

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH
AUTHORIZATION TO OPERATE UNDER THE AUTHORITY OF THE
UTAH WATER QUALITY ACT

INDIVIDUAL OPERATING PERMIT FOR THE FOLLOWING WASTEWATER
TREATMENT AND DISPOSAL FACILITIES: LAGOON, LAND DISPOSAL AND RAPID
INFILTRATION BASIN (RIB)

In compliance with provisions of the Utah Water Quality Act, Title 19, *Chapter 5, Utah Code Annotated ("UCA") 1953, as amended (the "Act")*,


Heber Valley Special Service District

is hereby directed to have no discharge to Waters of the State except as allowed in accordance with the provisions of this permit.

This permit shall become effective on the date signed by the Director.

This individual permit shall expire at midnight December 31, 2019.

Signed this 10 day of December, 2014.



Walter L. Baker, P.E.
Director

Table of Contents

Table of Contents.....	2
I. MONITORING REQUIREMENTS.....	3
A. Coverage under the Operating Permit.....	3
B. Specific Requirements.....	4
C. Monitoring Requirements.....	4
D. Best Management Practices.....	7
II. REPORTING REQUIREMENTS.....	8
A. Monitoring Procedures.....	8
B. Penalties for Tampering.....	8
C. Reporting Requirements.....	8
D. Records Contents.....	8
E. Retention of Records.....	8
F. Inspection and Entry.....	8
G. Twenty-four Hour Notice of Noncompliance Reporting.....	9
III. COMPLIANCE RESPONSIBILITIES.....	10
A. Duty to Comply.....	10
B. Penalties for Violations of Permit Conditions.....	10
C. Need to Halt or Reduce Activity not a Defense.....	10
D. Duty to Mitigate.....	10
E. Proper Operation and Maintenance.....	10
F. Removed Substances.....	10
G. Bypass of Treatment Facilities.....	11
H. Industrial Pretreatment.....	12
IV. GENERAL REQUIREMENTS.....	13
A. Planned Changes.....	13
B. Anticipated Noncompliance.....	13
C. Permit Actions.....	13
D. Duty to Provide Information.....	13
E. Other Information.....	13
F. Signatory Requirements.....	13
G. Penalties for Falsification of Reports.....	14
H. Availability of Reports.....	14
I. Oil and Hazardous Substance Liability.....	14
J. Property Rights.....	14
K. Severability.....	14
L. Transfers.....	14
M. State Laws.....	15

I. MONITORING REQUIREMENTS

A. Coverage under the Operating Permit

1. This operating permit shall apply to Wastewater Treatment and Disposal Facilities owned and operated by Heber Valley Special Services District (HVSSD), Heber, Utah, solely for the treatment and disposal of wastewater generated by: Heber Valley Special Services District. Any request for changes to this facility or its operation must be submitted writing.

Utah Department of Environmental Quality
Utah Division of Water Quality
195 North 1950 West
P. O. Box 144780
Salt Lake City, Utah 84114-4870
Telephone: (801) 536-4300, Fax: (801) 536-4301

2. Facility name, address, telephone number, location and ownership:
 - a. Individual in charge of Facilities: Scott W. Wright
 - b. Heber Valley Special Services District
1000 E. Main
P.O. Box 427
Midway, Utah 84049
 - c. Telephone: (435) 654-2248, FAX: (435) 657-1284
 - d. Email: hvssd@aol.com
 - e. Location: Wasatch County, Utah
 - f. Ownership: Heber Valley Special Services District (same contact data)
3. The HVSSD was issued a Construction Permit from the Division of Water Quality (Division) on July, 18, 2011 for the construction of a new wastewater treatment system to increase their capacity. Their existing lagoon and land application system could not be expanded. HVSSD has no ability to discharge to the Provo River due to Total Maximum Daily Load (TMDL) restrictions. The new facility involves an aerator mechanical treatment plant with a Rapid Infiltration Basin (RIB) for disposal.

