTF whole effluent toxicity (WET) evaluation.
Quarterly PFAS monitoring requirements to be determined and provided via future correspondence (i.e. for reference only see November 2021 MPCA Draft PFAS Monitoring Plan currently under review)

[1]Daily Average flow and loads amounts are sustainable by the ALASD wastewater treatment facility on a continuous basis.
[2]Flow and load in excess of the Daily Maximum amounts have the potential to cause overload or upset conditions at the ALASD wastewater treatment facility and are considered violations of this permit. This Permit does not provide the ability to discharge at Daily Maximum limits on a consistent or even periodic basis. Any discharge in excess of the Daily Maximum is a violation of this Permit. Maximum day limit exceedances will be reported to MPCA as permit violation of this agreement and included in the Annual Pretreatment Report to MPCA.
[3]Only on days when in operation.
[4]All required monitoring shall be done at the sample location specified in this permit.
[5]Conformance to Total Phenol will be based on the weighted flow from the main AEC building and the north addition.
** Any pH result lower than 5.5 or higher than 9.5 is permit violation.

The permittee is responsible for the cost of all sampling and testing. If the Effluent Limits are exceeded by AEC, all associated costs and necessary corrective actions to abate nuisances and comply with Federal, State, and Local laws will be the responsibility of AEC. If pretreatment facility or ALASD Wastewater Treatment Facility becomes overloaded or upset because of AEC actions or inaction, AEC, at the request of the ALASD, will reduce or cease the discharge of wastewater into the ALASD Wastewater Treatment Facility until the upset condition is corrected. This does not include discharge of non-contact water or bathroom water. The ALASD will provide AEC notice when the ALASD plant has been overloaded or upset. This notice will precede any request to reduce or cease the discharge of wastewater.

C. Submission of Reports and Information to ALASD

1. AEC shall notify the ALASD in writing, of any discharge of a substance that would, if otherwise disposed of, be considered a hazardous waste under 40CFR Part 261. Notification shall take place at least 30 days before the date of discharge and conform to 40 CFR Section 403.12(p). No discharge of any hazardous wastes may take place without prior written approval of the ALASD.

2. AEC shall submit a written monthly report to the ALASD of all discharge monitoring performed. This report shall be submitted by the 15th day of the following month.

3. All pollutant and discharge sampling results as monitored by or known to AEC or shall be provided to ALASD within 30 days of AEC receiving such information or sampling results. However, violations to Maximum Daily limits shall be reported upon detection as outlined in this permit.

D. General Conditions

1. Industrial wastewater discharges from AEC shall be in accordance with applicable provisions of the ALASD Ordinances, this Permit and Federal Pretreatment Standards (40 CFR Part 403).

2. AEC shall not knowingly make a false statement, representation or certification in any record, report, or plan required to be submitted to the ALASD.

3. This Permit is non-transferable.

4. AEC shall maintain and retain plant records relating to wastewater discharge as specified by the ALASD for a minimum of three years.

5. **AEC shall notify the ALASD immediately of any slug or accidental discharge of a substance, pollutant, or wastewater in violation of the ALASD Ordinances or this Permit.**

6. AEC shall install, operate, and maintain sampling and monitoring devices in proper working order at its own expense. This shall include the cost of testing by AEC, or a certified, independent, laboratory in accordance with Table B-7.

7. The ALASD may collect and test samples at random. The testing of these samples may be performed by the ALASD laboratory or an independent, certified laboratory. The permittee may be required to pay this cost of sampling.

8. AEC shall allow ALASD personnel to enter upon AEC premise to inspect any monitoring point, collect samples, and determine compliance with ALASD Ordinances, the Federal Pretreatment Regulations, and this permit. This inspection shall commence after contacting AEC management and following the AEC visitor policy.

9. The ALASD may revoke the permit of any industrial user upon occurrence of any of the following events: (a) if it fails to comply with the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations: (b) for just cause based upon the non-compliance of the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations. Revocation of the permit must be by action of the ALASD Board of Directors. Prior to such revocation AEC, upon written request, may present to the Board any information relevant to such proposed action.

10. AEC shall pay all monthly fees including service fee, usage charges, surcharges, additional surcharges and penalties in accordance with ALASD Ordinances and as described in Part E.

11. Any significant change in volume or characteristic of industrial wastewater introduced into the ALASD Wastewater Treatment Plant system shall immediately be reported to the Plant Superintendent or the Executive Director of the ALASD. In such cases this permit may be subject to modification.

12. Notice of any anticipated significant increase in pollutant contributed shall be given to the ALASD 180 days in advance of such increase, in the form of a new permit application. The ALASD may decide not to approve an increase of flow or loading in which case AEC must install pretreatment, equalization storage at their own cost or determine an alternate method of disposal.

13. The terms and conditions of the permit may be subject to modifications by the ALASD during the term of the permit as limitations or requirements are modified or other just cause exists.

14. AEC shall submit within 90 days of permit approval an updated Spill Prevention Plan. This plan shall include a step-by-step sequence and protocol to be followed to prevent a slug or accidental discharge occurs into the sanitary sewer. The plan all certify that all employees have been trained in the spill prevention plan. This training shall be continued on an annual basis and at the time of hire for a new employee. The plan shall be posted on the permittee bulletin board or other prominent place.

E. Treatment Rate and Fees

1. The **monthly fee** includes a service fee and usage charge plus all surcharge fees and penalties for exceeding limits for CBOD5, TSS, TP and NH^3. Additional fees not included in this agreement may be incorporated based on changes in industrial user wastewater constituents or conditions. The **minimum monthly fee** shall be calculated based on the average daily discharge limits in this permit. All fees must be paid monthly.

2. **Service fee** and **Usage rate** per the ALASD User Rate Ordinance for 2022:

Service fee (8"or larger service line)	$68.00
Usage Rate per 1,000 gallons (<5,000 gallons)	$9.00
Usage Rate per 1,000 gallons (>5,000 gallons)	$6.74

3. Discharges of wastewater that exceed the typical level of the domestic wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 shall pay a Surcharge fee for the amount (lbs) of each parameter that exceeds these concentrations. Surcharge fee for BOD, TSS, TP, NH^3 based on the additional cost for treating wastewater exceeding typical domestic strength are as follows for 2022:

Parameter	Surcharge Fee
CBOD5	$ 0.3794/lb
TSS	$ 0.3533/lb
TP	$10.94/lbs
NH3	$0.4419/lb

4. Discharges of wastewater that exceed the **Daily Average** limits as established in Table B-7 of this permit shall pay an additional surcharge fee for the amount (lbs) of each parameter that exceeds the Daily Average limits.

5. Discharges of wastewater that exceed the **Maximum Daily** limits as established in Table B-7 of this permit shall pay, in addition to the surcharge and additional surcharge fees, a penalty equal to the surcharge fee for the amount (lbs) of each parameter that exceeds the Maximum Daily limits.

6. Services fees, usage rates, surcharge rates and penalties shall be reviewed annually by the ALASD and amended as needed.

F. SEVERABILITY

If any provision, paragraph, word, section, or article of this permit is held unconstitutional or invalidated by a court of competence jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

G. Compliance Schedule

Submit the following to ALASD with executed permit:

a Spill prevention plan - submit within 90 days of executed permit.

H. Definitions

Industrial users --- non-domestic sources of wastewater with discharges large enough to potentially affect a POTW

Significant industrial users (SIUs) are industrial users that discharge:

- An average of 25,000 gallons/day or more of process wastewater to the receiving POTW,
- Up to 5% or more of the POTWs' capacity for a constituent or permitted parameter,
- Or designated by the MPCA or POTW as significant, based on potential to affect the POTW or violate pretreatment standards or POTW's NPDES requirements.

Bypass – the intentional diversion of wastes from any portion of the facility

Carbonaceous Biochemical Oxygen Demand (CBOD5)—A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Composite sample – A combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to flow rate during the sample period (flow composite) or constant volume samples are collected at equal time intervals during the composite period (time composite)

Cooling water – Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of intake water.

Daily Discharge or Daily Average Discharge – The flow or discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling/measuring. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units (e.g. concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day [40 CFR §122.2].

Daily Maximum or Maximum Daily Limit – The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Effluent Limitation---Any restriction imposed by the ALASD on quantities, discharge rates, discharge amounts or concentrations of pollutants which are discharged to the sewer.

Grab Sample – An individual sample collected in less than 15 minutes.

Hazardous waste – a waste that is dangerous or potentially harmful to health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges.

Interference — a discharge from an industrial user that, alone or in conjunction with other sources a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes a violation — including increasing a violation's magnitude or duration — of any permit or rule that controls release of pollutants from the POTW.

MGD or mgd -- million gallons per day is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

NPDES or National Pollutant Discharge Elimination System—The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Overload -- result from high strength discharge from an industrial user that, alone or in conjunction with other sources, a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes an upset plant condition that has the potential to cause a violation of any permit or rule that controls release of pollutants from the POTW.

Passivation

Pass-through -- a POTW has a violation of its limits caused by an industrial users discharge that passes through the public facility without being adequately treated. The pollutant limit violated must be a pollutant discharged by the industrial user, but it's not necessary to demonstrate impact on the POTW operation.

Process Wastewater—Any water which, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Prohibited discharges -- include both general and specific prohibitions, as described below: General prohibitions [40 CFR 403.5(a)] forbid the discharge to a POTW of any pollutant that causes pass through or interference. Specific prohibitions [40 CFR 403.5(b)(1) to (8)] forbid eight categories of pollutant discharges to POTWs. Specific Prohibitions per CFR 403.5 (b) -- are listed at the end of definitions section of this attachment.

Publicly Owned Treatment Works (POTW)—A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR §403.3].

Sewer or Sanitary Sewer—A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Self-Monitoring—Sampling and analyses performed by an industrial facility.

Slug discharge – Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b).

Spill Prevention Control and Countermeasure Plan (SPCC)—A plan prepared by an industrial user to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

Standard Industrial Classification (SIC) Code—A code number system used to identify various types of industries. The code numbers are published by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A particular industry may have more than one SIC code if it conducts several types of commercial or manufacturing activities onsite

Total Suspended Solids (TSS)—A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Upset – An incident in which there is unintentional and temporary noncompliance with Permit effluent limitations because of factors beyond reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

Violation – Exceeding the Daily Maximum limit as listed in Table B-7 of this Permit is considered a violation of this Permit.

Whole Effluent Toxicity (WET) Test – is the aggregate toxic effect of an effluent measured directly by an aquatic toxicity test. Aquatic toxicity methods designed specifically for measuring WET have been codified in 40 CFR 136. WET test methods employ a suite of standardized freshwater, marine, and estuarine plants, invertebrates, and vertebrates to estimate acute and short-term chronic toxicity of effluents and receiving waters.

Code of Federal Regulations § 403.5 (b) Specific prohibitions.
The following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
2. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW
5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.
6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
8. Any trucked or hauled pollutants, except at discharge points designated by the POTW

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to **Douglas Finishing (DF)** and permits the discharge of industrial wastes to the **Alexandria Lake Area Sanitary District (ALASD)** Sanitary Sewer System. Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: [signature]
[illegible]on D Gilbe[illegible]on, Executive Director, ALASD

Date: 12-27-2021

Acknowledged By: [signature]
Print Name & title: Aaron Nelson Director of Finishing

Date: 2-2-2022

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from DF to the public sanitary sewer system. DF must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify DF of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-16.

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to **Douglas Finishing (DF)** and permits the discharge of industrial wastes to the **Alexandria Lake Area Sanitary District (ALASD)** Sanitary Sewer System. Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: _____
Scott D Gilbertson, Executive Director, ALASD

Date: 12-27-2021

Acknowledged By: _____
Print Name & title:

Date: _____

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from DF to the public sanitary sewer system. DF must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify DF of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

ATTACHMENT A
TO
ALASD INDUSTRIAL USER DISCHARGE PERMIT

A. Permit Application Data.

1. Company Name: Douglas Finishing
Mailing Address: 1602 36th Avenue West
Alexandria, Mn 56308
Address of Premises: Same as Above
Contact Name: Michael Eye
Title: Director of Alexandria Finishing
Phone: (320) 762 -6235

2. Standard Industrial Classification Code: 3479

3. Product(s)/Raw Material(s)
Refer to the (current) copy of the SARA 311/312 Report

4. Description of Pretreatment Provided, if any:

5. Waste Characterization:

	Daily Average	Maximum Day
Flow, gallons per day	35,000	50,000
BOD5, lb./day		
Total Suspended Solids, lb./day		
Total Phosphorus, lb./day		
Toxic Pollutants		

6. Peak hourly flow contribution 2100 gallons per hour.
7. Range of pH levels in discharge waste 5.5-9.5 grab sample
8. Hours of operation during peak day 24 hours
9. Number of days of operation per week 7 days
10. Other waste characteristics (list) Alkaline cleaners, HCL Acid, HN03 Acid, H2S04 Acid, Rinse Waters

11. Batch or periodic discharges: Rinse tanks every week – bimonthly depending on rinse tank. Final hot RO water is weekly.

12. Source and volume of any non-contact cooling water to be discharged to the ALASD treatment facility: N/A

13. Toxic chemicals that are stored and/or used on the site: Dis-ol HC-70 Hexavalent chrome compound.

B. Permit Limitations and Monitoring Requirements

1. DF is authorized to discharge process wastewater in compliance with the limits and monitoring requirements specified on Table B-7 of this permit. DF is not authorized to discharge any new sources of non-contact cooling water to the sanitary sewer per federal pretreatment standards. DF shall also comply with Specific Prohibitions per 40 CFR Part 403.5(b) included in section H of this appendix.

2. Sample collection and testing shall be completed in compliance with the requirements specified on Table B-7 and shall be taken at the following location(s):
Sampling and flow monitoring basin for all discharge process water just prior to leaving the DF building.

3 DF shall comply with the provisions of this permit, ALASD Ordinances, and Federal Pretreatment Standards for significant industrial users (SIU). SIU discharge shall also comply with effluent limits listed in Table B-7 of this permit.

4. **DF shall notify the ALASD Plant Superintendent upon detection of any violations of the Maximum Daily limits specified in this permit and Table B-7 as soon as the test results are obtained.** Detection shall include all permit required and any other self-monitoring pollutants. In addition, DF shall provide in writing the reason for the violation and remedy to alleviate future violations associated with similar occurrences. **The reason for the violation and future remedy must be provided to ALASD Plant Superintendent within one week (7 calendar days) upon detection of the violation.**

5. For the purposes of the monitoring requirements specified on Table B-7, a 24-hour composite flow-based sample shall consist of a series of discrete samples taken at fixed / uniform increments of volume metered past a flow measurement point.

6. Test procedures for sample analyses required by this permit shall conform to the guidelines established on Code of Federal Regulations, title 40, part 136 and Code of Federal Regulations, title 40, section 403.12 of the general pretreatment regulation. DF or the contracted monitoring service and/or commercial analytical laboratory shall document analytical procedures including, but not limited to, the quality control and, if applicable, chain of custody procedures conducted on each sample.

7. DF may monitor its discharge more frequently than the minimum set forth in this Permit, the Sewer Use Ordinance, or as otherwise required. If DF monitors any pollutant more frequently than required by the ALASD, or additional pollutants not required by the ALASD, the results of this monitoring shall be included in the reports required by this discharge Permit.

Table R-7: Effluent Limits and Monitoring Requirements

Effluent Parameter	[1]Daily Average	[2]Daily Maximum	Minimum Frequency	[4]Sample Type
Flow (gallons)	35,000	50,000	Continuous	Recorder
BOD5			Quarterly	Composite
TSS			Quarterly	Composite
TP		6 mg/l	Monthly	Composite
pH		5.5 - 9.5**	Continuous*	Recorder
Cadmium	0.07 mg/l	0.11 mg/l	Quarterly	Composite
Copper	2.07 mg/l	3.38 mg/l	Quarterly	Composite
Total Chromium	1.71 mg/l	2.77 mg/l	Quarterly	Composite
Total Cyanide	0.65 mg/l	1.2 mg/l	Quarterly	Composite
Lead	0.43 mg/l	0.69 mg/l	Quarterly	Composite
Mercury		0.01 mg/l	Quarterly	Composite
Nickel	2.38 mg/l	3.98 mg/l	Quarterly	Composite
Silver	0.24 mg/l	0.43 mg/l	Quarterly	Composite
Zinc	1.48 mg/l	2.61 mg/l	Quarterly	Composite
PCB		Detectable	Annually	Composite

Quarterly monitoring is also required for chloride, calcium and magnesium hardness as CaCO3, specific conductance, total dissolved salts (solids), sulfates as SO4, bicarbonates (HCO3), sodium, calcium, magnesium, and potassium (composite samples)

Periodic monitoring may be required for quaternary ammonium compounds in conjunction with ALASD WWTF whole effluent toxicity (WET) evaluation.

Quarterly PFAS monitoring requirements to be determined based on November 2021 MPCA Draft PFAS Monitoring Plan currently under review.

[1]Daily Average flow and loads amounts are sustainable by the ALASD wastewater treatment facility on a continuous basis.

[2]Flow and load in excess of the Daily Maximum amounts have the potential to cause overload or upset conditions at the ALASD wastewater treatment facility and are considered violations of this permit. This Permit does not provide the ability to discharge at Daily Maximum limits on a consistent or even periodic basis. Any discharge in excess of the Daily Maximum is a violation of this Permit. Maximum day limit exceedances will be reported to MPCA as permit violation of this agreement and included in the Annual Pretreatment Report to MPCA.

[3]Only on days when in operation.

[4]All required monitoring shall be done at the sample location specified in this permit

[5]Conformance to Total Phenol will be based on the weighted flow from the main DF building and the north addition.

** Any pH result lower than 5.5 or higher than 9.5 is permit violation.

The permittee is responsible for the cost of all sampling and testing. If the Effluent Limits are exceeded by DF, all associated costs and necessary corrective actions to abate nuisances and comply with Federal, State, and Local laws will be the responsibility of DF. If pretreatment facility or ALASD Wastewater Treatment Facility becomes overloaded or upset because of DF actions or inaction, DF, at the request of the ALASD, will reduce or cease the discharge of wastewater into the ALASD Wastewater Treatment Facility until the upset condition is corrected. This does not include discharge of non-contact water or bathroom water. The ALASD will provide DF notice when the ALASD plant has been overloaded or upset. This notice will precede any request to reduce or cease the discharge of wastewater.

C. Submission of Reports and Information to ALASD

1. DF shall notify the ALASD in writing, of any discharge of a substance that would, if otherwise disposed of, be considered a hazardous waste under 40CFR Part 261. Notification shall take place at least 30 days before the date of discharge and conform to 40 CFR Section 403.12(p). No discharge of any hazardous wastes may take place without prior written approval of the ALASD.

2. DF shall submit a written monthly report to the ALASD of all discharge monitoring performed. This report shall be submitted by the 15th day of the following month.

3. All pollutant and discharge sampling results as monitored by or known to DF or shall be provided to ALASD within 30 days of DF receiving such information or sampling results. However, violations to Maximum Daily limits shall be reported upon detection as outlined in this permit.

D. General Conditions

1. Industrial wastewater discharges from DF shall be in accordance with applicable provisions of the ALASD Ordinances, this Permit and Federal Pretreatment Standards [40 CFR Part 403].

2. DF shall not knowingly make a false statement, representation or certification in any record, report, or plan required to be submitted to the ALASD.

3 This Permit is non-transferable.

4. DF shall maintain and retain plant records relating to wastewater discharge as specified by the ALASD for a minimum of three years.

5. **DF shall notify the ALASD immediately of any slug or accidental discharge of a substance, pollutant, or wastewater in violation of the ALASD Ordinances or this Permit.**

6. DF shall install, operate, and maintain sampling and monitoring devices in proper working order at its own expense. This shall include the cost of testing by DF, or a certified, independent, laboratory in accordance with Table B-7.

7. The ALASD may collect and test samples at random. The testing of these samples may be performed by the ALASD laboratory or an independent, certified laboratory. The permittee may be required to pay this cost of sampling.

8. DF shall allow ALASD personnel to enter upon DF premise to inspect any monitoring point, collect samples, and determine compliance with ALASD Ordinances, the Federal Pretreatment Regulations, and this permit. This inspection shall commence after contacting DF management and following the DF visitor policy.

9. The ALASD may revoke the permit of any industrial user upon occurrence of any of the following events: (a) if it fails to comply with the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations; (b) for just cause based upon the non-compliance of the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations. Revocation of the permit must be by action of the ALASD Board of Directors. Prior to such revocation DF, upon written request, may present to the Board any information relevant to such proposed action.

10. DF shall pay all monthly fees including service fee, usage charges, surcharges, additional surcharges and penalties in accordance with ALASD Ordinances and as described in Part E.

11. Any significant change in volume or characteristic of industrial wastewater introduced into the ALASD Wastewater Treatment Plant system shall immediately be reported to the Plant Superintendent or the Executive Director of the ALASD. In such cases this permit may be subject to modification.

