

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MEETING OF MAY 13 and 14, 2009
South Lake Tahoe**

ITEM: 12

SUBJECT: RENEWAL OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION, GROVER HOT SPRINGS STATE PARK, ALPINE COUNTY

CHRONOLOGY: <u>Date</u>	<u>Action</u>
November 12, 1981	Board Order No. 6-81-96, waste discharge requirements adopted for discharges of waste to land.
June 14, 2000	Board Order No. 6-00-58, National Pollutant Discharge Elimination System (NPDES) permit adopted (as waste discharge requirements) for discharges of pollutants to surface waters.

ISSUE: Is the proposed timing of actions to comply with requirements for Best Management Practices (BMP) Plan development and implementation acceptable?

DISCUSSION: The California Department of Parks and Recreation (Discharger) operates the Grover Hot Springs State Park (Facility) near Markleeville. The Facility discharges pollutants to wetlands and other surface waters from water treatment and public swimming pool filtration systems. The Discharger has submitted a NPDES permit application to the Water Board for authorization to continue operating the Facility and to discharge pollutants to surface waters tributary to the East Fork Carson River.

The Discharger currently maintains water filtration systems for the water treatment plant (WTP) and Cold Pool that involve periodically rinsing the filters and discharging the resulting rinse-waters to wetlands tributary to Hot Spring Creek. Additional controls to reduce or eliminate pollutants in these discharges are needed to comply with requirements.

In comments submitted on tentative (draft) requirements, the Discharger proposed to install a cartridge-type disposable paper filter system for discharges from the sand filters associated with the Cold Pool. It is expected, based on discussions with the Discharger, that this system will be installed within six months following permit adoption, pending funding approval.

12-0001

For the WTP, the proposed Order includes requirements to develop a comprehensive BMP Plan for the Facility that includes evaluating the need for an additional filter for the WTP filter backwash. BMP Plan requirements are in Attachment G of the proposed Order. The Order provides twelve months to develop the BMP Plan and an additional six months to have the BMP Plan fully implemented. Staff expectations for the BMP Plan are that it will provide improved reliability of existing system operations and pollutant control devices and practices, and evaluate new practices and/or controls that may be available or appropriate for the Facility. The time period to develop and implement the BMP Plan is appropriate because the existing Facility operations pose a low threat to water quality and Water Board staff is not aware of evidence that discharges from the Facility are adversely affecting the waters for beneficial uses.

On March 5, 2009, tentative requirements were mailed to the Discharger and other interested parties for review and comment. Public notices were posted at the Facility and other nearby public places and a Public Notice was published in area newspapers establishing a public comment period on the draft permit from March 6 to April 6, 2009. Comments received from the Discharger indicated a commitment to "prepare and implement a BMP Plan within six months of Order adoption . . ." This is less time than required in the Order, in recognition that funding may be affected by State budget processes. Other comments received from the Discharger are incorporated into the proposed Order. No other comments were received.

**RECOMMEND -
TION:**

Adoption of the Order as proposed.

Enclosures:

1. Proposed Board Order with Fact Sheet (Attachment F)
2. Discharger Comment Letter dated March 25, 2009

ENCLOSURE 1

12-0003



California Regional Water Quality Control Board

Lahontan Region



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Arnold Schwarzenegger
Governor

ORDER NO. R6T-2009-PROPOSED

NPDES NO. CA0103179
WDID NO. 6A020110801

WASTE DISCHARGE REQUIREMENTS FOR THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION GROVER HOT SPRINGS STATE PARK ALPINE COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order.

Table 1. Discharger Information

Discharger	California Department of Parks and Recreation
Name of Facility	Grover Hot Springs State Park
Facility Address	3415 Hot Springs Road
	Markleeville, California 96120
	Alpine County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

Discharges from the Grover Hot Springs State Park from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	WTP Filter Backwash	38.6988983°	113.8376530°	Hot Springs Creek
002	Swimming Pool Filter Backwash	38.6962108°	113.8434293°	Hot Springs Creek
003	Hot Springs Pool Discharge	38.6962333°	113.8436179°	Hot Springs Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	May 13, 2009
This Order shall become effective on the adoption date of this Order.	May 13, 2009
This Order shall expire five years from the adoption date of this Order.	May 12, 2014
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<u>180 days prior to the Order expiration date</u>

12-000A

IT IS HEREBY ORDERED, that Order No. 6-00-58 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Harold J. Singer, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 13, 2009.

HAROLD J. SINGER, EXECUTIVE OFFICER

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order.

Table 4. Facility Information

Discharger	California Department of Parks and Recreation
Name of Facility	Grover Hot Springs State Park
Facility Address	3415 Hot Springs Road
	Markleeville, California 96120
	Alpine County
Facility Contact, Title, and Phone	Graham Payne, Water and Sewage Plant Supervisor, California State Parks, Sierra District, phone: 530-525-4508
Mailing Address	P.O. Box 266, Tahoma, CA 96142
Type of Facility	State Park campground and pool complex
Facility Design Flow	124,000 gpd (average monthly discharge, July 2007 – June 2008)

II. FINDINGS

The California Regional Water Quality Control Board, Lahontan Region (hereinafter the Lahontan Water Board), finds:

- A. Background.** The California Department of Parks and Recreation (hereinafter the Discharger) is currently discharging pursuant to Order No. 6-00-58 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0103179. The Discharger submitted a Report of Waste Discharge, dated March 24, 2005, and applied to renew its NPDES permit to discharge treated wastewater from the Grover Hot Springs State Park to surface waters located near Markleeville in Alpine County. Additional information, supplementing the Report of Waste Discharge, was received in December 2008. Order No. 6-00-58 expired on June 14, 2005 and has been administratively extended.
- B. Facility Description.** The 700 acre, Grover Hot Springs State Park is located four miles west of Markleeville at the end of Hot Springs Road and includes 76 campsites with piped water and restrooms, hot and cold concrete bathing and swimming pools, a day use/picnic area, and hiking trails. The park is open year round; however, the campground is closed from October through April each year. It is located within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Unit No. 632.10).

A water treatment plant (WTP) at the park, with a design treatment capacity of 55 gallons per minute (gpm), produces filtered and chlorinated water year round for use in the campground, day use area, pool complex, maintenance facility, and in six residences for park employees. Greatest water production occurs when the campground is open. Before a S.C.A.D.A. (Supervisory Control and Data Acquisition) system was integrated with the WTP in 2005, water production was much more variable, as overproduction and overflows were common.

Raw water from Buck Creek flows through and over a (10' x 10' x 5' depth) sediment catch basin. Within the catch basin is a diversion trough which diverts a portion of the water through screens in the intake to the WTP, which operates automatically based on a signal from a level indicator in the 60,000 gallon product water storage tank. Following addition of chlorine (a 12.5 percent solution of sodium hypochlorite) and a Nalco polymer (to enhance filtration), raw water flows through a flash mixer ahead of two pressure sand filters (@ 22 square feet surface area, each) operated in series. Treated water is pumped upslope to two, above grade, redwood, water storage tanks from which it is fed by gravity to the park. A 60,000 gallon tank serves the campground, day use area, maintenance facilities, and employee housing, and a 20,000 gallon tank serves the pool complex. Product water from the 60,000 gallon tank is used to backwash the WTP filters, which are backwashed based on pressure differential or time basis year round. Approximately 5,700 gallons of wastewater are generated during each backwash event, and in the period of July 2007 through June 2008, between 4 and 14 backwashes occurred in each month. De-chlorinated filter backwash is discharged intermittently (when filters are backwashed) to a small channel within a wet meadow, and flows by gravity approximately 400 feet to Hot Springs Creek.

The pool complex at the park includes a 37,000 gallon hot pool and a 21,000 gallon cold pool. The hot pool is fed with a blend of geothermal water and treated water. The cold pool uses only treated water. The pools are typically open 10 hours per day, year round, are down for maintenance for two weeks per year, and closed for some holidays.

The hot pool is a flow through system which uses geothermal water captured in a concrete catch basin as it percolates from the ground. Geothermal water at 149° F is blended with filtered/chlorinated water to maintain 104° F in the pool. Blended geothermal water flows by gravity through the pool, and although this flow is not metered, the Discharger estimates a flow through rate of 115 gpm, when the pool is in use. An erosion chemical system, located on the pool's intake water system, is used to establish a bromine residual of 1 - 3 mg/L in the hot pool. Bromine dosage can be adjusted by regulating (by manual valve) the amount of flow through the chemical feed system. The discharge from the hot pool is de-brominated using a perforated PVC pipe which allows the water flow to come into contact with granules of sodium thiosulfate. Due to elevated temperatures, aerated conditions that promote algae growth, and public safety, the hot pool must be emptied each evening for manual spot cleaning. Discharges from the hot pool are de-brominated with sodium thiosulfate and directed to the wet meadow adjacent to the pool complex and flow by gravity approximately one-quarter mile to Hot Springs Creek.

Treated water is used to supply the 21,000 gallon cold pool, which is automatically chlorinated to maintain a chlorine residual of 2 - 3 mg/L. A pH controller regulates feed of soda ash to maintain a pH of approximately 7.4 in the pool. Pool water is circulated through a side stream sand filter that is backwashed at night (when there are no people in the pool) approximately one time per day in summer months and approximately two or three times per month during the rest of the year. Approximately 1600 gallons of pool water, blended with WTP product water, is used for backwashing during each backwash event. Backwash water is de-chlorinated with liquid sodium thiosulfate prior to discharge. The cold pool must be emptied approximately four times per year for service and is super-chlorinated very infrequently, as necessary to protect public health.

All backwash water discharges from the WTP, the hot pool, and the cold pool at Discharge Points 001, 003, and 002, respectively, percolate into the ground, commingle with other spring waters, and/or flow overland to Hot Springs Creek. Discharges from the WTP and the cold pool occur intermittently, based on the need for filter backwashing. Discharges from the hot pool are continuous, due to the flow-through design of the pool and supply from the geothermal springs. Flows during the evening hours are reduced due to water not needing blending to reduce the temperature. Certified park staff is at the WTP and pool complex every day and is responsible for their operation.

Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of each facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Lahontan Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for requirements of the Order, is hereby

incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G are also incorporated into this Order.

- E. California Environmental Quality Act (CEQA).** Pursuant to Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology Based Effluent Limitations.** CWA Section 301 (b) and USEPA's NPDES regulations at 40 CFR 122.44 require that permits include, at a minimum, conditions meeting applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards. Discharges authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with NPDES regulations at 40 CFR 125.3. Discussion regarding development of technology-based effluent limitations is included in the Fact Sheet (Attachment F).
- G. Water Quality Based Effluent Limitations.** CWA Section 301 (b) and NPDES regulations at 40 CFR 122.44 (d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44 (d) (1) (i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential is established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided at 40 CFR 122.44 (d) (1) (vi)°

- H. Water Quality Control Plans.** The Lahontan Water Board has adopted a *Water Quality Control Plan for the Lahontan Region* (hereinafter the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

Receiving waters for discharges from the Grover Hot Springs State Park are minor wetlands, which are tributary to the East Fork Carson River, via Hot Springs Creek (minor surface waters) and Markleeville Creek, within the Markleeville Hydrologic Area (632.10) of the East Fork Carson River Hydrologic Unit. Beneficial uses established by the Basin Plan for these receiving waters are described in Table 5, below. Because receiving waters for discharges from Grover Hot Springs State Park are minor wetlands, in accordance with the Basin Plan's Tributary Rule, beneficial uses of the first downstream water named by Table 2-1 of the Basin Plan (Markleeville Creek) are also applicable to the immediate receiving water (minor wetlands). Requirements of this Order implement the Basin Plan.

Table 5. Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001, 002, 003	Wetlands Tributary to Hot Springs Creek	<ul style="list-style-type: none"> ○ Municipal and Domestic Supply ○ Agricultural Supply ○ Ground Water Recharge ○ Fresh Water Replenishment ○ Commercial and Sport Fishing ○ Water Contact Recreation ○ Non-Contact Water Recreation ○ Cold Fresh Water Habitat ○ Wildlife Habitat ○ Rare, Threatened, or Endangered Species ○ Spawning, Reproduction, and Development ○ Water Quality Enhancement ○ Flood peak Attenuation / Flood Water Storage

Receiving waters for these discharges are not on the most recent (2006) CWA section 303 (d) list of impaired waters.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to pollutants added to discharges from the Grover Hot Springs State Park.

- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Lahontan Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow

time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations.

L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)] Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains water quality-based effluent limitations (WQBELs) for individual pollutants and technology-based requirements as discussed in section IV. B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs limitations have been derived to implement water quality objectives that protect beneficial uses. Both beneficial uses and water quality objectives applicable to discharges authorized by this permit have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent WQBELs for toxic pollutants were derived from the CTR, the CTR is the applicable standard pursuant to NPDES regulations at 40 CFR 131.38. The scientific procedures for calculating individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to NPDES regulations at 40 CFR 131.21 (c) (1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in the Fact Sheet, the permitted discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. CWA sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations and conditions in this Order are consistent with applicable anti-backsliding provisions of the CWA and its implementing regulations.

- P. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of California and the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Lahontan Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), provided as Attachment E to the Order, establishes monitoring and reporting requirements to implement federal and State requirements.
- R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable pursuant to 40 CFR 122.42. The Lahontan Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- S. Provisions and Requirements Implementing State Law.** The provisions and requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement State law only. These provisions and requirements are not required or authorized under the federal CWA, and consequently, violations of these provisions and requirements are not subject to the enforcement remedies that are available for NPDES violations.
- T. Notification of Interested Parties.** The Lahontan Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- U. Consideration of Public Comment.** The Lahontan Water Board, in a public meeting, provided an opportunity for a public hearing and considered all comments pertaining to the discharge. Details are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. The discharge of waste, which causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.
- B. The discharge of waste which causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.
- C. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste which causes further degradation or pollution is prohibited.
- D. The discharge of untreated sewage, garbage, or other solid wastes into surface waters of the Region is prohibited.
- E. For municipal and industrial discharges, as defined in the Basin Plan:
 - 1. The discharge, bypass, or diversion of raw sewage, sludge, grease, or oils to surface waters is prohibited.
 - 2. The discharge of wastewater except to designated disposal sites (as designated in this Order) is prohibited.
 - 3. The discharge of industrial process wastes to surface waters designated for the Municipal and Domestic Supply (MUN) beneficial use is prohibited. This prohibition and Prohibition E.2, above, do not apply to industrial stormwater.
- F. The discharge of any waste or deleterious material to surface waters of the East Fork Carson River Hydrologic Unit is prohibited.
- G. The discharge of any waste or deleterious material in the East Fork Carson River Hydrologic Unit, which would cause or threaten to cause violation of any water quality objective contained in the Basin Plan, or otherwise adversely affect or threaten to adversely affect the beneficial uses of water set forth in the Basin Plan is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001, 002, and 003

1. Final Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001, 002, and 003, with compliance measured at Monitoring Locations EFF-001, EFF-002, and EFF-003, as described in the MRP (Attachment E).

Table 6. Effluent Limitations

Constituent	Units	Average Monthly	Average Weekly	Maximum Daily
pH	Standard Units	6.5 – 8.5, at all times		
Total Residual Halogen	mg/L	ND ^[A]	ND ^[A]	ND ^[A]

^[A] ND = Non-Detect at the method detection limit of 10 µg/L achievable by the standard N,N-diethyl-p-phenylenediamine (DPD) field testing method (based on Method 4500-Cl-G, DPD Colorimetric Method, Standard Methods for the Examination of Water and Wastewater, 21st edition or a more recent edition)

2. Interim Effluent Limitations - Not Applicable

B. Land Discharge Specifications - Not Applicable

C. Reclamation Specifications - Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The receiving water limitations in the proposed Order are based upon the water quality objectives established by the Basin Plan and, as such, are a required part of the Order. Compliance with these receiving water limitations shall be determined as required by the attached Monitoring and Reporting Plan (Attachment E) at Monitoring Locations R-001 and R-002, which are located within Hot Springs Creek upstream and downstream of the authorized outfalls.

- Discharges from the Grover Hot Springs State Park shall not cause a violation of the following numeric water quality objectives, established by the Basin Plan for surface waters within the East Fork Carson River Hydrologic Unit.

Table 7. Water Quality Objectives for Surface Waters of the East Fork Carson River Hydrologic Unit

Parameter	Units	Annual Average ^[B]	90 th Percentile
Total Dissolved Solids	mg/L	80	100
Total Nitrogen (as N)	mg/L	0.20	0.30
Chloride	mg/L	4.0	6.0
Sulfate	mg/L	4.0	8.0
Total Phosphorous (as P)	mg/L	0.02	0.03
Boron	mg/L	0.12	0.25
Sodium ^[A]	percent	25	30

^[A] Percent sodium = (Na x 100) / (Na + Ca + Mg + K), where Na, Ca, Mg, and K are concentrations expressed as milliequivalents per liter

^[B] Values shown are mean of monthly mean for the period of record.

- Discharges from the Grover Hot Springs State Park shall not cause a violation of the following numeric and narrative water quality objectives, established by the Basin Plan for all surface waters of the Lahontan region.

Ammonia. The neutral, unionized ammonia species (NH₃) is highly toxic to freshwater fish. The fraction of toxic NH₃ to total ammonia species [total ammonia = ammonium ion (NH₄⁺) + NH₃] is a function of temperature and pH. Ammonia concentrations in receiving waters designated as cold fresh water habitat shall not exceed the values described below, which correspond to varying conditions of pH and temperature in the receiving water. For temperature and pH values not explicitly described by these tables, the most conservative value neighboring the actual value may be used or values may be calculated using formulas developed by USEPA in *Update of Ambient Water Quality Criteria for Ammonia* (EPA 822-R-99-014, 1999).

Table 8. One Hour Average Concentration for Ammonia (mg/L NH₃)

pH	Temperature ° C						
	0	5	10	15	20	25	30
Unionized Ammonia (mg/L NH₃)^[A]							
6.50	0.0091	0.0129	0.0182	0.026	0.036	0.036	0.036
6.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
7.00	0.023	0.033	0.046	0.066	0.093	0.093	0.093
7.25	0.034	0.048	0.068	0.095	0.135	0.135	0.135
7.50	0.045	0.064	0.091	0.128	0.181	0.181	0.181
7.75	0.056	0.080	0.113	0.159	0.22	0.22	0.22
8.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.25	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.50	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.75	0.065	0.092	0.130	0.184	0.26	0.26	0.26
9.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
Total Ammonia (mg/L NH₃)^[A]							
6.50	35	33	31	30	29	20	14.3
6.75	32	30	28	27	27	18.6	13.2
7.00	28	26	25	24	23	16.4	11.6
7.25	232	22	20	19.7	19.2	13.4	9.5
7.50	17.4	26.3	15.5	14.9	14.6	10.2	7.3
7.75	12.2	11.4	10.9	10.5	10.3	7.2	5.2
8.00	8.0	7.5	7.1	6.9	6.8	4.8	3.5
8.25	4.5	4.2	4.1	4.0	3.9	2.8	2.1
8.50	2.6	2.4	2.3	2.3	2.3	1.71	1.28
8.75	1.47	1.4	1.37	1.38	1.42	1.07	0.83
9.00	0.86	0.83	0.83	0.86	0.91	0.72	0.58

^[A] To convert table values to mg/L N, multiply by 0.822.

