

Appendix M

NPDES Process and Permits

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M.0 National Pollutant Discharge Elimination System (NPDES) Process and NPDES Permits

The U.S. Environmental Protection Agency (EPA) has delegated responsibility to the State of Nevada to implement the National Pollutant Discharge Elimination System (NPDES) program authorized by the Clean Water Act. The NPDES permits regulate discharges to "waters of the United States." The state issues NPDES permits for discharges to surface waters, including lakes, streams, dry washes, and storm drains. All surface discharge permits are sent to EPA, Region IX for review before they are issued.

A NPDES permit is basically a license for a facility to discharge a particular amount of a pollutant into a receiving water under certain conditions. Permits could also authorize facilities to process, incinerate, landfill, or beneficially use sewage sludge.

There are a minimum of five general sections to be completed for a NPDES permit:

1. A cover page that contains the name and location of the permittee, a statement that authorizes the discharge, and a specific location of where the discharge is authorized.
2. Effluent limits that are based on applicable technology-based and water quality-based standards.
3. Monitoring and reporting requirements that are used to characterize waste streams and receiving waters, evaluate wastewater treatment efficiency, and determine if the wastewater is in compliance with the permit conditions.
4. Special conditions that are developed to supplement effluent limit guidelines (i.e. best management practices, additional monitoring activities, ambient stream surveys, and toxicity reduction evaluations).
5. Standard conditions are predetermined conditions that apply to all NPDES permits and delineate the legal, administrative, and procedural requirements of the permit.

These are standard sections to the NPDES permit, but the contents could vary depending on the type of facility and number of dischargers. For example, the contents of a permit for a municipal facility may differ from those of an industrial facility. A NPDES permit for an individual facility (individual permit) may differ from a permit for multiple dischargers (general permit).

A municipal source is defined as a publicly owned treatment works facility that receives primarily domestic sewage from residential and commercial customers. Non-municipal sources include industrial and commercial facilities that are unique with respect to the products and processes present at the facility.

M.1 Individual Permit Process

The individual permit is specifically for individual facilities. When a facility submits a permit application, the Nevada Division of Environmental Protection (NDEP) develops a permit specifically for that facility based on the information contained in the application (i.e. type of activity, nature of discharge, receiving water quality). This permit has a time limit, not to exceed 5 years and requires that the facility reapply for a new permit before the current permit expires.

The major steps for a permit writer to develop and issue an individual NPDES permit are:

1. Receive application from permittee (permittee is the operator of the facility).
2. Review application for completeness and accuracy.
3. Request additional information as necessary.
4. Develop technology-based effluent limits using application data and other sources.
5. Develop water quality-based effluent limits using application data and other sources.
6. Compare water quality-based effluent limits with technology-based effluent limits and choose the more stringent of the two as the effluent limits for the permit.
7. Develop monitoring requirements for each pollutant.
8. Develop special conditions.
9. Develop standard conditions.
10. Consider variances and other applicable regulations.
11. Prepare the fact sheet, summarizing the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit including public notice of the draft permit, and other supporting documentation.
12. Complete the review and issuance process.
13. Issue the final permit.
14. Ensure permit requirements are implemented.

The permit process starts when the permittee submits a permit application. Once the permit application is received and the decision to proceed occurs, the permit writer reviews the application to insure that the information is complete and correct. After this is complete the permit writer begins to develop a draft permit using the application data, and justification for permit conditions (referred to as the fact sheet or statement of basis).

During the development process the permit writer needs to derive the technology-based effluent limits, and then must derive the effluent limits that are protective of the state's water quality standards (i.e. water quality-based effluent limits). Once this is complete the permit writer compares the technology-based effluent limits and water quality-based effluent limits and uses the stricter of the two. Then the decision is documented in the fact sheet. There is a possibility that the permit could contain both technology-based effluent limits and water quality-based effluent limits for certain parameters. After the effluent limits are established, the permit writer develops an appropriate monitoring and reporting condition, facility-specific special conditions that includes the standard conditions, which are the same for all permits.

Once the draft permit is completed the permitting authority gives the public a chance to participate in the permit process. There is a public notice announced and interested persons have the chance to comment on the draft permit. Then the permitting authority develops a final permit based on the comments received, carefully documenting the process and decisions for the administrative record, and the final permit is issued to the facility.

Each of the three current wastewater dischargers in the Las Vegas Valley has an Individual Permit for their plant. Copies of the current permits are provided in Attachment 1 of this appendix.

M.2 General Permit Process

The process for a general permit is similar to the individual permit process with some differences in the order of events. The first step in a general permit is the permitting authority must collect data that demonstrates a group, or category, of dischargers that have similarities to warrant a general permit. To decide if a general permit should be developed, the permitting authorities must consider the following:

- Are there a large number of facilities to be covered?
- Do the facilities have similar production processes or activities?
- Do the facilities generate similar pollutants?
- Do only a small percentage of the facilities have the potential for violations of water quality standards?

The remaining steps are the same for the general permit as they are for the individual permit. Once the general permit is issued, any facility that wants to be covered by the general permit must submit a Notice of Intent to the permitting authority. Additional information may be required by the permitting authority describing the facility, and then the facility that is covered by the general permit must be notified. The permitting authority may require the facility to apply for an individual permit.

Each of the three current wastewater dischargers in the Las Vegas Valley has an Individual Permit for their plant. Copies of the current permits are provided in Attachment 1 of this appendix.

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Appendix M

Attachment 1 – NPDES Permits

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Nevada Division of Environmental Protection

AUTHORIZATION TO DISCHARGE

In compliance with the provisions of the Clean Water Act as amended, (33 U.S.C. 1251 et. seq; the "Act"), and Chapter 445A of the Nevada Revised Statutes,

City of Las Vegas
6005 East Vegas Valley Drive
Las Vegas, NV 89142

is authorized to discharge from facilities located at
6005 East Vegas Valley Drive
Las Vegas, NV 89142
Clark County
(Water Pollution Control Facility)

and

3271 N. Durango Drive
Las Vegas, NV 89129
Clark County
(Durango Hills Water Resource Center)

Outfall 001
(Water Pollution Control Facility)

Latitude N36° 07' 48", Longitude W115° 02' 15"

Outfall 002 (Durango Hills WRC)

Latitude N36° 13' 20", Longitude W115° 17' 05"

to receiving waters named

Las Vegas Wash

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Part I, II, and III hereof.

This permit shall become effective on July 31, 2006.

This permit and the authorization to discharge shall expire at midnight, July 31, 2011.

Signed this 31st day of July, 2006.




Alan Tinney, P.E., Supervisor
Permitting Branch
Bureau of Water Pollution Control

PART I

A. EFFLUENT LIMITATIONS, MONITORING REQUIREMENTS AND CONDITIONS

1. During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee is authorized to discharge treated sanitary wastewater, stormwater, and facility dewatering water from:

- Outfall 001 (Water Pollution Control Facility) via the concrete lined channel to the Las Vegas Wash, and
- Outfall 002 (Durango Hills WRC) via the stormdrain system to the Las Vegas Wash,

Effluent samples taken in compliance with the monitoring requirements specified below shall be taken downstream of the disinfection facilities, but prior to mixing with Las Vegas Wash. Influent samples are to be taken at the headworks and are designated as INF. Sampling frequencies for Outfall 002 (Durango Hills WRC) apply after the Permittee has discharged for a week to the stormdrain system. The discharges for Outfall 001 (Water Pollution Control Facility) shall be limited and monitored by the Permittee as specified in Table I.1, for Outfall 002 (Durango Hills WRC) as specified in Table I.2.

TABLE I.1 (Outfall 001, WATER POLLUTION CONTROL FACILITY)

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average²	7 Day Average²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Flow-001	91 MGD	Monitor and Report: MGD	NA	INF, 001	Continuous	Flow meter
BOD₅ (uninhibited)	30 mg/l	45 mg/l	22,768	001	Daily	Composite
	Monitor and Report	Monitor and Report	NA	INF		
Total Suspended Solids	30 mg/l	45 mg/l	22,768	001	Daily	Composite
	Monitor and Report	Monitor and Report	NA	INF		

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
BOD₅ (uninhibited) & TSS	The Permittee shall demonstrate that the 30-day average percentage removal rate is at least 85%.			NA	Monthly	Calculate
pH	Minimum 6.0 and maximum 9.0 SU, except as allowed in Parts I.A.3 and I.A.19.		NA	001	Daily	Discrete
Fecal Coliform¹	Log mean 200 cfu or mpn/100ml	See footnote 1	NA	001	Daily	Discrete
Total Residual Chlorine	NA	0.1 mg/l-except as allowed in Part I.A.19.	NA	001	Daily	Discrete
Total Phosphorus as P: mg/l	See Part I.A.2			001	Daily	Composite
Total Ammonia as N: mg/l	See Part I.A.2			001	Daily	Composite
Total Inorganic Nitrogen as N: mg/l	See Part I.A.3			001	Weekly	Composite
Total Dissolved Solids: mg/l	See Part I.A.4			001	Weekly	Composite
Priority Pollutants	Monitor and Report, See Attachment A			001	Per Part I.A.18.d.	Discrete or Composite
WET testing	See Part I.A.17.			001	Monthly	Composite
Receiving Water Monitoring	Monitor and Report			See Part I.S.21	See Part I.A.21	Discrete
Temperature: °C	Monitor and Report		NA	001	Weekly	Discrete
Dissolved Oxygen: mg/L	Monitor and Report		NA	001	Weekly	Discrete

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Orthophosphorus as P: mg/l	Monitor and Report			001	Daily	Composite
Nitrate + Nitrite as N: mg/l	Monitor and Report			001	Weekly	Composite
Total Kjeldahl Nitrogen as N: mg/l	Monitor and Report			001	Weekly	Composite

1. The discharge shall not exceed a log mean of 200 cfu or mpn per 100 ml over a 30 day period nor may more than 10 percent of the total samples taken exceed 400 cfu or mpn per 100 ml.
2. For those parameters sampled weekly or less frequently, the Permittee shall report the single value instead of the 7-day or 30 day average.