4. The RIB is permitted-by-rule under R317-6.6.2.A.1, subject to the conditions of this permit, to discharge treated wastewater into the ground and ground water. The Director may require the owner or operator to apply for and obtain an individual ground water permit if:
 - a. The discharge is not in compliance with the conditions of this Operating Permit; or
 - b. Conditions or standards have changed so that the discharge no longer qualifies for Permit-By-Rule or an Operating Permit.
5. If an individual Ground Water or UPDES permit is issued to HVSSD, the Operating Permit is automatically terminated upon the effective date of the new permit.

B. Specific Requirements

1. During the term of this Operating Permit, the following requirements apply to all wastewater lagoons, rapid infiltration basin, land application, and monitoring wells, as described in the tables below.
 - a. There shall be no discharges to Waters of the State except as provided for in paragraphs B.1.b;
 - b. The discharge of water from emergency overflow systems shall occur only as a result of equipment failure and the need to protect the plant from flooding and/or to prevent severe property damage and will be allowed only if the facility has been properly operated and maintained. If such a discharge occurs, whenever possible the permittee shall dispose of the overflow on land to avoid any potential impacts on receiving waters.

C. Monitoring Requirements

In addition to monitoring of the treatment and disposal facilities, the HVSSD is required to continue to monitor the ground water wells installed during a special study required by the Division to assess if there were ground water / surface water interactions that could affect the water quality of the Provo River. The study indicated there are no current concerns but continued monitoring is required because of the proximity of the lagoon to the Provo River.

TABLE 1: Lagoon Monitoring Requirements		
Parameters	Measurement Frequency	Sample Type
Flow (MGD)	Weekly	Continuous
Lagoon Level	Weekly	Staff Gauge

TABLE 2: Land Application Requirements		
Parameters	Measurement Frequency	Sample Type
Flow (MGD)	Weekly	Continuous
<i>E-Coli</i>	Monthly	Grab
Total Inorganic Nitrogen	Monthly	Composite
Irrigated Acreage	Monthly	Calculated
Application Rate (MGD/acre)	Monthly	Calculated
Nutrient Application Rate (lbs/acre)	Monthly	Calculated
Nutrient Uptake	Crop Type	Calculated
Soil Testing	Biannual (Spring/Fall)	Core Sample

TABLE 3: RIB Monitoring Requirements		
Parameters	Measurement Frequency	Sample Type
Flow, (GPD) per RIB to document drying cycles	Weekly	Continuous
Total Inorganic Nitrogen (NH ₄ +NH ₃ +NO ₂ +NO ₃)	Monthly	Grab
Total Suspended Solids	Monthly	Grab

Sampling of monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7 are outlined in Table 4 listed below for parameters, measurement frequency and sample type.

Parameters	Measurement Frequency	Sample Type
Total Inorganic Nitrogen (NH ₄ +NH ₃ +NO ₂ +NO ₃)	Monthly (April through September 2015)	Grab
Phosphorous (TP)	Monthly (April through September 2015)	Grab
Total Dissolved Solids (TDS)	Monthly (April through September 2015)	Grab
Field parameters: pH, Conductivity Temperature, Static water level	Monthly (April through September 2015)	Grab
Potentiometric Surface Map	Semi Annual	N/A

Parameters	Measurement Frequency	Sample Type
Total Inorganic Nitrogen (NH ₄ +NH ₃ +NO ₂ +NO ₃)	Quarterly (Beginning January 2016)	Grab
Phosphorous (TP)	Quarterly (Beginning January 2016)	Grab
Total Dissolved Solids (TDS)	Quarterly (Beginning January 2016)	Grab
Field parameters: pH, Conductivity Temperature, Static water level	Quarterly (Beginning January 2016)	Grab
Potentiometric Surface Map	Semi Annual	N/A

Facility/Monitoring Well	Latitude	Longitude
Rapid Infiltration Basin	40°30'10.49" N	111°27'31.99" W
Land Application Centroid	40°48'81.78" N	111°42'86.98" W
Site MW-1	40°29'46.57" N	111°27'11.68" W
Site MW-2	40°30'00.69" N	111°27'00.94" W
Site MW-3	40°30'11.87" N	111°27'01.41" W
Site MW-4	40°29'47.52" N	111°27'27.04" W
Site MW-5	40°30'04.24" N	111°27'36.75" W
Site MW-6	40°30'09.34" N	111°27'27.33" W
Site MW-7	40°30'08.26" N	111°27'13.72" W

