

MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

FACT SHEET

Concentrated Aquatic Animal Production General Discharge Permit

FACILITY: Concentrated Aquatic Animal Production (Fish Farms)

PERMIT NO.: MTG130000

LOCATION: Statewide (Except for Indian Reservations)

CONTACT: Applicant

RECEIVING WATER: Statewide

FEE INFORMATION:

Type: Fish Farm

Number of Outfalls: One (1) or more

I. Permit Status

The Montana Department of Environmental Quality (DEQ) first issued the Concentrated Aquatic Animal Production (CAAP) General Permit (MTG130000) in 1977 as the Fish Farm General Permit and has renewed the General Permit approximately every five years. The permit is currently referred to as the Concentrated Aquatic Animal Production/Fish Farm General Permit. For the purposes of this renewal it will be referred to as the CAAP permit to maintain consistency with the definition in the Administrative Rules of Montana (ARM) 17.30.1331.

The 2011 CAAP permit became effective on July 1, 2011 and expires on June 30, 2016.

II. Description of Discharge and Discharging Facilities

CAAP facilities contain, grow, or hold fishes for commercial, recreational stocking, or other purposes. These facilities use raceways, tanks, ponds, and/or other types of water containment structures to house and feed fish. Currently, 13 facilities are authorized to discharge under the CAAP. Ten are state-owned fish production facilities, operated by the Montana Department of Fish Wildlife and Parks (FWP), two are United States Fish and Wildlife Service (USFWS) cold-water fish hatcheries and one is a USFWS research facility.

Discharge rates at the 13 facilities vary from 300 gallons per minute (gpm) to 22,000 gpm. Facility effluent is typically discharged from multiple discharge locations to the same receiving water. These discharge locations are considered one “outfall” for calculating effluent limits and for fee purposes.

Some facilities may also discharge smaller volumes of water from quarantine facilities and/or water used for drug or chemical treatments to upland areas that will not reach state waters. Effluent is also used for irrigation of facility grounds at some locations. These discharges are allowed under this General Permit and should be disclosed on the Notice of Intent.

Production rates vary from facility to facility depending on available water volume, fish species, and management objectives. Generally, production is most closely related to water volume with production increasing as water volume increases.

Although Montana CAAP facilities work proactively to maintain clean water, nationally CAAP facilities are known to discharge contaminants to receiving waters. The U.S. Environmental Protection Agency (EPA) *Development Document for Proposed Effluent Limitations Guidelines and Standards for the Concentrated Aquatic Animal Production Industry Point Source Category* states “CAAP facilities produce a variety of pollutants that may be harmful to the aquatic environment when discharged in significant quantities. The most significant of these pollutants are nutrients (nitrogen and phosphorus), total suspended solids (TSS), and biochemical oxygen demand (BOD). Each of these pollutants causes a variety of impacts on water quality or ecology in different bodies of water. Each type of production system produces different quantities and qualities of effluents, which are determined by the following:

- Amount and type of feed used for production
- Volume and frequency of discharge
- In-system treatment processes (including natural processes)
- Other inputs to the process water (such as drugs or chemicals).

Flow through systems can be characterized as continuous, high-volume flows containing low pollutant concentrations. Effluents from flow-through systems are affected by whether a facility is in normal operation or whether the tanks or raceways are being cleaned. Waste levels can be considerably higher during cleaning events (Hinshaw and Fornshell, 2002; Kendra, 1991).”

Most of the currently authorized facilities in Montana are flow-through systems. The Miles City Fish Hatchery cultures fish in ponds that are periodically drained during harvesting. The Fort Peck Fish Hatchery uses pond culture and also has flow through raceways.

At those facilities where it is required, wastewater treatment is commonly accomplished by settling of the solids in basins or in raceway quiescent zones with subsequent removal using vacuum equipment. Collected solids remain on-site in the settling basins or in other dedicated solids storage areas and are removed periodically for disposal.

