

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906**

**ORDER NO. R3-2013-0010**

**MASTER RECLAMATION REQUIREMENTS  
FOR  
COSTANOA LODGE AND CAMP  
SAN MATEO COUNTY**

**(Waste Discharger Identification No. 3 411001001)**

The California Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board"), finds:

**SITE OWNER AND LOCATION**

1. Reynolds Resorts - Costanoa, LLC (hereafter "Discharger," "Supplier," "Distributor," "User," or "Supplier and Distributor") owns and operates the Costanoa Lodge and Camp in San Mateo County. The 476-acre property has a domestic wastewater treatment, recycling, and distribution system (hereafter, "Facility") located at 2001 Rossi Road, approximately 12 miles south of the community of Pescadero. The Facility occupies San Mateo County Assessor's Parcel Number (APN) 089-200-200 within Township 9S, Range 5W, Section 13 of the Mount Diablo base and meridian. See Attachment A for Vicinity and Site Map.
2. Mr. Paul L. Gould, Inc. acquired Waste Discharge Order (WDR) No. 89-23 for the Costanoa Lodge and Camp from the Water Board on October 13, 1989 but installation of the domestic wastewater treatment and reclamation system was not completed until ten years later in 1999. Facility construction delays were due to petitions to review WDR Order No. 89-23 by the Committee for Green Foothills and other litigation actions pertaining to the development of the facility.
3. Facility ownership transferred to Prime Property Capital, Inc. in early 2000, to King Reynolds Ventures in 2004, and then to the current Discharger in late 2007.

**PURPOSE OF ORDER**

4. The Discharger submitted a *Report of Waste Discharge* on August 21, 2012, at the request of Water Board staff, as an application to replace WDR Order No. 89-23 with Facility ownership information and further define operational controls.
5. Staff's review of existing WDR Order No. 89-23 and available data indicates deficiencies in Facility treatment performance and potential for human health risks and groundwater quality impacts.
6. A letter dated December 14, 1999, from the California Department of Health Services (CDHS) indicates that the agency did not approve the facility starting operations since the design did not meet all the requirements of Title 22 - California Code of Regulations. There are no subsequent letters in the Water Board files indicating approval was ever granted from CDHS

for this facility. Water Board staff is updating WDR Order No. 89-23 to address aspects of the reclamation facility that did not originally meet Title 22 – California Code of Regulations as presented by CDHS.

7. Master Reclamation Requirements Order No. R3-2013-0010 (Order) replaces waste discharge requirements to require improved wastewater treatment, reclamation, and monitoring at the Facility.
8. California Water Code Section 13523.1 provides that the Water Board may issue a Master Reclamation Requirements permit to a supplier or distributor, or both, of reclaimed water.
9. This Order is intended to serve as a Master Reclamation Requirements permit that is consistent with California Water Code Section 13523.1.
10. The discharge was previously regulated by WDR Order No. 89-23, adopted by the Water Board on October 13, 1989. This Order rescinds the Discharger's enrollment in WDR Order No. 89-23.

## **SITE/FACILITY DESCRIPTION**

### **Current Capacity and Waste Classification**

11. The Facility is designed to accommodate a peak daily flow of 25,000 gallons per day (gpd) with a dry weather flow of 18,000 gpd averaged over each month (30-day average). Data collected from 2010 to 2012 indicates an actual annual wastewater flow at the Facility averaging 8,400 gallons per day (9.4 acre-feet/year).
12. The storage pond used to store the reclaimed water is clay lined and has a storage capacity of 15-acre-feet, providing storage of reclaimed water for up to 582 days at the average design flow rate.
13. The reclaimed water is used to irrigate several areas around the Facility. Water Board staff has determined the reclaimed water to have a Threat to Water Quality (TTWQ)<sup>1</sup> equal to 3 and Complexity (CPLX) equal to B, therefore assigning a waste classification of 3B to the discharge.

### **Treatment Facility and Wastewater Disposal**

14. Following is a summary of the wastewater treatment and reclamation system components.

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<sup>1</sup> CALIFORNIA CODE OF REGULATIONS, TITLE 23. Division 3. Chapter 9. Waste Discharge Reports and Requirements Article 1. Fees