TABLE I.2 (Outfall 002, DURANGO HILLS WRC)

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Flow-002	10 MGD	Monitor and Report: MGD	NA	002	Continuous	Flow Meter
BOD ₅ (uninhibited)	30 mg/l	45 mg/l	2.502	002	Daily	Composite
	Monitor and Report	Monitor and Report	NA	INF		

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Total Suspended Solids	30 mg/l	45 mg/l	2,502	002	Daily	Composite
	Monitor and Report	Monitor and Report	NA	INF		
BOD₅ (uninhibited) & TSS	The Permittee shall demonstrate that the 30-day average percentage removal rate is at least 85%.			NA	Monthly	Calculate
Fecal Coliform¹	Log mean 200 cfu or mpn/100ml	See footnote 1	NA	002	Daily	Discrete
pH	Minimum 6.0 and maximum 9.0 SU, except as allowed in Parts I.A.3 and I.A.19		NA	002	Daily	Discrete
Total Residual Chlorine	NA	0.1 mg/l Except as allowed in Part I.A.19	NA	002	Daily	Discrete
Total Phosphorus as P: mg/l	See Part I.A.2			002	Daily	Composite
Total Ammonia as N: mg/l	See Part I.A.2			002	Daily	Composite
Total Inorganic Nitrogen as N: mg/l	See Part I.A.3			002	Weekly	Composite
Total Dissolved Solids: mg/l	See Part I.A.4			002	Weekly	Composite
Priority Pollutants	Monitor and Report. See Attachment A			002	Per Part I.A.18.d.	Discrete or Composite
WET testing	See Part I.A.17			002	Quarterly	Composite

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Temperature: °C	Monitor and Report		NA	002	Daily	Discrete
Orthophosphorus as P: mg/l	Monitor and Report			002	Daily	Composite
Nitrate + Nitrite as N: mg/l	Monitor and Report			002	Weekly	Composite
Total Kjeldahl Nitrogen as N: mg/l	Monitor and Report			002	Weekly	Composite

1. The discharge shall not exceed a log mean of 200 cfu or mpn per 100 ml over a 30 day period nor may more than 10 percent of the total samples taken exceed 400 cfu or mpn per 100 ml.
2. For those parameters sampled weekly or less frequently, the Permittee shall report the single value instead of the 7-day or 30 day average.

I.A.2. **Waste Load Allocation (WLA) for Discharges into Las Vegas Wash:** The Permittee is authorized to discharge the waste loads listed in WLA Table for Total Phosphorus as P and Total Ammonia as N to the Las Vegas Wash. The WLA applies to the combined loading from Outfalls 001 and 002. This permit condition constitutes a cooperative agreement between the City of Las Vegas, Clark County Water Reclamation District, and City of Henderson (hereinafter Dischargers) to allow discharge flexibility. Each facility has an **Individual Waste Load Allocation (IWLA)** and there is a **Sum of Individual Waste Load Allocations (Σ IWLA)** defined below for the three facilities. Treatment facilities which are used to attain a waste load allocation are not required to be operated when not needed to meet that allocation.

- a. The Permittee shall be considered in compliance if **either**:
 - i. The Permittee does not exceed the **IWLA** listed below or the **IWLA** in effect due to transfers. **or**
 - ii. The **Sum of the Individual Waste Load Allocations (Σ IWLA)** listed below is not exceeded.

I.A.3. Confirmation of Standards Compliance

- a. The Permittee shall coordinate with the other dischargers identified in Part I.A.2 to determine whether on an annual basis the 95th percentile of the monitoring data for Las Vegas Wash complies with the 20 mg/l total inorganic nitrogen (TIN) water quality standard at the control point, Las Vegas Wash 2 (LVW2, LW6.05).
- b. The Permittee shall coordinate with the other dischargers identified in Part I.A.2 to determine whether the pH at LVW2 (LW6.05) complies with the water quality standard of 6.5-9.0 standard units.
- c. The results of these determinations shall be reported in the annual report identified in Part I.B.1.a.
- d. If the Permittee finds that Las Vegas Wash is not in compliance with the water quality standards identified in Part I.A.3. a. or b., the Permittee shall:
 - i. Consider whether reasonable changes in the Permittee's discharge from any outfall would result in compliance;
 - ii. Coordinate with the other dischargers identified in Part I.A.2 to consider whether coordinated reasonable changes would achieve compliance; and
 - iii. Submit a report to the Division explaining the analytical process and conclusions.

I.A.4 Salinity Control: The Permittee shall continue to implement the existing ordinances and public education programs for salinity control and identify and correct all identified infiltration/inflow problems which contribute to exceedance of the goal of more than 400 mg/l TDS increase above the Colorado River water supply. The Permittee shall provide the following information **annually by May 31st:**

- a. Description of the municipal entity and facilities.
- b. Description of significant salt sources of the municipal wastewater collection system, and identification of entities responsible for each source, if available.
- c. Description of the wastewater discharge, covering location, receiving waters, quantity of salt load, and salinity concentration.
- d. Description of alternative plans for minimizing salt contribution to the municipal discharge. Alternative plans should include:
 - i. Description of system salt sources and alternative means of control.
 - ii. Cost of alternative plans in dollars per ton, of salt removed from any new discharges to the municipality.
- e. In order to calculate the net increase in salinity the Permittee shall obtain the concentration of TDS in the water supply at least quarterly. The Permittee may rely on data collected by any water purveyors, and shall identify the source of the data.

Waste Load Allocation Table

Constituent	City of Las Vegas IWLA	Clark County Water Reclamation District IWLA	City of Henderson IWLA	Σ WLA
Total Phosphorus as P	123 lb/day	173 lb/day	38 lb/day	334 lb/day, Note: This WLA only applies March 1 - October 31; no limit applies the rest of the year.
Total Ammonia as N	358 lb/day	502 lb/day	110 lb/day	970 lb/day, Note: This WLA only applies April 1 - September 30; no limit applies the rest of the year.

- b. **Annual Reallocation of IWLA:** On an annual basis, the Permittee may modify the IWLA by either transferring or receiving waste load from another discharger. This reallocation shall become effective upon submittal of a notification signed by all three dischargers. The annual reallocation shall be **submitted by May 31st if applicable**. The notification of reallocation shall include the flow, waste load discharged, treatment plant removal efficiency in tabular and graphical format. The reallocation of IWLA's shall be considered a minor modification to the permit as long as the Σ WLA are not modified.
- c. **Temporary Trading of IWLA:** The Permittee may temporarily trade IWLA upon submittal of a notification signed by all three dischargers describing the amount of IWLA transferred, the length of time the transfer is effective and the basis for the transfer. The basis for the transfer shall include the last monthly flows and waste load discharged for each discharger. The waste load transfer shall be effective on the date of the submittal to the Division. This transfer is binding on the parties and cannot be revoked without a notification signed by all three dischargers. The transferred IWLA shall revert back to the original Permittee at the end of the time specified on the notification. A copy of the latest IWLA agreement and any agreements made during the reporting period shall be **submitted with each quarterly report required by Part I.B.1.**
- d. **Reporting:** The Permittee shall **submit quarterly reports** pursuant to Part I.B.1.b, the IWLA and the Σ WLA for Total Phosphorus as P and Total Ammonia as N, reported monthly as a 30 day average in lb/day. The data for the Σ WLA shall be provided to and obtained from the other dischargers. In the event the Permittee cannot obtain the Σ WLA information in time for submittal with the quarterly DMR, then an explanation shall be included with the report along with a schedule for timely submittal.

- f. An evaluation of the impact of the discharge on the lower stem of the Colorado River system in terms of average annual average tons/day and concentration of TDS discharged.

I.A.5 **Narrative Standards** (*Nevada Administrative Code (NAC) 445A.121*): Discharges shall not cause the following standards to be violated in any surface waters of the state. Waters must be free from:

- a. Substances that will settle to form sludge or bottom deposits in amounts sufficient to be unsightly, putrescent or odorous;
- b. Floating debris, oil, grease, scum, and other floating materials in amounts sufficient to be unsightly;
- c. Materials in amounts sufficient to produce taste or odor in the water or detectable off-flavor in the flesh of fish or in amounts sufficient to change the existing color, turbidity or other conditions in the receiving stream to such a degree as to create a public nuisance;
- d. High temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life;
- e. Radioactive materials must not result in accumulations of radioactivity in plants or animals that result in a hazard to humans or harm to aquatic life;
- f. Untreated or uncontrolled wastes or effluents that are reasonably amenable to treatment or control; and
- g. Substances or conditions, which interfere with the beneficial use of the receiving waters.

The narrative standards are not considered violated when the natural conditions of the receiving water are outside the established limits, including periods of high or low flow. Where effluents are discharged to such waters, the discharges are not considered a contributor to substandard conditions provided maximum treatment in compliance with permit requirements is maintained.

- I.A.6. The Permittee shall annually review monitoring data, conduct aquatic life studies using water with a hardness representative of the Las Vegas Wash (e.g., 800 mg/l) or conduct other studies to evaluate the existing water quality standards or other data issues, for the following parameters: cadmium, copper, hexavalent chromium, molybdenum, selenium, silver, and sulfide. Results shall be included as part of the annual report required by Part I.B.1.a.i.
- I.A.7. There shall be no objectionable odors from the collection system, treatment facility or disposal area, or biosolids treatment, use, storage or disposal area that the Permittee owns or operates.

