



STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division

State Disposal System (SDS) Permit MN0067342

PERMITTEE: MinAqua Fisheries
FACILITY NAME: MinAqua Fisheries

TOWNSHIP: Emmet
ISSUANCE DATE:

COUNTY: Renville
EXPIRATION DATE:

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, 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 Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility on September 24, 2004. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E.
Supervisor, Water Quality Permits Unit
Water Section
Industrial Division

for The Minnesota Pollution Control Agency

Submit DMRs to:

Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Submit Other WQ Reports to:

Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact:
Jennifer Satnik, 651-757-2692.
- For specific permit requirements or permit compliance status, contact:
Jaramie Logelin, 218-302-6640.
- General permit or NPDES program questions, contact:
MPCA, 651-282-6143 or 1-800-657-3938.

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Facility Description

MinAqua Fisheries was built in 1997, and has been in operation since October 1997 to the present. The MinAqua Fisheries (Facility) is located at Township 115 North Range 36 North in Section 4. The address of the Facility location is 1700 Park Avenue East, Renville County, in Renville Minnesota 56284. The principal activity for the Facility is the production of tilapia, a warm water fish species at an annual average of 1,830,000 pounds. Live fish are shipped to domestic and international markets (mostly in Canada) for human consumption.

Fresh water, for Facility production, is supplied by the Facility reusing their process water from their slurry pond after it has been treated for Total Suspended Solids and Phosphorus, but when needed the Facility can get their source water from either private wells or they can purchase water from the city of Renville. Wastewater from the Facility consists of water from fish production and transport areas.

The process water from the Facility's pond is treated and then used in the Fish tanks. After the water is used in the fish tanks it is run through a sand filtration treatment then it flows through a micro-filtration system (using honeycomb media) which afterward it is transferred to the slurry pond outside the facility. After it has settled out the water in the pond is run through a treatment system where the water from the pond is treated for TSS and Phosphorus. The residual sludge from the filters is redirected to the slurry pond. The Facility is trying to become a no discharge self-reliant Facility, although it is still authorized to discharge to the city at a max of 190,000 gallons per day.

MinAqua developed a manure storage pond for the storage manure. The storage basin holds approximately 900,000 gallons of tilapia slurry. Each day manure filters are pressure washed, and water plus manure is washed into the holding pond. The pond serves as a sludge pond and solids are accumulated and precipitate out of suspension.

Solids from the holding pond are removed twice annually. The holding pond is agitated into slurry which is applied by a certified operator through a drag hose system once prior to planting and once after crops are harvested. The slurry is injected into the soil on nearby farms. 500,000 to 600,000 gallons are applied at each event. Solids in the form of Tilapia slurry manure are produced at a rate of 1,200,000 gallons per year.

Sanitary wastewater from the Facility is discharged to the city of Renville's Wastewater Treatment Facility (WWTF).

A surface water discharge is not authorized by this permit.

Stormwater onsite is routed through drainage tile to protect the ground water on the property of MinAqua which is directed to the holding pond.

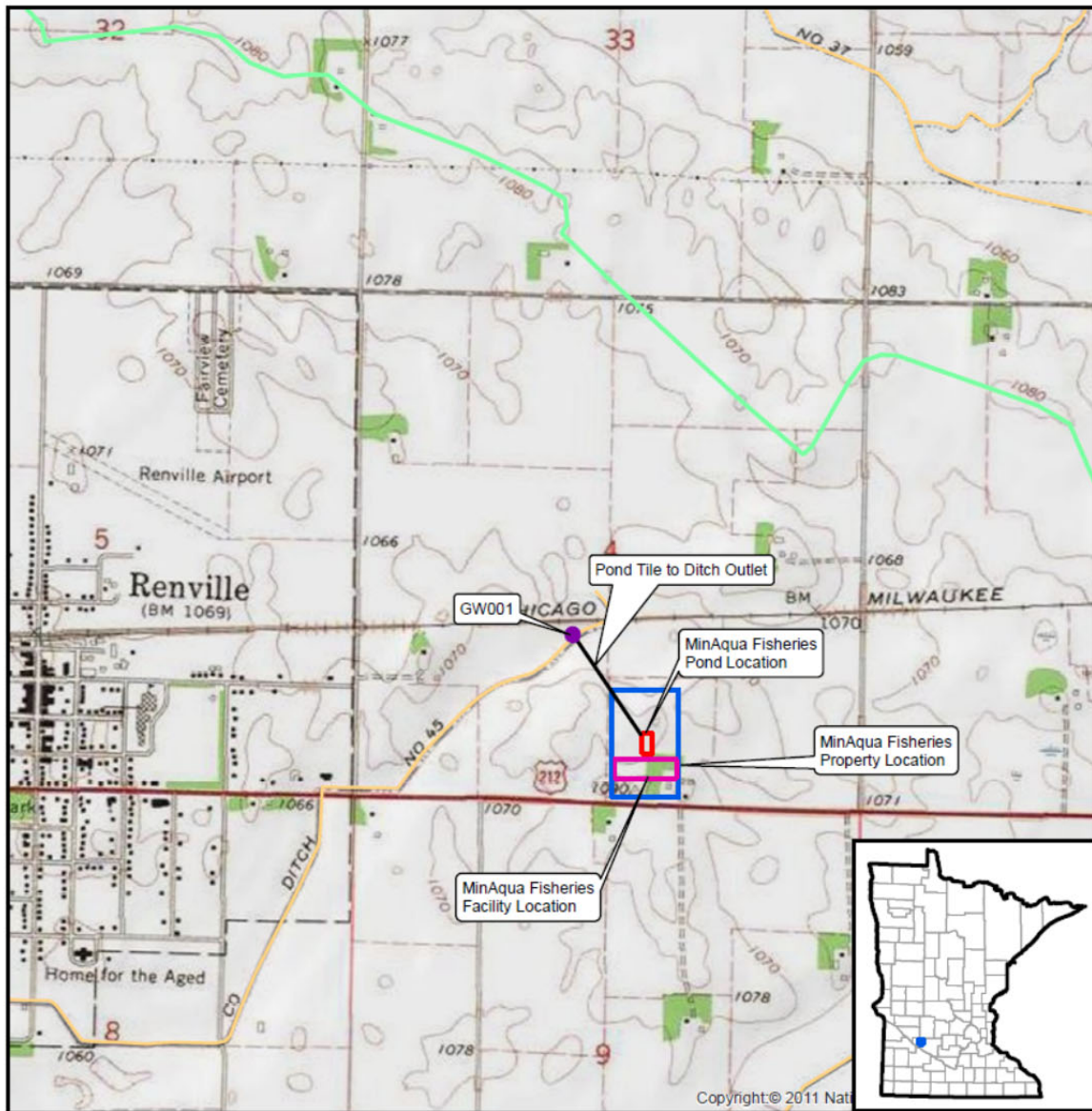
This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

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.

The location of the Facility is shown on the map below.

Topographic Map of Permitted Facility

MN0067342: MinAqua Fisheries
T115N, R36W, Section 4
Renville, Renville County, Minnesota



Map produced by: MPCA Staff, 1/28/2013
Source: USGS Quad Renville
Scale: 1:18,017

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Land Application Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
LA301	Non-biosolids WWT/Sludge Appl Site	Seitsema Field	NE Quarter of the Section 9, Township 115 North, Range 36 West
LA302	Non-biosolids WWT/Sludge Appl Site	Baker Field	SW Quarter of the Section 4, Township 115 North, Range 36 West

Waste Stream Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
WS301	Solids to Land Treatment/Application	Fish Manure/Solids to Land Application	NE Quarter of the Section 4, Township 115 North, Range 36 West

Ground Water Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
GW001	Tile Line Monitoring	Tile outlet to Ditch 45 NW of Pond	NE Quarter of the SW Quarter of Section 4, Township 115 North, Range 36 West

MinAqua Fisheries
Limits and Monitoring Requirements

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The Permittee shall comply with the limits and monitoring requirements as specified below.