Table 9. Four Day Average Concentration for Ammonia (mg/L NH₃)

pH	Temperature ° C						
	0	5	10	15	20	25	30
Unionized Ammonia (mg/L NH₃)							
6.50	0.0008	0.0011	0.0016	0.0022	0.0022	0.0022	0.0022
6.75	0.0014	0.0020	0.0028	0.0039	0.0039	0.0039	0.0039
7.00	0.0025	0.0035	0.0049	0.0070	0.0070	0.0070	0.0070
7.25	0.0044	0.0062	0.0088	0.0124	0.0124	0.0124	0.0124

pH	Temperature ° C						
	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/L NH₃)							
7.50	0.0078	0.0111	0.0156	0.022	0.022	0.022	0.022
7.75	0.0129	0.0182	0.026	0.036	0.036	0.036	0.036
8.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.25	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.50	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.75	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
9.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
Total Ammonia (mg/L NH₃)							
6.50	3.0	2.8	2.7	2.5	1.76	1.23	0.87
6.75	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.00	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.25	3.0	2.8	2.7	2.6	1.77	1.24	0.88
7.50	3.0	2.8	2.7	2.6	1.78	1.25	0.89
7.75	2.8	2.6	2.5	2.4	1.66	1.17	0.84
8.00	1.82	1.7	1.62	1.57	1.10	0.78	0.56
8.25	1.03	0.97	0.93	0.90	0.64	0.46	0.33
8.50	0.58	0.55	0.53	0.53	0.38	0.28	0.21
8.75	0.34	0.32	0.31	0.31	0.23	0.173	0.135
9.00	0.195	0.189	0.189	0.195	0.148	0.116	0.094

^(A) To convert these values to mg/L N, multiply by 0.822.

Coliform Bacteria. Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20 MPN per 100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40 MPN per 100 mL. The log mean shall ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. A log mean concentration exceeding 20 MPN per 100 ml for any 30-day period, however, shall indicate violation of this objective even if fewer than five samples are collected.

Biostimulatory Substances. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

Chemical Constituents. Waters designated as municipal and domestic supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) or secondary MCLs established by the California Department of Health Services for drinking water and specified in Title 22, Division 4, Chapter 15 of the California Code of Regulations – Table 64431-A (MCLs for Inorganic Chemicals), Table 64444-A (MCLs for Organic Chemicals), Table 64449-A (Secondary MCLs, Consumer Acceptance Limits), and Table 64449-B (Secondary MCLs, Ranges). This incorporation-by-reference is prospective and therefore includes future changes to the incorporated provisions, as changes take effect.

Waters designated as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

Total Residual Chlorine. For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L in the receiving water. Median values shall be based on daily measurements taken within any six-month period.

Color. Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.

Dissolved Oxygen. The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation in the receiving water. In accordance with Table 3-6 of the Basin Plan, dissolved oxygen concentration in waters with designated beneficial uses of cold freshwater habitat (COLD) and spawning, reproduction, and development (SPWN), including the receiving waters for discharges authorized by this Order, shall meet the following criteria.

Table 10. Dissolved Oxygen Criteria (mg/L) for Waters Designated COLD and SPWN

	Designated Use	
	COLD and SPWN ^{[A] [B] [C]}	COLD ^{[A] [B]}
30 Day Mean	NA ^[D]	6.5
7 Day Mean	9.5 (6.5)	NA ^[D]
7 Day Mean, Minimum	NA ^[D]	5.0
1 Day, Minimum ^{[E] [F]}	8.0 (5.0)	4.0

- ^[A] From: USEPA. 1986. Ambient water quality criteria for dissolved oxygen. Values are in mg/L.
- ^[B] These are water column concentrations recommended to achieve the intergravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column (SPWN), the figures in parentheses apply.
- ^[C] Includes all embryonic and larval stages and juvenile forms to 30-days following hatching (SPWN).
- ^[D] NA (Not Applicable)
- ^[E] For highly manipulatable discharges, further restrictions apply.
- ^[F] All minima should be considered as instantaneous concentrations to be achieved at all times.

Floating Materials. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses.

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For natural high quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernable at the 10 percent significance level.

Oil and Grease. Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses.

For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.

Non-degradation of Aquatic Communities and Populations. All wetlands shall be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life.

All wetlands shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.

Pesticides. For the purposes of this Order, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, piscicides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agriculture Code 12753).

Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life.

Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations specified in Table 64444-A of Section 64444 (Organic Chemicals) of Title 22 of the California Code of Regulations which is incorporated by reference into the Basin Plan. The incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

pH. In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Region, the pH shall not be depressed below 6.5 nor raised above 8.5. (The Lahontan Water Board recognizes that some waters of the Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by case basis.)

Radioactivity. Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life.

Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits established by the CA Department of Health Services as MCLs for drinking water at

Title 22, Division 4, Chapter 15, Article 5 of the California Code of Regulations, sections 64442 and 64443. The incorporation-by-reference of these MCLs as receiving water limitations into this Order is prospective; i.e., future changes to the MCLs shall be incorporated into this Order as such changes take effect.

Sediment. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

Settleable Materials. Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 milliliter per liter.

Suspended Materials. Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affects the water for beneficial uses.

For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

Taste and Odor. Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high quality waters, the taste and odor shall not be altered.

Temperature. The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Lahontan Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses.

For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit (5°F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered.

Toxicity. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Lahontan Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in the most recent edition of *Standard Methods for the Examination of Water and Wastewater* (American Public Health Association, et al).

Turbidity. Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

B. Groundwater Limitations - Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

At 40 CFR 122.41 (a) (1), and (b) through (n), USEPA establishes conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25 (a) (12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41 (j) (5) and (k) (2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

2. Lahontan Water Board Standard Provisions

- a. Inspection and Entry

The discharger shall permit Lahontan Water Board staff:

- i. to enter upon premises in which an effluent source is located or in which any required records are kept;
- ii. to copy any records relating to the discharge or relating to compliance with the waste discharge requirements;
- iii. to inspect monitoring equipment or records; and
- iv. to sample any discharge.

- b. Reporting Requirements

- i. Pursuant to California Water Code 13267(b), the discharger shall immediately notify the Lahontan Water Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

- ii. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Lahontan Water Board at least 140 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- iii. The owner(s) of, and discharger upon, property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the waste discharge requirements shall be reported to the Lahontan Water Board. Notification of applicable waste discharge requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Lahontan Water Board.
- iv. If a discharger becomes aware that any information submitted to the Lahontan Water Board is incorrect, the discharger shall immediately notify the Lahontan Water Board, in writing, and correct that information.
- v. Reports required by the waste discharge requirements, and other information requested by the Lahontan Water Board, must be signed by a duly authorized representative of the discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1000) for each day of violation.
- vi. If the discharger becomes aware that their waste discharge requirements are no longer needed (because the project will not be built or the discharge will cease) the discharger shall notify the Lahontan Water Board in writing and request that their waste discharge requirements be rescinded.

c. Right to Revise Waste Discharge Requirements

The Board reserves the privilege of changing all or any portion of the waste discharge requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

d. Duty to Comply

Failure to comply with the waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

e. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements which has a reasonable likelihood of adversely affecting human health or the environment.

f. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the waste discharge requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the discharger, when necessary to achieve compliance with the conditions of the waste discharge requirements.

g. Waste Discharge Requirement Actions

The waste discharge requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for waste discharge requirement modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

h. Property Rights

The waste discharge requirements do not convey any property rights of any sort, 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.

i. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the waste discharge requirements including imposition of civil liability or referral to the Attorney General.

j. Availability

A copy of the waste discharge requirements shall be kept and maintained by the discharger and be available at all times to operating personnel.

k. Severability

Provisions of the waste discharge requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

l. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

m. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Lahontan Water Board Executive Officer.

n. Definitions

i. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

ii. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

o. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order. All monitoring shall be conducted according to 40 CFR Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

C. Special Provisions

1. Reopener Provisions

This permit may be reopened and modified in accordance with NPDES regulations at 40 CFR Parts 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any USEPA approved, new, State water quality objective.

2. Special Studies, Technical Reports and Additional Monitoring Requirements - Not Applicable

3. Best Management Practices and Pollution Prevention

a. Best Management Practices Program

The Discharger shall develop and implement a Best Management Practices (BMP) Plan, which identifies and evaluates pollutant sources associated with filter backwashing and other discharges from the WTP and the pool complex as well as site-specific BMPs to reduce or eliminate the discharge of pollutants to waters of the State and of the United States. The BMP Plan shall be updated as needed and shall be consistent with the general guidance contained in U.S. EPA's *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004), and it shall be consistent with the requirements described in Attachment G of this Order. The BMP Plan shall be maintained onsite and shall be available to Lahontan Water Board staff upon request.

b. Implementation of Specific Control Measures

Within 18 months following the effective date of this Order, the Discharger shall identify and implement control and/or treatment BMPs to (1) reduce suspended and settleable solids in discharges of filter backwash at Discharge Points 001 and 002 to levels that are visually imperceptible, (2) promote dispersion and infiltration to the soil of the WTP discharge within the uplands adjacent to Hot Springs Creek, and (3) install and/or properly maintain and operate dechlorination/debromination systems so that free halogen is not discharged from the WTP and the pool complex. The Discharger shall evaluate specific control and/or treatment BMPs to accomplish these objectives during development of the BMP Plan required by VI. C. 3. a, above; and shall provide a letter report to the Lahontan Water Board within 12 months following the effective date of this Order that describes the selected BMPs that will accomplish these objectives as well as the expected completion date for their implementation.

4. Construction, Operation and Maintenance Specifications - Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable

6. Other Special Provisions - Not Applicable

7. Compliance Schedules - Not Applicable

VII. COMPLIANCE DETERMINATION - Not Applicable

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$\text{Arithmetic mean} = \mu = \Sigma x / n \quad \text{where: } \Sigma x \text{ is the sum of the measured ambient water concentrations, and } n \text{ is the number of samples.}$$

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Lahontan Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Lahontan Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Lahontan Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed.

For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Lahontan Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

- x is the observed value;
- μ is the arithmetic mean of the observed values; and
- n is the number of samples.

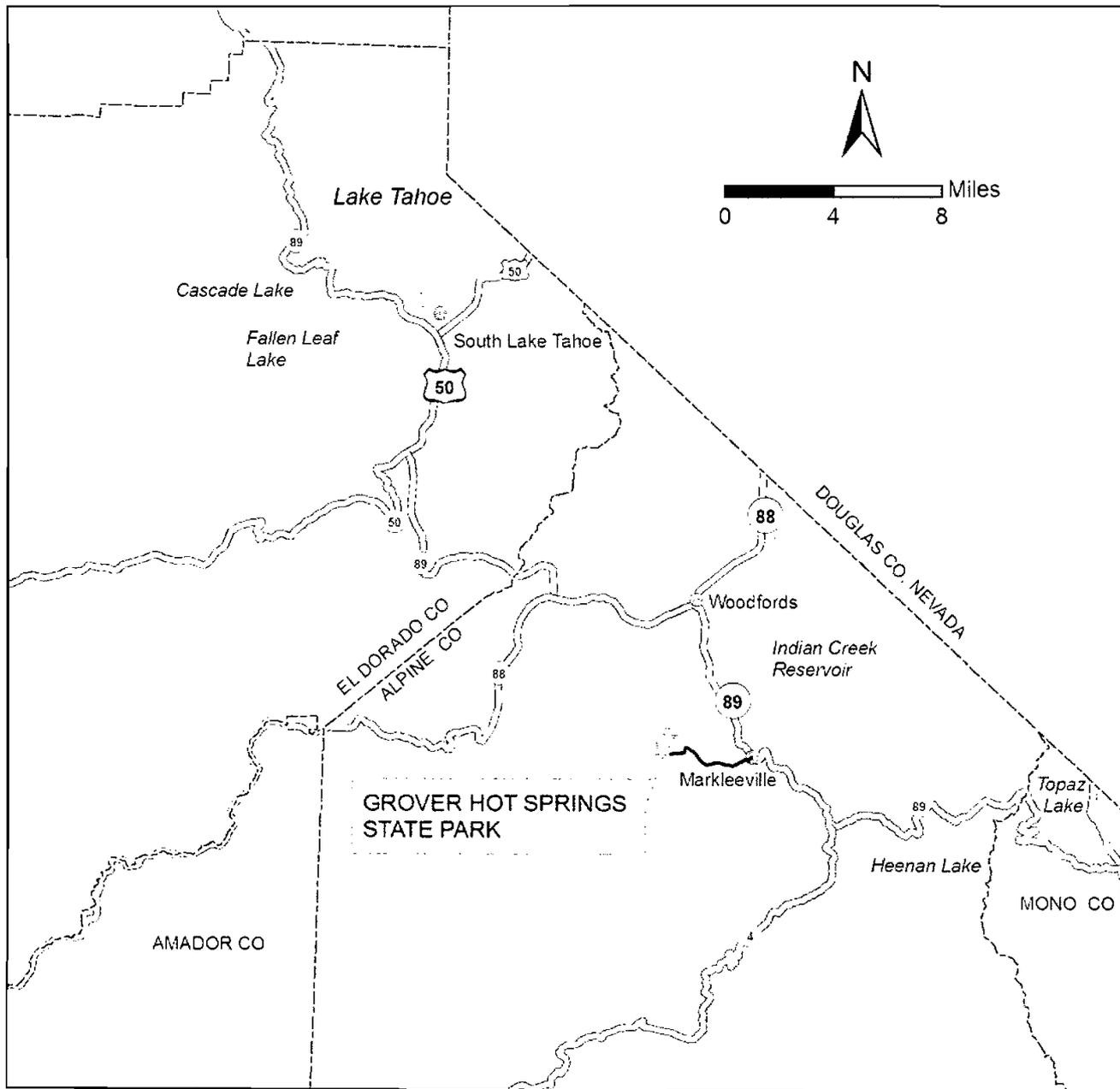
Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Waste is defined to include any waste or deleterious material, including, but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) and any other waste as defined in California Water Code § 13050 (d).

