

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. ~~R5-2006-TENTATIVE~~—~~R5-2007-TENTATIVE~~

WATER RECYCLING REQUIREMENTS
FOR
GRIZZLY CREEK GOLF LLC
GRIZZLY CREEK GOLF COURSE IRRIGATION
PLUMAS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

REPORT OF WASTE DISCHARGE

1. The Grizzly Creek Golf Course, LLC, (hereafter User) submitted a Report of Waste Discharge, on 19 May 2006 to recycle treated effluent from the Grizzly Ranch Community Services District (Producer) wastewater treatment plant (Plant) for irrigation of their golf course at the Grizzly Ranch Development. The Report of Waste Discharge was deemed complete on 13 June 2006. The User proposes to use approximately ~~29.2 million~~29.2 million gallons per year of disinfected tertiary recycled water for irrigation.

RECYCLED WATER SYSTEM DESCRIPTION AND GENERAL SITE INFORMATION

2. The Water Recycling Area (Use Area) is in Sections 15, 16, 17, 21, and 22, T23N, R14E MDB&M; as shown on ~~Attachment "A" which is~~Attachments A-1 and A-2, which are a part of this Order. The golf course (110 irrigated turf acres of 210 total acres), on which recycled water application will take place, consists of parcels 028-010-006, 028-010-031, ~~028-010-036, and~~028-010-036, and 028-010-037, which are owned by the Grizzly Creek Golf, LLC.
3. Surface water drainage from the site is to Big Grizzly Creek, which is tributary to the Middle Fork of the Feather River.
4. Waste Discharge Requirements Order No. R5-2005-0170 (NPDES No. CA0085162) for the Producer (Grizzly Ranch Community Services District (GRCS D)) currently prescribes the terms and conditions for discharges of disinfected tertiary treated wastewater to surface water owned by GRCS D and named individuals (hereafter use areas).
5. Order No. R5-2005-0170 characterizes the Plant effluent as follows:
 - a. Monthly Average (dry weather) Flow: 0.061 million gallons per day (mgd)
 - b. Daily Peak Wet Weather Flow: 0.12 mgd
 - c. Design Flow (dry weather): 0.081 mgd

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Constituent	mg/L	lb/day
BOD ¹	10	6.75 ²
Total Suspended Solids	10	6.75 ²
Total Nitrogen	10	6.75 ²
Total Coliform	<2.2 (MPN/100 mL)	NA

¹5-day, 20°C biochemical oxygen demand

²Based on the design flow of 0.081 mgd

6. Treated effluent from the Plant is discharged to Big Grizzly Creek during the winter. Biosolids generated by the Plant are disposed at a sanitary landfill.

STATE WATER RECYCLING POLICIES AND REGULATIONS

7. Domestic wastewater contains pathogens harmful to humans that are typically measured by means of total or fecal coliform, as indicator organisms. California Department of Health Services (DHS), which has primary state-wide responsibility for protecting public health, has established statewide criteria in §60301, Article 1, Chapter 3, Division 4, Title 22, California Code of Regulations et seq., (hereafter Title 22 CCR) for the use of recycled water, and has developed guidelines for specific uses. Revisions of the water recycling criteria in Title 22 CCR became effective on 2 December 2000. The revised Title 22 CCR expands the range of allowable uses of recycled water, establishes criteria for these uses, and clarifies some of the ambiguity contained in the previous regulations. These requirements implement the water recycling criteria in Title 22 CCR.
8. Section 60323, Article 7, Chapter 3, Division 4 of Title 22 CCR requires recyclers of treated municipal wastewater to submit an engineering report detailing recycled water use, contingency plans, and safeguards. The User submitted an engineering report, titled Grizzly Ranch Water Reclamation Facility, Engineering Design Report (hereafter Engineering Report), dated April 2004, to DHS pursuant to §60323, Article 7, Chapter 3, Division 4, Title 22 CCR for recycling disinfected tertiary treated water for the Use Area.
9. Section 13523 of the California Water Code (CWC) provides that a regional board, after consultation with and in accordance with recommendations from DHS as necessary to protect the public health, safety, or welfare, shall prescribe water recycling requirements for wastewater used or proposed to be used as recycled water.
10. The State Water Resources Control Board (State Water Board) adopted Resolution No. 77-1, titled, *Policy With Respect to Water Reclamation in California* on 6 January 1977. This policy requires the Regional Board to encourage water recycling and reuse of water in water-short areas of the state.