- I.A.8. There shall be no discharge of substances that would cause a violation of water quality standards of the State of Nevada as defined by the permit. The permit may be reopened, and additional limits imposed, if it is determined that the discharge is causing a violation of ambient water quality standards of the State of Nevada.
- I.A.9. There shall be no discharge from the collection, treatment and disposal facilities except as authorized by this permit or in accordance with the Division's Spill Reporting Policy.
- I.A.10. The treatment and disposal facility shall be fenced and posted.
- I.A.11. The collection, treatment and disposal facilities shall be constructed in conformance with plans approved by the Administrator, as required by NAC 445A.284, except as provided in the Division's "Plan and Specification Review Policy for Collection and Treatment Systems in Clark County" latest edition.
- I.A.12. The facility shall be operated in accordance with the Operations and Maintenance (O&M) manual, which must be approved by the Administrator.
- I.A.13. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- I.A.14. **Biosolids and Sewage Sludge**
- a. **Disposal:** The Permittee shall comply with all applicable sections of the following regulations for biosolids, which are disposed and inform any biosolids disposer of the requirement that they must comply with the following regulations as applicable.
 - i. 40 CFR 257 and 258: for biosolids disposed in municipal solid waste landfills as approved by the Administrator and the County;
 - ii. 40 CFR 261 for hazardous biosolids or 40 CFR 761 for biosolids with a PCB concentration greater than 50 mg/kg; or
 - iii. 40 CFR 503: placed in surface disposal sites (dedicated land disposal sites or monofills), or incinerated.
 - b. **Reuse:** The Permittee shall comply with any applicable sections of 40 CFR 503 for biosolids generated at the facility including solid waste screening and sewage sludge which is to be used, land applied, stored or treated in compliance with any applicable sections of the following regulations:
 - i. 40 CFR 503: for non-hazardous biosolids that are land applied;
 - ii. The Permittee is responsible for informing any biosolids preparer, applier, or disposer, of all requirements and the applicable regulations listed above.
 - iii. Facilities which are regulated under 40 CFR part 503 shall monitor parameters listed in Part I.A.18., and shall also monitor the pathogen density requirements in 40 CFR 503.32 (a) and (b)(2) through (4) and the vector attraction reduction requirements in 503.33(b)(1) through (8); at the frequencies listed below.

Dry Biosolids Disposal rate in metric tons/yr.

>0 - <290
≥290 - <1500
≥1500 - <15000
≥15000

Frequency

each year
once a quarter
once every 2 months
once a month

- iv. Biosolids to be land applied shall be tested for organic nitrogen as N, ammonia as N, nitrate as N, and Total Nitrogen as N on the frequency required above.
- v. Biosolids, which are to be land applied, shall be characterized annually pursuant to 40 CFR 261 to determine if they are hazardous.
- c. If biosolids are stored at any facility owned or operated by the Permittee for over two years from the time they are generated, the Permittee shall notify the Division within 30 days and shall ensure compliance with all the requirements of surface disposal 40 CFR 503 C, or must submit a written notification to the Division and EPA with the information listed at 40 CFR 503.20 (b), demonstrating the need for longer temporary storage.
- d. Biosolids treatment or storage facilities owned or operated by the Permittee shall be designed to divert stormwater run-on for the 100-year storm event, and be designed to prevent erosion, which could cause biosolids to run-off.
- e. The Permittee shall take all appropriate precautions to inform biosolids haulers that all necessary measures to contain the biosolids should be taken before leaving the treatment facility.
- f. The Permittee shall comply with the following notification requirements either directly or through contractual arrangements with a biosolids management contractor:
 - i. If biosolids are shipped to another state or to Indian lands, the Permittee shall send notice of the shipment to the state permitting authorities, the EPA Regional Office of the region receiving the biosolids or the Indian authorities.
 - ii. For land application or un-permitted disposal sites, the Permittee shall notify the Division 180 days prior to shipping any biosolids to enable the site to obtain a permit.
- g. **Biosolids Monitoring Report (BMR):** The Permittee shall submit a BMR annually which shall be submitted by **May 31st** for the period covering the previous calendar year. The report shall contain all the required biosolids analytical data, the volume of biosolids generated that year, any volume accumulated from previous years, descriptions of pathogen and vector attraction reduction methods and the required certifications as required by 40 CFR 503.17 and 27, the names, mailing and street addresses and telephone numbers of all facilities which received biosolids for storage, disposal, use, treatment, land application or any other use or disposal methods not mentioned and the volume of biosolids taken to each facility.

- I.A.15. **Annual Fee:** The Permittee shall remit an annual review and services fee in accordance with NAC 445A.232 starting **July 1, 2007** and every year thereafter until the permit is terminated.
- I.A.16. The treatment facility shall be operated by a Nevada Certified Grade IV Wastewater Operator. The first DMR submitted under this permit must include the written designation of the authorized representative as required by Part III.A.2. If the certified operator in responsible charge changes, a new designation letter must be submitted.
- I.A.17. **Whole Effluent Toxicity Testing:** Beginning with the effective date of this permit, the Permittee shall conduct monthly toxicity tests on 24-hour composite effluent samples as described below on the discharge from Outfall 001.
- a. **Acute Toxicity Limit:** The effluent shall be deemed acutely toxic when there is a statistically significant difference at the 95th% confidence interval between the survival of the control (0% effluent) test organisms and the survival of the test organisms in the 100% effluent at the following limits:
 - i. The survival of test organisms in the undiluted effluent sample is less than 90 percent in six (6) out of eleven (11) consecutive samples; or
 - ii. The survival rate of test organisms in the undiluted effluent sample is less than 70 percent in any two of eleven consecutive samples.
 - b. **Test Methods**
 - i. The acute flow through or static replacement tests shall be conducted in general accordance with the procedures set out in the latest revision of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," EPA/600/4-90/027. The Permittee shall conduct an acute 48-hour flow through or static replacement toxicity test using any Daphnid approved by the Division and an acute 96-hour flow through or static replacement toxicity test using fathead minnows, Pimephales promelas. After each 24-hours of the test period the dilutions shall be replaced with freshly prepared dilutions of the original effluent sample.
 1. If more than 10 percent control mortality occurs, the test shall be repeated until satisfactory control survival is achieved.
 2. The source of the dilution water shall be reported with the test results. The tests shall be run using 4 replicate chambers, with a minimum of 5 organisms per test chamber for the Daphnid and 2 replicate chambers with a minimum of 10 organisms per test chamber for the Pimephales promelas.
 - ii. **Alternative Species and Protocols:** The Permittee may undertake an investigation of alternative site specific toxicity test species and alternative site specific toxicity protocols. If alternative, site-specific toxicity test species or protocols are developed as a result of work by the Permittee, such species or protocols may be substituted for those specified in this permit on approval by the Division under 40 CFR Part 136. Alternative protocols must be compared to EPA protocols to demonstrate appropriateness and reliability.

- c. **Testing Schedule**
- i. *Routine Schedule:* The Permittee shall conduct an acute toxicity test monthly.
 - ii. *Accelerated schedule:* Whenever the effluent has been determined to be acutely toxic per Part I.A.17.a., the Permittee shall increase the frequency of acute toxicity testing to every other week. The accelerated testing shall also be conducted to determine an endpoint of either the LC50 or the No Observed Effects Concentration (NOEC) as defined in the above referenced method. When 4 (four) consecutive tests show greater than 70 percent survival of undiluted effluent, the Permittee may resume its routine test schedule.
- d. **Follow-up Responses:** Whenever the acute toxicity effluent limitation as defined under either Part I.A.17.a.i or ii has been exceeded, **and** one or more of the tests conducted under Part I.A.17.c ii. has a survival rate of less than 70% in an undiluted effluent sample, the Permittee shall:
- i. In general accordance with EPA manuals and EPA/600/6-91/003, EPA/600/3-88/035, or any subsequent revisions and/or methods approved by the Division, initiate an identification investigation within 24 hours of the exceedance to identify the cause(s) of the toxicity. After the initiation of the investigation phase pursuant to this condition, the Permittee may suspend the accelerated testing required by Part I.A.17.c.ii. as long as the routine testing required by Part I.A.17.c.i. is resumed.
 - ii. In general accordance with EPA manuals and EPA/600/R-92/081, or any subsequent revisions and/or methods approved by the Division, conduct an evaluation of findings where appropriate; and
 - iii. Notify the Division within fifteen (15) days of becoming aware of the exceedance and provide the following:
 1. Times and dates when the limitation was exceeded;
 2. The findings of the identification investigation or other investigations to identify the cause(s) of the toxicity or a plan for continuing the identification investigation if it was not conclusive;
 3. The actions the Permittee has taken or will take to mitigate the impact of the discharge, to correct the noncompliance and prevent the recurrence of toxicity; and
 4. Where corrective actions have not been completed, an expeditious schedule under which the corrective actions will be implemented.
- e. In no event shall the discharger cause any impairment of the receiving water or of the beneficial uses, nor cause a violation of any other provision of this permit, the Clean Water Act and State or local regulation or law.
- f. **Toxicity Testing Reopener:** This permit may be reopened and modified by the Division to include effluent limits, additional testing and/or other appropriate actions to address demonstrated effluent toxicity. This permit may also be reopened and modified by the permitting authority to incorporate alternative permit conditions reflecting State Water Quality Standards revisions related to effluent toxicity.

