

**NEVADA DIVISION OF ENVIRONMENTAL PROTECTION  
FACT SHEET**

(pursuant to NAC 445A.236)

**Permittee:** Nevada Department of Wildlife  
1100 Valley Rd, Reno, NV 89512

**Permit:** NV0020656

**Project:** Gallagher Fish Hatchery

**Description of Discharge:** Hatchery flow through and cleansing water is discharged into a natural oxbow pond, a part of the Ruby Marsh in the Ruby Lake National Wildlife Refuge, approximately 65 miles southeast of Elko, NV, the main complex (south parcel) is about 2 miles north of Shanty Town in Ruby Valley, Elko County, Nevada.

Location: Nevada Dept Of Wildlife, Gallagher Hatchery  
H.C. 60 Box 870, Ruby Valley, NV 89833

Sec. 25: SW4-NE4-SE4-SE4 and SE4-SE4-SE4 [S Parcel]	Township 27 North	Range 57 East	Mt Diablo Base & Meridian
Sec. 36: N2-NE4-NE4 [S Parcel]			
Sec. 18: Part E2-SW4-NW4, Part W2-SE4-NW4 [N Parcel]	Township 27 North	Range 58 East	
Sec. 30: Part SW4-SW4-SW4 [S Parcel]			
Sec. 31: Part W2-NW4-NW4 [S Parcel]			

FEATURE	LAT (d m s)	LON (d m s)	LAT (decimal °)	LON (decimal °)
101 Outfall – S Parcel Consolidated Discharge to Oxbow	40° 11' 02.65" N	115° 29' 29.65" W	40.1840694°	-115.4915694°
005 Outfall - N parcel N Canopy to Effluent Pond	40° 13' 22.90" N	115° 29' 09.60" W	40.2230278°	-115.4860000°

**General Description and Discharge Location:** The State of Nevada, Department of Wildlife (NDOW) operates a fish hatchery approximately 65 miles southeast of Elko, Nevada. The Gallagher hatchery operations include the north canopy area (north parcel), located adjacent to Bressman Spring, and the main hatchery complex (south parcel). The parcels are approximately 3 miles apart. The parcels are occupied and operated by the Nevada Department of Wildlife (NDOW) through a cooperative agreement with the U.S. Fish and Wildlife Service (USFWS) on lands of the Ruby Lake National Wildlife Refuge (RLNWR).

The USFWS constructed an approximately seven-mile long collection ditch in the eastern Ruby Mountain alluvial fans to intercept artesian spring and runoff flow for marsh water level management. All hatchery discharges from the north and south parcels ultimately flow into the Ruby Marsh of the RLNWR, a Class B water, by passing through an “oxbow” on the immediate south boundary of the main complex facility. The facility site has been used as a hatchery since 1940 when originally started by Elko County. At Gallagher, NDOW produces trout for stocking in the streams of northern Nevada and produces fingerlings for Spring Creek Rearing Station. In recent years, production has averaged 100,000 pounds of fish annually. Permit NV0020656 was originally issued in February 1977. A series of improvements and refurbishments were constructed from 2004-2008 to improve system efficiency and reduce disease impacts at the facility to fish production. The refurbishments operation changes and modifications are reflected in this 2010 permit development.

The north canopy parcel rearing ponds discharge through a single outfall into a natural retention pond that overflows into the USFWS alluvial fan collection ditch. The flows from this retention pond combine with other collection ditch flows and continue approximately three miles southward to where the collection ditch discharges at the northeast corner of a natural “oxbow” pond on the immediate south boundary of the main complex parcel. Following 2004-2008 facility refurbishments at the south parcel, the main hatchery complex includes 26 hatchery troughs, 3 -8400 cft raceways (only 2 in use) and 16 – 3500 cft raceways. Pre-refurbishments operations had three outfalls [002, 003 and 004] discharging from the old south rearing ponds into an aerated oxbow/mixing pond. These direct discharges and pond aeration are now eliminated [post 2008]. Also pre-refurbishments, some south parcel facility effluent discharges were collected and conveyed to a concrete ditch on the east side of the site entering the northeast corner of the south oxbow [Outfall 001] just west of the USFWS collection ditch. Hatchery discharge into the oxbow at outfall 001 has also been eliminated post 2008.

