

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-G130000

Owner:
Address:

Continuing Authority:
Address:

Facility Name:
Facility Address:

Legal Description:
UTM Coordinates:

Receiving Stream:
First Classified Stream and ID:
USGS Basin & Sub-watershed No.:

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

Operation of this facility shall not cause a violation of water quality standards.

FACILITY DESCRIPTION

All Outfalls - SIC Codes 0273 and 0921

Concentrated Aquatic Animal Production Facilities that utilize flow-through systems, impoundments, or recirculating systems.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

January 1, 2014
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2018
Expiration Date

John Madras, Director, Water Protection Program

APPLICABILITY

1. This permit authorizes the discharge from Concentrated Aquatic Animal Production Facilities (CAAPF) under the National Pollution Discharge Elimination System (NPDES) regulations found in 40 CFR Parts 122 and 451, along with coverage under the Missouri Clean Water Law and regulation found in 10 CSR 20-Chapter 6, Chapter 7, and Chapter 8. This permit applies to CAAPFs that utilize flow-through systems, impoundments, or recirculating systems. A CAAPF is defined as a hatchery, fish farm or other facility which contains, grows or holds aquatic animals, that discharges at least thirty (30) days per year, and meets either of the following operational thresholds:
 - a. facilities which produce “cold water aquatic animals” in excess of 20,000 pounds per year or which feed at least 5,000 pounds during the month of maximum feeding are CAAPFs. Examples of “cold water aquatic animals” include but are not limited to trout and salmon, or
 - b. facilities which produce “warm water aquatic animals” in excess of 100,000 pounds per year are CAAPFs. Examples of “warm water aquatic animals” included but are not limited to catfish, minnows, and sunfish.
2. Flow-through facilities are those that divert water from a river, stream, or spring to supply a continual flow through a series of tanks or a raceway. A raceway is a series of pools or chambers at or below grade and constructed of earth, concrete, plastic or metal. After passing through the tank or raceway system the water is discharged back into the river, stream or spring. This term does not apply to net pens.
3. Impoundments include, but are not limited to ponds, pools, pits, closed cells, tanks, or other structures constructed from earth, concrete, plastic, or metal that is used for production aquaculture or as settling ponds or basins used for the collection of solids. No impoundment aquaculture facility shall discharge more than three days in any one week for any reason other than harvest, renovation, or excessive precipitation.
4. Recirculating systems filter and reuse water from the production of aquatic animals. Typically tanks, biological or mechanical filtration are used to maintain high quality water for production.
5. If at any time, the Department determines that a site-specific NPDES permit is necessary to ensure protection of the waters of the state, the Department may require the CAAPF to obtain one.
6. If at any time the owner or operator of the CAAPF desires to apply for a site specific NPDES permit, the owner or operator may do so.
7. This permit applies to the production of fish, crawfish, and amphibians. It does not apply to the production of alligators, turtles, or other aquatic species.
8. This permit does not apply to the discharge of any water other than from a CAAPF. Solids collected as part of normal operation cleaning processes, or maintenance must be disposed of properly and not discharged into waters of the state. Solids can include but are not limited to manure, mortalities, waste feed, and sediment. Proper disposal methods include, but are not limited to, land application, composting, or disposal at a permitted wastewater treatment facility or a permitted solid waste disposal facility.
9. This permit authorizes the use of drugs or chemicals in the CAAPF operation that have been approved by the United States Environmental Protection Agency (USEPA) for use in aquatic environments. USEPA approval is demonstrated on the product label by mandated instructions or precautions for use in aquatic environments. Other drugs or chemicals, including those approved by the United States Food and Drug Administration (USFDA) and “Investigational New Animal Drugs” (INAD), require prior approval from the Department before being used.
10. This permit does not authorize CAAPFs which use floating, hanging, or anchored net structures with a hydraulic connection to waters of the state, otherwise known as net pen aquaculture.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 10	
					PERMIT NUMBER MO-G130000	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Cold water facilities with greater than 20,000 lbs. but less than 100,000 lbs. of production per year						
<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/year	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/year	grab
Biochemical Oxygen Demand ₅	mg/L	20		20	once/year	grab
pH – Units	SU	**		**	once/year	grab
Total Phosphorus	mg/L	*		*	once/year	grab
Facilities with greater than 100,000 lbs. of production per year						
<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/quarter****	grab
Biochemical Oxygen Demand ₅	mg/L	20		20	once/quarter****	grab
pH – Units	SU	**		**	once/quarter****	grab
Total Phosphorus	mg/L	*		*	once/quarter****	grab
Ammonia as N	mg/L	2.0		1.0	once/quarter****	grab
Chloride***	mg/L	376		187	once/quarter****	grab
Copper, Total Recoverable***	µg/L	20.7		10.3	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE XXXXXXX . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