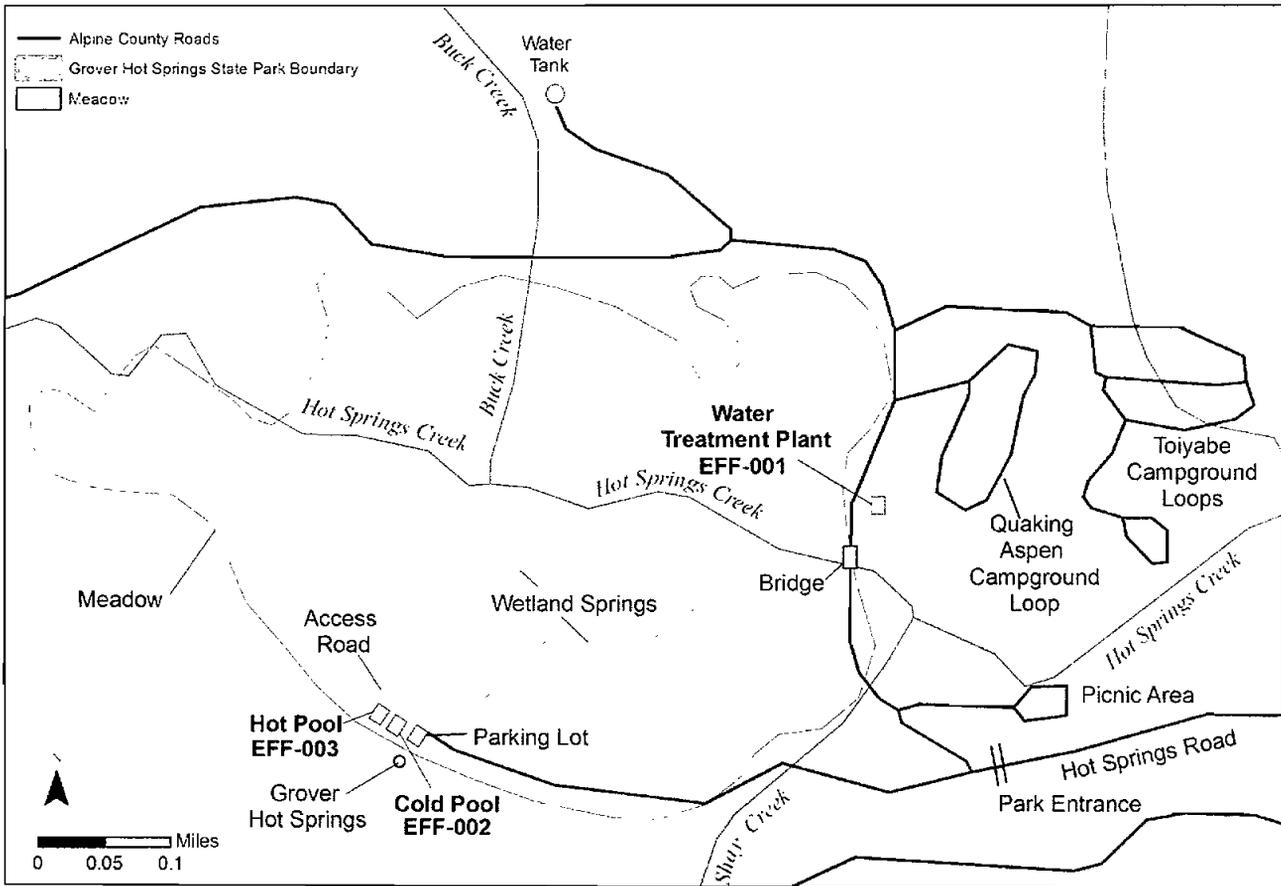
12-0089

ATTACHMENT B – MAPS

LOCATION MAP

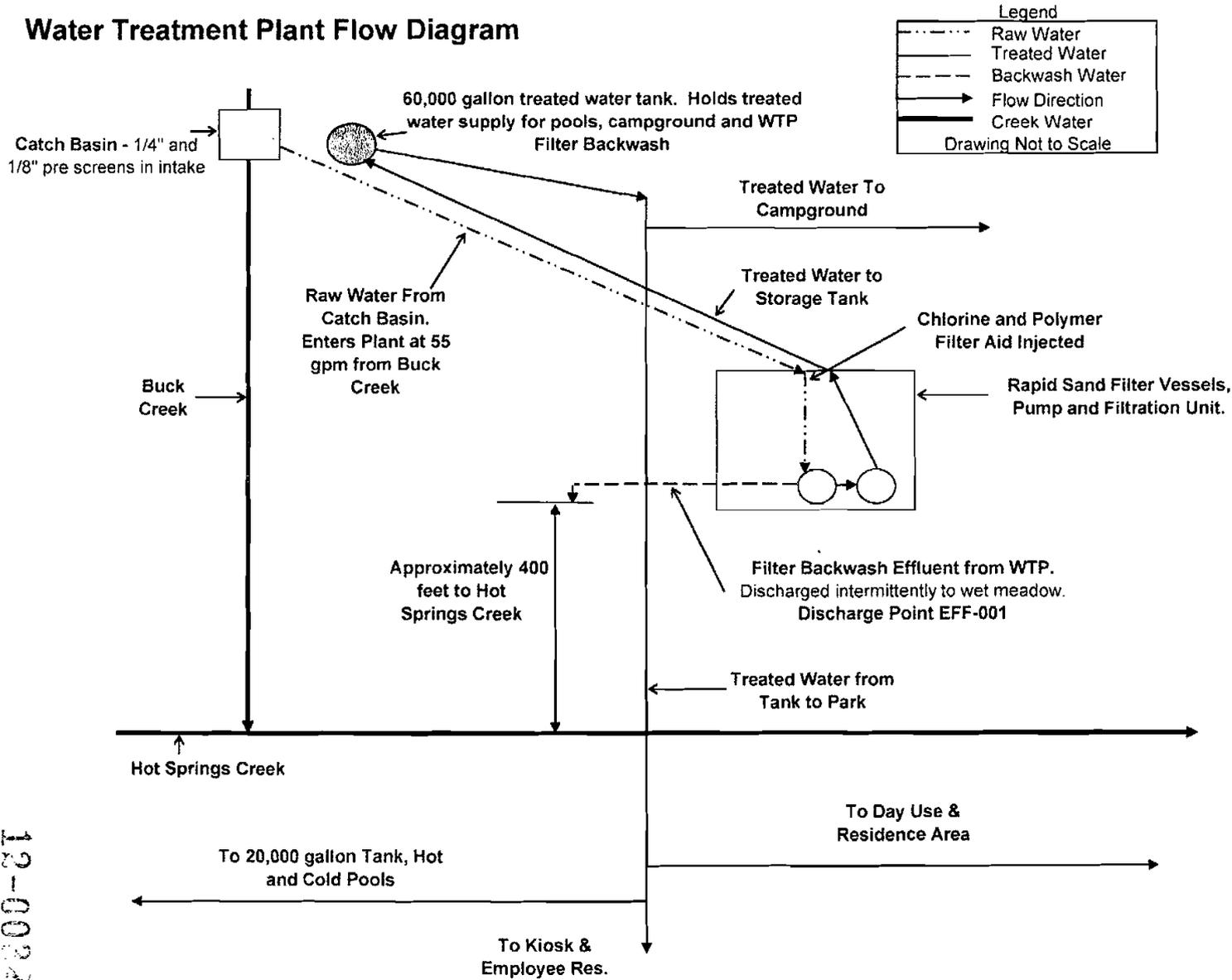


GROVER HOT SPRINGS STATE PARK

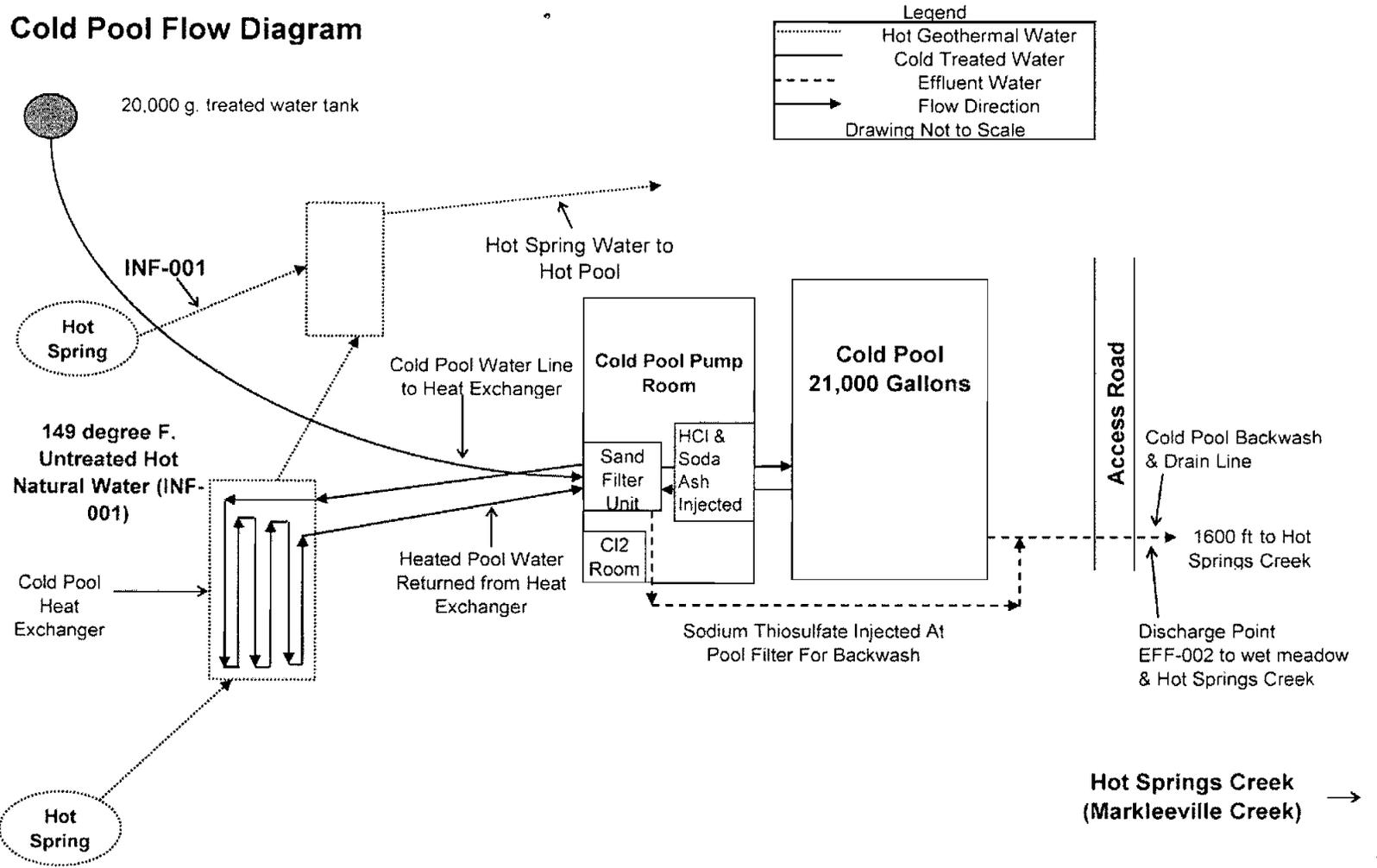


ATTACHMENT C – FLOW SCHEMATIC

Water Treatment Plant Flow Diagram

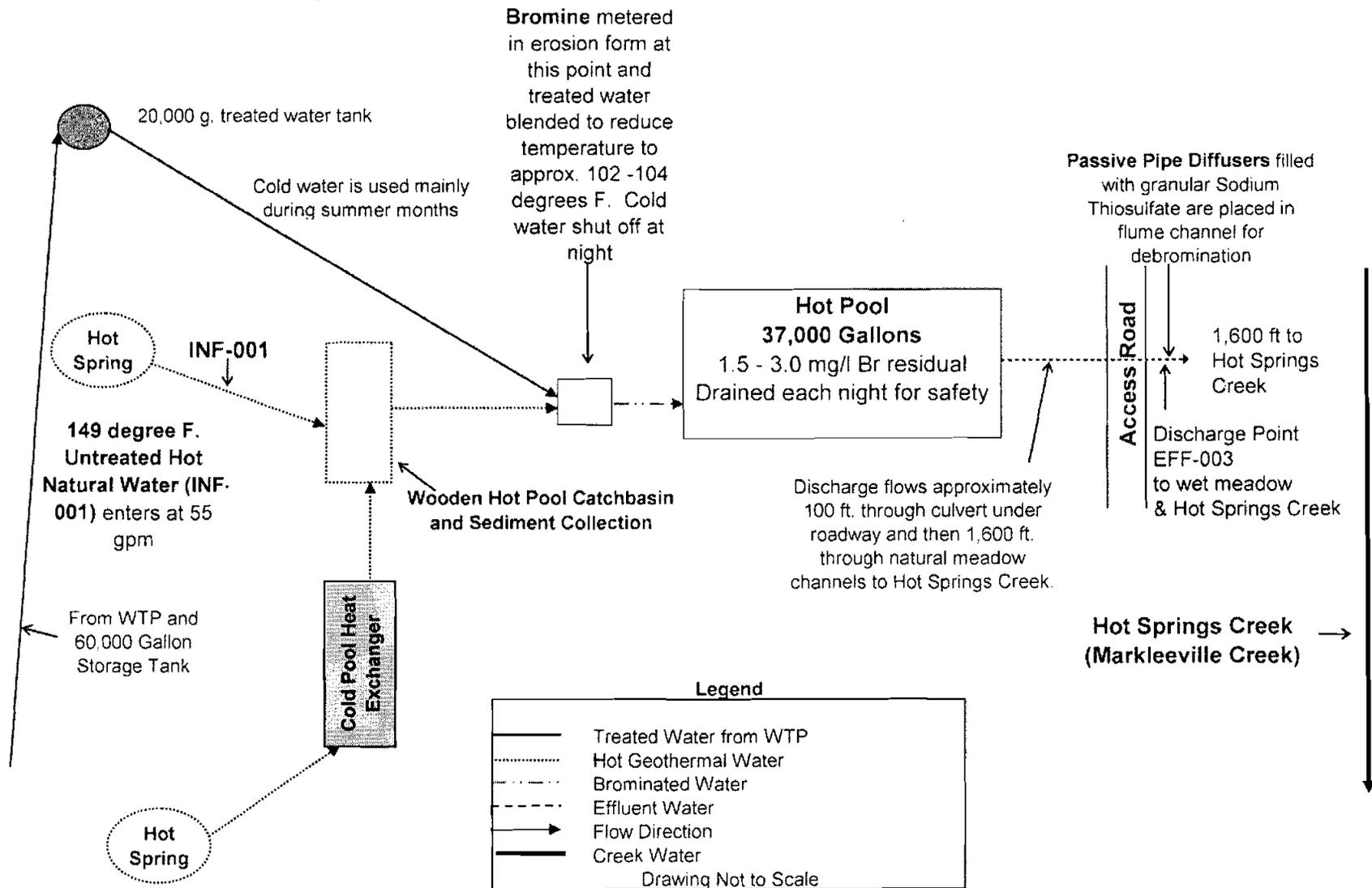


Cold Pool Flow Diagram



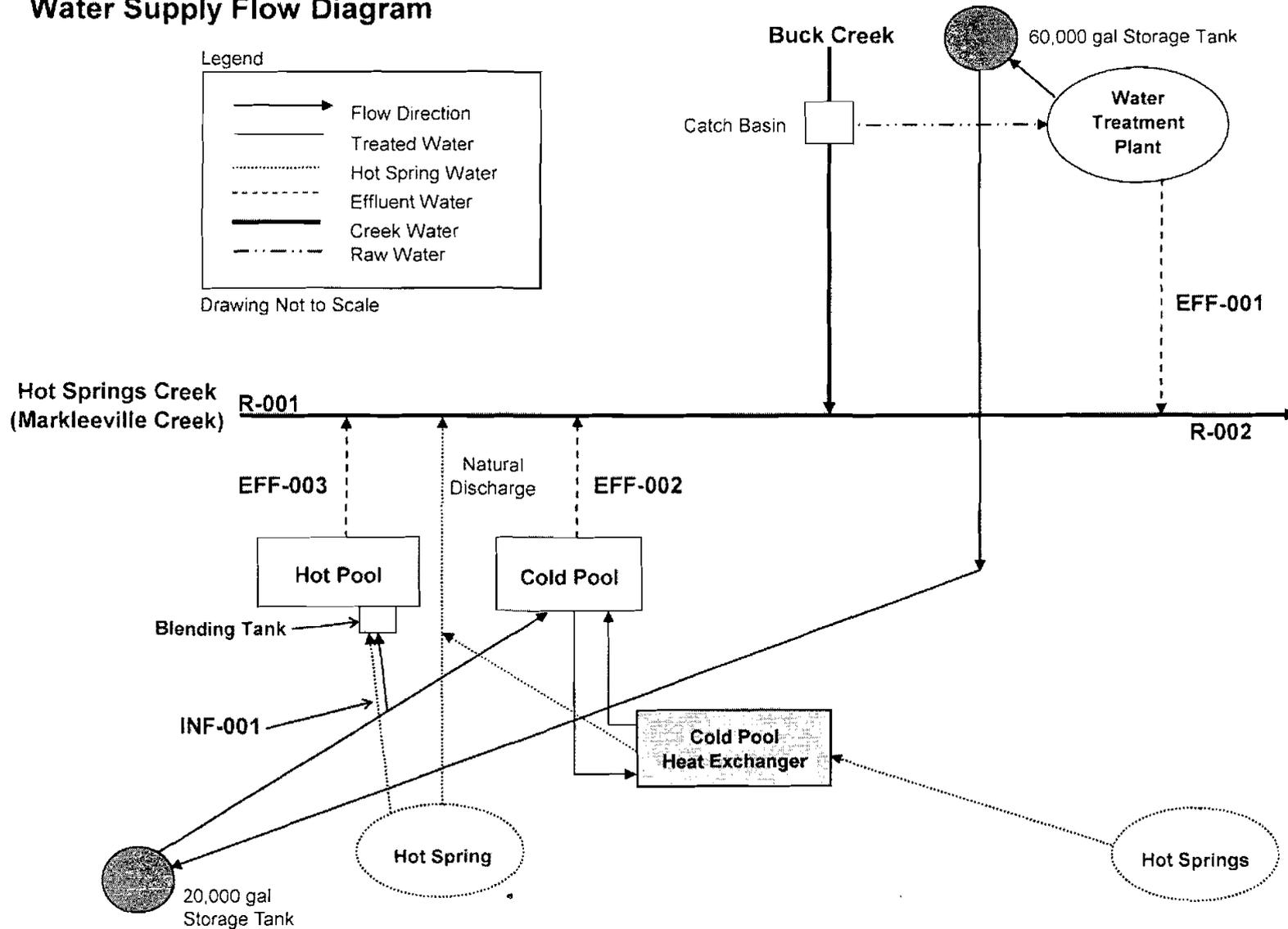
12-0033

Hot Pool Flow Diagram



12-0094

Water Supply Flow Diagram



12-0031

ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Lahontan Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Lahontan Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. 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 downtime. 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 that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

- c. The Discharger submitted notice to the Lahontan Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Lahontan Water Board may approve an anticipated bypass, after considering its adverse effects, if the Lahontan Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

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 Discharger. 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. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Lahontan Water Board. The Lahontan Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Lahontan Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Lahontan Water Board, State Water Board, or USEPA within a reasonable time, any information which the Lahontan Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Lahontan Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Lahontan Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Lahontan Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant

manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

- c. The written authorization is submitted to the Lahontan Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above 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 Standard Provisions – Reporting V.B.3 above must be submitted to the Lahontan Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make 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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the 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.” (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Lahontan Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Lahontan Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Lahontan Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Lahontan Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Lahontan Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger 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 Lahontan Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The Lahontan Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Lahontan Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
 - a. 100 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(1)(i));
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
 - d. The level established by the Lahontan Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that

discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):

- a. 500 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(2)(i));
- b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
- c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
- d. The level established by the Lahontan Water Board in accordance with 40 C.F.R. §122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Lahontan Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements pursuant to sections 13267 and 13383 which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Sampling and Analysis

1. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - a. *Standard Methods for the Examination of Water and Wastewater*
 - b. *Methods for Chemical Analysis of Water and Wastes*, EPA
2. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health or a laboratory approved by the Lahontan Water Board's Executive Officer. Specific methods of analysis must be identified on each laboratory report.
3. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Lahontan Water Board's Executive Officer prior to use.
4. The Discharger shall establish chain of custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
5. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in a permanent log book.
6. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
7. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.
8. The Discharger must provide information on how the flow measurement is obtained at each location where flow monitoring is required. The information must include the instrument used, last calibration date and results and, for field measurements, the name of the person who conducted the measurement.

B. Operational Requirements

1. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date; exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Lahontan Water Board.

2. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

C. Reporting

1. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
2. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Lahontan Water Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Lahontan Water Board.
3. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Lahontan Water Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
4. Monitoring reports shall be signed by:
 - a. In the case of a corporation, by a principle executive officer at least of the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates.
 - b. In the case of a partnership, by a general partner.
 - c. In the case of a sole proprietorship, by the proprietor; or
 - d. In the case of a municipal, state or other public facility, by either a principle executive officer, ranking elected official, or other duly authorized employee.
5. Monitoring reports are to include the following:
 - a. Name and telephone number of individual who can answer questions about the report.

- b. The Monitoring and Reporting Program Number.
- c. WDID Number 6A020110801

D. Noncompliance

Under section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports required pursuant to Water Code section 13267, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Hot spring water, which is used for the Hot Pool, at a point before it blends with other waters
001	EFF-001	Filter backwash from the WTP, representative of discharges from this system, before contact with other waste streams or receiving waters
002	EFF-002	Filter backwash from the Cold Pool, representative of discharges from this system, before contact with other waste streams or with receiving waters
003	EFF-003	Water discharged from the Hot Pool, representative of discharges from this system, before contact with other waste streams or receiving waters
---	R-001	Within Hot Springs Creek, within 100 feet upstream of all points of discharge from the WTP and the pool complex, where representative samples of receiving water (that has not contacted or mixed with wastewater) can be collected to determine ambient background conditions
---	R-002	Within Hot Springs Creek, within 100 feet downstream of all points of discharge from the WTP and the pool complex, where representative samples of receiving water can be collected to determine water quality.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

- 1. The Discharger shall monitor hot springs makeup water to the Hot Pool at Monitoring Location INF-001 in accordance with the following schedule.

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Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Dissolved Solids (TDS), chloride, total nitrogen, total phosphorous, sulfate, boron, % sodium ^[A]	mg/L	Grab	2X/permit term
CTR Metals ^[B]	µg/L	Grab	2X/permit term

^[A] Those pollutants for which specific numeric water quality objectives have been established by the Basin Plan for surface waters within the East Fork Carson River Hydrologic Unit. Monitoring shall coincide with effluent monitoring events for the same parameters.