- g. In addition to the quarterly DMR submittals, the Permittee shall submit an annual summary, **which** provides a review of the survival rates of both the control and the 100% effluent. The summary shall be submitted by **May 31st of each year**.
- h. **Chronic Toxicity:** The Permittee shall conduct chronic toxicity study using Ceriodaphnia dubia to confirm existing nontoxic conditions identified in studies conducted during the previous permit cycle and, if toxicity is found, to identify pollutants that may require additional controls under the pretreatment program, Part I.A.18.
 - i. The Permittee shall submit a study plan and schedule within one hundred eighty (180) days from the date of issuance of this permit for concurrence by the Division.
 - ii. The study will include the following:
 - 1. Chronic toxicity testing to be conducted at least once per quarter over a one year period following concurrence of the study plan by the Division.
 - 2. Samples of wastewater shall be taken at the same location as the effluent compliance samples, unless otherwise approved in writing by the Division.
 - 3. If chronic toxicity is identified, using appropriate statistical procedures or other evaluation methods acceptable to the Division, the Permittee may either increase testing frequency to monthly or conduct a toxicity identification evaluation (TIE). If after two additional months of testing the chronic toxicity has abated, the Permittee may return to quarterly testing. If it has not, the Permittee shall continue accelerated testing, conduct a TIE, or submit an alternate proposal to the Division for approval.
 - 4. Chronic toxicity testing shall be conducted in accordance with procedures specified in 40 CFR Part 136.
 - 5. TIEs shall be conducted in accordance with procedures set forth in *Toxicity Identification Evaluations: Characterization of Chronically Toxic Effluents, Phase I*, EPA/600/6-91/003, USEPA, 1991A; and *Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatment Plants*, EPA/600/2-88/062, USEPA, 1989A, as appropriate.
 - iii. The Permittee shall take appropriate actions to address any pollutant of concern identified through this study.
 - iv. A report on the study shall be submitted to the Division within the time provided for in the study plan and schedule. The Permittee and the Division will review the information and any subsequent actions taken by the Permittee to assess the results and determine what actions, e.g., additional chronic toxicity testing, are necessary and appropriate.
 - v. The data collected through this study, and through the chronic toxicity testing and TIE procedures, are for informational purposes only and shall not be used to assess compliance or in an enforcement action against the Permittee.

I.A.18. **Pretreatment of Industrial Wastewaters:** The Permittee shall implement and enforce a pretreatment program under 40 CFR Part 403 (hereinafter 403), including any subsequent regulatory revisions to 403 and be responsible for and liable for the performance of all Control Authority pretreatment requirements contained in 403. Where 403 or subsequent revision places mandatory actions upon the Permittee as Control Authority but does not specify a timetable of completion of the

actions, the Permittee shall complete the required actions within 6 months from the issuance date of this permit or the effective date of the 403 revisions, whichever comes later. For violations of pretreatment requirements, the Permittee shall be subject to enforcement actions, penalties, fines, and other remedies by the U.S. EPA or other appropriate parties, as provided in the Act. EPA may initiate enforcement action against a non-domestic user for noncompliance with applicable standards and requirements as provided in the Act and as provided by the Division and EPA in the enforcement agreement.

- a. The Permittee will comply with the Pretreatment Program as submitted to and approved by the Division and EPA. This program shall include written agreements, with all sewage agencies who contribute flows to the treatment facility, that provide the Permittee with the legal authority to enforce the pretreatment program. The Permittee shall comply with all parts of the schedule listed below, Pretreatment of Industrial Wastewaters.
- b. The Permittee shall enforce the requirements promulgated under sections 307(b) through (d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The Permittee shall cause all non-domestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or in the case of a new non-domestic user, upon commencement of the discharge.
- c. The Permittee shall perform the pretreatment functions as required in 403 including but not limited to:
 - i. Implement the necessary legal authorities as provided in 403.8(f)(1);
 - ii. Enforce the pretreatment requirements under 403.5 and 6;
 - iii. Implement the programmatic functions as provided in 403.8(f)(2); and
 - iv. Provide the requisite funding and personnel to implement the pretreatment program as provided in 403.8(f)(3).
- d. The Permittee shall submit annually a report to the Division and EPA describing its pretreatment activities over the previous year. In the event the Permittee is not in compliance with any conditions or requirements of this permit, then the Permittee shall also include reasons for non-compliance and state how and when the Permittee shall comply with such conditions and requirements. This annual report shall cover operations for the previous calendar year and is due **May 31st** of each year. The report shall contain, but is not limited to, the following information:
 - i. A summary of the analytical results from representative, flow proportioned, 24-hour composite sampling of the Publicly Owned Treatment Works' (POTW's) influent and effluent for those pollutants EPA has identified under section 307(a) of the Act which are known or suspected to be discharged by non-domestic users. This will consist of an annual full priority pollutant scan, with
 - ii. Quarterly samples analyzed only for those pollutants detected in the full scan. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent. The sludge analyzed shall be a composite sample of a minimum of twelve discrete samples taken at equal time intervals over a 24-hour period or a composite of

discreet samples every two hours when the sludge production period is less than 24 hours. Wastewater and sludge sampling and analysis shall be performed a minimum of once per quarter. The Permittee shall also provide any influent or effluent monitoring data for non-priority pollutants, which the Permittee believes, may be causing or contributing to interference, pass through, or adversely impacting sludge quality. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR 136;

- iii. A discussion of upset, interference, or pass through incidents, if any, at the treatment plant, which the Permittee knows, or suspects were caused by non-domestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the non-domestic user responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;
- iv. An update of the Permittee's significant industrial users (SIU's) including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The Permittee shall provide a brief explanation for each change. The list shall identify the SIU's subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;
- v. The Permittee shall characterize the compliance status of each SIU by providing a list or table which includes the following information:
 1. Name of the SIU;
 2. Category, if subject to federal categorical standards;
 3. The type of wastewater treatment or control process in place;
 4. The number of samples taken by the POTW during the year;
 5. The number of samples taken by the SIU during the year;
 6. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
 7. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
 8. Whether the facility is in significant noncompliance (SNC) as defined at 403.12(f)(2)(vii) at any time during the year; and
 9. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action, final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance;
- vi. A brief description of any programs the POTW implements to reduce pollutants from non-domestic users that are not classified as SIU's;
- vii. A brief description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to, changes concerning the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;
- viii. A summary of the annual pretreatment budget, including the cost of the pretreatment

- program functions and equipment purchases; and
- ix. A summary of activities to involve and inform the public of the program including a copy of the newspaper notice, if any, required under 403.8(f)(2)(vii).
 - e. The Permittee shall submit quarterly SIU compliance status reports to EPA, Region 9 and the Division. The reports shall cover the periods of January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31. Each report shall be submitted by the end of the month following the quarter except the report for October 1 through December 31, which may be included in the annual report. The reports, which may be submitted in outline form, shall contain:
 - i. The name and address of all SIU's which violated any discharge or reporting requirements during the quarter;
 - ii. A description of the violations including whether any discharge violations were for categorical standards or local limits;
 - iii. A description of the enforcement or other actions that were taken to remedy the noncompliance; and
 - iv. The status of active enforcement and other actions taken in response to SIU noncompliance identified in previous reports.

I.A.19. Chlorine Residual and pH Effluent Limitation

- a. The Permittee may determine compliance with chlorine residual and pH either by grab sampling or by continuous monitoring.
- b. If the Permittee chooses continuous monitoring, the Permittee shall maintain the chlorine residual and pH of such effluent within the range set forth in the applicable effluent limitations guidelines, except excursions from the range are permitted subject to the following limitations:
 - i. The total time during which the chlorine residual and pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month;
 - ii. No individual excursion from the range of chlorine and pH shall exceed 60 minutes; and
 - iii. If the continuous monitoring equipment fails, estimates derived from historical or contemporary data may be used.
- c. The Division may allow the Permittee to discontinue monitoring for chlorine upon approval of a submittal, which demonstrates that there is no reasonable potential for the chlorine concentrations to be toxic.

I.A.20. 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. The Permittee shall submit a report in accordance with permit condition Part I.B.1.c. within 14

days of a compliance date detailing compliance or noncompliance with that date.

- c. Within six (6) months of the completion of the plant expansion and/or modification, the Permittee shall submit a revised O&M manual to the Division for review and approval.

I.A.21. Lake Mead and Las Vegas Wash Monitoring: By **November 1st** of each year, the Permittee shall jointly submit, with the Clark County Water Reclamation District and the City of Henderson, an annual plan for monitoring ambient water quality in Lake Mead and Las Vegas Wash during the following year. Following approval by the Division, the Permittee shall implement its portion of the plan beginning **January 1st** of each year. The joint monitoring plan shall include, as a minimum, the following:

- a. The identification of at minimum three locations in Las Vegas Wash at which water quality will be routinely monitored.
- b. The identification of at minimum five locations within Lake Mead at which water quality will be routinely monitored, including at least one station near the mouth of Las Vegas Wash.
- c. An identification of the depths at which each station will be sampled.
- d. An explanation of why the station locations and depths were chosen.
- e. A schedule for monitoring water quality at the selected stations, at minimum biweekly in Las Vegas Wash and, during April through September, in Lake Mead.
- f. A list of parameters to be monitored, including at minimum chlorophyll (in epilimnetic samples), total phosphorus, orthophosphorus, nitrate, ammonia, dissolved oxygen, conductivity, temperature, pH, and fecal coliforms or E. coli.
- g. If the Permittee is unable to reach agreement with the other dischargers, the Permittee shall submit an explanation and a proposed individual monitoring plan.

I.B. MONITORING AND REPORTING

I.B.1. Reporting

a. Annual Reports

- i. On or before **May 31st** of each year, the Permittee shall submit a plot of concentration (y-axis) versus date (x-axis) for each analyzed constituent, which has been detected greater than 25% of the time. The plot shall include data from the preceding five years, if available. Any data point from the current year detected at concentrations greater than the limits in Part I.A.1 or the applicable water quality standard must be explained by a narrative.

