

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0113

CEASE AND DESIST ORDER AND CONNECTION RESTRICTION

FOR
NAPA BERRYESSA RESORT IMPROVEMENT DISTRICT
WASTEWATER TREATMENT SYSTEM
NAPA COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The Regional Water Quality Control Board, Central Valley Region, (hereafter referred to as "Regional Water Board") finds that:

1. Waste Discharge Requirements (WDRs) Order No. 95-173, adopted by the Regional Water Board on 23 June 1995, prescribes requirements for the wastewater system owned and operated by Napa Berryessa Resort Improvement District (NBRID) (hereafter referred to as "Discharger").
2. The Discharger's wastewater treatment facility (WWTF) is located on the west side of Steele Canyon Road in Section 33, T8N, R3W, MDB&M.

Wastewater Treatment Facility

3. The WDRs prescribe requirements for treatment of a monthly average flow of 50,000 gallons per day (gpd) of wastewater from the Berryessa Highlands Subdivision and the Steele Park Resort. However, the Discharger routinely exceeds the flow limit. According to the Discharger's June 2006 Master Plan, the Berryessa Highlands Subdivision consists of 330 Equivalent Dwelling Units (EDUs) and the Steele Park Resort consisted of 228 EDUs. The Discharger states that at full lot buildout, the maximum number of connections served by WWTF will be 635 EDUs at the Berryessa Highlands Subdivision and 228 EDUs at Steele Park Resort
4. Wastewater is collected from the Berryessa Highlands Subdivision and Steele Park Resort through a series of gravity sewers, lift stations, and force mains prior to entering the Wastewater Treatment Plant (WWTP). Wastewater from the Berryessa Highlands Subdivision gravity flows into the WWTP and wastewater from the Steele Park Resort is pumped to the WWTP. The Discharger states that these influent flows are metered at the WWTP.
5. The WWTP is an extended aeration activated sludge plant consisting of two aeration basins, two clarifiers and three synthetic lined effluent holding basins. One of the holding basins is used as a chlorine contact basin. Chlorinated wastewater is pumped some distance from the plant to a 50,000 gallon storage tank located on a hillside where it flows via gravity into a spray irrigation system. The spray irrigation system consists of a series of spray heads located within four land application areas (Zone Nos. 1-4) totaling

approximately 60 acres. The Zone No. 1 land application area is located on a hillside above a tailwater pond. The other zones are also located on the hillside above a dirt road and theoretically drain into the tailwater pond. A pump station conveys recycled water from the tailwater pond back up to the spray irrigation system storage tank.

Previous Enforcement

6. On 25 April 1995, the Discharger was issued a Notice of Violation (NOV) for discharging wastewater into an overflowing drainage ditch that is a tributary to Lake Berryessa, and for not notifying Regional Water Board staff of the spill. This NOV was based on a 7 April 1995 site inspection where staff discovered that wastewater was being applied to the Zone No. 1 land application area during a period of moderate to heavy precipitation. The NOV stated that the part-time plant operator indicated that this spill had been intermittently ongoing since January 1995. The NOV required the Discharger to submit a plan and time schedule by 2 June 1995 to evaluate the wastewater system's capacity. In addition, the NOV required the Discharger to implement changes to cease the discharge to surface waters. Finally, the NOV required the Discharger to implement a spill sampling and notification program.
7. In a 31 May 1995 letter, the Discharger stated that backup power sources and pump systems were not functional during the periods of heavy inflow and infiltration experienced in January and March 1995. The Discharger also stated that the following measures were either initiated or completed:
 - a. Installation of a new culvert at the north end of the Zone No. 1 land application area to ensure that all runoff flows into the tailwater pond.
 - b. The submittal of a plan by September 1995 that addresses the treatment facility design capacity, necessary upgrades, inflow/infiltration, the backup power generation problems, and any other deficiencies at the plant.
 - c. The installation of a backup generator by the winter of 1996 to provide electrical power as needed.
 - d. A spill sampling and notification program was provided to the plant operators.
8. On 20 November 1995, the Discharger was again issued a NOV for discharging wastes to surface water drainage courses. This NOV was based on a 25 October 2005 site inspection where Regional Water Board staff found that wastewater from the land application areas was being allowed to runoff into surface water drainage courses. The volume and duration of the discharge was not known. In addition, the Discharger was in violation of the WDRs due to the lack of capacity in the tailwater pond and sludge storage basin, and for the non-submittal of the Sludge Disposal Plan required by the WDRs. The NOV cited violations of numerous Prohibitions and Specifications of the WDRs.
9. In April 1996, the Discharger submitted a report titled "*Capacity Study for the Wastewater Treatment and Disposal Facilities for Napa Berryessa Resort Improvement District.*" In

summary, the report concluded that excessive infiltration/inflow exists at the facility and significantly impacts treatment and reuse systems. In addition, the report stated that the sludge handling facilities at the wastewater treatment plant are inadequate. The report included recommendations for (a) a study to identify and correct the sources of I/I, (b) a study of alternatives for improving sludge handling facilities, and (c) investigating the feasibility of conducting dewatering and disposal of sludge accumulated in the storage lagoon.

10. On 24 July 1996, a five-year financial plan to finance many of the improvements was approved by the NBRID Board of Directors and submitted to the Regional Water Board. In summary, the Discharger stated that they applied for funding through the Proposition 204 grant/low interest loan program and the United States Department of Agriculture (USDA) Rural Development Program, but did not qualify because of the median household income being higher than the funding threshold. In addition, the Discharger stated that they were able to generate approximately \$56,000 to fund both water and wastewater improvements made during the 1997-98 and 1998-99 fiscal years. Finally, the Discharger stated that they were planning meetings with customer groups to determine how to fund larger improvements to the wastewater system.
11. On 20 September 1996, the Regional Water Board adopted Cease and Desist (C&D) Order No. 96-232 issued to the Discharger for violating Discharge Prohibition No. A.1, Discharge Specifications Nos. B.9, B.10, and B.15, and Sludge Disposal Requirement No. C.4 of the WDRs. The C&D Order required the Discharger to provide the following information: (a) a short-term sludge disposal plan by 15 November 1996, (b) a financial plan by 15 May 1997, (c) a long term sludge management plan by 1 August 1997, (d) complete an expansion project design by 1 November 1998, (e) commence expansion construction by 1 May 1999, (f) complete construction and achieve full compliance by 15 September 2000, and (g) submit quarterly progress reports which were to include the number of connections made and building permits issued during the calendar quarter. However, the Discharger only submitted the short term and long term sludge disposal plans, and the financial plan; and did not complete the rest of the work required by the C&D Order.
12. On 13 November 1996, the Discharger submitted the short-term and long-term sludge management plans. In summary, the short term plan stated that the Discharger had entered into an agreement to rent a portable phase separator for a one-month period to dewater the sludge from the sludge storage pond. The plan also stated that the dried sludge would be removed from the pond and applied to the spray application area. The long-term sludge disposal plan stated that the portable separator would be purchased and a more permanent handling process would be installed depending on the success of the short term plan. Regional Water Board staff determined these plans to be acceptable on 27 January 1997. However, the Discharger never implemented the long-term plan, and the sludge dried during the pilot study remains in a pile on the Zone No. 1 land application area.