*** If no Chloride or Copper bearing chemicals were used during the reporting period, report "0, none used". If Chloride or Copper bearing chemicals were used during the reporting period, report analysis as with other parameters.

**** See table below for quarterly sampling.

Minimum Sampling Requirements		
Quarter	Months	Effluent Parameters
First	January, February, March	Sample at least once during any month of the quarter
Second	April, May, June	Sample at least once during any month of the quarter
Third	July, August, September	Sample at least once during any month of the quarter
Fourth	October, November, December	Sample at least once during any month of the quarter

Note 1 – Sampling shall be scheduled to coincide with rearing impoundment or raceway cleaning operations, or harvest activities if cleaning does not occur during the sampling period. If no discharge occurs, report as "No-discharge".

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 10	
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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Cold water facilities with greater than 20,000 lbs. but less than 100,000 lbs. of production per year that discharge within the watersheds of Lake Taneycomo or Table Rock Lake (hydrologic units 11010001 and 11010002)						
<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/year	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/year	grab
Biochemical Oxygen Demand ₅	mg/L	20		20	once/year	grab
pH – Units	SU	**		**	once/year	grab
Total Phosphorus	mg/L	0.5		0.5	once/year	grab
Facilities with greater than 100,000 lbs. per year that discharge within the watersheds of Lake Taneycomo or Table Rock Lake (hydrologic units 11010001 and 11010002)						
<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/quarter****	grab
Biochemical Oxygen Demand ₅	mg/L	20		20	once/quarter****	grab
pH – Units	SU	**		**	once/quarter****	grab
Total Phosphorus	mg/L	0.5		0.5	once/quarter****	grab
Ammonia as N	mg/L	2.0		1.0	once/quarter****	grab
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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 10	
					PERMIT NUMBER MO-G130000	
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Cold water facilities with greater than 20,000 lbs. but less than 100,000 lbs. of production per year that discharge to a losing stream (Note 2)						
<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/year	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/year	grab
Biochemical Oxygen Demand ₅	mg/L	15		10	once/year	grab
pH – Units	SU	**		**	once/year	grab
Total Phosphorus	mg/L	*		*	once/year	grab
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<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Total Suspended Solids	mg/L	15		15	once/quarter****	grab
Biochemical Oxygen Demand ₅	mg/L	15		10	once/quarter****	grab
pH – Units	SU	**		**	once/quarter****	grab
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Note 2 - Identified or described in 10 CSR 20, Chapter 7. These regulations are available at many libraries and online at www.sos.mo.gov, or may be purchased from MDNR by calling the Water Protection Program

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<u>All Outfalls</u> (Note 1)						
Flow	MGD	*		*	once/year	24 hr. estimate
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B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated November 1, 2013, and hereby incorporated as though fully set forth herein.

REQUIREMENTS AND SPECIAL CONDITIONS

1. Water Quality Standards
 - a. To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - b. General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
2. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

 - a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
 - b. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application
3. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - a. Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - b. Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - c. Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
4. All outfalls must be clearly marked in the field.
5. If a facility increases their production of fish so as to rise above one of the thresholds in Table A, so as to change applicable effluent limits, the facility is required to notify the Department in writing.