^[B] Those metals listed in the California Toxics Rule (CTR) at 40 CFR 131.38 - Sb, As, Be, Cd, Cr⁺³, Cr⁺⁶, Cu, Pb, Hg, Se, Ag, Th, Zn. Monitoring shall be conducted to coincide with effluent monitoring for the CTR metals. Monitoring shall occur in each of the first two years following the effective date of this Order and shall occur in July or August.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations EFF-001, EFF-002, and EFF-003

1. The Discharger shall monitor discharges at Monitoring Locations EFF-001, EFF-002, and EFF-003 in accordance with the following schedule.

Table E-3. Effluent Monitoring at EFF-001, EFF-002, and EFF-003

Parameter	Units	Monitoring Location	Sample Type	Monitoring Frequency
Flow Volume	Gallons	001, 002, 003	Metered	Daily
pH	pH units	001, 002, 003	Grab	Monthly
Total Residual Halogen ^[A]	mg/L	001, 002, 003	Grab	Monthly
Fecal Coliform Bacteria	MPN/100 mLs	001, 002, 003	Grab	2X/year ^[B]
Total Suspended Solids	mg/L	001, 002	Grab	2X/year ^[B]
Settleable Solids	mL/L/hr	001, 002	Grab	2X/year ^[B]
Trihalomethanes ^[C]	µg/L	001, 002, 003	Grab	1X/year
CTR Pollutants ^[D]	µg/L	001, 002, 003	Grab	1X/permit term
CTR Metals	µg/L	002, 003	Grab	2X/permit term ^[F]
TDS, chloride, sulfate, total nitrogen, total phosphorous, boron, % sodium ^[E]	mg/L	001, 002, 003	Grab	1X/year

^[A] Total residual halogen includes free and combined chlorine and/or bromine.

^[B] Parameter shall be monitored in July and August (high use periods) of each year.

^[C] Monitoring shall be performed for the common trihalomethanes – chloroform, chlorodibromomethane, bromodichloromethane, and bromoform, one time per year, in July or August.

^[D] Those pollutants listed in the California Toxics Rule (CTR) at 40 CFR 131.38. Monitoring shall occur one time during the first two years following the effective date of this Order, in July or August.

^[E] Monitoring shall be performed for those pollutants for which specific numeric water quality objectives have been established by the Basin Plan for surface waters within the East Fork Carson River Hydrologic Unit, one time per year, in July or August

^[F] Monitoring for the CTR metals - those metals listed in the California Toxics Rule (CTR) at 40 CFR 131.38 (Sb, As, Be, Cd, Cr⁺³, Cr⁺⁶, Cu, Pb, Hg, Se, Ag, Th, Zn) shall coincide with monitoring at Monitoring Location INF-001 for the same parameter. Monitoring shall be conducted in each of the first two years following the effective date of this Order and shall occur in July or August. Monitoring for the full suite of “CTR Pollutants” shall satisfy monitoring requirements for the “CTR Metals” in the year when the “CTR Pollutants” are monitored.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS – Not Applicable

VI. LAND DISCHARGE MONITORING REQUIREMENTS – Not Applicable

VII. RECLAMATION MONITORING REQUIREMENTS – Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Locations R-001 and R-002

The Discharger shall monitor receiving water at monitoring Locations R-001 and R-002 in accordance with the following schedule.

Table E-4. Receiving Water Monitoring

Parameter	Units	Monitoring Location	Sample Type	Minimum Sampling Frequency
Flow	cfs or gpm	R-001 R-002	Visual Estimate	2X/year, including at the time of each monitoring event ^[A]
Trihalomethanes	µg/L	R-002	Grab	1X/year ^[C]
TDS, chloride, sulfate, total nitrogen, total phosphorous, boron, % sodium ^[B]	mg/L	R-001 R-002	Grab	1X/year ^[C]
CTR Metals	µg/L	R-001 R-002	Grab	2X/permit term ^[D]

^[A] Flow monitoring shall be performed one time during the spring runoff period and one time in late summer (but before Labor Day) so that low and high flow conditions in Hot Springs Creek are characterized. Determination of low flow conditions in late summer before Labor Day will account for peak discharges from the pool complex.

^[B] Those pollutants for which specific numeric water quality objectives have been established by the Basin Plan for surface waters within the East Fork Carson River Hydrologic Unit. Monitoring shall coincide with effluent monitoring events for the same pollutants, in July or August.

^[C] Monitoring shall be performed to coincide with effluent monitoring for the same parameter.

^[D] Those metals listed in the California Toxics Rule (CTR) at 40 CFR 131.38 - Sb, As, Be, Cd, Cr⁺³, Cr⁺⁶, Cu, Pb, Hg, Se, Ag, Th, Zn. Monitoring shall be conducted to coincide with effluent monitoring for the CTR metals. Monitoring shall coincide with monitoring at Monitoring Locations INF-001, EFF-002, and EFF-003 for the same parameter. Monitoring shall be conducted in each of the first two years following the effective date of this Order and shall occur in July or August.

B. Bioassessment Monitoring

The Discharger shall utilize biomonitoring (bioassessment) techniques to document assemblages of aquatic communities in Hot Springs Creek upstream and downstream of the combined discharge points. Results of biomonitoring at upstream and downstream locations shall be compared to evaluate effects on aquatic life attributable to the pollutant discharges from the Grover Hot Springs State Park. Biomonitoring shall be conducted between June 15 and September 15 at least one time before 2014 during the anticipated five year permit term and shall be performed in a manner consistent with *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (February 2007 or the most recent update). This guidance document is available on the State Water Resources Control Board website (http://www.waterboards.ca.gov/water_issues/programs/swamp/reports.shtml), or it can be obtained by following links from the Lahontan Water Board’s website

(http://www.swrcb.ca.gov/rwqcb6/water_issues/available_documents/monitoring.shtml) or by contacting the Lahontan Water Board Regional Monitoring Coordinator.

At least thirty days prior to conducting the bioassessment monitoring, the Discharger shall submit for approval to the Lahontan Water Board staff a Biomonitoring Plan. Within three months following completion of bioassessment monitoring, the Discharger shall submit a report summarizing the methods, findings, and conclusions of the study. If the Discharger determines that discharges from the Grover Hot Springs State Park are causing or contributing to adverse effects on aquatic life, the summary report shall include a description of mitigation steps and a schedule for their completion.

IX. OTHER MONITORING REQUIREMENTS

A. Chemical Usage

The Discharger shall record and report, chemical usage (bromine, chlorine, sodium thiosulfate, and polyelectrolyte coagulant, in mass or volume, as appropriate) on a monthly basis at the water treatment plant and the cold and hot pools.

B. Best Management Practices

The Discharger shall report annually regarding BMP implementation and the effectiveness of the BMP Plan. Representative and descriptive photographs of the points of discharge shall be included in the annual reporting. Changes to the BMP Plan shall also be reported in writing with the date of the change and person responsible for the change listed.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The results of any analysis taken more frequently than required using analytical methods, monitoring procedures, and locations specified in this Monitoring and Reporting Program shall be reported to the Lahontan Water Board.
2. The Discharger shall immediately notify the Lahontan Water Board's Executive Officer by telephone regarding any discharge in violation of this Order, or any emergency discharge or other unauthorized discharge to Hot Springs Creek or its tributary wetlands, and shall confirm this notification in writing within one week of the notification by telephone. Written notification shall include the date, duration, and volume of the discharge, as well as reasons for the discharge, mitigative steps taken, and actions taken to correct the problem and prevent its reoccurrence.
3. The Discharger shall notify Lahontan Water Board staff of any substantial change in the volume or character of pollutants discharged from the facility, from the conditions existing at the time of adoption of this Order. Notice shall include information regarding the quality and quantity of the discharge as well as anticipated impacts to the receiving waters. A substantial change in volume is considered to be any increase greater than 10 percent from the mean daily rate of discharge.

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B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State Water Resources Control Board or the Lahontan Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit semi-annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins ...	Monitoring Period	SMR Due Date
Daily	First day following the permit effective date	Daily	Data shall be reported with the next SMR to be submitted, either July 15 or January 15
1x/month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	Data shall be reported with the next SMR to be submitted, either July 15 or January 15
1x/semiannual period	January 1 or July 1, whichever occurs first following the effective date of this Order	January 1 – June 30, and July 1 – December 31	Data shall be reported with the next SMR to be submitted, either July 15 or January 15
1x/year	First day of calendar year following permit effective date or on permit effective date if that date is first day of the year	January 1 – December 31	Data shall be reported with the next SMR to be submitted before January 15
1x/permit term	The permit effective date	A period of five years beginning on the effective date of this Order	Data shall be reported with the SMR to be submitted before January 15

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the applicable procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. The Discharger shall submit SMRs in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. SMRs must be submitted to the Lahontan Water Board, signed and certified as required by the Standard Provisions (Attachment D, section V. B), to the address listed below.

California Regional Water Quality Control Board
Lahontan Region
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

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C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Lahontan Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	Fed Ex / UPS/ Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

The Discharger shall report the results of any special monitoring or other data or information that results from the Special Provisions, section VI. C, of the Order. The Discharger shall submit such reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	6A020110801
Discharger	California Department of Parks and Recreation
Name of Facility	Grover Hot Springs State Park
Facility Location	3415 Hot Springs Road
	Markleeville, California 96120
	Alpine County
Facility Contact, Title and Phone	Graham Payne, Water and Sewage Plant Supervisor, California State Parks, Sierra District, phone: 530-525-4508
Authorized Person to Sign and Submit Reports	Same as facility contact
Mailing Address	Grover Hot Springs State Park
	P. O. Box 266
	Tahoma, California 96142
Billing Address	Same as Mailing Address
Type of Facility	Recreational Facilities
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	N/A
Facility Design Flow	124,000 gpd (average monthly discharge, July 2007 – June 2008)
Watershed	East Fork Carson River Hydrologic Unit, Markleeville Hydrologic Area
Receiving Water	Hot Springs Creek and associated minor wetlands
Receiving Water Type	Fresh Water

A. The California Department of Parks and Recreation (hereinafter the Discharger) is the owner and operator of the potable water treatment plant and recreational facilities which are the subject of this Order. For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B. The Facility discharges wastewater at three locations within wet meadows associated with Hot Springs Creek, all waters of the State and the United States, and is currently regulated by Order No. 6-00-58, which was adopted on June 14, 2000 and administratively continued past its expiration date of June 15, 2005. The terms and conditions of the current Order are administratively continued and remain in effect until new Waste Discharge Requirements are adopted pursuant to this Order.
- C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on March 24, 2005. In December 2008, additional information was provided to complete the application.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The 700-acre Grover Hot Springs State Park is located four miles west of Markleeville at the end of Hot Springs Road and includes 76 campsites with piped water and restrooms, hot and cold pools, a picnic/day use area, and hiking trails. The park is open year round; however, the campground is closed yearly from October through April. It is located within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Unit No. 632.10).

A water treatment plant (WTP) at the park, with a design treatment capacity of 55 gallons per minute (gpm), produces filtered and chlorinated water year round for use in the campground, day use area, pool complex, maintenance facility, and in six residences for Park employees. As shown by Table F-2, greatest water production occurs when the campground is open. Before a S.C.A.D.A. (Supervisory Control and Data Acquisition) system was integrated with the WTP in 2005, water production was much more variable as overproduction and overflows were common.

Raw water from Buck Creek, a tributary to Hot Springs Creek, flows through and overflows a (10' x 10' x 5' depth) sediment catch basin. Within the catch basin is a diversion trough which transports a portion of the water through 0.25-inch and 0.125-inch screens to the WTP, which operates automatically based on incoming raw water turbidity or a signal from a level indicator in a 60,000 gallon treated water storage tank. Following the addition of chlorine (a 12.5 percent solution of sodium hypochlorite) and a Nalco polymer (to enhance filtration), raw water flows through a flash mixer ahead of two pressure sand filters (@ 22 square feet surface area, each) operated in series. Treated water is pumped upslope to two, above grade, redwood, water storage tanks from which it is fed by gravity to the park. A 60,000 gallon tank serves the campground, day use area, maintenance facilities, and employee housing, and a 20,000 gallon tank serves the pool complex. Product water from the 60,000 gallon tank is used to backwash the WTP filters, which are backwashed based on pressure differential or time basis year round.

Table F-2 indicates that approximately 5,700 gallons of wastewater are generated during each backwash event, and in the period of July 2007 through June 2008, between 4 and 14 backwashes occurred in each month. During each backwash event, sodium thiosulfate is injected into the water prior to discharge from the water plant to neutralize chlorine injected into the system. Filter backwash is discharged intermittently (when filters are backwashed) to a drainage channel within a wet meadow, and flows by gravity approximately 400 feet to Hot Springs Creek.

Table F-2. Representative Water Production and Discharges at Discharge Points 001, 002, and 003

	Jul 07	Aug 07	Sep 07	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
WTP Production (gallons per day)	44,500	39,600	20,800	8,800	17,500	17,200	13,900	15,400	18,700	21,400	32,900	52,100
WTP Total Discharge (gallons per month) (Discharge Point 001)	45,800	22,800	45,600	40,100	80,700	63,200	45,900	34,500	80,800	28,800	51,900	57,600
WTP No. of Backwash Events	8	4	8	7	14	11	8	6	14	5	9	10
WTP Discharge per Backwash Event (gal)	5,700	5,700	5,700	5,700	5,800	5,700	5,700	5,800	5,800	5,800	5,800	5,800
Cold Pool Total Discharge (gal) (Discharge Point 002)	49,000	46,400	9,600	[A]	[A]	6,400	8,000	6,400	4,800	3,200	22,400	32,000
Cold Pool No. of Backwash Events	31	30	6	0	0	4	5	4	3	2	14	20
Cold Pool Discharge Per Backwash Event (gal)	1,600	1,600	1,600	---	---	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Hot Pool Total Discharge (gpd) (Discharge Point 003) ^[B]	70,000	70,000	70,000	[A]	[A]	70,000	70,000	70,000	70,000	70,000	70,000	70,000

[A] Cold and hot pools were out of service during October and November 2007.

[B] Discharge from the hot pool is not metered; however, the pool is open for approximately 10 hrs/day, and water flows through the pool at 115 gpm during that time (115 gpm x 60 min/hr x 10 hr/day = 70,000 gpd)

Wastewaters discharged from Point 001 come from the WTP that is located in the campground area on the opposite side of Hot Springs Creek from the pool complex. It is accessible via a bridge across Hot Springs Creek from the pool complex. The discharge flows approximately 400 feet overland and into wetland drainages tributary to Hot Springs Creek.

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The pool complex at the park includes a 37,000 gallon hot pool and a 21,000 gallon cold pool. The hot pool is fed with a blend of geothermal water and treated water. The cold pool uses only treated water within the pool. Geothermal water is only used to heat the pool through a heat exchanger (see Cold Pool Filter Plant Flow Diagram in Attachment C). Geothermal water is not blended with treated water for the cold pool. The pools are typically open 10 hours per day, year round, and are shut down for maintenance for two weeks per year, and closed for some holidays. Certified park staff is responsible for operation of the WTP and pool facilities and present at the park during operating hours.

The hot pool at the park is a flow through system which uses geothermal water captured in a concrete catch basin as it percolates from the ground. Geothermal water at 149° F is blended with filtered/chlorinated water from the WTP to maintain 104° F in the hot pool. Blended geothermal water flows by gravity through the pool, and although this flow is not metered, the Discharger estimates a flow through rate of 115 gpm, when the pool is in use. An erosion chemical feed system, located on the pool's intake water supply, is used to establish a bromine residual of 1 – 3 mg/L in the hot pool. Bromine dosage can be adjusted by regulating (by manual valve) the amount of flow through the chemical feed system. The discharge from the hot pool is de-brominated using a perforated PVC pipe which allows flow to come into contact with granules of sodium thiosulfate. Due to elevated temperatures and aerated conditions that promote algae growth, the hot pool must be emptied each evening for manual spot cleaning. Discharges from the hot pool are de-brominated with sodium thiosulfate and are also to the wet meadow adjacent to the pool complex and up-gradient of Hot Springs Creek.

Treated water from the WTP is used to supply the 21,000 gallon cold pool, which is automatically chlorinated to maintain a chlorine residual of 2 – 3 mg/L. A pH controller regulates feed of soda ash to maintain a pH of approximately 7.4 in the pool. Pool water is circulated through a side stream sand filter that is backwashed at night (when there are no people in the pool) approximately one time per day during summer months and approximately 2-3 times per month during the rest of the year. Approximately 1600 gallons of pool water blended with WTP product water is used for backwashing during each backwash event. Backwash water is de-chlorinated with liquid sodium thiosulfate prior to discharge. The cold pool must be emptied approximately four times per year for service and is superchlorinated very infrequently as necessary to protect public health and is subsequently dechlorinated by neutralization with sodium thiosulfate.

Table F-2 contains a summary of water production and rates of discharge at Discharge Points 001, 002, and 003 from July 2007 through June 2008.

B. Discharge Points and Receiving Waters

Wastewaters are discharged from the pool complex at Discharge Points 002 and 003 to a wet meadow/wetlands area adjacent to Hot Springs Creek and associated with the Markleeville Hot Springs, a natural upwelling of geothermal spring waters. Flow from the meadow enters Hot Springs Creek, which is tributary to the East Fork Carson River via Markleeville Creek, all waters of the United States within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Department of Water Resources Hydrologic Unit 632.10). Wastewaters are discharged from the WTP on the opposite side of Hot Springs Creek from the pool complex, at Discharge Point 001. This discharge flows overland approximately 400 feet via a wet meadow/wetlands area to Hot Springs Creek.

All discharges from the WTP, the hot pool, and the cold pool at Discharge Points 001, 003, and 002, respectively, percolate into the ground, commingle with other spring waters, and/or flow overland to a wet meadow adjacent to the pool complex and tributary to Hot Springs Creek. Discharges from the WTP and the cold pool occur intermittently, based on the frequency of filter backwashing. Discharges from the hot pool are continuous due to the flow-through design of the pool and the supply from the geothermal springs. Flows from the hot pool during the evening hours are reduced due to water not needing blending to reduce the temperature.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Order No. 6-00-58 includes the following numeric effluent limitations.

Table F-3. Historic Effluent Limitations

Fecal Coliform	Wastewater discharged from the facility shall not contain maximum daily concentrations of fecal coliform bacteria greater than 40 MPN/100 mL nor average monthly concentrations greater than 20 MPN/100 mL.
pH	Wastewater discharged from the facility shall not have a pH less than 6.5 nor greater than 8.5.
Total Residual Halogen	Wastewater discharged from the facility shall not contain total residual halogen levels (free and combined halogen) greater than the practical quantitation limits achievable by standard N,N-diethyl-p-phenylenediamine (DPD) field testing methodology (based on Method 4500-Cl G, DPD Colorimetric Method, Standard Methods for the Examination of Water and Wastewater, 21 st edition.)

Table F-4, below, summarizes self-monitoring data at Discharge Points 001, 002, and 003 during the previous permit term.

