

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(Pursuant to NAC 445A.236)

Permittee Name: U.S. Department of Interior
National Park Service - Lake Mead National Recreation Area
601 Nevada Way
Boulder City, NV 89005

Facility: Echo Bay Water Treatment Plant (WTP)
670 Runaway Hill Road
Echo Bay (Overton), NV 89040

Permit Number: NEV2004513

Location: North of Echo Bay; West of the Echo Bay Resort; 23 miles south of Overton, NV

Latitude: 36° 18' 36" N
Longitude: 114° 25' 43" W

Township 19 South, Range 68 East, Section 6

Flow: Current Operational Flow is 0.006 MGD (30-Day Average)

Corrective Actions Sites:

There are no Bureau of Corrective Actions (BCA) remediation sites located within a one-mile radius of the permitted facility.

Well Head and Drinking Water Supply Protection:

The facility is within 6000' of a surface water intake (IN01) and Public Well System (NV0002503)

General:

The Permittee operates a micro filtration water treatment facility which draws raw water from a Lake Mead water intake barge structure into the plant raw water storage tank. Raw water is pumped from the tank, passing through screens and into the 0.2 micron membrane modules (24 membrane filters) of the micro filtration system for treatment. Product water is collected in the clearwell, disinfected with calcium hypochlorite and pumped to the 500,000 gallon potable water storage tank and from there into the distribution system. Backwash is achieved with a reverse flow of 95 psi compressed air through the membrane modules, with a raw water sweep to flush away any material. The backwash water is discharged for evaporation to a 3472 ft³ pond lined with a 60 mil heavy-duty poly membrane liner. The pond has an overflow riser designed to direct any excess water for the irrigation of an area of desert riparian vegetation. Excess flows are seldom, occurring mostly on busy summer event weekends. The plant is designed to meet State and Federal water quality requirements and for protection against *giardia cysts* and *cryptosporidium oocysts*. **The Permittee is required to monitor the backwash discharge.**

FACT SHEET
NEV2004513 / NPS Echo Bay WTP
Page 2 of 4

Flow:

The treatment system has a design capacity of 0.012 MGD 30-day average, and 0.044 MGD daily maximum. The requested flow limits for the current permit renewal 5 year time frame for the backwash flows is 0.012 MGD (30-day average) and 0.044 MGD (daily maximum). Backwash discharges occur at 422 GPM for each cycle. Current operational flows are at 0.006 MGD (30-day average) and 0.010 MGD (daily maximum). The plant is automated with cycles of operation monitored by the water treatment plant operator.

Receiving Water Characteristics:

The receiving waters are the groundwater of the State of Nevada. Depth to groundwater is 37.06 feet. No adverse effects are expected as a result of this discharge.

Proposed Effluent Limitations and Monitoring Requirements

The discharge from the facility shall be monitored and limited by the following:

TABLE I. Discharge Limitations

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS</u>		<u>MONITORING REQUIREMENTS</u>	
	30 Day Ave.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	0.012	0.044	Monthly	Meter/Calculate ¹
Total Dissolved Solids (mg/L)	1000	1000	Monthly	Discrete
Total Suspended Solids (mg/L)	Monitor and Report		Monthly	Discrete

(1) The total flow in gallons per month shall be determined from the flows recorded in the plant Operations Log. This information shall be reported quarterly, as required by this permit.

Discharge Monitoring Reports are to be submitted by the Permittee to NDEP at the following address.

Nevada Division of Environmental Protection
 Bureau of Water Pollution Control
 Compliance Coordinator
 901 South Stewart Street, Suite 4001
 Carson City, NV 89701

Schedule of Compliance

FACT SHEET
NEV2004513 / NPS Echo Bay WTP
Page 3 of 4

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, which the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit;
- b. By **August 20, 2010**, the Permittee, or its representative, shall submit for approval an updated Operations and Maintenance (O & M) manual. The document shall be prepared by the Certified Water Treatment Plant Operator, and reviewed by the National Park Service Utility Systems Manager prior to submission.
- c. All compliance deliverables shall be submitted to both addresses listed below:

Mr. Nadir Sous
Nevada Division of Environmental Protection

Compliance Coordinator
Nevada Division of Environmental Protection

Las Vegas Office
2030 E. Flamingo Road Suite 230
Las Vegas, NV 89119

Bureau of Water Pollution Control
Stewart Street, Suite 4001
Carson City, NV 89701

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to the groundwater of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Las Vegas Review-Journal** for publication. The notice is being emailed to interested persons on our email list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. **All comments must be received by NDEP by 5:00 pm, May 17, 2010**

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 determined to be appropriate. All public hearings must be conducted to 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

FACT SHEET
NEV2004513 / NPS Echo Bay WTP
Page 4 of 4

The Division has made the tentative determination to reissue the permit for a period of five (5) years, subject to effluent and monitoring limitations.

Rationale for Permit Requirements

The limitations and monitoring requirements are intended to provide for appropriate reuse of treated effluent, to minimize the possibility of adverse impact to ground waters of the State, and to alert those persons who might have contact with treated effluent to its presence at the facility.

Prepared by: Michele Reid
April 2010