The hatchery complex uses three artesian springs (Hagar, Nino, and North). Spring flows are collected and managed on site daily to serve the hatchery, brood, and rearing buildings. All facility pass though and cleansing flows are

directed via pipeline to a consolidated outfall (Outfall 101 beginning with this 2010 permit) at the northwest corner of the south boundary oxbow. The flows discharged at this point cross the 450 feet long, 100 foot wide oxbow and exit the oxbow southeast corner where it is conveyed to the Ruby Marsh by a channel.

**Flow:** The winter 2000/2001 flow records for Bressman Spring show a 1,200 gpm supply for the four rearing ponds at the north canopy area and are considered typical flows. The main complex southern parcel uses three artesian springs as source water: Hagar, North, and Nino contributing approximately 65%, 25%, and 10% of the inflow, respectively. Recent combined source spring flows at the south parcel have varied from 1,170 gallons per minute (gpm) to 2,700 gpm. The flows from all four springs are closely related to precipitation levels and events in the area thus they will fluctuate on a seasonal, monthly and daily basis. Based on historic flow records for each parcel, this permit accommodates the normally expected daily maximum flows; however, it is recognized that extreme natural conditions of high or low precipitation will also affect spring flows at each parcel.

The daily maximum flow from the combined hatchery facility north and south parcel outfalls is 9.55 million gallons per day (MGD); the maximum 30-day average flow from the parcel outfalls is not specified in the permit. The daily maximum flow from Outfall 101 post-refurbishments (i.e. new consolidated outfall) main hatchery complex, south parcel, is 6.05 MGD. The daily maximum flow from Outfall 005, the north canopy north parcel area flow-through water, is 3.50 MGD. The final loading composition of discharge flows at each site is relatively consistent on a daily basis due to uniform management use of pass through and cleansing flows. This operation practice prevents unbalanced nutrient slug flows from entering the receiving waters that could occur if facility cleansing were performed in cycles.

**Receiving Water Characteristics:** Discharges from the Gallagher fish hatchery north and south parcels join together in a natural oxbow pond lying on the south parcel’s immediate south boundary. The oxbow is the terminus of a several mile long USFWS collection ditch that intercepts other alluvial fan runoff and springs flows. The collection ditch flows are outside of NDOW’s management or control. The Permittee began analyzing USFWS collection ditch waters at select locations as a condition of the permit issued in 2001. Sampling at select locations will continue with this permit to gather data necessary to determine standards relying on background natural condition of receiving water. All co-mingled/mixed water exits the oxbow pond’s southeast corner via a connecting channel to Ruby Marsh. The facility discharge is regulated in part by Chapter 445A of the Nevada Administrative Code (NAC). NAC 445A sections used in permit development include:

Permit Receiving Water Name	Waterbody Controls of Water Quality Standards & Criteria per NAC 445A			
	Waterbody	Statewide	Narrative	Beneficial Use
Ruby Marsh	125.3	118, 144	121	125.2

Per NAC 445A.125, all of Ruby Marsh of the RLNWR is a Class B water of the state. NAC 445A.125.2 designates beneficial uses of a Class B water as: drinking water supply with treatment by disinfection and filtration only, irrigation, livestock watering, aquatic life and propagation of wildlife, recreation involving contact with the water, recreation not involving contact with the water, and industrial supply. Because of the presence of trout fish species in Ruby Marsh, it is regarded as a cold water fishery.

**Discharge Characteristics:** Discharge Monitoring Report (DMR) submittals during the period June 2001 to December 2008 for this facility have shown consistent achievement of effluent discharge limits set in the 2001 issued permit. It is recognized that many of the reported DMR values are predominately influenced by and a reflection of the pre-existing natural conditions for the diverted source waters of which the permittee has little or no control over. The permittee utilizes best management practices (BMPs) developed for aquaculture facilities to manage and control adverse impacts to receiving waters after diversion of natural source water. Operation practices generally provide for the bulk of diverted flows to have short duration direct contact with facility operations. Cleansing flows are managed in a manner that minimizes the potential to degrade the receiving waters. Review of permit parameters and analysis limits are provided in the following table.