GW 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	Monitor Only	#100ml	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Nitrogen, Nitrite, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	

LA 301, LA 302

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Organic Matter, Total In Soil	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	2
pH	Monitor Only	SU	Single Value	Sep-Aug	Composite	1 x Year	2
Phosphorus, BRAY-1 Ext In Soil	200	ppm	Single Value	Sep-Aug	Composite	1 x Year	3
Phosphorus, Olson Ext in Soil	180	ppm	Single Value	Sep-Aug	Composite	1 x Year	3
Potassium, NH4AC, Exch In Soil	Monitor Only	ppm	Single Value	Sep-Aug	Composite	1 x Year	2
Salts, Water Soluble In Soil	4	mmh/cm	Single Value	Sep-Aug	Composite	1 x Year	2

WS 301

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chloride, Dry Weight (as Cl)	Monitor Only	mg/kg	Single Value	Sep-Aug	Composite	1 x Year	1
Nitrogen, Ammonia, Dry Weight	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	1
Nitrogen, Kjeldahl, Total, Solid Fraction, Dry Weight	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	1
Oil & Grease, Total	Monitor Only	mg/kg	Single Value	Sep-Aug	Composite	1 x Year	1
pH, Sludge	Monitor Only	SU	Single Value	Sep-Aug	Composite	1 x Year	1
Phosphorus, Total, Dry Wt (as P2O5)	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	1
Sodium, Dry Weight (as Na)	Monitor Only	mg/kg	Single Value	Sep-Aug	Composite	1 x Year	1
Sodium, Total (as Na)	170	lbacyr	Single Value	Sep-Aug	Composite	1 x Year	1
Solids, Total	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	1

MinAqua Fisheries
Limits and Monitoring Requirements

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The Permittee shall comply with the limits and monitoring requirements as specified below.

WS 301

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Solids, Total Volatile, Percent of Total	Monitor Only	%	Single Value	Sep-Aug	Composite	1 x Year	1

Notes:

1 -- Refer to Table 2 of the 'Tables for Industrial By-Products Chapter' appendix of this permit to determine the minimum frequency of analysis for these analytes. Samples must be representative of the industrial by-product land applied, and in some cases, the minimum frequencies of analysis will not be adequate to achieve a representative sample. In this case, additional analysis may be required.

2 -- Soil testing must be conducted on each site that is used for land application before the site is used for the first time and once every three years a site is used. The composite sample shall consist of a mixture of 15-20 sub-samples taken in the plow layer for every 40 acres.

3 -- The soil test method used for extractable phosphorus in soil is either the Bray P-1 test, or the Olson test; the Olson procedure should be used if the soil pH is 7.4 or higher. Soil testing must be conducted on each site that is used for land application before the site is used for the first time and once every three years a site is used. The composite sample shall consist of a mixture of 15-20 sub-samples taken in the plow layer for every 40 acres.

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Chapter 1. Aquaculture

1. Applicability

- 1.1 As defined at 40 CFR 122.24 and Minnesota Rules 7053.0405, this permit language applies to discharges from concentrated aquatic animal production facilities that produce 20,000 pounds or more of aquatic animals per year in a flow-through or recirculating system.

2. Permit Required

- 2.1 No person may construct, operate, or maintain a concentrated aquatic animal production facility until the agency has issued a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) permit for the facility according to Minn. R. 7001. Production levels of multiple projects and multiple stages of a single project that are connected actions or phased actions shall be considered in total under Minn. R. 7053.0405 subpart 1, item E.

3. Authorization

- 3.1 This chapter authorizes the Permittee to land apply aquatic animal manure from the operation of the concentrated aquatic animal production facility identified by the 'Facility Description' section of this permit, as limited by the 'Limits and Monitoring' section of this permit, the 'Land Application of Industrial By-Products' chapter, and the other terms and conditions of this permit.
- 3.2 This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.
- 3.3 This permit authorizes the storage of aquatic animal manure in the existing solids holding basin at the Facility, in accordance with the terms and conditions of this chapter. Use or construction of any other storage unit is not authorized under this permit, and is subject to the standards in the 'Construction' part of the 'Total Facility' chapter of this permit.
- 3.4 This chapter authorizes the Permittee to land apply aquatic animal manure from the operation of the concentrated aquatic animal production facility identified by the 'Facility Description' section of this permit, as limited by the 'Limits and Monitoring' section of this permit, and the other terms and conditions of this permit.

4. Treatment Technology

- 4.1 All concentrated aquatic animal production facilities shall collect, remove, treat, and properly dispose of unconsumed fish food and fish wastes.
- 4.2 All concentrated aquatic animal production facilities that discharge industrial or other wastes to waters of the state shall comply with the requirements of parts 7053.0225, subparts 1, 3, 4, and 5, and 7053.0275.

5. Prohibition of Discharges to Municipal Wastewater Treatment Systems

- 5.1 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.
- 5.2 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

6. Reporting Requirements

Drugs

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Chapter 1. Aquaculture

6. Reporting Requirements

- 6.1 Except as noted below, the Permittee must notify the MPCA of the use in a concentrated aquatic animal production facility of any investigational new animal drug (INAD) or any extralabel drug use where the use contribute to the discharge to waters of the state. Reporting is not required for an INAD or extralabel drug use that has been previously approved by FDA for a different species or disease if the INAD or extralabel use is at or below the approved dosage and involves similar conditions of use.
- a. The Permittee must provide a written report to the MPCA of an INAD's impending use within seven (7) days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.
- b. For INADs and extralabel drug uses, the Permittee must provide an oral report to the MPCA as soon as possible, preferably in advance of use, but no later than seven (7) days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug.
- c. For INADs and extralabel drug uses, the Permittee must provide a written report to the MPCA within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added.
- 6.2 Failure in, or damage to, the structure of an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the state. In accordance with the following procedures, any Permittee subject to this Part must notify the MPCA when there is a reportable failure.
- a. The MPCA may specify what constitutes reportable damage and/or a material discharge of pollutants, based on a consideration of production system type, sensitivity of the receiving waters and other relevant factors.
- b. The Permittee must provide an oral report within 24 hours of discovery of any reportable failure or damage that results in a material discharge of pollutants, describing the cause of the failure or damage in the containment system and identifying materials that have been released to the environment as a result of this failure.
- c. The Permittee must provide a written report within 7 days of discovery of the failure or damage documenting the cause, the estimated time elapsed until the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.
- 6.3 In the event a spill of drugs, pesticides or feed occurs that results in a discharge to waters of the state, the Permittee must provide an oral report of the spill to the permitting authority within 24 hours of its occurrence and a written report within 7 days. The report shall include the identity and quantity of the material spilled.

Best Management Practices (BMP) Plan

- 6.4 The Permittee must:
- a. Develop and maintain a plan on site describing how the Permittee will achieve the requirements of 40 CFR Part 451.11, as explained below.
- b. Make the plan available to the MPCA upon request.
- c. The Permittee must certify in writing to the MPCA that a BMP plan has been developed by 180 days after permit issuance.

Required BMP Plan Elements

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Chapter 1. Aquaculture

6. Reporting Requirements

6.5 Solids Control

According to 40 CFR Part 451.11 subp. A, the Permittee must employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.

In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, the Permittee must identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system.

6.6 Materials Storage

The Permittee must ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the state.

The Permittee must implement procedures for properly containing, cleaning, and disposing of any spilled material.

6.7 Structural Maintenance

The Permittee must inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

The Permittee must conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

6.8 Recordkeeping

In order to calculate representative feed conversion ratios, the Permittee must maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.

The Permittee must keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

6.9 Training

In order to ensure the proper clean-up and disposal of spilled material, the Permittee must adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.

The Permittee must train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

7. Special Requirements

Collection and Disposal of Aquatic Animal Mortalities and Blood

7.1 The Permittee shall transport aquatic animal mortalities for rendering or disposal at a land-based facility approved by the MPCA, or alternately manage fish mortalities as authorized in the following subpart. Aquatic animal mortalities shall not be disposed of in waters of the state.

7.2 The following methods are approved for the management of fish mortalities:

- a. Composting of fish mortalities at the WLSSD Source Separated Organics Composting facility, at WLSSD's discretion;
- b. Composting of fish mortalities on-site in accordance with the Board of Animal Health rules, which govern this activity; and/or,
- c. Incineration of fish mortalities at the Permittee's on-site wood fired boiler for up to 2 pounds fish mortalities per day.

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Chapter 1. Aquaculture

7. Special Requirements

- 7.3 The Permittee shall maintain an operation record book of daily operations and other occurrences that may affect water quality including addition of fish food, composition of fish food, aquatic animal transfers and harvests, cleaning, mortalities, major weather events, and power failures. The operation record book shall be available at all times for inspection and copying by the MPCA.