D. Best Management Practices

1. The permittee shall take such precautions as are necessary to maintain and operate all the facilities in a manner that will minimize upsets and ensure stable operating conditions.
2. The permittee shall visually inspect, at least weekly, the lagoons and the RIBs to determine if there is adequate freeboard for the lagoons or clogging of the RIBs to minimize the likelihood of an accidental discharge occurring. If it is determined that a discharge is occurring and/or there is not adequate freeboard or clogging, the appropriate corrective measures shall be taken immediately.
3. The permittee shall take precautions and have erosion control measures in place that, in the event of a bypass of treatment, the discharge will not cause any erosion into the Waters of the State.

II. REPORTING REQUIREMENTS

A. Monitoring Procedures.

Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10*, unless other test procedures have been specified in this permit.

B. Penalties for Tampering.

The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

C. Reporting Requirements.

All monitoring shall be recorded monthly on spreadsheet, provided by the Division of Water Quality. All reports shall contain the information required in Part I.C and shall be submitted electronically to:

MOR@utah.gov

D. Records Contents.

Records of monitoring information shall include:

1. The date of sampling or measurements;
2. The method of such analyses.
3. Analytical Results

E. Retention of Records.

All records and information resulting from the monitoring activities required by this permit shall be maintained for a minimum of five years. This period may be extended by the request of the Director at any time.

F. Inspection and Entry.

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit

compliance or as otherwise authorized by the *Act*, any substances or parameters at any location.

G. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any overflows or spills, which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.
2. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
3. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
4. Reports shall be submitted to the address in *Part I.A., Coverage Under the Operating Permit.*

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply.

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions.

The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding \$25,000 per day of violation; Any person convicted under UCA 19-5-115(2) a second time shall be punished by a fine not exceeding \$50,000 per day. Nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance.

The permittee 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 permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances.

Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any Waters of the State or creating a health hazard.

G. Bypass of Treatment Facilities

1. Prohibition of bypass of treatment.

- a. Bypass of treatment is prohibited and the Director may take enforcement action against a permittee for a bypass of treatment, unless:
- (1) The bypass of treatment was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass of treatment, 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 of treatment which occurred during normal periods of equipment downtime or preventive maintenance; and,
 - (3) The permittee submitted notices as required under this section.
- b. The Director may approve an anticipated bypass of treatment, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 1.a of this section.

2. Notice.

- a. Anticipated bypass of treatment. If the permittee knows in advance of the need for a bypass of treatment, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass of treatment. The prior notice shall include the following unless otherwise waived by the Director:
- (1) Evaluation of alternative to bypass of treatment, including cost-benefit analysis containing an assessment of anticipated resource damages;
 - (2) A specific bypass of treatment plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass of treatment schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass of treatment;
 - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass of

treatment to enable evaluation of public health risks and environmental impacts; and,

(6) Any additional information requested by the Director.

- b. Emergency Bypass of Treatment. Where ten (10) days advance notice is not possible, the permittee must notify the Director, the Local Health Department and any effected downstream party as soon as it becomes aware of the need to bypass and provide to the Director the information to the extent practicable.
- c. Unanticipated bypass of treatment. The permittee shall submit notice of an unanticipated bypass to the Director as required under Part II.G. (Twenty-Four Hour Notice). The permittee shall also immediately notify the Local Health Department, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Industrial Pretreatment.

Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

IV. GENERAL REQUIREMENTS

A. Planned Changes.

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance.

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

C. Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Provide Information.

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

E. Other Information.

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

F. Signatory Requirements.

All applications, reports or information submitted to the Director shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Director shall be signed by a person described 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 above and

submitted to the Director, and,

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to Authorization. If an authorization under paragraph *IV.F.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph *IV.F.2* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- G. Penalties for Falsification of Reports.
- The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- H. Availability of Reports.
- Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.
- I. Oil and Hazardous Substance Liability.
- Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Act.
- J. Property Rights.
- The issuance of this permit does 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.
- K. Severability.
- The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, are held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- L. Transfers

This permit may be automatically transferred to a new permittee.

