

DATE: SEPTEMBER 15, 2011
WWM PERMIT NO.: HI11WWIP431

PERMIT RATIONALE: APPLICATION FOR WASTEWATER MANAGEMENT PERMIT

PERMITTEE: PRINCEVILLE UTILITIES COMPANY, INC.
FACILITY/SITE: PRINCEVILLE UTILITIES COMPANY, INC.
WASTEWATER TREATMENT PLANT

FACILITY/SITE ADDRESS

4261 Kekuanaoa Lane
Princeville, Hawaii 96722
Tax Map Key: (4) 5-4-011:001

PERMITTEE MAILING ADDRESS

5-3541 Kuhio Highway
Princeville, Hawaii 96722
Mr. Michael Loo, Manager
Phone No.: (808) 826-6100 x20
Fax No.: (808) 827-8019

PERMITTEE: MR. ROBERT J. FARIAS
FACILITY/SITE: KAPA'A LAND APPLICATION SITE

FACILITY/SITE ADDRESS

Midler 1400
Kapa'a, Hawaii 96746
Tax Map Key(s): (4)-3-3-010-003 and
(4)-3-3-010:004

PERMITTEE MAILING ADDRESS

1714 Hulu Street
Kapa'a, Hawaii 96746
Phone No.: (808) 652-0628
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PERMIT STATUS

The Permittee submitted an Individual NPDES Permit application (dated August 24, 2011) for coverage of a treatment works that generates wastewater sludge that is directly land applied.

The Director of Health (Director) proposes to issue a permit to treat and dispose of wastewater sludge that is land applied. The Director has included in the proposed draft permit those terms and conditions which the Director determined are necessary to carry out the provisions of the Hawaii Revised Statutes, (HRS), Chapter 342D, and Chapter 11-62, Hawaii Administrative Rules (HAR).

SCOPE OF THE ACTIVITY AND LOCATION OF THE PROJECT

The proposed project is located at the Princeville Utilities Company, Inc. Wastewater Treatment Plant and Kapa'a Land Application Site. The scope of the proposed project is to operate the Princeville Utilities Company, Inc. Wastewater Treatment Plant that recycles wastewater effluent for irrigation and treats wastewater sludge that can be land applied as a soil amendment with site conditions at the Kapa'a Land Application Site.

DESCRIPTION OF THE PROJECT

The Princeville Utilities Company, Inc. Wastewater Treatment Plant treats and disposes of wastewater and wastewater sludge. The wastewater effluent discharge will be used for irrigation and regulated under Chapter 11-62, HAR.

The wastewater sludge is aerobically processed to a “Class B” level that can be used as a soil amendment as long as site restrictions are met. The wastewater sludge will be land applied at the Kapa’a Land Application Site.

WASTEWATER EFFLUENT CRITERIA

The Director has promulgated administrative rules for the wastewater systems in Chapter 11-62, HAR. These rules, in addition to Guidelines for the Treatment and Use of Recycled Water, set the criteria for the use of recycled water. The Director has considered the criteria established in the state regulations and has determined that the Facility and the use of recycled water for irrigation will not endanger human health or the environment. Based on current information, the Director proposes to issue a permit.

WASTEWATER SLUDGE CRITERIA

The EPA has promulgated regulations for the use and disposal of wastewater sludge in 40 Code of Federal Regulations Part 503. In addition, the Director has also promulgated administrative rules for wastewater systems in Chapter 11-62, HAR. The Director has considered the criteria established in both the federal and state regulations and has determined that the Facility and the land application of the wastewater sludge will not endanger human health or the environment. Based on current information, the Director proposes to issue a permit.

PERMIT CONDITIONS

The Director has considered the permit conditions to wastewater, wastewater effluent, and wastewater sludge associated with the facility, established pursuant to the Federal Water Pollution Control Act, Federal Clean Water Act, and the HRS. The Director has determined that the operation of the facility and the land application of the wastewater sludge will not endanger human health and the environment when the Permittee complies with the conditions of the permit. Therefore, based on current information, the Director proposes to issue a permit.