12. Notice of any anticipated significant increase in pollutant contributed shall be given to the ALASD 180 days in advance of such increase, in the form of a new permit application. The ALASD may decide not to approve an increase of flow or loading in which case DF must install pretreatment, equalization storage at their own cost or determine an alternate method of disposal.

13. The terms and conditions of the permit may be subject to modifications by the ALASD during the term of the permit as limitations or requirements are modified or other just cause exists.

14. DF shall submit within 90 days of permit approval an updated Spill Prevention Plan. This plan shall include a step-by-step sequence and protocol to be followed to prevent a slug or accidental discharge occurs into the sanitary sewer. The plan all certify that all employees have been trained in the spill prevention plan. This training shall be continued on an annual basis and at the time of hire for a new employee. The plan shall be posted on the permittee bulletin board or other prominent place.

E. Treatment Rate and Fees

1. The **monthly fee** includes a service fee and usage charge plus all surcharge fees and penalties for exceeding limits for CBOD5, TSS, TP and NH^3. Additional fees not included in this agreement may be incorporated based on changes in industrial user wastewater constituents or conditions. The **minimum monthly fee** shall be calculated based on the average daily discharge limits in this permit. All fees must be paid monthly.

2. **Service fee** and **Usage rate** per the ALASD User Rate Ordinance for 2022:

Service fee (8"or larger service line)	$68.00
Usage Rate per 1,000 gallons (<5,000 gallons)	$9.00
Usage Rate per 1,000 gallons (>5,000 gallons)	$6.74

3. Discharges of wastewater that exceed the typical level of the domestic wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 shall pay a Surcharge fee for the amount (lbs) of each parameter that exceeds these concentrations. Surcharge fee for BOD, TSS, TP, NH^3 based on the additional cost for treating wastewater exceeding typical domestic strength are as follows for 2022:

Parameter	Surcharge Fee
CBOD5	$ 0.3794/lb
TSS	$ 0.3533/lb
TP	$10.94/lbs
NH3	$0.4419/lb

4. Discharges of wastewater that exceed the **Daily Average** limits as established in Table B-7 of this permit shall pay an additional surcharge fee for the amount (lbs) of each parameter that exceeds the Daily Average limits.

5. Discharges of wastewater that exceed the **Maximum Daily** limits as established in Table B-7 of this permit shall pay, in addition to the surcharge and additional surcharge fees, a penalty equal to the surcharge fee for the amount (lbs) of each parameter that exceeds the Maximum Daily limits.

6. Services fees, usage rates, surcharge rates and penalties shall be reviewed annually by the ALASD and amended as needed.

F. SEVERABILITY

If any provision, paragraph, word, section, or article of this permit is held unconstitutional or invalidated by a court of competence jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

G. Compliance Schedule

Submit the following to ALASD with executed permit:

a. Spill prevention plan - submit within 90 days of executed permit.

H. Definitions

Industrial users — non-domestic sources of wastewater with discharges large enough to potentially affect a POTW

Significant industrial users (SIUs) are industrial users that discharge:

- An average of 25,000 gallons/day or more of process wastewater to the receiving POTW.
- Up to 5% or more of the POTWs' capacity for a constituent or permitted parameter.
- Or designated by the MPCA or POTW as significant, based on potential to affect the POTW or violate pretreatment standards or POTW's NPDES requirements.

Bypass – the intentional diversion of wastes from any portion of the facility

Carbonaceous Biochemical Oxygen Demand (CBOD5)—A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Composite sample – A combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to flow rate during the sample period (flow composite) or constant volume samples are collected at equal time intervals during the composite period (time composite).

Cooling water – Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of intake water.

Daily Discharge or Daily Average Discharge – The flow or discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling/measuring. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units (e.g. concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day [40 CFR §122.2].

Daily Maximum or Maximum Daily Limit – The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Effluent Limitation—Any restriction imposed by the ALASD on quantities, discharge rates, discharge amounts or concentrations of pollutants which are discharged to the sewer.

Grab Sample – An individual sample collected in less than 15 minutes.

Hazardous waste – a waste that is dangerous or potentially harmful to health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges.

Interference — a discharge from an industrial user that, alone or in conjunction with other sources a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes a violation — including increasing a violation's magnitude or duration — of any permit or rule that controls release of pollutants from the POTW.

MGD or mgd -- million gallons per day is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

NPDES or National Pollutant Discharge Elimination System—The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Overload -- result from high strength discharge from an industrial user that, alone or in conjunction with other sources, a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes an upset plant condition that has the potential to cause a violation of any permit or rule that controls release of pollutants from the POTW.

Passivation

Pass-through — a POTW has a violation of its limits caused by an industrial users discharge that passes through the public facility without being adequately treated. The pollutant limit violated must be a pollutant discharged by the industrial user, but it's not necessary to demonstrate impact on the POTW operation.

Process Wastewater—Any water which, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Prohibited discharges – include both general and specific prohibitions, as described below: General prohibitions [40 CFR 403.5(a)] forbid the discharge to a POTW of any pollutant that causes pass through or interference. Specific prohibitions [40 CFR 403.5(b)(1) to (8)] forbid eight categories of pollutant discharges to POTWs. Specific Prohibitions per CFR 403.5 (b) – are listed at the end of definitions section of this attachment.

Publicly Owned Treatment Works (POTW)—A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR §403.3]

Sewer or Sanitary Sewer—A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Self-Monitoring—Sampling and analyses performed by an industrial facility.

Slug discharge -- Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b).

Spill Prevention Control and Countermeasure Plan (SPCC)—A plan prepared by an industrial user to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

Standard Industrial Classification (SIC) Code—A code number system used to identify various types of industries. The code numbers are published by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A particular industry may have more than one SIC code if it conducts several types of commercial or manufacturing activities onsite.

Total Suspended Solids (TSS)—A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Upset – An incident in which there is unintentional and temporary noncompliance with Permit effluent limitations because of factors beyond reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

Violation – Exceeding the Daily Maximum limit as listed in Table B-7 of this Permit is considered a violation of this Permit.

Whole Effluent Toxicity (WET) Test – is the aggregate toxic effect of an effluent measured directly by an aquatic toxicity test. Aquatic toxicity methods designed specifically for measuring WET have been codified in 40 CFR 136. WET test methods employ a suite of standardized freshwater, marine, and estuarine plants, invertebrates, and vertebrates to estimate acute and short-term chronic toxicity of effluents and receiving waters.

Code of Federal Regulations § 403.5 (b) Specific prohibitions.
The following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
2. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
5. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.
6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

PERMIT FOR INDUSTRIAL USER DISCHARGE TO THE ALASD SANITARY SEWER SYSTEM

This permit is issued to SunOpta Grains and Foods Inc. (SunOpta) and permits the discharge of industrial wastes to the Alexandria Lake Area Sanitary District (ALASD) Sanitary Sewer System from **SunOpta Aseptic Minnesota Street Plant (SOA).** Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: ______________________
Scott D Gilbertson, Executive Director, ALASD

Date: 2-7-22

Acknowledged By: ______________________
Chris Whitehair, SVP of Supply Chain
SunOpta Grains and Foods Inc.

Date: 6/8/2022

This permit issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from SunOpta to the public sanitary sewer system. SunOpta must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify SunOpta of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

ATTACHMENT A
TO
ALASD INDUSTRIAL USER DISCHARGE PERMIT

A. Permit Application Data.

1. Company Name: SunOpta Grains and Foods Inc.
   Mailing Address: 7078 Shady Oak Road
   Eden Prairie, MN 55344

   Address of Premises: **SunOpta Aseptic**, 3915 Minnesota St., Alexandria, MN
   Contact Name: Cody Emery
   Title: Plant Manager
   Phone: 320-759-5404; 320-808-7863; cody.emery@sunopta.com

2. Standard Industrial Classification Code 2099 (311511 NAICS Code)
3. Product(s)/Raw Material(s) Liquid Beverages – Soy, Oat, Rice, Fruit

4. Description of Pretreatment Provided, if any: None

5. Waste Characterization and Limits: Soy, Rice, Oat, Fruit base products

	Daily Average	Maximum Day
Flow, gallons per day	175,000	200,000
CBOD5 lb./day	500	2250
Total Suspended Solids, lb./day	550	1180
Total Phosphorus, lb./day	4	16

Ammonia, Nitrogen - Future limits will be determined by ALASD WET results or future NPDES Permit limits.

6. Peak hourly flow contribution 15,000 gallons per hour
7. Range of pH levels in discharge waste 5.5 - 9.5 grab sample
8. Hours of operation during peak day 24 hours
9. Number of days of operation per week 7 days
10. Other waste characteristics (list): Acid, Caustic, Cooling System Cleaners
11. Batch or periodic discharges:
    CIP and Water Softener Cycling, RO System Flushes
12. Source and volume of existing non-contact cooling water to be discharged to the ALASD treatment facility: Water Softener, RO System Flushes
13. Toxic chemicals that are stored and/or used on the site:
    Nitric Acid, Sodium Hypochlorite.

B. Permit Effluent Limitations and Monitoring Requirements

1. SunOpta is authorized to discharge process wastewater in compliance with the limits and monitoring requirements specified on Table B-7 of this permit. SunOpta is not authorized to discharge phosphoric acid or phosphorus-based cleaners to the sanitary sewer in excess of the permissible limits. Passivation treatment methods shall utilize non- phosphorous additives. SunOpta is not authorized to discharge any new sources of non-contact cooling water to the sanitary sewer per federal pretreatment standards. SunOpta shall also comply with Specific Prohibitions per 40 CFR Part 403.5(b).

2. Sample collection and testing shall be completed in compliance with the requirements specified on Table B-7 (below) and shall be taken at the following location(s): Sampling Manhole to the West of SOA Building (sketch attached)

3. SunOpta shall comply with the provisions of this permit, ALASD Ordinances, and Federal Pretreatment Standards for significant industrial users (SIU). SIU discharge shall also comply with effluent limits listed in Section B of this permit.

4. **SunOpta shall notify the ALASD Plant Superintendent upon detection of any violations of the Maximum Daily limits specified in this permit and Table B-7 as soon as the test results are obtained.** Detection shall include all permit required and any other self-monitoring pollutants. In addition, SunOpta shall provide in writing the reason for the violation and remedy to alleviate future violations associated with similar occurrences. Upon request by ALASD, SunOpta will provide **the reason for the violation and future remedy must be provided to ALASD Plant Superintendent within one week (7 calendar days) after such request.**

5. For the purposes of the monitoring requirements specified on Table B-7, a 24-hour composite flow-based sample shall consist of a series of discrete samples taken at fixed / uniform increments of volume metered past a flow measurement point.

6. Test procedures for sample analyses required by this permit shall conform to the guidelines established on Code of Federal Regulations, title 40, part 136 and Code of Federal Regulations, title 40, section 403.12 of the general pretreatment regulation. SunOpta or the contracted monitoring service and/or commercial analytical laboratory shall document analytical procedures including, but not limited to, the quality control and, if applicable, chain of custody procedures conducted on each sample.

7. SunOpta may monitor its discharge more frequently than the minimum set forth in this Permit, the Sewer Use Ordinance, or as otherwise required. If SunOpta monitors any pollutant more frequently than required by the ALASD, or additional pollutants not required by the ALASD, the results of this monitoring shall be included in the reports required by this discharge Permit.

Table B-7: Effluent Limits and Monitoring Requirements

Effluent Parameter	[1]Daily Average	[2]Daily Maximum	Minimum Frequency	[4]Sample Type
Flow (gal./day)	175,000	200,000	Continuous	Recorder
CBOD5 (lb./day)	500	2250	Daily[3]	24-hour composite
TSS (lb./day)	550	1180	Daily[3]	24-hour composite
TP (lb./day)	4	18	Daily[5]	24-hour composite
TKN			Monthly	24-hour composite
NH^3			Weekly[5]	24-hour composite
pH	5.5-9.0**	5.5-9.5**	Daily[3]	Grab

Quarterly monitoring is required for chloride, calcium and magnesium hardness as CaCO3, specific conductance, total dissolved salts (solids), sulfates as SO4, bicarbonates (HCO3), sodium, calcium, magnesium, and potassium (24-hour composite samples)

Annual monitoring is required for Cadmium, Copper, Total Chromium, Total Cyanide, Lead, Mercury, Nickel, Zinc and PCB (24-hour composite samples)

Periodic monitoring for quaternary ammonium compounds in conjunction with ALASD WWTF whole effluent toxicity (WET) evaluation

Quarterly PFAS monitoring requirements to be determined based on November 2021 MPCA Draft PFAS Monitoring Plan currently under review.

[1]Daily Average flow and loads amounts are sustainable by the ALASD wastewater treatment facility on a continuous basis.

[2] Flow and load in excess of the Daily Maximum amounts have the potential to cause overload or upset conditions at the ALASD wastewater treatment facility and are considered violations of this permit. This Permit does not provide the ability to discharge at Daily Maximum limits on a consistent or even periodic basis. Any discharge in excess of the Daily Maximum is a violation of this Permit. Maximum daily limit exceedances will be reported to MPCA as permit violation of this agreement and included in the Annual Pretreatment Report to MPCA.

[3]Only on days when in operation.

[4]All required monitoring shall be done at the sample location specified in this permit.

[5] Weekly NH^3 samples shall be obtained starting on Monday the first week, Tuesday the second week, and so forth continuing this rotation pattern of sampling days week after week.

Any pH result lower than 5.5 or higher than 9.5 is permit violation.

Industrial discharges exceeding typical domestic wastewater daily concentrations of 200 mg/l. CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 will be subject to a surcharge fee per Section E of this permit. Daily Average and Maximum Daily permit limits are based on current ALASD WWTF capacity and are required to protect against potential interference of industrial strength discharges. Additional fees/penalties will be applied when permit limits are exceeded per Section E of this permit.

The permittee is responsible for the cost of all sampling and testing where such tests are conducted by the ALASD for the purpose of checking to determine if a previously found violation of this Permit has been corrected or as otherwise provided in Subdivision 13 of Section 3.10 Use of Public Sewers of the ALASD Sewer Use Code, and the cost of such tests shall be added to the permittee's service charge. If the Effluent Limits are exceeded by SunOpta, all associated costs and necessary corrective actions to abate nuisances and comply with Federal, State, and Local laws will be the responsibility of SunOpta. If pretreatment facility or ALASD Wastewater Treatment Facility becomes overloaded or upset because of SunOpta actions or inaction, SunOpta, at the request of the ALASD, will reduce or cease the discharge of wastewater into the ALASD Wastewater Treatment Facility until the upset condition is corrected. This does not include discharge of non-contact water or bathroom water. The ALASD will provide SunOpta notice when the ALASD plant has been overloaded or upset. This notice will precede any request to reduce or cease the discharge of wastewater.

C. Submission of Reports and Information to ALASD

1. SunOpta shall notify the ALASD in writing, of any planned discharge of a substance that would, if otherwise disposed of, be considered a hazardous waste under 40CFR Part 261. Notification shall take place at least 30 days before the date of any anticipated discharge and conform to 40 CFR Section 403.12(p). No such discharge of any hazardous wastes may take place without prior written approval of the ALASD. Notwithstanding the above, in the event of any accidental or otherwise unforeseen discharge of any hazardous wastes, SunOpta will notify the ALASD as set forth in Paragraph D(5) below and will otherwise comply with all applicable provision of the ALASD Ordinances, this Permit, and federal standards

2. SunOpta shall submit a written monthly report to the ALASD of all discharge monitoring performed. This report shall be submitted by the 15th day of the following month.

3. All pollutant and discharge sampling results as monitored by or known to SunOpta or shall be provided to ALASD within 30 days of SunOpta receiving such information or sampling results. However, violations to Maximum Daily limits shall be reported upon detection as outlined in this permit.

D. General Conditions

1. Industrial wastewater discharges from SunOpta shall be in accordance with applicable provisions of the ALASD Ordinances, this Permit and Federal Pretreatment Standards [40 CFR Part 403].

2. SunOpta shall not knowingly make a false statement, representation or certification in any record, report, or plan required to be submitted to the ALASD

3. This Permit is non-transferable.

4. SunOpta shall maintain and retain plant records relating to wastewater discharge as specified by the ALASD for a minimum of three years.

5. **SunOpta shall notify the ALASD immediately of any slug or accidental discharge of a substance, pollutant, or wastewater in violation of the ALASD Ordinances or this Permit.**

6. SunOpta shall install, operate, and maintain sampling and monitoring devices in proper working order at its own expense. This shall include the cost of testing by SunOpta, or a certified, independent, laboratory in accordance with Table B-7.

7. The ALASD may collect and test samples at random. The testing of these samples may be performed by the ALASD laboratory or an independent, certified laboratory. The permittee may be required to pay this cost of sampling.

8. SunOpta shall allow ALASD personnel to enter upon SunOpta premise to inspect any monitoring point, collect samples, and determine compliance with

ALASD Ordinances, the Federal Pretreatment Regulations, and this permit. This inspection shall commence after contacting SunOpta management and following the SunOpta visitor policy.

9. The ALASD may revoke the permit of any industrial user upon occurrence of any of the following events: (a) if it fails to comply with the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations; (b) for just cause based upon the non-compliance of the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations. Revocation of the permit must be by action of the ALASD Board of Directors. Prior to such revocation SunOpta, upon written request, may present to the Board any information relevant to such proposed action.

10. SunOpta shall pay all monthly fees including service fee, usage charges, surcharges, additional surcharges and penalties in accordance with ALASD Ordinances and as described in Part E.

11. Any significant change in volume or characteristic of industrial wastewater introduced into the ALASD Wastewater Treatment Plant system shall immediately be reported to the Plant Superintendent or the Executive Director of the ALASD. In such cases this permit may be subject to modification.

12. Notice of any anticipated significant increase in pollutant contributed shall be given to the ALASD 180 days in advance of such increase, in the form of a new permit application. The ALASD may decide not to approve an increase of flow or loading in which case SunOpta must install pretreatment, equalization storage at their own cost or determine an alternate method of disposal.

13. The terms and conditions of the permit may be subject to modifications by the ALASD during the term of the permit as limitations or requirements are modified or other just cause exists.

14. SunOpta shall submit within 90 days of permit approval an updated Spill Prevention Plan. This plan shall include a step-by-step sequence and protocol to be followed to prevent a slug or accidental discharge occurs into the sanitary sewer. The plan shall certify that all employees have been trained in the spill prevention plan. This training shall be continued on an annual basis and at the time of hire for a new employee. The plan shall be posted on the permittee bulletin board or other prominent place.

E. Treatment Rate and Fees

1. The **monthly fee** includes a service fee and usage charge plus all surcharge fees and penalties for exceeding limits for CBOD5, TSS, TP and NH^3. Additional fees not included in this agreement may be incorporated based on changes in industrial user wastewater constituents or conditions. The **minimum monthly fee** shall be calculated based on the average daily discharge limits in this permit. All fees must be paid monthly

2. **Service fee** and **Usage rate** per the ALASD User Rate Ordinance for 2022:

Service fee (8" or larger service line)	$68.00
Usage Rate per 1,000 gallons (<5,000 gallons)	$9.00
Usage Rate per 1,000 gallons (>5,000 gallons)	$6.74

3. Discharges of wastewater that exceed the typical level of the domestic wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 shall pay a Surcharge fee for the amount (lbs) of each parameter that exceeds these concentrations. Surcharge fee for BOD, TSS, TP, NH^3 based on the additional cost for treating wastewater exceeding typical domestic strength are as follows for 2022:

Parameter	**Surcharge Fee**
CBOD5	$ 0.3794/lb
TSS	$ 0.3533/lb
TP	$10.94/lbs
NH3	$0.4419/lb

4. Discharges of wastewater that exceed the **Daily Average** limits as established in Table B-7 of this permit shall pay an additional surcharge fee for the amount (lbs) of each parameter that exceeds the Daily Average limits.

5. Discharges of wastewater that exceed the **Maximum Daily** limits as established in Table B-7 of this permit shall pay, in addition to the surcharge and additional surcharge fees, a penalty equal to the surcharge fee for the amount (lbs) of each parameter that exceeds the Maximum Daily limits.

6. Services fees, usage rates, surcharge rates and penalties shall be reviewed annually by the ALASD and amended as needed.

F. SEVERABILITY

If any provision, paragraph, word, section, or article of this permit is held unconstitutional or invalidated by a court of competence jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

G. Compliance Schedule

1. Submit the following to ALASD by March 30, 2022.
   a. Updated spill prevention plan.
   b. Slug control plan and notification plan (1) standard operating procedure for controlling slug loads and (2) standard operating procedure for notifying ALASD of exceedances of effluent limits and/or discharge of slug loads.
   c. Best management practice for use of quaternary ammonium compounds including type of product, location, and volume used at SIU facilities.
2. Maintain discharge below Maximum Daily Limits per permit requirements.
3. Provide further information on peak hourly flows from industry discharge.