1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;
2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

M. State Laws.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117*.

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**Heber Valley Special Services District
Individual Operating Permit UTOP9002
Comment Response Summary
Division of Water Quality
December 2014**

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Printed on 100% recycled paper

Project Background and Draft Operating Permit Overview

The Heber Valley Special Services District is a waste water treatment facility that is comprised of three treatment lagoons, one winter storage lagoon, one rapid infiltration basin (RIB) and a land application site. The first lagoons began treatment in August 1981 while the most recent lagoon began in 2003. The winter storage lagoon began in 1982 and the Rapid Infiltration Basin (RIB) began in 2013. As a condition in the July 18, 2011 construction permit for the RIB that a ground water study be under taken to access the potential for phosphorus movement from the RIBs to the Provo River. As part of this study, seven monitoring wells were installed. The RIB was granted Permit-by-rule in 2013.

The purpose of this Operating Permit is to monitor the activities of the treatment facility (lagoons, land application and rapid infiltration basin) and to assure that the facilities do not pose a risk to waters of the state. A ground water discharge permit may be required by the Director for any discharge permitted by rule under R317-6-6.2 if it is determined that the discharge may be causing or is likely to cause increases above the ground water quality standards or applicable class TDS limits under R317-6-3 or otherwise is interfering or may interfere with probable future beneficial use of the ground water.

Comments and Responses

A copy of the submitted comments and attachments may be found at

<http://www.waterquality.utah.gov/PublicNotices/pnarchive2014.htm>

Comments from Claudia Wheeler, Metropolitan Water District, Salt Lake and Sandy, Utah

Comment 1: *Page 5/TABLE 2: Land Application Requirements. Total Inorganic Nitrogen monitoring sample type is listed as composite. How is a violation determined? Is there a maximum contaminant level (MCL) for Nitrogen disposal? If the MCL is exceeded, what is HVSSD required to do to mitigate the situation? Will the parties that receive water from Provo River be contacted? The District recommends establishing a level above which HVSSD would be required to take mitigating action and notify affected users.*

DWQ Response: The land application site sampling is for soils only. There is no MCL for soils. The land application rate is related to the crop and its agronomic uptake rate for the given nutrient. The nutrients in the applied treated waste water are not sufficient for the crop (alfalfa) and the deficit is made up with the application of additional fertilizer. Soil monitoring is to determine that fertilizer is applied at the correct rate and not over applied. 2013 soil samples results indicate that an additional 80 to 110 pounds of P₂O₅ per acre and an additional 20 pounds of nitrogen per acre are needed in addition to the land application of treated waste water. When soil sampling results indicate there could be an issue at this site, steps will be taken to ensure proper agronomic uptake of the treated water.

Action Taken: None

Comment 2: *Page 5/TABLE 3: RIB Monitoring Requirements. Monitoring requirements do not include pH, conductivity, Phosphorus (TP), and Temperature. The Provo River Watershed Council (PRWC) has been monitoring for Phosphorus (TP) for over 20 years because of the concerns of high nutrients levels and their impact on the water quality both as treating challenges and taste and odor events. The District recommends adding the above parameters to the RIB monitoring requirements.*

DWQ Response: In regards to the operating permit, monitoring for pH, conductivity and temperature does not provide useful information. However we do agree that data for phosphorus would be useful. Please note that pH, conductivity and temperature is a requirement for the monitoring wells, as indicated in Tables 4 and 5.

Action Taken: **Added Phosphorus (TP) to Table 3.**

Comment 3: *Page 6/TABLE 4: Initial Ground Water Monitoring Well Requirements. Monitoring is only required for six months (April through September 2015). Is this due to weather constraints? The District recommends sampling monthly year round.*

DWQ Response: The intent of the accelerated sampling period is to gather data from seasonal impact of the irrigation season and to develop a baseline of the ground water conditions. Once this is accomplished, further monthly sampling, due to the speed of which ground water travels, would unlikely provide additional useful data. If however the initial data suggest otherwise, a more frequent monitoring schedule can be required.