Inflow/Infiltration Analysis

13. The Discharger reported that during the winter of 1996/1997, visual observations of the manholes and the sewer mains in the back easements were evaluated during rainstorms to identify areas of the collection system with the highest flows. Approximately 2,000 feet of sewer main was video surveyed and with the exception of repairing three sections of sewer pipe, the Discharger indicated that the joints were generally in very good condition. During the winter of 1997/1998, approximately 300 feet of sewer main was identified as a possible problem. However, subsequent video logging of the sewer main did not show any repairable spots. In addition, the Discharger states that they replaced two cleanout caps and sealed two dry well pump stations and a manhole.

Violations and Threatened Violations of WDRs and C&D Orders

Spill Violations

14. Discharge Prohibition No. A.1 of WDRs Order No. 95-173 states: *“Discharge of wastes to surface waters or surface water drainage courses is prohibited.”*
15. Discharge Prohibition No. A.2 of WDRs Order No. 95-173 states: *“Bypass or overflow of untreated or partially treated effluent is prohibited.”*
16. Discharge Specification No. B.15 of WDRs Order No. 95-173 states: *“The discharge shall remain within the designated disposal areas at all times.”*
17. Discharge Specification No. B.16 of WDRs Order No. 95-173 states: *“Storm water runoff from the irrigation areas shall not discharged to any surface water drainage course within 48 hours of the last application of reclaimed water.”*
18. On 30 December 1996, the Discharger reported a spill estimated at approximately 150,000 gallons of partially treated wastewater to a tributary to Lake Berryessa. The spill was reported following several days of rain. The Discharger stated that monitoring during the storm event indicated that considerable inflow was from the Steele Park Resort. The Discharger also stated that future rainstorms lasting two or more days would result in additional spillage.
19. On 12 March 2002, Regional Water Board staff sent the Discharger a report documenting the results of a 20 February 2002 inspection of the wastewater treatment system. The report identified several potential concerns including the runoff/runon and tailwater control arrangement for the Zone Nos. 2, 3, and 4 land application areas.
20. On 16 January 2003, Regional Water Board staff sent the Discharger a report of a 30 August 2002 inspection. The inspection was conducted to determine whether the Discharger had made improvements to the deficiencies noted during a previous inspection conducted on 12 March 2002. Staff requested that the Discharger submit a technical report addressing the containment of the spray application runoff water, and the tailwater control.

21. On 17 March 2003, the Discharger submitted a letter in response to the 16 January 2003 inspection report transmittal. The Discharger stated that the wood cofferdam had recently been replaced with a concrete structure outfitted with four culverts designed to allow for the passage of wet weather flow, to control tailwater flow downstream of the structure, to provide a natural transition zone between the culverts and the natural stream channel downstream, and also to assist in the redirection of spray runoff water into the pond when Zone Nos. 2, 3, and 4 were used.
22. On 21 March 2006, following an 8 December 2005 site inspection, the Discharger was issued a NOV for failure to inspect the spray disposal field on a daily basis as required by Revised Monitoring and Reporting (MRP) No. 95-173. Therefore it is unknown whether the tailwater controls are sufficient to prevent discharges to surface waters. Due to the small volume of the tailwater pond, it is assumed that wastewater runoff from the land disposal areas occurs in the winter. It is noted that the Discharger is not consistently inspecting the sprayfields or reporting freeboard levels in the tailwater collection pond.

Flow Violations

23. Discharge Specification No. B.1 of WDRs Order No. 95-173 states: *"The monthly average discharge shall not exceed 50,000 gallons per day."* Regional Water Board staff's review of monthly monitoring reports submitted between July 2000 and March 2006 indicates that the average monthly discharge has ranged from 26,367 gallons per day (gpd) to 153,724 gpd. During this period, the monthly average discharge exceeded 50,000 gpd for 48 months.
24. As described in the June 2006 Master Plan, "Although the meter has been reportedly calibrated, the monthly average flows reported are inconsistent and questionable." It is critical that the Discharger report influent and effluent flows from properly calibrated meters, in order to ascertain compliance with the flow limit of the WDRs, to properly plan for an expanded facility, and to determine the effects of I/I on the system. Therefore, it is appropriate to require that a third party certify the calibration of all flow meters used to determine compliance with the WDRs.

Pond Monitoring Violations

25. Discharge Specification No. B.3 of the WDRs states: *"As a means of discerning compliance with Discharge Specification No. B.3, the dissolved oxygen content in the upper zone (1 foot) of wastewater ponds shall not be less than 1.0 mg/L."* The Discharger was not required to monitor the ponds for dissolved oxygen prior to April 2004; however, since that time this monitoring has been required. A review of the monitoring reports shows that dissolved oxygen levels are not being reported in all ponds.
26. Discharge Specification No. B.7 of WDRs Order No. 95-173 states: *"Ponds shall be managed to prevent breeding of mosquitoes. In particular,*
 - a. *An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.*
 - b. *Weeds shall be minimized through control of water depth, harvesting, or herbicides.*
 - c. *Dead algae, vegetation, and debris shall not accumulate on the water surface.*

27. On 23 February 1999, Regional Water Board staff sent a report to the Discharger documenting the results of a 5 January 1999 inspection report stating that there was an overgrowth of weeds and other forms of vegetation in and around the tailwater pond and the drainage channel.
28. On 12 March 2002, the Discharger was sent another report documenting the results of a 20 February 2002 site inspection that again identified significant algae growth in the tailwater pond.
29. In a 17 March 2003 report, the Discharger stated that the weeds around the tailwater and sludge ponds will be periodically sprayed with pesticide, and the vegetation within the tailwater pond will be managed with a surfactant.
30. On 25 October 2004, the Discharger submitted a report indicating that application of herbicide by Napa County Mosquito Abatement Control District (NCMCD) did not include direct treatment of the duckweed. The report also stated that the tailwater pond would be monitored biannually for the presence of duckweed and that when the duckweed covered approximately 50 percent of the pond surface then the duckweed would be manually removed. The Discharger states that it has since conducted the biannual monitoring which consists of a visual inspection of the pond and the application of herbicide onto the banks of the pond by NCMCD.

Land Application Area Violations

31. Discharge Specification No. B.14 of WDRs Order No. 95-173 states: *"The Discharger may not spray irrigate effluent during periods of precipitation and for at least 24 hours after cessation of precipitation or when winds exceed 30 mph."*
32. The Discharger has been in violation of Discharge Specification No. B.14 on numerous occasions. For instance, monthly self-monitoring reports from December 2005 through March 2006 shows that rainfall occurred a total of 46 days and that the Discharger applied wastewater to the land application areas via spray irrigation every day during those months.