PROPOSED DETERMINATIONS

A. General Conditions

1. The Permittee shall comply with all Federal and State regulations, and any NPDES and UIC permits issued to the facility.
2. All wastewater pumps and haulers that discharge wastewater and wastewater sludge into the facility shall be registered with the State. Copies of the wastewater manifests shall be made available to the Director upon request.
3. The Permittee shall submit an operations manual within 60 days of the permit issuance. The operations manual shall include all sampling locations, sampling protocols, and land application procedures.
4. The Permittee shall retain a copy of the permit application and the individual permit at the facility.
5. The Permittee shall submit signed copies of all reports required by this permit to the Director at the following address or as otherwise specified:

Director of Health
919 Ala Moana Boulevard, Room 309
Honolulu, Hawaii 96814

6. The Permittee shall include the following certification statement and signature on each submittal in accordance with HAR, Chapter 11-55, Section 11-55-07(b):

"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 or imprisonment for knowing violations."

7. The Permittee shall include the Wastewater Management (WWM) permit number on each submittal. Failure to provide the assigned WWM permit number for this facility on future correspondence or submittals may be a basis for delay of the processing of the document(s).

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8. The Permittee shall notify the Director, in writing, of any changes to information on file with the DOH as soon as changes arise. A revised operations manual reflecting these changes shall be submitted for the Director’s review and approval prior to implementation. Depending on the extent of the proposed changes, a modification to this permit may be required.

B. Special Conditions.

1. The wastewater shall be sampled and monitored for all applicable parameters in Sections 11-62-26 and 11-62-27. These parameters are summarized in the table below. The data shall be recorded and kept on site for a minimum of five years. In addition, BOD₅, suspended solids and fecal coliform data shall be submitted to the Director no later than 30 days after the quarters ending March 31, June 30, September 30, and December 31.

Parameter	Minimum Monitoring Frequency	Type of Sample
BOD ₅ in the effluent	Weekly	Composite
Suspended Solids in the effluent	Weekly	Composite
Effluent Fecal Coliform	Daily, unless otherwise specified by the Director	Grab
Chlorine Residual	Daily	Grab or continuous
Dissolved Oxygen in the aeration tank	Weekly	Grab
pH in the aeration tank	Weekly	Grab
30 Minute Settleability in the aeration tank	Weekly	Grab
Total Daily Flow	Weekly	

2. In accordance with section 11-62-27(k), for recycled water systems, the following information shall be recorded and submitted to DOH by February 19 of each year and shall be in a monthly summary format for the preceding calendar year:

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The volume of recycled water used, the volume of recycled water stored, the volume and location of any recycled water stored, the volume and location of any recycled water spills, and details on the irrigated areas including water budgets, precipitation, evaporation, application rates, and monitoring of best management practices.

3. Pathogens. At the minimum meet the pathogen requirements of 40 CFR 503.32(b). In addition the Permittee shall meet the following:
 - a. Once per year, seven samples of the wastewater sludge that is applied to the land shall be collected and the geometric mean of these seven samples shall be less than 2 million MPN per gram of wastewater sludge (dry weight basis).
 - b. The seven samples shall be taken over a two week period and shall be performed during the months of October through March.
 - c. The facility may sample the wastewater sludge with a frequency greater than once per year, however, the density of fecal coliform of any seven consecutive samples shall not exceed 2 million MPN per gram of sewage sludge (dry weight basis).
 - d. If the wastewater sludge produced at the facility for land application exceed 250 dry metric tons per year, the frequency of sampling shall increase to a minimum of once per quarter.
4. Vector Attraction reduction. The wastewater sludge shall be incorporated into the soil within six hours after application or placement onto the soil.
5. Pollutant Limits. The wastewater sludge shall not be land applied if the concentration limit of any pollutant exceeds the maximum ceiling limit listed in Chapter 11-62, Table IV, which is listed below. The pollutant analysis shall be conducted at least once per year.