8. Definitions

- 8.1 "Approved dosage" means the dose of a drug that has been found to be safe and effective under the conditions of a new animal drug application.
- 8.2 "Aquaculture therapeutics" means drugs, medications, or disease control chemicals that are approved for concentrated aquatic animal production facility use by the United States Food and Drug Administration or the United States Environmental Protection Agency.
- 8.3 "Aquatic animal containment system" means a culture or rearing unit such as a raceway, pond, tank, net or other structure used to contain, hold or produce aquatic animals. The containment system includes structures designed to hold sediments and other materials that are part of a wastewater treatment.
- 8.4 "Aquatic animal production" means harvest of unprocessed aquatic animals, including mortalities, where the animals are fed fish food.
- 8.5 "Aquatic animal manure" means aquatic animal excreta or a mixture of excreta with feed or other materials and includes solids collected from settling basins and areas.
- 8.6 "Change in operation" means an increase beyond the maximum harvest weight of aquatic animal production identified in the application for this permit, an increase in the number of aquatic animals at a facility requiring a construction investment, or a change in the construction operation of a facility that would affect the storage, handling, utilization or disposal of aquatic animal manure.
- 8.7 "Chemical additive" means an aquaculture therapeutic, growth-inducing compound, hormone, equipment or system disinfectant, chemistry or algal control product that is added to a concentrated aquatic animal production facility.
- 8.8 "Cold water aquatic animals" means aquatic animals in the Salmonidae family of fish, such as trout and salmon.
- 8.9 "Concentrated aquatic animal production facility" means a hatchery, fish farm, or other facility that contains, grows, or holds aquatic animals as described in subitems (a) to (d).
- a. Cold water aquatic animal facilities that produce more than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year or feed more than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.
- b. Warm and cool water aquatic animal facilities that produce more than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.
- c. Case-by-case designation of concentrated aquatic animal production facilities.
- d. Harvest weight is considered the weight of aquatic animal product that leaves a production facility, minus the weight of aquatic animal product that enters the same production facility.
- 8.10 "Domestic fertilizer" means:
- a. Aquatic animal manure that is put on or injected into the soil to improve the quality or quantity of plant growth; or,
- b. Aquatic animal manure that is used as compost, soil conditioners, or specialized plant beds.

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Chapter 1. Aquaculture

8. Definitions

- 8.11 "Drug" means any substance defined as a drug in section 201(g)(1) of the Federal Food, Drug and Cosmetic Act (21 U.S.C. 321).
- 8.12 "Existing beneficial uses" means the uses that have been made or may be reasonably anticipated to be made during the time of the proposed operations of waters of the state for domestic water supply, tourism and recreational industries, transportation, industrial consumption, wellhead protection, wildlife sustenance, wetland protection, fire protection, fire prevention, or other uses within this state, and, at the discretion of the agency, any uses in another state or interstate waters flowing through or originating in this state.
- 8.13 "Extralabel drug use" means a drug approved under the Federal Food, Drug and Cosmetic Act that is not used in accordance with the approved label directions, see 21 CFR Part 530.
- 8.14 "Fish food" means materials including processed feeds, grains and seeds, plants, plant wastes, meat, and dead fish or other dead animal parts, but not including living aquatic animals, for the purposes of sustaining growth, repairing vital processes, or furnishing energy for aquatic animals present in the facility.
- 8.15 "Flow-through system" means a system designed to provide a continuous water flow to waters of the United States through chambers used to produce aquatic animals. Flow-through systems typically use rearing units that are either raceways or tank systems. Rearing units referred to as raceways are typically long, rectangular chambers at or below grade, constructed of earth, concrete, plastic, or metal to which water is supplied by nearby rivers or springs. Rearing units comprised of tank systems use circular or rectangular tanks and are similarly supplied with water to raise aquatic animals. The term does not include net pens.
- 8.16 "Intermittent streams" means all water courses identified as intermittent streams on United States Geological Survey quadrangle maps.
- 8.17 "Investigational new animal drug (INAD)" means a drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360b(j), to conduct experiments.
- 8.18 "New animal drug application" is defined in 512(b)(1) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360b(b)(1)).
- 8.19 "Pesticide" means any substance defined as a ☐pesticide☐ in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136(u)).
- 8.20 "Recirculating flow" means wastewater, within a concentrated aquatic animal production facility, that is collected from aquatic animal rearing units, treated, and then returned to aquatic animal rearing units for reuse.
- 8.21 "Separation distance to bedrock" means the distance between stored aquatic animal manure and bedrock.
- 8.22 "Sinkhole" means a surface depression caused by a collapse of soil or overlying formation above fractured or cavernous bedrock.

Chapter 2. Land Application of Industrial By-Products

1. Authorization

- 1.1 This chapter authorizes the Permittee to land apply industrial by-products generated during the production and wastewater treatment process, as described in the 'Facility Description' section of this permit. This activity is limited by the 'Limits and Monitoring' section of this permit as well as the other terms and conditions of this permit.

2. Plan for Sampling, Analysis, and Field Equipment Calibration

- 2.1 Submit a Sampling, Analysis and Field Equipment calibration plan to address storage, management, and land application schedules by 60 days after permit issuance.

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Chapter 2. Land Application of Industrial By-Products

2. Plan for Sampling, Analysis, and Field Equipment Calibration

2.2 The Sampling, Analysis and Field Equipment Calibration plan must include, but is not limited to the following:

- a. A description of how samples will be collected to ensure representative samples of the industrial by-product land applied are obtained, which shall include the identification of sampling locations, and a description of a sampling schedule;
- b. A list of all parameters that will be analyzed, the frequency they will be analyzed, maximum holding times, and preservation methods that will be used;
- c. The laboratory methods used for analysis and reporting limits necessary;
- d. A schedule and detailed procedures which will be followed for calibration of field equipment to determine actual application rates of industrial by-product;
- e. Example of record keeping forms that will be used for sampling, analysis, and equipment calibration;
- f. Position of the person(s) responsible for sampling and calibration of field equipment; and
- g. Description of measures and practices that will be implemented to provide reasonable assurance that the land application, staging and/or storage of industrial by-product will not cause nuisance conditions.

3. Limits and Monitoring Requirements

Parameters

- 3.1 The 'Limits and Monitoring' section of this permit contains the parameters that must be analyzed in each industrial by-product that is land applied as well as the sampling frequency for the industrial by-product land applied.

4. Soil Chemical Suitability Requirements and Limits

- 4.1 Soil samples must be collected and analyzed within the three-year period prior to industrial by-product application for the parameters listed below:

Parameter	Limit	Units
Organic Matter, Total in Soil	Monitor Only	%
pH	Monitor Only	SU
Phosphorus, BRAY-1 Ext in Soil	200	ppm
Phosphorus, Olson Ext in Soil	180	ppm*
Potassium, NH4AC, Exch In Soil	Monitor Only	ppm
Salts, Water Soluble in Soil	4	mmho/cm

* The soil test method used for extractable phosphorus in the soil is either the Bray P-1 test, or the Olson test; the Olson procedure shall be used if the soil pH is 7.4 or higher.

A site shall not be used for land application until sample results are received and evaluated to determine soil suitability.

If any of the soil limits are exceeded, the site shall not be used for land application by the Permittee until sample results show limits are met.

- 4.2 Soil samples shall be a composite sample consisting of a mixture of 15-20 sub-samples taken in the plow layer. A minimum of one composite sample per site is required. On sites that are greater than 40 acres in size, a minimum of one composite sample per 40 acres of area is required.

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Chapter 2. Land Application of Industrial By-Products

5. Soil Physical Suitability Requirements

- 5.1 The soil will be considered suitable if the site is used for growing a crop which is harvested and removed during the cropping year that the industrial by-product is land applied.
- 5.2 If the site does not meet this condition or the application site is set aside land (CRP), pasture land, non-agricultural land, or the industrial by-product contain pathogens, all the soil suitability criteria in a through c, below, must be met:
 - a. The soil texture at the zone of industrial by-product application must be fine sand, loamy sand, sandy loam, loam, silt, silt loam, sandy clay loam, clay loam, sandy clay, silty clay loam, silty clay or clay.
 - b. The depth to bedrock must be at least 3 feet, unless the soil is classified as a highly permeable soil, in which case the minimum depth is increased to 5 feet.
 - c. The depth to the seasonal high water table must be at least 3 feet, unless the soil is classified as a highly permeable soil, in which case the minimum depth is increased to 5 feet.
- 5.3 On sites where tile drainage is installed, the depth to tile lines is considered the depth to the seasonal high water table. Tiling must be adequate to ensure the three-foot separation distance can be maintained. Maps of the tiling system must be provided indicating their depth and placement in the field. Water tables classified as perched or epi-saturated by the Natural Resources Conservation Service are not considered to be the seasonal high water table.
- 5.4 Soil suitability can be determined by obtaining information from soil surveys published by the Natural Resources Conservation Service or by characterization of the site by a state of Minnesota licensed soil scientist or other qualified person.