6. An Operation & Maintenance Plan shall be developed, implemented, and kept onsite. This plan must be submitted to the Regional Office for review and approval within sixty (60) days of issuance of this permit to a facility. The plan should be specific to the facility and include, at least:
 - a. A sketch, map, or diagram showing the flow of water through all production and treatment areas;
 - b. Best Management Practices (BMP) and procedures for solids control;
 - (1) identify BMPs, treatment devices, procedures used to capture or collect solids to minimize the discharge of solids, especially during cleaning and harvesting activities, etc.;
 - (2) describe procedure for removal and disposal of solids from BMPs and treatment devices;
 - c. A description of feeding strategies that limit the amount of feed to the minimum amount reasonably necessary to achieve production goals and maintain targeted aquatic animal growth rates.
 - d. Methods used to ensure proper storage and disposal of drugs, feed and chemicals;
 - e. A list of all BMPs, treatment devices, production and wastewater systems, and feeding equipment that are visually inspected monthly. A schedule of when visual inspections and routine maintenance are to be conducted shall also be included; and
 - f. Procedures to meet record keeping requirements.The Operation & Maintenance Plan should be reviewed periodically, and when there is a change in the operation or an expansion of the facility.
7. All CAAPFs constructed or expanded after October 1, 2003 must employ BMPs or treatment devices to remove solids from the effluent flow. Examples of appropriate primary treatment devices include, but are not limited to: quiescent zones, full flow sedimentation basins, off line sedimentation basins, and sock filters. Other solids treatment devices will be considered and approved by the Department on a case by case basis.
8. BMP and treatment devices intended to remove or collect solids shall be maintained in good repair and routinely cleaned as necessary to protect waters of the state. Devices associated with feeding shall be maintained in good repair to reduce solids generation. Any deficiencies shall be corrected with thirty days from the date discovered. If repairs cannot be made within thirty days, a description as to why repairs could not be completed shall be included with the inspection.
9. Provide training to all staff in the proper operation of production and wastewater treatment facilities, feeding procedures, and the prevention and cleanup of spills.
10. If land application is used to dispose of solids it shall be conducted as a plant nutrient application to ensure appropriate utilization of the nutrients in the solids. There shall be no land application of solids or sludge within:
 - a. 300 feet of any well, sinkhole, losing stream or water supply intake;
 - b. 100 feet of any perennial or intermittent stream, or wetland;
 - c. 50 feet of a dwelling, public road, or property line.
11. Drugs or chemicals must be used according to label instructions. In no case shall the discharge of drugs or chemicals result in acute or chronic toxicity in the receiving stream. In the event that the Department has evidence of toxicity in a receiving stream, a Whole Effluent Toxicity test may be required to determine the potential for water quality impacts of the drug or chemical.
12. Prior approval is required before the use of a chemical or drug, including an INAD that has not been approved by USEPA for use in aquatic environments. Unless the INAD has been previously approved by USFDA for a different species or disease and is used at or below the approved dosage and used under similar conditions, the permittee shall submit the following information to the Regional Office.
 - a. Submit a written report within seven (7) days of the use, agreeing or signing up to participate in an INAD study. The report must include, drug or chemical to be used, concentration and toxicity information of the drug, method of use, dosage, duration of exposure, the disease or condition to be treated, and method of disposal.
 - b. Provide an oral report no later than seven (7) days after beginning use. The oral report must include the drug or chemical used, method of application, and the reason for the use.
 - c. Submit a written report within thirty (30) days after beginning use. The report must include the drug or chemical used, reason for treatment, date(s), time(s) and duration used, method of application, and the amount added.
 - d. The Department may request additional information before approval is granted.
13. Feed, fertilizers and chemicals shall be stored in a manner to prevent contact with precipitation and stormwater.

14. Record keeping Requirements

The following records shall be maintained on site for a period of five (5) years and shall be made available to the Department upon request.

- a. The name and amount of drugs and chemicals applied to fish or production waters, except ice, oxygen and carbon dioxide. This includes pesticides, sodium chloride (salt), vinegar, or any other substance added to the water. In addition, the Department's Regional Office must be notified sixty (60) days prior to application of new or different drugs or chemicals. Prior approval must be obtained from the Department before these drugs or chemicals are used except for those which have been approved by the USEPA for use in aquatic environments.
- b. The amount of feed used and estimated number and weigh in animals in rearing units.
- c. Record of monthly inspections, cleanings, maintenance, and repairs of BMPs and treatment devices.
- d. For feed, the product name, chemical additives (such as antibiotics), and guaranteed analysis shall be submitted with the amount used since the previous report.