II. Definitions

Industrial users – non-domestic sources of wastewater with discharges large enough to potentially affect a POTW

Significant industrial users (SIUs) are industrial users that discharge:

- An average of 25,000 gallons/day or more of process wastewater to the receiving POTW,
- Up to 5% or more of the POTWs' capacity for a constituent or permitted parameter,
- Or designated by the MPCA or POTW as significant, based on potential to affect the POTW or violate pretreatment standards or POTW's NPDES requirements.

Bypass – the intentional diversion of wastes from any portion of the facility

Carbonaceous Biochemical Oxygen Demand (CBOD5) – A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Composite sample – A combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to flow rate during the sample period (flow composite) or constant volume samples are collected at equal time intervals during the composite period (time composite).

Cooling water – Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of intake water.

Daily Discharge or Daily Average Discharge – The flow or discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling/measuring. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units (e.g. concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day [40 CFR §122.2]

Daily Maximum or Maximum Daily Limit – The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Effluent Limitation – Any restriction imposed by the ALASD on quantities, discharge rates, discharge amounts or concentrations of pollutants which are discharged to the sewer.

Grab Sample – An individual sample collected in less than 15 minutes.

Hazardous waste – a waste that is dangerous or potentially harmful to health or the environment as defined in 40 CFR Part 261.3. Hazardous wastes may be contained in liquids, solids, gases, or sludges.

Interference – a discharge from an industrial user that, alone or in conjunction with other sources a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes a violation — including increasing a

violation's magnitude or duration ---- of any permit or rule that controls release of pollutants from the POTW.

MGD or mgd – million gallons per day is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

NPDES or National Pollutant Discharge Elimination System—The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Overload -- result from high strength discharge from an industrial user that, alone or in conjunction with other sources, a) inhibits or disrupts a POTW plant, its treatment processes or operations, or its sludge processes, use, or disposal, and b) therefore causes an upset plant condition that has the potential to cause a violation of any permit or rule that controls release of pollutants from the POTW.

Passivation –The treatment of the surface of stainless steel, often with acid solutions, to remove contaminants and promote the formation of a passive film on the surface for corrosion protection.

Pass-through --- a POTW has a violation of its limits caused by an industrial users discharge that passes through the public facility without being adequately treated. The pollutant limit violated must be a pollutant discharged by the industrial user, but it's not necessary to demonstrate impact on the POTW operation.

Process Wastewater---Any water which, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Prohibited discharges -- include both general and specific prohibitions, as described below: General prohibitions [40 CFR 403.5(a)] forbid the discharge to a POTW of any pollutant that causes pass through or interference. Specific prohibitions [40 CFR 403.5(b)(1) to (8)] forbid eight categories of pollutant discharges to POTWs. Specific Prohibitions per CFR 403.5 (b) -- are listed at the end of definitions section of this attachment.

Publicly Owned Treatment Works (POTW)---A treatment works, as defined by Section 212 of the CWA, that is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant §40 CFR §403.3).

Sewer or Sanitary Sewer—A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Self-Monitoring---Sampling and analyses performed by an industrial facility.

Slug discharge -- Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b)

Spill Prevention Control and Countermeasure Plan (SPCC)—A plan prepared by an industrial user to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

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Total Suspended Solids (TSS)—A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Upset - An incident in which there is unintentional and temporary noncompliance with Permit effluent limitations because of factors beyond reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

Violation - Exceeding the Daily Maximum limit as listed in Table 9-7 of this Permit is considered a violation of this Permit

Whole Effluent Toxicity (WET) Test – is the aggregate toxic effect of an effluent measured directly by an aquatic toxicity test. Aquatic toxicity methods designed specifically for measuring WET have been codified in 40 CFR 136. WET test methods employ a suite of standardized freshwater, marine, and estuarine plants, invertebrates, and vertebrates to estimate acute and short-term chronic toxicity of effluents and receiving waters.

Code of Federal Regulations § 403.5 (b) Specific prohibitions.
The following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

2. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;

3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.

5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW

[HNB]

PERMIT FOR
INDUSTRIAL USER DISCHARGE TO THE
ALASD SANITARY SEWER SYSTEM

This permit is issued to SunOpta Grains and Foods Inc. and permits the discharge of industrial wastes to the Alexandria Lake Area Sanitary District (ALASD) Sanitary Sewer System from **SunOpta Ingredients 3rd Avenue Plant (SOI).** Effluent limitations, monitoring requirements, general permit conditions and other specific conditions are set forth in **Attachment A.**

Effective Date: January 1, 2022
Expiration Date: December 31, 2022

Issued By: ____________________
Scott D Gilbertson, Executive Director, ALASD

Date: 2-7-2022

DocuSigned by:

Acknowledged By: ____________________
Chris Whitehair, SVP of Supply Chain
SunOpta Grains and Foods Inc.

Date: 6/6/2022

This permit is issued in accordance with the Alexandria Lake Area Sanitary District (ALASD) Sewer Use Ordinances and Federal Pretreatment Standards.

The conditions of this permit supersede any arrangements or requirements by the ALASD pertaining to discharges from SOI to the public sanitary sewer system. SOI must also comply with any terms of the ALASD Sanitary Sewer Ordinances not modified by this permit. ALASD may modify the terms and conditions of this permit to meet its' NPDES discharge permit requirements, if substantial changes of the SIU operations or wastewater occur, if applicable Federal Pretreatment Standards are amended, or if the ALASD determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance. The ALASD shall provide good faith efforts to notify SOI of any such change in this permit at least 90 days prior to the effective date of change.

Attachment A to this permit contains pages 2-10.

ATTACHMENT A
TO
ALASD INDUSTRIAL USER DISCHARGE PERMIT

A. Permit Application Data.

1. Company Name: SunOpta Grains and Foods Inc.
   Mailing Address: 7078 Shady Oak Road
   Eden Prairie, MN 55344

   Address of Premises: **SunOpta Ingredients**, 3rd Avenue West, Alexandria, MN
   Contact Name: Joe Gerhardt
   Title: Plant Manager
   Phone: 320-762-2241; 320-815-9256; joe.gerhardt@sunopta.com

2. Standard Industrial Classification Code 2099 (311580 NAICS Code)

3. Product(s)/Raw Material(s) Soy, Oat, Grain, Rice Products

4. Description of Pretreatment Provided, if any: None

5 Waste Characterization and Limits: Soy, Oat and other Agricultural Commodities

	Daily Average	Maximum Day
Flow, gallons per day	220,000	300,000
CBOD5 lb./day	1800	2500
Total Suspended Solids, lb./day	850	1720
Total Phosphorus, lb./day	30	42

Ammonia, Nitrogen - Future limits will be determined by ALASD WET results or future NPDES Permit limits.

6. Peak hourly flow contribution 13,000 gallons per hour
7. Range of pH levels in discharge waste 5.5 - 9.5 grab sample
8. Hours of operation during peak day 24 hours
9. Number of days of operation per week 7 days
10. Other waste characteristics (list): Cleaners, Cooling System Chemicals, Acids, Bases, Chlorine, R.O. System Flushes
11. Batch or periodic discharges:
    CIP, Cooling Water Flush, Softener Cycle, R.O. System Flushes
12. Source and volume of existing non-contact cooling water to be discharged to the ALASD treatment facility: Cooling Tower Flush, Water Softener
13. Toxic chemicals that are stored and/or used on the site:
    Nitric, Sulfuric, Per acetic Acid, Ammonia, Sodium Hyper Chlorite, Sodium Hydroxide, Potassium Hydroxide

B. Permit Limitations and Monitoring Requirements

1. SOI is authorized to discharge process wastewater in compliance with the limits and monitoring requirements specified on Table B-7 of this permit. SOI is not authorized to discharge phosphoric acid or phosphorus-based cleaners to the sanitary sewer in excess of the permissible limits. Passivation treatment methods shall utilize non-phosphorous additives. SOI is not authorized to discharge any new sources of non-contact cooling water to the sanitary sewer per federal pretreatment standards. SOI shall also comply with Specific Prohibitions per 40 CFR Part 403.5(b).

2. Sample collection and testing shall be completed in compliance with the requirements specified on Table B-7 (below) and shall be taken at the following location(s):- Sampling Manhole Southeast of SOI Building. (sketch attached)

3. SOI shall comply with the provisions of this permit, ALASD Ordinances, and Federal Pretreatment Standards for significant industrial users (SIU). SIU discharge shall also comply with effluent limits listed in Section B of this permit.

4. **SOI shall notify the ALASD Plant Superintendent upon detection of any violations of the Maximum Daily limits specified in this permit and Table B-7 as soon as the test results are obtained.** Detection shall include all permit required and any other self-monitoring pollutants. In addition, SOI shall provide in writing the reason for the violation and remedy to alleviate future violations associated with similar occurrences. **Upon request by ALASD, SOI will provide the reason for the violation and future remedy to ALASD Plant Superintendent within one week (7 calendar days) after such request.**

5. For the purposes of the monitoring requirements specified on Table B-7, a 24-hour composite flow-based sample shall consist of a series of discrete samples taken at fixed / uniform increments of volume metered past a flow measurement point.

6. Test procedures for sample analyses required by this permit shall conform to the guidelines established on Code of Federal Regulations, title 40, part 136 and Code of Federal Regulations, title 40, section 403.12 of the general pretreatment regulation. SOI or the contracted monitoring service and/or commercial analytical laboratory shall document analytical procedures including, but not limited to, the quality control and, if applicable, chain of custody procedures conducted on each sample.

7. SOI may monitor its discharge more frequently than the minimum set forth in this Permit, the Sewer Use Ordinance, or as otherwise required. If SOI monitors any pollutant more frequently than required by the ALASD, or additional pollutants not required by the ALASD, the results of this monitoring shall be included in the reports required by this discharge Permit.

Table B-7: Effluent Limits and Monitoring Requirements

Effluent Parameter	[1]Daily Average	[2]Daily Maximum	Minimum Frequency	[4]Sample Type
Flow (gal./day)	220,000	300,000	Continuous	Recorder
CBOD5 (lb./day)	1800	2500	Daily[3]	24-hour composite
TSS (lb./day)	850	1720	Daily[3]	24-hour composite
TP (lb./day)	30	42	Daily[3]	24-hour composite
TKN			Monthly	24-hour composite
NH^3			Weekly[5]	24-hour composite
pH	5.5-9.0	5.5-9.5	Daily[3]	Grab

Quarterly monitoring is required for chloride, calcium and magnesium hardness as CaCO3, specific conductance, total dissolved salts (solids), sulfates as SO4, bicarbonates (HCO3), sodium, calcium, magnesium, and potassium (24-hour composite samples).

Annual monitoring is required for Cadmium, Copper, Total Chromium, Total Cyanide, Lead, Mercury, Nickel, Zinc and PCB (24-hour composite samples).

Periodic monitoring for quaternary ammonium compounds in conjunction with ALASD wastewater treatment facility (WWTF) whole effluent toxicity (WET) evaluation.

Quarterly PFAS monitoring requirements to be determined based on November 2021 MPCA Draft PFAS Monitoring Plan currently under review.

[1]Daily Average flow and loads amounts are sustainable by the ALASD wastewater treatment facility on a continuous basis.

[2] Flow and load in excess of the Daily Maximum amounts have the potential to cause overload or upset conditions at the ALASD wastewater treatment facility and are considered violations of this permit. This Permit does not provide the ability to discharge at Daily Maximum limits on a consistent or even periodic basis. Any discharge in excess of the Daily Maximum is a violation of this Permit. Maximum day limit exceedances will be reported to MPCA as permit violation of this agreement and included in the Annual Pretreatment Report to MPCA.

[3]Only on days when in operation.

[4]All required monitoring shall be done at the sample location specified in this permit.

[5] NH^3 weekly samples shall be obtained each week starting on Monday the first week, Tuesday the second week, and so forth continuing the rotation of sampling days each week

Any pH result lower than 5.5 or higher than 9.5 is permit violation.

Industrial discharges exceeding domestic wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 will be subject to a surcharge fee per Section E of this permit. Daily Average and Maximum Daily permit limits are based on current ALASD WWTF capacity and are required to protect against potential interference of industrial strength discharges. Additional fees/penalties will be applied when permit limits are exceeded per Section E of this permit.

SOI is responsible for the cost of all sampling and testing as listed above or where such tests are conducted by the ALASD for the purpose of checking to determine if a previously found violation of this Permit has been corrected or as otherwise provided in Subdivision 13 of Section 1.10 Use of Public Sewers of the ALASD Sewer Use Code, and the cost of such tests shall be added to the permittee's service charge. If the Effluent Limits are exceeded by SOI, all associated costs and necessary corrective actions to abate nuisances and comply with Federal, State, and Local laws will be the responsibility of SOI. If pretreatment facility or ALASD Wastewater Treatment Facility becomes overloaded or upset because of SOI actions or inaction, SOI, at the request of the ALASD, will reduce or cease the discharge of wastewater into the ALASD Wastewater Treatment Facility until the upset condition is corrected. This does not include discharge of non-contact water or bathroom water. The ALASD will provide SOI notice when the ALASD plant has been overloaded or upset. This notice will precede any request to reduce or cease the discharge of wastewater.

C. Submission of Reports and Information to ALASD

1. SOI shall notify the ALASD in writing, of any planned discharge of a substance that would, if otherwise disposed of, be considered a hazardous waste under 40CFR Part 261. Notification shall take place at least 30 days before the date of discharge and conform to 40 CFR Section 403.12(p). No discharge of any hazardous wastes may take place without prior written approval of the ALASD.

2. SOI shall submit a written monthly report to the ALASD of all discharge monitoring performed. This report shall be submitted by the 15th day of the following month.

3. All pollutant and discharge sampling results as monitored by or known to SOI or shall be provided to ALASD within 30 days of SOI receiving such information or sampling results. However, violations to Maximum Daily limits shall be reported upon detection as outlined in this permit.

D. General Conditions

1. Industrial wastewater discharges from SOI shall be in accordance with applicable provisions of the ALASD Ordinances, this Permit and Federal Pretreatment Standards [40 CFR Part 403].

2. SOI shall not knowingly make a false statement, representation or certification in any record, report, or plan required to be submitted to the ALASD.

3. This Permit is non-transferable.

4. SOI shall maintain and retain plant records relating to wastewater discharge as specified by the ALASD for a minimum of three years.

5. **SOI shall notify the ALASD immediately of any slug or accidental discharge of a substance, pollutant, or wastewater in violation of the ALASD Ordinances or this Permit.**

6. SOI shall install, operate, and maintain sampling and monitoring devices in proper working order at its own expense. This shall include the cost of testing by SOI, or a certified, independent, laboratory in accordance with Table B-7.

7. The ALASD may collect and test samples at random. The testing of these samples may be performed by the ALASD laboratory or an independent, certified laboratory. The permittee may be required to pay this cost of sampling.

8. SOI shall allow ALASD personnel to enter upon SOI premise to inspect any monitoring point, collect samples, and determine compliance with ALASD Ordinances, the Federal Pretreatment Regulations, and this permit. This inspection shall commence after contacting SOI management and following the SOI visitor policy.

9. The ALASD may revoke the permit of any industrial user upon occurrence of any of the following events: (a) if it fails to comply with the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations; (b) for just cause based upon the non-compliance of the conditions of this permit, the ALASD Ordinances, or applicable State and Federal Regulations. Revocation of the permit must be by action of the ALASD Board of Directors. Prior to such revocation SOI, upon written request, may present to the Board any information relevant to such proposed action.

10. SOI shall pay all monthly fees including service fee, usage charges, surcharges, additional surcharges and penalties in accordance with ALASD Ordinances and as described in Part E.

11. Any significant change in volume or characteristic of industrial wastewater introduced into the ALASD Wastewater Treatment Plant system shall immediately be reported to the Plant Superintendent or the Executive Director of the ALASD. In such cases this permit may be subject to modification.

12. Notice of any anticipated significant increase in pollutant contributed shall be given to the ALASD 180 days in advance of such increase, in the form of a new permit application. The ALASD may decide not to approve an increase of flow or loading in which case SOI must install pretreatment, equalization storage at their own cost or determine an alternate method of disposal.

13. The terms and conditions of the permit may be subject to modifications by the ALASD during the term of the permit as limitations or requirements are modified or other just cause exists.

14. SOI shall submit within 90 days of permit approval an updated Spill Prevention Plan. This plan shall include a step-by-step sequence and protocol to be followed to prevent a slug or accidental discharge occurs into the sanitary sewer. The plan shall certify that all employees have been trained in the spill prevention plan. This training shall be continued on an annual basis and at the time of hire for a new employee. The plan shall be posted on the permittee bulletin board or other prominent place.

E. Treatment Rate and Fees

1. The **monthly fee** includes a service fee and usage charge plus all surcharge fees and penalties for exceeding limits for CBOD5, TSS, TP and NH^3. Additional fees not included in this agreement may be incorporated based on changes in industrial user wastewater constituents or conditions. The **minimum monthly fee** shall be calculated based on the average daily discharge limits in this permit. All fees must be paid monthly.

2. **Service fee** and **Usage rate** per the ALASD User Rate Ordinance for 2022:

Service fee (5"or larger service line)	$68.00
Usage Rate per 1,000 gallons (<5,000 gallons)	$9.00
Usage Rate per 1,000 gallons (>5,000 gallons)	$6.74

3. Discharges of wastewater that exceed the typical level of the domestic wastewater daily concentrations of 200 mg/L CBOD5, 195 mg/l TSS, 6 mg/l TP, 35 mg/l NH^3 shall pay a Surcharge fee for the amount (lbs) of each parameter that exceeds these concentrations. Surcharge fee for BOD, TSS, TP, NH^3 based on the additional cost for treating wastewater exceeding typical domestic strength are as follows for 2022:

Parameter	Surcharge Fee
CBOD5	$ 0.3794/lb
TSS	$ 0.3532/lb
TP	$10.94/lbs
NH3	$0.4419/lb

4. Discharges of wastewater that exceed the **Daily Average** limits as established in Table B-7 of this permit shall pay an additional surcharge fee for the amount (lbs) of each parameter that exceeds the Daily Average limits.

5. Discharges of wastewater that exceed the **Maximum Daily** limits as established in Table B-7 of this permit shall pay, in addition to the surcharge and additional surcharge fees, a penalty equal to the surcharge fee for the amount (lbs) of each parameter that exceeds the Maximum Daily limits.

6. Services fees, usage rates, surcharge rates and penalties shall be reviewed annually by the ALASD and amended as needed.

F. SEVERABILITY

If any provision, paragraph, word, section, or article of this permit is held unconstitutional or invalidated by a court of competence jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

G. Compliance Schedule

1. Submit the following to ALASD by March 30, 2022.
    a. Updated spill prevention plan.
    b. Slug control plan and notification plan (1) standard operating procedure for controlling slug loads and (2) standard operating procedure for notifying ALASD of exceedances of effluent limits and/or discharge of slug loads.
    c. Best management practice for use of quaternary ammonium compounds including type of product, location, and volume used at SIU facilities.
2. Maintain discharge below Maximum Daily Limits per permit requirements.
3. Provide further information on peak hourly flows from industry discharge.

II. Definitions

Industrial users — non-domestic sources of wastewater with discharges large enough to potentially affect a POTW

Significant industrial users (SIUs) are industrial users that discharge:

- An average of 25,000 gallons/day or more of process wastewater to the receiving POTW,
- Up to 5% or more of the POTWs' capacity for a constituent or permitted parameter,
- Or designated by the MPCA or POTW as significant, based on potential to affect the POTW or violate pretreatment standards or POTW's NPDES requirements.

Bypass - the intentional diversion of wastes from any portion of the facility

Carbonaceous Biochemical Oxygen Demand (CBOD5)—A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Composite sample – A combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to flow rate during the sample period (flow composite) or constant volume samples are collected at equal time intervals during the composite period (time composite).

Cooling water – Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of intake water.

Daily Discharge or Daily Average Discharge – The flow or discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling/measuring. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units (e.g. concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day [40 CFR §122.2].

Daily Maximum or Maximum Daily Limit – The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

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Grab Sample – An individual sample collected in less then 15 minutes

Hazardous waste - a waste that is dangerous or potentially harmful to health or the environment as defined in 40 CFR Part 261.3. Hazardous wastes may be contained in liquids, solids, gases, or sludges.

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violation's magnitude or duration — of any permit or rule that controls release of pollutants from the POTW.

MGD or mgd – million gallons per day is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

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Pass-through — a POTW has a violation of its limits caused by an industrial users discharge that passes through the public facility without being adequately treated. The pollutant limit violated must be a pollutant discharged by the industrial user, but it's not necessary to demonstrate impact on the POTW operation.

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Sewer or Sanitary Sewer—A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Self-Monitoring-- Sampling and analyses performed by an industrial facility.

Slug discharge - Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b).

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Violation - Exceeding the Daily Maximum limit as listed in Table B-7 of this Permit is considered a violation of this Permit.