11. In 1996, the State Water Board and DHS set forth principles, procedures, and agreements to which the agencies committed themselves, relative to the use of recycled water in California, in a document titled *Memorandum of Agreement Between The Department of Health Services and The State Water Resources Control Board On Use of Reclaimed Water* (1996 MOA). This Order is consistent with the 1996 MOA.
12. The 1988 MOA between DHS and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the regional boards. In addition, the 1988 MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.
13. The effluent the User proposes to use for irrigation meets the definition for “Disinfected Tertiary-Treated Recycled Water” established by the DHS in §60301.230, Article 1, Chapter 3, Division 4, Title 22 CCR.
14. These requirements are consistent with and implement the Chapter 3, Division 4, Title 22 CCR. When the recycled water is being applied to the golf course, and application is not restricted (e.g. the recycled water can be applied at any time of the day, including those times that golfers are present), Article 1, Chapter 3, Division 4, Title 22 CCR requires that:
 - a. The wastewater be oxidized, which requires that its organic matter is stabilized nonputrescible, and contains dissolved oxygen (§60301.650);
 - b. The wastewater be filtered, which requires that it be coagulated and passed through a specified filter media, and that it meets specific effluent turbidity criteria (§60301.320);
 - c. For a chlorine disinfection process, the product of total chlorine residual and modal contact time (CT) be a minimum of 450 mg-minutes per liter and the contact time be a minimum of 90 minutes (§60301.230(a)(1));
 - d. The median count of total coliform bacteria measured in the disinfected effluent not exceed 2.2 MPN /100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed (§60301.650(2)(b));
 - e. The count of total coliform bacteria measured in the disinfected effluent does not exceed 23 MPN/100 mL in more than one sample in any 30 day period (§60301.650(2)(b)), and;
 - f. The count of total coliform bacteria measured in the disinfected effluent never exceeds 240 MPN/100 mL (§60301.650(2)(b)).

This Order requires daily testing of the disinfected wastewater for coliform during golf course irrigation in accordance with §60321, Article 6, Chapter 3, Division 4, Title 22 CCR.

15. This discharge is exempt from the requirements of Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, Division 2, Subdivision 1, §20005, et seq., (hereafter Title 27). The exemption, pursuant to §20090(b), is based on the following:
 - a. The Regional Board is issuing water recycling requirements,
 - b. The discharge complies with the Basin Plan, and
 - c. The recycled water does not need to be managed according to Division 4.5, Chapter 11, Title 22, CCR, as a hazardous waste.

HYDROLOGY, SOILS, AND LAND USE

16. The Use Area lies within the Sloat Hydrologic SubArea (No. 518.33) of the Middle Fork Feather Hydrologic Area, which is within the Feather River Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the California Department of Water Resources (DWR) in August 1986.
17. The Use Area is not within a 100-year floodplain according to Federal Emergency Management Administration (FEMA) maps for the area. Surface discharge is to Big Grizzly Creek, a tributary to the Middle Fork of the Feather River.
18. Area soils consist of silty clay.
19. The Use Area is in a semiarid region. Average annual precipitation and evapotranspiration are about 24.6 inches and 35.3 inches respectively, according to information published by DWR. The average annual precipitation at the Use Area is 21 inches to 24 inches per year, according to the Discharger.
20. Area groundwater has been encountered at approximate depths of 40-42 feet below the surface near the 17th and 18th tee.
21. The Producer monitors area groundwater via a groundwater monitoring well network currently comprised of three domestic wells in the WWTF and Use Area vicinity. Groundwater in the WWTF and Use Area vicinity occurs in an unconfined aquifer at depths ranging from 40 to 42 feet below ground surface (bgs).