6. Site Suitability Criteria

- 6.1 The criteria in this section detail the suitability of land application sites for receiving industrial by-products. All criteria within this section must be met for a site to qualify as being suitable for land application of an industrial by-product.
- 6.2 The Permittee is responsible for determining the suitability of the site for industrial by-product application, including a determination that the site meets the soil sample limitations identified above for Land Application Stations in the 'Limits and Monitoring' section of this permit, and the 'Site Suitability Criteria' of this part.
- 6.3 Slope Restrictions. The slope restrictions in Table 3 of the appendix to this permit apply to all sites used for land application of industrial by-products.
- 6.4 Separation Distances. The separation distances in Table 4 of the appendix to this permit shall be maintained on all land application sites.

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Chapter 2. Land Application of Industrial By-Products

7. Site Management, Limitations, and Restrictions

- 7.1 Hydraulic Loading Limits. Hydraulic loading are set to prevent ponding and runoff from land application sites. The limitations specified in this part shall not cause any other application limits of this permit to be exceeded.

Daily application rates for industrial by-products which are surface applied are limited to:

- a. 10,000 gallons/acre/day for fine textured surface soils with United States Department of Agriculture (USDA) textural classifications of clay loam, silty clay loam, sandy clay, silty clay;
 - b. 15,000 gallons/acre/day for medium textured surface soils with USDA textural classifications of loam, silt, silt loam, and sandy clay loam; and,
 - c. 25,000 gallons/acre/day for coarse textured surface soils with USDA textural classifications of sand, loamy sand, and sandy loam.
- 7.2 Winter Application. During the time that soils are frozen or snow covered, so that incorporation or injection is not possible, the following requirements shall be met:
- a. A maximum hydraulic loading rate of 15,000 gallons/acre/winter for liquid industrial by-product shall not be exceeded.
 - b. Applications are restricted to areas with 0 % to 2 % slopes.
 - c. All separation distances identified in Table 4 of the appendix to this permit must be maintained.
 - d. For the purposes of this permit, it is assumed that industrial by-product is unable to be incorporated or injected during the months of December, January, February, and March unless specific field or climatic conditions are observed and documented appropriately in the Daily Hauling Record.
- 7.3 Additional measures may be necessary to prevent runoff of the material during the Spring thaw, such as installation of silt fences and berms and planting of grass buffer strips, to meet the requirement that no runoff of the industrial by-product from the application site is allowed.

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Chapter 2. Land Application of Industrial By-Products

7. Site Management, Limitations, and Restrictions

7.4 Miscellaneous Management Practices/Restrictions. All of the following standards apply to the land application of industrial by-products.

- a. No runoff of the industrial by-product from the application site is allowed. Management tools such as installation of silt fences and berms, and planting of grass buffer strips may be required to meet the no-runoff requirement.
- b. No ponding of liquid industrial by-products is allowed after 6 hours of application.
- c. All of the industrial by-product land applied must be uniformly distributed over the area of the site used during application.
- d. The application area must be clearly identified with flags, stakes, or other easily seen markers at the time of application to identify the site boundaries, separation distances, and unsuitable application areas within the site. Where site boundaries can be identified by field roads, and fences, and so forth, identification is not necessary.
- e. The industrial by-product must be immediately incorporated or injected on sites subject to flooding.
- f. Application of the industrial by-product is not allowed on areas of a site ponded with water or industrial by-product.
- g. Application of the industrial by-product is not allowed on areas that remain fallow for the entire cropping year.
- h. Liquid industrial by-products must be injected or immediately incorporated when applied on soil with a surface horizon permeability rate of less than 0.2 inches/hour.
- i. The industrial by-product shall not be applied by spraying from public roads or across road right of ways without prior written MPCA approval.

7.5 Nuisance conditions. Land application, staging and/or storage of industrial by-product shall be performed to minimize odors, noise, and vector attraction. The Permittee shall provide reasonable assurance that the land application, staging and/or storage of industrial by-product will not cause nuisance conditions. All aspects of land application of the industrial by-product shall be considered in providing reasonable assurance, to include loading, unloading, transportation, storage and land application of the industrial by-product, and shall be specified in the Sampling, Analysis, and Field Calibration Equipment Plan.

8. Additional Requirements - Industrial By-Products Supplying Nitrogen

Total Available Nitrogen

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Chapter 2. Land Application of Industrial By-Products

8. Additional Requirements - Industrial By-Products Supplying Nitrogen

- 8.1 For the purposes of this permit, the total quantity of nitrogen available for crop uptake during the cropping year is the sum of available organic nitrogen and ammonia nitrogen.
- a. Available organic nitrogen. The available organic nitrogen shall be determined by one of the methods in items i or ii:
 - i. The total quantity of organic nitrogen present in the industrial by-product will be considered 50% available during the cropping year it is applied and 25% the following cropping year (carry over nitrogen)..
 - ii. The quantity of organic nitrogen available in the IBP during the cropping year it is applied and subsequent years (carry over) will be determined by a mineralization study. The mineralization study will determine the rate and quantity of organic nitrogen mineralized during the cropping year it is applied and the rate and quantity of nitrogen mineralized during the second cropping year after application. To be used for the purposes of this permit, the mineralization study, including study protocol, must be approved by MPCA prior to initiation of the study.
 - b. Ammonia nitrogen. The quantity of ammonia nitrogen used for calculating total available nitrogen is equal to 100% of the ammonia nitrogen contained in the industrial by-product when it is injected or immediately incorporated or 50% of the ammonia nitrogen when it is surface applied without immediate incorporation.

Maximum Allowable Nitrogen Application Rates

- 8.2 Maximum allowable nitrogen application rates shall be based on recommendations from the University of Minnesota Extension Service. These recommendations are based on soil analyses, realistic crop yield goals, and previously grown crops. This information is available from the MPCA upon request. When information on recommended nitrogen application rates is not readily available or agreed upon, MPCA written approval must be obtained for the nitrogen application rate proposed.
- 8.3 Maximum allowable nitrogen application rates for selected crops which do not have University of Minnesota Extension Service recommendations for nitrogen are provided in Table 6 of the appendix to this permit.
- 8.4 Industrial by-products shall not be applied at rates that cause the annual maximum allowable nitrogen application rate to be exceeded. Maximum allowable nitrogen application rates must take into account all available nitrogen supplied by industrial and municipal by-products such as biosolids, compost and septage, and fertilizers applied on the site.

Application Management

- 8.5 When no crop is grown on the application site during the time period between July 1 through August 31, the following requirements apply:
- a. Applications are limited to rates which supply no more than 50 pounds per acre of available nitrogen.
 - b. Available nitrogen for the following cropping year shall be the sum of the total amount of nitrogen applied between July 1 and August 31 plus applicable carry over from earlier industrial by-product application.
- 8.6 The maximum application rate of an industrial by-product allowed after the second cutting of a hay crop shall not provide more than 50 percent of the maximum allowable nitrogen based on the recommendations from the University of Minnesota Extension Service or Table 6 in the appendix of this permit.

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Chapter 2. Land Application of Industrial By-Products

9. Additional Requirements - Industrial By-Products Containing Pathogens

9.1 Applicability. Industrial by-products containing pathogens have additional separation distances and site restrictions which must be met. For purposes of this permit, an industrial by-product will be assumed to contain pathogens when it contains waste streams known or likely to contain pathogens, including wastes containing blood, animal feces and raw meats. All requirements of this section must be met for industrial by-products containing pathogens.

Site Restrictions for Industrial By-Products Containing Pathogens

9.2 The restrictions on crop harvest and access restriction described below must be met on all land application sites when industrial by-products containing pathogen are land applied. If necessary, the area must be posted to ensure these restrictions are being met. Minimum duration between time of application of an industrial by-product containing pathogens and harvest, grazing, and public access to the site are as follows:

- a. For food crops whose harvested part may touch the soil/industrial by-product mixture, such as melons, squash, and tomatoes, the waiting period is 14 months.
- b. For food crops whose harvested parts grow in the soil, such as potatoes and carrots, the waiting period is 38 months. This waiting period can be reduced to a 20 month duration between application and harvest when the industrial by-product is surface applied and stays on the soil surface four months or longer prior to incorporation into the soil.
- c. For feed, other food crops, such as field corn or sweet corn, hay, or fiber crop, the waiting period is 30 days.
- d. For the grazing of animals, the waiting period is 30 days.
- e. For public access to land with a high potential for exposure, including public contact sites, reclamation sites located in populated areas, turf farms, or plant nurseries, the waiting period is one year.
- f. For public access to land with a low potential for exposure, including lands with infrequent public use such as agricultural land, forests, or reclamation sites located in an unpopulated area, the waiting period is 30 days.