The facilities authorized to discharge under the 2011 permit and their approximate production rates, as reported on 2011 permit applications are as follows:

<u>Facility Name</u>	<u>Authorization Number</u>	<u>Annual Production (lbs)</u>
Murray Springs Hatchery	MTG130001	32,000
Giant Springs Hatchery	MTG130002	65,000
Big Springs Hatchery	MTG130003	14,000
Big Springs Hatchery	MTG130004	140,000
Bozeman Fish Tech Center	MTG130006	6,000
Creston National Fish Hatchery	MTG130007	61,500
Ennis National Fish Hatchery	MTG130008	75,000
Yellowstone River Hatchery	MTG130011	3,500
Bluewater Hatchery	MTG130012	51,500
Washoe Park Hatchery	MTG130013	13,000
Flathead Lake Hatchery	MTG130014	3,000
Miles City Fish Hatchery	MTG130015	1,000
Fort Peck Fish Hatchery	MTG130017	20,000

III. Coverage

Section 75-5-605(2)(c) Montana Code Annotated (MCA) states that it is unlawful to discharge sewage, industrial wastes or other wastes into any state waters without a current permit from DEQ. 75-5-402 MCA directs DEQ to issue permits to discharge sewage, industrial wastes, or other wastes into state waters, consistently with rules established by the Board of Environmental Review (BER). The BER has adopted rules that specifically define Concentrated Aquatic Animal Production facilities as point sources subject to regulation under the Montana Pollutant Discharge Elimination System (MPDES) program (ARM 17.30.1331). Concentrated aquatic animal production facilities are hatcheries, fish farms, or facilities classified under Standard Industrial Classification (SIC) Codes 0273 or 0921 (Office of Management and Budget SIC Manual, 1987) or other facilities that meet the following criteria:

- (a) facilities that contain, grow, or hold cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, and produce 20,000 pounds or more harvest weight of aquatic animals per year or feed 5,000 pounds or more of food during the calendar month of maximum feeding;
- (b) facilities other than closed ponds which discharge only during periods of excess runoff, that contain, grow, or hold warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures, which discharge at least 30 days per year, and produce 100,000 pounds or more harvest weight of aquatic animals per year; or
- (c) cold water or warm water facilities that DEQ designates as Concentrated Aquatic Animal Production facilities as specified in ARM 17.30.1331(3).

DEQ has conducted inspections at each of the facilities listed in Part II of this Fact Sheet. For those facilities that do not meet the minimum production requirements of (a) or (b) above, DEQ has designated these facilities as point sources requiring MPDES permit coverage under (c).

Cold water aquatic animals include but are not limited to the *Salmonidae* family of fish; e.g., trout and salmon. Warm water aquatic animals include but are not limited to the *Cyprinidae*, *Percidae*, *Esocidae*, *Acypenseridae*, *Polyodontidae*, and *Centrarchidae* families of fish; e.g., minnows, walleye and perch, pike, sturgeon, paddlefish, and sunfish, respectively.

To obtain coverage under the CAAP General Permit, applicants must submit the following:

1. For existing permitted CAAP facilities, the following must be submitted 90 days prior to the expiration date of the general permit:
 - a. Submit a complete Notice of Intent (NOI) for CAAP facilities.
 - b. Submit the proper renewal fee of \$600.00 per outfall. An application fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or result in multiple or variable (flow dependent) effluent limits or monitoring requirements.
2. For new CAAP facilities, the following must be submitted 90 days prior to any discharge:
 - a. Submit a complete NOI for CAAP facilities.
 - b. Submit the proper new permit fee of \$1,200.00 per outfall. An application fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or result in multiple or variable (flow dependent) effluent limits or monitoring requirements.

IV. Exclusions

Facilities with production levels less than those specified in Section III and not otherwise designated as such by DEQ are not defined as CAAP facilities and therefore are not considered point sources subject to regulation under the MPDES program.

V. Description of Receiving Waters and Applicable Standards

Discharges from CAAP facilities covered under the General Permit are to state surface waters. New facilities will be considered for coverage under the General Permit as applications are received. The facilities currently authorized discharge to the following receiving waters:

<u>Facility Name</u>	<u>Receiving Water</u>	<u>Classification</u>
Murray Springs Hatchery	Lake Koocanusa	B-1
Giant Springs Hatchery	Missouri River	B-2
Big Springs Hatchery (2)	Big Spring Creek	B-1
Bozeman Fish Tech Center	Bridger Creek	B-1
Creston Fish Hatchery	Mill Creek	B-1

Ennis National Fish Hatchery	Blaine Spring Creek	B-1
Yellowstone River Hatchery	Yellowstone River	B-1
Bluewater Hatchery	Bluewater Creek	B-1
Washoe Park Hatchery	Warm Springs Creek	B-1
Flathead Lake Hatchery	Flathead Lake	A-1
Miles City Fish Hatchery	Spotted Eagle Lake	C-3
Fort Peck Fish Hatchery	Fort Peck Dredge Cuts	B-2

The surface water quality standards are composed of the rules in ARM 17.30, Subchapter 6. The provisions of ARM 17.30.635 through 17.30.637, 17.30.640, 17.30.641, 17.30.645, and 17.30.646 apply to all surface waters in addition to the standards for specific receiving water classifications at ARM 17.30.620 through 17.30.629.