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Code of Federal Regulations § 403.5 (b) Specific prohibitions.
The following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

2. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;

3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.

5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

[END]

Appendix C: Flows and Loads TM

Technical Memorandum

370 Wabasha Street North
Suite 500
Saint Paul, MN 55102

T: 651.298.0710

Prepared for: Alexandra Lake Area Sanitary District (ALASD)

Project Title: ALASD Wastewater Treatment Facility Plan

Project No.: 158466

Technical Memorandum

Subject: Influent Flows and Loadings

Date: December 5, 2022

To: Scott Gilbertson and Troy Drewes

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Table of Contents

List of Figures

List of Tables

List of Abbreviations

ADWF	average dry weather flow
ALASD	Alexandria Lakes Area Sanitary District
AWWF	Annual wet weather flow
gal	gallon(s)
lb	pound(s)
mgd	million gallons per day
BC	Brown and Caldwell
$cBOD_5$	five day carbonaceous biochemical oxygen demand
COD	chemical oxygen demand
d	day(s)
MPCA	Minnesota Pollution Control Agency
N	nitrogen
P	phosphorus
PHWWF	peak hour wet weather flow
PIWWF	peak instantaneous wet weather flow
SOA	SunOpta Aseptic
SOI	SunOpta Ingredients
TKN	total Kjeldahl nitrogen
TM	technical memorandum
TP	total phosphorus
TSS	total suspended solids
WWTF	Wastewater Treatment Facility

Executive Summary

This technical memorandum (TM) presents the Alexandria Lake Area Sanitary District (ALASD) wastewater treatment facility (WWTF) influent flow and loading projections that will serve as the basis of the 2022 Facilities Plan. This TM presents historical plant influent flows and loadings and projected influent flows and loadings.

Plant influent flows from January 1, 2017 through April 31, 2022 and influent loadings from May 1, 2021 through April 31, 2022 were selected as representative for determining the baseline flows and loadings. The period selected as representative of influent loadings captures recent increases in industrial loading contributions.

Influent flows and loadings were then projected through Year 2045 using three different methods which can be generalized as follows:

- Method 1: 1 percent linear growth using current influent wastewater characteristics
- Method 2A: 1.5 percent compounded growth using current influent wastewater characteristics
- Method 2B: 1.5 percent compounded growth using typical domestic waste sewage strength

Each projection method included a 10 percent industrial growth allocation based upon current reported SunOpta Ingredients (SOI) and SunOpta Aseptic (SOA) combined loadings. Method 2B was selected as the most realistic basis of determining future flows and loadings projections as it represents future conditions with growth being driven by domestic user increases and a lower percent of industrial contributions. Maximum month, week, and day were calculated using peaking factors calculated from historical data.

Table ES-1 presents the Baseline and Year 2035 and 2045 design influent flow and loading projections. Baseline flows are representative of current conditions at the WWTF.

For reference purposes, the existing WWTF has a permitted average wet weather flow design capacity of 4.7 mgd, with a five-day carbonaceous biochemical oxygen demand loading of 7,100 pounds per day, total suspended solids loading of 6,000 pounds per day, phosphorus loading, and 470 pounds per day of ammonia-nitrogen.

Table ES-1. ALASD WWTF Design Influent Flows and Loading Projections				
Item	Units	Baseline (Current)	Year 2035	Year 2045
Flows				
Annual Average	mgd	3.1	3.8	4.3
Average Dry Weather	mgd	2.7	3.2	3.7
Average Wet Weather	mgd	4.1	5.0	5.7
Peak Hour Wet Weather	mgd	8.0	9.5	10.9
Peak Instantaneous Wet Weather[c]	mgd	11.9	14.5	16.6
Carbonaceous Biochemical Oxygen Demand				
Annual Average	lb/d	5,720	7,200	8,200
Maximum Month	lb/d	6,910	8,700	9,900
Maximum Week	lb/d	7,930	10,000	11,400
Maximum Day	lb/d	10,150	16,200[d]	18,400 [d]
Chemical Oxygen Demand[a]				
Annual Average	lb/d	16,600	20,900	23,800
Maximum Month	lb/d	25,000	31,500	35,800
Maximum Week	lb/d	28,700	36,100	41,100
Maximum Day	lb/d	37,400	47,000	53,500
Total Suspended Solids				
Annual Average	lb/d	6,010	7,300	8,300
Maximum Month	lb/d	7,120	8,600	9,800
Maximum Week	lb/d	8,060	9,800	11,100
Maximum Day	lb/d	11,300	12,600 [d]	14,300 [d]
Ammonia				
Annual Average	lb-N/d	570	700	820
Maximum Month	lb-N/d	650	810	940
Maximum Week	lb-N/d	730	900	1,050
Maximum Day	lb-N/d	840	1,410 [d]	1,640 [d]
Total Kjeldahl Nitrogen[b]				
Annual Average	lb/d	1,080	1,340	1,550
Maximum Month	lb/d	1,240	1,530	1,780
Maximum Week	lb/d	1,380	1,710	1,980
Maximum Day	lb/d	2,160	2,670	3,100
Total Phosphorus				
Annual Average	lb/d	130	160	190
Maximum Month	lb/d	150	180	210
Maximum Week	lb/d	160	200	230
Maximum Day	lb/d	230	240	280

[a]COD based on COD:cBOD5 ratio observed during March 2022 wastewater characterization of 2.90.

[b]TKN based on ammonia-N:TKN ratio observed during March 2022 wastewater characterization of 0.53.

[c]Peak instantaneous flow of 11.9 mgd to be used as discussed in Flows and Loads Workshop.

[d]Maximum day peaking factors of 2.25 for cBOD5 and TSS of 2.25 and 2.0 for ammonia-N was used as discussed in Flows and Loads Workshop.

Section 1: Current Influent Flows and Loadings

This section provides an overview of the historical influent flows and loadings. ALASD provided plant influent flow and pollutant loadings data from January 1, 2012 through April 30, 2022. The data set included reported daily values for the following influent parameters:

- Flow (daily)
- Temperature (daily)
- $cBOD_5$ (3 samples per week)
- TSS (3 samples per week)
- Ammonia (Daily since 1/13/2021)
- Total phosphorus (Daily)

This section focuses on establishing baseline conditions for the annual average, maximum month, maximum week and maximum day flows and loadings for each parameter.

1.1 Influent Flows

Table 1-1 summarizes current influent flows. Average dry weather flow (ADWF) relates to the lowest 30-day running average during the year. Annual average represents the daily average flow during the year. The average wet weather flows (AWWF) and maximum week flows are the highest 30-day and 7-day running averages during the year, respectively. Finally, maximum day represents the highest single daily flow in the given year. The ALASD influent annual flow average 3.1 mgd over the last five years and will serve as the "baseline" annual average flow condition. The influent flow rates include backwash flow that accounts for only 2 to 3 percent of the plant flow and loading. Due to the low impact of the backflow flow on overall flows and loads, influent conditions were not adjusted to account for backwash flow.

Table 1-1. ALASD Plant Influent Flows (mgd)

Flow	2017	2018	2019	2020	2021	2022[a]	Current Baseline
Average Dry Weather	2.7	2.7	2.6	2.7	2.6	2.7	2.7
Annual Average	3.1	3.0	3.2	2.9	3.1	3.4	3.1
Average Wet Weather	3.9	3.4	3.8	3.2	3.5	4.1	4.1
Maximum Week	4.8	3.6	4.5	3.7	3.9	4.4	4.8
Maximum Day	6.2	3.8	5.1	5.3	4.3	4.9	6.2
Peak Hour Wet Weather	-	-	-	-	-	-	8.0
Peak Instantaneous Wet Weather	-	-	-	-	-	-	11.9

[a] *Year 2022 includes data from Jan 1 to April 30.*

Year 2022 contains the highest AWWF of 4.1 mgd which occurred in April 2022. Year 2017 contains the highest maximum week and the highest maximum day. The reported maximum day flow of 6.2 mgd occurred on Aug 13, 2017. The maximum week flow included the maximum day and occurred from Aug 13 to 19, 2017. The daily influent flow data is captured in Figure 1-1.

MPCA defines the peak hour wet weather flow (PHWWF) as the resultant peak hour flow from a 5-year one-hour storm event when groundwater is high and the peak instantaneous wet weather flow (PIWWF) as the resultant peak hour flow from a 25-year one-hour storm event when groundwater is high. The PHWWF is typically used in process analysis such as maximum clarifier surface overflow rates, or chlorine contact detention times. The PIWWF is used to define the hydraulic flow capacity which the plant must pass. The peak hour wet weather flow (PHWWF) of 8.0 mgd was determined using MPCA flow determination guidelines (See Appendix A). The calculated peak instantaneous wet weather flow (PIWWF) of 10.2 mgd was increased to 11.9 mgd to represent a more conservative flow based upon May 13, 2022 estimated peak flows of roughly 11 to 12 mgd.

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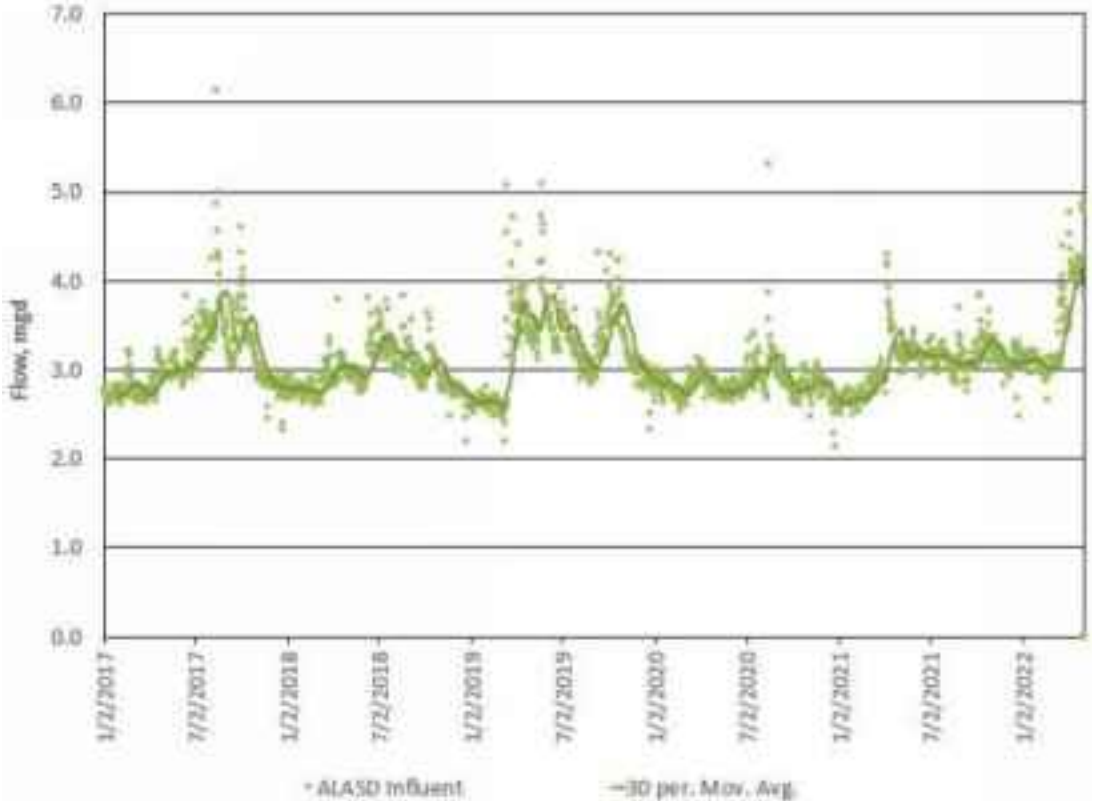

Figure 1-1. ALASD plant influent flows

1.2 Plant Influent Loadings

Table 1-2 summarizes the plant influent loadings for the last five year plus four months of 2022. Unless stated otherwise, current/baseline loadings are based on an annual average starting May 1, 2021 to April 30, 2022 which are representative of recent increases in industrial loadings.

Figures 1-2 through 1-5 show daily plant influent loadings (green dots) and the 30-day moving average (green line). The baseline loading rates were discussed and agreed upon in the Flows and Loads Workshop on June 30, 2022.

1.2.1 Carbonaceous Biochemical Oxygen Demand ($cBOD_5$)

The baseline annual average influent $cBOD_5$ loading is 5,720 lb/d. This loading rate is higher than any calendar year average and captures the recent increase in industry $cBOD_5$ loading (see Table 1-2). Loadings from 2017 to 2020 were lower by approximately 25 percent with 2020 having the lowest loadings likely due to

the COVID-19 pandemic and decreased average industrial loads of 3,520 lb/d (38 percent lower than baseline). Daily $cBOD_5$ and 30-day moving average $cBOD_5$ loadings are presented in Figure 1-2.

The maximum month, week, and day loading conditions occurred in 2021. The maximum month loading of 6,910 lb/d occurred in December 2021 and included the maximum day loading of 10,150 lb/d. The highest maximum week loading of 7,930 lb/d occurred in August 2021. Changes in $cBOD5_5$ influent loadings correspond closely to changes in industrial loading, specifically SOA and SOI combined $cBOD_5$ effluent loading with SunOpta contributing an average of 52 percent to ALASD influent $cBOD_5$ loading. Appendix B includes plots of both $cBOD_5$ ALASD influent $cBOD_5$ loads and SunOpta combined $cBOD_5$ discharge loads.

1.2.2 Total Suspended Solids

Figure 1-3 shows the daily and 30-day moving average TSS loading. The current baseline annual average loading of 6,010 lb/d reflects the TSS loading from May 1, 2021 to April 30, 2022 with current industrial contributions. The variation in average TSS load from year to year is less than 6 percent as shown in Table 1-2. The baseline maximum month and week TSS loadings of 7,120 lb/d and 8,060 lb/d respectively are roughly 5 percent lower than the corresponding highest maximum load over the 5-year period and are considered representative. The baseline maximum day TSS loadings was selected as the highest value recorded over the 5-year period for conservatism.

1.2.3 Ammonia

The plant influent began routine sampling of influent ammonia on January 13, 2021 as shown in Figure 1-4. The current baseline average ammonia loading of 570 lb N/d represents the average loading from May 1, 2021 to April 30, 2021. The maximum month ammonia load of 650 lb N/d occurred in June/July 2021 and maximum day load of 840 lb N/d occurred within this period on July 5, 2021.

1.2.4 Total Phosphorus

The current baseline annual average TP loading of 130 lb/d was calculated from the previous 5 years of data (January 1, 2017 to April 30, 2022) given industrial loadings account for less than 10 percent of the influent load. Figure 1-5 shows the influent TP loading has been relatively constant over the period analyzed with seasonal variations. The maximum month TP load of 150 lb/d occurred from June 21 to July 21, 2018 and maximum day (230 lb/d) TP loadings occurred in March 14, 2019.

Table 1-2. ALASD Raw Influent Loadings (lb/d)								
Item	2017	2018	2019	2020	2021	2022[a]	Current Baseline	Peaking Factor
Carbonaceous Biochemical Oxygen Demand								
Annual Average	4,440	4,820	4,350	3,520	5,550	5,370	5,720	-
Maximum Month	5,110	5,750	5,870	4,850	6,910	6,780	6,910	1.21
Maximum Week	6,630	7,840	7,170	5,550	7,930	7,580	7,930	1.39
Maximum Day	8,060	9,720	8,280	5,920	10,150	8,200	10,150	1.77
Total Suspended Solids								
Annual Average	5,770	6,310	6,230	5,410	5,900	6,290	6,010	-
Maximum Month	7,370	7,420	7,410	6,180	6,690	7,120	7,120	1.18
Maximum Week	7,780	8,460	8,445	8,005	7,760	8,060	8,060	1.34
Maximum Day[b]	10,060	9,950	11,290	11,330	10,150	8,400	11,300	1.88
Ammonia-Nitrogen[c]								
Annual Average	-	-	-	-	550	560	570	-
Maximum Month	-	-	-	-	650	590	650	1.14
Maximum Week	-	-	-	-	730	630	730	1.28
Maximum Day	-	-	-	-	840	790	840	1.47
Total Phosphorus								
Annual Average[d]	130	130	130	120	130	130	130	-
Maximum Month	150	150	150	140	150	130	150	1.15
Maximum Week	160	160	160	150	160	140	160	1.23
Maximum Day	229	197	230	230	182	188	230	1.77

[a] Year 2022 only includes Jan 1, 2022 to April 30, 2022

[b] TSS maximum day values were determined using the entire data set from 2017 to 2022

[c] Daily ammonia-N data beings on Jan 13, 2021

[d] TP baseline was calculated using data from 2017 to 2022

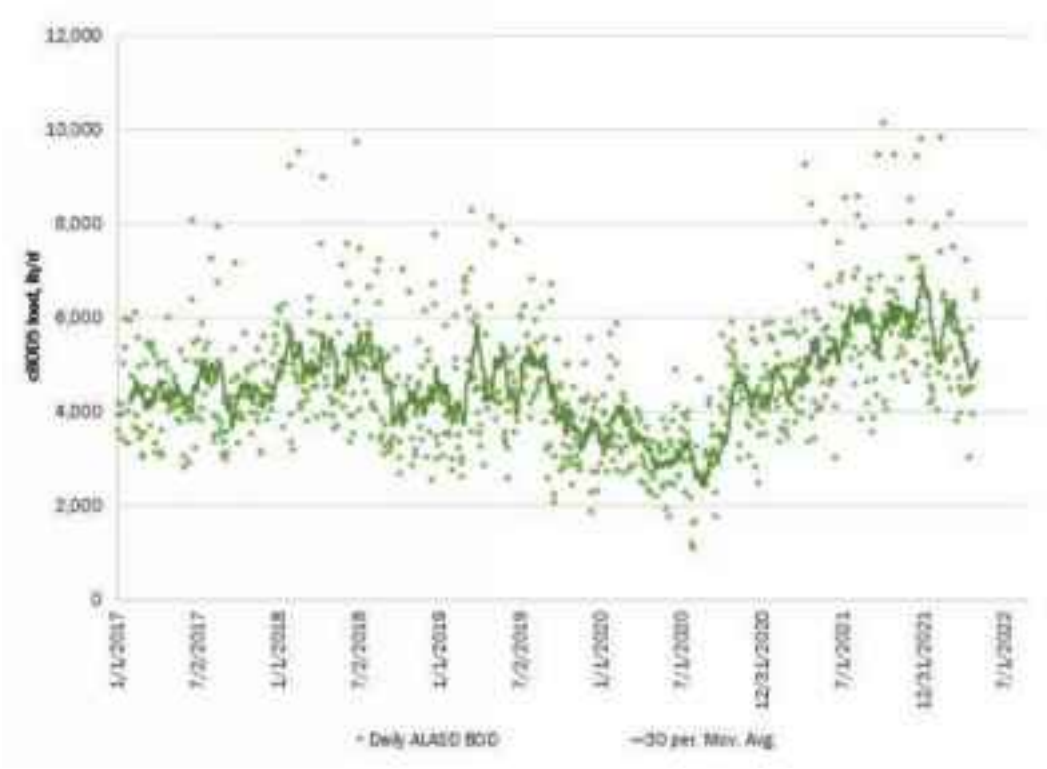

Figure 1-2. ALASD plant influent $cBOD_5$ loadings (January 1, 2017 – April 30, 2022)

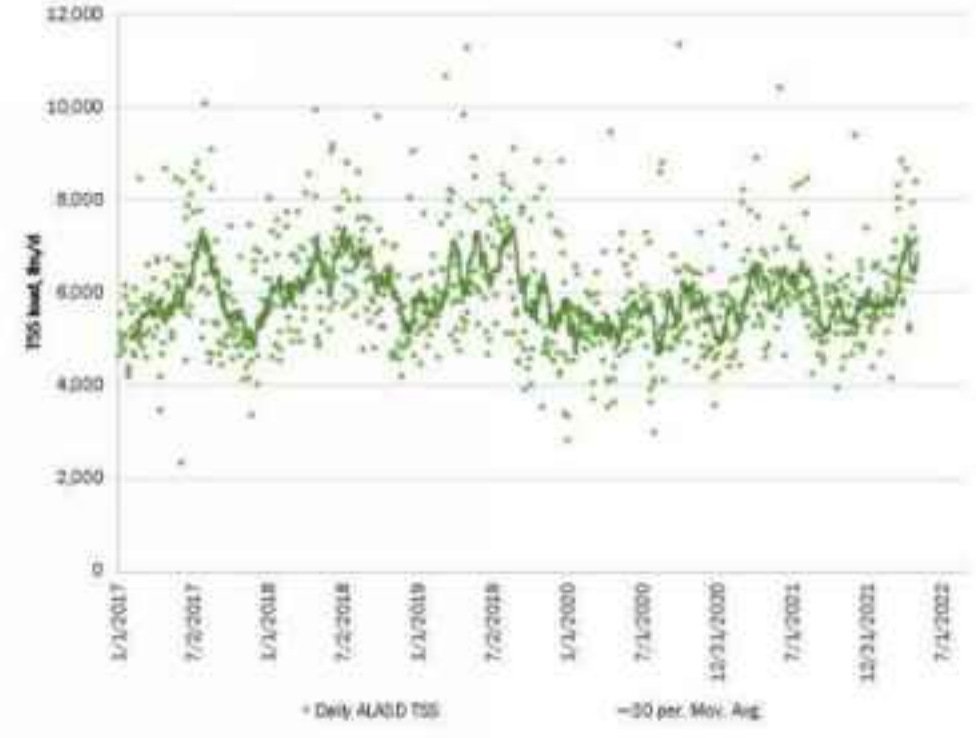

Figure 1-3. ALASD plant influent TSS loadings (January 1, 2017 – April 30, 2022)