15. Reporting Requirements

- a. Discharges resulting from a spill, or failure or damage to BMPs or treatment devices.
 - (1) The permittee must verbally notify the Department of any spill, failure, or damage resulting in a discharge of solids or pollutants within twenty-four (24) hours of the discovery of the discharge. This report shall include the cause of the discharge and the type of solids or pollutants discharged.
 - (2) The permittee must also submit a written report to the Department within seven (7) days of the discovery of the discharge. This report shall include an explanation for cause of the discharge, amount of time to repair the failure or damage, and steps taken to prevent a recurrence. For spills, the report must also include the kind and amount of material spilled.
- b. In addition to monitoring requirements in Table A facilities must annually submit:
 - (1) The name and amount of drugs and chemicals used since the previous reporting period and,
 - (2) The name, amount, chemical additives and guaranteed analysis of feed used since the previous reporting period.

16. Additional requirements for facilities with impoundments, closed cells, or tanks.

- a. If an impoundment is drained for any reason, the final twenty percent (20%) of impoundment volume shall be held for a minimum of two (2) days after disturbance ceases before discharging. Impoundments may not be flushed or washed with water unless the wastewater undergoes primary treatment prior to discharge.
- b. Impoundment valves shall be closed immediately after draining of impoundments to avoid sediments being discharged from the impoundment by rainfall.
- c. A minimum of one foot of freeboard shall be maintained in impoundments during normal operation.
- d. Water shall not be discharged for at least 72 hours after any drug or chemical treatment has been applied.
- e. If the chemical Rotenone or a formula containing Rotenone is applied, the affected water shall not be discharged for a minimum period of thirty-five (35) days. If the chemical Antimycin or a formula containing antimycin, such as Fintrol®, is applied to an impoundment, the affected water shall not be discharged for a minimum period of fourteen (14) days. Discharge of these chemicals prior to the prescribed number of days is only allowed when rainfall is in excess a 25 year, 24-hour storm event and if there was a minimum of one foot of freeboard at the time of the application.

17. Any new or existing CAAPF that wishes to construct an earthen storage structure designed to hold, convey, contain, store or treat process wastewater must apply for a construction permit. All other construction-related activities at point sources shall be exempt from construction permit requirements. Construction of any point source system designed to hold, convey, contain, store or treat process wastewater shall be designed by a professional engineer licensed in Missouri to comply with regulations and constructed in accordance with those design plans.

18. Anyone wishing to construct a new CAAPF which requires an NPDES permit after August 30, 2008, or existing CAAPFs which undergo expansion, must go through an antidegradation review. Expansion involves construction of additional raceways, or other modification to increase the total production capacity of the facility. Expansion does not include year-to-year variations in production, or efficiency improvements.

19. If, as a result of an antidegradation review and alternatives analysis, a facility is required to install a technology for controlling pollution (the preferred alternative), the facility is required to operate that control technology in accordance with its plans and specifications. This may result in effluent of higher quality than what is required to comply with the effluent limits. See Antidegradation Rule and Implementation Procedure, May 7, 2007.

20. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources intends to adopt the new ammonia criteria during the next water quality standards triennial review. Also, refer to Part IV of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.pdf>.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

TERMINATION

In order to terminate this permit, the permittee shall notify the Department by submitting Form H, included with the State Operating Permit. The permittee shall complete Form H and mail it to the Department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the Department and approved prior to initiating closure activities.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than thirty (30) days prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this general permit. Any noncompliance with this general permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

This permit authorizes only the activities described in this permit. Compliance with this permit may not be considered a shield from compliance with any local ordinance, State Regulation or State Law.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-G130000

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Master General Permit.

General Comment

There are currently two Master General Permits for Concentrated Aquatic Animal Production Facilities (CAAPF), MO-G130000 for flow-through systems and MO-G13A000 for impoundment and recirculating systems. The MO-G13000 permit currently has 12 issued permits and there have been no MO-G13A000 permits issued. Federal regulations for CAAPF in 40 CFR 122 and 40 CFR 451 is applicable to all systems. Because no MO-G13A000 permits have been issued, it has been combined with the MO-G130000 Master General Permit.