VI. Proposed Effluent Limitations and Conditions

A. Technology Based Effluent Limitations

In August 2004 the U.S. Environmental Protection Agency (EPA) promulgated national Effluent Limit Guidelines (ELGs) for the Concentrated Aquatic Animal Production Category at 40 CFR Part 451. The ELGs are applicable to facilities that produce 100,000 pounds or more of aquatic animals per year in flow-through or recirculating systems. Any facility that will produce 100,000 pounds or more of aquatic animals per year is subject to the requirements of 40 CFR Part 451, and the water quality-based requirements of either this Fact Sheet or an individual MPDES permit.

The requirements of 40 CFR 451 are summarized as follows:

(a) Solids control. The permittee must:

1. 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 water of the U.S.
2. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, 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 of aquatic animals in the production system.
3. Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to state waters, except in cases where the permitting authority authorizes such discharge in order to benefit the aquatic environment.

(b) Materials storage. The permittee must:

1. 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 state waters.

2. Implement procedures for properly containing, cleaning and disposing of any spilled material.

(c) Structural maintenance. The permittee must:

1. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
2. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

(d) Recordkeeping. The permittee must:

1. In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.
2. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

(e) Training. The permittee must:

1. In order to ensure the proper clean-up and disposal of spilled material, adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
2. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

B. Water Quality Based Effluent Limitations

Nationally, pollutants present in CAAP discharges include TSS, BOD, nutrients, and potentially low dissolved oxygen concentrations. Feed is the primary source of pollutants to CAAP systems and minimizing the discharge of waste solids is the most efficient method of controlling pollution from CAAP facilities.

Permits must include technology-based and/or water-quality based effluent limits (WQBEL). WQBEL are required when DEQ determines a discharge has the reasonable potential to exceed any state water quality standard.

During renewal of the CAAP permit in 2006, DEQ determined that a Best Management Practice (BMP) approach, to minimize the discharge of waste solids from CAAP facilities, would best protect the beneficial uses and water quality standards of the receiving waters. This determination was based on the fact, as stated above, that waste solids are the source of most pollutants discharged at CAAP facilities. A second consideration was the difficulty implementing numeric limits because obtaining samples of hatchery effluents that are representative of a facility's daily discharge is complicated by the need to collect samples during both normal operation, which represent the majority of a daily

discharge, and during brief bursts of higher concentration wastes discharged during cleaning operations.

The 2011 General Permit continued the 2006 BMP approach and requires the development and implementation of BMP plans at all CAAP facilities. The permit further requires effluent treatment at CAAP facilities with current production greater than 20,000 pounds per year. DEQ believes the BMP approach remains the most efficient means of maintaining water quality in CAAP discharges. These requirements are maintained in the 2015 General Permit renewal as follows:

1. Facilities producing less than 20,000 pounds of fish per year are required to utilize BMPs to minimize the generation and discharge of waste solids. Authorizations at facilities producing 20,000 pounds or more of fish per year include the same requirement to implement BMPs and a prohibition on the direct discharge of waste solids without treatment.
2. With the 2015 General Permit renewal, all facilities are required to monitor and report results for TSS, total nitrogen, and total phosphorus. Additional requirements may apply to individual facilities depending on treatment processes and/or the use of certain drugs and chemicals which may need to be further limited or monitored. Any facility specific requirements will be stated in the authorization letter.

Additional discussion and rationale for the requirements implemented in this permit renewal are provided below.

1.) Best Management Practices

DEQ is authorized to employ BMPs in permits to control or abate the discharge of pollutants when the practices are “reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA”. ARM 17.30.1304(10) defines BMPs as “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of state waters.”