Sludge Disposal Violations

33. Sludge Disposal Requirement No. C.1 of WDRs Order No. 95-173 states: *"Collected screening, sludges, and other solids removed from liquid wastes shall be disposed in a manner that is consistent with Chapter 15, Division 3, Title 23, of the California Code of Regulations and approved by the Executive Officer."*
34. Site inspections conducted by Regional Water Board staff on 20 February and 30 August 2002, 11 March and 1 July 2004, and on 8 December 2005 indicate the stockpiling of sludge pond scrapings next to the sludge pond and within the Zone No. 1 land application area.
35. On 8 April 2004, the Discharger was issued a NOV for violating Sludge Disposal Requirement No. C.1 of the WDRs. The NOV required the Discharger to submit a Sludge

Management Plan by 1 July 2004. A second NOV was also issued on 21 March 2006 for continued violations of the WDRs. The stockpiled sludge continues to remain next to the sludge pond and within the Zone No. 1 land application area and is a violation of the WDRs.

Reporting Violations

36. Provision No. E.9 of WDRs Order No. 95-173 states: *"The Discharger shall comply with Monitoring and Reporting Program No. 95-173, which is part of this Order, and any revisions thereto as ordered by the Executive Officer."*
37. Provision No. 13 of WDRs Order No. 95-173 states: *"The Discharger 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."*
38. A 23 February 1999 letter from Regional Water Board staff states that monthly self monitoring reports as required by the WDRs were not being submitted according to the time schedules in the Order. In addition, the letter also stated that quarterly progress reports as required by the C&D Order were not being submitted. The Discharger is currently submitting the required monthly self-monitoring reports, but is not following all monitoring requirements in Revised MRP No. 95-173.
39. On 11 March 2004, Regional Water Board staff conducted a site inspection of the facility and identified that the Discharger was not reporting freeboard measurements in the tailwater pond as required by the MRP. The Discharger was issued a Notice of Violation on 8 April 2004 and instructed to immediately begin taking freeboard measurements of the tailwater pond. However, that has not occurred to date.
40. On 18 February 2004, the Discharger was issued a NOV for the non-submittal of groundwater monitoring reports as required by Revised MRP No. 95-173. The NOV required the Discharger to submit the following: (a) the name of the California Registered Professional that will prepare the Groundwater Monitoring Well Installation Workplan, (b) a Groundwater Monitoring Well Installation Workplan, and (c), a Groundwater Well Installation Report.
41. On 8 April 2004, the Discharger was again issued a NOV for violating Provision No. E.9 of the WDRs. In a 15 April 2004 response to the NOV, the Discharger stated that they were in the process of increasing the water and wastewater rates by 40 percent over the next two years. The Discharger stated that the rate increase would allow for the development of a 5-year capital improvement plan. In addition, the response letter stated that the Discharger did not have the financial means to meet the schedule set forth in the NOV at this time and that the installation of the required groundwater monitoring wells would be included in a 5-year capital improvement plan.

42. On 23 July 2004, the Executive Officer issued a California Water Code (CWC) 13267 Order for the non-submittal of the technical reports. The CWC 13267 Order required the Discharger to submit a report that documents removal of vegetation within and around the tailwater pond by 1 September 2004 and a Sludge Management Plan by 1 October 2004.
43. On 30 August 2004, the Discharger submitted a response to the CWC 13267 Order stating that due to existing emergency situations and budgetary constraints that the schedule specified in the Order for submittal of the required technical reports could not be met and requested an extension. The Discharger indicated that the report documenting vegetation removal in and around the tailwater pond would be submitted by 1 November 2004 and the Sludge Management Plan would be submitted by 1 December 2004.
44. On 25 October 2004, the Discharger submitted a report stating that an herbicide applied by the Napa County Mosquito Abatement Control District (NCMACD) had been applied to the immediate area of the tailwater pond. However, the Discharger indicated that the herbicide application did not control the duckweed and that a mechanical skimmer device would be installed. The Discharger also stated that a manual duckweed management plan would be implemented where the tailwater pond would be monitored biannually for the presence of duckweed. The Discharger indicated that when approximately 50 percent of the tailwater pond is covered with duckweed, manual removal would be performed. The Discharger states that it has since conducted the biannual monitoring which consists of a visual inspection of the pond and the application of herbicide onto the banks of the pond by NCMCD.
45. On 21 March 2006, following an 8 December 2005 site inspection; the Discharger was issued a Notice of Violation (NOV) for not conducting daily monitoring of the spray irrigation disposal areas and reporting of those results in the monthly monitoring reports per requirements of the Revised MRP.
46. As discussed in the Staff Report, many small dischargers do not have enough staff to adequately maintain a collection system, wastewater treatment plant, and disposal field. One reason that the monitoring reports are inadequate and spills from the disposal field are not being reported could be due to a lack of staff. Therefore, it is appropriate to require the Discharger to complete a staffing analysis to determine whether the current staff allocation is adequate to operate and maintain a system that complies with the WDRs.

Master Plan Study Recommendations

47. On 24 April 2006, the Discharger submitted (a) documentation showing that the flow meter had been installed and (b) a *Master Plan Study*, which provides an assessment of the water and wastewater treatment facility with respect to current Department of Health Services and Regional Water Board regulations. The *Master Plan Study* states that the Discharger is in violation of Discharge Specifications Nos. B.1, B.9, B.14, B.15, and B.16 of the WDRs. In addition, the *Master Plan Study* states that the Discharger is in violation of Sludge Disposal Requirement No. C.1 and Provision E.9 of the WDRs. A summary of these violations are as follows:

- a. The *Master Plan Study* states that inflow/infiltration has been an ongoing problem and that flows up to 200 percent of permitted flows have occurred during the rainy season, which has resulted in violating Discharge Specification No. B.1 of the WDRs. However, the case file does not contain any reports of spills from the collection system since the 1996/1997 collection system improvements were completed. Large I/I flows are usually accompanied by spills from the collection system.

The Master Plan states that the current average dry weather flow (ADWF) to the WWTP is estimated to be 113,000 gpd (as compared to the flow limit of 50,000 gpd) and at full buildout, the ADWF will be 175,000 gpd. The *Master Plan Study* also states that the WWTP can treat more than 50,000 gpd, however the effluent disposal field and storage capability is limited.