- ii. The BMR required by Part I.A.14., the pretreatment annual report required by Part I.A.18.d., the Lake Mead and Las Vegas Wash Annual Report required by Part I.A.21, the TIN annual report required by Part I.A.3, the Salinity Control Report required by Part I.A.4 and WET annual reports required by Part I.A.17 are due each **May 31st**.
- b. **Quarterly Reporting:** Monitoring results obtained pursuant to Part I.A of the permit for the previous three (3) month period shall be summarized for each month and reported on a Discharge Monitoring Report (DMR) form. The DMR is to be received in this office no later than the 28th day of the month following the completed reporting period. The Permittee shall also submit the data in an electronic format provided by the Division. The first report is due on October 28, 2006. Summaries of laboratory results for analyses conducted by outside laboratories must accompany the DMR, and the full data package provided by the laboratory must be provided if requested in writing by the Division. If at any time the Permittee concludes that submitted data were incorrect, the Permittee shall notify the Division in writing, identify the incorrect data, and replace the incorrect data with corrected data, which shall thereafter be used for determining compliance with this permit.
- c. **Compliance Report:** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- d. **Other information:** Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Administrator, it shall promptly submit such facts or information.
- e. **Planned changes:** The Permittee shall give notice to the Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition to a permitted facility;
 - i. May meet one of the criteria for determining whether a facility is a new source (40 CFR 122.29(b));
 - ii. Could significantly change the nature or increase the quantity of pollutants discharged; or
 - iii. Results in a significant change to the Permittee's sludge management practice or disposal sites.
- f. **Anticipated non-compliance:** The Permittee shall give advance notice to the Administrator of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- g. An original signed copy of these, and all other reports required herein, shall be submitted to the State at the following address:

Division of Environmental Protection

Bureau of Water Pollution Control
ATTN: Compliance Coordinator
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701

- h. A signed copy of all Discharge Monitoring Reports and any other reports shall be submitted to the Regional Administrator at the following address:

U.S. Environmental Protection Agency, Region IX
NPDES/DMR WTR-7-1
75 Hawthorne Street
San Francisco, CA 94105

I.B.2 Monitoring

- a. **Representative Samples:** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.
- b. **Test Procedures:** Monitoring for the analysis of pollutants shall be conducted according to test procedures approved under 40 CFR 136 published pursuant to Section 304(h) of the Act, or SW-846, or in the case of sludge disposal, approved under 40 CFR 503, or other procedures as approved by the Administrator. Analysis shall be performed by a State of Nevada certified laboratory.
- c. **Recording the Results:** For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information:
- i. The exact place, date, and time of sampling;
 - ii. The dates the analyses were performed;
 - iii. The person(s) who performed the analyses;
 - iv. The analytical techniques or methods used; and
 - v. The results of all required analyses.
- d. **Additional Monitoring by Permittee:** If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated on the DMR. If a Permittee monitors more often than once per day, the Permittee shall compute the 7-day average or 30-day average by first averaging the samples for each day, and then averaging the daily averages or discrete samples representing all sampled days within the period; provided, however, that the Permittee may instead average all samples taken within the period if it notifies the Division that it will use this method.

e.

- f. **Records Retention:** All records and information resulting from the monitoring activities, permit application, reporting required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, shall be retained for a minimum of five years, or longer if required by the Administrator. Records of monitoring information required by this permit related to the Permittee's sewage sludge use and/or disposal activities shall be retained for a period of at least 5 years or longer as required by 40 CFR 503.
- g. **Detection Limits:** All laboratory analysis conducted in accordance with this discharge permit must meet the following criteria:
- i. All methods used must be specified or approved in either 40 CFR 136, SW-846 or otherwise approved by the Division. All analytical results must be generated by analytical laboratories certified by the state of Nevada laboratory certification program;
 - ii. The reporting limit for each metal monitored in accordance with this permit shall be less than or equal to the water quality standards for metals which apply to the Las Vegas Wash on the effective date of the permit, except for mercury. This requirement does not apply if a water quality standard is lowered after the issuance of this permit; however, the Permittee shall review methods used and by letter notify the division if the reporting limit will exceed the new criterion, and if so the Division may reopen the permit to impose new monitoring requirements;
 - iii. The Permittee shall determine whether any laboratories certified by the State of Nevada are analyzing mercury using EPA Method 1631 and achieving results within acceptable limits. If so, the Permittee shall provide a sample for analysis using EPA Method 1631 once per year. If not, the Permittee, acting individually or with other Permittees, shall initiate a dialog with its contract laboratories or other laboratories that might be interested in providing service to the Permittee to inform them of the opportunity to provide additional testing services to the Permittee, and to provide information on current sampling and analytical practices and procedures that might assist the laboratories in their determinations about whether to institute the use of the method; and
 - iv. All priority pollutant data reported by contract laboratories shall be submitted to the Division.
- g. **Modification of Monitoring Frequency and Sample Type:** After considering monitoring data, stream flow, discharge flow and receiving water conditions, the Administrator, may for just cause, modify the monitoring frequency and/or sample type by issuing an order to the Permittee.

I.B.3. Definitions

- a. The "30-day average discharge" means the total discharge during a month divided by the number of samples in the period for that discharge facility. Where less than daily sampling is required by this permit, the 30-day average discharge shall be determined by the summation of all the measured discharges divided by the number of samples during the period when the measurements were made.

- b. The "7-day average" concentration means the arithmetic mean of measurements made during a week. If there are more than one measurement per day, the measurements may be averaged in accordance with Part I.B.2.d.
- b. The "daily maximum" is the highest measurement during the monitoring period.
- c. The "30-day average concentration", other than for fecal coliform bacteria, means the arithmetic mean of measurements made during a month. If there are more than one measurement per day, the measurements may be averaged in accordance with Part I.B.2.d. The "30-day average concentration" for fecal coliform bacteria means the geometric mean of measurements made during a month. The geometric mean is the " n^{th} " root of the product of " n " numbers. Geometric mean calculations where there are non-detect results for fecal coliform shall use one half the detection limit as the value for the non-detect results.
- d. A "discrete" sample means any individual sample collected in less than 15 minutes.
- e. For flow-rate measurements a "composite" sample means the arithmetic mean of no fewer than six individual measurements taken at equal time intervals for 24 hours, or for the duration of discharge, whichever is shorter. For other than flow-rate a "composite" sample means a combination of no fewer than six individual flow-weighted samples obtained at equal time intervals for 24 hours, or for the duration of discharge, whichever is shorter. Flow-weighted sample means that the volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling.
- f. "Acute toxicity" is defined in the whole effluent testing procedures presented in this permit in Part I.A.17.
- g. "Biosolids" are non-hazardous sewage sludge or domestic septage as these terms are defined in 40 CFR 503.9.

PART II

A. MANAGEMENT REQUIREMENTS

II.A.1. **Change in Discharge:** All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, or treatment modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Any changes to the permitted treatment facility must comply with Nevada Administrative Code (NAC) 445A.283 to 445A.285. Pursuant to NAC 445A.263, the

permit may be modified to specify and limit any pollutants not previously limited.

- II.A.2. Facilities Operation-Proper Operation and Maintenance:** The Permittee shall at all times maintain in good working order and properly operate all treatment and control facilities, collection systems and pump stations installed or used by the Permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures.
- II.A.3. Adverse Impact-Duty to Mitigate:** The Permittee shall take all reasonable steps to minimize releases to the environment resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge. The Permittee shall carry out such measures, as reasonable, to prevent significant adverse impacts on human health or the environment.
- II.A.4. Noncompliance, Unauthorized Discharge, Bypassing and Upset**
- a. Any diversion, bypass, spill, overflow or discharge of treated or untreated wastewater from wastewater treatment or conveyance facilities under the control of the Permittee to navigable waters is prohibited except as authorized by this permit or in accordance with the Division's Spill Reporting Policy. The Division may take enforcement action for a diversion, bypass, spill, overflow, or discharge of treated or untreated wastewater to waters of the state except as authorized by this permit or in accordance with the Division's Spill Reporting Policy. In the event the Permittee has knowledge that a diversion, bypass, spill, overflow or discharge not authorized by this permit or in accordance with the Division's Spill Reporting Policy is probable, the Permittee shall notify the Administrator immediately.
 - b. The Permittee shall notify the Administrator within twenty-four (24) hours of any diversion, bypass, spill, upset, overflow or release of treated or untreated discharge from wastewater treatment or conveyance facilities under the control of the Permittee other than that which is authorized by the permit or in accordance with the Division's Spill Reporting Policy. A written report shall be submitted to the Administrator within five (5) days of diversion, bypass, spill, overflow, upset or discharge, detailing the entire incident including:
 - i. Time and date of discharge;
 - ii. Exact location and estimated amount of discharge;
 - iii. Flow path and any bodies of water which the discharge reached;
 - iv. The specific cause of the discharge; and
 - v. The preventive and/or corrective actions taken.
 - c. The following shall be included as information which must be reported within 24 hours:
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - ii. Any upset which exceeds any effluent limitation in the permit;
 - iii. Violation of a limitation for any toxic pollutant or any pollutant identified as the method to

control a toxic pollutant.

- d. The Permittee shall report all instances of noncompliance not reported under Part II.A.4.b. at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.A.4.b.
- e. A **"bypass"** means the intentional diversion of waste streams from any portion of a treatment facility.
 - i. **Bypass not exceeding limitations:** The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II.A.4.a, II.A.4.b, and II.A.4.f.
 - ii. **Anticipated bypass:** If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of bypass.
- f. **Prohibition of Bypass:** Bypass is prohibited, and the Administrator may take enforcement action against a Permittee for bypass, unless:
 - i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
 - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - iii. The Permittee submitted notices as required under Part II.A.4.e.
- g. The Administrator may approve an anticipated bypass, after considering its adverse effects, if the Administrator determines that it will meet the three conditions listed in Part II.A.4.f.
- h. An **"upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
 - i. **Effect of an upset:** An upset constitutes an affirmative defense to an action brought for non-compliance with such technology-based permit effluent limitations if the requirements of Part II.A.4.j. are met.
- j. **Conditions necessary for a demonstration of an upset:** A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated;

- iii. The Permittee submitted notice of the upset as required under paragraph c of this section; and
- iv. The Permittee complied with any remedial measures required under Part II.A.3.

k. In selecting the appropriate enforcement option, the Administrator shall consider whether or not the noncompliance was the result of an upset. The burden of proof is on the Permittee to establish that an upset occurred.

II.A.5. **Removed Substances:** Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollution from such materials from entering any navigable waters.