Parameter	DMR Analysis Limit (mg/L unless noted)		DMR Review Results
	30- Day Avg.	Daily Max	
South parcel discharges to oxbow	--	6.05 MGD	Avg. ≈ 2.2 to 3.2
North parcel discharge to retention pond	--	3.50 MGD	Avg. ≈ 1.1 to 1.7
Total Phosphates S & N	0.06 mg/L	0.3 mg/L	Consistently met
Biochemical Oxygen Demand [5-day, 20°C] S & N	4.00 mg/L	5.00 mg/L	Avg. ≈ 2.0

Total Suspended Solids	S & N	10.00 mg/L	15.00 mg/L	Consistently < 10
Total Dissolved Solids	S & N	500 mg/L	500 mg/L	Consistently < 200
pH	S & N	6.5 ≤ pH ≤ 8.5 S.U.		Avg. ≈ 7
Dissolved Oxygen	S & N	≥ 6.0 mg/L		Consistently > 7
Temperature (°C)	Receiving Water S & N	Receive T ≤ 20		Consistently met
Un-ionized Ammonia as Nitrogen	S & N	0.02 mg/L	0.03 mg/L	Consistently met
Ammonia as Nitrogen	S & N	Monitor and Report		Consistently < 0.1
mg/L: milligram per Liter; ppm		MGD: Million Gallons per Day	S.U.: Standard Unit	C: Celsius

The 2010 permit will not require collection of parameter samples for analysis and reporting to the Division for some locations designated in previous permits. Locations retained for reporting in the permit continue to allow the Division to assess potential facility discharge impacts to receiving waters. To assist in making facility management and operation decisions, the permittee may continue to sample and monitor parameters as needed at the sample locations removed by the 2010 permit. The following locations designated in previous permits are not required for reporting by this permit:

- a. The South parcel inflow springs at Hagar, North and Nino Springs;
- c. Outfall 001, the concrete lined ditch at the east side of the south parcel discharging into the northeast corner of the oxbow, but west of the USFWS alluvial fan collection ditch weir discharge to the oxbow [location b];
- d. Lying west of location c, Outfall 002, 003, and 004, pre-2008 raceways discharging to the oxbow;
- e. The oxbow outlet channel to Ruby Marsh, approximately 20 feet downstream east of the oxbow flow exit point at the SE corner of the oxbow. Flows from location b also pass through this point;
- f. The North parcel inflow spring, Bressman Spring;
- i. The overflow outlet from the north parcel natural retention pond prior to discharge to the USFWS collection ditch. This point lies downstream of the collection channel Bressman culvert sample location g.

Locations c and d have been eliminated due to the 2004-2008 refurbishments at the south parcel. Locations a, e, f, and i remain in place and samples may continue to be gathered and analyzed by the permittee as needed. Samples, other than temperature, gathered for analysis at location a of the south parcel are a composite of the artesian spring flow proportions of Hagar, North, and Nino Springs that contribute approximately 65%, 25%, and 10% of the source water, respectively. Temperature values reported for location a shall be the average of the three source springs' temperature taken in a discrete fifteen minute period.

**Proposed Effluent Limitations:** During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee is authorized to discharge from **Outfall 101**, the south parcel main hatchery complex flow-through and hatchery complex cleaning water to the oxbow/mixing pond, and from **Outfall 005**, the north parcel north canopy flow-through and cleaning water to the north parcel natural retention pond.

Samples taken in compliance with the monitoring requirements specified below shall be taken at location [naming convention retained from previous permits where necessary]:

- b. Collection ditch weir [end of a several miles long USFWS ditch at the south parcel's oxbow NE corner];
- g. Bressman culvert [USFWS ditch upstream of north parcel's natural retention pond overflow to ditch];
- h. **Outfall 005**, the north canopy discharge into the north parcel natural retention pond; and
- z. **Outfall 101**, the main complex consolidated hatchery discharge at the south parcel's oxbow NW corner.