Therefore, to comply with the water quality criteria and stream classifications, all facilities covered under the CAAP General Permit are required to develop, update, implement and submit to DEQ for approval a BMP plan that addresses feed management and solids handling, as well as the management of drugs and chemicals. The requirements below closely follow the ELG requirements for CAAP facilities at 40 CFR 451. The BMP plan shall be developed and submitted to DEQ within 90 days of the date on the authorization letter. Thereafter, the permittee must update the plan by January 31st of each calendar year. The permittee must maintain a copy of the updated BMP plan on-site that has been updated, signed, and dated by the facility manager. BMP plans shall address, at a minimum, the following areas:

- a. A plan for the efficient feeding of the fish in the facility that will maximize feed conversion and minimize the amount of metabolic wastes and uneaten food produced in the hatchery, and still allow the achievement of production goals. This plan could include, but is not limited to, the following: projected annual production, feeding methods used, appropriate record-keeping of feed

consumption, feed storage and handling methods to minimize 'fines' in the feed, and any other means employed to minimize waste food and excess metabolic wastes.

- b. A description and schedule of cleaning and maintenance activities that will minimize the amount of waste discharged from the facility at any one time. This must include, at a minimum, the weekly cleaning of raceways, unless otherwise approved for a specific fish species' rearing requirements in an approved BMP plan. Records of raceway cleaning must be maintained on-site.
- c. A description, including dosage rates, total quantity used, and calculated concentrations, of all drugs and chemicals that are used routinely in hatchery operations.
- d. A report of the total pounds of food fed for the previous calendar year, the total weight gain of all fish in the hatchery the previous calendar year and the corresponding feed conversion ratio (FCR). Feed conversion ratios may be calculated for individual lots of fish, providing all fish produced are accounted for.
- e. A description of the sampling collection method used for DMR reporting. This description should include the sampling location(s), methods for determining proper flow-weighted proportions of sample aliquots, and methods for preserving and shipping analytical samples to an off-site laboratory when an off-site laboratory is used.

In addition to the above requirements, facilities that produce 20,000 pounds or more of fish per year are subject to the following requirements:

- a. Practices such as the removal or lifting of dam boards or standpipes in raceways or ponds, which allow accumulated solids to discharge to state waters without treatment, are prohibited.
- b. Sweeping accumulated solids from raceways or ponds to state waters without treatment is prohibited.
- c. The annual BMP plan must include a description of the methods or standard operating procedures (SOPs) for cleaning accumulated wastes from settling basins or other treatment units and the method of final disposal. The plan must also document that final disposal of accumulated wastes will occur in such a manner that they will not reach state waters.

2.) Total Suspended Solids

The water quality standards prohibit any increase in sediment, suspended sediment, settleable solids, oils, or floating solids, which will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife. With this permit renewal, Total Suspended Solids (TSS) self-monitoring is required at all CAAP facilities. Monitoring results will aid DEQ in ensuring that each facility's BMP plan is effectively protecting this narrative water quality standard.

DEQ acknowledges that for the majority of the time a flow through fish hatchery is discharging, the effluent quality is high and TSS concentrations are low. It is during short periods when cleaning operations are conducted that more solids are discharged. Previous versions of the permit required sample collection only during cleaning operations and may have over-estimated TSS. To more accurately characterize TSS concentrations over the course of the day, this permit renewal changes the TSS sampling requirements as follows:

TSS monitoring shall be conducted semi-annually during the month of maximum feeding in each monitoring period. Samples shall be composite samples composed of aliquots collected from each discharge point. All samples must be collected on a day that cleaning occurs. Composite samples may be collected using automated sampling devices or may be collected as a collection of grab samples from each discharge location at the hatchery and should be collected using the following definition:

“Composite Samples” shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

- a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
- b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
- c. Constant sample volume, time interval between samples proportional to flow (i.e. sample taken every “X” gallons of flow); and,
- d. Continuous collection of sample, with sample collection rate proportional to flow rate.

At least one set of sample aliquots must be collected during cleaning operations and shall include samples collected from the overflow of any settling basin or other treatment unit that discharges to state waters. The overflow samples must be collected while cleaning wastes are being discharged to the settling basin or treatment unit. If all discharges from raceways or other rearing units are directed to a settling basin or treatment unit during cleaning operations, the only cleaning sample shall be collected from the treatment unit overflow. All sample aliquots shall be combined into one common sample for analysis.

Because discharge configurations are unique at each facility, the sampling procedure used to address the requirements above must be described in the BMP plan for the facility.

3.) Polychlorinated biphenyls

The last two CAAP General Permits included an effluent limit for PCBs. Self-monitoring has not shown the presence of PCBs in the effluent at any of the fish hatcheries over that nearly 10 year period. Further, Fish Wildlife and Parks removed the source of PCBs at the facility where this pollutant was of the greatest concern and has conducted extensive remediation of the receiving water that was affected by historic PCB discharges. Since PCBs have not been detected at any facility since the imposition of this effluent limit and monitoring, DEQ is removing the PCB limitation and monitoring requirement from this permit renewal.

