

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

Permittee: City of Fallon
55 W. Williams Ave
Fallon, NV 89406

Permit No.: NV0020061

Facility: Fallon Wastewater Treatment Plant
1375 New River Parkway
Fallon, Churchill County, Nevada 89406
Township 19N, Range 29E, Section 32

Latitude: 39° 27' 49" North
Longitude: 118° 45' 10" West

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Corrective Actions Sites:

There are no Nevada Division of Environmental Protection (NDEP) Bureau of Corrective Actions (BCA) remediation sites located within a one-mile radius of the subject site.

Well Head and Drinking Water Supply Protection:

The subject facility is within the 3000' Drinking Water Protection Area around Wells 1, 2 and 3 of the Naval Air Station (NAS) Fallon public water supply well. The facility is within the 6000' DWPA around the public water supply wells listed in the table below. The subject facility is not within an established Well Head Protection Area (WHPA).

Public Water Supply		Well
NDEP Public Water Supply Designation	Public Water Supply Name	
NV0000058	Wildes Manor	Well 1
NV0000061	Tolas Mobile Home Park	Well 1
NV0004002	Ember Mobile Manor	Well1
NV0000047	Deluxe Mobile Home Park	East Well
NV0000055	South Maine Mobile Home Park	Well 2

General:

The City of Fallon's wastewater treatment plant is based on three sequencing batch reactors (SBRs) with a combined capacity of 2.2 MGD. Pretreatment is accomplished by a grit chamber and mechanical auger screen, with a bar screen-equipped bypass channel. Screening loads are reduced considerably by the trash rack in the adjacent lift station. Air is withheld for most of the fill cycle, delaying reaction and therefore resulting in maximum distribution of influent with biomass. Near the end of the fill cycle aeration is initiated through distributed jet nozzles, achieving nitrification within the jet streams, and denitrification in the oxygen poor areas throughout the basin. Each batch cycle of this activated sludge process concludes with quiescent

settling followed by decanting and discharge of the liquid portion to the chlorine contact basin. Four decant cycles daily are discharged to the chlorine contact basin and held for 60 minutes each. Following disinfection, sodium metabisulfite is mixed in at the basin's discharge pipe for dechlorination; with the final effluent discharged to a rock lined ditch leading to a short tributary of New River Drain.

A portion of the settled sludge is removed periodically and pumped to an aerobic digester. Following the one week digestion period the sludge is pumped to one of two HDPE lined storage ponds, with an estimated capacity of four years each.

During the period from April 2006 through December 2010, the following effluent flow and characteristics were reported:

Parameter	Permit Limit	Average	Maximum	Minimum
Flow (MGD)				
30-Day Average:	2.2	0.9	1.2	0.8
Daily Maximum	3.3	1.1	1.9	0.8
Biochemical Oxygen Demand (BOD ₅) (mg/L)				
30-Day Average:	30	3	19	<2
Daily Maximum	45	5	29	<2
Total Suspended Solids (TSS)(mg/L)				
30-Day Average:	30	6	15	<5
Daily Maximum	45	9	44	<5
Fecal Coliform (CFU/100 mL)				
30-Day Average:	200	1.5	28	<2
Daily Maximum	400	2.6	3300	<2
pH (Standard Units)				
Minimum	6.5	7.1	7.4	6.7
Maximum	8.5	7.9	8.4	7.6
% Removal				
BOD ₅	85	98	99	86
TSS	85	96	99	85
Total Nitrogen (mg/L)	10	2.6	7.7	0.9
Total Dissolved Solids (mg/L)	M&R	875	1800	680
Total Phosphorus (mg/L)	M&R	0.2	1.3	0.008
Temperature (° C)	M&R	21	28	7.2
Minimum Dissolved Oxygen (mg/L)	M&R	3.3	4.3	2.4

Receiving Water Characteristics:

New River Drain is a tail water conveyance that is part of the Truckee Carson Irrigation District (TCID) system. Although normally considered to drain to Harmon Reservoir, for further irrigation use, followed by excess flow to Stillwater National Wildlife Marsh and Refuge, in

practice the system is operated to direct flow to L-Line Canal and Carson Lake (Government Pasture). Harmon Reservoir and Carson Lake/Government Pasture are listed in (NAC) 445A.126 as Class C Waters of the State. The portion of Stillwater Marsh to which the facility L-Line Canal discharges is listed in Nevada Administrative Code (NAC) 445A.127 as a Class D Water of the State.