Table F-4. Summary of Monitoring Data, 2002 - 2007

	2002	2003	2004	2005	2006 ^[A]	2007 ^[A]
Discharge Point 001						
Flow (gpd - avg monthly)						
Minimum	20,600	17,100	30,000	36,000	11,200	18,000
Maximum	151,200	97,900	120,000	72,000	36,800	76,200
pH (avg monthly)						
Minimum	7.2	7.0	7.4	7.4	7.4	7.4
Maximum	7.2	7.2	7.7	7.6	7.4	7.8
Halogen (mg/L - avg monthly)						
Minimum	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0
Fecal Coliform (mpn/100 mLs - avg monthly)						
Minimum	0.0	< 2.0	< 1.1	< 1.1	< 1.1	Absent
Maximum	< 2.2	< 2.2	< 2.0	< 2.0	< 1.1	Absent
Discharge Point 002						
Flow (gpd - avg monthly)						
Minimum	8,000	6,400	4,800	14,400	16,000	11,200
Maximum	57,600	57,600	48,000	49,600	30,400	36,800
pH (avg monthly)						
Minimum	7.2	7.2 ^[A]	7.2 ^[A]	7.3	7.4	7.4
Maximum	7.2	7.4 ^[A]	7.3 ^[A]	7.4	7.4	7.4

	2002	2003	2004	2005	2006 ^[A]	2007 ^[A]
Halogen (mg/L - avg monthly)						
Minimum	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0
Fecal Coliform (mpn/100 mLs - avg monthly)						
Minimum	0.0	< 2.0	< 1.1	< 1.1	< 1.1	< 1.1
Maximum	< 2.2	< 2.2	< 2.0	< 2.0	< 1.1	< 1.1
Discharge Point 003						
Flow (gpd - avg monthly)						
Minimum	70,000	70,000	70,000	70,000	70,000	70,000
Maximum	70,000	70,000	70,000	70,000	70,000	70,000
pH (avg monthly)						
Minimum	7.8	7.8	7.8 ^[A]	7.8	7.8	7.8
Maximum	8.0	8.0	7.8 ^[A]	7.9	8.0	8.0
Halogen (mg/L - avg monthly)						
Minimum	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	0.0	0.0	0.0	0.0	0.0	0.0
Fecal Coliform (mpn/100 mLs - avg monthly)						
Minimum	< 2.0	< 2.0	< 1.1	< 1.1	< 1.1	< 1.1
Maximum	< 2.2	< 2.2	< 2.0	< 2.0	< 1.1	< 1.1

^[A] Monitoring data is available only for January through June of the time period indicated.

D. Compliance Summary

Available monitoring data generally indicate compliance with effluent limitations established by the previous permit. The Discharger installed a chlorine neutralization system for the WTP in 2000, as required following adoption of Board Order No. 6-00-58. During the term of this Order (the reissued permit), in addition to regularly assessing compliance with effluent limitations, Lahontan Water Board staff will give particular attention to such permit requirements/provisions as adherence to all monitoring and reporting requirements, and adherence to special provisions established by section VI. C. 3 of the Order. These provisions require development and implementation of best management practices to reduce or eliminate the discharge of pollutants from the State Park facilities. Although such requirements are less stringent than numeric effluent limitations, they indicate a concern of the Lahontan Water Board staff that maintaining the status quo is unacceptable for these discharges. Compliance with these special provisions will be measured, for example, by the Discharger's efforts (1) to remove settleable and suspended solids from filter backwash waters prior to discharge and (2) to properly maintain and operate chemical treatment systems thereby preventing discharges of halogens and other pollutants to receiving waters.

E. Planned Changes

No significant changes to the physical components or operation of the water treatment and pollutant control facilities are planned for the anticipated term of the Order except as needed to further control and/or eliminate pollutant discharges. The Discharger is currently planning to install a filtration system for the cold pool backwash filter (EFF-002) that features disposable filter cartridges. The Discharger is also currently planning pool facility modifications needed to comply with American Disability Act requirements. This Order includes requirements to notify the Lahontan Water Board

of certain planned changes such that the Lahontan Water Board can consider permit modifications as may be needed (see Order at Section VI.A..b.ii., and Attachment D, Section V.F.).

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Pursuant to Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21000 - through 21177.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans.

The Lahontan Water Board has adopted a *Water Quality Control Plan for the Lahontan Region* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Requirements of this Order implement the Basin Plan.

2. Thermal Plan.

The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (the Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal Plan does not apply to this facility, which does not discharge thermal or elevated temperature waste as defined by the Thermal Plan, that is, at temperatures higher than natural for the receiving waters.

3. National Toxics Rule (NTR) and California Toxics Rule (CTR).

USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State.

The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to pollutants added to discharges from the Grover Hot Springs State Park.

4. State Implementation Policy.

On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Lahontan Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control that are applicable to discharges from the Grover Hot Springs State Park. Requirements of this Order implement the SIP

5. Alaska Rule.

On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 C.F.R. 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

6. Antidegradation Policy.

NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Lahontan Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in section IV. D. 2 of the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

7. Anti-Backsliding Requirements.

CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in section IV. D. 1 of this Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable anti-backsliding provisions of the CWA and NPDES regulations.

D. Impaired Water Bodies on CWA 303(d) List

Receiving waters for discharges subject to this Order are not identified as impaired pursuant to CWA section 303 (d), which requires states to identify receiving waters which are not meeting applicable water quality standards after imposition of technology-based requirements on point source discharges, as required by CWA sections 301 (b) (1) (A and B).

E. Other Plans, Policies and Regulations - Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. NPDES regulations establish two principal bases for effluent limitations. 40 CFR 122.44 (a) requires permits to include applicable technology-based limitations and standards; and at 40 CFR 122.44 (d) permits are required to include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. Discharge Prohibition III. A.

Discharge of waste, which causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

This prohibition is a restatement of Regionwide Prohibition 1 from section 4.1 of the Basin Plan and encompasses antidegradation provisions associated with State Water Resources Control Board Resolution No. 68-16.

2. Discharge Prohibition III.B.

Discharge of waste which causes violation of any numeric water quality objective contained in the Basin Plan is prohibited

This prohibition is a restatement of Regionwide Prohibition 2 from section 4.1 of the Basin Plan.

3. Discharge Prohibition III. C.

Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste which causes further degradation or pollution is prohibited.

This prohibition is a restatement of Regionwide Prohibition 3 from section 4.1 of the Basin Plan. Whenever pollutants are present at levels above receiving water objectives, this prohibition does not allow for an increase by the Discharger.

4. Discharge Prohibition III.D.

Discharge of untreated sewage, garbage, or other solid wastes into surface waters of the Region is prohibited.

This prohibition is a restatement of Regionwide Prohibition 4 from section 4.1 of the Basin Plan.

5. Discharge Prohibition III.E.1-3.

Discharge, bypass, or diversion of raw sewage, sludge, grease, or oils to surface waters is prohibited. Discharge of wastewater except to designated disposal sites (as designated in this Order) is prohibited. The discharge of industrial process wastes to surface waters designated for the Municipal and Domestic Supply (MUN) beneficial use is prohibited. The discharge of industrial process wastes to surface waters not designated for the MUN use may be permitted if such discharges comply with the General Discharge Limitations in Section 4.7 of the Basin Plan and if appropriate findings under State and federal antidegradation regulations can be made. This prohibition and Prohibition E.2 do not apply to industrial stormwater. For control measures applicable to industrial stormwater, see Section 4.3 of the Basin Plan, entitled "Stormwater Runoff, Erosion, and Sedimentation." This prohibition and Prohibition E.2, above, do not apply to surface water disposal of treated groundwater. For control measures applicable to surface water disposal of treated groundwater, see Lahontan Water Board Order No. 6-93-104, adopted November 19, 1993 (Basin Plan Appendix B).

These prohibitions are restatements of Regionwide Prohibitions 5 (a, b, and c) from section 4.1 of the Basin Plan.

6. Discharge Prohibition III.F.

Discharge of any waste or deleterious material to surface waters of the East Fork Carson River Hydrologic Unit is prohibited.

This prohibition is a restatement of Basin Plan Unit/Area-Specific Prohibition 2, applicable to the Carson River Hydrologic Unit.

7. Discharge Prohibition III.G.

Discharge of any waste or deleterious material in the East Fork Carson River Hydrologic Unit, which would cause or threaten to cause violation of any water quality objective contained in the Basin Plan, or otherwise adversely affect or threaten to adversely affect the beneficial uses of water set forth in the Basin Plan is prohibited.

This prohibition is a restatement of Basin Plan Unit/Area-Specific Prohibition 3, applicable to the Carson River Hydrologic Unit.

12-0066

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. Where the USEPA has not yet developed technology based standards for a particular industry or a particular pollutant, CWA Section 402 (a) (1) and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. Applicable Technology Based Effluent Limitations

The Order does not establish any technology-based effluent limitations.

C. Water Quality Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (d) require that permits include limitations more stringent than applicable federal technology based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard. In accordance with NPDES regulations at 40 CFR 122.44 (d) (1) (i), effluent limitations must be established for all pollutants, which the Lahontan Water Board 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. The process for determining “reasonable potential” is a reasonable potential analysis (RPA). For toxic pollutants in the CTR, the RPA is accomplished in accordance with the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). The SIP describes a procedure for comparing effluent data with applicable water quality criteria for determining “reasonable potential.” In accordance with section 1.3 of the SIP, the Lahontan Water Board may consider other information, such as the type of discharge, lack of dilution, and nature of the receiving water, to make a determination of “reasonable potential.”

The process for determining “reasonable potential” and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the CTR and the NTR. The RPA for pollutants not on the CTR or NTR lists may be conducted by SIP procedures or BPJ.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of 40 CFR 122.44 (d) (1) (vi), using (1) USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the State’s narrative criterion, supplemented with other relevant information.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses for receiving waters subject to this Order are established by the Basin Plan and are described by Section II. H of the Order. Numeric water quality criteria applicable to this receiving water are established by the CTR and the NTR and by the Basin Plan.

3. Determining the Need for WQBELs

The Lahontan Water Board has determined that pollutants of concern and subject to regulation in discharges from the pool complex of the Grover Hot Springs State Park include the following substances added by the Discharger:

- Pollutants associated with disinfection processes – chlorine, bromine, and disinfection byproducts (the common trihalomethanes: chloroform, chlorodibromomethane, dichlorobromomethane, and bromoform).
- Pollutants associated with halogen removal (sodium, sulfate, TDS).
- Pollutants associated with filter backwash – suspended and settleable solids.
- Naturally occurring pollutants in geothermal waters that may be increased by chemical additions and discharged to surface water at levels exceeding applicable water quality criteria for surface waters [total dissolved solids, chloride, sulfate, boron, sodium, and the CTR metals (Sb, As, Be, Cd, Cr+3, Cr+6, Cu, Pb, Hg, Se, Ag, Th, Zn)].

Text below addresses each pollutant of concern, including the Lahontan Water Board's determination regarding "reasonable potential" for each pollutant to exceed objectives for receiving waters as a result of the Discharger's operations.

Chlorine and Bromine. For the protection of aquatic life, the Basin Plan establishes water quality objectives for chlorine of 0.002 mg/L (median) and 0.003 mg/L (maximum). In addition, the Basin Plan establishes a narrative water quality objective for toxicity, stating that all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

Because chlorine is used as a disinfectant by the Discharger at concentrations several orders of magnitude greater than applicable water quality criteria, the Lahontan Water Board has determined that discharges from the pool complex have the reasonable potential to cause or contribute to excursions above applicable standards. Although the Basin Plan does not establish a numeric water quality objective for bromine, it is chemically similar to chlorine, and due to the use of bromine as a disinfectant at similarly high concentrations, the Lahontan Water Board has determined that discharges from the pool complex have the reasonable potential to cause or contribute to excursions above the Basin Plan's narrative water quality objective for toxicity. Due to a finding of "reasonable potential" for chlorine and bromine, the Lahontan Water Board is retaining the "non-detect" effluent limitation for total residual halogen from the previous Order. Note that the method detection limit achievable by the standard N,N-diethyl-p-phenylenediamine (DPD) field testing method (based on Method

4500-CI-G, DPD Colorimetric Method, Standard Methods for the Examination of Water and Wastewater, 21st edition or a more recent edition) is 10 µg/L.

Trihalomethanes (THMs). The California Toxics Rule (CTR) establishes the following water quality criteria for the common trihalomethanes for protection of human health, which are applicable to receiving waters for discharges from the WTP and the pool complex.

Table F-5. CTR Water Quality Criteria for Trihalomethanes

Trihalomethane	Criterion for Consumption of Water and Organisms
Chloroform	No Criteria
Chlorodibromomethane	0.401 µg/L
Dichlorobromomethane	0.56 µg/L
Bromoform	4.3 µg/L

In accordance with Monitoring and Reporting Program No. 6-00-58, the Discharger collected effluent and receiving water samples in November 2000, May 2001, and February 2002 and analyzed those samples for the common THMs. Results of this monitoring are presented in the following table.

Table F-6. Results of Trihalomethane Monitoring

	Effluent		Downstream Receiving Water	
	11/30/2000	5/10/2001	5/10/2001	2/28/2002
Discharge Point 001				
Chloroform	5.1 µg/L	18 µg/L	ND	ND
Chlorodibromomethane	ND	ND	ND	ND
Dichlorobromomethane	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND
Discharge Point 002				
Chloroform	46 µg/L	120 µg/L	ND	ND
Chlorodibromomethane	1.7 µg/L	5.3 µg/L	ND	ND
Dichlorobromomethane	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND
Discharge Point 003				
Chloroform	1.5 µg/L	1.3 µg/L	ND	ND
Chlorodibromomethane	ND	ND	ND	ND
Dichlorobromomethane	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND

Comparison of effluent data with applicable water quality criteria shows that, in single samples of the cold pool discharge in 2000 and 2001, chlorodibromomethane was present at concentrations exceeding applicable water quality criteria established by the CTR. All other effluent data indicate low levels of the THMs, and all THMs were at non-detect concentrations in receiving water. Based on the data, the Lahontan Water Board has determined that discharges from the WTP and the pool complex do not have the reasonable potential to cause or contribute to excursions from applicable water quality criteria for the THMs, and this Order is not establishing effluent limitations for the THMs. Because THMs

are commonly formed when chlorine and bromine are used for disinfection, this Order is establishing annual monitoring requirements for the THMs at Discharge Points 001, 002, and 003 and receiving water Monitoring Location R-002. If routine monitoring shows elevated concentrations of THMs in discharges from the pool complex and present in Hot Springs Creek, this permit can be reopened to establish appropriate effluent limitations. Routine monitoring data for the THMs will also be used at the time of the next permit reissuance to conduct a more comprehensive reasonable potential analysis and to establish effluent limitations at that time, if necessary.

Suspended and Settleable Solids. The Basin Plan establishes the two following narrative water quality objectives, applicable to all surface waters of the Region, for settleable and suspended solids, respectively.

Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 milliliter per liter.

Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

Although monitoring of discharges from the pool complex for settleable and suspended solids has not been required by previous discharge permits, this Order establishes routine (twice yearly) monitoring requirements for settleable and suspended solids at Discharge Points 001 and 002. Lahontan Water Board staff expect that discharges originating as filter backwash waste may contain elevated levels of settleable and suspended solids; however, without characterization data, the Lahontan Water Board cannot make a conclusive determination that discharges from the pool complex have the "reasonable potential" to cause or contribute to excursions from the narrative water quality standards of the Basin Plan for settleable and suspended solids. If routine monitoring shows elevated concentrations of solids in discharges from the pool complex, this permit can be reopened to establish appropriate effluent limitations. Routine monitoring data will also be used at the time of the next permit reissuance to conduct a more comprehensive reasonable potential analysis and to establish effluent limitations for settleable and/or suspended solids at that time, if necessary.

Total Dissolved Solids (TDS), Chloride, Sulfate, Total Nitrogen, Total Phosphorous, Boron, Sodium. Table 3-14 of the Basin Plan identifies the following water quality objectives, which are applicable to all surface waters of the East Fork Carson River Hydrologic Unit.

Table F-7. Water Quality Objectives

Pollutant	Annual Average	90 th Percentile
TDS	80 mg/L	100 mg/L
Chloride	4.0 mg/L	6.0 mg/L
Sulfate	4.0 mg/L	8.0 mg/L
Total Phosphorous	0.02 mg/L	0.03 mg/L

Pollutant	Annual Average	90 th Percentile
Boron	0.12 mg/L	0.25 mg/L
Percent Sodium	25 percent	30 percent
Total Nitrogen	0.20 mg/L	0.30 mg/L

In accordance with Monitoring and Reporting Program No. 6-00-58, the Discharger collected effluent and receiving water samples in several monitoring events between November 2000 and June 2002. Results of this monitoring are presented in the following table. (No analysis was performed for boron, total nitrogen, and total phosphorous.)

Table F-8. Results of Monitoring Events Between November 2000 and June 2002

	Date	Sulfate (mg/L)	Chloride (mg/L)	TDS (mg/L)	% Sodium
Intake Water					
Geothermal Hot Springs	11/30/2000	157	174	1304	89
	5/11/2001	218	214	1307	92
Effluents					
WTP (001)	11/30/2000	18	6.0	98	36
WTP (001)	5/11/2001	24	3.5	92	42
WTP (001)	6/24/2002	2.7	4.0	78	40
Cold Pool (002)	11/30/2000	85	240	756	65
Cold Pool (002)	5/11/2001	139	125	591	66
Hot Pool (003)	11/30/2000	152	172	1217	93
Hot Pool (003)	5/11/2001	146	195	1158	90
Receiving Water					
Upstream (Wetlands Area Flowing to Hot Springs Creek)	5/11/2001	3.8	0.5	86	47
	6/24/2002	1.9	3.5	50	44
Hot Springs Creek Downstream of Discharges	5/11/2001	0.5	0.5	31	28
	2/28/2002	30	30	375	46
	6/24/2002	1.8	2.9	46	60

Data indicates that geothermal waters and spring runoff or precipitation events may have impacts on the water chemistry of Hot Springs Creek; however the data is inconclusive regarding the reasonable potential for discharges from the WTP and the pool complex to cause or contribute to exceedances of applicable water quality criteria for TDS, chloride, sulfate, total nitrogen, total phosphorous, boron, and percent sodium. The Order establishes routine monitoring requirements for these parameters in geothermal spring water (2X/permit term), in all discharges from the WTP and the pool complex (1X/year), and in Hot Springs Creek, upstream and downstream of the discharge points (1X/year) to provide better characterization for these constituents and to determine the need for effluent limitations.