10. Notification Procedures

Notification to MPCA

- 10.1 Prior to the use of a site for land application of an industrial by-product for the first time, the Permittee shall submit a completed 'Industrial By-Products Land Application Site Application Form', at least 30 days prior to application of industrial by-product at the respective site. The soil test results submitted with this form shall be collected no greater than six (6) months prior to submittal of the form. This notification must be repeated if any of the properties or conditions of the site changes, including a change in site name, site ownership, acreage used, soil types, slope and/or drainage capacity (tile lines). A copy of the form is included in the appendices section of this permit and is available electronically at <http://www.pca.state.mn.us/water/landapp.html>.
- 10.2 Prior to the use of a structure for the storage of an industrial by-product, the appropriate and respective certifications required by the Industrial By-Product Storage section of this permit shall be provided to the MPCA.

Local Notification

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Chapter 2. Land Application of Industrial By-Products

10. Notification Procedures

- 10.3 Before land application activities are initiated within a county, city or township for the first time, written notification shall be provided to local officials at least 30 days before initiating land application activities in the respective jurisdiction. The first time a Permittee applies an industrial by-product within a county, township, or city, the Permittee must satisfy the following notification procedures:
- a. Notify the county's Planning and Zoning or Solid Waste Officer (whichever is appropriate for the county) in writing 30 days before the industrial by-product is land applied within the county; and,
 - b. Notify the township clerk in writing 30 days before the industrial by-product is land applied within the township; or,
 - c. Notify the mayor or other appropriate official of the city in writing 30 days before the industrial by-product is land applied within the city limits.
- 10.4 Notifications must be dated and contain a description of how the industrial by-product will be managed during land application, to include the following elements:
- a. Description of the industrial by-product to be land applied, including a description of how the industrial by-product is produced, what nutrients/pollutants are present in the industrial by-product, and the limiting nutrient/pollutant in the industrial by-product being applied.
 - b. Description of how any staging and/or short-term storage of the industrial by-product will be conducted prior to land application.
 - c. Description of the applicable slope and setback requirements that will be followed during land application.
 - d. Response section must be provided to notify the local officials there is an opportunity to request additional information regarding copies of records, testing information, individual site information, listing of all sites, etc; and/or a section to provide information to the generator of the waste, applicator(s) and land owner(s) of any local requirements.
- 10.5 If any significant changes in the management of the industrial by-product described in the notification occur, including changes affecting the staging and/or storage of the industrial by-product, the notification process must be repeated.

End User Notification

- 10.6 For each site used for land application of the industrial by-product, the end user must receive, at a minimum, the information necessary to meet the requirements of this permit. This includes information such as actual nutrient application rates, any restrictions on the by-product use, crop restrictions, and so forth.
- 10.7 The end user must be provided with this information in writing as soon as possible and in no case more than 6 weeks after application has been completed. Records demonstrating compliance with end user notification shall be maintained in accordance with the Records section of this permit.
- 10.8 The Permittee shall inform end users that they should take appropriate credits for all plant nutrients supplied by industrial and municipal by-products, manures, and fertilizers so that maximum allowable application rates are not exceeded.

11. Operator Certification

- 11.1 All land application activities must be done by or under the supervision of a Type IV certified operator.
- 11.2 The number of certified operators required for land application activities is subject to the requirements of Minn. R. 7048.0500.

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Chapter 2. Land Application of Industrial By-Products

12. Records

- 12.1 Record Retention. The following records shall be maintained at the facility for a minimum of three (3) years, and shall be available at the facility for review at any time by MPCA staff:
- a. Copy of the submitted 'Site Notification Form' for each land application site, including the site map identifying the exact site location of the site, soil types on the site, and areas that are required to be excluded from use.
 - b. Documentation of site suitability of each site, including a copy of any lab results and other analytical information related to the industrial by-product or site used for application.
 - c. Documentation of loading calculations for each site, including the maximum allowable industrial by-product application rate for each site being used during the current cropping year.
 - d. Documentation of acres used for application.
 - e. Daily hauling records which indicate quantities of industrial by-product transferred to storage or land applied with the storage or site location identified for each land application site or storage area/structure.
 - f. Sampling and calibration records as required by the Sampling, Analysis and Field Equipment Calibration Plan as well as a copy of the submitted Sampling, Analysis, and Field Equipment Calibration Plan.
 - g. Copy of the submitted Industrial By-Products Annual Report Form and any other reported information necessary to prepare the Annual Report.
 - h. Copy of notification letter(s) and other information submitted to each city, county and township.
 - i. Copy of written information provided to each end user of the industrial by-product.
- 12.2 Record Retention continued:
- j. Any approved plans or special approvals required by this permit.
 - k. Copy of any 'Transfer to Manure Storage Form' submitted for storage of industrial by-product in a manure storage structure.
 - l. Any applicable records requirements pertaining to the storage of industrial by-product as specified by Industrial By-Products Storage section of this permit.

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Chapter 2. Land Application of Industrial By-Products

12. Records

- 12.3 The following information shall be maintained as the 'Daily Hauling Record,' organized by site or storage area/structure for each site or storage unit used for the land application or storage of industrial by-product covered by this permit, including manure storage structures and structures used for the storage of sweet corn silage:
- a. Name of site;
 - b. Date delivered to site/storage area/structure;
 - c. Date applied to site/removed from storage area/structure;
 - d. Volume applied/delivered to site/storage area/structure;
 - e. Application rate;
 - f. Visual observations of site, including but not limited to an indication of whether soils are frozen or snow covered, such that incorporation or injection of industrial by-product is not possible; and
 - g. Running total of industrial by-product applied to site/added to storage unit during the cropping year.
- 12.4 The Permittee shall maintain records for each sample and measurement. The records shall include the following information:
- a. the location and date 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.
- 12.5 Records for soil sampling and samples related to the industrial by-products shall be maintained in accordance with the Permittee's Sampling, Analysis and Field Equipment Calibration Plan, as required in the Sampling and Analysis part of this chapter.
- 12.6 The Permittee shall keep the records required by this permit for at least three (3) 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 and/or during the course of an unresolved enforcement action.

13. Annual Report

- 13.1 Submit an Industrial By-Product Land Application Annual Report by December 31 of each year following permit issuance. Report on the form provided by the MPCA in the appendices section of this permit or the Annual Report form available electronically at <http://www.pca.state.mn.us/water/landapp.html> or another MPCA approved form.

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Chapter 2. Land Application of Industrial By-Products

13. Annual Report

13.2 The Industrial By-Product Land Application Annual Report must include the following information:

- a. Total quantity of each industrial by-product land applied during the cropping year (if none land applied, this can be indicated on the form).
- b. Results of all analyses conducted and the average of these analyses.
- c. Site specific information:
 - i. Crops grown/vegetation receiving nutrient benefit;
 - ii. Realistic yield goal;
 - iii. Months site used;
 - iv. Soil analysis results;
 - v. Application rate of industrial by-product;
 - vi. Application rates for sodium, phosphorus, and nitrogen; and,
 - vii. Description of any management problems associated with land application that occurred during the cropping year and how these problems have been or will be resolved.
- d. Total quantity of industrial by-product transferred to/from a storage area/structure under the terms of the Industrial By-Product Storage section of this permit, if applicable.

13.3 The Permittee shall report monitoring results for the completed reporting period in the units specified by this permit on the Industrial By-Product Land Application Annual Report form, as provided in the appendices section of this permit or electronically at <http://www.pca.state.mn.us/water/landapp.html>.

14. Industrial By-Product Storage

- 14.1 Applicability. Storage or staging of industrial by-product prior to land application is allowed only under the terms and conditions of this permit for the industrial by-product(s) covered by this permit. This section is divided into several subparts, which specifies the applicable standards to the storage area and/or structure based on the length and method of storage.
- 14.2 Dewatered industrial by-products being spread concurrent with the unloading of bulk material on the land application site and not stockpiled overnight are not considered storage and are not subject to the additional requirements for storage under this part.
- 14.3 For the purposes of this permit, management of industrial by-product in a lagoon or pond system that is an inherent part of a wastewater treatment system that has already been expressly approved by the Agency in writing does not constitute storage and is not covered under this permit. Inherent to a wastewater treatment system means that the lagoon or pond system is physically connected to the treatment facility, and is closed loop in nature.
- 14.4 Storage of a dewatered industrial by-product that has already been approved under a previous permit action or other written approval must meet the requirements of the applicable parts of this chapter.