To ensure that the discharge does not significantly impact the New River Drain, the Drain is monitored upstream and downstream of the effluent discharge point. The average of reported values for the upstream and downstream sampling locations, during the period from April 2006 through December 2010, are as follows:

Parameter	Average Upstream	Average Downstream
Total Nitrogen (mg/L)	2.6	2.52
Chlorophyll-a	6	4.75
Fecal Coliform (CFU/100 mL)	111.8	115.9
pH (Standard Units)	8.058	8.025
Total Phosphorus (mg/L)	0.30	0.53
Total Dissolved Solids (mg/L)	778	763
Total Ammonia (mg/L)	0.21	0.28
Dissolved Oxygen (mg/L)	4.4	5.01
Temperature (° C)	13	14.3

Proposed Permit Requirements: The permit discharge limits and monitoring requirements proposed for the permit renewal are listed in Table I.A.1. The sampling and monitoring locations are listed below:

- a. Influent, taken at headworks
- b. Effluent, taken prior to mixing with receiving waters
- c1. New River Drain upstream of discharge point
- c2. New River Drain downstream of discharge point

Table I.A.1 - Influent, Effluent, and New River Drain Monitoring

PARAMETER		LIMITATIONS		MONITORING REQUIREMENTS		
		30 Day Avg	Daily Max	Sample Location	Measurement Frequency	Sample Type
Flow, (MGD)	Influent	2.2	3.3	a	Continuous	Meter
	Effluent	M&R	M&R	b	Continuous	Calculated
TSS (mg/L)	Influent	M&R	M&R	a	Weekly	Composite
	Effluent	30	45	b	Weekly	Composite
	% Removal	85	---	Calculate from a & b (30 Day Average)		
BOD ₅ (mg/L)	Influent	M&R	M&R	a	Weekly	Composite
	Effluent	30	45	b	Weekly	Composite
	% Removal	85	---	Calculate from a & b (30 Day Average)		
Fecal Coliform, cfu/100 ml		200	400	b	Weekly	Discrete
		M&R	M&R	c1, c2	Monthly	Discrete
pH, Standard Units		---	6.5-9.0	b	Weekly	discrete
		---	M&R	c1, c2	Monthly	Discrete
Total Residual Chlorine (mg/L)		---	0.1	b	Weekly	Discrete
Total Nitrogen (mg/L)		---	10	b	Monthly	Discrete
		---	M&R	c1, c2	Monthly	Discrete
Nitrate as N (mg/L)		---	M&R	b, c1, c2	Monthly	Discrete
Total Ammonia (mg/L)		---	M&R	b, c1, c2	Monthly	Discrete
Total Phosphorus as P (mg/L)		---	M&R	b, c1, c2	Monthly	Discrete
Total Dissolved Solids (mg/L)		---	M&R	b, c1, c2	Monthly	Discrete
Dissolved Oxygen (mg/L)		---	M&R	b, c1, c2	Monthly	Discrete
Temperature (°C)		---	M&R	b, c1, c2	Monthly	Discrete
Priority Pollutants (µg/l) (Appendix A)		---	M&R	b	Annual 4th Quarter	Discrete
Hardness, mg/l as CaCO ₃		---	M&R	c1, c2	Annual 4th Quarter	Discrete

Notes:

- mg/L: Milligrams per liter
- MGD: Million gallons per day.
- °C: Degrees Celsius
- N: As nitrogen
- P: As phosphorus
- cfu/100mL: Colony forming units per 100 milliliters

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 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 MMM DD, 2011**, the Permittee shall submit for review and approval any necessary additions or revisions to the Operations and Maintenance (O&M) Manual, prepared in accordance with Division guidance document WTS-2, "*Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant*". If no additions or revisions to the O&M Manual are necessary, the Permittee shall submit a letter stating this condition to the Division by the date specified in this section.