- b. The *Master Plan Study* states that based on current flows and preliminary water balance scenarios the Discharger cannot comply with Discharge Specification No. B.9 of the WDRs without increasing the size of the current land application areas and tailwater pond, or installing a subsurface disposal system. Discharge Specification No. B.9 of the WDRs states: *Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the nonirrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Freeboard shall never be less than two feet (measured vertically).*
- c. The *Master Plan Study* states that the Discharger operates the land application areas on an annual basis, even during the rainy season, which is a violation of Discharge Specification No. B.14 of the WDRs.
- d. The *Master Plan Study* states that there have been intermittent violations of Discharge Specifications Nos. B.15 and B.16 of the WDRs since the runoff collection ditch at times is used to bypass the tailwater pond during the winter months. The *Master Plan Study* also states that the only options for the Discharger are to seasonally store the effluent in a large pond or construct a subsurface disposal field.
- e. The *Master Plan Study* recommends that in order to comply with Sludge Disposal Requirement No. C.1 of the WDRs that the sludge currently stored on-site within the Zone No. 1 land application area must be removed and hauled to a landfill or designated sludge disposal site. In addition, the accumulated sludge stored in the sludge drying pond should be removed prior to winter in order to allow for next year's sludge. This sludge should also be hauled to a landfill or designated sludge disposal site.
- f. Provision No. E.9 of WDRs Order No. 95-173 states: *The Discharger shall comply with Monitoring and Reporting Program No. 95-173, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.* The Revised MRP

requires that a groundwater monitoring program begin in the third quarter of 2004. The *Master Plan Study* states that a draft plan should be submitted to the Regional Water Board that outlines a groundwater monitoring program for the shallow aquifer. The Groundwater Monitoring Well Installation Workplan and Sampling and Analysis Plan was received on 14 August 2006.

- g. The *Master Plan Study* states that backwash water from the existing water treatment plant is disposed of via a sprayfield, and that the sprayfield should be relocated to an area further away from Lake Berryessa to protect this drinking water source. The Discharger states that a ceramic membrane or conventional backwash filtration system may mitigate the need to relocate the sprayfield. Regional Water Board staff note that this is an unpermitted discharge of waste to land.

Sewer Connection Restriction

48. Because the Discharger has consistently violated the flow limit as required by Discharge Specification No. B.1 of the WDRs, this Order prohibits new connections to the WWTP. This prohibition is also necessary because new connections are being added to the WWTP even though the Discharger has violated its flow requirement in the WDRs.
49. Due to the fact that the Discharger is unable to comply with the Waste Discharge Requirements, the Revised Monitoring and Reporting Program, and the CWC 13267 Order, it is appropriate to issue another Cease and Desist Order.

Regulatory Considerations

50. The Regional Water Board's Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) designates beneficial uses, includes water quality objectives to protect the beneficial uses, and includes implementation plans to implement the water quality objectives.
51. Surface water drainage from the facility is to Lake Berryessa. The beneficial uses of Lake Berryessa, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; power generation; water contact recreation; noncontact water recreation; warm freshwater habitat; cold freshwater habitat; spawning, reproduction and/or early development; and wildlife habitat.
52. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.
53. Section 13301 of the California Water Code states in part: "When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the

volume, type, or concentration of waste that might be added to such system by discharges who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302.”

54. Title 23, California Code of Regulations, Section 2244(b) states: “Prohibitions or appropriate restrictions on additional discharges should be included in a cease and desist order if the further addition in volume, type, or concentration of waste entering the sewer system would cause an increase in violation of waste discharge requirements or increase the likelihood of violation of requirements.”
55. The Regional Water Board finds that there is an existing and threatened violation of waste discharge requirements in the operation of a community sewer system because the volume of influent exceeds the amount the facility is physically capable of treating and disposing in compliance with Order No. 95-173. The Regional Water Board also finds that additional volume of wastewater entering the facility will cause an increase in violation of waste discharge requirements and, therefore, this Order prohibits new hookups to the WWTP.
56. Section 13267(b) of the California Water Code states: “In conducting an investigation specified in 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. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”
57. The technical reports required by this Order are necessary to assure compliance with WDR Order No. 95-173 and to assure protection of public health and safety. The Discharger operates the facility that discharges the waste subject to this Order.
58. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.
59. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board to review the action in accordance with Section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, CA, 95812-0100, within 30 days of the date on which the Regional Water Board action took place. Copies of the law and regulations applicable to filing petitions are available at www.waterboards.ca.gov/water_laws/index.html and also provided upon request.

IT IS HEREBY ORDERED that pursuant to Sections 13301 and 13267 of the California Water Code, Napa Berryessa Resort Improvement District, its agents successors, and assigns, shall implement the following measures necessary to ensure long-term compliance with WDRs No. 95-173, or any superceding permits or orders issued by the Regional Water Board.

This Cease and Desist Order rescinds and replaces Cease and Desist Order No. 96-232 except for purpose of enforcing violations that have occurred to date.

Any person signing a document submitted to comply with this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

1. The Discharger shall **immediately** comply with all aspects of WDRs Order No. 95-173 (or subsequent WDRs that rescind and replace Order No. 95-173).

General Items

2. The Discharger shall **immediately** begin reporting all sanitary sewer overflows and any overflows from any treatment, storage, or disposal component in compliance with the Standard Provisions and Reporting Requirements (an attachment to the WDRs). In particular, this requires verbal notification within 24 hours of a spill, and a written spill report within 14 days. The Discharger shall also notify the Office of Emergency Services (OES), the County Environmental Health Department, and the Department of Fish and Game as appropriate.
3. By **1 January 2007**, the Discharger shall submit a *Flow Meter Calibration Report* that demonstrates that all flow meters used for determining compliance with the WDRs have been independently calibrated by a third party. The report shall also (a) provide standard procedures for the treatment plant operators to use when taking and recording flow measurements, and (b) provide a schedule for meter calibration.
4. By **1 January 2007**, the Discharger shall submit a *Revenue Plan* that describes the costs associated with implementation of all tasks in this Order. The plan must show whether the Discharger has necessary funds to implement all tasks. Should the Revenue Plan show that there are inadequate funds, the Discharger must include an implementation schedule that shows how the Discharger will raise the necessary funds.
5. By **1 January 2007**, the Discharger shall submit a report describing measures taken to prevent the tailwater overflows from the land application areas that were identified during the December 2005 site inspection. In addition, the report shall document that the Discharger will perform (a) daily inspections of the sprayfields, (b) daily freeboard and dissolved oxygen measurements of the recirculation/tailwater pond, and (c) will close the

cofferdam whenever the sprayfields are in operation and during the time necessary for the sprayfields to drain. If wastewater is applied to the fields during periods of precipitation or within 24 hours after precipitation, then the cofferdam must remain closed during these periods. The results of these inspections and when the cofferdam is opened and closed shall be described in the monthly self-monitoring reports.

6. By **1 February 2007**, the Discharger shall submit a *Staffing Analysis Report* for the NBRID wastewater collection, treatment, and disposal system. The analysis shall include a review of current staffing levels, allocation of staff tasks, an analysis of whether current staff allocation is adequate, and if necessary, describe the shortfalls and make recommendations for future staffing needs. If the analysis indicates additional staff are necessary, then the report shall also include a *Staffing Contingency Plan* describing the steps the Discharger shall take in the short term and long term to assure that it has enough staff (either directly working for the district or under contract) to perform the necessary operation and maintenance activities associated with the wastewater treatment and disposal system. If the analysis indicates additional staff are necessary, then the *Staffing Contingency Plan* shall also contain a proposed timeline for acquiring the necessary staff.