A. Requirements Applicable for Storage of Industrial By-Product

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Chapter 2. Land Application of Industrial By-Products

14. Industrial By-Product Storage

- 14.5 Prior to use of an area or structure for storage of an industrial by-product within a county, township, or city, the Permittee must notify the appropriate local authorities as described below. Notification to local officials as required by this section shall include as least the following information, and a response section:
- a. a description of the necessity for storage at the land application site;
 - b. the location of the storage area delineated on maps submitted;
 - c. the dimensions of the storage area;
 - d. the quantity of industrial by-product to be stored;
 - e. expected duration of storage before land application; and,
 - f. a description of precautions or practices to minimize or prevent drainage, runoff or nuisance conditions at the storage area.
- 14.6 Separation Distances. The separation distances in Table 7 of the 'Tables for Industrial By-Product Chapter' appendix of this permit shall be maintained for all areas and structures used for the storage of industrial by-products.
- 14.7 Management of Storage Area. All of the following requirements apply to areas and structures used for the storage of industrial by-products:
- a. No runoff of the industrial by-product from the storage site is allowed.
 - b. If the storage area contains any particulate matter that may be subject to wind dispersion, the owner or operator must cover or otherwise manage the waste to control wind dispersion.
 - c. Nuisance conditions resulting from the storage of industrial by-product must be controlled and managed by the Permittee.
- 14.8 Records Requirements. In addition to the records retention requirements of this permit, owners and operators of structures used for the storage of industrial by-products shall retain, for the life of the storage structure, the following additional records:
- a. maintenance and repair documentation;
 - b. third-party certifications of storage structure(s) used for the storage of industrial by-product; and
 - c. as-built drawings of any storage structure(s) used for the storage of industrial by-product.

Additional requirements pertaining to record retention is required in accordance with Minn. R. chapter 7151 for storage of an industrial by-product in a tank or tank system.

B. Requirements for Short-Term Storage of Dewatered Industrial By-Product

- 14.9 Short-term storage requirements under this section are applicable to industrial by-products that meet the definition of "Dewatered Industrial By-product", as defined by this permit.

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Chapter 2. Land Application of Industrial By-Products

14. Industrial By-Product Storage

14.10 In addition to the requirements under subpart A of this section ("Minimum Requirements for Storage of Industrial By-Products"), the following standards apply to the short-term storage of industrial by-products:

- a. Storage under this section shall not exceed thirty (30) days.
- b. Short-term storage shall only occur on the land application site where the industrial by-product will be applied. The quantity of industrial by-product to be stored at an application site shall not exceed the quantity of material that can be applied to that site.
- c. Short-term storage shall not take place on land with a slope greater than two percent (2%) unless measures are taken to control water runoff.

C. Requirements for Long-Term Storage of Dewatered Industrial By-Product

14.11 Long-term storage requirements under this section are applicable to industrial by-products that meet the definition of "Dewatered Industrial By-product", as defined by this permit.

14.12 In addition to the requirements under subpart A of this section ("Minimum Requirements for Storage of Industrial By-Products"), the following standards apply to the long-term storage of industrial by-products:

- a. Long term storage shall not exceed a period of 7 months.
- b. Long-term storage of an industrial by-product is allowed only when land application will occur on the site where it is stored, or on land that is owned, leased, or rented by the same person, and all sites are within a one-half mile radius of the storage site.
- c. Long-term storage shall not be allowed on land with greater than a two percent (2%) slope unless measures are taken to control water runoff.
- d. Long-term storage areas shall be located in areas where the texture of all the horizons in the soil profile to a depth of five feet is sandy loam or finer, unless an impervious pad with a drainage collection system is constructed.
- e. Long-term storage shall not take place on the same area for two or more consecutive years unless an impervious pad with a drainage collection system is constructed.
- f. Prior to the use of an area for long-term storage (whether or not a pad is constructed), the Permittee shall submit boring logs from at least two soil borings taken to a depth of ten feet at the perimeter of the proposed storage area.

Boring logs must include the following information:

- i. Texture and thickness of each soil horizon encountered;
- ii. Color and presence or absence of mottling for each soil horizon encountered (by the Munsell Soil Color Charts);
- iii. Depth to seasonal high water table, if encountered; and,
- iv. Depth to bedrock, if encountered.

14.13 Locational Prohibitions. All of the locational standards in Table 7 apply to all areas and structures used for the storage of industrial by-products.

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Chapter 2. Land Application of Industrial By-Products

14. Industrial By-Product Storage

- 14.14 Certification Required. Prior to use of a constructed pad or other structure for the long-term storage of an industrial by-product under this section, owners and operators must obtain and submit written certification from a Professional Engineer registered in the state of Minnesota stating that the storage area and/or structure (storage facility), based on their assessment of the requirements of the Long Term Storage of Dewatered Industrial By-Products section of this permit, is suitable for the long-term storage of the industrial by-product.
- 14.15 Certification Required. Prior to the use of an area for the long-term storage of an industrial by-product, the Permittee shall submit written certification by a Professional Soil Scientist registered by the state of Minnesota or a Professional Engineer registered in the state of Minnesota, that the site, based on their assessment of the boring logs required under the Long Term Storage of Dewatered Industrial By-Products of this permit, is suitable for the long-term storage of the industrial by-product.

D. Additional Requirements for the Permanent Storage of Dewatered Industrial By-Product

- 14.16 Permanent Storage Requirements are applicable to Industrial By-Products that are stored for a period of more than seven months and are not stored in a tank or tank system.

If manure becomes co-mingled with industrial by-products, all the waste in the structure is considered an industrial by-product.

- 14.17 In addition to part A (Minimum Standards for Storage of Industrial By-Products), the following standards apply to the permanent storage of industrial by-products:
- a. Any basin, pit or lagoon used to store liquid industrial by-products shall not seep at a rate greater than 500 gallons per acre per day.
 - b. Any area used to store dewatered industrial by-products must be paved with asphalt, concrete, or other material meeting the seepage requirement above, and must be sufficient to bear the weight of unloading and loading trucks and equipment without cracking. The pad must be sloped and curbed to collect all runoff water. Runoff water must be collected and used in a manner approved by the MPCA.
 - c. The industrial by-product shall not be stored at the permanent storage location for more than three years without being processed or utilized.
 - d. Prior to operation of a storage facility, the Permittee shall evaluate the potential for migration of contaminants into adjacent subsurface soil, groundwater, or surface water from the stored industrial by-product. This evaluation must take into consideration the characteristics of the industrial by-product, the quantity of industrial by-product to be stored, and the length of time the industrial by-product will be stored.

- 14.18 Certification Required. Prior to use of a constructed area or structure for the permanent storage of an industrial by-product under this section, the Permittee must obtain and submit written certification from an engineer licensed in Minnesota stating that the storage area and/or structure (storage facility), based on their assessment of the requirements of this permit are suitable for the permanent storage of the industrial by-product.

E. Requirements for the Storage of Industrial By-Product in a Tank or Tank System

- 14.19 Certification Required. Prior to use of a tank for the storage of an industrial by-product under this section, owners and operators must obtain written certification from an engineer licensed in Minnesota stating that the tank, based on their assessment of the applicable provisions of Minn. R. chapter 7151 is compliant with the Above Ground Storage Tank Rules.

F. Additional Requirements for the Transfer of Industrial By-Products to Manure Storage Structures

- 14.20 Applicability. Structures designed primarily for the storage of manure wherein industrial by-product and manure are co-mingled are regulated by the requirements of Part F of this section.