Rationale for Permit Requirements:

In summary, permit requirements are in conformance with secondary treatment standards and the plant design capacity, and to ensure that the beneficial uses of Class C waters are not adversely impacted.

FLOW: The limits are based on the design capacity of the plant.

TOTAL SUSPENDED SOLIDS AND BIOCHEMICAL OXYGEN DEMAND: These are the national secondary treatment standards set by U.S. EPA, with the 7 Day Average limitation used as a Daily Maximum instead.

FECAL COLIFORM: This is a standard permit condition based on the water quality criteria for Class C and D waters. The Permittee has been in compliance with this permit limit since September 2008.

pH: The pH limit is 6.5 to 9.0 Standard Units, as specified for Class C waters of the State.

TOTAL RESIDUAL CHLORINE: The Total Residual Chlorine limit is set at 0.1 mg/L as protective of aquatic life. The operator of the facility operates a dechlorination process.

NITROGEN SPECIES: The total nitrogen limit is a conservative application of the nitrate drinking water standards, and is applied to be protective of potential drinking water sources. The other species are of interest both for treatment plant operations and in consideration of effects on receiving waters.

TOTAL PHOSPHORUS: The proposed permit continues the reporting requirement of the previous one. Monitoring data shows the average effluent phosphorus concentration below the Class C specification of 0.33 mg/L.

TOTAL DISSOLVED SOLIDS (TDS): The proposed permit continues the reporting requirement of the previous one. Data gathered over the years shows the discharge concentration to be approximately the same as New River Drain.

DISSOLVED OXYGEN (DO): The proposed permit continues the reporting requirement of the previous permit. The DO concentration in New River Drain appears to be slightly higher downstream than upstream of the discharge point. The water quality specification for non-trout Class C waters is 5.0 mg/L.

PRIORITY POLLUTANTS: The current permit continues the requirement of the previous one for reporting the results of annual analyses for these constituents. During the period from April 2006 through December 2010, no significant concentrations were detected.

WHOLE EFFLUENT TOXICITY: The Permittee has previously performed one whole effluent toxicity test, the results of which were negative. Based on the absence of industrial inputs to the treatment plant and past history, the Division deems that toxicity of the effluent is not reasonably expected.

NEW RIVER DRAIN SAMPLING: The proposed permit retains the requirement for sampling New River Drain above and below the discharge, to assess any potential impacts to water quality due to the discharge. Previously, Chlorophyll-a concentration was monitored at the upstream and downstream sampling locations. However, there is no Class C or D water quality specification for this parameter; therefore, monitoring for this parameter has not been retained in the proposed permit renewal.

Proposed Determination:

The Division has made the tentative determination to issue the proposed discharge permit for a five year term.

Procedures for Public Comment:

Notice of the Division's intent to renew discharge permit NV0020061, authorizing continued discharge from the City of Fallon's wastewater treatment plant to New River Drain, is being sent to the **Lahontan Valley News** and the **Reno Gazette Journal** for publication, and is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit must submit written comments to the Division within (30) days of the publication date. The comment period can be extended at the discretion of the Administrator. The deadline for receipt of all written comments is 5:00 P.M. **July 22, 2011**. Comments received after the deadline will be accepted if postmarked on that date or before.

A public hearing on the proposed determination can be requested by the applicant, any affected state or interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division are conducted in accordance with NAC 445A.238.

The final determination of the Division may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Janine O. Hartley, P.E.
Bureau of Water Pollution Control
Draft: May, 2011
Final:

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