

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

Permittee Name: Nevada Department of Wildlife
1100 Valley Road
Reno, NV 89512

Permit Number: NEV92035

Location: Mason Valley Wildlife Management Area
1 Lux Lane
Yerington, Lyon County, NV 89447
Latitude: 39° 10' N, Longitude: 119° 10' W
Township 14N, Range 26E, Section 7

Wellhead Protection Area: The municipal and hatchery effluent reuse areas, addressed within this permit, are not located within a Drinking Water Protection Area or a wellhead capture zone for any public supply well.

General: Mason Valley Wildlife Management Area (MVWMA) is operated by the Nevada Department of Wildlife (NDOW) as a wildlife habitat with areas set aside for hunting and fishing.

Table 1 addresses the reuse of treated, disinfected effluent from the City of Yerington (#NEV40033). Yerington effluent is received in the Cinnamon Pond mixing pool, located at the southern MVWMA boundary. Cinnamon Pond is a 125-acre wetland habitat providing waterfowl habitat and managed duck hunting. The wetland is also augmented with diversion water from the Walker River. Cinnamon Pond is not a recognized game fishing area, and fish production is presently limited to “rough” fish, e.g., carp.

Table 2 addresses the reuse of effluent from the MVWMA trout hatchery (i.e., rainbow, cutthroat, brown and brook trout). Hatchery water is sourced from five on-site production wells. After chilling, the water is used in the hatchery as single-pass water in the egg hatchery and raceways (holding pens). Hatchery effluent is then biologically treated (polished) in Kuenzli Pond via natural wetland purification processes, prior to discharging to the MVWMA stocked fishing ponds. The stocked fishing ponds can be rotated seasonally, and include Hinkson Slough, Redhead Pond, Bass Pond, Crappie Pond and North Pond. The primary game fish species in the fishing ponds includes trout and bass.

Not covered in this permit’s monitoring conditions but also intermittently supplied to MVWMA is non-contact, cooling pond water from the NV Energy Ft. Churchill Generating Station (#NEV95001). Ft. Churchill supplies its cooling pond water as needed to MVWMA to augment operating level in the North Pond.

Flow: Yerington effluent averaged 0.29 MGD (324 AF/yr). Hatchery effluent averaged 4.96 MGD (5,555 AF/yr). The discharge from Ft. Churchill (#NEV95001, Outfall #003) to the North Pond is intermittent, and the flow not metered. Total discharge to the Ft. Churchill cooling ponds (Outfall #001) averaged 2.5 MGD. Permit #NEV92035 is assigned to the hatchery fee category for assessment of its permit discharge fee (5.6 MGD upper limit).

DMR Analysis:

- *Yerington Effluent:* Monitoring data provided by the City of Yerington (#NEV40033) indicates the following representative data: CBOD, 15 mg/l; TSS, 45 mg/l; pH, 7.5 S.U. and Fecal Coliform, 30 CFU, which indicated overall compliance with Category “D” reuse standards. For the permit renewal of discharge permits #NEV40033 and #NEV92035, a seasonal (quarterly) monitoring schedule is proposed for effluent Total Nitrogen and Phosphorus parameters to allow the Division and NDOW to track nutrient loading to the wetlands environment, similar to the monthly reporting requirement at the Fernley Wildlife Management Area (#NEV98008). The City of Yerington influent is considered domestic-strength in origin and no industrial dischargers are connected. Municipal wastewater lagoons do not considerably reduce domestic levels of nitrogen and phosphorus.
- *Hatchery Effluent:* Monitoring data provided by NDOW (#NEV92035) indicates the following representative data for fish hatchery effluent after polishing in Kuenzli Pond: Temperature, 55°F; Total Phosphorus as P, 0.15 mg/l; BOD₅, 3 mg/l; TSS, < 10 mg/l; TDS, 223 mg/l; pH, 8 S.U.; Un-ionized Ammonia; < 0.003 mg/l; Ammonia-Nitrogen, < 0.1 mg/l and Dissolved Oxygen; 8 mg/l. The hatchery effluent is very good quality water and suitable for use in stocked bass and trout ponds.

Receiving Water Characteristics: Treated municipal, hatchery and cooling pond effluent is reused within natural wetlands and pond habitats at MVWMA. This environment provides natural wetland purification and vegetative nutrient uptake of nitrogen and phosphorus. As NDOW resources allow, some seasonal nutrient management is practiced via pond rotation and vegetation burning. The wetland and fishing ponds are unlined, and as such, permit some seepage to groundwater of the State. To date, the Division has not required groundwater monitoring at this location. The depth to groundwater at the fish hatchery is reported to be 33 ft below ground surface (ref. NDOW Well “B”). The groundwater flow path from the ponds is also reported to be west-northwest towards the Walker River.

Proposed Effluent Limitations and Special Conditions:**Table 1: Yerington Effluent (Cinnamon Pond Mixing Pool)**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, AF/yr	660		Continuous	Flow Meter ¹
CBOD, mg/L	Monitor & Report		Monthly	Discrete ¹
TSS, mg/L	Monitor & Report		Monthly	Discrete ¹
pH, S.U.	Monitor & Report		Monthly	Discrete ¹
Fecal Coliform, cfu or mpn/100 ml	Monitor & Report		Monthly	Discrete ¹

Total Nitrogen as N, mg/l	Monitor & Report	Quarterly	Discrete ¹
Total Phosphorus as P, mg/l	Monitor & Report	Quarterly	Discrete ¹

1. Sampling results shall be provided by the City of Yerington (#NEV40033) and reported by the Permittee on a DMR form.

Table 2: Mason Valley Fish Hatchery (Kuenzli Pond)

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD (Hatchery Effluent)	Monitor & Report		Continuous	Flow Meter
Analytes List, mg/L (Hatchery Effluent) ¹	Monitor & Report		Annually (2 nd Quarter)	Discrete
Analytes List, mg/L (Kuenzli Pond Effluent) ¹	Monitor & Report		Annually (2 nd Quarter)	Discrete

1. Analytes list defined as: BOD₅, TSS, TDS, pH, Total Nitrogen as N, Ammonia Nitrogen as N, Un-ionized Ammonia Nitrogen as N, Total Phosphorus as P, and D.O.

Schedule of Compliance: The Permittee shall submit the following item to the Division for review and approval (**all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control**):

- Within ninety (90) days of the permit renewal date, the Permittee shall submit an updated copy of the Effluent Management Plan (EMP) covering the reuse of municipal, hatchery and non-contact cooling pond effluent at the MVWMA.

Procedures for Public Comment: The Notice of the Division’s intent to issue (renew) this reuse permit, subject to the conditions contained within the permit is being sent to the **Mason Valley News** and **Reno Gazette-Journal** newspapers for publication. The notice is also being electronically mailed to interested persons on our public notification mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **Monday, May 18, 2009, by 5:00 P.M. PST.**

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 reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must 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.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed effluent reuse permit for a period of five (5) years.

Prepared by: Mark A. Kaminski, P.E.
Staff Engineer III
Technical Services Branch
NDEP Bureau of Water Pollution Control

Date: April 9, 2009