The discharge shall be limited and monitored by the Permittee as specified below:  
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**TABLE I.1 – DISCHARGE LIMITATIONS**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS <sup>1</sup>			
	30-Day Average	Daily Max	Sample Location		Measurement Frequency	Sample Type
All concentration units are mg/L unless otherwise indicated.			Facility	Receive		
<b>Flow (MGD) – Outfall 101 South parcel</b>	M & R	6.05	z	--	Monthly	Discrete
<b>Flow (MGD) – Outfall 005 North parcel</b>	M & R	3.50	h	--	Monthly	Discrete
<b>Temperature (°C) Receiving water with trout</b>	<b>Receive</b>	Monitor & Report	--	b, g	Monthly	Discrete
	<b>S Discharge</b>	T <sub>z</sub> ≤ 20.0	z	--	Monthly	Discrete

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS <sup>1</sup>			
All concentration units are mg/L unless otherwise indicated.		30-Day Average	Daily Max	Sample Location		Measurement Frequency	Sample Type
				Facility	Receive		
	N Discharge	T <sub>h</sub> ≤ 20.0		h	--	Monthly	Discrete
pH (S.U.)	Receive	Monitor & Report		--	b, g	Monthly	Discrete
	S & N parcel	6.5 to 9.0		z, h	--		
Dissolved Oxygen	Receive	Monitor & Report		--	b, g	Monthly	Discrete
	S & N parcel	≥ 6.0		z <sup>2</sup> , h <sup>2</sup>	--		
Biochemical Oxygen Demand [5-day, 20°C]	Receive	Monitor & Report		--	b, g	Quarterly	Discrete
	S & N parcel	≤ 4.00	≤ 5.00	z <sup>2</sup> , h <sup>2</sup>	--		
Total Suspended Solids	Receive	Monitor & Report		--	b, g	Quarterly	Discrete
	S & N parcel	≤ 10.00	≤ 15.00	z <sup>2</sup> , h <sup>2</sup>	--		
Total Phosphorus as P	Receive	Monitor & Report		--	b, g	Quarterly	Discrete
	S & N parcel	≤ 0.02	≤ 0.10	z <sup>2</sup> , h <sup>2</sup>	--		
Total Dissolved Solids <sup>3</sup>	Receive	Monitor & Report		--	b, g	Quarterly	Discrete
	S & N parcel	≤ 500		z, h	--		
Total Ammonia as N <sup>4</sup>	S & N parcel	Footnote 4A	Footnote 4B	z <sup>2</sup> , h <sup>2</sup>	--	Monthly <sup>4A, 4B</sup>	Discrete
E. Coli <sup>5</sup> (number) per 100 ml	Receive	Monitor & Report		--	b, g	Monthly <sup>5</sup> Quarterly <sup>5</sup>	Discrete
	S & N parcel	Monitor & Report		z, h	--		
Drugs <sup>6</sup> : INAD & extralabel		Monitor & Report		Report per 40 CFR 451.3(a).			
Failure or Damage to the Structure of Aquatic Animal Containment System		Monitor & Report		Perform Permit Part II requirements. Report per 40 CFR 451.3(b).			
Spills		Monitor & Report		Perform Permit Part II requirements. Report per 40 CFR 451.3(c).			
°C: Degrees Celsius [temperature] mg/L: Milligrams per Liter: ppm		ml: milliliter M & R: Monitor and Report		MGD: Million Gallons per Day SU: Standard Units		MPN: Most Probable Number TDS: Total Dissolved Solids	

