

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

Permittee Name: Clark County Water Reclamation District
Searchlight Wastewater Treatment Facility
5857 East Flamingo Road
Las Vegas, NV 89122

Permit Number: NEV40038

Location: Approximately 0.75 mile southeast of Searchlight
Clark County, Nevada

Latitude: 35° 27' 29"N, Longitude: 114° 54' 23"W
Township 29S, Range 63E, Section 2

Proximity to Water Supply Wells:

The Searchlight Wastewater Treatment Facility is not within a 2-, 5-, or 10-year capture zone for any protected wellhead, nor is it within a 7000-foot buffer zone for any water supply well.

General:

The Searchlight Wastewater Treatment Facility (WWTF), owned and operated by the Clark County Water Reclamation District (CCWRD), provides sewer service to 198 residential and 21 commercial connections. According to recent documentation from CCWRD, the commercial connections account for approximately 51% of the influent to the WWTF. The head works consist of a main lift station, which serves the commercial connections and residences east of US Highway 95. The lift station pump timer determines flow. However, a number of residences west of the Highway discharge via a 4-inch gravity flow line, which enters the lift station discharge line after the pump, and is therefore not accounted for in the reported flows.

The WWTF is located approximately 0.75 miles south-southeast of the Searchlight town site. Wastewater is transported to the treatment pond system via an 8-inch line. Primary treatment ponds 1 and 2 are twin 1.2 acre, asphalt lined facultative ponds operated in parallel. Effluent from the primary treatment ponds is discharged to two asphalt-lined, 1.8-acre secondary treatment/evaporation ponds, Ponds 3 and 4. During periods of low evaporation, Ponds 3 and 4 discharge to Pond 5, a 2.8-acre percolation basin with Hypalon lined sides and a scarified bottom.

Flow:

The mean quarterly average and daily maximum influent flow to the WWTF during the term of the current permit are 0.037 and 0.040 MGD, respectively. The highest measured daily flow during the period was 0.063 MGD. The measured influent is below the permit flow limitation of 0.090 MGD (Quarterly Average).

Effluent Characteristics

Influent to the facility during the period of the previous permit was determined to have average BOD₅ and TSS concentrations of 311 and 210 mg/l, respectively. These levels are higher than typically encountered in domestic wastewater treatment systems, and have been attributed to the relatively high percentage of commercial flow from restaurant/casinos in the Searchlight collection system. The previous permit limited effluent quality by BOD₅ loading parameters. Pond loading limitations are typically applied to pond systems that discharge to groundwater

only during periods of low evaporation. Loading was set at 120 pounds BOD₅ per day, based on NDEP facultative pond limits of 50 pounds BOD₅/acre/day discharged to the two 1.2 acre primary ponds. Primary pond effluent quality is listed in the following Table:

| PARAMETER | POND 3 | POND 4 |
|---|--------|--------|
| BOD ₅ Loading, lbs/day (limit: 120 lbs/day) | 25.9 | 25.3 |
| BOD ₅ , mg/l (limit: Monitor & Report) | 84 | 84 |
| TSS, mg/l (limit: Monitor & Report) | 182 | 265 |

Receiving Water Characteristics:

Reported depth to groundwater in the area near the WWTF exceeds 100 feet, and the soils underlying the ponds are reported to be impervious caliches and cemented sand and gravel horizons. There are currently no monitoring wells associated with this permit.

Proposed Determination:

The Division has made the tentative determination to renew the proposed groundwater discharge permit for a period of five (5) years with specific requirements for achieving effluent compliance and protection of State groundwater resources.

Proposed Effluent Limitations and Special Conditions:

Discharges from the Searchlight WWTF to groundwater of the State will be limited and monitored as follows:

| PARAMETER | | DISCHARGE LIMITATIONS | | MONITORING REQUIREMENTS | |
|--------------------------------------|-------------------------------------|-----------------------|---------------|--------------------------------|-----------------------|
| | | Quarterly Average | Daily Maximum | Measurement Frequency | Sample Type |
| Flow (MGD) | | 0.090 | --- | Continuous | Pump Timer & Estimate |
| Influent: BOD ₅ (lbs/day) | | 84* | --- | Quarterly | Discrete |
| BOD ₅ (mg/l) | | M & R | --- | | |
| TSS (mg/l) | | M & R | --- | | |
| Pond 3 | Effluent: BOD ₅ (mg/l) | 30 | 45 | Quarterly, as Discharge Occurs | Discrete |
| | TSS (mg/l) | 90 | --- | | |
| Pond Level (feet) | | M & R | --- | Quarterly | |
| Pond 4 | Effluent: BOD ₅ (mg/l) | 30 | 45 | Quarterly, as Discharge Occurs | Discrete |
| | TSS (mg/l) | 90 | --- | | |
| Pond Level (feet) | | M & R | --- | Quarterly | |
| Pond 5 | Pond Water: BOD ₅ (mg/l) | Monitor & Report | | Quarterly, as Discharge Occurs | Discrete |
| | TSS (mg/l) | | | | |
| Pond Level (feet) | | | | Quarterly | |

* Based upon 35 lbs/acre/day discharged to 2-1.2 acre evaporation ponds.

Schedule of Compliance:

- a. 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.
- b. Within thirty (30) days of permit issuance, the Permittee shall submit, for review and approval, a plan for the estimation of inflow to the pond system from the gravity flow connections.
- c. Within forty-five (45) days of permit issuance, the Permittee shall submitted, for review and approval, a revised Operations and Maintenance (O&M) Manual.
- d. Within ninety (90) days of the permit issuance, the Permittee shall submit, for review and approval, a schedule for measuring sludge levels, and for draining, removing sludge, inspecting and sealing (where necessary) of the primary and secondary asphalt-lined ponds.

Rationale for Permit Requirements:

The Division's rationale for the proposed monitoring conditions is as follows:

- *Flow*: Flow is tracked to ensure that the design capacity of the treatment pond system is not exceeded, and that the proper monitoring regimen is followed when the facility nears design capacity. Estimates of non-pumped flow to the system will be included in the flow reporting.
- *BOD₅*: The Division requires the monitoring of effluent Biochemical Oxygen Demand (BOD₅) as an indicator of treatment performance in the pond, and to ensure that the loading of the primary ponds do not contribute to odor issues. The permit limit established for primary ponds located above 3000 feet AMSL is 35 pounds BOD₅ per acre per day. Discharge from the secondary ponds to groundwater is limited by secondary treatment BOD₅ standards to quarterly average of 30 mg/l and daily maximum 45 mg/l. These limits are set to ensure groundwater quality protection.
- *TSS*: The TSS limit is set at 90 mg/L, the standard set for discharge from wastewater treatment systems utilizing secondary ponds. Other similarly operated systems within the State meet the treatment standard of 90-mg/l.

Procedures for Public Comment:

The Notice of the Division's intent to renew a permit authorizing the facility to discharge secondary-treated effluent into groundwaters of the State, subject to the conditions contained within the permit is being sent to the **Las Vegas Review Journal** for publication. The notice is being mailed to interested persons on our 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. All written comments are to be hand-delivered, postmarked (via mail) or transmitted to the Division via fax or e-mail by **5:00 P.M. on September 26, 2005**.

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.

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 Bureau of Water Pollution Control
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