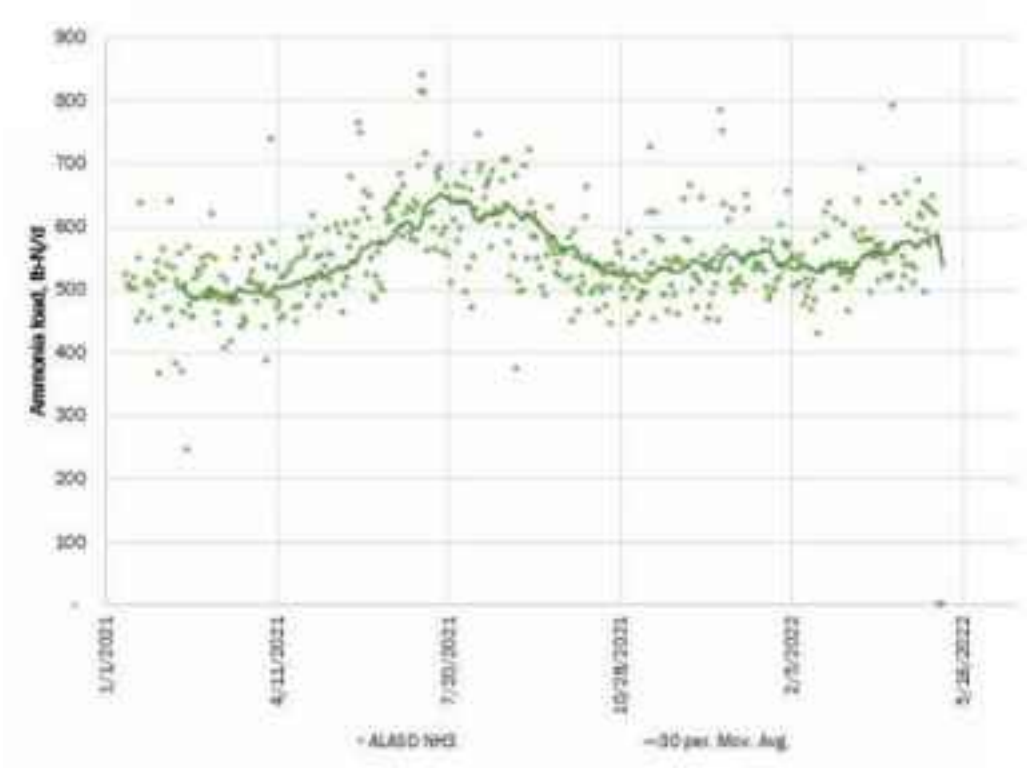

Figure 1-4. ALASD plant influent ammonia loadings (January 13, 2021 – April 30, 2022)

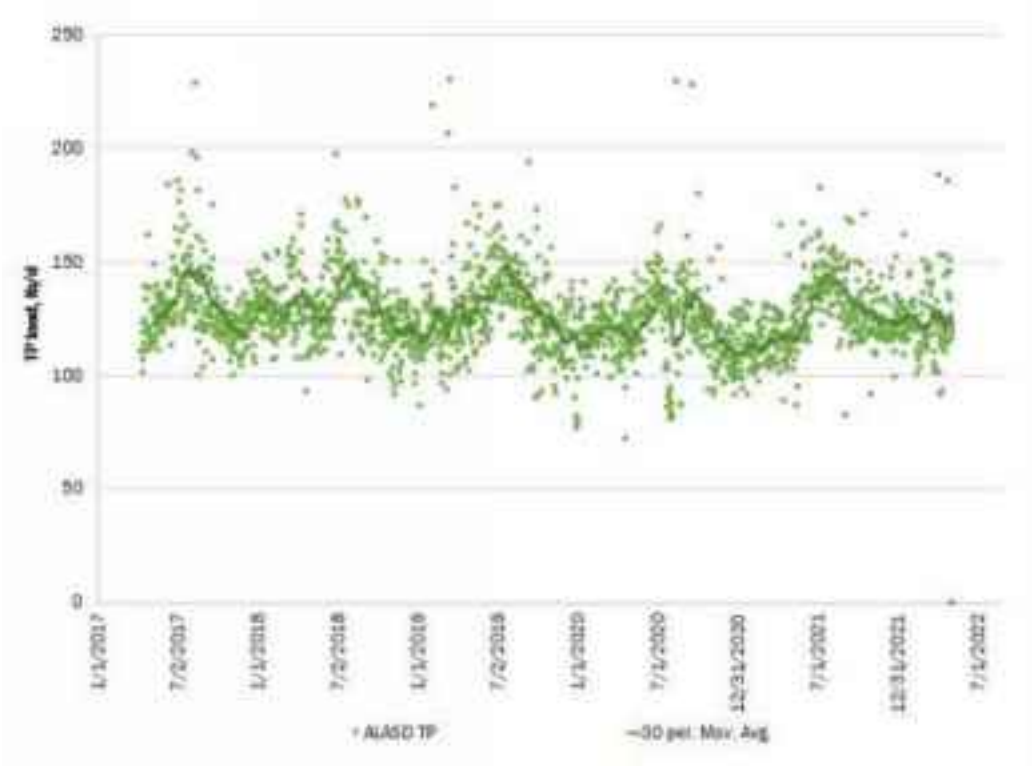

Figure 1-5. ALASD plant influent TP loadings (January 1, 2017 – April 30, 2022)

1.3 Raw Influent Temperature

The recent influent temperature data is presented in Figure 1-6 below. The seasonal pattern is clear with monthly temperatures ranging from 10 to 20 degrees Celsius (°C) on a 30-day rolling average basis. March and April of 2019 were the coldest 30-day period while August and September in 2021 are the warmest. The average temperature over the defined period of Jan 2017 through April 2022 is 15°C.

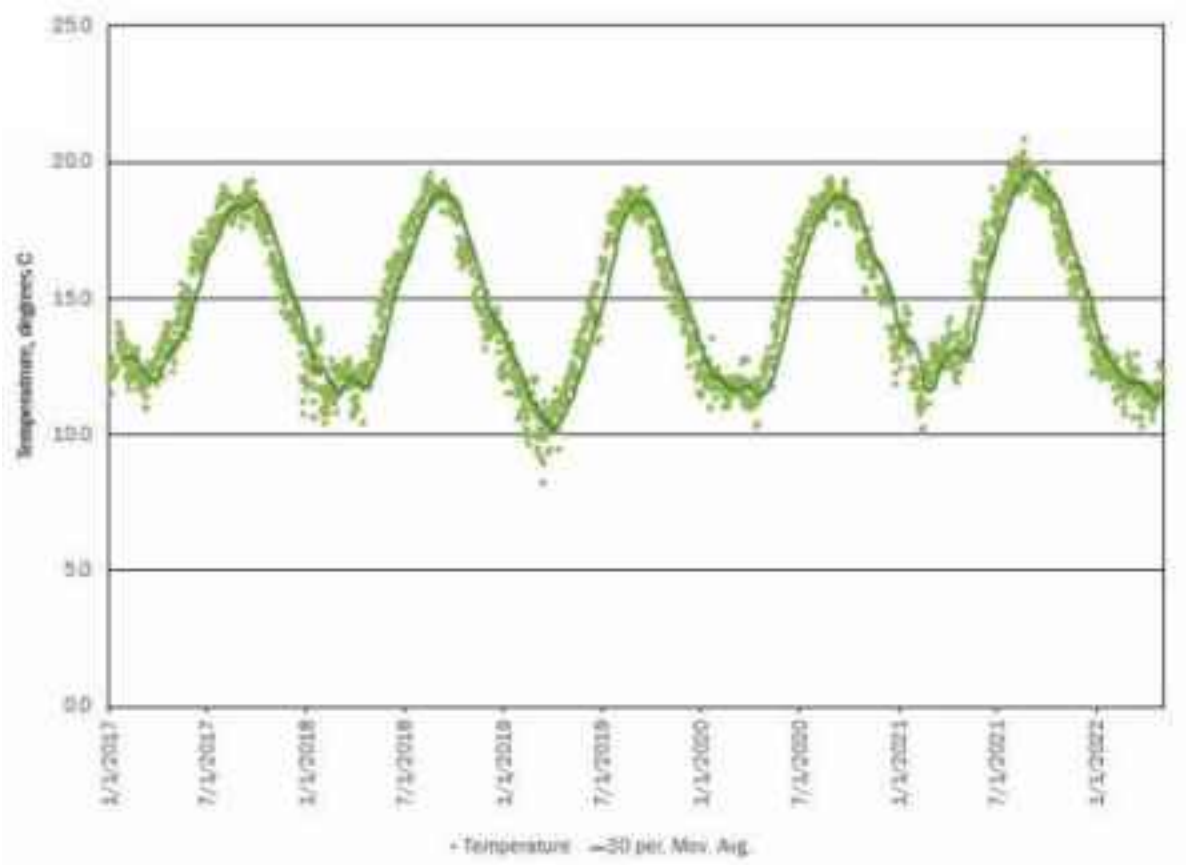

Figure 1-6. ALASD daily influent temperature (January 1, 2017 – April 30, 2022)

Section 2: Projected Flows and Loadings

This section presents the projected influent flows and loadings for construction intervals of 2035 and 2045.

2.1 Projected Growth

Three different approaches were considered for estimating the future growth within the ALASD sewerage system and can be generalized as follows:

- Method 1: 1 percent linear growth using current influent wastewater characteristics
- Method 2A: 1.5 percent compounded growth using current influent wastewater characteristics
- Method 2B: 1.5 percent compounded growth using typical domestic waste sewage strength

Each projection method included a 10 percent $cBOD_5$ and TSS allocation for industrial growth based upon current reported SunOpta Ingredients (SOI) and SunOpta Aseptic (SOA) combined loadings. These approaches were presented to ALASD on June 30, 2022 during the Flows and Loads Workshop (Appendix B).

Method 2B was selected as the most realistic basis of determining future flows and loadings projections as it represents future conditions with growth being driven by domestic user increases and a lower percent of industrial contributions. Years 2035 and 2045 were selected as potential construction intervals. Maximum month, week, and day were calculated using peaking factors calculated from daily data.

2.2 Projected Influent Flows and Loadings

Table 2-1 summarizes the projected flows and loadings agreed upon during the Flows and Loads workshop. Influent flows and loadings were projected based upon the following per capita loading factors:

- Flow = 104 gallons/capita-d
- $cBOD_5$ = 0.19 lb/capita-d
- TSS = 0.19 lb/capita-d
- Ammonia = 0.03 lb N/capita-d
- TP = 0.005 lb P/capita-d

As noted earlier, not enough data was collected for complete analysis for COD and TKN which were measured only intermittently. These two parameters are required inputs in the BioWin™ simulator which will be used for facility process evaluation. Given ALASD's limited influent COD and TKN database, influent loadings are calculated by multiplying the influent $cBOD_5$ and ammonia-N loading by the COD:$cBOD_5$ ratio of 2.90 and ammonia-N:TKN of 0.53 and determined during the March 2022 wastewater characterization sampling event (Appendix C).

Additionally, slightly higher maximum day peaking factors for $cBOD_5$, TSS, and ammonia-N were selected to be slightly more conservative in terms of aeration system design. The final maximum day peaking factors of 2.25 for $cBOD_5$ and TSS and 2.0 for ammonia-N (compared to the values listed in Table 1-2) were selected. ALASD should continue to sample and monitor influent flows and loads to obtain representative data for future analysis.

Table 2-1. ALASD WWTF Design Influent Flows and Loadings				
Item	Units	Current Baseline	Year 2035	Year 2045
Flows				
Annual Average	mgd	3.1	3.8	4.3
Average Dry Weather	mgd	2.7	3.2	3.7
Average Wet Weather	mgd	4.1	5.0	5.7
Peak Hour Wet Weather	mgd	8.0	9.5	10.9
Peak Instantaneous Wet Weather[c]	mgd	11.9	14.5	16.6
Carbonaceous Biochemical Oxygen Demand[d]				
Annual Average	lb/d	5,720	7,200	8,200
Maximum Month	lb/d	6,910	8,700	9,900
Maximum Week	lb/d	7,930	10,000	11,400
Maximum Day	lb/d	10,150	16,200	18,400
Chemical Oxygen Demand[a,d]				
Annual Average	lb/d	16,600	20,900	23,800
Maximum Month	lb/d	25,000	31,500	35,800
Maximum Week	lb/d	28,700	36,100	41,100
Maximum Day	lb/d	37,400	47,000	53,500
Total Suspended Solids[d]				
Annual Average	lb/d	6,010	7,300	8,300
Maximum Month	lb/d	7,120	8,600	9,800
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Ammonia				
Annual Average	lb-N/d	570	700	820
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Maximum Day	lb-N/d	840	1,410	1,640
Total Kjeldahl Nitrogen[b]				
Annual Average	lb/d	1,080	1,340	1,550
Maximum Month	lb/d	1,240	1,530	1,780
Maximum Week	lb/d	1,380	1,710	1,980
Maximum Day	lb/d	2,160	2,670	3,100
Total Phosphorus				
Annual Average	lb/d	130	160	190
Maximum Month	lb/d	150	180	210
Maximum Week	lb/d	160	200	230
Maximum Day	lb/d	230	240	280

[a]COD based on COD:cBOD$_5$ ratio observed during wastewater characterization (March 2022) of 2.90.
[b]TKN based on historical ammonia-N:TKN ratio observed during wastewater characterization (March 2022) of 0.53.
[c]Peak instantaneous flow of 11.9 mgd to be used as discussed in Flows and Loads Workshop.
[d]Maximum day peaking factors for cBOD$_5$ and TSS of 2.25 was used and for ammonia-N of 2.0 as discussed in Flows and Loads Workshop.

For reference purposes, the existing WWTF has a permitted average wet weather flow design capacity of 4.7 mgd, with a five-day carbonaceous biochemical oxygen demand loading of 7,100 pounds per day, total suspended solids loading of 6,000 pounds per day, phosphorus loading, and 470 pounds per day of ammonia-nitrogen.

Section 3: References

Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (GLUMRB). 2014. *Recommended Standards for Wastewater Facilities*. Health Research Inc, http://10statesstandards.com/wastewater-standards.pdf.

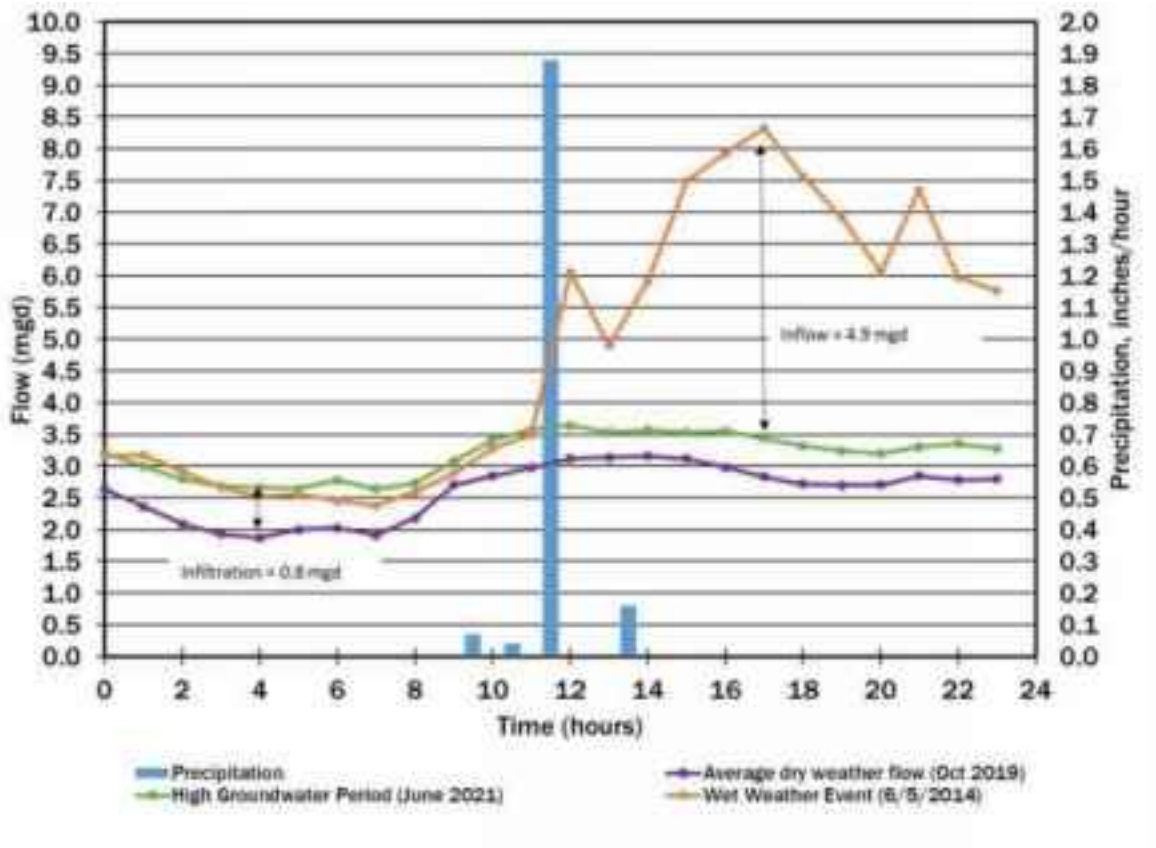
Brown and Caldwell (BC). 2013. Wastewater Feasibility Study Updated, prepared for ALASD. November.

BC. 2017. Phosphorus and Chloride Reduction Facility Plan prepared for ALASD. August.

Hazen. 2021. Comprehensive Wastewater Services Plan, prepared for ALASD.

Metcalf and Eddy. 2014. Wastewater Engineering: Treatment and Resource Recovery. 5th Edition, McGraw-Hill, New York.