CTR Metals. Previous discharge permits have not required analysis of geothermal waters or discharges from the park for the common metals, and therefore, the Lahontan Water Board cannot make a determination regarding the “reasonable potential” of discharges to cause or contribute to exceedances of applicable CTR criteria for metals in receiving waters. The Order establishes routine monitoring requirements for the CTR metals in geothermal spring

water, receiving waters, and in discharges from the WTP and the pool complex (each 2X/permit term). If routine monitoring shows elevated concentrations of metals in discharges from the pool complex, this permit can be reopened to establish appropriate effluent limitations. Routine monitoring data will also be used at the time of the next permit reissuance to conduct a more comprehensive reasonable potential analysis and to establish effluent limitations for metals at that time, if necessary.

pH. The Basin Plan establishes water quality criteria for pH in all surface waters of the Region at pH 6.5 – 8.5. For receiving waters with the beneficial use designation of “cold freshwater habitat,” as are the receiving waters in the park, discharges cannot cause normal ambient pH levels to vary more than 0.5 pH units.

Because soda ash is used to regulate the pH of water in the pool complex, the Lahontan Water Board has determined that there is some potential for under and overfeed of this material, and therefore “reasonable potential” for discharges to cause or contribute to excursions from applicable criteria for pH. Due to a finding of “reasonable potential” for pH, the Lahontan Water Board is retaining effluent limitations for pH from the previous permit.

4. WQBEL Calculations

The Order establishes the applicable water quality objective for pH as an end-of-pipe effluent limitation. Because the Lahontan Water Board has found “reasonable potential” for chlorine and bromine, and because applicable water quality objectives for chlorine are functionally at the “non-detect” level, the Order also retains the “non-detect” effluent limitation for total residual halogen from the previous permit.

5. Final WQBELs

Final WQBELs established by the Order are summarized in Table F-9, below.

Table F-9. Final WQBELs

Constituent	Units	Average Monthly	Average Weekly	Maximum Daily
pH	Std Units	6.5 – 8.5 at all times		
Total Residual Halogen	mg/L	ND ^[A]	ND ^[A]	ND ^[A]

^[A] ND = Non-Detect at the method detection limit of 10 µg/L achievable by the standard N,N-diethyl-p-phenylenediamine (DPD) field testing method (based on Method 4500-Cl-G, DPD Colorimetric Method, Standard Methods for the Examination of Water and Wastewater, 21st edition or a more recent edition)

6. Whole Effluent Toxicity (WET)

The Order establishes effluent limitations and/or monitoring requirements for individual toxic pollutants of concern (e.g., chlorine and bromine, trihalomethanes) and does not establish limitations and/or monitoring for WET. WET limitations and monitoring requirements are most meaningful when discharges may contain low levels of toxic pollutants, which individually are not present at concentrations of concern, but which may have an aggregate toxic effect. In these circumstances, the Order has established effective control and monitoring of discharges from the State Park through attention to all individual

toxic pollutants of concern, and there is minimal concern for an aggregate toxic effect caused by unregulated or unknown toxic pollutants, therefore, WET monitoring is not required.

D. Final Effluent Limitations

Final technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Satisfaction of Anti-Backsliding Requirements

The Order satisfies applicable anti-backsliding provisions of the Clean Water Act, as all numeric limitations and requirements, with one exception, are at least as stringent as those of the previous permit.

The numeric effluent limitation for fecal coliform bacteria from the previous permit has not been retained. This limitation prohibited maximum daily effluent concentrations of fecal coliform bacteria greater than 40 MPN/100 mL and average monthly concentrations greater than 20 MPN/100 mL.

During the term of the previous permit, effluent monitoring at each point of discharge consistently showed non-detectable or very low concentrations of fecal coliform bacteria. This observation is expected, as these discharges originate as either potable supply or geothermal waters. Further, because these waters are used for contact recreation purposes, the Discharger provides close attention to disinfection practices. For these reasons, effluent limitations for fecal coliform bacteria for these discharges are unnecessary and burdensome in light of the monitoring requirements necessary to determine compliance. The Order does not include effluent limitations for fecal coliform bacteria; however, it retains infrequent monitoring requirements for this parameter as a means to spot check disinfection practices. In addition, receiving water objectives for total coliform bacteria remain applicable.

The Lahontan Water Board has determined that the non-retention of effluent limitations for fecal coliform bacteria is consistent with the exception to the CWA's backsliding prohibition expressed at CWA section 402 (o) (2) (B) – new information is available which was not available at the time of permit issuance, which would have justified the application of a less stringent effluent limitation. Here, new information (effluent monitoring data from the term of the previous permit) confirms that the source of the discharges (potable supply or geothermal waters) and the Discharger's disinfection practices justify the elimination of permit limitations and associated monitoring practices for fecal coliform bacteria.

2. Satisfaction of Antidegradation Policy

Provisions of the Order are consistent with applicable anti-degradation policy expressed by NPDES regulations at 40 CFR 131.12 and by State Water Board Resolution No. 68-16. The Order does not authorize increased volumes of or increased concentrations of pollutants in discharges from the facility. Effluent limitations and conditions of the Order will also assure maintenance of the existing high quality of receiving waters.

3. Stringency of Requirements for Individual Pollutants

The water quality-based effluent limitations established by the Order for individual pollutants are discussed in section IV. B of the Fact Sheet. These limitations are necessary to meet applicable water quality standards and are not more stringent than required by the CWA. Water quality standards - beneficial uses and the water quality objectives - have been approved pursuant to federal law and are the applicable federal water quality standards. Beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21 (c) (1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water quality in Hot Springs Creek and associated wetlands is a result of many factors, some unrelated to the discharge. Waters from Buck Creek and Grover Hot Springs flow to Hot Springs Creek in the vicinity of the discharges. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving waters. Receiving water limitations within the Order generally include the receiving water limitations of the previous Order; however these limitations have been supplemented and modified to reflect all current applicable, general water quality objectives of the Basin Plan for inland surface waters, as well as those specific water quality objectives established by the Basin Plan for surface waters of the East Fork Carson River Hydrologic Unit.

B. Groundwater – Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Lahontan Water Board to require technical and monitoring reports. Rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program (MRP), which is presented as Attachment E of this Order, is presented below.

A. Influent Monitoring

The previous permit required monitoring of geothermal influent or makeup waters, two times during the permit term, for total dissolved and suspended solids, chloride, sulfate, sodium, calcium,

magnesium, and potassium. This Order requires monitoring of geothermal waters, two times during the permit term, for all pollutants with water quality objectives established by Table 3-14 of the Basin Plan specifically for surface waters of the East Fork Carson River Hydrologic Unit (TDS, chloride, sulfate, boron, total nitrogen, total phosphorous, and percent sodium) and for the CTR metals - pollutants with water quality criteria established by the CTR that are applicable to Hot Springs Creek. The purpose of this monitoring is to characterize geothermal waters and to determine the influence of chemical additions on the ability of the facility to meet effluent limitations and/or cause exceedances of applicable water quality criteria.

B. Effluent Monitoring

Effluent monitoring requirements from the previous permit for flow, pH, and total halogen are retained in this Order. Additional or changed monitoring requirements are described in the following bulleted text.

- Because the permit no longer includes effluent limitations for fecal coliform bacteria, effluent monitoring for this parameter has been reduced from a frequency of monthly to semi-annually. This monitoring is required to spot check for the presence and concentrations of fecal coliform bacteria.
- Because discharges from Discharge Points 001 and 002 are filter backwash waters, in which total suspended solids (TSS) and settleable solids would typically be pollutants of concern, monitoring for TSS and settleable solids in these discharges is required semi-annually to provide more complete characterization of these waste streams.
- Because each waste stream is chlorinated and/or brominated, the common disinfection by-products (trihalomethanes) are pollutants of concern, and therefore, the Order requires monitoring one time per year for the trihalomethanes in each waste stream. There are applicable water quality objectives for several of the common trihalomethanes, which, once formed, are not eliminated by dechlorination and/or debromination.
- The CTR pollutants are those pollutants with applicable water quality criteria established by the California Toxics Rule (CTR) at 40 CFR 131.38. These pollutants must be monitored one time during the permit term (in July or August within the first two years following the effective date of the Order) in each discharge (Discharge Points 001, 002, and 003).
- The CTR metals are those metals (Sb, As, Be, Cd, Cr⁺³, Cr⁺⁶, Cu, Pb, Hg, Se, Ag, Th, Zn) for which the CTR, codified at 40 CFR 131.38, has established water quality objectives, which are applicable to Hot Springs Creek. Monitoring for the CTR metals is required two times during the permit term (in July or August within the first two years following the effective date of this Order) at Discharge Points 002 and 003. Monitoring results will provide characterization data to determine the influence of geothermal waters on the chemistry of these two discharges and regarding the reasonable potential for these discharges to cause or contribute to exceedances of applicable water quality criteria for the metals.

- One time per year, all discharges must be monitored for TDS, chloride, sulfate, boron, total nitrogen, total phosphorous, and percent sodium. Chapter 3 of the Basin Plan establishes specific, numeric water quality objectives for these pollutants that are applicable to surface waters of the East Fork Carson River Hydrologic Unit. This monitoring will allow a determination as to whether discharges are contributing to exceedances of these water quality objectives in the receiving waters.

C. Whole Effluent Toxicity (WET) Testing Requirements

Because the Order establishes monitoring requirements for each individual toxic pollutant of concern, WET monitoring requirements are not established by the Order. WET monitoring is especially meaningful when toxic pollutants may be unidentified and/or when there is concern for the aggregate effect of more than one toxic pollutant which may be present at low levels.

D. Receiving Water Monitoring

1. Surface Water

The Order retains from the previous permit a requirement to conduct biomonitoring in Hot Springs Creek, one time during the anticipated five year term of the Order, to assess impacts of discharges on receiving waters. Biomonitoring, plus effluent monitoring requirements established by the Order, will enable the Lahontan Water Board to identify potential adverse impacts attributable to discharges from the State park facilities and to respond appropriately, if necessary. The Discharger must conduct biomonitoring in a manner consistent with the objectives and methods of the Lahontan Water Board's Surface Water Ambient Monitoring Program (SWAMP). Information regarding SWAMP is available on the Lahontan Water Board's website and from the Lahontan Regional Monitoring Coordinator.

The Order also requires upstream and downstream receiving water monitoring, one time per year for TDS, sulfate, chloride, percent sodium, boron, total nitrogen, and total phosphorous. Upstream and downstream monitoring in Hot Springs Creek for the CTR pollutants is required two times during the permit term, in July or August during the first two years following the effective date of this Order. This monitoring will allow assessment of impacts of the discharges, including impacts of geothermal waters, on water quality of Hot Springs Creek and on the likelihood of discharges from the facility to contribute to exceedances of applicable water quality criteria.

2. Groundwater - Not Applicable

E. Other Monitoring Requirements

The MRP retains a requirement to record and report regarding chemical usage at the WTP and the pool complex. In addition, the Discharger shall annually report regarding the implementation and effectiveness of the BMP Plan developed pursuant to section VI. C. 3. a of the Order.

12-0076

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D to the Order.

NPDES regulations at 40 CFR 122.41 (a) (1) and (b - n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25 (a) (12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41 (j) (5) and (k) (2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

B. Special Provisions

1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new State water quality objectives that are approved by the USEPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies and Additional Monitoring Requirements

The Order does not establish requirements for special studies or monitoring requirements.

3. Best Management Practices and Pollution Prevention

- a. **BMP Plan.** The Order requires development and implementation of a Best Management Practices (BMP) Plan to reduce or eliminate the discharge of pollutants to waters of the State and of the United States. The BMP Plan must be maintained onsite, be available to Lahontan Water Board staff and the public, and be updated as necessary.
- b. **Specific Control/Treatment Measures.** The Order requires implementation of BMPs to address three specific concerns regarding discharges from the State Park: (1) the aesthetic/nuisance impacts and potential adverse impacts to aquatic life caused by the discharge of suspended and settleable solids associated with filter backwashing, (2) the potential adverse impacts to aquatic life caused by direct overland discharges from the WTP to Hot Springs Creek, and (3) poor maintenance and operation of dechlorination/debromination systems which may lead to the discharge of free available halogen from the WTP and/or the pool complex. The Lahontan Water Board expects the Discharger to evaluate reasonable technologies to remove settleable and suspended solids from filter backwash wastes, and reasonable methods of dispersing the discharge from

the WTP and promoting its infiltration into the ground to prevent its direct overland flow to Hot Springs Creek. The Lahontan Water Board also expects the Discharger to select and implement necessary BMPs, in accordance with section VI. C. 3 of the Order, to preclude impairment of receiving waters. As such, the requirement to evaluate and implement these specific control/treatment measures is included as an enforceable requirement of the Order.

4. **Construction, Operation, and Maintenance Specifications** – Not Applicable
5. **Special Provisions for Municipal Facilities (POTWs Only)** – Not Applicable
6. **Other Special Provisions** – Not Applicable
7. **Compliance Schedules** – Not Applicable

VIII. PUBLIC PARTICIPATION

The California Water Resources Control Board, Lahontan Region (Lahontan Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Grover Hot Springs State Park. As a step in the WDR adoption process, the Lahontan Water Board staff has developed proposed WDRs. The Lahontan Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Lahontan Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Tahoe Daily Tribune and the (Minden, NV) Record-Courier.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these proposed WDRs. Comments must be submitted either in person or by mail to the Lahontan Water Board at the address above on the cover page of this Order.

To receive a full response from Lahontan Water Board staff and consideration by the Lahontan Water Board, written comments were requested to be received during a public comment period established from March 6, 2009 to April 6, 2009 by 5:00 p.m. on April 6, 2009. Comments received from the Discharger clarified certain facility operations and planned changes that are incorporated in this Order. No other comments were received.

C. Public Hearing

The Lahontan Water Board will provide opportunity for a public hearing and may hold a public hearing, as necessary, on the proposed WDRs during its regular Board meeting on the following date and time and at the following location:

Date: May 13, 2009
Time: 7:00 pm

12-0078

Location: Lake Tahoe Community College, Board and Aspen Rooms
One College Drive
South Lake Tahoe, CA 96150

Interested persons are invited to attend. At the public meeting, the Lahontan Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/lahontan/> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board may receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on Saturday, Sunday, or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, proposed effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Lahontan Water Board by calling (530) 542-5400.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Lahontan Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Alan Miller by telephone at (530) 542 - 5430 or by e-mail at AEMiller@waterboards.ca.gov.

ATTACHMENT G – BEST MANAGEMENT PRACTICES (BMP) PLAN

The Discharger shall prepare a Best Management Practices Plan (BMP) Plan within six months following adoption of this Order. The BMP Plan shall be updated as needed and shall be consistent with the general guidance contained in U.S. EPA's Guidance Manual for Developing Best Management Practices (EPA 833-B-93-004), and it shall be consistent with the requirements described below.

The BMP Plan must address:

- Preventative BMPs - measures to reduce or eliminate the generation of pollutants and waste,
- Control BMPs - measures to control or manage pollutants and wastes after they are generated and before they are discharged, including measures to prevent leaks and spills and to prevent the discharge of solids from filter backwashing,
- Treatment BMPs - measures to remove pollutants and wastes from wastewaters before they are discharged, and
- Response BMPs - measures to respond to leaks, spills, and other releases with containment, control, and cleanup measures to prevent or minimize the potential for the discharge of pollutants and to minimize the adverse effects of such discharges.

The BMP Plan must include, but is not limited to, site-specific BMPs which:

- Identify and implement measures to prevent or minimize the generation of pollutants and the potential release of pollutants during discharges;
- Identify and implement measures to prevent the discharge of chlorine and bromine residuals to surface waters during discharges from backwash events and pool emptying or rinsing;
- Prohibit the use of non-oxidizing materials for microbiological control in pool waters and prohibit the discharge of backwash, equipment wash, and rinse waters that contain detergents and/or surfactants to surface waters;
- Identify and implement measures to prevent the formation and discharge of common byproducts of chlorination and bromination (i.e., trihalomethanes);
- Identify and implement measures to prevent or minimize the discharge of suspended and settleable solids with filter backwash waters (treatment BMPs shall be implemented, as necessary, to prevent visual accumulations of solids and/or sediment at the points of discharge);
- Identify and implement measures to control leaks and spills of chlorine, bromine, soda ash, cleaning chemicals and other liquids used at the pool complex;
- Identify and implement measures to prevent surges, provide flow equalization, and minimize rates of discharges from the pool complex;

12-0080

- Identify and implement measures, if appropriate, to control erosion and sedimentation at the points of discharge (the Discharger shall also adhere to applicable State and local recommended procedures for erosion and sediment control);
- For discharges from the WTP, identify and implement measures to direct discharges into areas with sufficient vegetation to filter and slow the flow;
- Identify and implement measures to minimize the exposure of disturbed soil during construction, repair, and maintenance activities; and
- Identify and implement good housekeeping procedures at the pool complex.

ENCLOSURE 2

12-0082



To: California Regional Water Quality Control Board
Lahontan Region

Re: Grover Hot Springs State Park Waste Discharge Permit

From: Graham Payne (Water & Sewer Treatment Plant Supervisor)

Date: March 25, 2009

We have reviewed Order No. R6T-2009-(Tentative) NPDES No. CA0103179 and submit the following corrections to the order:

The following pages of the attached have been updated only with current information pertaining to the park;

1, 5, 6, F-3, F-4, F-5, F-6.

The following diagrams have also been corrected to represent the proper operation of the water and pool facilities;

C-1, C-2, C-3, C-4.

The changes made only reflect the operation and flow diagrams of the park unit.

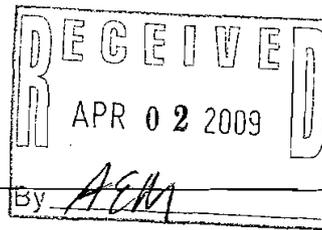
We are currently seeking vendors to provide analytical testing for the required chemical constituents listed in this order.

We have contacted Knorr Pool Systems and have information on a filter backwash separation tank to install on the Cold Pool Backwash Pump.

We will prepare and implement a BMP Plan within 6 months of adoption of this order.

Thanks much

Graham Payne
Water & Sewer Plant Supervisor
California State Parks
Sierra District
P. O. Box 266
Tahoma, Ca. 96142
530-525-4508
Gpayne@parks.ca.gov



....NOTICE....

Submittal of Written Material for Regional Board Consideration

In order to ensure that the Water Board has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the meeting. This will allow distribution of material to the Board Members in advance of the meeting. Pursuant to Title 23 California Code of Regulations Section 648.4, the Water Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Water Board may refuse to admit it.

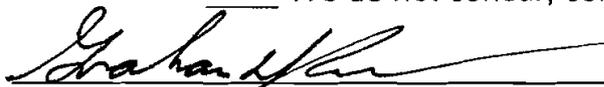
A copy of the procedures governing Water Board meetings may be found at Title 23, California Code of Regulations, Section 647 et seq., and is available upon request. Hearings before the Regional Board are not conducted pursuant to Government Code Section 11500 et seq.