Sludge Removal and Management

7. By **1 March 2007**, the Discharger shall provide a report showing that the stockpiled sludge from the Zone No. 1 land application area and the sludge drying bed has been removed and disposed of at an approved landfill or at a designated biosolids disposal facility. Copies of waste hauler and disposal receipts shall be included with the report.
8. By **1 March 2007**, the Discharger shall provide a *Sludge Pond Closure Workplan* that describes measures to be taken to ensure that the sludge pond is abandoned in a manner that is protective of water quality. Residual water and biosolids/sludge shall be sampled and removed from the pond and disposed in a manner consistent with the Regional Water Board's plans and policies.
9. By **1 September 2007**, the Discharger shall submit a *Sludge Pond Closure Report* that describes the work completed as per those requirements presented in the approved workplan. The Plan shall also include sampling results to confirm whether any constituents of concern remain in the soil column.
10. By **1 September 2007**, the Discharger shall submit a *Sludge Management Plan*, which describes the annual volume of sludge generated by the facility and specifies the disposal practices. Items to be included in the Sludge Management Plan are presented in Attachment A.

Collection System Improvements

11. By **1 March 2007**, the Discharger shall submit an *Inflow and Infiltration (I/I) Assessment Workplan* that includes at a minimum the following: (a) measures to quantify and identify the I/I sources using information pertaining to observed overflows, surcharges, reported bypasses, chronic maintenance activities, etc., (b) an evaluation of cost effective measures to reduce the I/I, (c) a description of how identified repairs and sewer line replacements will be implemented and the timing for the work, and (d) an identification of the types of

repairs that should be done in the field without further evaluation. The workplan shall also describe methods (i.e., smoke testing, video surveying, manhole surveying, etc.) that will be used to provide an assessment of those segments of the collection system known to exhibit significant inflow and infiltration (I/I) and shall describe those portions of the collection system that are in need of immediate repair and shall include a proposed schedule for completing these necessary repairs.

12. By **1 September 2007**, the Discharger shall submit an *Inflow and Infiltration (I/I) Assessment Report* that describes the results of the Discharger's I/I evaluation of the collection system, and describes the repairs which must be completed to reduce I/I to industry standards. The report shall also include a proposed schedule for necessary repairs and/or replacement of collection system components contributing to the I/I problems.
13. Due to the I/I issues at this facility, it is appropriate to require an expedited schedule to comply with certain sections of the State Water Resources Control Board Order No. 2006-0003-DWQ, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Therefore, by **1 October 2007**, the Discharger shall submit the *Overflow Emergency Response Plan* and the *Operation and Maintenance Program* sections of the Sewer System Management Plan. The items required to be addressed by each of these plans are listed in Attachment E to this Order. The Discharger shall ensure that an up-to-date Sewer System Management Plan is readily available to sewer system personnel at all times and that sewer system personnel are familiar with it.

Wastewater Disposal Plan and Report of Waste Discharge

14. By **1 June 2007**, the Discharger shall submit a *Final Wastewater Disposal Plan* that describes the facility improvements needed to:
 - a. Increase overall storage and disposal capacity as necessary to comply with a 100-year total annual precipitation event;
 - b. Provide enough wastewater storage and disposal capacity for current flows, as well as growth projected over the next 15 years;
 - c. Prevent sanitary sewer overflows;
 - d. Comply with pond weed control measures in the WDRs; and
 - e. Ensure that the dissolved oxygen content in the upper zone (1 foot) of wastewater ponds and the tailwater pond is not less than 1.0 mg/L.

The *Final Wastewater Disposal Plan* shall include a water balance for both the current inflow and projected flows through at least the year 2022, and shall clearly show the times of the year when wastewater must be stored versus when it may be applied to land. The water balance shall evaluate the storage ponds' ability to provide sufficient capacity to maintain two feet of freeboard on a month-by-month basis. The water balance shall include monthly evaporation, precipitation, and percolation rates, and shall identify contributions from major sources to monthly discharge volumes such as subsurface inflows, stormwater run-on, and any inflow and infiltration from the collection system. Rainfall shall be based on the 100-year return period total annual precipitation.

The *Final Wastewater Disposal Plan* shall include a proposed timeline for all improvements to be completed by **1 January 2012**.

15. **Within 60 days of the Executive Officer's written concurrence** with the *Final Wastewater Disposal Plan*, the Discharger shall submit a *Report of Waste Discharge* (RWD) to allow WDRs to be revised to reflect the proposed upgrades. The RWD consists of the Form 200 (*Application for Report of Waste Discharge*) and a technical report that addresses all items listed in Attachment B to this Order, "*Additional Information Requirements for a Report of Waste Discharge for the WWTP.*" The Report of Waste Discharge shall clearly reference the groundwater monitoring data collected for the sprayfields and shall demonstrate that the proposed improvements are compliant with State Water Resources Control Board Resolution No. 68-16 (the Antidegradation Policy).

Groundwater Monitoring

16. By **1 May 2007**, the Discharger shall submit a *Groundwater Monitoring Well Installation Report* that describes the installation of a minimum of three groundwater monitoring wells installed per the Regional Water Board's approval of a *Groundwater Monitoring Well Installation Workplan*. The well installation report shall contain items found in the second section of Attachment C.
17. Beginning with the **Second Quarter 2007**, the Discharger shall comply with the groundwater monitoring and reporting requirements of Revised Monitoring and Reporting Program No. 95-173.

Water Treatment Plant

18. By **1 December 2006**, the Discharger shall modify the backwash water disposal sprayfield to ensure that all waste remains on the sprayfield and that there is no possibility of discharge to Lake Berryessa. A report documenting the improvements shall be submitted by **10 December 2006**.
19. By **1 November 2007**, the Discharger shall submit a RWD for the discharge of filtered backwash water from the NBRID water treatment plant to land. The RWD shall consist of the Form 200 (*Application for Report of Waste Discharge*), a filing fee, and a technical report that addresses all items listed in Attachment D to this Order, "*Additional Information Requirements for a Report of Waste Discharge for the WTP.*"

Progress Reporting

20. Beginning **1 December 2006**, and by the first day of the second month following each calendar quarter (**i.e., by 1 February, 1 May, 1 August, and 1 November each year**), the Discharger shall submit a progress report describing the work completed to date regarding each of the reporting requirements described above.

Sewage Connection Restriction

21. Connections to the sewage collection system by individual households or businesses that did not have a building permit approved prior to the 12 September 2006 Public Hearing Notice are prohibited.