- See Part I.B. of permit for additional information on sampling, testing, reporting, monitoring and definitions related to requirements.
- At times such that total spring inflow significantly subsides in response to natural conditions at either parcel and forces the required daily cleansing flow to become a substantively larger portion of the combined discharge of cleansing and pass through flows, the permittee may meet the compliance limit at location e (south parcel's oxbow outlet channel to Ruby Marsh) or i, (overflow outlet of north parcel's natural retention pond to the USFWS collection channel) of the respective parcel. Permittee shall provide explanation when utilizing this provision AND frequency shall be monthly.
- TDS is limited to whichever is less of the 95<sup>th</sup> percentile value calculated for the receiving water's sample concentrations and 500 mg/L. Until a statistically significant number of samples are collected to develop the 95<sup>th</sup> percentile value, the TDS permit level is set at 500 mg/L.
- For each sample event, formula terms contained in A and B below shall have the following meaning: **pH and T are field measurements of facility discharge** taken at the same time and location as the water sample destined for the laboratory analysis of ammonia.
  - The chronic criteria of water quality with regard to the concentration of total ammonia are subject to the following:
    - The facility discharge Monthly chronic concentration of total ammonia, in milligrams of nitrogen per liter, shall be calculated by the NAC 445A.118 Table 2 chronic concentration by **value from table matrix of temperature and pH or by formula** for the 30-Day average for each discharge sample event as follows:
 
$$\left[ \frac{0.0577}{1 + 10^{7.688 - pH}} \right] + \left[ \frac{2.487}{1 + 10^{pH - 7.688}} \right] \times MIN [2.85, 1.45 \times 10^{0.028 \times (25 - T)}]$$
 where : MIN = lesser of comma separated values; T = temp. Celsius deg.; x = multiply
    - The concentration of total ammonia, in milligrams of nitrogen per liter, expressed as a 30-day average must not exceed the applicable chronic criterion as calculated more than once every 3 years on average and the highest 4-day average within the 30-day period must not exceed 2.5 times the applicable chronic criterion.

**Measurement frequency** of once per 30-day (Monthly) is an acceptable indicator for evaluating total ammonia chronic criterion and may be used in reporting to demonstrate compliance of discharge event calculated limit. However, if a sample analysis exceeds the allowed calculated chronic limit in part (a), the **measurement frequency** must be increased to a minimum of 4 consecutive days within the 30-day period so that chronic criterion part (b) can be applied for determining permit compliance.

B. The acute criteria for water quality with regard to the concentration of total ammonia are subject to the following:

- The facility discharge Daily Maximum acute concentration of total ammonia, in milligrams of nitrogen per liter, for **cold water**

**fisheries** shall be calculated by the NAC 445A.118 Table 1 acute concentration by **value from table matrix of pH and fishery water type or by formula** for the 1-hour average for each sample event as follows: 
$$\left[ \frac{0.275}{1 + 10^{7.204 - pH}} \right] + \left[ \frac{39.0}{1 + 10^{pH - 7.204}} \right]$$

- (b) The concentration of total ammonia, in milligrams of nitrogen per liter, must not exceed the applicable acute criterion as calculated more than once every 3 years on average.

**Measurement frequency** for evaluating total ammonia acute criterion as daily maximum shall utilize the same **measurement frequency** required for that of evaluating the chronic criteria of water quality defined in A above. The total ammonia concentration determined by laboratory analysis for each sample event shall be compared to the same event's calculated acute criterion limit.

5. To establish representative values for this parameter, the permittee, for the first two years of this 2010 permit, shall sample monthly May through October, inclusive, and sample quarterly the remainder of the calendar year. At the end of the first two years of this 2010 permit after establishing representative values for this parameter at the respective locations, upon Permittee request to and approval by NDEP, Permittee may reduce sample frequency to quarterly at the locations. NDEP may require the higher frequency of samples to continue beyond the anticipated two year time frame depending on analysis of reported results.
6. Reporting is not required for an investigational new animal drug (INAD) or extralabel drug use of a drug previously approved by FDA for a different aquatic animal species or diseases if the INAD or extralabel use is at or below the approved dosage and involves similar conditions of use. The permittee shall notify the Division of any anticipated use of a drug that will not qualify for non-reporting in accordance with this provision. Following permittee notification to the Division, the permittee shall, for the drug or constituent of concern, meet the concentration limit and the sampling and reporting frequency set by the Division. The permittee shall apply for permit modification if necessary.