Complete Form and Return

TO: California Regional Water Quality Control Board, Lahontan Region

SUBJECT: Comments on Waste Discharge Requirements for Grover Hot Springs State Park

- We concur with tentative requirements
- We concur; comments attached
- We do not concur; comments attached


 _____ (Sign)
 GRAHAM D PAYNE (Type or print name)
 CA. STATE PARKS (Organization)
 P.O. BOX 266 (Address)
 TAHOOMA CA 96142 (City and State)
 530-529-1023 (Telephone)



California Regional Water Quality Control Board

Lahontan Region



Linda S. Adams
Secretary for
Environmental Protection

2501 South Lake Tahoe Blvd., South Lake Tahoe, California 96150
Phone (530) 542-5400 • Fax (530) 544-2271
<http://www.waterboards.ca.gov/lahontan/>

Arnold Schwarzenegger
Governor

ORDER NO. R6T-2009-TENTATIVE

NPDES NO. CA0103179

WASTE DISCHARGE REQUIREMENTS FOR THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION GROVER HOT SPRINGS STATE PARK ALPINE COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order.

Table 1. Discharger Information

Discharger	California Department of Parks and Recreation
Name of Facility	Grover Hot Springs State Park
Facility Address	end of Hot Springs Road (P.O. Box 188) 3415 Hot Springs Road
	Markleeville, California 96120
	Alpine County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

Discharges from the Grover Hot Springs State Park from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	WTP Filter Backwash	38.6988983°	113.8376530°	Hot Springs Creek
002	Swimming Pool Filter Backwash	38.6962108°	113.8434293°	Hot Springs Creek
003	Hot Springs Pool Discharge	38.6962333°	113.8436179°	Hot Springs Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	May 13, 2009
This Order shall become effective on the adoption date of this Order.	May 13, 2009
This Order shall expire five years from the adoption date of this Order.	May 13, 2014
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<u>180 days prior to the Order expiration date</u>

IT IS HEREBY ORDERED, that Order No. 6-00-58 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the

12-0085

II. FINDINGS

The California Regional Water Quality Control Board, Lahontan Region (hereinafter the Lahontan Water Board), finds:

- A. Background.** The California Department of Parks and Recreation (hereinafter the Discharger) is currently discharging pursuant to Order No. 6-00-58 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0103179. The Discharger submitted a Report of Waste Discharge, dated March 24, 2005, and applied to renew its NPDES permit to discharge treated wastewater from the Grover Hot Springs State Park to surface waters located near Markleeville in Alpine County. Additional information, supplementing the Report of Waste Discharge, was received in December 2008. Order No. 6-00-58 expired on June 14, 2005 and has been administratively extended.
- B. Facility Description.** The 700 acre, Grover Hot Springs State Park is located four miles west of Markleeville at the end of Hot Springs Road and includes 76 campsites with piped water and restrooms, hot and cold concrete bathing and swimming pools, a day use/picnic area, and hiking trails. The park is open year round; however, ~~its the campgrounds are~~ is closed from early October ~~until~~ through ~~May~~ April each year. It is located within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Unit No. 632.10).

A water treatment plant (WTP) at the park, with a design treatment capacity of 55 gallons per minute (gpm), produces filtered and chlorinated water year round for use in the campground, day use area, pool complex, maintenance facility, and in six residences for park employees. Greatest water production occurs when the ~~campgrounds are~~ is open. ~~in June through September.~~ Before a S.C.A.D.A. (Supervisory Control and Data Acquisition) system was integrated with the WTP in 2005, water production was much more variable, as overproduction and overflows were common.

~~Raw water from Buck Creek is captured by and overflows from a~~ flows through and over a (10' x 10' x 5' depth) catch basin. Within the catch basin is a diversion trough which diverts a portion of the water to the WTP, which operates automatically based on a signal from a level indicator in a the 60,000 gallon product water storage tank. Following addition of chlorine (using a 12.5 percent solution of sodium hypochlorite) and a Nalco polymer (to enhance filtration), raw water flows through a flash mixer ahead of two pressure sand filters (@ 22 square feet surface area, each) operated in series. Treated water is pumped upslope to two, above grade, redwood, water storage tanks from which it is fed by gravity to the park. A 60,000 gallon tank serves the campground, day use area, maintenance facilities, and employee housing, and a 20,000 gallon tank serves the pool complex. Product water from the 60,000 gallon tank is used to backwash the WTP filters, which are backwashed based on pressure differential or time basis year round. ~~in summer months and on a timed basis, approximately one time per week, in winter months.~~ Approximately 5,700 gallons of wastewater are generated during each backwash event, and in the period of July 2007 through June 2008, between 4 and 14 backwashes occurred in each month. De-chlorinated filter backwash is discharged intermittently (when filters are backwashed) to a small channel within a wet meadow, and flows by gravity approximately 400 feet to Hot Springs Creek.

The pool complex at the park includes a 37,000 gallon hot pool and a 21,000 gallon cold pool, ~~both of which are fed with a blend of geothermal water and treated water.~~ The hot pool is fed with a blend of geothermal water and treated water. The cold pool uses only treated water. The pools are

typically open 10 hours per day, year round, are down for maintenance for two weeks per year, and closed for some holidays.

The hot pool is a flow through system which uses geothermal water captured in a concrete catch basin as it percolates from the ground. Geothermal water at 149° F is blended with filtered/chlorinated water to maintain 104° F in the pool. Blended geothermal water flows by gravity through the pool, and although this flow is not metered, the Discharger estimates a flow through rate of 115 gpm, when the pool is in use. An ~~dissolving, flow-through~~ erosion chemical feed system, located on the pool's intake water system, is used to establish a bromine residual of 1 - 3 mg/L in the hot pool. Bromine dosage can be adjusted by regulating (by manual valve) the amount of flow through the chemical feed system. The discharge from the hot pool is de-brominated using ~~solid~~ a perforated PVC pipe which allows the water flow to come into contact with granules of sodium thiosulfate and a ~~dissolving, flow-through chemical feed system~~. Due to elevated temperatures and, aerated conditions that promote algae growth, and public safety, the hot pool must be emptied ~~approximately one time per week~~ each evening for manual spot cleaning. Discharges from the hot pool are de-brominated with sodium thiosulfate and directed to the wet meadow adjacent to the pool complex and flow by gravity approximately one-quarter mile to Hot Springs Creek.

Treated water, with a ~~small component of geothermal water~~, is used to supply the 21,000 gallon cold pool, which is automatically chlorinated to maintain a chlorine residual of 2 - 3 mg/L. A pH controller regulates feed of soda ash to maintain a pH of approximately 7.4 in the pool. Pool water is circulated through a side stream sand filter that is backwashed at night (when there are no people in the pool) approximately one time per day in summer months and approximately 2-3 times per month during the rest of the year. Approximately 1600 gallons of pool water, blended with WTP product water, is used for backwashing during each backwash event. ~~Wastewater~~ Backwash water is de-chlorinated with liquid sodium ~~thiosulfite~~ thiosulfate prior to discharge. The cold pool must be emptied approximately four times per year for service and is super-chlorinated very infrequently, as necessary to protect public health.

All backwash water discharges from the WTP, the hot pool, and the cold pool at Discharge Points 001, 003, and 002, respectively, percolate into the ground, commingle with other spring waters, and/or flow overland to Hot Springs Creek. Discharges from the WTP and the cold pool occur intermittently, based on the need for filter backwashing. Discharges from the hot pool are continuous, due to its flow throw nature ~~when the pool is in use~~ of the pool and from the geothermal springs. Flows during the evening hours are reduced due to water not needing blending to reduce the temperature. Certified park staff is at the WTP and pool complex every day and is responsible for their operation.

Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of each facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).

ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	6A020110801
Discharger	California Department of Parks and Recreation
Name of Facility	Grover Hot Springs State Park
Facility Location	Western end of Hot Springs Road 3415 Hot Springs Road
	Markleeville, California 96120
	Alpine County
Facility Contact, Title and Phone	Graham Payne, Water and Sewage Plant Supervisor, California State Parks, Sierra District, phone: 530-525-4508
Authorized Person to Sign and Submit Reports	Same as facility contact
Mailing Address	Grover Hot Springs State Park
	P.O. Box 188 P. O. Box 266
	Markleeville, CA 96120 Tahoma, California 96142
Billing Address	Same as Mailing Address
Type of Facility	Recreational Facilities
Major or Minor Facility	Minor
Threat to Water Quality	3 (confirm)
Complexity	C (confirm)
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	Not Applicable
Facility Design Flow	124,000 gpd (average monthly discharge, July 2007 – June 2008)
Watershed	East Fork Carson River Hydrologic Unit, Markleeville Hydrologic Area
Receiving Water	Hot Springs Creek and associated minor wetlands
Receiving Water Type	Fresh Water

A. The California Department of Parks and Recreation (hereinafter the Discharger) is the owner and operator of the potable water treatment plant and recreational facilities which are the subject of this Order. For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

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- B. The Facility discharges wastewater at three locations within wet meadows associated with Hot Springs Creek, all waters of the State and the United States, and is currently regulated by Order No. 6-00-58, which was adopted on June 14, 2000 and administratively continued past its expiration date of June 15, 2005. The terms and conditions of the current Order are administratively continued and remain in effect until new Waste Discharge Requirements are adopted pursuant to this Order.
- C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on March 24, 2005. In December 2008, additional information was provided to complete the application.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The 700-acre Grover Hot Springs State Park is located four miles west of Markleeville at the end of Hot Springs Road and includes 76 campsites with piped water and restrooms, hot and cold pools, a picnic/day use area, and hiking trails. The park is open year round; however, its the campgrounds are is closed yearly from early October until through May April. It is located within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Unit No. 632.10).

A water treatment plant (WTP) at the park, with a design treatment capacity of 55 gallons per minute (gpm), produces filtered and chlorinated water year round for use in the campground, day use area, pool complex, maintenance facility, and in six residences for Park employees. As shown by Table F-2, greatest water production occurs when the campgrounds are is open. Before a S.C.A.D.A. (Supervisory Control and Data Acquisition) system was integrated with the WTP in 2005, water production was much more variable as overproduction and overflows were common.

Raw water from Buck Creek, a tributary to Hot Springs Creek, ~~is captured by and overflows from a~~ flows through and overflows a (10' x 10' x 5' depth) catch basin. Within the catch basin is a diversion trough which transports a portion of the water to the WTP, which operates automatically based on incoming raw water turbidity or based on a signal from a level indicator in a the 60,000 gallon ~~product~~ treated water storage tank. Following the addition of chlorine (using a 12.5 percent solution of sodium hypochlorite) and a Nalco polymer (to enhance filtration), raw water flows through a flash mixer ahead of two pressure sand filters (@ 22 square feet surface area, each) operated in series. Treated water is pumped upslope to two, above grade, redwood, water storage tanks from which it is fed by gravity to the park. A 60,000 gallon tank serves the campground, day use area, maintenance facilities, and employee housing, and a 20,000 gallon tank serves the pool complex. Product water from the 60,000 gallon tank is used to backwash the WTP filters, which are backwashed based on pressure differential or time basis year round. ~~in summer months and on a timed basis, approximately one time per week, in winter months.~~

Table F-2 indicates that approximately 5,700 gallons of wastewater are generated during each backwash event, and in the period of July 2007 through June 2008, between 4 and 14 backwashes occurred in each month. During each backwash event, sodium thiosulfate is injected into the water prior to discharge from the water plant to neutralize chlorine injected into the system. Filter backwash is discharged intermittently (when filters are backwashed) to a drainage channel within a wet meadow, and flows by gravity approximately 400 feet to Hot Springs Creek.

The pool complex at the park includes a 37,000 gallon hot pool and a 21,000 gallon cold pool, both of which are fed with a blend of geothermal water and treated water. The hot pool is fed with a blend of geothermal water and treated water. The cold pool uses only treated water within the pool. Geothermal water is only used to heat the pool through a heat exchanger (see Cold Pool Filter Plant Flow Diagram in section C). Geothermal water is not blended with treated water for the cold pool. The pools are typically open 10 hours per day, year round, and are down for maintenance for two weeks per year, and closed for some holidays. Certified park staff is responsible for operation of the WTP and pool facilities.

The hot pool at the park is a flow through system which uses geothermal water captured in a concrete catch basin as it percolates from the ground. Geothermal water at 149° F is blended with filtered/chlorinated water from the WTP to maintain 104° F in the hot pool. Blended geothermal water flows by gravity through the pool, and although this flow is not metered, the Discharger estimates a flow through rate of 115 gpm, when the pool is in use. An ~~dissolving flow through~~ erosion chemical feed system, located on the pool's intake water system supply, is used to establish a bromine residual of 1 – 3 mg/L in the hot pool. Bromine dosage can be adjusted by regulating (by manual valve) the amount of flow through the chemical feed system. The discharge from the hot pool is de-brominated using a perforated PVC pipe which allows flow to come into contact with a ~~block~~ granules of solid sodium ~~thiosulfite~~ thiosulfate. Due to elevated temperatures and aerated conditions that promote algae growth, the hot pool must be emptied ~~approximately one time per week~~ each evening for manual spot cleaning. Discharges from the hot pool are de-brominated with sodium thiosulfate and are also to the wet meadow adjacent to the pool complex and up-gradient of Hot Springs Creek.

Treated water ~~with a small geothermal component~~ from the WTP is used as to makeup to the 21,000 gallon cold pool, which is automatically chlorinated to maintain a chlorine residual of 2-3 mg/L. A pH controller regulates feed of soda ash to maintain a pH of approximately 7.4 in the pool. Pool water is circulated through a side stream sand filter that is backwashed at night (when there are no people in the pool) approximately one time per day in during summer months and approximately 2-3 times per month during the rest of the year. 1600 gallons of pool water blended with WTP product water is used for backwashing during each backwash event. ~~Wastewater~~ Backwash water is de-chlorinated with liquid sodium ~~thiosulfite~~ thiosulfate prior to discharge. The cold pool must be emptied approximately four times per year for service and is super chlorinated very infrequently as necessary to protect public health.

Table F-2 contains a summary of water production and rates of discharge at Discharge Points 001, 002, and 003 from July 2007 through June 2008.

B. Discharge Points and Receiving Waters

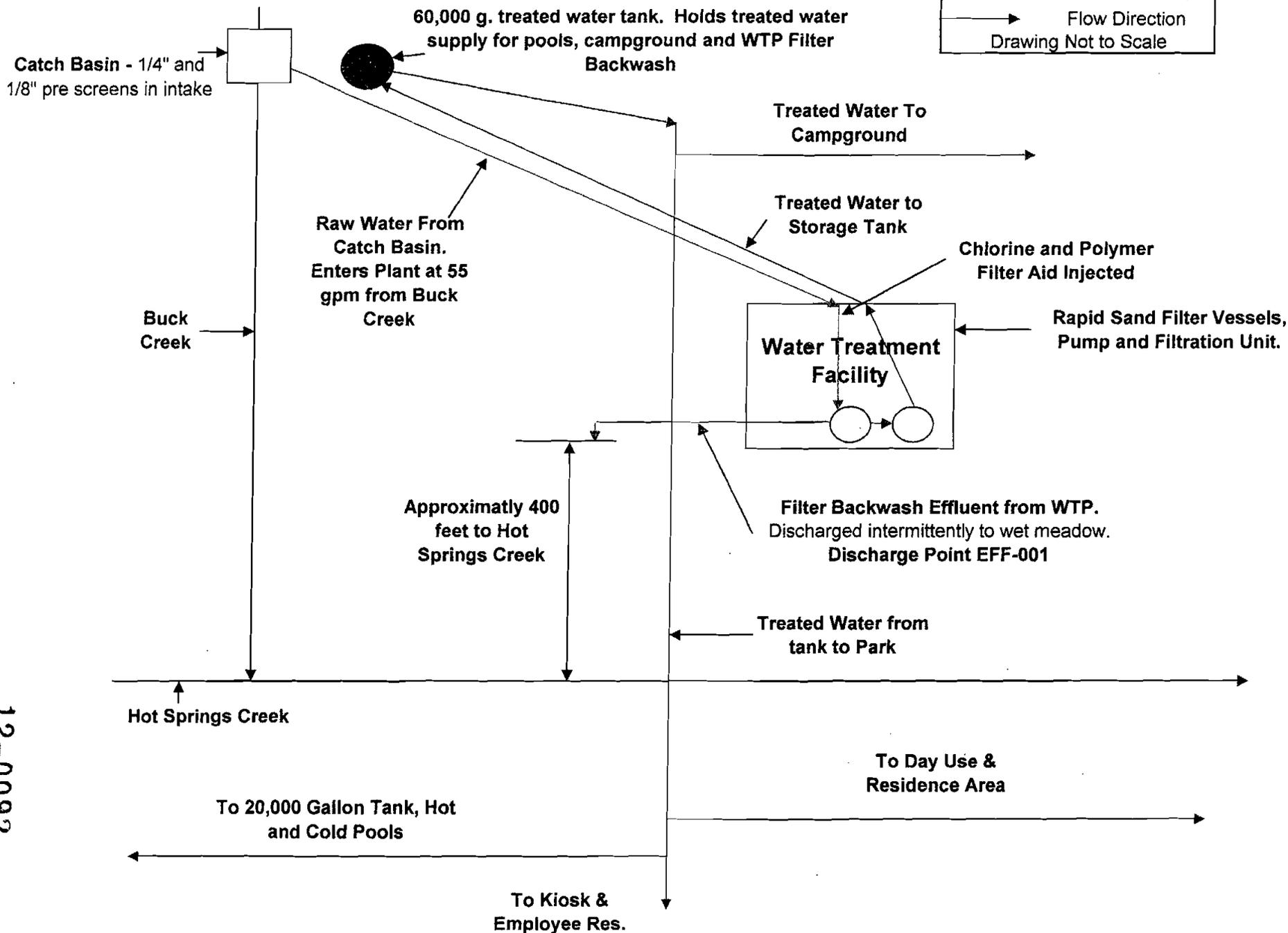
Wastewaters are discharged from the pool complex at Discharge Points 002 and 003 to a wet meadow/wetlands area adjacent to Hot Springs Creek and associated with the Markleeville Hot Springs, a natural upwelling of geothermal spring waters. Flow from the meadow enters Hot Springs Creek, which is tributary to the East Fork Carson River via Markleeville Creek, all waters of the United States within the Markleeville Hydrologic Area of the East Fork Carson River Hydrologic Unit (Department of Water Resources Hydrologic Unit 632.10). Wastewaters are discharged from the WTP on the opposite side of Hot Springs Creek from the pool complex, at

Discharge Point 001. This discharge flows overland approximately 400 feet via a wet meadow/wetlands area to Hot Springs Creek.