Part I – Facility Information

Facility Type: Concentrated Aquatic Animal Production Facilities that utilize flow-through systems, impoundments, or recirculating systems.

Facility SIC Code(s): 0273, 0921

OUTFALLS

A full description of each outfall shall appear on the coverage document issued to a General Permit Covered Facility. The following information is required for each outfall.

Part II – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category list effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]:
- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM MONITORING REQUIREMENTS: No receiving water monitoring requirements recommended at this time.

Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions

PERMIT APPLICABILITY:

Explanations of impoundments and recirculating systems were incorporated from the MO-G13A000 permit. Impoundments included but are not limited to ponds, pools, pits, closed cells, tanks, or other structures constructed from earth, concrete plastic or metal that used for production aquaculture or as settling ponds or basins used for the collection of solids. Recirculating systems are those that use biological or mechanical filtration to filter the water from impoundments. The filtered water is then pumped back and reused in the impoundments.

PERMIT REQUIREMENTS AND SPECIAL CONDITIONS:

Some requirements were added in this permit that is in the current federal regulations effective since August 23, 2004. They include requirements of the Operation and Maintenance Manual to address feeding strategies that limit feed to reduce solids generation, inspections of production and waste water systems and record keeping requirements. Staff shall be provided training in the proper operation of the facility, feeding procedures and prevention and cleanup of spills. Record keeping requirements for the amount of feed used and estimated number and weight of animals, record of inspections, and maintenance and repair of best management practices (BMPs).

Requirements for CAAPFs with impoundments were also added from the MO-G13A000 permit. It sets requirements for the draining impoundments to prevent the discharge of solids and sediment. It also sets time frames for discharges after drugs or chemical treatments have been applied to an impoundment. A minimum of one foot of freeboard is required during normal operation.

Any new or existing CAAPF that wishes to construct an earthen storage structure designed to hold, convey, contain, store or treat domestic, agricultural or industrial process wastewater must apply for a construction permit. Construction of other structures that are designed to hold, convey, contain, store or treat domestic, agricultural or industrial process waste do not require a construction permit but shall be designed by a professional engineer licensed in Missouri and constructed in accordance with those designs and plans.

Constructions permits are now only required for an earthen storage structure designed to hold, convey, contain, store or treat domestic, agricultural or industrial process wastewater. Construction of other structures that are designed to hold, convey, contain, store or treat domestic, agricultural or industrial process waste do not require a construction permit but shall be designed by a professional engineer licensed in Missouri and constructed in accordance with those designs and plans.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- Backsliding proposed in this Fact Sheet for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 § CFR 122.44. The increase in limits for Total Recoverable Copper are due to a change in water quality standards.

ANTIDEGRADATION:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge. Any facility seeking coverage under this Master General Permit constructed after August 30, 2008, or existing CAAPFs which undergoes expansion, must go through an antidegradation review. Expansion involves construction of additional raceways, or other modification to increase the total production capacity of the facility. Expansion does not include year-to-year variations in production, or efficiency improvements. Renewal of coverage for a facility does not require antidegradation review. The permit applicant may avoid having to determine the assimilative capacity of the receiving water and, consequently, may proceed directly into defining the "necessity" (i.e., performing the alternatives analysis) of the discharge under Section II.B of the Antidegradation Rule and Implementation Procedure by assuming (instead of demonstrating) that the proposed discharge will result in significant degradation for each of the Pollutant of Concern. The Pollutants of Concern in this permit are Ammonia, Copper, Chloride and BOD₅.

PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:

The need for an individual public notification process shall be determined and identified in the general permit. [10 CSR 20-6.020(1)(C)5.]

Not Applicable; Public Notice is not required for issuance of coverage under this Master General Permit to individual facilities for the first time. Public Notice of reissuance of coverage is not required unless the facility has been found to be in significant noncompliance [10 CSR 20-6.020(1)(C)4.].

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ; This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Not Applicable ; At this time, the permittee is not required to develop and implement a SWPPP.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined to total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable ; Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{C_s \times Q_s + C_e \times Q_e}{Q_e + Q_s} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration

Cs = upstream concentration

Qs = upstream flow

Ce = effluent concentration

Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Not Applicable ; At this time, the permittee is not required to conduct WET test for this facility.