Attachment A: MPCA Flow Determination Worksheets



MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North
St. Paul, MN 55155-4194

Design flow and loading determination worksheets

Municipal/Industrial Wastewater

Doc Type: Engineering Report
wq-wwtp5-20a (Revised 1/7/19)

Tab		6/5/2014
A. Determine peak hourly wet weather design flows (PHWWF)		Flow, mgd
1	Present peak hourly dry weather flow	3.16
2	Present peak hourly flow during high ground water period (no run off)	3.64
3	Present peak hourly dry weather flow	3.16
4	Present peak hourly infiltration	0.48
5	Present peak hourly dry weather flow during high ground water period and runoff at point of greatest distance between curves Y and Z	8.32
6	Present hourly flow during high ground water (no runoff) at same time of day as (5) measurement	3.44
7	Present peak hourly inflow	4.88
8	Present peak hourly inflow adjusted for a 5-year 1-hour rainfall event	4.34
9	Present peak hourly infiltration	0.5
10	Peak hourly infiltration cost effective to eliminate	0.0
11	Peak infiltration after rehabilitation	0.48
12	Present peak hourly adjusted inflow	4.3
13	Peak hourly inflow cost effective to eliminate	0.0
14	Peak hourly inflow after rehabilitation	4.34
15	Population increase	
16	Peak hourly flow from planned industrial increase	0.0
17	Estimated peak hourly flow from future unidentified industries	0.0
18	Peak hourly flow from other future increases	0.0
19	Peak hourly wet weather design flow [1+11+ sum(14...18)]	8.0
B. Determine peak instantaneous wet weather design flow (PIWWF)		
20	Peak hourly wet weather design flow [same as (19)]	8.0
21	Present peak hourly inflow adjusted for a 5-year 1-hour rainfall event [same as (8)]	4.3
22	Present peak inflow adjusted for a 25-year 1 hour rainfall event	6.5
23	Peak instantaneous wet weather design flow [20-21+22]	10.2

Attachment B: Flows and Loads Workshop Handouts

Meeting Goals

- Define planning period duration and construction intervals
- Define projected influent flows and loadings
- Confirm projected industrial growth

Agenda

- Populations projections
- Flow projections
- Loading projections
- Recommendations

Population Projections

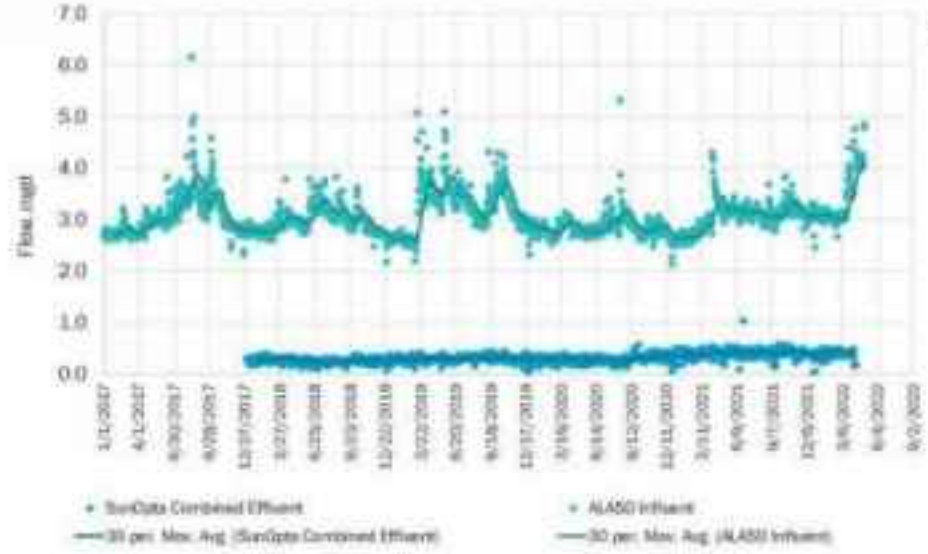
ALASD 2021 Comprehensive Wastewater Services Plan (Section 2.1)

- **Method 1**: Linear growth of approximately 1% annually for a projected population of 35,000 in 2050. (3,000 people added every 10 years)
- **Method 2**: Compounded growth of 1.5% (flow based) until 2050
- Projected to years 2035 and 2045 as construction intervals
  - 2050 projections roughly 5 to 8 percent greater than 2045

Flow Projections

- Review recent influent flows
- Influent flow methodology
- Wet weather flows
- Projections

Plant Influent and SunOpta Combined Flows



January 2017 to March 2022

ALASD (includes backwash)

Average	3.1	MGD
ADWF	2.7	MGD
AWWF	4.1	MGD
Max Day	6.2	MGD

SunOpta Combined

Average	0.32	MGD
Max month	0.47	MGD
Max week	0.50	MGD
Max day	1.03	MGD

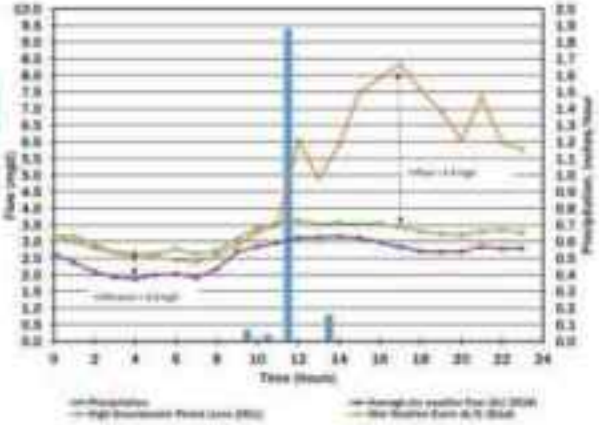
Wet Weather Flows

MPCA Flow Determination Guidelines

- Peak hour wet weather flow (5-yr 1-hr storm event) – process design
- Peak instantaneous wet weather flow (25-yr 1-hr storm event) – hydraulic flow capacity

Analysis	Flow, mgd		
	Average	PHWWF	PIWWF
Current Analysis	3.1	8.0	10.2
ALASD Phosphorus and Chloride Reduction Facility Plan (2020 projection)	3.1	10.1	11.9

- May 13, 2022 – peak flow of 10.8 mgd



Influent Flow Methodology

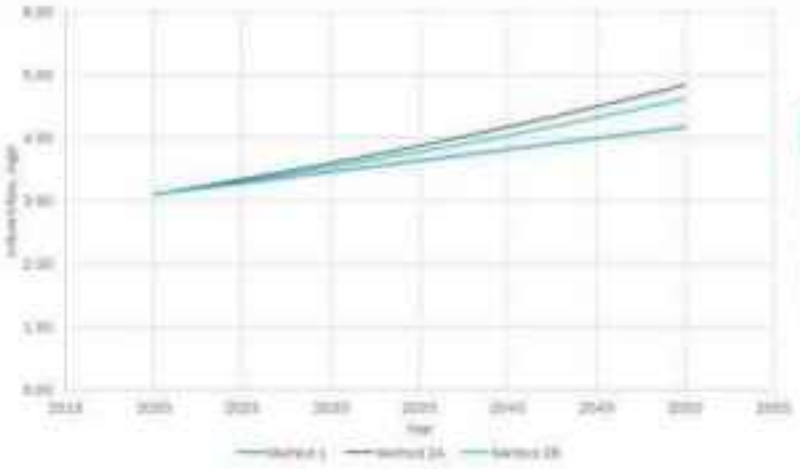
Plant Influent Loadings (2017-2022)

- 119 gal/cap-d based upon total influent flow (includes industry)
- 104 gal/cap-d based upon total influent flow minus SunOpta combined flow
- 98 gal/cap-d based upon total flow- SunOpta - backwash flows
- 10-State Standards recommendation: 100 gal/cap-d

Added Growth Methodology

- **Method 1**: Method 1 projection increase at 119 gal/cap-d
- **Method 2A**: Method 2 projection increase at 119 gal/cap-d
- **Method 2B**: Method 2 projection increase at 104 gal/cap-d

Influent Flow Projections - Average

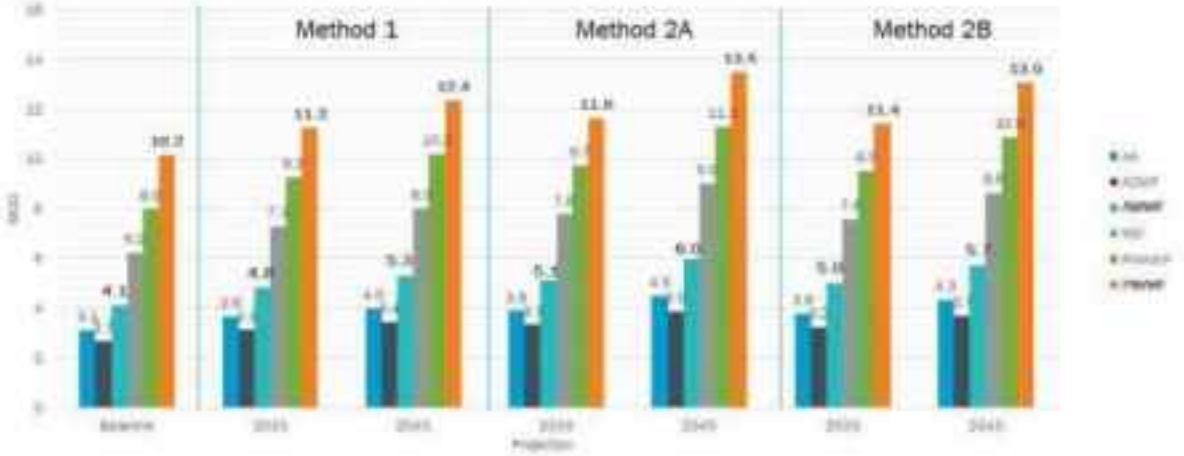


Annual Average Flow (mgd)

Year	Method 1	Method 2A	Method 2B
Baseline (2021)	3.1	3.1	3.1
2035	3.6	3.9	3.8
2045	4.0	4.5	4.3
2050	4.2	4.9	4.6

Projected Flows

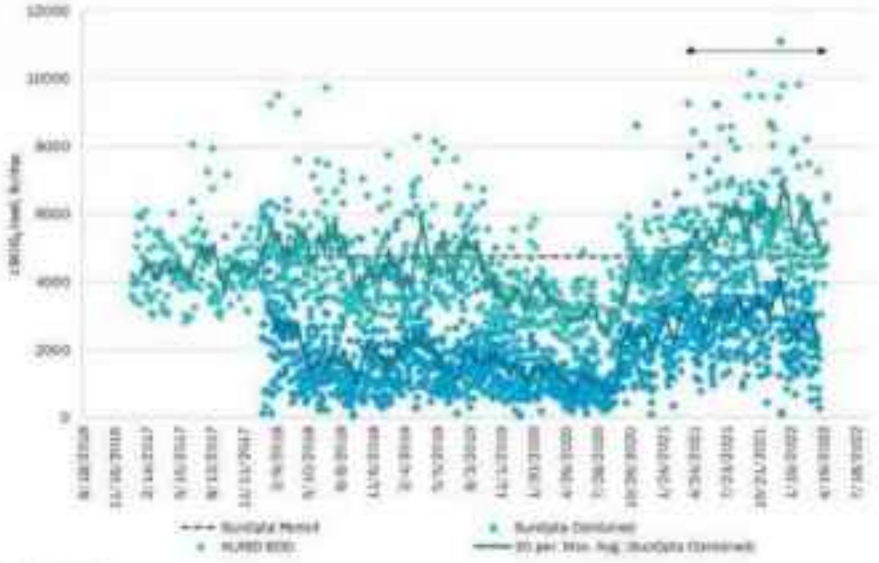
Projected PHWWF and PMWF peaking factors reduced slightly based upon 10-States peaking factors for larger systems. If current peaking factors are used – add roughly 1 mgd to 2045 PMWF



Influent Loading Projections

- Review influent and SunOpta loadings
  - Last 12-month representative of current annual average operations (SunOpta contributions)
  - Influent loadings calculated using influent flow and concentrations were within 2 to 3 percent of loadings estimated from using effluent flow and influent concentration adjusted (increased) after backwash loading removed
- Influent loading methodology
- Projections
  - cBOD5
  - TSS
  - TP
  - Ammonia-N

cBOD5 - Plant Influent and SunOpta Combined Loading



Last 12 Months

ALASD Influent

Average	5,720	lb/d
Max month	6,910	lb/d
Max week	7,930	lb/d
Max day	10,150	lb/d

SunOpta Combined

Average	3,000	lb/d
Max month	4,160	lb/d
Max week	4,860	lb/d
Max day	11,100	lb/d

Projected Influent cBOD5 Loading Methodology

Plant Influent cBOD5 Loadings

- 0.22 lb/cap-d based upon total influent load
- 0.10 lb/cap-d based upon total influent load minus SunOpta combined load
- 10-State Standards – 0.17 to 0.22 lb BOD5/cap-d (0.15 to 0.19 lb cBOD5/cap-d)

Added Growth Methodology

- **Method 1**: Method 1 projection increase at 0.22 lb/cap-d
- **Method 2A**: Method 2 projection increase at 0.22 lb/cap-d
- **Method 2B**: Method 2 projection increase at 0.19 lb/cap-d
- **All methods**:
  - Plant influent load increased by 10% of SunOpta combined average loading (300 lb/d) starting in 2022
  - Apply current maximum month, week and day peaking factors to projected average loadings

Projected Influent cBOD5 Loadings - Average

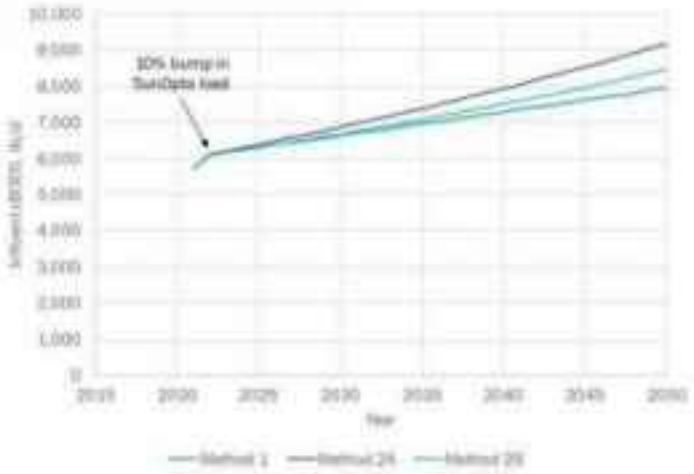
Year 2035 - Method 2A projections roughly 6 and 3 percent higher than Method 1 and 2B

Year 2045 - Method 2A projections roughly 11 and 4 percent higher than Method 1 and 2B

Method 1 and 2B projections within 5 percent

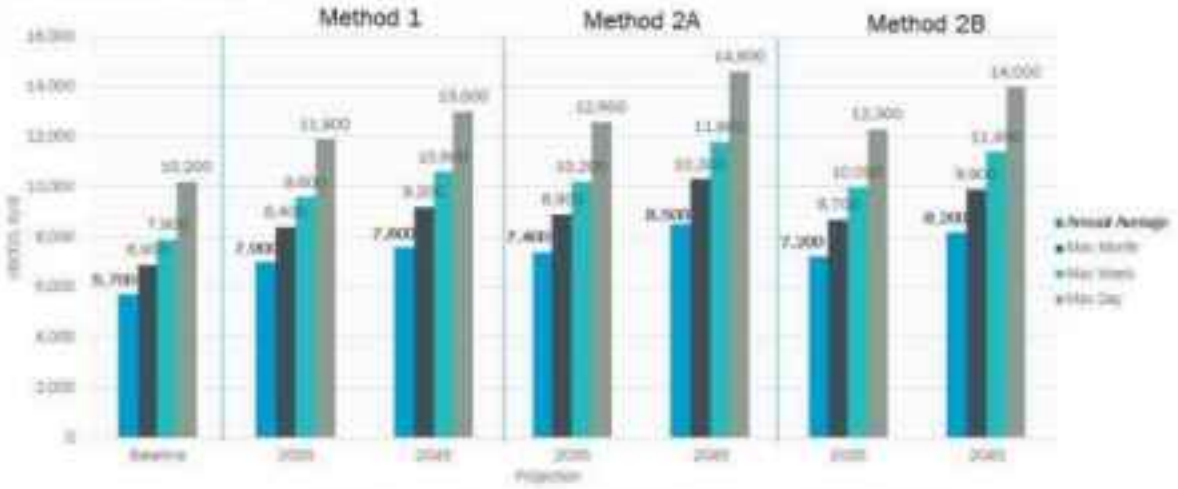
Annual Average (lb/d)

	Method 1	Method 2A	Method 2B
Baseline (2021)	5,720	5,720	5,720
2035	6,960	7,380	7,200
2045	7,620	8,530	8,190



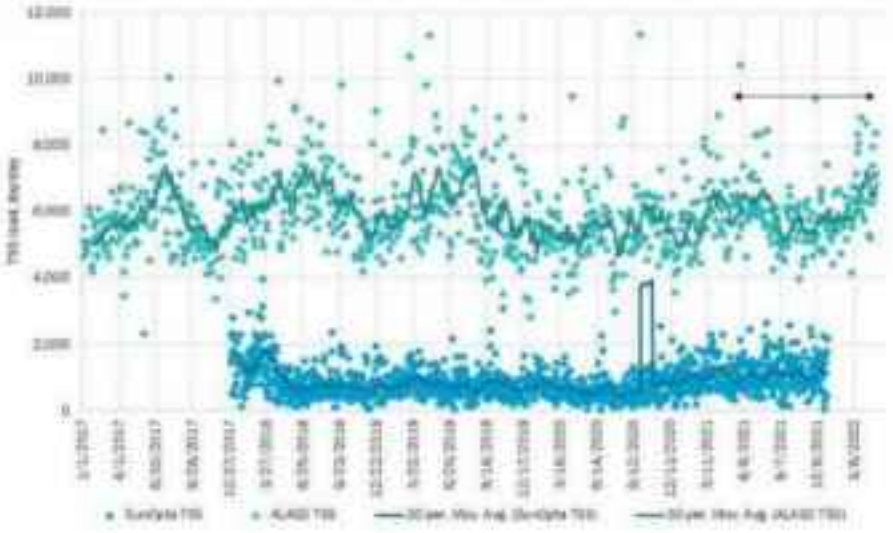
cBOD5 - Projected Influent Loadings

Based on last 12 months



Current NPDES permit includes WWTF cBOD5 rating of 7,100 lb/day

TSS - Plant Influent and SunOpta Combined Loading



Last 12 Months
(Except Max Day – Last 5 Years)

ALASD

Average	6,010	lb/d
Max month	7,120	lb/d
Max week	8,060	lb/d
Max day	11,300	lb/d

SunOpta Combined

Average	1,090	lb/d
Max month	1,360	lb/d
Max week	1,730	lb/d
Max day	3,790	lb/d

Projected Influent TSS Loading Methodology

Plant Influent Loadings

- 0.23 lb/cap-d based upon total influent load
- 0.19 gal/cap-d based upon total influent load minus SunOpta combined load
- 10-State Standards – 0.19 to 0.25 lb/cap-d

Added Growth Methodology

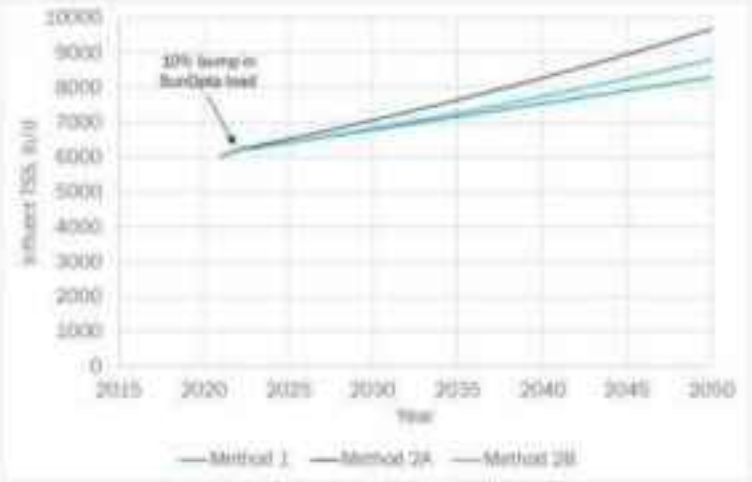
- **Method 1**: Method 1 projection increase at 0.25 lb/cap-d
- **Method 2A**: Method 2 projection increase at 0.25 lb/cap-d
- **Method 2B**: Method 2 projection increase at 0.19 lb/cap-d
- **All methods**:
  - Plant influent load increased by 10% of SunOpta combined average loading (110 lb/d) starting in 2022
  - Apply current maximum month, week and day peaking factors to projected average loadings

Projected Influent TSS Loadings - Average

Year 2035 - Method 2A projections roughly 6 and 5 percent higher than Method 1 and 2B

Year 2045 - Method 2A projections roughly 13 and 8 percent higher than Method 1 and 2B

Method 1 and 2B projections within 5 percent

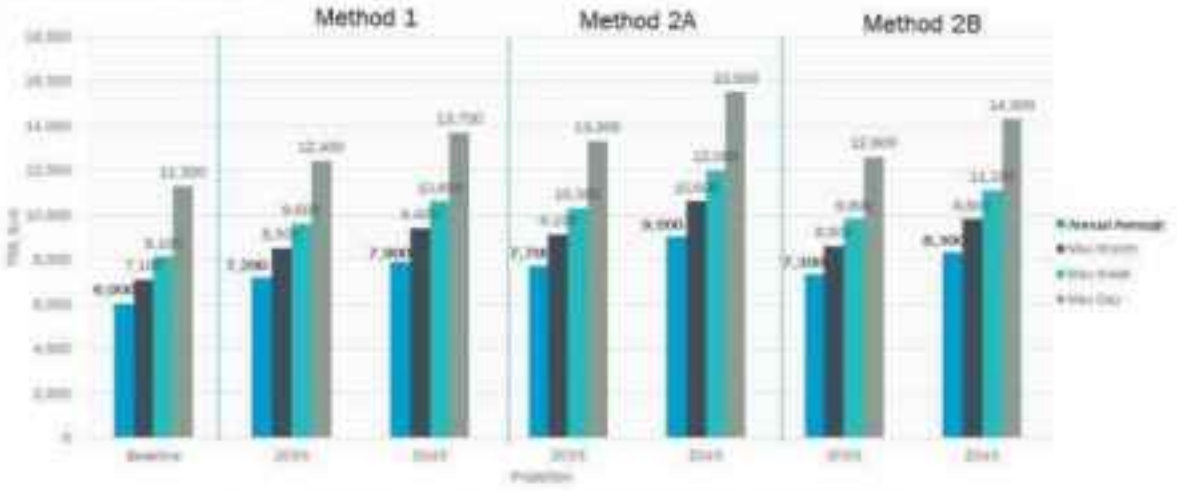


Annual Average (lb/d)

	Method 1	Method 2A	Method 2B
Baseline (2021)	6,010	6,010	6,010
2035	7,170	7,650	7,380
2045	7,920	8,960	8,270