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Pollutant	Ceiling Limit (mg/kg, dry weight basis)
Arsenic	20
Cadmium	15
Chromium	200
Copper	1500
Lead	300
Mercury	10
Molybdenum	15
Nickel	100
Selenium	25
Zinc	2000

6. All wastewater sludge generated by the Permittee shall meet the requirements in Special Conditions 3 through 5. If the wastewater sludge does not meet these criteria:
- a. The Permittee must inform the Director immediately that the wastewater sludge does not meet these requirements and must submit in writing why the facility did not meet the criteria and any corrective actions taken.
 - b. The wastewater sludge cannot be land applied and must be disposed of in a municipal solid waste landfill, taken to another permitted wastewater facility for further processing, or otherwise used or disposed as approved by the Director.
 - i. Municipal solid waste landfill.
 - (a) The Permittee shall dispose of wastewater sludge into a municipal solid waste landfill that meets the requirements of 40 CFR 258 and is permitted under Chapter 11-58.1, HAR.
 - (b) Wastewater sludge disposed into a municipal solid waste landfill shall meet the requirements of 40 CFR 258 and Chapter 11-58.1, HAR concerning the quality of materials disposed of in a solid waste disposal facility.
 - ii. Other permitted wastewater facility. The Permittee shall dispose of wastewater into another wastewater facility that has been permitted under Chapter 11-62, HAR to accept wastewater sludge and is compliance with the sludge related conditions of that permit.

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7. The following items shall be monitored and records kept in accordance with condition 16 of appendix A, Individual and General Permit Standard Conditions.
 - a. Volume of wastewater sludge used or disposed in metric tons (dry weight basis);
 - b. Solids concentration;
 - c. Use or disposal location;
 - d. If land applied, application rate;
 - e. Date wastewater sludge was hauled from the treatment works; and
 - f. Name of the person hauling the wastewater sludge from the wastewater works to the treatment facility.

8. All wastewater sludge generated by the Permittee shall be reused or disposed of in accordance with the applicable portions of:
 - a. 40 CFR 503 and Chapter 11-62, HAR: For wastewater sludge that is land applied.
 - b. 40 CFR 258 and Chapter 11-58.1, HAR: For all wastewater sludge that is disposed in municipal solid waste landfills.
 - c. 40 CFR 257 and Chapter 11-62, HAR: For all wastewater sludge use and disposal practices not covered in 40 CFR 258 or 503.

9. The Permittee is responsible for assuring that all wastewater sludge produced at the facility are used or disposed of in accordance with 40 CFR 257, 258, and 503, and Chapters 11-58.1 and 11-62, HAR, whether the Permittee reuses or disposes of the wastewater sludge directly or transfers the wastewater sludge to another entity for further treatment, reuse, or disposal. The Permittee is responsible for informing the subsequent preparers, applicators, and disposers of the requirements which these entities must meet under 40 CFR 257, 258, and 503, and Chapters 11-58.1 and 11-62, HAR.

10. The Permittee shall obtain approval for each land application site prior to land application. In addition, each land application site shall be registered with the State in accordance with Section 11-62-50(b), HAR. For each land application site, the Permittee shall submit sufficient information to determine the suitability of the site including, but not limited to address, tax map key, map of the site including the property line and all structures within 500 feet of the site, potable water sources within 1000 feet of the site, the type of crop grown, the nitrogen content at the land application site, the nutrient balance for each crop, the application rate for each crop, and any other information requested by the Director.

11. The Permittee shall notify in writing to the land applicator and the owner of the land application site of:
 - a. The vector attraction reduction requirements of Special Condition 4.
 - b. The spacing and site requirements of Special Condition 12.