II.A.6. **Safeguards to Electric Power Failure:** In order to maintain compliance with the effluent limitations and prohibitions of this permit the Permittee shall either:

- a. Provide at the time of discharge an alternative power source sufficient to operate the wastewater control facilities; or
- b. Halt or reduce all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

II.B. RESPONSIBILITIES

II.B.1. **Right of Entry and Inspection:** The Permittee shall allow the Administrator and/or his authorized representatives, upon the presentation of credentials, to:

- a. Enter at reasonable times upon the Permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. Have access to and copy any records required to be kept under the terms and conditions of this permit at reasonable times;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations required in this permit; and
- d. Perform any necessary sampling or monitoring to determine compliance with this permit at any location for any parameter.

II.B.2. **Transfer of Ownership or Control:** In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the Permittee shall notify the succeeding owner or controller of the existence of this permit, by letter, a copy of which shall be forwarded to the Administrator. The Administrator may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be

necessary. The Administrator shall approve ALL transfer of permits.

II.B.3. Availability of Reports: Except for data determined to be confidential under NRS 445A.665, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

II.B.4. Furnishing False Information and Tampering with Monitoring Devices: Any person who intentionally or with criminal negligence makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained by the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than \$10,000 or by imprisonment. This penalty is in addition to any other penalties, civil or criminal, provided pursuant to NRS 445A.300 to 445A.730, inclusive.

II.B.5. Penalty for Violation of Permit Conditions: Nevada Revised Statutes (NRS) 445A.675 provides that any person who violates a permit condition is subject to administrative and judicial sanctions as outlined in NRS 445A.690 through 445A.705.

II.B.6. Permit Modification, Suspension or Revocation

- a. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
 - i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;
 - iv. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination;
 - v. There are material and substantial alterations or additions to the permitted facility or activity;
 - vi. The Administrator has received new information;
 - vii. The standards or regulations have changed; or
 - viii. The Administrator has received notification that the permit will be transferred.

- b. **Minor Modifications:** With the consent of the Permittee and without public notice, the Administrator may make minor modifications in a permit to:
 - i. Correct typographical errors;
 - ii. Clarify permit language;
 - iii. Require more frequent monitoring or reporting;

- iv. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the permit and does not interfere with attainment of the final compliance date;
- v. Allow for change in ownership;
- vi. Change the construction schedule for a new discharger provided that all equipment is installed and operational prior to discharge; or
- vii. Delete an outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits;
- viii. Reallocation of the Waste Load Allocation as long as the sum of the allocations does not change.

- II.B.7. **Toxic Pollutants:** Notwithstanding Part II.B.6., if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the Permittee so notified.
- II.B.8. **Liability:** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal, State or local laws, regulations, or ordinances. However, except for any toxic effluent standards and prohibitions imposed under section 307 of the Clean Water Act or toxic water quality standards set forth in NAC 445A.144, compliance with this permit constitutes compliance with Clean Water Act sections 301, 302, 306, 307, 318, 403, 405(a) and (b), and with NRS 445A.300 through 445A.730.
- II.B.9. **Property Rights:** The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- II.B.10. **Severability:** The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- II.B.11. **Duty to Comply:** The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action: for permit termination; revocation and reissuance, or modification; or denial of a permit renewal application.
- II.B.12. **Need to Halt or Reduce Activity Not a Defense:** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.

II.B.13. Duty to Provide Information: The Permittee shall furnish to the Administrator, within a reasonable time, any relevant information which the Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this permit. The Permittee shall also furnish to the Administrator, upon request, copies of records required to be kept by this Permit.

PART III

III.A. OTHER REQUIREMENTS

III.A.1. Reapplication: If the Permittee desires to continue to discharge, he shall reapply not later than 180 days before this permit expires on the application forms then in use. POTW's with NPDES permits shall submit the sludge information listed at 40 CFR 501.15(a)(2) with the renewal application. The renewal application shall be accompanied by the fee required by NAC 445A.232.

III.A.2. Signatures, certification required on application and reporting forms

- a. All applications, reports, or information submitted to the Administrator shall be signed and certified by making the following certification.

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

- b. All applications, reports or other information submitted to the Administrator shall be signed by one of the following:
 - i. A principal executive officer of the corporation (of at least the level of vice president) or his authorized representative who is responsible for the overall operation of the facility from which the discharge described in the application or reporting form originates;
 - ii. A general partner of the partnership;
 - iii. The proprietor of the sole proprietorship; or
 - iv. A principal executive officer, ranking elected official or other authorized employee of the municipal, state or other public facility.
- c. **Changes to Authorization:** If an authorization under paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this section must be submitted to the Administrator prior to or together with any reports, information, or

applications to be signed by an authorized representative.

III.A.3. Holding Pond Conditions: If any wastewater from the Permittee's facility is placed in ponds owned or operated by the Permittee, such ponds shall be located and constructed so as to:

- a. Contain with no discharge the once-in-the twenty-five year, 24 hour storm at said location;
- b. Withstand with no discharge the once-in-one-hundred year flood of said location; and
- c. Prevent escape of wastewater by leakage other than as authorized by this permit;

unless otherwise approved by the Division.

III.A.4. Flow Rate Notification: The Permittee shall notify the Administrator, by letter, not later than ninety (90) days after the 30-day average daily influent flow rate first equals or exceeds 85% of the design treatment capacity of the Permittee's facility given in Part I.A. The letter shall include:

- c. The 30-day average daily influent flow rate;
- d. The maximum 24-hour flow rate during the 30-day period reported above and the date the maximum flow occurred;
- e. The Permittee's estimate of when the 30-day average influent flow rate will equal or exceed the design treatment capacity of the Permittee's facility;
- f. A status report on the treatment works which will outline but not be limited to past performance, remaining capacity of the limiting treatment and disposal units or sites, past operational problems and improvements instituted, modifications to the treatment works which are needed to attain the permitted flow rate due to changing site specific conditions or design criteria; and
- g. The Permittee's schedule of compliance to provide additional treatment capacity before the 30-day average daily influent flow rate equals the present design treatment capacity of the Permittee's facility.

III.A.5. Publicly Owned Treatment Works [40 CFR 122.42(b)]: All POTWs must provide adequate notice to the Administrator of the following:

- h. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Act if it were directly discharging those pollutants; and
- i. Any substantial change in the volume or character of pollutants being introduced into that

POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

- j. For the purposes of this part, adequate notice shall include information on: (1) the quality and quantity of effluent introduced into the POTW and (2) any anticipated impact of the change on the quantity or quality of effluent to be discharge from the POTW.

ATTACHMENT A

PRIORITY POLLUTANTS

BASE NEUTRAL EXTRACTIBLES

Acenaphthene
Benzidine
1,2,4-Trichlorobenzene
Hexachlorobenzene
Hexachloroethane
Bis(2-chloroethyl) ether
2-Chloronaphthalene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis(2-Chloroisopropyl) ether
Bis(2-Chloroethoxy) methane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosodi-n-propylamine
Bis(2-ethylhexyl) phthalate
n-Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Chrysene
Acenaphthylene
Anthracene
Benzo(g,h,i)perylene
Fluorene
Phenanthrene
Dibenzo(a,h)anthracene
Indeno(1,2,3-cd)pyrene
Pyrene

VOLATILE ORGANICS

Acrolein
Acrylonitrile
Benzene
Carbon tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,1,2,2-Tetrachloroethane
Chloroethane
2-Chloroethylvinylether
Chloroform
1,1-Dichloroethene
Trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropane
Ethylbenzene
Dichloromethane
Chloromethane
Bromomethane
Bromoform
Bromodichloromethane
Dibromochloromethane
Tetrachloroethene
Toluene
Trichloroethene
Vinyl chloride

PESTICIDES

Aldrin
Dieldrin
Chlordane (Technical)
4,4'-DDT
4,4'-DDE
4,4'-DDD
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC (Lindane)
Delta-BHC
PCB 1016
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260
Toxaphene

ACID EXTRACTIBLES

2,4,6-Trichlorophenol
4-Chloro-3-methylphenol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol
Pentachlorophenol
Phenol

METALS

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

DIOXINS

TCDD

OTHER

Cyanide
Asbestos

Note:

Priority Pollutants to be analyzed using Environmental Protection Agency (EPA) Methods 200 Series, 353.3, 420.2, 624.625, 608, and/or an appropriate combination of these methods to verify compliance with permit-specified effluent discharge limitations.

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

- I. **Permittee Name:** City of Las Vegas
6005 East Vegas Valley Drive
Las Vegas, NV 89142
- II. **Permit Number:** NV0020133 – Renewal
- III. **Location:** 6005 East Vegas Valley Drive
Las Vegas, NV 89142
and
3271 N. Durango Drive
Las Vegas, NV 89129
- IV. **General:** The Permittee has applied for a National Pollutant Discharge Elimination System (NPDES) permit renewal to extend the authorization to discharge to the Las Vegas Wash.

The discharge is from a 91 million gallons per day (MGD) wastewater treatment plant located at 6005 East Vegas Valley Drive, Las Vegas, NV 89142. Treatment at the plant, after preliminary treatment consisting of bar screen and grit removal, is provided by two types of treatment trains. One consists of primary sedimentation, trickling filters and secondary sedimentation followed by nitrification (activated sludge) for the conversion of ammonia to nitrate, chemical addition and filtration for phosphorus removal, chlorination and dechlorination. The other consists of primary sedimentation, BOD and biological nutrient removal using the Bardenpho process, secondary sedimentation, chemical addition and filtration for additional phosphorus removal, chlorination, and dechlorination. Odor control is used at the various processes. Sludge is removed from sedimentation and activated sludge processes and is thickened, digested and dewatered for final disposal in a landfill. The plant discharges through Outfall 001 to Las Vegas Wash.