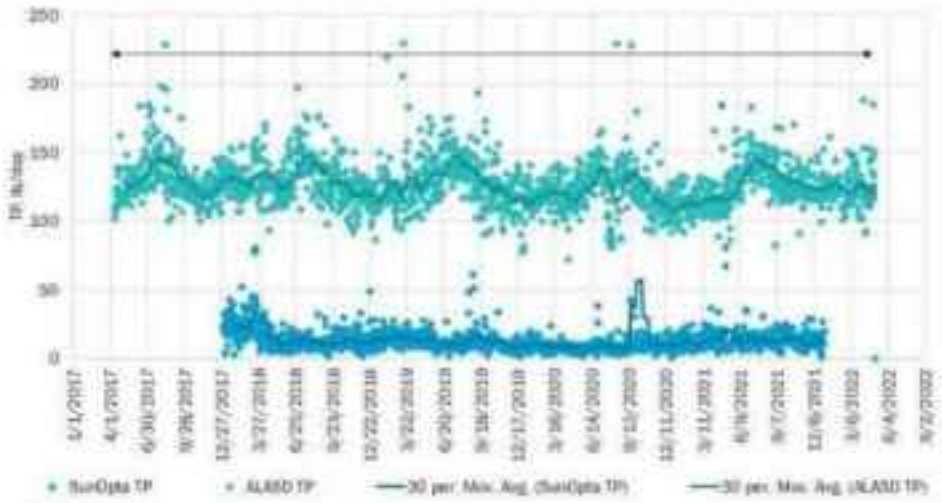
TSS - Projected Influent Loadings

Based on last 12 months



Current NPDES permit includes WWTF TSS rating of 6,000 lb/day

Total Phosphorus (TP) - Plant Influent and SunOpta Combined loadings



Last 5 years

ALASD

Average	130	lb/d
Max month	150	lb/d
Max week	160	lb/d
Max day	220	lb/d

SunOpta Combined

Average	10	lb/d
Max month	20	lb/d
Max week	30	lb/d
Max day	80	lb/d

Projected Influent TP Loading Methodology

Plant Influent Loadings

- 0.005 lb/cap-d based upon total influent load
- 0.0045 gal/cap-d based upon total influent load minus SunOpta combined load

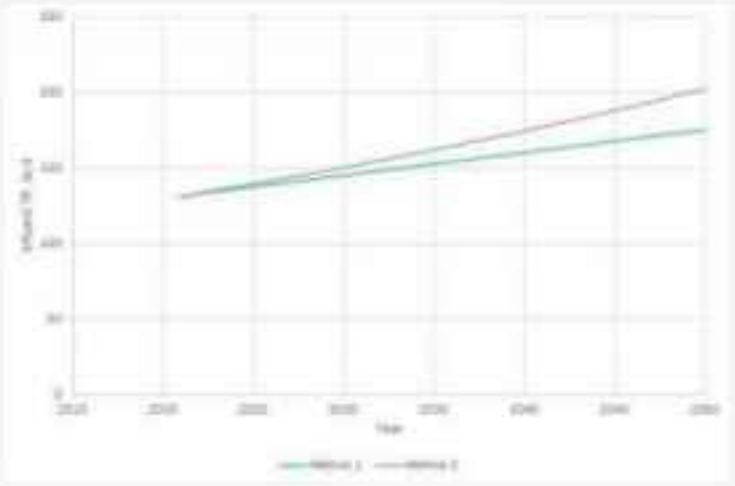
Added Growth Methodology

- **Method 1**: Method 1 projection increase at 0.005 lb/cap-d
- **Method 2**: Method 2 projection increase at 0.005 lb/cap-d
- All methods:
  - Apply current maximum month, week and day peaking factors to projected average loadings

Projected Influent TP Loadings - Average

Year 2035 - Method 2 projections roughly 6 percent higher than Method 1

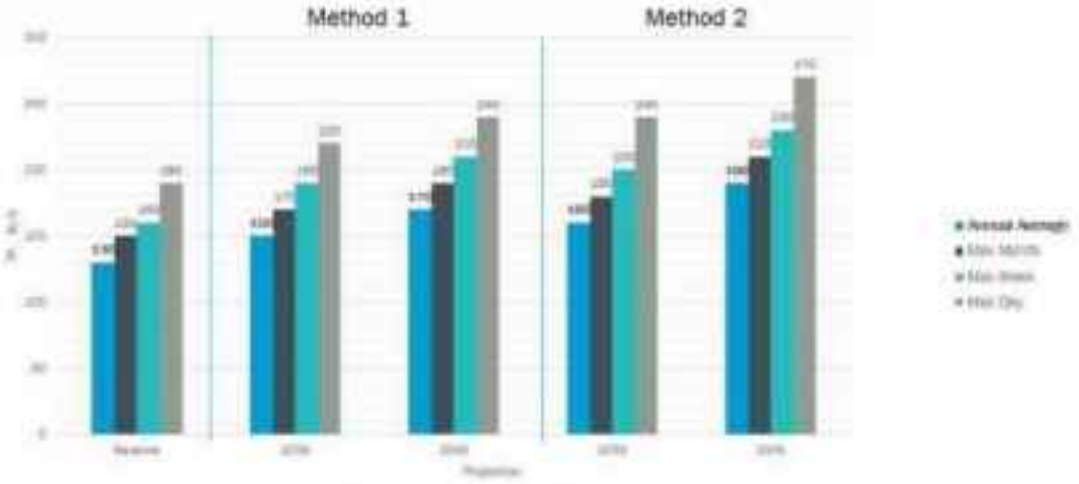
Year 2045 - Method 2 projections roughly 12 percent higher than Method 1



Annual Average (lb/d)

	Method 1	Method 2
Baseline (2021)	130	130
2035	150	160
2045	170	190

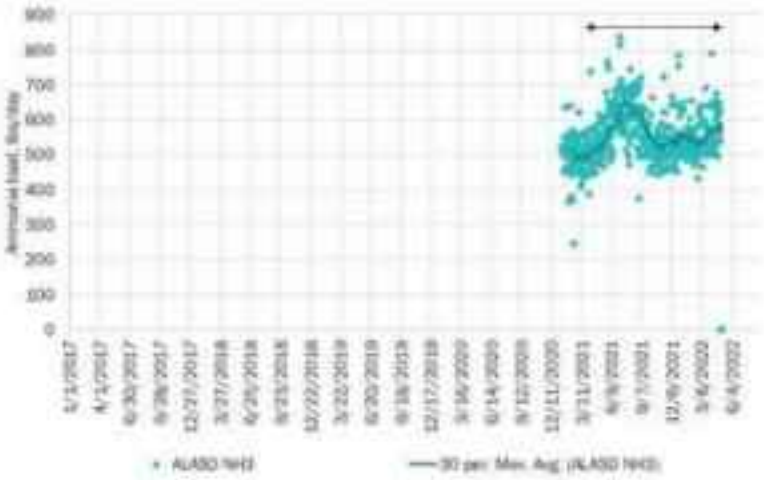
TP - Projected Influent Loadings



Current NPDES permit includes WWTF TP rating of 210 lb/day

Ammonia-N - Plant Influent Loadings

No SunOpta NH_3 Data (TKN Only)
Limited plant influent data



Last 12 Months

ALASD

Average	570	lb/d
Max month	650	lb/d
Max week	730	lb/d
Max day	840	lb/d

SunOpta TKN is less than 2% of influent TKN

Projected Influent Ammonia-N Loading

Plant Influent Loadings

- 0.022 lb/cap-d based upon total influent load
- 10-State Standards = 0.03 lb/cap-d (0.045 lb TKN/cap-d * typical ammonia-N:TKN ratio of 0.66)

Added Growth Methodology

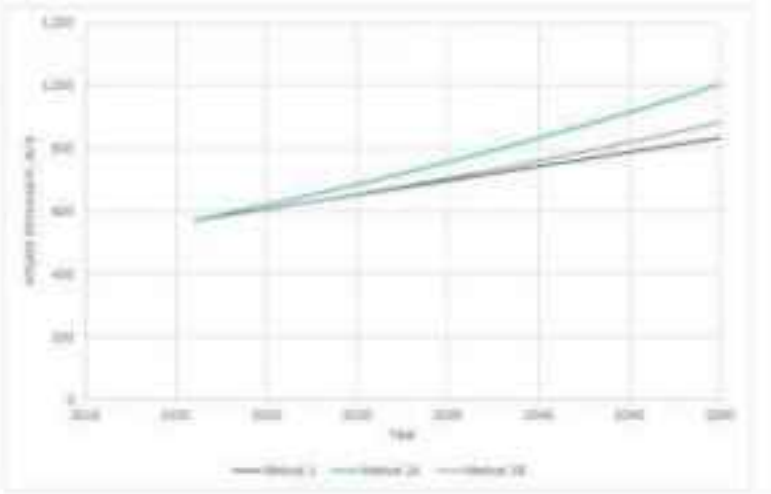
- **Method 1**: Method 1 projection increase at 0.030 lb/cap-d
- **Method 2A**: Method 2 projection increase at 0.030 lb/cap-d
- **Method 2B**: Method 2 projection increase at 0.022 lb/cap-d
- **All methods**:
- Apply current maximum month, week and day peaking factors to projected average loadings

Projected Influent Ammonia-N Loadings - Average

Year 2035 - Method 2A projections roughly 8 and 5 percent higher than Method 1 and 2B

Year 2045 - Method 2A projections roughly 13 and 8 percent higher than Method 1 and 2B

Method 1 and 2B projections within 5 percent

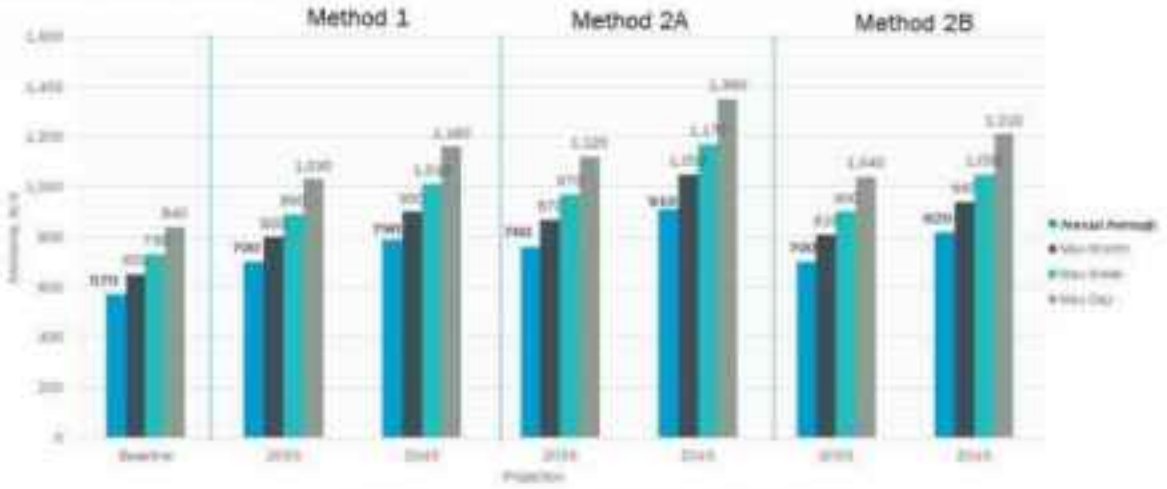


Annual Average (lb/d)

	Method 1	Method 2A	Method 2B
Baseline (2021)	570	570	570
2035	700	760	705
2045	790	915	820

Ammonia - Projected Influent Loadings

Based on last 12 months



Current NPDES permit includes WWTF rating 470 lb/day

Recommendations

Item	Recommendation
Planning Period	Evaluate/layout for Year 2045 with facility requirements for construction project phasing for Year 2035
Flow Average Wet weather	 Method 2B – 1.5% compounded growth at 104 gal/cap-d Slightly reduced peaking factors with larger system
cBOD5 and TSS	Method 2B - growth at slightly lower capita loadings plus 10% SunOpta load for industrial growth
TP	Method 2 for consistency with flow, CBOD5,TSS based population growth
Ammonia-N	Method 2A – same population growth as above but with higher ammonia loadings based upon 10-state standards recommendation. Slightly more conservative for oxygen demands and nutrient reduction
COD	Base upon the March 7-13, 2022 influent wastewater sampling COD:cBOD5 of 2.90 x influent cBOD5
TKN	Base upon projected influent ammonia loadings divided by the March 7-13, 2022influent wastewater sampling ammonia-N:TKN of 0.53

Projected flows and loadings summary

Item	Units	Baseline	2035	2045
Flows				
Annual Average	mgd	3.1	3.8	4.3
Average Dry Weather Flow	mgd	2.7	3.2	3.7
Average Wet Weather Flow	mgd	4.1	5.0	5.7
Maximum Day	mgd	6.2	7.6	8.6
PHWWF	mgd	8.0	9.5	10.9
PMWF	mgd	10.2	11.4	13.0
cBOD5				
Annual Average	lb/d	5,720	7,200	8,190
Maximum Month	lb/d	6,910	8,700	9,900
Maximum Week	lb/d	7,930	9,980	11,350
Maximum Day	lb/d	10,150	12,320	14,010
TSS				
Annual Average	lb/d	6,010	7,280	8,270
Maximum Month	lb/d	7,120	8,620	9,800
Maximum Week	lb/d	8,060	9,760	11,080
Maximum Day	lb/d	11,300	12,620	14,340

Item	Units	Baseline	2035	2045
Ammonia-N				
Annual Average	lb/d	570	760	910
Maximum Month	lb/d	650	870	1,050
Maximum Week	lb/d	730	970	1,170
Maximum Day	lb/d	940	1,120	1,350
TP				
Annual Average	lb/d	130	160	190
Maximum Month	lb/d	150	180	210
Maximum Week	lb/d	160	200	230
Maximum Day	lb/d	230	240	280

- Maximum month values generally within +/-10 percent of 2013 and 2017 Planning Effort Year 2035 projections.
- Maximum day loading peaking factors lower

Current	2.0	1.9	1.5	1.5
2017	2.1	1.8	1.8	1.8
2013 FP Update	3.0	3.4	2.0	3.0
2003 FP	2.35	2.75	2.0	2.9

Attachment C: Wastewater Sampling Characterization

Table C-1. Wastewater Characterization Study Results (lb/d)					
Item	cBOD5	COD	TKN	Ammonia	TP
Units	lb/d	lb/d	lb/d	lb/d	lb/d
3/7/2022	4748	13831	999	578	114
3/8/2022	6259	17075	924	458	112
3/9/2022	5747	17344	998	522	117
3/10/2022	7506	19160	969	494	122
3/11/2022	6299	16644	974	513	141
3/12/2022	4842	15530	1030	551	149
3/13/2022	5322	17397	1002	522	130

Table C-2.COD and TKN Ratios		
Item	COD: cBOD5	TAN:TKN
Characterization Study		
3/7/2022	2.91	0.58
3/8/2022	2.73	0.50
3/9/2022	3.02	0.52
3/10/2022	2.55	0.51
3/11/2022	2.64	0.53
3/12/2022	3.21	0.54
3/13/2022	3.27	0.52
Average	2.90[a]	0.53[a]
Daily Influent Data[b]		
Average	2.93	0.55

[a] *Ratios selected to calculate COD and TKN.*

[b] *Ratios calculated from daily influent data were within 5% of the wastewater characterization study ratios.*

Appendix D: 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.

Table of Contents

Page

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.

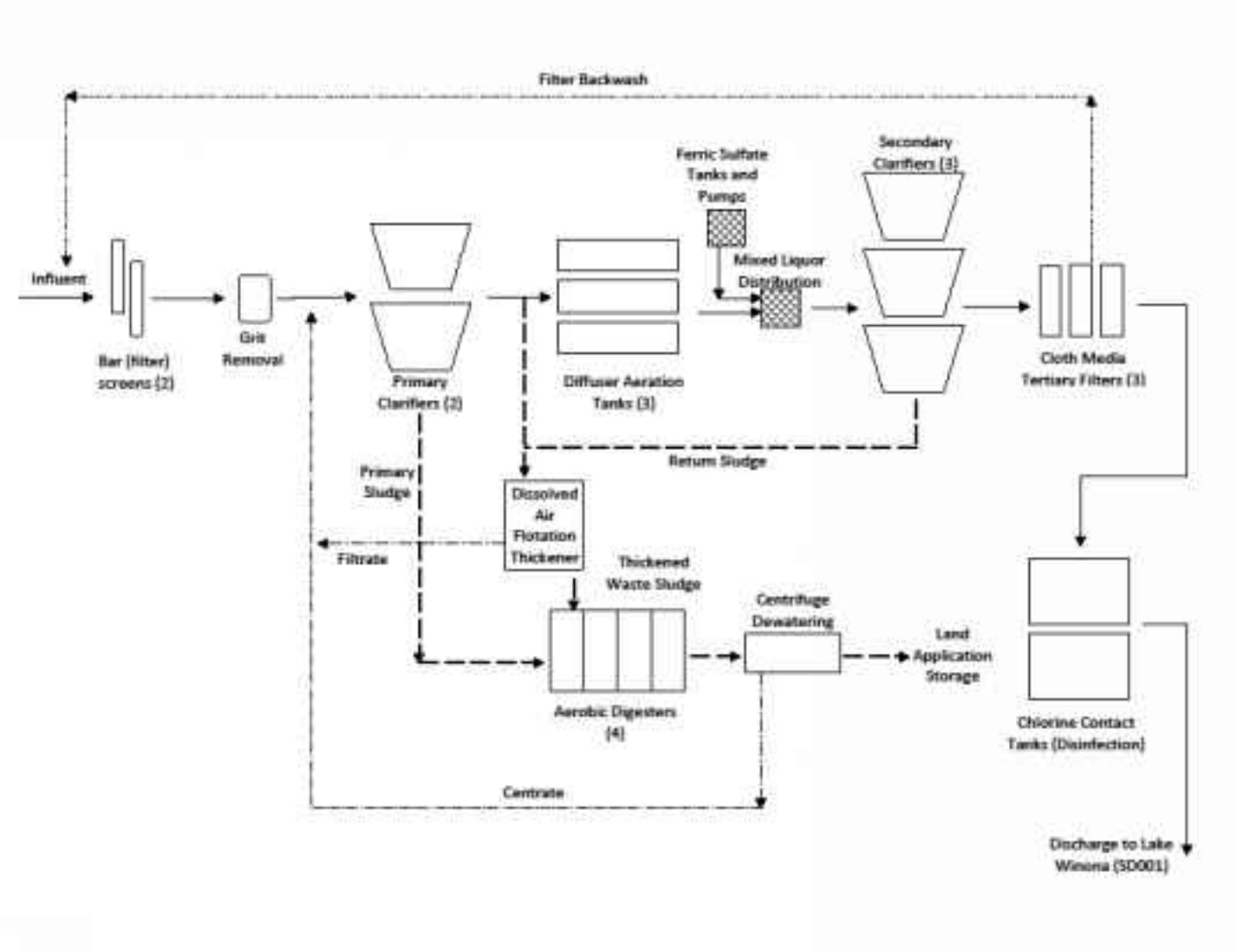
Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by Minn. R. 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, 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

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	

Appendix E: PEL Letter

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

December 28, 2022

SENT VIA EMAIL

Jennifer Gruman
Brown and Caldwell
370 Wabasha St, N
Suite 500
Saint Paul, MN 55102

RE: A revision to the request for preliminary effluent limitations applicable to the proposed expansion at the Alexandria Lake Area Sanitary District wastewater treatment facility, NPDES Permit No. MN0040738.

Dear Jennifer Gruman:

This letter is a revision to the preliminary effluent limitations letter dated October 3, 2022. The effluent limits table below contains multiple changes from the earlier (10/3/2022) version, in response to questions from the Alexandria Lake Area Sanitary District (ALASD) provided in writing on Wednesday, 12/7/2022 and a subsequent discussion on Thursday, 12/15/2022. The revised table below contain additional columns to further clarify recommended effluent limits, depending upon whether ALASD chooses to complete an antidegradation assessment. Monitoring conditions (Table 2) are identical to the previous preliminary limits letter (10/3/2022).

The preliminary limits are draft values and are not finalized until the National Pollutant Discharge Elimination System (NPDES) permit process and an Antidegradation Assessment has undergone a complete review, been public noticed, the public's comments considered and either our commissioner or a delegated representative sign the permit.

Please be aware that receiving the preliminary effluent limits in the table below does not mean that your proposed new facility has been approved. As part of the permitting process, your project must comply with antidegradation requirements (see the Antidegradation Requirements section below for important details). You must demonstrate that the chosen project alternative is the least degrading prudent and feasible alternative. In many cases, the least degrading prudent and feasible alternative may not be your preferred option, or the option discussed in this letter.