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- c. The management requirements in Special Condition 13; and
 - d. The concentration of total nitrogen (as N on a dry weight basis).
12. The Permittee shall meet the following site restrictions.
- a. Horizontal distances

Waters of the United States, state waters, the ocean at the vegetation line, or any other surface water body	50 feet
Property line	50 feet
Occupied building or dwelling	500 feet
Potable water source serving a public water system	1000 feet

- b. Vertical distance. The land application shall be at least five feet above the seasonal mean high groundwater table.
- c. Site restrictions of 40 CFR 503.32(b)(5).
 - i. Food crops with harvested parts that touch the wastewater sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after the last application of the wastewater sludge;
 - ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the last application of wastewater sludge when the wastewater sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
 - iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after the last application of wastewater sludge when the wastewater sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
 - iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after the last application of wastewater sludge.
 - v. Animals shall not be allowed to graze on the land for 30 days after the last application of wastewater sludge.
 - vi. Turf grown on land where wastewater sludge is applied shall not be harvested for 1 year after the last application of wastewater sludge, unless otherwise specified by the Director.
 - vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after the last application of the wastewater sludge.
 - viii. Public access to the land with a low potential for public exposure shall be restricted for 30 days after the last application of wastewater sludge.

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13. The management practices of 40 CFR 503.14 shall be met, specifically, the practices (a), (b), (d), (e)(1), and (e)(2) listed below:
 - a. Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.
 - b. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the United States, as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.
 - d. Bulk sewage sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sewage sludge, unless, in the case of a reclamation site, otherwise specified by the permitting authority.
 - e. Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in another container for application to the land. The label or information sheet shall contain the following information:
 - (1) The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
 - (2) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.
14. No wastewater sludge shall be allowed to enter wetlands or other waters of the United States.
15. Wastewater sludge treatment, storage, reuse, or disposal shall not contaminate groundwater.
16. Wastewater sludge treatment, storage, reuse, or disposal shall be performed in a manner as to minimize nuisances such as objectionable odors or flies.
17. If non-exceptional quality criteria wastewater sludge is transported for off-site treatment, reuse, or disposal, the Permittee shall use only haulers registered in the State. In addition, the Permittee shall assure that haulers take all necessary measures to keep the wastewater sludge contained.
18. If the wastewater sludge is stored for over two years from the time it was generated, the Permittee must ensure compliance with all requirements for surface disposal in 40 CFR 503 Subpart C and section 11-62-45, HAR.

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19. Wastewater sludge containing PCBs equal to or greater than 50 mg/kg of total solids (100% dry weight basis) shall be disposed of in accordance with 40 CFR 761. Testing for PCBs shall be at a minimum of once every five years and shall be submitted with all subsequent permit applications.
20. Any wastewater sludge treatment, storage, or disposal site shall have adequate facilities which divert surface runoff from adjacent areas, protect site boundaries from erosion, and prevent any conditions that would cause drainage to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.
21. Additional monitoring requirement:
 - a. Sampling protocols, including sampling locations, shall be submitted and approved by the director within 60 days of the issuance of the permit.
 - b. Wastewater sludge that is land applied shall be tested for the pollutants using Test Methods for Evaluating Solid Waste Physical/Chemical Methods”, EPA Publication SW-846.
 - c. Wastewater sludge that is land applied shall be tested for organic-N, ammonium-N, and nitrate. The frequency of testing shall be done at least once per year.
22. Reporting.
 - a. The Permittee shall submit the information in Special Condition 7 no later than 30 days after the quarters ending March 31, June 30, September 30, and December 31.
 - b. The Permittee shall submit an annual report to the Director by February 19 of each year for the period covering the previous calendar year. The report shall include:
 - i. A wastewater sludge balance in dry metric tons, including the amount of wastewater sludge generated at the facility, the amount of wastewater sludge received from each source, the amount of wastewater sludge land applied, the application rate of the wastewater sludge land applied, and a map indicating the land application site and the dates of application.
 - ii. Results of all monitoring required by this permit, including the results of testing required in Special Condition 3 and 5.
 - iii. A completed Certification Form (Chapter 11-62, Form A).
 - iv. Names, mailing addresses, and street addresses of entities who received wastewater sludge for further treatment, storage, disposal in a municipal solid waste landfill, or for other use or disposal methods not covered above, and the volumes in dry metric tons delivered to each.

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23. Records regarding the wastewater sludge processing including end-product transactions including invoices, billings, and/or manifests, shall be maintained for a minimum of five (5) years. Records of all analytical testing data shall also be maintained for a minimum of five (5) years. Copies shall be made available to the Director upon request.