The permit also covers the 10 MGD Durango Hills WRC located at 3271 N. Durango Drive, Las Vegas, NV 89129, which is primarily used to provide re-use water for irrigation, but may discharge during non-irrigation season. Irrigation re-use water from the Durango Hills Plant is regulated under the state discharge permit NEV98005. The plant is authorized to discharge up to 10 MGD from Outfall 002 through the storm-sewer system to Las Vegas Wash. Sampling will apply after the Permittee has discharged for a week to the stormdrain system. Treatment at the Durango Hills Plant consists of preliminary treatment including grinding and grit removal, activated sludge, secondary sedimentation, ultraviolet treatment for disinfection, and flow equalization. Odor control is used throughout the plant. Sludge from the plant is returned to the sanitary sewers, and treated at the main plant.

The majority of the flow into the plants is from domestic wastewater. There is a small percentage of flow from industry in the service area and there is a pretreatment program which regularly samples effluent from

the industrial dischargers. The pretreatment program is authorized through the United States Environmental Protection Agency (USEPA).

The existing permit was issued on July 20, 2001, and expires on July 20, 2006. Since the permit effective date, the plant has consistently been in compliance with its permit. The proposed permit is based on a completed permit application submitted by the Permittee, plant monitoring data, and ambient water quality data.

V. Discharge Characteristics: Discharges from the main plant have the following characteristics:

<u>Parameter</u>	<u>Long-Term Average, 2005</u>
Flow	64 MGD
Uninhibited BOD ₅	<2 mg/l
pH	6.7 SU
Chlorine Residual	<0.1 mg/L
Total Dissolved Solids	1200 mg/l
TSS	<2 mg/l
Ammonia as N	<0.1 mg/l
Nitrate as N	17 mg/l
Total Kjeldahl Nitrogen	<2 mg/l
Phosphorus as P	0.17 mg/l
Orthophosphorus as P	0.12 mg/l
Dissolved Oxygen	6.2 mg/l
Fecal Coliforms	<2 MPN/100 ml

Treated re-use water from the Durango Hills WRC has not yet been discharged through Outfall 002. Re-use water from the plant has the following characteristics:

<u>Parameter</u>	<u>Long-Term Average, 2005</u>
Flow	3 MGD
Uninhibited BOD ₅	4 mg/l
pH	6.9 SU
Total Dissolved Solids	1200 mg/l
TSS	<2 mg/l
Ammonia as N	0.3 mg/l
Nitrate as N	16 mg/l
Total Kjeldahl Nitrogen	<2 mg/l
Phosphorus as P	1.8mg/l
Orthophosphorus as P	1.6 mg/l
Fecal	

VI. Receiving Water: The receiving water is the Las Vegas Wash. The standards applicable to the Las Vegas Wash are attached to this fact sheet as Attachment A. Pursuant to NAC 445A.198, the designated beneficial uses for the appropriate reach of Las Vegas Wash are:

- Irrigation
- Watering of livestock
- Recreation not involving contact with the water
- Maintenance of a freshwater marsh
- Propagation of wildlife
- Propagation of aquatic life, excluding fish. This does not preclude the establishment of a fishery.

This reach of the Las Vegas Wash also has an established goal of the propagation of aquatic life, including, without limitation, fish by the next triennial review. This goal may be reevaluated in the near future considering the construction of the grade control structures in the Las Vegas Wash.

Las Vegas Wash has been included on the 303(d) list because of suspended solids and iron. The exceedances identified were not attributed to the Permittee or other publicly owned treatment works in Southern Nevada, but instead were attributable to erosion resulting from high velocity streamflows produced by steep gradients and from loose unconsolidated soils. Several erosion-control structures have been installed in the affected area, and additional structures are planned, along with streambank protection, revegetation, and other control measures. The suspended solids has been de-listed and the iron is being reviewed for de-listing.

VII. Summary of Changes From Previous Permit:

The main changes from the previous permit are:

Item	Change
Ambient Water Quality Monitoring	Replace 2 fixed-location monitoring stations in Las Vegas Wash and 5 fixed-location monitoring stations in Lake Mead with annual plan in which Permittee proposes and the Division approves locations of at minimum 3 stations in Las Vegas Wash and 5 in Lake Mead. Revision improves flexibility of monitoring program so that stations at locations no longer considered necessary can be moved to locations that provide representative data.

VIII. Proposed Effluent Limitations: The Permittee is required to meet the following permit limits. Note: The load limits are calculated using the 30 day average flow and the permit limit expressed as a concentration. If higher flows are allowed in future permits, the load limits will increase accordingly.

TABLE I.1 (Outfall 001, WATER POLLUTION CONTROL FACILITY)

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Flow-001	91 MGD	Monitor and Report: MGD	NA	INF, 001	Continuous	Flow meter
BOD₅ (uninhibited)	30 mg/l	45 mg/l	22,768	001	Daily	Composite
	M&R	M&R	NA	INF		
Total Suspended Solids	30 mg/l	45 mg/l	22,768	001	Daily	Composite
	M&R	M&R	NA	INF		
BOD₅ (uninhibited) & TSS	The Permittee shall demonstrate that the 30-day average percentage removal rate is at least 85%.			NA	Monthly	Calculate
pH	Minimum 6.0 and maximum 9.0 SU, except as allowed in Parts I.A.3 and I.A.19.		NA	001	Daily	Discrete
Fecal Coliform¹	Log mean 200 cfu or mpn/100ml	See footnote 1	NA	001	Daily	Discrete
Total Residual Chlorine	NA	0.1 mg/l- except as allowed in Part I.A.19.	NA	001	Daily	Discrete
Total Phosphorus as P: mg/L	See Part I.A.2			001	Daily	Composite

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS			MONITORING REQUIREMENTS		
	30 Day Average²	7 Day Average²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Total Ammonia as N: mg/l	See Part I.A.2			001	Daily	Composite
Total Inorganic Nitrogen as N: mg/l	See Part I.A.3			001	Weekly	Composite
Total Dissolved Solids: mg/l	See Part I.A.4			001	Weekly	Composite
Priority Pollutants	Monitor and Report, See Attachment A			001	Per Part I.A.18.d.	Discrete or Composite
WET testing	See Part I.A.17.			001	Monthly	Composite
Receiving Water Monitoring	Monitor and Report			See Part I.A.21	See Part I.A.21	Discrete
Temperature: °C	Monitor and Report		NA	001	Weekly	Discrete
Dissolved Oxygen: mg/L	Monitor and Report		NA	001	Weekly	Discrete
Orthophosphorus as P: mg/l	Monitor and Report			001	Daily	Composite
Nitrate + Nitrite as N: mg/l	Monitor and Report			001	Weekly	Composite
Total Kjeldahl Nitrogen as N: mg/l	Monitor and Report			001	Weekly	Composite

1. The discharge shall not exceed a log mean of 200 cfu or mpn per 100 ml over a 30 day period nor may more than 10 percent of the total samples taken exceed 400 cfu or mpn per 100 ml.
2. For those parameters sampled weekly or less frequently, the Permittee shall report the single value

instead of the 7-day or 30 day average.

TABLE I.2 (Outfall 002, DURANGO HILLS WRC)

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Flow-002	10 MGD	Monitor and Report: MGD	NA	002	Continuous	Flow Meter
BOD₅ (uninhibited)	30 mg/l	45 mg/l	2,502	002	Daily	Composite
	M&R	M&R	NA	INF		
Total Suspended Solids	30 mg/l	45 mg/l	2,502	002	Daily	Composite
	M&R	M&R	NA	INF		
BOD₅ (uninhibited) &TSS	The Permittee shall demonstrate that the 30-day average percentage removal rate is at least 85%.			NA	Monthly	Calculate
Fecal Coliform¹	Log mean 200 cfu or mpn/100ml	See footnote 1	NA	002	Daily	Discrete
pH	Minimum 6.0 and maximum 9.0 SU, except as allowed in Parts I.A.3 and I.A.19		NA	002	Daily	Discrete
Total Residual Chlorine	NA	0.1 mg/l Except as allowed in Part I.A.19	NA	002	Daily	Discrete

<u>PARAMETERS</u>	<u>EFFLUENT DISCHARGE LIMITATIONS or REPORTING REQUIREMENTS</u>			<u>MONITORING REQUIREMENTS</u>		
	30 Day Average ²	7 Day Average ²	30-Day Average (lb/day)	Sample Location	Measurement Frequency	Sample Type
Total Phosphorus as P: mg/l	See Part I.A.2			002	Daily	Composite
Total Ammonia as N: mg/l	See Part I.A.2			002	Daily	Composite
Total Inorganic Nitrogen as N: mg/l	See Part I.A.3			002	Weekly	Composite
Total Dissolved Solids: mg/l	See Part I.A.4			002	Weekly	Composite
Priority Pollutants	Monitor and Report, See Attachment A			002	Per Part I.A.18.d.	Discrete or Composite
WET testing	See Part I.A.17			002	Quarterly	Composite
Temperature	Monitor and Report		NA	002	Daily	Discrete
Orthophosphorus as P: mg/l	Monitor and Report			002	Daily	Composite
Nitrate + Nitrite as N: mg/l	Monitor and Report			002	Weekly	Composite
Total Kjeldahl Nitrogen as N: mg/l	Monitor and Report			002	Weekly	Composite

1. The discharge shall not exceed a log mean of 200 cfu or mpn per 100 ml over a 30 day period nor may more than 10 percent of the total samples taken exceed 400 cfu or mpn per 100 ml.
2. For those parameters sampled weekly or less frequently, the Permittee shall report the single value instead of the 7-day or 30 day average.

Attachment A This attachment to the permit is the list of Priority Pollutants which are required to be sampled under the pretreatment permit requirements.

IX. Proposed Technology Based Effluent Limitations: Federal regulations at 40 CFR section 133 require publicly owned treatment works to achieve specified limits in discharged BOD, suspended solids, and pH. The permit includes these limits.