### **Rationale for Permit Requirements:**

Operations are routine enough at each parcel that the combination of cleansing and pass through volumes are relatively consistent from day to day; hence, samples taken on any given day are considered to be representative of normal discharges that can affect the receiving waters identified in the permit.

Laboratory analyses for select permit parameters on the USFWS collection ditch will be performed at a permit designated collection frequency and report basis to accumulate a statistically significant number of samples and calculate the samples 95<sup>th</sup> percentile value. This value is used for characterizing existing conditions of the receiving waters and to establish a background numeric criteria standard for the receiving water. Until such time as the 95<sup>th</sup> percentile value is established for specific parameters to limit respective discharges into receiving waters; the concentration limits set for parameters in this permit are set to be protective of the beneficial uses identified for the receiving water. Limits may be adjusted in future permits to reflect determinations based on the receiving water characterization analyses.

**Flow-** Records indicate that the previous discharge for the south parcel has usually been well below the permitted volume; however, the hatchery has no method to control the volume of inflow spring water sources. The daily maximum discharge flow is 6.05 MGD, slightly above the maximum historic flow, to allow for total springs source flow variability. The volume of Hagar, North, and Nino Spring flow that exceed facility process use (flow-through and cleansing water) at the hatchery are directly by-passed as discharge to the south parcel oxbow. Due to 2004-2008 refurbishments on the south parcel, Outfall 101 (location z) serves as the consolidated discharge for all NDOW facility by-pass, flow-through, and cleansing water operation functions.

The north canopy facility source flows for the winter 2000/2001 flow averaged approximately 1.73 MGD. To account for seasonal variation from Bressman Spring, a daily maximum flow of 3.50 MGD is set for the permit at Outfall 005 (location h). As on the south parcel, the north parcel site has no method to control the volume of inflow spring water sources.

**Temperature-** Per NAC 445A.125.3, the Class B water quality standards require that the temperature not exceed 20° C for waters with trout and that there may be no temperature increase above natural receiving water temperature. Records indicate that the temperature of individual artesian spring sources contributing to the receiving water (Ruby Marsh) are often already elevated above that of the receiving water it is meant not to increase. This phenomenon is typical in this geographic area since the artesian source water must have sufficient time to be influenced by ground and air temperature away from the initial spring source in order to achieve an ambient temperature that can be regarded as the temperature of the receiving water. The permitted facilities lie in close proximity to the artesian spring sources and do not utilize the diverted water in a manner that will alter or disrupt the source water's temperature appreciably from the changes anticipated to occur if the facilities were absent. Applying the Class B temperature standard requiring no temperature increase above the natural receiving water temperature is impractical for this permit since the natural physical condition itself does not conform to the language of the adopted standard. No temperature change limit is set by this permit relating the facility discharge temperature to that of either the receiving or source water temperature. Records indicate that the source spring temperatures at each parcel are consistently meeting the requirement not to exceed 20 °C for Class B waters with trout present. Water discharged from the facility will be limited to not exceeding 20 °C as required for a Class B designated receiving water with trout present.

**Dissolved Oxygen (DO)**- The minimum (level) DO limit of 6.0 mg/l for north and south parcels is based on the requirement listed in NAC 445A.125.3. The Class B water quality standards require that DO concentration be greater than or equal to 6.0 mg/L for waters with trout.

**pH**- This limit of 6.5 to 9.0 S.U. is based on the requirements listed in NAC 445A.125.3 and is set for both the north and south parcels.