Part IV – Effluent Limits Determination

Outfall #001 – Main Facility Outfall

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	No	*/*
BOD ₅	mg/L	1	20		20	No	20/20
TSS	mg/L	1	15		15	No	15/15
pH	SU	1	6.5-9.0		6.5-9.0	No	6.5-9.0
AMMONIA AS N	mg/L	2/3/5	2.0		1.0	No	2.0/1.0
CHLORIDE	mg/L	1	376		187	No	376/187
PHOSPHORUS, TOTAL	mg/L	2/3	*/0.5		*/0.5	No	*/0.5
COPPER, TOTAL RECOVERABLE	µg/L	2/3	20.7		10.3	Yes	17.1/8.5

* Monitoring requirement only

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids** Effluent limitations are protective, and have been retained from previous state operating permit.
- **pH.** 10 CSR 20-7.031(4)(E)
- **Temperature** Monitoring requirement, no longer necessary to determine compliance.
- **Total Ammonia Nitrogen** Effluent limits are protective, and have been retained from previous permit. Calculating a wasteload allocation based on current policy would result in an increase in the limits. It is the permit writer's best professional judgment that increasing ammonia limits would not provide any benefit to water quality or the industry. On August 22, 2013 EPA published revised aquatic life protection criteria for ammonia. Water quality standards will be revised to incorporate the new criteria in the future. This new criteria incorporated into this permit at the next subsequent permit renewal.

DMR data submitted by all facilities during the previous permit cycle indicates a range of ammonia values from 0.00054 – 1.0 in the summer months and 0.0 – 1.0 in the winter months. This would indicate that some facilities may have the potential to exceed water quality criteria for ammonia in the summer (after new water quality standards are adopted).

- **Chloride.** Protection of Aquatic Life Chronic Criteria = 230 mg/L, Acute Criteria = 860 mg/L. Because the volume of discharge for a general permitted facility is unknown, a flow of 0.01 CFS is assumed.

Chronic WLA: $C_e = ((0.01 + 0.0)230 - (0.0 * 0.0))/0.01$
 $C_e = 230 \text{ mg/L}$

Acute WLA: $C_e = ((0.01 + 0.0)860 - (0.0 * 0.0))/0.01$
 $C_e = 860 \text{ mg/L}$

$LTA_c = 230 (0.527) = 121.2 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 860 (0.321) = 276.0 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 121.2 (3.11) = 376.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 121.2 (1.55) = 187.8 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 4]

- **Phosphorus, Total** Effluent limits are protective, and have been retained from previous permit.

Metals. Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the “Technical Support Document For Water Quality-based Toxic Controls” (EPA/505/2-90-001) and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 162 mg/L is used in the conversion below.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Copper	0.960	0.960

Conversion factors for Lead, Zinc, and Copper are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 162 mg/L.

- **Copper, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 5.5 µg/L, Acute Criteria = 7.8 µg/L. Because the volume of discharge for a general permitted facility is unknown, a flow of 0.01 CFS is assumed.

Chronic = $13/0.960 = 13.54 \text{ µg/L}$
 Acute = $20/0.960 = 20.83 \text{ µg/L}$

Chronic WLA: $C_e = ((0.01 + 0.0)13.54 - (0.0 * 0.0))/0.01$
 $C_e = 13.54 \text{ µg/L}$

Acute WLA: $C_e = ((0.01 + 0.0)20.83 - (0.0 * 0.0))/0.01$
 $C_e = 20.83 \text{ µg/L}$

$LTA_c = 13.54 (0.527) = 7.13 \text{ µg/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 20.83 (0.321) = 6.68 \text{ µg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 6.68 (3.11) = 20.7 \text{ µg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 6.68 (1.55) = 10.3 \text{ µg/L}$ [CV = 0.6, 95th Percentile, n = 4]

Part V – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from 10/19/13 to 11/19/13. Two sets of comments were received. For clarification, minor wording changes were made in response to public comments.

DATE OF FACT SHEET: 12/09/2013

COMPLETED BY:

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