X. Proposed Water Quality-Based Effluent Limitations: The Nevada water quality standards require that point source discharges not cause a violation of any applicable water quality standards in the receiving water nor interfere with the attainment or maintenance of beneficial uses. The following requirements are included in the permit to ensure that the discharge does not cause water quality standards violations. In addition, the permit requires monitoring and reporting of constituents which are present in the discharge and the subject of ambient water quality standards.

Total Dissolved Solids. The permit includes the goal of not more than a 400 mg/l increase in Total Dissolved Solids (TDS) over the drinking water supply, a goal established by the Colorado River Salinity Forum. The Permittee has implemented the salinity public education program required by the permit. This activity is a continuing requirement of the proposed permit.

Phosphorus and Ammonia. Total Maximum Daily Loads (TMDLs) were developed for Total Ammonia as N and Phosphorus as P in 1989. The Permittee has been allocated a Waste Load for Total Ammonia as N and Total Phosphorus as P. This permit includes language which allows waste load allocation trading between the City of Las Vegas, Clark County Water Reclamation District, and City of Henderson (hereafter Dischargers). The WLA applies to the combined loading from all outfalls. This permit condition constitutes a cooperative agreement between the Dischargers to allow discharge flexibility. Each facility has an **Individual Waste Load Allocation (IWLA)** and there is a **Sum of Waste Load Allocations (Σ WLA)** defined below for the three facilities. The Permittee shall be considered in compliance if **either:**

- i. The Permittee does not exceed the **IWLA** listed below or the **IWLA** in effect due to transfers,
- or**
- ii. The **Sum of the Waste Load Allocations (Σ WLA)** listed below is not exceeded.

Waste Load Allocation Table

Constituent	City of Las Vegas IWLA	Clark County Sanitation District IWLA	City of Henderson IWLA	Σ WLA
Total Phosphorus as P	123 lb/day	173 lb/day	38 lb/day	334 lb/day. Note: This WLA only applies March 1 - October 31; no limit applies the rest of the year. Non-point source load is 100 lb/day.
Total Ammonia as N	358 lb/day	502lb/day	110 lb/day	970 lb/day. Note: This WLA only applies April 1 - September 30; no limit applies the rest of the year. No non-point source load.

Fecal Coliform. Water quality standards for Las Vegas Wash specify fecal coliform requirements to be imposed on discharges into the wash. Water quality standards for Lake Mead include fecal coliform standards. These standards have been imposed as effluent limits on discharges into the Wash and Lake Mead.

Total Residual Chlorine. Water quality standards for Las Vegas Wash prohibit the discharge of toxic substances in toxic amounts. The Permittee dechlorinates the effluent to remove free chlorine. An excess of the dechlorinating agent is used to ensure that no free chlorine remains. The effluent limit of 0.1 mg/l Total Residual Chlorine is included in the permit as an indicator that no free chlorine is present in the effluent.

Acute WET Testing. Acute whole effluent toxicity requirements have been imposed to prevent discharges of toxic substances in toxic amounts.

XI. Special Conditions: In addition to the technology based effluent limitations and the water quality based effluent limitations, the permit includes standard conditions required by 40 CFR section 122.41, including requirements on duty to comply, duty to reapply, need to halt or reduce activity not a defense, duty to mitigate, proper operation and maintenance, permit actions, property rights, duty to provide information, inspection and entry, monitoring and records, signatory requirement, reporting requirements (including planned change, anticipated noncompliance, transfers, monitoring reports, compliance schedules, 24 hour reporting, and other non-compliance), bypass requirements, and upset requirements. In addition, the permit includes the following special conditions.

Total inorganic nitrogen and pH. The Permittee is required to coordinate with the Clark County Water Reclamation District and the City of Henderson to determine whether Las Vegas Wash complies with the RMHQ criterion for total inorganic nitrogen, and for the beneficial use standard for pH. If the Permittee and other dischargers determine that the wash has exceeded these criteria, they must consider whether reasonable changes would result in compliance, and report to the Division.

Chronic WET Testing. The Permittee previously conducted a chronic whole effluent toxicity testing study and determined that there was no chronic whole effluent toxicity present in the effluent. The permit requires additional chronic WET testing to ensure that chronic toxicity does not appear.

Cadmium, copper, hexavalent chromium, molybdenum, selenium, silver, sulfide. The Permittee previously conducted studies to ascertain whether hardness levels above 400 mg/l provided additional protection against toxicity, and determined that Las Vegas Wash water, which contains 800 mg/l of hardness, had a protective effect. The permit requires annual data review to determine whether additional aquatic studies or other investigations are needed.

Biosolids. The permit includes requirements on the disposal or reuse of biosolids. No changes are proposed from existing requirements.

Pretreatment. The permit includes requirements for a pretreatment program, which the Permittee has

established. No changes are proposed from existing requirements.

Miscellaneous. The permit includes miscellaneous requirements for odors, fencing, fees, operator qualifications, etc. No changes are proposed from existing requirements.

Effluent Monitoring. The permit includes extensive effluent monitoring requirements for all substances subject to effluent limitations or included in ambient water quality standards.

Ambient Water Quality Monitoring. The existing permit specifies locations and monitoring intervals for ambient water quality monitoring. The proposed permit would revise the provision by requiring the Permittee to submit a proposed monitoring plan annually, consistent with minimum requirements imposed by the permit. In the plan, the Permittee would identify locations and sampling schedules. The minimum permit requirements provide for monitoring at least as intensive as in the existing permit. The revisions allow for greater flexibility, including the moving of existing stations to areas of current interest, and the addition and deletion of stations to provide monitoring for specific issues and for limited times.

XII. Reasonable Potential Analysis and Antidegradation Review. EPA regulations require that "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." (40 CFR § 122.44(d)(1)(i).) Before issuance of the permit in 2001, a detailed reasonable potential analysis was conducted on the potential for wastewater discharges from the City of Henderson, City of Las Vegas, and Clark County Water Reclamation District to cause or contribute to excursions above water quality standards. The conclusion from that analysis was that there was no reasonable potential, and no numeric effluent limits were imposed. Since that permit was issued, the Permittee, in coordination with the other Dischargers, have conducted aquatic life studies demonstrating that Las Vegas Wash, which has hardness concentrations of 800 mg/l, provides a protective effect beyond the protective effect associated with 400 mg/l of hardness, and that it is appropriate to use the concentrations of 800 mg/l in calculating hardness-based water quality criteria. The discharges are unlikely to exceed the ambient water quality metals criteria, and there is no reasonable potential for Las Vegas Wash.

In Nevada, antidegradation review is conducted through the criteria known as Requirements to Maintain Higher Quality (RMHQ). RMHQ criteria were reviewed and applied to this permit, and none of the discharges can reasonably be expected to exceed any RMHQ criterion.

**XIII. Flow: 91 MGD, Water Pollution Control Facility
10 MGD, Durango Hills WRC**

XIV. Quantities: At the 30 day average flow allowed by this permit, the discharge from Outfalls 001 and 002 combined will consist of the following maximum loadings:

	Outfall 001	Outfall 002
BOD₅	22,768 lb/day	2,502 lb/day
Total Suspended Solids	22,768 lb/day	2,502 lb/day

XV. Discharges From Future Outfalls

As part of its application, the Permittee has submitted a request for a mixing zone and information on proposed discharges from future outfall 003 to lower Las Vegas Wash and from future outfall 004 to Lake Mead. These discharges will require the construction of a pipeline from the Permittee's plant along Las Vegas Wash to Lake Mead. This proposed pipeline will require approval of federal agencies, and is currently undergoing environmental review through the preparation of an environmental impact statement. The Division is holding the request for a mixing zone and the application for additional outfalls in abeyance at this time, pending a written request from the Permittee to proceed. When it receives a written request to proceed, the Division will prepare a major modification of the permit, which will be subject to public review and comment. No additional application will be required from the Permittee.

XVI. Procedures for Public Comment

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to surface waters 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 mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. July 24, 2006, a period of 30 days following the date of the public notice. 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 of EPA Region IX 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.650.

XVII. Proposed Determination

The Division has made the tentative determination to re-issue the proposed 5-year permit.

Prepared by: Alan Tinney
April 24, 2006

ATTACHMENT A

PRIORITY POLLUTANTS

BASE NEUTRAL EXTRACTIBLES

Acenaphthene
Benzidine
1,2,4-Trichlorobenzene
Hexachlorobenzene
Hexachloroethane
Bis(2-chloroethyl) ether
2-Chloronaphthalene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis(2-Chloroisopropyl) ether
Bis(2-Chloroethoxy) methane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosodi-n-propylamine
Bis(2-ethylhexyl) phthalate
n-Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Chrysene
Acenaphthylene
Anthracene
Benzo(g,h,i)perylene
Fluorene
Phenanthrene
Dibenzo(a,h)anthracene
Indeno(1,2,3-cd)pyrene
Pyrene

VOLATILE ORGANICS

Acrolein
Acrylonitrile
Benzene
Carbon tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
2-Chloroethylvinylether
Chloroform
1,1-Dichloroethene
Trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropane
Ethylbenzene
Dichloromethane
Chloromethane
Bromomethane
Bromoform
Bromodichloromethane
Dibromochloromethane
Tetrachloroethene
Toluene
Trichloroethene
Vinyl chloride

PESTICIDES

Aldrin
Dieldrin
Chlordane (Technical)
4,4'-DDT
4,4'-DDE
4,4'-DDD
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC (Lindane)
Delta-BHC
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260
Toxaphene

ACID EXTRACTIBLES

2,4,6-Trichlorophenol
4-Chloro-3-methylphenol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol
Pentachlorophenol
Phenol

METALS

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

DIOXINS

TCDD

OTHER

Cyanide
Asbestos

Note:

Priority Pollutants to be analyzed using Environmental Protection Agency (EPA) Methods 200 Series, 353.3, 420.2, 624.625, 608, and/or an appropriate combination of these methods to verify compliance with permit-specified effluent discharge limitations.