**BOD (5-day, 20° C)** - No five-day biochemical oxygen demand (BOD<sub>5</sub>) standard exists for Class B waters; however, a dissolved oxygen (DO) standard for a minimum 6.0 mg/L concentration is set for receiving waters with trout species present. To maintain this level of DO, a BOD<sub>5</sub> standard was established at the 4.00 mg/L 30-day average and 5.00 mg/L daily maximum levels in a previous National Pollutant Discharge Elimination System Permit issued for the south and north parcels. Each parcel's daily cleansing, flow-through, and source by-pass flow activities are routed at each parcel to become a consolidated discharge for the parcel. The cleansing flow component constitutes a must-do process activity at each parcel and which will become a greater proportion of the consolidated discharge from each parcel when inflow from spring sources subside in response to possible lower seasonal and cyclical precipitation patterns. As source springs respond to natural conditions, operations at either parcel may require that cleansing flows become more dominant in the discharge stream; thus have greater influence on the final consolidated discharge concentration. Although this situation of proportional increase of cleansing flow in relation to a parcel's discharge flow should be infrequent, the permittee may meet the BOD<sub>5</sub> concentration limit for compliance for the south parcel at location e (south parcel's oxbow outlet channel to Ruby Marsh), and on the north parcel at location i (overflow outlet of north parcel's natural retention pond to the USFWS collection ditch). When the permittee chooses to act under this provision, the permittee is required to provide explanation for using location e and/or i being the compliance location for a sample report.

**Total Suspended Solids**- The Class B water quality standards, NAC 445A.125.3, do not include a total suspended solids (TSS) concentration standard. The proposed limits of 10.00 mg/L and 15.00 mg/L as a 30-day average and daily maximum respectively were established in a previous permit for the south and north parcels. These limits are continued for each parcel in this permit.

**Total Phosphorus as P**- NAC 445A.125.3 now requires total phosphorus as P as the Class B water quality standard rather than total phosphates as was required in previous permits. Beginning with this 2010 permit, the daily maximum limit is 0.10 mg/L and the 30-day average limit is 0.02 mg/L for total phosphorus as P on the north and south parcels. Using the proposed concentration criteria limits for total phosphorus as P is as stringent as the previous permit's concentration criteria having total phosphates for the protecting beneficial uses.

**Total Dissolved Solids**- In June 2008, the State Environmental Commission (SEC) approved modifying NAC 445A.125.3 TDS limits to be the 95<sup>th</sup> percentile value calculated for the receiving water's historic background concentrations or not to exceed 500 mg/L, whichever is less. Enacting this change is as protective of and stringent as the previous limit in addition to providing an approach that is better able to address characterizing the variability of natural conditions at a given location. Until a statistically significant number of samples are collected to develop the 95<sup>th</sup> percentile value for the receiving water at the USFWS collection ditch at location b and h of the respective south and north parcels, the TDS permit level is set at 500 mg/L. A limit of 500 mg/L is protective of the beneficial uses identified for Class B waters in NAC 445A.125.2.

**Total Ammonia as N**- In June 2008, the State Environmental Commission (SEC) approved modifying NAC 445A.125.3 to include requirement to meet provisions for this parameter as listed in NAC 445A.118. Provision is made in NAC 445A.118 for meeting a Daily Maximum value (acute concentration) and a 30-Day Average value (chronic concentration). This method for analyzing ammonia is new to this 2010 permit and replaces the evaluation of un-ionized ammonia and ammonia nitrogen for the protection of aquatic life beneficial use for a Class B receiving waterbody. Using the proposed acute and chronic total ammonia concentration criteria table values or formula from NAC 445A.118 to determine protection of aquatic life is as stringent as the previous permit using un-ionized ammonia concentration criteria.

**E. Coli** - In June 2008, the State Environmental Commission (SEC) approved modifying NAC 445A.125.3 to include criteria for E. Coli being protective of beneficial uses for Class B waters. Limits of E. Coli. number per 100 milliliter sample have not been set for receiving waters of this permit. No limits are set for this parameter until such time as a statistically significant number of samples are collected to develop the individual value for limits to the receiving waters at the north and south parcels. E. Coli. number limits that can be considered as target values for receiving waters of this permit are 126 annual geometric mean and 576 single value. The permittee shall monitor and report samples for this parameter taken at the sample locations and frequency indicated in the permit discharge limitations

table.