BASIN PLAN AND REGULATORY CONSIDERATIONS

22. The Regional Board adopted a Water Quality Control Plan, Fourth Edition, for the Sacramento River Basin and the San Joaquin River Basin (hereafter Basin Plan), which designates beneficial uses, establishes water quality objectives, and describes an implementation program and policies to achieve those objectives for all waters of the Basins. These requirements implement the Basin Plan.
23. The beneficial uses of the Middle Fork of the Feather River are agricultural supply (AGR); recreation (REC-1, REC-2); freshwater habitat (WARM and COLD); spawning,

reproduction, and/or early development of salmon and steelhead (SPWN) and wildlife habitat (WILD).

24. The beneficial uses of the underlying groundwater include municipal, domestic, agricultural, and industrial supply.

COMPLIANCE WITH STATE AND FEDERAL POLICIES REGARDING WATER QUALITY DEGRADATION

25. State Water Board Resolution No. 68-16 requires maintenance of all high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in water quality policies (e.g., quality that exceeds water quality objectives).

~~26. Assimilative capacity is available in the underlying soil and groundwater, considering limited dilution, to allow for some degradation and not unreasonably threaten present and anticipated beneficial use of such water, or result in groundwater that exceeds or threatens to exceed water quality objectives set forth in the Basin Plan. Compliance monitoring is essential to assure the effectiveness to treatment and control measures in protecting groundwater.~~

27.26. The conditional discharge as permitted herein is consistent with the provisions of the State Water Board Resolution No. 68-16, specifically Best Practicable Treatment and Control (BPTC) measures. As permitted, the use of recycled water will not unreasonably affect present and anticipated beneficial uses of groundwater and will not result in water quality less than that described in the Basin Plan. BPTC will be accomplished by the following:

- a. Groundwater limitations which state that the recycled water shall not cause the groundwater underlying the water recycling areas to contain waste constituents statistically greater than background water quality except for coliform;
- b. The use of recycled shall not cause a pollution or nuisance, as defined by the CWC;
- c. The use of recycled water shall not cause degradation of any water supply;
- d. This Order requires the Discharger to meet Section 60304 (a) of Title 22 California Code of Regulations (CCR), which states that "recycled water used for surface irrigation... shall be disinfected tertiary recycled water..." suitable for golf course irrigation; and,
- e. Compliance monitoring is required in this Order to assure the effectiveness to treatment and control measures in protecting groundwater.

27. A full antidegradation analysis is only required when a reasonable expectation of possible groundwater degradation exists. Base on the following items, Regional Board staff believes the discharge is a low threat of groundwater degradation:

- a. The recycled wastewater pond is lined with a synthetic liner which will minimize percolation of waste constituents to groundwater;
 - b. Recycled water will be applied in amounts suitable for the plants being irrigated and consistent with prevailing irrigation practices for fresh water; and;
 - c. The Producer will produce disinfected tertiary recycled water for golf course irrigation, consistent with Title 22, CCR.
 - d. Even at full development build out, recycled water will account for less than 12% of the total water used for irrigation.
28. Pursuant to CWC §13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
29. Section 13267 of the CWC states, in part, that:
- “In conducting an investigation specified in [Section 13267] subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.”
30. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2006-TENTATIVE are necessary to assure compliance with these waste discharge requirements. The Producer operates the facility that discharges the recycled water subject to this Order. The User is responsible to comply with the monitoring requirements of Monitoring and Reporting Program No. R5-2006-TENTATIVE.

COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT

31. On 28 June 2000, Plumas County certified the Environmental Impact Report for the Wastewater Treatment Facilities Improvement and Reclamation Project in accordance with the California Environmental Quality Act (CEQA) (Public Resource Code §21100, et seq.). The County determined that the use of recycled water for this project would not have a significant impact on the environment (State Clearinghouse #97072003 & #89051521). The Regional Board has considered the Environmental Impact Report and concurs that the water-recycling project will not result in significant impacts to water quality.