4.) Nutrients

In 2014, BER adopted numeric standards for total nitrogen (TN) and total phosphorus (TP). These standards apply to wadeable streams statewide and vary by ecoregion. The numeric standards are effective from July through September annually and do not apply to large rivers or lakes, where the narrative standard at ARM 17.30.637(1)(e) continues to apply. Nutrient standards applicable to the receiving water at each currently authorized facility are shown in the table below.

Table 1. Nutrient Standards for Receiving Waters at Currently Authorized CAAP Facilities				
Authorization Number	Receiving Water	Ecoregion	TP Standard (µg/L)	TN Standard (µg/L)
MTG130001 Murray Springs Hatchery	Lake Koocanusa	Not applicable (NA)	Narrative – ARM 17.30.637	
MTG130002 Giant Springs Hatchery	Missouri River	NA	Narrative – ARM 17.30.637	
MTG130003 Big Springs Hatchery, upper	Big Spring Creek	43s	33	440
MTG130004 Big Springs Hatchery, lower	Big Spring Creek	43s	33	440
MTG130006 Bozeman Fish Tech Center	Bridger Creek	17	30	300
MTG130007 Creston National Fish Hatchery	Mill Creek	15	25	275
MTG130008 Ennis National Fish Hatchery	Blaine Spring Creek	17	30	300
MTG130011 Yellowstone River Hatchery	Yellowstone River	NA	Narrative – ARM 17.30.637	
MTG130012 Bluewater Hatchery	Bluewater Creek	43	150	1,300
MTG130013 Washoe Park Hatchery	Warm Springs Creek	17	30	300
MTG130014 Flathead Lake Hatchery	Flathead Lake	NA	Narrative – ARM 17.30.637	
MTG130015 Miles City Hatchery	Spotted Eagle Lake	NA	Narrative – ARM 17.30.637	
MTG130017 Fort Peck Hatchery	Fort Peck Dredge Cuts	NA	Narrative – ARM 17.30.637	

The ELG development document identifies nutrients as pollutants present in CAAP discharges in “not insignificant amounts.” EPA determined that the control of TSS via the use of best management practices is adequate to meet the TBELs for the control of nutrients. Previous versions of the CAAP

General Permit have not required facilities to monitor nutrients in the effluent or the receiving water, and it is unknown whether or not these discharges will achieve Montana's numeric nutrient standards.

To assess the need for WQBELs for nutrients, DEQ is requiring characterization of each facility's effluent and receiving water during the time periods when the standards apply. This is necessary to ensure that the discharges have reasonable potential to exceed the water quality standards and to ensure that where effluent limits are needed, they account for any available assimilative capacity in the receiving water. Without receiving water data, DEQ must base reasonable potential analyses and effluent limit development on achieving the water quality standard at the point of discharge. Effluent and upstream monitoring for TN and TP are therefore required at all facilities. Monitoring is required monthly during the period from July through September to coincide with the season when the nutrient standards apply. Effluent monitoring must follow the sampling procedure described above for TSS. Instream monitoring data shall consist of grab samples collected upstream of the facility discharge. Monitoring data collected during this permit cycle will be used at the next permit renewal to determine the need for WQBELs for TN and TP.

5.) Drugs and Chemicals

Drugs and chemicals approved by the U.S. Food and Drug Administration (FDA) for use in aquaculture may be used in accordance with label requirements. Pesticides must be registered for use in Montana by the Montana Department of Agriculture.

Drugs found on the FDA list of low regulatory priority drugs including sodium chloride (salt), iodine, garlic, Fuller's earth, and Epsom salts may be used in accordance with the guidelines in Part C of the FDA document *Enforcement Priorities for Drug Use in Aquaculture (Center for Veterinary Medicine Program Policy and Procedures Manual, 1240.4200)*.

The following investigational new animal drugs (INAD) are approved for use in CAAP facilities in Montana. The use must strictly adhere to the INAD study protocol.