Action Taken: **None**

Comment 4: *Page 6/ TABLE 5: Continuing Ground Water Monitoring Well Requirements. Quarterly monitoring requirements. The District recommends, for consistency with RIB monitoring, that monitoring wells be sampled monthly on a continual basis.*

DWQ Response: Due to slow travel times in ground water, quarterly sampling has been shown to be adequate and more frequent monitoring does not provide additional useful information. For RIB sampling, see comment 2.

Action Taken: **None**

Comment 5: *Page 7/D. Best Management Practices 2. This section reads “The permittee shall visually inspect, at least weekly, the lagoons and the RIBs to determine if there is adequate freeboard for the lagoons or clogging of the RIBs to minimize the likelihood of an accidental discharge occurring”. Does the system have high level sensor alarms? If not, weekly checks are not enough to ensure a discharge. Again, what constitutes a violation? How will a violation be communicated to those identities affected by the discharge? The District recommends increasing the required frequency of inspecting lagoons and RIBs to daily due to proximity of the lagoons and RIBs to the Provo River and establishing a protocol for notifying affected parties.*

DWQ Response: The lagoons do not have a level sensors or alarms. Lagoon design standards require three feet of freeboard in accordance with R317-3-10.C. By-pass provisions listed in Part III.G. As described in these provisions a by-pass is a violation unless certain criteria are met, see Part III.G.1. Also, as described in Part I.B. any discharge to waters of the State except as provided under the operating permit are a violation of the permit. Notification requirements for any non-compliance or by-pass are described in Part II.G and Part III.G(2) respectively. In the event of a by-pass Part III.G.2.a(4) requires notification plan to alert all downstream users as well as the public and any others who may be affected by the by-pass.

Action Taken: DWQ will advise directly, upon confirmation, the Metropolitan, Jordan Valley, Provo River and the local Health Department of any circumstances that may impact their respected facilities caused by HVSSD.

Comments from Scott Wright, HVSSD, Heber, Utah

Comment 6. *On page 4 section C the permit states "HVSSD is required to continue to monitor the ground water wells installed during a special study required by the division to assess if there were ground water / surface water interactions that could affect the water quality of the Provo River." This statement is not what the study was intended to evaluate. Our understanding of the study was that it was intended to determine if the Rapid Infiltration Basins (RIB) would allow phosphorus to travel to the Provo River which could affect water quality. We pointed out to DWQ that the groundwater was below the water surface in the river and that this section of the river was actually loosing water. The study indicated that the general groundwater flow was away from the river and the treatment facility. The lagoons are near the Provo River but the lagoons were constructed according to the design requirements that are intended to protect groundwater. The design requirements for lagoons allow a quarter of an inch infiltration each day which was established to protect the environment. We do not think we should be required to do additional testing beyond what is required of other lagoon systems in the State.*

DWQ Response: The primary goal of the study was to evaluate the potential for phosphorous migration. However, the results of the study indicated that the lagoons are impacting the river and the Division has determined that it is necessary to collect additional data on the RIB and land application to verify that the facility is not impacting the beneficial uses of down-stream users. In addition, data provided by Aqua Engineering shows that MW-2 and MW-4 water levels are above Staff Gauge 3 and 4. This suggests that there could be closer communication with the Provo River. Regardless, the study shows that discharges from HVSSD will reach the Provo River or Deer Creek Reservoir at some point in time. Monitoring, especially in regards to phosphorus, will confirm this assumption presented in the initial study.

The Division's basis for requiring an operating permit, or not, is determined by the site specific factors of the facility and the quality of the receiving waters along with their attendant current or future beneficial uses. In this particular case, the quality and beneficial uses of the surface and ground water in hydrologic connection to the plant's operations is very high. Therefore a permit is being issued to verify that the activities and the treatment plant operate within the agreed design criteria and do not affect water quality and the beneficial uses of down-stream or future users.

Action Taken: None.