All discharges from the WTP, the hot pool, and the cold pool at Discharge Points 001, 003, and 002, respectively, percolate into the ground, commingle with other spring waters, and/or flow overland ~~are to a wet meadow adjacent to the pool complex and tributary to Hot Springs Creek.~~ Discharges from the WTP and the cold pool occur intermittently, based on the frequency of filter backwashing, ~~and due to its flow through nature,~~ Discharges from the hot pool are continuous ~~when the pool is in use,~~ due to its flow through nature of the pool and the geothermal springs. Flows during the evening hours are reduced due to water not needing blending to reduce the temperature.

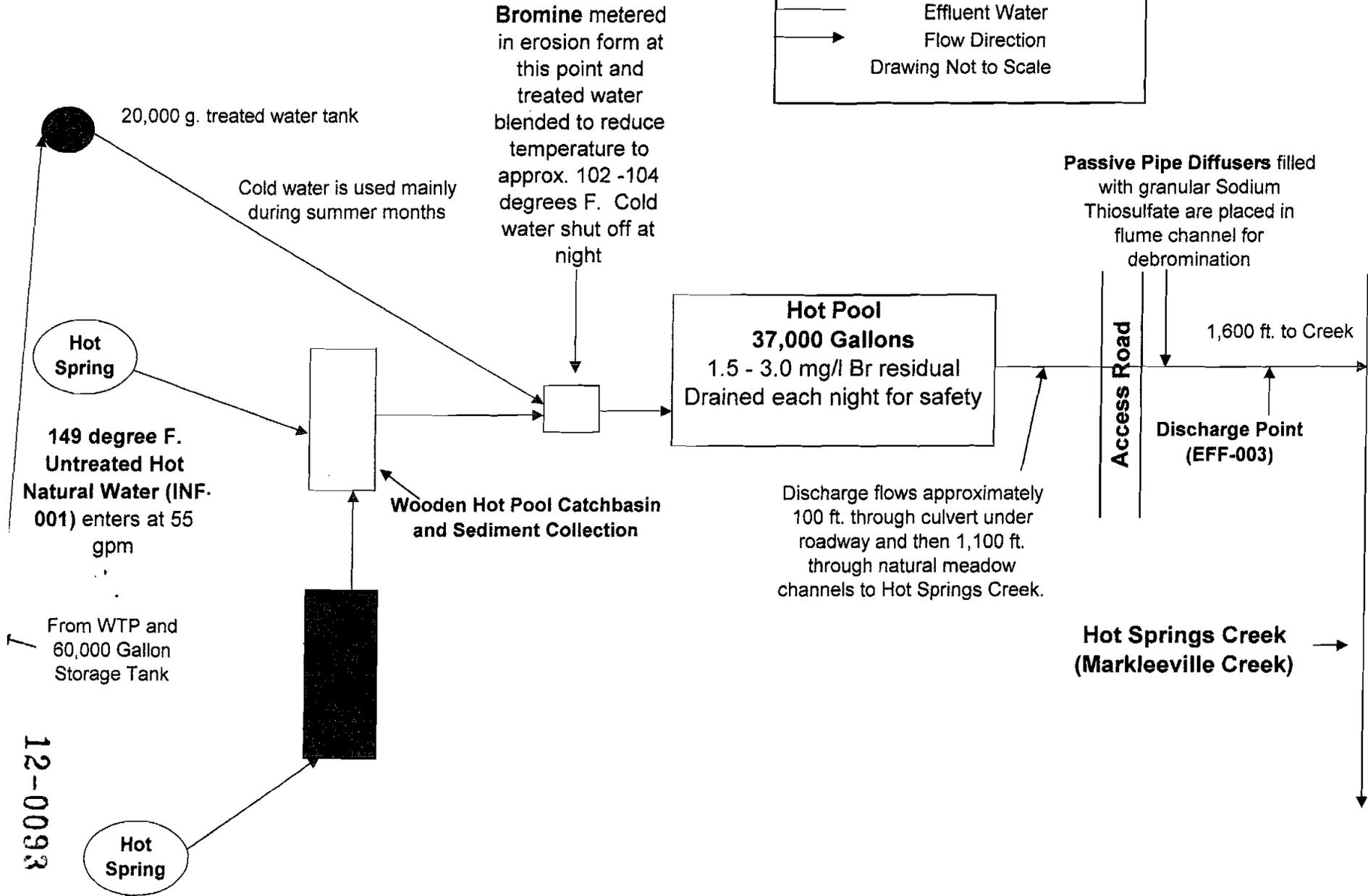
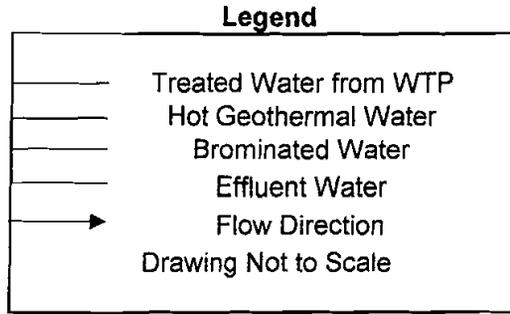
Water Treatment Plant Flow Diagram

Legend	
	Raw Water
	Treated Water
	Backwash Water
	Flow Direction
Drawing Not to Scale	



12-0092

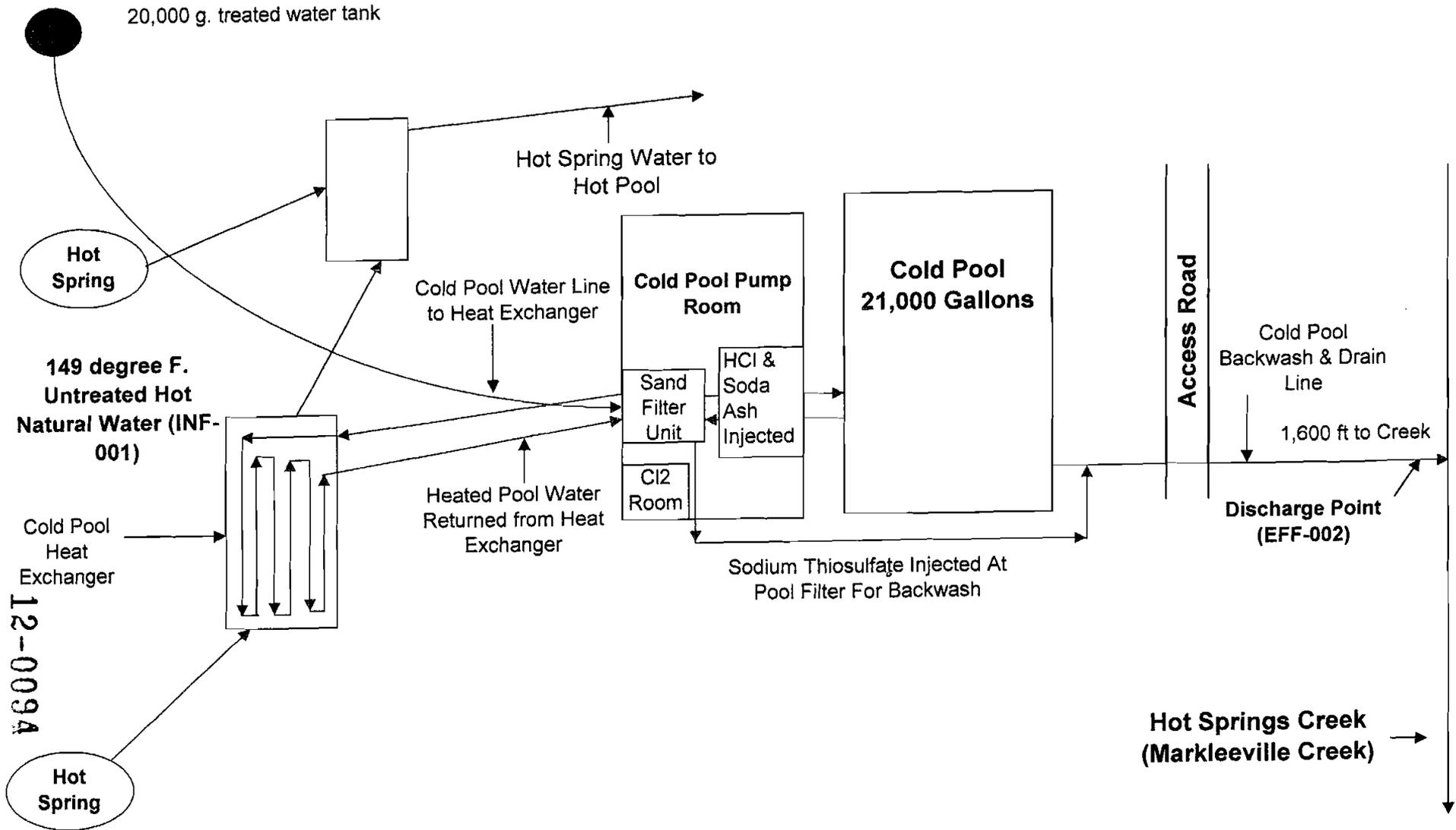
Hot Pool Flow Diagram



Cold Pool Flow Diagram

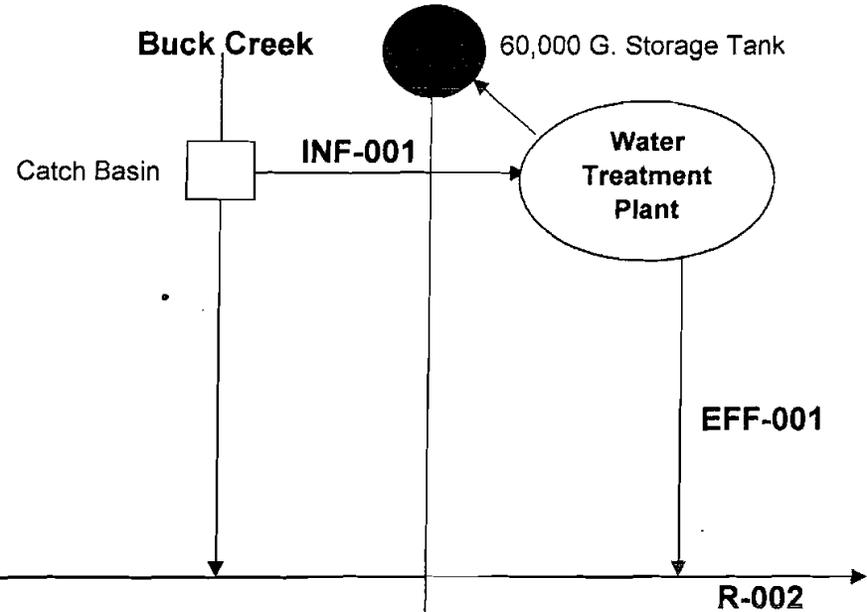
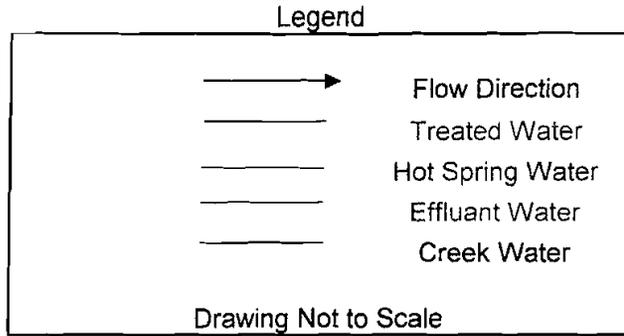
Legend

- Hot Geothermal Water
- Cold Treated Water
- Effluent Water
- Flow Direction
- Drawing Not to Scale



12-009A

Water Supply Flow Diagram



Hot Springs Creek
(Markleeville Creek)

R-001

R-002

EFF-003

Natural
Discharge

EFF-002

Hot Pool

Cold Pool

Blending Tank

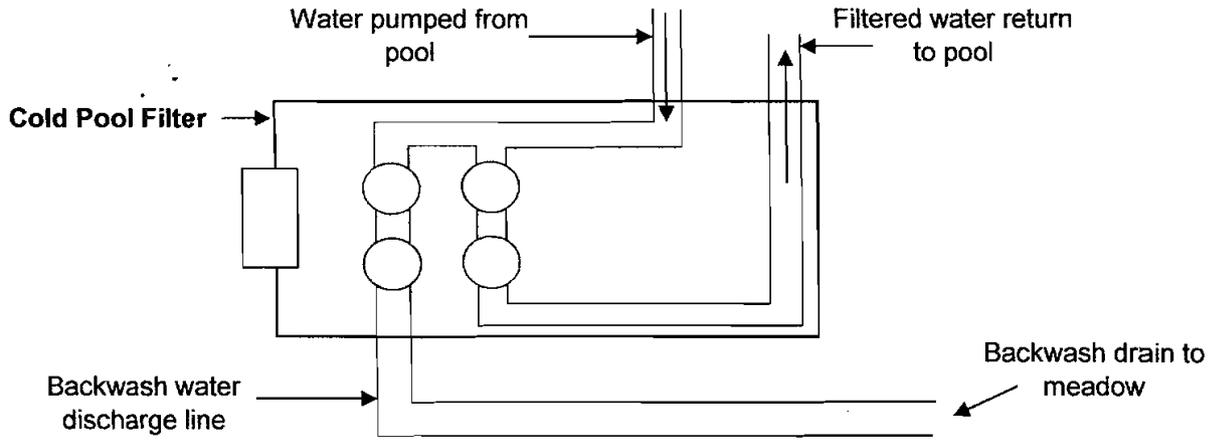
Hot Spring

Hot Springs

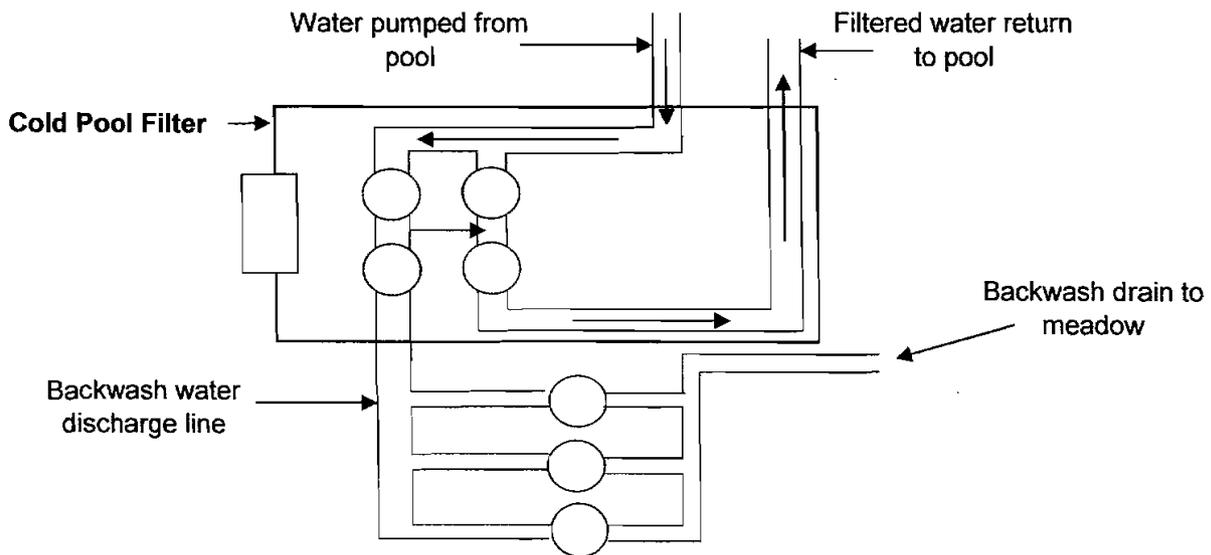
12-0095

000 G. Storage
Tank

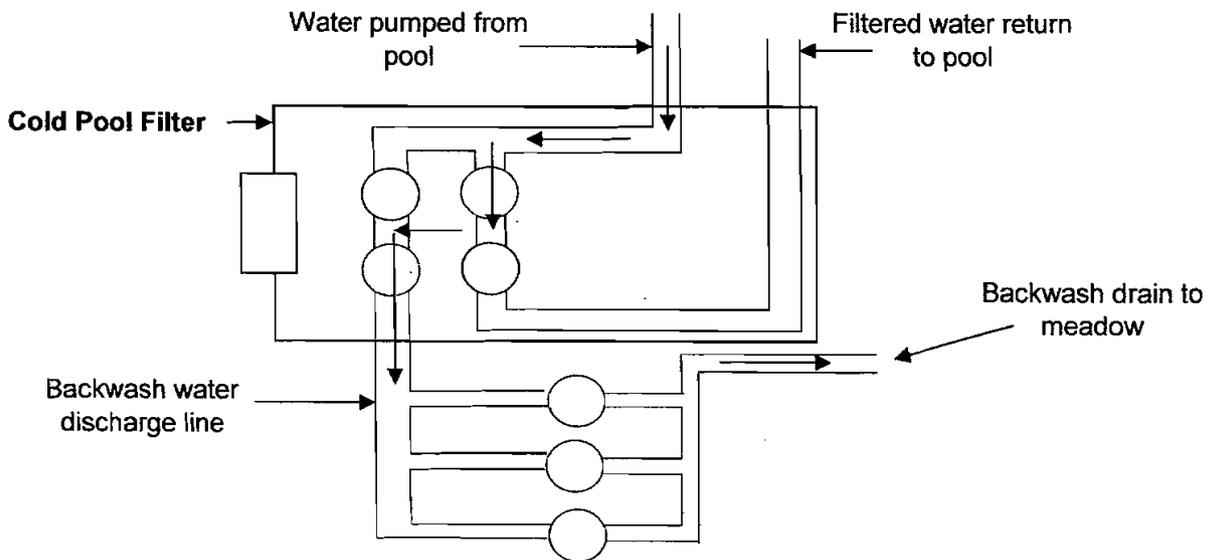
Cold Pool Filter Configurations



Current Pool Filter Configuration



Pool in normal operation. Not in backwash situation



Pool in Backwash Situation



- b. The Monitoring and Reporting Program Number.
- c. WDID Number 6A020110801

D. Noncompliance

Under section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports required pursuant to Water Code section 13267, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Hot spring water, which is used for the Hot and Cold Pools, at a point before it blends with other waters
001	EFF-001	Filter backwash from the WTP, representative of discharges from this system, before contact with other waste streams or receiving waters
002	EFF-002	Filter backwash from the Cold Pool, representative of discharges from this system, before contact with other waste streams or with receiving waters
003	EFF-003	Water discharged from the Hot Pool, representative of discharges from this system, before contact with other waste streams or receiving waters
--	R-001	Within Hot Springs Creek, within 100 feet upstream of all points of discharge from the WTP and the pool complex, where representative samples of receiving water (that has not contacted or mixed with wastewater) can be collected to determine ambient background conditions
--	R-002	Within Hot Springs Creek, within 100 feet downstream of all points of discharge from the WTP and the pool complex, where representative samples of receiving water can be collected to determine water quality.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor hot springs makeup water to the Hot and Cold Pools at Monitoring Location INF-001 in accordance with the following schedule.