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Chapter 2. Land Application of Industrial By-Products

14. Industrial By-Product Storage

- 14.21 Maximum Amount Transferred to Each Structure. A maximum of 50,000 gallons of industrial by-product, or up to 10 % of the available volume of the structure, whichever is greater, is allowed to be transferred to each approved manure storage structure. A second transfer to the manure storage structure during a cropping year is also subject to a maximum of 50,000 gallons, or up to 10% of the available volume of the structure, whichever is greater. Two transfers of product are allowed as long as the first quantity is removed prior to receiving the second transfer. The available capacity of the structure at the time of transfer and the amount transferred shall be maintained in the Daily Hauling Record, as required by the Records section of this permit.
- 14.22 Storage Structure Minimum Standards. The following restrictions apply to the storage of industrial by-product in a manure storage structure:
- a. The structure shall meet the design and operational standards of Minn. R. 7020.2100 pertaining to liquid manure storage areas.
 - b. Biological treatment lagoons shall not be used for the storage of industrial by-product.
 - c. The manure storage structure shall be operated to maintain a minimum of three-foot freeboard at all times.
 - c. Industrial by-products must be compatible with the structure and manure to prevent damage to the structure and changes in biological activity. Examples of problems associated with incompatible wastes are damage to concrete and soil liners, physical or chemical changes in the mixture which make it difficult to agitate or pump, cause odors, or cause other nuisance or structural problems.
- 14.23 Approval Required. Use of manure storage structures for the storage of industrial by-products requires written MPCA approval prior to use of these structures.
- 14.24 To request approval of the manure storage structure, the Permittee shall:
- a. Complete an Industrial By-Product Transfer to Manure Storage Application Form and submit it to the appropriate county official (feedlot officer in delegated counties or the county solid waste official in nondelegated counties) in the county in which the manure storage structure is located. A copy of the 'Industrial By-Product Transfer to Manure Storage' form is included in the appendices section of this permit and is available electronically at <http://www.pca.state.mn.us/water/landapp.html>.
 - b. Submit a copy of the county completed and signed form to the township or city where the manure storage structure is located.
 - c. Submit a copy of the county completed and signed form to the MPCA for review and approval.
- 14.25 Feedlot Facility Minimum Standards
- In consideration for approval of a manure storage structure for industrial by-product use, the following standards apply to the facility storing the industrial by-product:
- a. The feedlot receiving the industrial by-product must have a valid permit or certificate of compliance which identifies the manure storage structure.
 - b. The feedlot receiving the industrial by-product must be in compliance with agency feedlot and manure management requirements and have no unresolved compliance issues.

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Chapter 2. Land Application of Industrial By-Products

14. Industrial By-Product Storage

14.26 Land Application of Industrial By-product/Manure Mixtures. The following requirements apply to the land application of mixtures of industrial by-products and manure:

- a. Sampling and analysis of the industrial by-product/manure mixture must occur prior to land application to determine allowable application rates.
- b. Land application of the mixture shall be in accordance with Minn. R. 7020.2225, pertaining to the land application of manure.
- c. The Permittee shall provide the following information to the owner and operator of the manure storage structure at the time of transfer:
 - i. a copy of the analysis of the industrial by-product as required in the 'Limits and Monitoring' section and Table 1 of the appendix to this permit.
 - ii. a copy of the analysis of the industrial by-product/manure mixture.
 - iii. an account of the volume transferred to the manure storage facility.

14.27 Land Application of Industrial By-product/Manure Mixtures (continued)

- d. The Permittee shall obtain a copy of the Manure Management Plan from the owner or operator of the manure storage structure and ensure that the addition of the industrial by-product is appropriately addressed in the Plan. A Manure Management Plan is required by Minn. R. chapter 7020 for operations with more than 300 animal units; for operations with less than 300 animal units, a MMP is not required, but the manure must be land applied in accordance with the requirements of Minn. R. chapter 7020.
- e. The Permittee shall not relinquish control of the industrial by-product until the Manure Management Plan has been appropriately updated or if there is reason to believe that the industrial by-product will not be managed in accordance with this permit or Minn. R. 7020.2225.
- f. The total quantity of by-product transferred and a copy of analysis results shall be submitted to the agency in accordance with the 'Annual Report' part of this chapter.
- g. Daily Hauling Records pertaining to the transfer of the industrial by-product to/from a manure storage structure, as required by the Records section of this permit.

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Chapter 2. Land Application of Industrial By-Products

15. General Requirements

- 15.1 Characterization of the industrial by-product at the time of permit application must indicate all of the eligibility requirements in this part are met.
- a. The industrial by-product cannot be a hazardous waste.
 - b. Concentrations of any of the analytes in the industrial by-products cannot exceed the limits for the specified analytes below. Industrial by-products cannot be diluted or mixed with other materials before this determination has been made.

Concentration limits for industrial by-products on a dry weight basis:

Total Arsenic: 41 mg/kg
Total Cadmium: 39 mg/kg
Total Copper: 1500 mg/kg
Total Lead: 300 mg/kg
Total Mercury: 5 mg/kg
Total Molybdenum: 75 mg/kg
Total Nickel: 420 mg/kg
Total Selenium: 100 mg/kg
Total Zinc: 2800 mg/kg
Total Dioxin equivalents: 10 parts per trillion
Total Polychlorinated biphenyls: 6 mg/kg

- c. Annual application rates of the industrial by-product cannot exceed a sodium application rate limitation of 170 lb/acre/year.

Chapter 3. Industrial Pond System

1. Authorization

- 1.1 This chapter authorizes the Permittee to manage wastewater in a pond system, as described in the 'Facility Description' section of this Permit. This activity is limited by the 'Limits and Monitoring' section of this Permit, as well as the other terms and conditions of this Permit.
- 1.2 The requirements of this chapter apply to all components of the permitted pond system, including but not limited to all impoundments at the facility used for collection, containment, storage, and/or treatment; and all related structures, conveyances, and/or appurtenances.

2. Operation and Maintenance

Pond Performance Evaluation

- 2.1 Submit Pond Performance Evaluation Report by 3 years after permit issuance.

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Chapter 3. Industrial Pond System

2. Operation and Maintenance

- 2.2 The Pond Performance Evaluation report shall include at least the following elements for each wastewater impoundment at the Facility:
- a. Pond performance data, calculations and graphs for each impoundment at the Facility. Pond performance data includes, but is not limited to, water balance data; at least two years of influent and effluent flow data for the ponds, and capacity/volume use comparisons.
 - b. A determination of whether the seepage requirements specified by part 2.4 of this chapter, relative to liner integrity of each impoundment at the Facility are being met;
 - c. Completed "Municipal and Industrial Pond Attachment" form, which is included in the appendices section of this Permit, for each impoundment at the Facility;
 - d. A certification from a registered professional engineer with expertise in wastewater structures that the respective impoundment at the Facility meets the technical criteria specified by parts 2.4, 2.5 and 2.6 of this chapter; or,
 - e. If the professional engineer cannot certify that all impoundments meet the required technical criteria, a Pond Restoration Plan shall be submitted for MPCA review and approval, to be completed by a registered professional engineer with expertise in wastewater structures. The Pond Restoration Plan shall include, at minimum, a proposal of corrective actions for the restoration of any impoundment at the Facility to meet the technical criteria in parts 2.4, 2.5 and/or 2.6 of this chapter, and an implementation schedule for the proposed actions.
- 2.3 Pursuant to Item 2.2 of this chapter, the Permittee shall measure and record all influent and effluent flows for the holding pond. If, at the issuance of this permit, devices to measure and record influent and effluent flows are not installed at the facility, the Permittee shall install devices to measure and record influent and effluent flows within one year of permit issuance. Equipment must enable the Permittee to measure the total volume of liquid transferred to and from the holding pond within +/-10%.

Maintenance of Wastewater Ponds

- 2.4 Liner Performance. Wastewater ponds at the facility shall maintain liner systems that restrict infiltration losses to less than 500 gallons per acre per day if the pond was constructed after May 16, 1975 or less than 3,500 gallons per acre per day if the pond was constructed before May 16, 1975.

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Chapter 3. Industrial Pond System

2. Operation and Maintenance

2.5 Locational Standards. All of the following locational standards apply to any wastewater impoundment at the Facility:

- a. The impoundment must be located entirely above the high water table. A minimum separation of 4 feet (1.2m) between the bottom of the pond and the maximum ground water elevation should be maintained.
- b. The impoundment may not be located within a shoreland or wild and scenic river land use district governed by Minn. R. chapters 6105 and 6120.
- c. The impoundment may not be located within a wetland.
- d. The impoundment may not be located within a location where emissions of air pollutants would violate the ambient air quality standards in Minn. R. chapters 7005, 7007, 7009, 7011, 7017, 7019, and 7028 and Minn. R. parts 7023.0100 to 7023.0120.
- e. The impoundment may not be located in the designated Karst Region in the Southeastern portion of Minnesota that was subject to the 1993 Administrative Order that required the preparation of a contingency plan.
- f. The impoundment should not be located in an area which is unsuitable because of topography, geology, hydrology, or soils.