Comment 7: *Table 2: Land application requirements requires composite sampling for Total Inorganic Nitrogen (TIN). A grab sample should be allowed for this sample. The water that is pumped from our winter storage pond to the fields has been in the treatment system or storage for several months. The TIN will not change over a twenty-four hour period. In addition in Table 3: the TIN sample type is Grab. This would allow both sample types to be the same. There is a requirement to provide Nutrient Uptake calculations. Please provide the method you expect us to use for this calculation. There are several different methods with different assumptions used to make this calculation. We would like to know how the State would like this information calculated for them.*

DWQ Response: DWQ Concur with the recommended method for sampling Nitrogen (TIN)

Action Taken: **Table 2, nutrient application has been changed to ‘grab sample’. The application rate is described by EPA Region 8 and will be included in HVSSD O&M Manual.**

Comment 8: *Table 4: Ground Water Monitoring Well Requirements requires the monitoring wells to be sampled on a monthly basis. During the long term study we did not even measure all the parameters on a monthly basis. We believe annual sampling will give an indication of how the parameters change in time.*

DWQ Response: As described in Comment 3 above the monthly data is to develop aid in developing baseline data and to try and capture changes as the RIB comes into operation. The RIB’s were not operational while the study was being completed. In addition, Part IV.C allows the permittee the ability to request changes in the Operating Permit for consideration by the Director.

Action Taken: None.

Comment 9: *Table 5: Facility/Monitoring Well locations lists two wells that do not even exist. The Rapid infiltration Basin is listed and has a coordinate but there is no well. The Land application Centroid is also listed and there is no monitoring well at that location. MW-5 is the well that is down gradient from the RIB. Monitoring this well should give an indication of what is happening with the RIB better than all the others. The ground water level in that well ranged from 5458.94 to 5463.19. The water suffice [sic] in the river ranged from 5471.0 to 5472.5 at Staff Gauge 3. If the water surface was monitored at MW-5 it would need to raise 7.81 feet before the flow direction would be close to changing directions to the river.*

The cost associated with monitoring the wells shown in the permit would be expensive and provide little if any benefit to anyone. We believe monitoring MW-5 is prudent to see how the RIB is functioning but the additional monitoring would be a waste of money. We would be happy to allow people access to the wells if they would like to collect samples and monitor the wells. However, we do not think it is necessary for us to constantly monitor the wells to protect the river.

DWQ Response: Table 5 reads as ‘Facility or Monitoring well location’. We concur there are no monitoring wells for the RIB or Land Application Site. The coordinates are given to show the general location of the RIB and Land application site, i.e. “facility”. Future monitoring may

be reduced if data indicates that concentrations over time do not change. The permittee can apply for changes under Part IV.C of the Operating Permit.

Action Taken: None.

Comment 10: *On page 7 number 3 states “The permittee shall take precautions and have erosion control measures in place that, in the event of a bypass of treatment, the discharge will not cause any erosion into the Waters of the State.” Please clarify the meaning of this requirement in the permit. We are already not allowed to discharge to the Waters of the State. This looks like it is intended to just add additional fines if something bad happened. We need to know what erosion control measures are required.*

DWQ Response: This is standard language from all NPDES permits. This is used to call for emergency overflow structure on a lagoon system. This overflow additionally needs to be armored on the downward side to minimize erosion. This is to prevent overtopping of the lagoon banks or back-cutting into the lagoon banks. Either of these events could lead to a catastrophic failure of the banks.

Action Taken: None.

Comment 11: *Page 8 Requirement C requires that we record monthly monitoring on a spreadsheet provided by the Division of Water Quality. The spreadsheet that we received from you does not match the permit requirements. We would like to work with you to generate an acceptable spreadsheet that meets your requirements but will also allow us to report the information required in the permit.*

DWQ Response: A modified Spreadsheet was provided to HVSSD via e-mail from Paul Krauth on 12/4/2012

Action Taken: None.

Comments from Jeffrey D. Budge, P.E., Provo River Water Users Association.