AQUI-S, INAD 11-741
SLICE, INAD 11-370
Benzoak, INAD 11-740
Aquaflor (florfenical), INAD 10-697
Oxytetracycline-Injectable, INAD 9027
Chloramine-T, INDA 9321
Luteinizing Hormone-Releasing Hormone Analogue (LHRHa) INAD 8061
Salmon Gonadotropin-Releasing Hormone (Ovaplant), INAD 11-375
Oxytetracycline-Feed Additive, INAD 9332
Diquat, INAD 10-969
Formalin, INAD 9013
35% Perox-aid, INAD 11-669
Common Carp Pituitary (CCP), INAD 8391

Any extra-label use of approved drugs and chemicals or use of unapproved drugs and chemicals, beyond those listed above, will require case-by-case approval by DEQ prior to the discharge to state waters. All drug and chemical use must be documented in the annual BMP plan.

6.) Other Pollutants

The water quality standards apply to BOD, dissolved oxygen, and variations in pH. While these pollutants are present in CAAP discharges, they are closely associated with the solids discharged by these facilities. Given this relationship it is believed that the control of solids via BMPs and TSS monitoring will be protective of these standards rather than numeric effluent limits and monitoring.

One facility adds an aluminum-based product during the treatment process (Creston National Fish Hatchery, MTG130007). This is a new treatment process that was implemented after the last renewal of the CAAP general permit. Effluent data to characterize aluminum concentrations in the discharge are unavailable. To determine the need for an effluent limit for aluminum, the authorization for this facility will require semi-annual monitoring for total recoverable aluminum in the discharge.

7.) Total Maximum Daily Load Wasteload Allocations

Two facilities authorized under the General Permit are assigned Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA). Each WLA is discussed below.

USFWS Bozeman Fish Tech Center, MTG130006: The Bozeman Fish Tech Center is assigned a WLA for nitrite plus nitrate. The *Lower Gallatin Planning Area TMDLs & Framework Water Quality Improvement Plan* (TMDL) states that the WLA is “equal to the current discharge load from the facility” and that this estimated load is 0.777 lb/day. The estimated load was calculated by subtracting the natural nitrite/nitrate load in the facility’s source springs from the effluent load as measured at the point of discharge to the receiving water. The TMDL also states, “Additional monitoring will be a requirement of the Fish Technology Center’s WLA to ensure that the conditions upon which the WLA is based are maintained.” Since the WLA is equal to the current discharge load from the facility and the estimated discharge load was based on limited data, DEQ will implement the WLA in the permit by including the additional monitoring required by the TMDL. This data will be used to ensure the conditions upon which the WLA is based are maintained and to determine the actual loads discharged by the facility.

Washoe Park Trout Hatchery, MTG130013: The *Upper Clark Fork Phase 2 Sediment and Nutrients TMDLs and Framework Water Quality Improvement Plan* (TMDL) assigns a WLA to the Washoe Park Trout Hatchery of 23.3 tons of TSS per year. This translates to an average of 3,883 pounds per calendar month.

During the month of maximum feeding, as reported on the hatchery’s DMR forms, the highest daily feed usage is approximately 80 pounds per day, or 2,400 pounds per month. Since the source of TSS in the hatchery discharge is the fish food, the hatchery is easily able to comply with the TSS WLA. The TMDL WLA is implemented in the permit by requiring the facility to maintain current practices. The authorization letter will include an average limit of 3,883 pounds of feed use per month. The

average reported on each semiannual DMR shall be the total pounds of fish food fed during the monitoring period divided by 6. Additionally, the facility will be limited to using no more than 23.3 tons of feed during any calendar year.

VII. Final Effluent Limits and Conditions

A. Facilities that produce less than 20,000 pounds of aquatic animals per year:

- 1.) Develop and implement a Best Management Practices plan that addresses feed and waste management, drug and chemical use, and effluent sample collection procedure. The plan shall be developed and submitted to DEQ, postmarked within 90 days of the date on the authorization letter. Thereafter the plan shall be updated annually and a copy, dated and signed by the facility manager, shall be kept on-site and be available for inspection.

B. Facilities that produce 20,000 pounds or more of aquatic animals per year

- 1.) Develop and implement a Best Management Practices plan that addresses feed management, solids handling, drug and chemical use, and effluent sample collection procedure. The plan shall be developed and submitted to DEQ, postmarked within 90 days of the date on the authorization letter. Thereafter the plan shall be updated annually and a copy, dated and signed by the facility manager, shall be kept on-site and be available for inspection.
- 2.) Direct discharge of waste solids without treatment is prohibited.