PUBLIC NOTICE

32. The Regional Board consulted with DHS, and Plumas County Environmental Health and considered their comments regarding public health aspects for this use of recycled water.
33. The Regional Board has notified the Producer and User, and interested agencies and persons of its intent to prescribe recycling requirements for this water reuse, and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
34. The Regional Board has considered the information in the attached Information Sheet in developing the Findings of this Order. The attached Information Sheet is part of this Order.
35. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Grizzly Creek Golf LLC, its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge of recycled water to surface waters or surface water drainage courses either by direct discharge or runoff from the water recycling area is prohibited.
2. By-pass or overflow of untreated or partially treated recycled water to Use Area is prohibited.
3. Discharges of recycled water, including windblown spray and runoff of recycled water applied for irrigation to lands for which valid recycling requirements are not in force, are prohibited.
4. The use of recycled water for irrigation during periods when the soil is saturated is prohibited.

B. Recycled Water Specifications

1. The recycled water discharge shall, at a minimum, be disinfected tertiary recycled water as defined in the most current Title 22 CCR.
2. The median concentration of total coliform bacteria measured in the recycled water shall not exceed a Most Probable Number (MPN) of 2.2 per 100 mL utilizing the bacteriological results of the last 7 days for which analyses have

- been completed, and the number of total coliform bacteria does not exceed an MPN of 23 per 100 mL in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 per 100 mL.
3. The turbidity of the recycled water shall not exceed any of the following:
 - (a) An average of 2 Nephelometric turbidity units (NTU) within a 24-hour period;
 - (b) 5 NTU more than 5 percent of the time within a 24-hour period; and
 - (c) 10 NTU at any time.
 4. Neither the treatment nor the use of recycled water shall cause a pollution or nuisance as defined by the CWC, §13050.
 5. The use of recycled water shall not cause degradation of any water supply.
 6. Recycled water shall remain within the designated water recycling area, as defined in Finding No. 2, at all times.
 7. The use of recycled water shall be limited to golf course landscape irrigation by direct application.
 8. Recycled water shall be applied in amounts suitable for the plants being irrigated and consistent with prevailing irrigation practices for fresh water, except under extreme conditions and upon approval of the Executive Officer.
 9. Recycled water shall not be applied so as to cause saturated conditions within 100 feet of any water body.
 10. Recycled water used for irrigation shall be managed to minimize erosion and runoff.
 11. Spray, mists, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
 12. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
 13. All areas where recycled water is used that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER- DO NOT DRINK" and the international symbol similar to that shown in Attachment B, a part of this Order.
 14. The DHS guidance entitled "Guidance Criteria For The Separation Of Water Mains And Non-potable Pipelines" (Guidance) requires that water mains be installed 4 feet horizontally from and one foot vertically above any parallel pipe transporting disinfected tertiary recycled water. The Guidance also specifies that a pipe transporting recycled water that crosses a water main shall be constructed

perpendicular to and at least one foot below the water main and that there shall be no joints in the pipe within eight horizontal feet of the water main.

15. All pipes designed to carry recycled water shall be colored purple or distinctively wrapped with purple tape, pursuant to California Health And Safety Code, Section 116815.
16. There shall be no cross-connection between potable water supply and piping containing recycled water. Supplementing recycled water with potable water shall not be allowed except through an air-gap separation, or if approved in writing by DHS, a reduced pressure principle backflow device.
17. Recycled water shall be managed to minimize contact with workers.
18. All water recycling equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. The recycled water piping system shall not include any hose bibbs.
19. The following setbacks from areas irrigated with recycled water shall be maintained:

~~No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well;~~

~~No impoundments of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply wells~~

<u>Area</u>	<u>Setback Distance (feet)</u>
<u>Property Line</u>	<u>25</u>
<u>Public Road</u>	<u>30</u>
<u>Drainage Course</u>	<u>50</u>
<u>Irrigation and Domestic Wells</u>	<u>150</u>

20. If an outside laboratory is used for coliform analysis, the User shall arrange to obtain results of coliform testing from the laboratory by telephone as soon as confirmed tests are completed.
21. Recycled water use shall cease during any period that the Discharge Prohibitions, Recycled Water Specifications or Groundwater Limitations in this Order cannot be met.