Comment 12: *After reviewing the proposed permit, the Association has concerns regarding possible impacts to water quality in Deer Creek Reservoir and the Provo River System due to HVSSD’s proposed increase in operations. The Association requests that the Department of Environmental Quality ensure that appropriate limits and requirements are placed on HVSSD’s operations that will protect the waters of the Provo River and Deer Creek Reservoir.*

DWQ Response: The intent of the Operating Permit is to measure parameters, as outlined in the permit, to ascertain that the operations and activities at the HVSSD facility do not adversely impact water quality and the beneficial uses of current and future users. If conditions indicate, changes to operation will need to be reviewed and changes in operation made accordingly.

Action Taken: None.

Comments from Shazelle Terry, Jordan Valley Water Conservancy District, West Jordan, Utah

Comment 13: *Pg 5 Table 1: It is our recommendation that the lagoon levels be monitored continuously with the means of immediate notification to staff in the event of an over flow.*

DWQ Response: The Heber Valley lagoon systems have an approximate surface area of 105 acres. Given the 3 foot freeboard that is an addition 102 million gallons of storage capacity. Or, approximate 50 days of additional storage at peak flow. See also, response to Comment 5.

Action Taken: **None.**

Comment 14: *Pg 5 Table 2: As a member of the Provo River Watershed Council, Jordan Valley Water has worked for several decades to reduce nutrient loading into the Provo River System. It is our recommendation that the land application requirements include monitoring for Total Phosphorus in addition to the parameters listed. In addition we feel that given the critical nature of the Provo River to the drinking water supply that E-coli, total inorganic Nitrogen and Total Phosphorus be monitored weekly.*

DWQ Response: See response to Comment 1. In addition, the water chemistry in the winter storage lagoon is very stable. Permit monitoring requirements are intended and currently appear adequate to address this concern. In regards to e-coli, the Division of Drinking Water uses a 250 day travel time for pathogen degradation. The Land Application site exceeds this requirement.

Action Taken: **None.**

Comment 15: *Pg 5 Table 3: Again it would seem prudent to include Total Phosphorus to the list of parameter that are required to be monitored at this location and that all parameters in this table be monitored weekly.*

DWQ Response: Agreed. Please see response to Comment 3.

Action Taken: **Also see action Taken to Comment 3.**

Comment 16: *Pg 6 Table 5: It is our recommendation that rather than automatically going to reduced monitoring of the groundwater wells on the specific date of January 2016 that the permit be written to allow reduced monitoring only when the levels of the parameters outlined remain stable and below ranges of concern. Any increase beyond an acceptable range would again trigger the more frequent monitoring outlined in Table 4.*

DWQ Response: Please see response to Comment 4.

Action Taken: **None.**

Comment 17: *Pg 7 Part D.2 indicates that the lagoons be inspected weekly. It is our recommendation that the lagoons be inspected daily along with some type of continuous sensing with alarms that can notify operators of a potential problem.*

DWQ Response: One of the ways a wastewater lagoon accomplishes treatment is through long detention times. Heber Valley has an approximate detention time of 60 days plus through the aerated lagoons alone. Daily fluctuations are virtually unmeasurable in a system this large.

Action Taken: None.

Comment 18: *Pg 7 Part D.3 indicates that HVSSD is required to have erosion control measures in place for a bypass of treatment event. It is our recommendation that the permit outline when this requirement needs to be demonstrated and how it will be enforced.*

DWQ Response: This is standard language from all NPDES permits. This is used to call for emergency overflow structure on a lagoon system. This overflow additional needs to be armored on the downward side to minimize erosion. This is to prevent overtopping of the lagoon banks or back-cutting into the lagoon banks. Either of these events could lead to a catastrophic failure of the banks.

Action Taken: None.

Comment 18: *Pg 9 Part G.1 explains the requirement for HVSSD to notify the Division of Water Quality within 24 hours if there is any overflow or spill. We request that the Division in turn notify drinking water users immediately upon receiving notification from HVSSD. We would appreciate knowing how this permit will be flagged to remind the Division that this communication needs to occur.*

DWQ Response: See response to Comment 5.

Action Taken: See Action Taken to Comment 5

DWQ-2014-013319