22. The Regional Water Board has decided to exclude the following projects from the sewage connection restriction because they had completed all steps to obtain a building permit prior to the 12 September 2006 Public Hearing Notice except for the ministerial action of paying the permit fee: Johnpeer (1122 Rimrock Dr; building permit no. B06-01305), Nix (4645 Monticello Road; building permit no. B06-01258), Penley (Neptune Way; building permit no. B06-01142); Raymond (1020 Overland Dr; building permit no. B06-01338), and Raymond (342 Black Oak Lane; building permit no. B06-01374).
23. The following may be excluded from the sewage connection restriction upon a project-specific determination of eligibility by the Regional Water Board:
 - a. Projects which normally do not require a building permit and for which construction commenced prior to the 12 September 2006 Public Hearing Notice;
 - b. Projects which would eliminate discharges from existing dwellings which have failing systems whose threat to water quality or public health is greater than that of the existing collection system; and
 - c. Projects that would alleviate an extreme public hardship or public health problem.
24. The sewage connection restriction will remain in effect until removed by the Regional Water Board. The Regional Water Board may remove the restriction upon finding that the violations of requirements which were the basis for imposing the restriction have ceased and consistent compliance with those requirements has been achieved.
25. The Regional Water Board may, prior to removing the sewage connection restriction, grant a limited exception to allow additional connections to the sewage collection system upon finding that the Discharger has met the following conditions:
 - a. Consistent compliance with requirements can be achieved only by construction of a facility which will take a substantial period of time to complete;
 - b. The Discharger has the capacity, authority, and financial resources to complete the corrective measures necessary to achieve compliance and is currently proceeding with such corrective measures;
 - c. The corrective measures necessary to achieve compliance will be completed and placed into operation by the Discharger in the shortest practicable time;
 - d. All practicable interim repairs and improvements which can be made have been made; and
 - e. During the interim period of time until compliance with requirements can be fully achieved, the discharge will be managed, operated, maintained and repaired so as to reduce to a minimum the violations which resulted in the imposition of the connection restriction, and that such minimum violations for the interim period of time involved will not significantly impair water quality or beneficial uses.
26. The Regional Water Board shall, upon finding that the above conditions are no longer met by the Discharger, revoke the exception and re-impose the sewage connection restriction.

In addition to the above, the Discharger shall comply with all applicable provisions of the California Water Code that are not specifically referred to in this Order. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all technical

reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed/stamped by the registered professional.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of \$1,000 to \$10,000 per day of violation, depending on the violation, pursuant to the California Water Code, including sections 13268, 13350 and 13385. The Regional Water Board reserves its right to take any enforcement actions authorized by law.

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 26 October 2006.

PAMELA C. CREEDON, Executive Officer

Attachments on following page

Attachments

Attachment A	Information Needs for a Sludge Management Report
Attachment B	Additional Information Requirements for a Report of Waste Discharge for the WWTP
Attachment C	Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports
Attachment D	Additional Information Requirements for a Report of Waste Discharge for the WTP
Attachment E	Information Requirements for the Overflow Emergency Response Plan and for the Operation and Maintenance Program



Linda S. Adams
*Secretary for
Environmental Protection*

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**Arnold
Schwarzenegger**
Governor

ATTACHMENT A

INFORMATION NEEDS FOR A SLUDGE MANAGEMENT PLAN

- A. Treatment Pond Cleaning
 - 1. Describe the measurements for the sludge level in each treatment pond.
 - 2. Describe the method for removing the sludge from each treatment pond.
 - 3. Provide a time schedule for the sludge removal from each treatment pond.
- B. Sludge Production
 - 1. Provide a schematic diagram showing solids flow and sludge handling operations; include, where applicable, supernatant flow and handling operations.
 - 2. Specify the annual biosolids production in dry tons and how this will be quantified.
 - 3. For sludge handling facilities with sludge drying beds:
 - a. Describe number and size of sludge drying beds.
 - b. Describe sludge drying bed construction (e.g., liner, leachate collection system).
 - c. If sludge drying beds are not lined, thoroughly describe measures taken to ensure that groundwater is not adversely affected by sludge drying operations.
 - d. Indicate the frequency with which sludge is wasted and applied on sludge drying beds.
- C. Biosolids Storage
 - 1. If on-site biosolids storage is used,
 - a. Describe:
 - i. Size of biosolids storage area
 - ii. How frequently it will be used (emergency basis only or routine use)
 - iii. Typical storage duration
 - iv. Leachate controls
 - v. Erosion controls
 - vi. Run-on/runoff controls

- b. Indicate measures that will be taken to ensure that area groundwater is not adversely affected by the biosolids storage facility.
- c. For biosolids storage facilities that contain biosolids between 15 October and 15 May of each year, describe how facilities are designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.

D. Biosolids Disposal

- 1. Describe and provide the following information related to the method of biosolids disposal. If more than one method is used, include the percentage of annual biosolids production disposed of by each method.
 - a. Landfill Disposal
 - i. Name(s) and location(s) of landfill(s).
 - ii. Name and telephone number of the contact person at the landfill(s).
- 2. Incineration
 - a. Name(s) and location(s) of incineration site(s).
 - b. Name and telephone number of the contact person at the incineration site(s).
- 3. Composting
 - a. Name(s) and location(s) of composting site(s).
 - b. Name and telephone number of the contact person at the composting site(s).
- 4. Land Application Off-site
 - a. Ownership of the site(s) where biosolids are applied.
 - b. Name and telephone number of the contact person responsible for application of the biosolids.

ATTACHMENT B
ADDITIONAL INFORMATION REQUIREMENTS
FOR A REPORT OF WASTE DISCHARGE
NAPA BERRYESSA RESORT IMPROVEMENT DISTRICT

Provide a technical report prepared by a California Registered Civil Engineer that presents the following information:

1. A narrative description of all wastewater conveyance, treatment, and disposal systems currently existing at the facility.
2. A narrative description of all planned physical improvements, their purpose, and anticipated completion dates. If phased build out is planned provide scope and completion dates for each phase.
3. A process flow diagram, scaled treatment plant site plan, and scaled map(s) showing all existing and proposed effluent disposal areas (including conveyance and tailwater control systems).
4. For each pond and other waste containment structure, provide the following information. Discuss both existing and proposed ponds:
 - a. Identification (name) and function of the pond;
 - b. Surface area, depth, and volumetric capacity at two feet of freeboard;
 - c. Height (relative to surrounding grade), crest width, interior slope, and exterior slope of each berm or levee;
 - d. Materials used to construct each berm or levee;
 - e. Description of engineered liner, if any;
 - f. Estimated steady state percolation rate for each unlined pond;
 - g. Depth to shallow groundwater below the planned base of the ponds;
 - h. Overfilling/overflow prevention features; and
 - i. Operation and maintenance procedures.
5. For each reclamation site, provide:
 - a. Complete ownership information.
 - b. A scaled map showing the topography, property boundary, streets, residences, surface waters, etc. A USGS topo map may be sufficient as a base map.
 - c. A scaled map showing the limits of the reclamation areas, reclaimed water conveyance systems, other irrigation water conveyance systems, on-site drainage, tailwater systems, and runoff controls (existing and proposed).
 - d. Net irrigation area.