22. Areas irrigated with recycled water shall be managed to prevent ponding and conditions conducive to the proliferation of mosquitoes and other disease vectors, and to avoid creation of a public nuisance or health hazard. The following practices shall be implemented, at a minimum:
 - a. Irrigation water must infiltrate completely within a 48-hour period.
 - b. Ditches receiving irrigation runoff, not serving as wildlife habitat, shall be maintained free of emergent, marginal, and floating vegetation.
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
23. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

C. Groundwater Limitations

The recycled water, ~~in combination with other sources~~, shall not cause groundwater underlying the water recycling area to contain waste constituents statistically greater than background water quality except for coliform. For coliform, increases shall not cause the most probable number of total coliform organisms to exceed 2.2 MPN per 100 mL over any seven-day period.

D. General Provisions

1. The User shall comply with Monitoring and Reporting Program ~~No. R5-2006-TENTATIVE, No. R5-2007-TENTATIVE~~, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
2. The User shall comply with all applicable requirements in the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)." For the purposes of this order, "Discharger" and "Permittee" as used in the Standard Provisions shall mean "User"; "disposal" shall mean "application"; and "disposal area" shall mean "Water Recycling Area."
3. The User must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
4. In the event of any change in control of land or recycled water presently controlled by the User, the User shall notify the succeeding owner or operator of

the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharger without requirements, a violation of the CWC. Transfer shall be approved or disapproved by the Executive Officer.

5. The use of recycled water shall comply with the provisions of Title 22 CCR. Further, the User must obtain written approval from the Executive Officer prior to use of recycled water for uses other than those listed in Recycled Water Specifications C.5.

6. To demonstrate compliance with Recycled Water Specifications B.8, the User shall submit an irrigation management plan by 1 June 2007, with annual updates thereafter, which addresses compliance with said requirements.

The irrigation management plan shall describe the acreage of various types of plants to be grown (turf grass, shrubs, trees) and water use. The plan must include a monthly water balance, with storage requirements, and must demonstrate that reclamation can be accomplished in accordance with accepted irrigation practices. The plan shall also include a map showing locations of all domestic and irrigation wells that are close to the Use Area, areas of public access, location and wording of public warning signs. The plan shall describe how setback distances of Recycled Water Specification B.9 and B.19 will be maintained. Moreover, the plan shall be subject to the review and approval of the Executive Officer. The User shall comply with the approved plan.

7. The User shall ensure that key operating personnel are familiar with this Order and its contents.
8. The User shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has reasonable likelihood of adversely affecting human health. In such an event, the User shall verbally report the circumstances to the Executive Officer within 24 hours from the time of discovery.
9. The User shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Producer or User, respectively, to achieve compliance with these water recycling requirements.

10. The User shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the Use Area's pipelines and equipment.
11. The User shall assure that all above ground equipment, including pumps, piping, canals, and valves, etc., which may at any time contain recycled water, are adequately and clearly identified with appropriate warning signs.
12. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Producer and/or User from liability under Federal, State, or local laws, and do not create a vested right to continue reclamation.
13. If any condition or criteria set forth in this Order conflicts or is inconsistent with any requirement set forth in any State regulation, the more stringent condition or criterion shall apply.
14. The Regional Board will review this Order periodically and may revise requirements when necessary
15. A copy of this Order shall be available at the Use Area and the User shall ensure that key operating personnel are familiar with its contents.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

PAMELA C. CREEDON
Executive Officer