DISCHARGE SCENARIOS
The preliminary effluent limitations request is for a continuous discharge to Lake Winona in Douglas County, Minnesota. The proposed two discharge scenarios are:

1. A mechanical liquid treatment system including solids processing. The proposed facility discharges on a continuous basis through outfall SD001 (T128N, R38W, S25) to Lake Winona, Douglas County. The capacity of the proposed WWTF is average wet weather flow (AWWF) of 5.0 mgd and average dry weather flow (ADWF) of 3.2 mgd.

2. A mechanical liquid treatment system including solids processing. The proposed facility discharges on a continuous basis through outfall SD001 (T128N, R38W, S25) to Lake Winona, Douglas County. The capacity of the proposed WWTF is average wet weather flow (AWWF) of 5.7 mgd and average dry weather flow (ADWF) of 3.7 mgd.

The Lake Winona has been assigned use classifications of 2Bg, 3C, 4A, 4B, 5 and 6 waters of the state under Minnesota Pollution Control Agency (MPCA) rules chapter 7050. These multiple classifications include consideration for aquatic life and recreation, industrial consumption, agriculture and wildlife, aesthetic enjoyment and navigation, and other beneficial uses not specifically listed.

PRELIMINARY EFFLUENT LIMITATIONS

The preliminary effluent limitations applicable to the proposed expansion at ALASD WWTF in Alexandria are summarized in Table 1.

	EXISTING FACILITY	PROPOSED FACILITY			
PROPOSED FACILITY	**EXISTING**	**OPTION 1**		**OPTION 2**	
		No Antideg	**Antideg**	**No Antideg**	**Antideg**
PROPOSED YEAR	**NA**	**2035**	**2035**	**2045**	**2045**
TREATMENT OPTION	MECHANICAL SYSTEM	MECHANICAL SYSTEM	MECHANICAL SYSTEM	MECHANICAL SYSTEM	MECHANICAL SYSTEM
DISCHARGE TYPE	CONTINUOUS DISCHARGE	CONTINUOUS DISCHARGE	CONTINUOUS DISCHARGE	CONTINUOUS DISCHARGE	CONTINUOUS DISCHARGE
OUTFALL	SD001	SD001	SD001	SD001	SD001
AWWF, mgd	4.70	5.00	5.00	5.70	5.70
ADWF, mgd	3.00	3.20	3.20	3.70	3.70
River Flow (7Q10), cfs	NA	NA	NA	NA	NA
Dilution Ratio	NA	NA	NA	NA	NA
Antidegradation Review Needed	NA	YES	YES	YES	YES
Environmental Review Needed	NA	YES	YES	YES	YES
Frozen Mass Limits Possible	NA	YES	YES	YES	YES
CBOD5-Ammonia Linkage Eligible	NA	NA	NA	NA	NA
POLLUTANT/PARAMETER					
CBOD5, mg/L (kg/day)[1]	25 (282)	25 (282)	25 (473)	25 (282)	25 (539)
TSS, mg/L (kg/day)[1]	30 (339)	30 (339)	30 (568)	30 (339)	30 (647)
Fecal Coliform Organisms, orgs/100 mL[2]	200	200	200	200	200
pH (Standard Unit)	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0
Total Residual Chlorine, mg/L[2]	0.038	0.038	0.038	0.038	0.038
Chloride (final), mg/L, [mg/L][3] {kg/day}[4]	230 [252]	230 [252] {4092}	230 [252] {4353}	230 [252] {4092}	230 [252] {4962}

	EXISTING FACILITY	PROPOSED FACILITY			
PROPOSED FACILITY	**EXISTING**	**OPTION 1**		**OPTION 2**	
		No Antideg	**Antideg**	**No Antideg**	**Antideg**
PROPOSED YEAR	**NA**	**2035**	**2035**	**2045**	**2045**
Chloride (intervention limit), [mg/L][3]	[839]	[839]	[839]	[839]	[839]
Total Copper (kg/day)[1]	NA	(0.712)		(0.712)	
Total Dissolved Salts, (kg/day)[1]	NA	(34,512)		(34,512)	
Sulfate, kg/yr, 12 month rolling total[8]	NA	1,077,866	1,077,866	1,077,866	1,077,866
Total Zinc, (kg/day)[1]	NA	(2.03)		(2.03)	
Phosphorus, Total[5], mg/L	0.157	0.157	0.157	0.157	0.157
Phosphorus[5], kg/yr	665*	665*	665*	665*	665*
Total Mercury (mg/day)[7]	NA	(53)		(53)	

[1]Maximum daily mass limit (kg/day)
[2]Applicable from April – October. Dechlorination is required if chlorine is used for disinfection.
[3]Maximum daily concentration limit [mg/L]
[4]Calendar Month Average mass limit {kg/day}
[5]Effective period is Jan-Dec
[6]Monthly Average mass limit (mg/day)
[7]Maximum Daily mass limit (mg/day)
[8]Current full authorized load (4.7 mgd x 166 mg/L, max concentration x 3.785 L/gal x 365 days/yr.) Limit to ensure permit not in violation of 40 CFR 122.4(i).
*This is a 12 Month Total kg/yr.

NB - Please note that the existing facility has interim phosphorus limits dependent on adaptive lake management activities. The proposed TP limits are the same in either design flow increase. In case the facility adaptive management efforts meet water quality goals, the proposed limits will be the same as the interim phosphorus limits (0.250 mg/L and 1,087 kg/yr). If adaptive management efforts do not meet the water quality goals, the proposed TP limits will be the same as the final limits in the existing permit (0.157mg/L and 665 kg/yr).

MONITORING REQUIREMENTS

Monitoring for the listed parameters in the Table 2 will be required in addition to the NPDES permit monitoring requirements for the effluent limitations in Table 1.
Influent Station – WS 001
Effluent Station – S D001
Surface Water Stations – SW 001, SW 002, SW 003

Table 2 - MONITORING REQUIREMENTS

Station	Parameter Description	Units	Monitoring method	Monitoring frequenc	Effective period
SD 001	Bicarbonates (HCO3)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Calcium, Total (as Ca)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Copper, Total (as Cu)	ug/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Hardness, Calcium & Magnesiu Calculated (as CaCO3)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Magnesium, Total (as Mg)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Mercury, Dissolved (as Hg)	ng/L	Grab	-once per month	May, Sept
SD 001	Mercury, Total (as Hg)	ng/L	Grab	-once per month	May, Sept
SD 001	Nitrite Plus Nitrate, Total (as N)	mg/L	24-Hour Flow Composite	once per month	Jan-Dec
SD 001	Nitrogen, Ammonia, Total (as N	mg/L	24-Hour Flow Composite	once per month	Jan-Dec
SD 001	Nitrogen, Kjeldahl, Total	mg/L	24-Hour Flow Composite	once per month	Jan-Dec
SD 001	Nitrogen, Total (as N)	mg/L	Calculation	once per month	Jan-Dec
SD 001	Potassium, Total (as K)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Sodium, Total (as Na)	mg/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Solids, Total Dissolved (TDS)	mg/L	24-Hour Flow Composite	once per month	Mar, Jun, Sep, Dec
SD 001	Solids, Total Suspended (TSS), grab (Mercury)	ug/L	Grab	-once per month	May, Sept.
SD 001	Specific Conductance	umhos/cm	Measurement	-once per quarter	Mar, Jun, Sep, Dec
SD 001	Zinc, Total (as Zn)	ug/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
SW 001	Chlorophyll a, corrected	mg/L	Grab	once per month	May, Oct
SW 001	Chlorophyll a, corrected	mg/L	Grab	twice per month	Jun-Sep
SW 001	Phosphorus, Total (as P)	mg/L	Grab	once per month	May, Oct
SW 001	Phosphorus, Total (as P)	mg/L	Grab	twice per month	Jun-Sep
SW 001	Transparency, Secchi Disc	m	Grab	once per month	May, Oct
SW 001	Transparency, Secchi Disc	m	Grab	twice per month	Jun-Sep
SW 002	Chlorophyll a, corrected	mg/L	Grab	once per month	May, Oct

Station	Parameter Description	Units	Monitoring method	Monitoring frequenc	Effective period
SW 002	Chlorophyll a, corrected	mg/L	Grab	twice per month	Jun-Sep
SW 002	Phosphorus, Total (as P)	mg/L	Grab	once per month	May, Oct
SW 002	Phosphorus, Total (as P)	mg/L	Grab	twice per month	Jun-Sep
SW 002	Transparency, Secchi Disc	m	Grab	once per month	May, Oct
SW 002	Transparency, Secchi Disc	m	Grab	twice per month	Jun-Sep
SW 003	Chlorophyll a, corrected	mg/L	Grab	once per month	May, Oct
SW 003	Chlorophyll a, corrected	mg/L	Grab	twice per month	Jun-Sep
SW 003	Phosphorus, Total (as P)	mg/L	Grab	once per month	May, Oct
SW 003	Phosphorus, Total (as P)	mg/L	Grab	twice per month	Jun-Sep
SW 003	Transparency, Secchi Disc	m	Grab	once per month	May, Oct
SW 003	Transparency, Secchi Disc	m	Grab	twice per month	Jun-Sep
WS 001	Copper, Total (as Cu)	ug/L	24-Hour Flow Composite	-once per quarter	Mar, Jun, Sep, Dec
WS 001	Nitrite Plus Nitrate, Total (as N)	mg/L	24-Hour Flow Composite	once per month	Jan-Dec
WS 001	Nitrogen, Kjeldahl, Total	mg/L	24-Hour Flow Composite	once per month	Jan-Dec
WS 001	Nitrogen, Total (as N)	mg/L	Calculation	once per month	Jan-Dec
WS 001	Phosphorus, Total (as P)	mg/L	24-Hour Flow Composite	once per week	Jan-Dec

ANTIDEGRADATION REQUIREMENT (Antidegradation Assessments and Capped Mass Limits)

Antidegradation is one of the fundamental protections in the Clean Water Act, and all newly issued or re-issued wastewater permits must comply with both state and federal antidegradation rules. The goal of antidegradation is to preserve waters of high quality and to ensure that they are not degraded unless balanced by important economic or social development. See Minn. R. 7050.0250 to 7050.0335. The antidegradation assessment process may result in more restrictive effluent limits.

For wastewater permitting, antidegradation concerns are triggered when a new discharge is proposed or when an existing discharger is proposing to increase the loading of any parameter of concern in its discharge.

An antidegradation assessment is a substantial valuation that must consider all beneficial uses of the receiving water, potential economic impacts, all possible treatment options and the potential environmental degradation for every pollutant that triggers the need for an antidegradation assessment. The proposed 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.

New and expanded NPDES permits that result in net increases in pollutant loading to surface waters are required to undergo an antidegradation review (Minn. R. 7050.0280). When applied to a proposed activity that is not regulated by an existing control document (i.e., permit), any loading or other causes of degradation resulting from the proposed activity constitute a net increase (7050.0255 Subp. 26).

In order to comply with the antidegradation requirements the permittee must choose one of the two following options:

1. "Cap" mass limit at their current levels in lieu of an antidegradation review.

2. Submit an antidegradation review that meets the antidegradation requirements in Minn. R. 7050.

The permittee must submit the antidegradation assessment to the Minnesota Pollution Control Agency (MPCA). MPCA staff will review the assessment to determine if it satisfies state and federal rules. The MPCA has recently developed a guidance document for developing antidegradation assessments that you may find helpful. If ALASD believes they will not be able to meet the limits shown in Table 1, please contact the MPCA before starting the antidegradation process.

Mass Cap Limit Options
For mercury, chloride, copper, zinc and total dissolved salts (TDS). There is one mass cap option, for each pollutant, as shown in Table 1. If the permittee accepts this option for these pollutants, they will not have to go through the antidegradation process.

A mass cap is recommended for sulfate in all expansion scenarios because of a downstream wild rice sulfate impairment. The most proximate impairments are located on the Long Prairie river at AUIDs 07010108-501 and 07010108-505. Federal regulations restrict the addition of new pollutant loading upstream of impaired waters (40CFR 122.4(i)). Currently, the Long Prairie River at the outlet of Lake Carlos has long-term average sulfate concentrations less than 10 mg/L, the applicable water quality standard. One may conclude that loading from the existing facility might not cause or contribute to an excursion of the standard. The recommended mass limit (1,077,866 kg/yr. SO_4) is considered to be the current full authorized load.

Chronic WET Testing and Toxicity Reduction Evaluation (TRE)

This facility has recently completed their Toxicity Reduction Evaluation (TRE) process. The TRE process found the main toxicant causing chronic WET failures was slugs of ammonia coming into the WWTP. This appears to have been addressed. In the final approval letter to get ALASD out for the TRE process, this facility will do biannual chronic WET testing for the life of the next permit cycle. As a result of the TRE, this permit will have a chronic WET limit of 1.0 Toxic Unit chronic (1.0 TUc) at the end of pipe for outfall SD001.

TOTAL MAXIMUM DAILY LOAD (TMDL) Requirements/Waste Load Allocation

The Alexandria Lake Area Sanitary District WWTP discharges to Lake Winona in the Long Prairie River Watershed. There are 66 impairments downstream of this discharge, including the following parameters: aluminum, chloride, dissolved oxygen, fecal coliform, mercury in fish tissue, mercury in water column, nutrients, perfluorooctane sulfonate (PFOS) in fish tissue, total suspended solids (TSS), fish bioassessments, PCBs in fish tissue, perfluorooctane sulfonate (PFOS), and sulfate. Following are the TMDLs that are applicable to this facility's discharge.

Wasteload Allocations:

Lake Winona Phosphorus TMDL

- WLA = 665 kg/yr (page 29, Table 14)
- The WLA is based on the AWWDF of 4.7 mgd multiplied by the phosphorus concentration of 0.105 mg/L. The NPDES permitted monthly TP effluent limit of 0.157 mg/L was calculated from the TMDL-derived phosphorus concentration times a 1.5 multiplier to allow for annual variability in effluent concentration.
- The WLA is equivalent to the current permitted effluent total phosphorus mass limit of 665 kg/yr.

Statewide Mercury TMDL - Mercury in Fish Tissue and Mercury in Water Column Impairments

- Mercury limits, monitoring, and MMP requirements in the permit should be in accordance with the Mercury Permit Writers Guidance.

South Metro Mississippi TSS TMDL

- TSS WLA = 123,735 kg/year and 339.00 kg/day (page 96)
- The WLA is equivalent to the Facility's current permitted TSS effluent limit of 339 kg/day.
- This facility is included in Appendix A.1. of the TMDL – Minnesota Wastewater Permits with TSS Limits ≤ 32 mg/L and Eligible for Future WLA Increase.

Lake Pepin and Mississippi River Eutrophication TMDL

- WLA = 665 kg/year and 1.82 kg/day (Appendix B, page 125)
- Note 4 in Appendix B applies to this facility and states "The Rum River is meeting RES standards and is therefore a boundary condition for the 07010206-805 TMDL. Therefore, no RES WLAs are needed for these facilities."

If you have any questions or comments regarding this letter, please call me at 651-757-2814 or email steven.weiss@state.mn.us.

Sincerely,

Steve Weiss

This document has been electronically signed.

Steve Weiss
Supervisor
Effluent Limits Unit
Environmental Analysis and Outcomes Division

SW:ct

Attachments

cc: Scott Gilbertson, Executive Director, ALASD (This was emailed)
Tracy Ekola, Vice President & Midwest Sr. Director, Brown and Caldwell (This was emailed)
Clifton Bell, Environmental Scientist, Brown and Caldwell (This was emailed)
Gbolahan Gbadamosi, Engineer, MPCA (This was emailed)
Dann White, Research Scientist, MPCA (This was emailed)

Antidegradation Assessments Memo

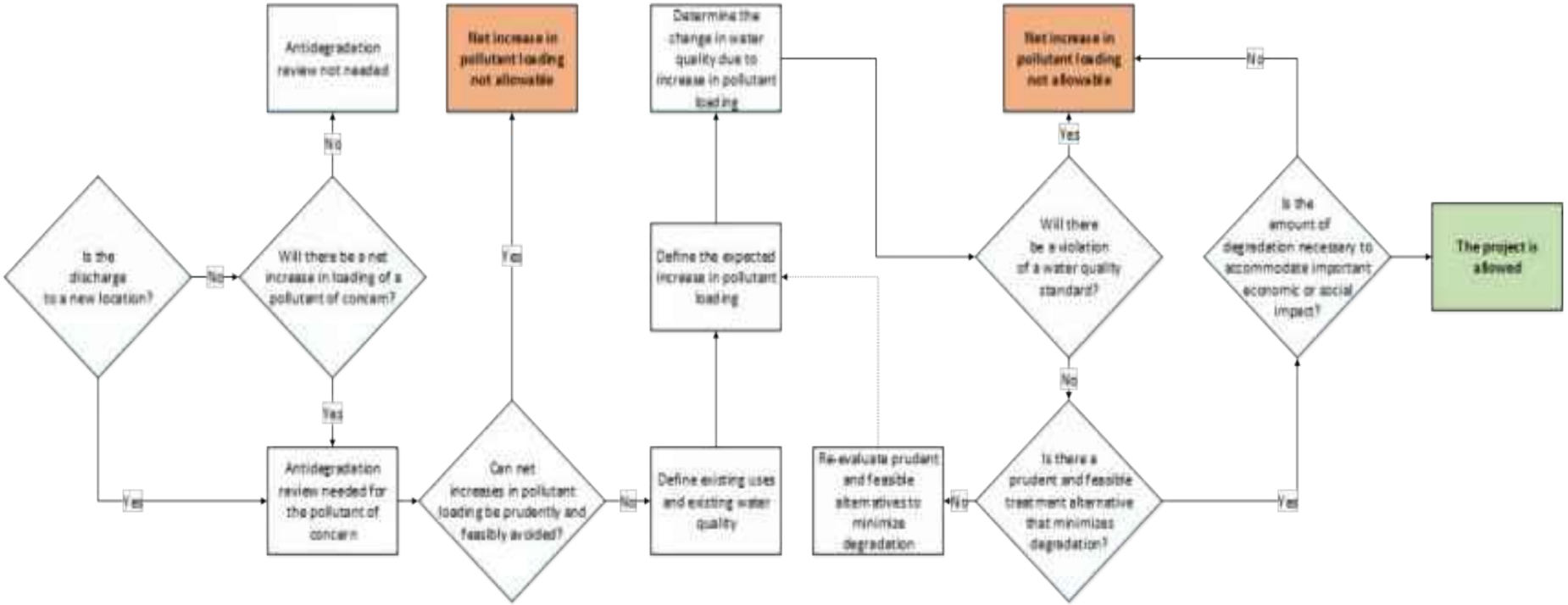
Antidegradation is one of the fundamental protections in the Clean Water Act, and all newly issued or re-issued wastewater permits must comply with both state and federal antidegradation Rules. The goal of antidegradation is to preserve waters of high quality and to ensure that they are not degraded unless balanced by important economic or social development.

For wastewater permitting, antidegradation concerns are triggered when a new discharge is proposed or when an existing discharger is proposing to increase the loading of any parameter of concern in its discharge. An antidegradation assessment is a substantial valuation that must consider all beneficial uses of the receiving water, potential economic impacts, all possible treatment options, and the potential environmental degradation for every pollutant that triggers the need for an antidegradation assessment. A flowchart summary of the antidegradation assessment process required by state rules (Minn. R. 7050.0280) is shown in Figure 1.

Antidegration assessments frequently require permittees to perform additional water quality monitoring to ensure that appropriate water quality evaluations are performed. The water quality monitoring required for an antidegradation assessment is permit-specific and is intended to fill gaps in existing water quality knowledge. Filling these water quality gaps could require additional monitoring of the discharge, receiving waters upstream and downstream of the discharger or significant industrial users permitted by the discharger.

Figure 1. Antidegradation Assessment Chart

Summary of the antidegradation assessment process required by Minn. R. 7050.0280



Completing an antidegradation assessment can require a significant amount of time, data and writing effort (Figure 1). It is reasonable to expect at least six to twelve months of effort to complete an antidegradation assessment. The permittee is expected to complete the antidegradation assessment, but the MPCA must approve it as a part of permit documents. The MPCA is responsible for defending the assessment during public comment and in any future legal proceedings. Antidegradation assessments are frequently legally contested, and as such, the MPCA will only approve an assessment of high quality that complies with state and federal antidegradation rules. MPCA staff may provide assistance to the permittee with the antidegradation process. Because of the workload associated with completing an antidegradation assessment, most permittees looking to expand their permitted flow rates choose to accept "frozen mass limits." "Frozen mass limits" represent the full authorized load in the previous permit for the pollutants of interest. If the permittee is willing to accept "frozen mass limits" while also expanding their flow rates, then the receiving water would receive no net increase in authorized loading because of the expansion, and an antidegradation assessment would not be needed. In this scenario, permitted concentration limits would stay the same as in the last permit issuance, however "effective" concentration limits would be lower in order to comply with voluntary mass limits. If the permittee voluntarily accepts mass cap limits for the pollutants of concern, they will have satisfied antidegradation rules, and they will not need to submit an antidegradation assessment for the next permit issuance.