**Fecal Coliform-** Although NAC 445A.125.3 water quality standards criteria for Class B waters establishes limits for fecal coliform, pre-2010 permits did not require any limits, monitoring or reporting for this parameter at either the north or south parcels. Analysis for E. Coli is a 2010 permit requirement and is protective of the beneficial uses identified for Class B waters in NAC 445A.125.2. Analyzing for fecal coliform is resource intensive and redundant of beneficial uses protected by E. Coli. limits set in this permit; therefore, fecal coliform monitoring is not required.

**DRUGS: INAD & Extralabel-** This limit is based on a US EPA final rule, effective on June 30, 2004, addressing effluent guidelines for the aquatic animal production industry and requires that such facilities monitor and report drug use per 40 CFR 451.3. Reporting is not required for an investigational new animal drug (INAD) or extralabel drug use of a drug previously approved by FDA for a different aquatic animal species or diseases if the INAD or extralabel use is at or below the approved dosage and involves similar conditions of use. . The permittee shall notify the Division of any anticipated use of a drug that will not qualify for non-reporting in accordance with this provision. Following permittee notification to the Division, the permittee shall, for the drug or constituent of concern, meet the concentration limit and the sampling and reporting frequency set by the Division. The permittee shall apply for permit modification if necessary.

**Supplemental Permit Conditions:** A statistically significant number of samples must be collected to develop the 95<sup>th</sup> percentile value that characterizes the background natural conditions of receiving waters for a parameter/location combination. Monitoring and reporting by the permittee for specified parameters is required relative to the receiving waters and parcel discharge. Until a sufficient number of representative factors of the combination have been encountered for inclusion in developing the 95<sup>th</sup> percentile value, the data collection time period at a particular site is indeterminate. In many instances, establishing discharge limits for a given parameter/location that are dependent on receiving waters characterization, may be resource intensive to the permittee. During the period this permit is in force, the permittee may work with NDEP to establish limits and controls by minor modification of the permit. Minor modification is allowed by using available receiving waters characterization results and reviewing, if possible, other appropriate criteria guidelines so long as any resulting limitations established by a minor modification will be protective of the beneficial uses of the receiving water at the given location.

**Schedule of Compliance:** The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

- **Discharge Limits** - Permittee shall achieve discharge limits compliance upon permit issue.
- **Operations and maintenance manual** - Reconstruction of the facility is completed and in production. The current operation manual of record is for the facility operating prior to the 2004-2008 refurbishments on the south parcel. An updated operations and maintenance (O&M) manual for the facility shall be submitted to NDEP by **July 1, 2010**. The O&M manual shall cover both facility parcels and shall address, but are not limited to,:

Requirements from the July 2008 NDEP facility inspection report,

- Sludge management practices; and
- Site plan of the refurbished hatchery south parcel showing, but not limited to, new buildings, covered springs, general flow paths (piping) for routing of pass-through source water and cleansing flows.

A requirement by the EPA *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category* [EPA 821-B-05-001, March 2006] to provide a Best Management Practice (BMP) plan that describes how the facility will function to meet 40 CFR 451.3(d).(1)-(3) requirements.

**Proposed Determination:** The Division has made the tentative determination to issue (renew) the proposed permit, under the provisions prescribed, for a 5-year period. Under NAC 445A.232, this facility falls under the permit category of DISCHARGE FROM A FISH HATCHERY ...2,500,000 gallons or more daily.

**Procedures for Public Comment:** Notice of the Division's intent to issue a permit authorizing the facility to discharge to waters of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** and the **Elko Daily Free Press** for publication. Notice is also mailed to interested persons in the NDEP-BWPC mailing list database. Anyone wishing to comment on the proposed permit can do so in writing up through the noticed comment period date, as designated herein, which must be through a period of at least 30 days

following the date of the public notice. All materials being submitted must be hand-delivered, e-mailed, faxed or postmarked no later than 5:00 P.M. PST, or PDT if in effect, on **April 14, 2010**, the close of noticed comment period. The comment period can be extended at the discretion of the Administrator. A public hearing on the proposed determination can be requested by the Applicant, any affected state, any affected interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reason(s) why a hearing is warranted.

Any public hearing held by the Administrator will be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings will be conducted in accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: E. Samuel Stegeman, P.E.  
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