- e. Method(s) of irrigation, including typical frequency and depths of application for each month when irrigation will occur.
 - f. Typical cropping practices (crops grown, rotation cycles, use of fertilizers and pesticides, etc.).
 - g. Typical storm water management practices.
6. A description of the sources and types of wastewater flowing into the wastewater treatment system, design flow rates, and the design capacity of the system (existing and proposed). Include projected infiltration/inflow rates and peaking factors used in design calculations.
 7. A description of emergency wastewater storage facilities or other means of preventing system bypass or failure during reasonably foreseeable overload conditions (e.g., power failure, sewer blockage, and illicit sewer discharges). Consider both potential problems at the plant and within the community sewer system.
 8. A description of the community sewer system: materials, age, infiltration/inflow estimate, and lift station details (type, location, capacity, backup systems, and alarm features).
 9. Chemical characterization of influent wastewater quality, including biochemical oxygen demand, total suspended solids, total dissolved solids, and nitrogenous compounds. Include a discussion of seasonal variations, if any, and supporting analytical data.
 10. A description of all known or anticipated industrial and commercial dischargers whose individual BOD, total dissolved solids and/or hydraulic loads will be greater than 2% of the plant's total daily influent loading, including the following:
 - a. Name;
 - b. Industry/business type;
 - c. Nature of waste stream;
 - d. Average daily flow (gpd and percentage of total plant loading);
 - e. Peak daily flow;
 - f. Average daily BOD loading (lb/day and percentage of total plant loading);
 - g. Peak daily BOD loading;
 - h. Salinity (e.g., total dissolved solids, electrical conductivity, major ions);
 - i. Nitrogen (all forms);
 - j. Nature of seasonal or diurnal variations in influent flow or quality, if any; and
 - k. Pre-treatment or self-monitoring programs, if any.
 11. A description of the following for the both existing system and each phase of the proposed expansion:

- a. Average dry weather flow;
 - b. Peak wet weather flow; and
 - c. Effluent quality at the point of discharge to the disposal system (BOD, total suspended solids, settleable matter, nitrogenous compounds, electrical conductivity, pH, and total coliform organisms).
12. Narrative description of expected solids generation rates and handling/storage procedures:
- a. Debris;
 - b. Grit and screenings; and
 - c. Biosolids.
13. Narrative description of proposed solids disposal practices for debris, grit, screenings, and biosolids:
- a. Method of disposal;
 - b. Frequency of disposal;
 - c. Disposal site/area name(s) and location(s); and
 - d. For biosolids (if beneficial re-use is proposed for reclamation sites):
 - Land application rates (dry tons per unit area per application, number of applications per year);
 - Soil incorporation practices;
 - Vegetation grown;
 - Runoff controls, if any; and
 - Public access controls.
14. A description of the types of soil underlying any planned ponds and effluent disposal areas (include a copy of the geotechnical report).
15. Projected monthly water balance for each phase of buildout demonstrating adequate containment capacity for the 100-year return period total annual precipitation, including consideration of at least the following.
- a. A minimum of two feet of freeboard in each pond at all times;
 - b. Historical local evaporation data (monthly average values);
 - c. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns;
 - d. Proposed wastewater loading rates distributed monthly in accordance with expected seasonal variations;

- e. Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging on all ponds); and
 - f. Projected irrigation usage rates (if recycling is proposed).
16. Proposed flow limits and basis for the limit for the current facility and each phase of the planned expansion. Consider dry weather flows vs. peak flows and seasonal variations associated with major industrial dischargers. Include the technical basis for the proposed flow limit (e.g., design treatment capacity; hydraulic capacity of a main lift station, headworks, or other system element; and demonstrated effluent disposal capacity).
17. A narrative description of plant operation and maintenance procedures to be employed, including those associated with effluent storage and disposal.
18. A description of any policies or facility design features that reduce the potential for groundwater degradation (best practicable treatment and control or BPTC measures). Such features might include industrial discharger effluent quality limits, prohibitions on discharge of certain types of waste, advanced treatment, disinfection, concrete treatment structures, and pond lining systems.
19. Provide a technical report prepared by a Professional Geologist or Certified Hydrogeologist that provides an assessment of the following:
- a. Baseline groundwater quality at each new disposal or reclamation site.
 - b. Groundwater degradation, if any, that has resulted from the existing operation; and
 - c. The potential for the proposed effluent disposal expansion to degrade groundwater quality (at the plant and at reclamation/disposal sites).

This assessment must be made based on site-specific data and must provide technically-based answers to the following questions based on historical data and supplemental data to be collected for the purpose of this study:

- ◆ What is the groundwater elevation and gradient at the existing facility? At least one new well will be required to better define background groundwater quality outside the influence of any mounding around the ponds and at least one more well will be required downgradient of the existing ponds.
- ◆ What is background shallow groundwater quality for typical municipal waste constituents? Compare to established water quality objectives for protection of the beneficial uses of groundwater.¹
- ◆ What is the groundwater quality data downgradient of the existing WWTP and application areas.

¹ Include analyses for the following: BOD, total coliform organisms, total dissolved solids, ammonia (as N), total Kjeldahl nitrogen, nitrate (as N), nitrite (as N), and a complete anion/cation scan with ion balance. Total coliform organisms shall be determined using the 15- or 25- tube method.

- ◆ For each monitored constituent, has the existing facility degraded groundwater quality? If so:
 - What constituents exceed the applicable water quality objective?
 - What constituents exceed background concentrations?
 - Based on site hydrogeology, is the degradation contained within a defined area (or one that could be defined by additional investigation)?
 - What Best Practicable Treatment and Control (BPTC) methods will be utilized to minimize the degradation?
- ◆ What are subsurface conditions at the proposed new disposal sites?²
- ◆ What is the character of groundwater quality at the proposed new disposal sites?²
- ◆ Based on site hydrogeology, the nature of the waste, and the proposed disposal method, what level of degradation is expected to result from the expansion (if any)?
- ◆ If the proposed expansion will cause degradation, how will the degradation be confined or controlled?
- ◆ At a minimum, the report shall include the following:
 - Rationale for field investigation approach.
 - Description and documentation of all proposed investigational methods and activities.
 - Description of the site hydrogeology including stratigraphy, hydraulic conductivity of the soils, capillary rise, groundwater elevation and gradient, transmissivity, and influence of all recharge and pumping sources (i.e., a site conceptual model)
 - A detailed map showing locations of all water wells including springs and isolated wetlands within one mile of the WWTP and land application areas.
 - Description of fate and transport mechanisms for all monitored constituents.
 - Description of data reduction/analysis techniques and results.
 - Presentation of historical and supplemental site-specific soil and groundwater data.
 - Comparison of groundwater quality data to background groundwater quality and water quality objectives for each constituent.
 - An analysis of all data and conclusions regarding each of the above questions.

² This must be based on subsurface investigation at the proposed disposal site including soil borings and/or cone penetrometer tests and groundwater analyses. Groundwater samples may be obtained using a one-time sampling method such as Hydropunch®.



Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board Central Valley Region

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ATTACHMENT C REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLANS AND MONITORING WELL INSTALLATION REPORTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approve the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2, below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

SECTION 1 - Monitoring Well Installation Workplan and Groundwater Sampling and Analysis Plan

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- On-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):

- Diagram of proposed well construction details
 - Borehole diameter
 - Casing and screen material, diameter, and centralizer spacing (if needed)
 - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
 - Anticipated depth of well, length of well casing, and length and position of perforated interval

- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):

Method of development to be used (i.e., surge, bail, pump, etc.)