C. Specific limitations for Authorization MTG130006 (USFWS Fish Tech Center)

- 1.) In addition to the requirements in Part VII.A and Part VIII, monitoring for nitrate plus nitrite is required in the facility source water springs, the main facility effluent, upstream in Bridger Creek and Downstream in Bridger Creek. Monitoring shall be required monthly from July through September of each year. These additional requirements will be specified in the Authorization Letter for MTG130006.

D. Specific limitations for MTG130013 (Washoe Park Trout Hatchery)

- 1.) In addition to the requirements of Part VII.A above, the average total food fed per month during the monitoring period may not exceed 3,883 pounds. The total food fed for the entire calendar year shall not exceed 23.3 tons. These requirements will be specified in the Authorization Letter for MTG130013.

VIII. Monitoring and Reporting Requirements

Table 2 Monitoring and Reporting Requirements							
Parameter	Units	Location	Minimum Sample Frequency	Type ⁽¹⁾	Reporting Requirement	Reporting Frequency	Required Reporting Value
Flow Rate (gpm)	gpm	(2)	Monthly	Calculated ⁽³⁾	Average daily & Max Monthly Avg.	Semi-annual	NA
Fish Food Fed (lbs/day)	lb/day	NA	Daily	Measured	Average daily & Max daily	Semi-annual	NA
Fish Food Fed (lbs/month) ⁽⁴⁾	lb/month	NA	Monthly	Calculated	6 Month Average	Semi-annual	NA
Total Suspended Solids (mg/L)	mg/L	Effluent	Semi-Annual	Composite	Single Sample	Semi-annual	1 mg/L
Nitrite plus Nitrate (mg/L)	mg/L	Effluent	Monthly ⁽⁵⁾	Composite	Minimum, Maximum, & Average	Semi-annual	0.02 mg/L
		Influent ⁽⁷⁾		Grab			
		Upstream		Grab			
		Downstream ⁽⁷⁾		Grab			
Nitrite plus Nitrate (lb/day)	lb/day	Net Effluent ^(7, 8)	Monthly ⁽⁵⁾	Calculated	Minimum, Maximum, & Average	Semi-annual	NA
Total Kjeldahl Nitrogen (mg/L)	mg/L	Effluent	Monthly ⁽⁵⁾	Composite	Minimum, Maximum, & Average	Semi-annual	0.1 mg/L
		Upstream ⁽⁶⁾		Grab			
Total Nitrogen (mg/L)	mg/L	Effluent	Monthly ⁽⁵⁾	Calculated	Minimum, Maximum, & Average	Semi-annual	0.070 mg/L
		Upstream ⁽⁶⁾					
Total Phosphorus (mg/L)	mg/L	Effluent	Monthly ⁽⁵⁾	Composite	Minimum, Maximum, & Average	Semi-annual	0.003 mg/L
		Upstream ⁽⁶⁾		Grab			
Dissolved Aluminum ⁽⁹⁾	mg/L	Effluent	Semi-Annual	Grab	Single Sample	Semi-annual	0.009 mg/L

(1) See the definitions in Part I.A. of the permit.
(2) Flow rate may be established via either influent or effluent flow and shall be reported as effluent on the DMR.
(3) Flow rate may be measured via instantaneous reading of flow meters or weirs, or may be a calculated sum of instantaneous observations.
(4) Washoe Park Trout Hatchery only, MTG130013.
(5) July through September only. Report minimum, maximum, and average on December DMR.
(6) Upstream sample must be collected in the receiving water in a location upstream of, and uninfluenced by, all facility discharges.
(7) Bozeman Fish Tech Center only, MTG130006.
(8) Effluent load at main discharge point minus influent load.
(9) Creston National Fish Hatchery only, MTG130007

Effluent monitoring shall be conducted at the end of pipe, prior to discharge to the receiving water. Samples from multiple discharge pipes shall be flow proportioned grab samples composited prior to analysis.

All monitoring shall be reported electronically semi-annually on Discharge Monitoring Report (DMR) via NetDMR web based portal.

IX. Mixing Zone

Mixing zones will be established in accordance with ARM 17.30.501-518, Mixing Zones in Surface and Ground Water, and stated in the authorization letter.

X. Nondegradation

Existing facilities permitted prior to April 29, 1993 are not subject to the nondegradation requirements unless production capacity increased after that date. In such cases nondegradation would apply to the increased capacity only. New facilities must meet the requirements of ARM 17.30.715 for significance criteria to qualify for coverage under the General Permit.