2.6 Operating Depth. All of the following apply to impoundments at the Facility:

- a. Except for impoundments lined with synthetic material, such as HDPE or PVC, impoundments that do not discharge continuously shall maintain a minimum depth of 2 feet at all times, except for maintenance.
- b. At least 3 feet freeboard on all impoundments and wastewater solids containment dams at the Facility shall be maintained at all times.
- c. Based on specific Facility conditions and upon demonstration of an acceptable alternative, an alternate performance standard may be approved by the MPCA. Specific written authorization by the MPCA shall be obtained prior to implementing an alternately approved performance standard in lieu of item a. and/or b. of this part.

2.7 An approved rip rap cover that meets MPCA's "Riprap Criteria for Stabilization Ponds" (5/91) shall be maintained on any earthen wastewater impoundment dikes from one foot above the high water line to the toe of the dike. Where riprap is not used, the Permittee shall maintain a vegetative cover of shallow-rooted, perennial, low-growing grasses that withstand erosion and inundation and that can be mowed.

2.8 Plants with long root structures, such as alfalfa, reed canary, willows, poplars, cottonwoods, shrubs, and cattails shall not be allowed to grow in the pond or on the dikes, regardless of water depth in the pond. Such harmful vegetative growth shall be controlled and such plants removed from the pond and pond structure.

2.9 The Permittee shall use approved methods to prevent muskrats and other burrowing animals from tunneling and causing damage to the pond liner or dikes.

2.10 The Permittee shall maintain a perimeter fence around the wastewater treatment system. Appropriate signs should be provided along all fences to designate the nature of the facility and advise against trespassing. At least one sign shall be provided on each side of the site, and one for every 500 feet of its perimeter.

2.11 In addition to the requirements of this Permit, the Permittee shall operate and maintain the pond system in general accordance with MPCA's "Stabilization Pond Manual" (1999).

Solids Removal

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Chapter 3. Industrial Pond System

2. Operation and Maintenance

- 2.12 Prior to the excavation or removal of solids from any wastewater pond at the facility, the Permittee shall implement measures to maintain the integrity of the pond liner during the removal process.
- 2.13 A water balance evaluation shall be completed on the pond within seven months of each removal action, the results of which shall be made available for MPCA review at the facility or upon request. The water balance evaluation procedure is described in the MPCA document "Prefill and Water Balance Criteria (7/89)."
- 2.14 Ground water quality monitoring results shall be evaluated before and after the excavation or removal to assess the potential impacts of the pond on ground water. Any significant changes shall be reported to the MPCA on the next scheduled Discharge Monitoring Report.
- 2.15 No impact demonstration. The requirements of parts 2.12 and/or 2.13 of this Chapter can be foregone if the Permittee can successfully demonstrate that the removal action will not impact the liner of the wastewater impoundment, or the integrity thereof. To make this demonstration, submit a Removal Plan for MPCA review and approval at least 90 days prior to the anticipated removal date. The Removal Plan should include, at a minimum, a description of the proposed methodolog(ies) to be used for the excavation or removal of solids, any proposed deviations from the water balance procedure cited in subpart a, above, and justification that the removal action does not impact the liner of the wastewater impoundment. The requirement to comply with parts 2.12 and/or 2.13 of this Chapter shall only be waived after written confirmation of approval of the Removal Plan by the Agency.

Inspection of Wastewater Ponds

- 2.16 The Permittee shall inspect the pond system weekly, and shall take measurements of pond water depth, estimate the coverage of aquatic plants, floating mats and ice cover on the surface of the ponds, and note odors, the condition of the dikes and the presence of muskrats. The Permittee shall maintain records of these weekly inspections for the last three (3) years, and submit the results on the Discharge Monitoring Report (DMR) supplemental form.
- 2.17 The Permittee shall maintain daily precipitation records.

3. Application for Permit Reissuance

- 3.1 By the end of each calendar five years following permit issuance, wastewater treatment ponds; related conveyances; and appurtenances to the pond system at the permitted facility shall be inspected and certified for structural integrity, complete containment, and compliance with performance standards.
- 3.2 The inspection and certification shall be completed by a registered professional engineer with expertise in wastewater structures.
- 3.3 An inspection report shall be prepared by the professional engineer and submitted with the application for permit reissuance and/or every five years, whichever comes first.
- 3.4 If repairs are necessary as a result of the professional engineer's inspection, a detailed proposal for restoration shall be submitted to the Agency for review within 180 days of discovery, and at least 60 days prior to initiation of restoration work.

4. Discharge Requirements

- 4.1 Discharges to surface waters from the holding pond are not authorized by this permit.

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Chapter 4. Ground Water Stations

1. Discharges From Tile Lines

- 1.1 The Permittee shall begin sampling at the frequencies noted two weeks prior to wastewater or waste application to the site, during periods of application, and continuing for two weeks after waste application ends.

2. Requirements for Specific Stations

- 2.1 GW 001: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.
- 2.2 GW 001: All samples for station GW001 shall be taken at the tile outlet from the Facility pond.
- 2.3 GW 001: Samples from GW001 shall be representative of the groundwater flowing out from the tile outlet connected to the Facility pond.

Chapter 5. Total Facility Requirements

1. General Requirements

General Requirements

- 1.1 No Discharge. There shall be no point source discharge to surface water from the permitted activity.
- 1.2 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. Sec. 115 and 116.
- 1.3 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, item E)
- 1.4 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, item A)
- 1.5 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)
- 1.6 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- 1.7 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, item O)
- 1.8 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, item D)
- 1.9 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, item A)

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.10 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, item B)
- 1.11 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.
- 1.12 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.
- 1.13 Inspection and Entry. When authorized by Minn. Stat. Sec. 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, item I)
- 1.14 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.

Sampling

- 1.15 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))
- 1.16 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, item E)
- 1.17 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. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)
- 1.18 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.
- 1.19 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, subp. 2, items B and C)

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.20 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 (Minn. R. 7001.0150, subp. 2, item C):
- 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; and
 - d. The analytical techniques, procedures and methods used; and
 - e. The results of the analysis.
- 1.21 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. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

DMR Supplemental Form

Individual values for each sample and measurement must be recorded on the DMR Supplemental Form which, if required, will be provided by the MPCA. DMR Supplemental Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it must be approved by the MPCA.

Note: Required summary information **MUST** also be recorded on the DMR. Summary information that is submitted **ONLY** on the DMR Supplemental Form does not comply with the reporting requirements.

- 1.22 Submitting Reports. DMRs and Supplementals shall be submitted to:

MPCA

Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

DMRs, DMR supplemental forms and related attachments may be electronically submitted via the MPCA Online Services Portal after authorization is approved. When electronically submitted, the paper DMR submittal requirement is waived.

DMRs and DMR Supplemental Forms shall be postmarked or electronically submitted by the 21st day of the month following the sampling period or as otherwise specified in this permit. Electronic DMR submittal must 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. (Minn. R. 7001.0150, subps. 2.B and 3.H)

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 55155-4194

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.23 Incomplete or Incorrect Reports. The Permittee shall immediately submit an 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. (Minn. R. 7001.0150 subp. 3, item G)
- 1.24 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 must 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, must be certified by a registered professional engineer. (Minn. R. 7001.0540)
- 1.25 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. (Minn. R. 7001.0150, subp. 2, item B)

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, subp. 2, item B)
- 1.26 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, subp. 3, item H)
- 1.27 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 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 must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

- 1.28 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. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)
- 1.29 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, subp. 3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.30 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))
- 1.31 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. 7001.0150, subp. 3k)
- 1.32 Unauthorized Releases of Wastewater Prohibited. Except for conditions specifically described in Minn. R. 7001.1090, subp. 1, items J and K, all unauthorized bypasses, 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 and Minn. Stat. Sec 115.061)

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Chapter 5. Total Facility Requirements

1. General Requirements

1.33 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.
- d. 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.
- e. Submit the sampling results as directed by the MPCA. At a minimum, the results shall be submitted to the MPCA with the next DMR.

1.34 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.

Operation and Maintenance

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.35 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.
- 1.36 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, subp. 1, item C)
- 1.37 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 and Minn. R. 7041 and applicable federal and state solid waste rules)
- 1.38 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. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)
- 1.39 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. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

- 1.40 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. (Minn. R. 7001.0030)
- Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must 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.
- 1.41 No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, 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.
- 1.42 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.

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.43 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, subp. 3, item M)
- 1.44 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. Material Safety Data Sheet (MSDS) 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. (Minn. R. 7001.0170)
- 1.45 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.
- 1.46 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.
- 1.47 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.
- 1.48 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, subp. 3, item N)

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Chapter 5. Total Facility Requirements

1. General Requirements

- 1.49 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. Sec. 116.07, subd. 4)

- 1.50 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before 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.