Parameters to be monitored during development and record keeping technique

Method of determining when development is complete

Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):

Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey

Datum for survey measurements

List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. **Appendix: Groundwater Sampling and Analysis Plan (SAP)**

The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
 - General sampling techniques
 - Record keeping during sampling (include copies of record keeping logs to be used)
 - QA/QC samples
- Chain of Custody
- Sample handling and transport

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

A. General Information:

Purpose of the well installation project

Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells

Number of monitoring wells installed and copies of County Well Construction Permits

Topographic map showing facility location, roads, surface water bodies

Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

On-site supervision of drilling and well installation activities

Drilling contractor and driller's name

Description of drilling equipment and techniques

Equipment decontamination procedures

Soil sampling intervals and logging methods

Well boring log

- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form):

Well construction diagram, including:

- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development:

Date(s) and method of development

How well development completion was determined

Volume of water purged from well and method of development water disposal

Field notes from well development should be included in report

F. Well Survey (survey the top rim of the well casing with the cap removed):

Identify the coordinate system and datum for survey measurements

Describe the measuring points (i.e. ground surface, top of casing, etc.)

Present the well survey report data in a table
Include the Registered Engineer or Licensed Surveyor's report and field notes in
appendix

ATTACHMENT D
ADDITIONAL INFORMATION REQUIREMENTS
FOR A REPORT OF WASTE DISCHARGE
NAPA BERRYESSA RESORT IMPROVEMENT DISTRICT
WATER TREATMENT PLANT

Please submit a technical report, providing the following information. The technical report must be prepared under the direct supervision of a registered civil engineer.

Please provide the following information:

1. Site information which includes the following:
 - a. Depict the water treatment plant, conveyance systems (i.e., piping, etc.), and disposal site on a 7.5 U.S.G.S quadrangle map (site map) and indicate the township, range, and section of the area;
 - b. Identify Assessors Parcel Number for the water treatment plant and disposal areas;
 - c. Identify the area of the site (disposal areas), in acres, and the total acreage of parcel;
 - d. Report distance to residences within 1000 feet and to the nearest community. Depict nearby residences on the site map;
 - e. Indicate uses of surrounding land (i.e., agricultural, residential, etc.) and the site;
 - f. Report annual average precipitation and evaporation;
 - g. Indicate locations of all groundwater wells, surface streams, drainage ditches (including seasonal), canals, and channels within 500 feet of the treatment plant, wastewater conveyance system on the site map. Identify the nearest identifiable water body or water course to which the site is tributary and its approximate distance;
 - h. Report direction and typical velocity of the prevailing winds;
2. A narrative description of all proposed waste conveyance (i.e., ditches, piping etc.), treatment, and disposal systems. For the water treatment process, please include a list of chemicals and coagulants used in the water treatment process
3. A copy of the California Environmental Quality Act (CEQA) document for the project. If the CEQA document has not yet been prepared, provide the name of the lead agency and anticipated adoption date.
4. For any proposed wastewater disposal pond, provide the following information:
 - a. Identification (name) and function of the pond;
 - b. Surface area, depth, and volumetric capacity at two feet of freeboard;
 - c. Height (relative to surrounding grade), crest width, interior slope, and exterior slope of each berm;
 - d. Estimated steady state percolation rate for each unlined pond based on site-specific testing;
 - e. Depth to shallow groundwater below the planned base of the pond;
 - f. Overfilling/overflow prevention features;
 - g. Storm water diversion features;

5. A chemical characterization of the waste. Include a discussion of potential seasonal variations and supporting analytical data for at least the following tests:
 - a. Total dissolved solids (TDS)
 - b. Total suspended solids (TSS)
 - c. Settleable Matter (SM)
 - d. Total Coliform organisms
 - e. Anions (EPA Method 300): bromide, chloride, nitrate, nitrite, phosphate, sulfate, sulfite
 - f. Trace metals (EPA Method 6010B): barium, beryllium, chromium, cobalt, copper, silver, tin, vanadium, and zinc
 - g. Antimony and arsenic (EPA Method 7062)
 - h. Cadmium (EPA Method 7131A)
 - i. Lead (EPA Method 7421)
 - j. Mercury (EPA Method 7471A)
 - k. Nickel (EPA Method 7521)
6. A description of the types of soil underlying the planned disposal area (with reference to any geotechnical reports).
7. A projected monthly water balance demonstrating adequate containment capacity for the 100-year return period total annual precipitation, including consideration of at least the following.
 - a. A minimum of two feet of freeboard in each pond (ponds used to store wastewater) at all times;
 - b. Historical local evaporation data (monthly average values);
 - c. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns;
 - d. Proposed wastewater loading rates distributed monthly in accordance with expected seasonal variations; and
 - e. Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging on unlined ponds).
8. Proposed flow limits and basis for the limit for disposal system. Consider seasonal variations and include the technical basis for the proposed flow limit (e.g., design water treatment capacity; hydraulic capacity of a main discharge pump or other system element; and demonstrated effluent disposal capacity).
9. An irrigation management plan demonstrating adequate disposal capacity, including at least the following information:
 - a. Scaled plans showing the limits of all effluent irrigation areas, including their relationship to storm drains, surface waters, and wells;

- b. For each discrete irrigation area, specify the following:
 - i. Total available area;
 - ii. Net available area (considering setbacks required per 22 CCR, Division 4 water reclamation regulations);
 - iii. Type of irrigation systems;
 - iv. Structural and operational Best Management Practices (BMPs) used to control potential runoff quality impacts associated with use of reclaimed effluent; and
 - v. Means and methods to control public access and/or provide legally required notice regarding exposure to treated effluent.

10. Provide a preliminary groundwater assessment of the following:

- a. What is the groundwater elevation and gradient at the existing facility?
- b. What are subsurface conditions at the disposal site?
- c. What is the character of groundwater quality at the disposal site?
- d. Based on site hydrogeology, the nature of the waste, and the proposed disposal method, what level of degradation is expected to result from the discharge (if any)?
- e. If the discharge might cause degradation, how will the degradation be confined or controlled?

ATTACHMENT E
INFORMATION REQUIREMENTS FOR THE OVERFLOW EMERGENCY RESPONSE PLAN
AND FOR THE OPERATION AND MAINTENANCE PROGRAM
NAPA BERRYESSA RESORT IMPROVEMENT DISTRICT
WASTEWATER TREATMENT SYSTEM

Overflow Emergency Response Plan

The Overflow Emergency Response Plan section of the Sewer System Management Plan shall identify measures to protect public health and the environment. At a minimum, this plan must include the following:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all Sanitary Sewer Overflows (SSOs) in a timely manner;
- (b) A program to ensure an appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The Overflow Emergency Response Plan should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

Operation and Maintenance Program

The Operation and Maintenance section of the Sewer System Management Plan shall include those elements listed below that are appropriate and applicable to the Dischargers wastewater system:

- (a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;

- (b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
- (c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
- (d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and
- (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.