- a. Influent lift pumps and flow meter
  - b. ¼" gravity screen
  - c. Double Oxidation Basins, each 18,322 gallon capacity
  - d. Two Equalization Basins, each 5,000 gallons capacity
  - e. Tube Settler Clarifier
  - f. Dual influent upflow sand filters
  - g. Two Submersible Filter Feed Pumps
  - h. Programmable Logic Controller
  - i. Influent and tertiary effluent chlorine residual analyzers
  - j. Submersible mixing pumps
  - k. Aspirator/Submersible Pump for aeration
  - l. Two Tertiary Effluent Filters
  - m. Two Effluent Vertical Turbine Pumps
  - n. Wasting and Return pumps
  - o. Secondary and tertiary effluent pumps
  - p. Chemical level sensors
  - q. Water level transmitters
  - r. Dissolved oxygen and suspended solids analyzers
  - s. Filter effluent pump and flow meter
  - t. Continuous monitoring effluent turbidity meter
  - u. Polymer feed pump
  - v. Chlorine contact piping (130 feet) with inline static mixing and chlorine feed pumps
  - w. Tertiary effluent flow meter
  - x. Tertiary effluent storage pond (15-acre feet)
  - y. Chemical feed and storage building
  - z. Alarms and generator
15. Wastewater is of domestic and industrial origin, produced from the campground Recreational Vehicle (RV) hookups, shared guest bathroom facilities, lodge facilities and from the water treatment system filter backwash operations. All domestic wastewater from the campground and lodge facilities flows by gravity to a pumping station and is pumped to the treatment plant. The pumped domestic wastewater passes a screen that removes particles larger than 0.25 inches. The water treatment system filter backwash water (industrial) does not flow through the Facility and is disposed of directly into the storage pond.
16. The screened domestic wastewater enters the two sequencing batch reactor (SBR) basins, where the wastewater is treated (oxidized) to a secondary effluent quality.
17. The SBR effluent discharges onto a filter that is designed to produce high quality filtered effluent, which flows by gravity to a chlorine disinfection chamber. The chlorine contact chamber produces an effluent with a fecal coliform quantity at or less than 2.2 most probable number per 100 milliliters (MPN/ml).
18. The treated effluent is pumped to the storage pond prior to irrigation.
19. Reclaimed water is used for irrigation throughout the Costanoa Lodge and Camp areas that is mostly dripped on shrubs and trees with a bubbler type system, but also on lawn using low trajectory type sprinklers.

20. A five-acre area of land has been set aside and established as the disposal spray field, which is used to dispose of off-specification (not meeting Title 22 criteria) treated wastewater. This area is an open space area with limited access to the public.

### **Compliance History**

21. The Facility's effluent turbidity daily average and daily maximum limits have exceeded the current Order's effluent limits throughout 2012 by exceeding the reclaimed water specification of 2.0 Nephelometric Turbidity Units (NTUs) and 5.0 NTUs, respectively. The annual average turbidity is 0.78 NTUs, with peaks as high as 8.30 NTUs.
22. The Facility's effluent five-day biological oxygen demand (BOD<sub>5</sub>) 30-day average was in violation three times in between the years of 2009 and 2010.
23. Water Board staff review of the Discharger's self-monitoring reports revealed that groundwater monitoring data has not been provided by the Discharger since 2003.
24. Water Board staff discussions with the Discharger's Facility management contractor revealed that treated off-specification wastewater has been mixed with Title 22 reclaimed water stored at the storage pond for the past seven years instead of diverting it to the disposal spray field.
25. During a May 25, 2011 field inspection, Water Board staff observed that the storage pond is not adequately maintained. Water Board staff observed the storage pond to be abundant in wildlife and aquatic plants, which can compromise the retention walls and the quality of the distributed reclaimed water.

### **Land Uses**

26. The surrounding area is principally composed of grazing land and open green space adjacent to the Pacific Ocean. The Ano Nuevo State Reserve lies on the western border and Cascade Ranch State Park is immediately to the east.

### **Geographic Setting & Geology**

27. Geoconsultants, Inc. summarized the geology of the project area in 1988. They state that at the wastewater discharge sites, the geology consists of marine terrace alluvium of limited areal extent and thickness, underlain by the Pigeon Point formation (Kpp). Bedrock units exist in the vicinity of Costanoa Lodge and Camp facilities. Composed of highly cemented sediments, the Pigeon Point Formation is characterized by difficult drilling, negligible to very low well yields, and poor ground-water quality. To the east lie the Purisima Formation (Tp), consisting of fine-grained sandstones and siltstones that weather rapidly, and fractured Santa Cruz Mudstone (Tsc), both known to be water bearing.
28. Whitehouse Creek wraps around the north end of the property where it crosses the San Gregorio Fault Zone. Steep escarpment slopes drop north off the top of the drainage divide to Whitehouse Creek. Gentler slopes extend south and west across the property

29. The underlying soils are generally composed of medium-dense silty, clayey sands to depths ranging from six to fifteen feet. A very dense sandstone or siltstone underlies this terrace deposit soil.
30. Percolation rates are low, ranging on the order of zero to  $\frac{1}{4}$  of an inch per hour, based on a geotechnical investigation performed by Haro, Kasunich & Associates Inc., in 1988-1989.

### **Surface Water**

31. The west side of the property is crossed by Whitehouse Creek, flowing north to south. Naturally occurring phosphate has been identified in this surface water.

### **Groundwater**

32. The Facility is not located within any groundwater basin but lies immediately north of the Ano Nuevo Area groundwater basin.
33. Two groundwater monitoring wells, MW 98-1 and MW 98-2, were installed on October 23, 1998, at the Facility to fulfill groundwater monitoring requirements set by WDR Order 89-23. Groundwater monitoring well MW 98-1 was set downgradient on the west side of the storage pond and MW 98-2 was set in the downgradient end of the spray disposal field.
34. The Discharger periodically attempted to sample groundwater from monitoring well MW 98-1 between October 1998 and March 2002. Every attempt resulted in a dry well. The well is screened from 9 to 21 feet below grade surface. It is assumed that any water found in this well would indicate that the storage pond is leaking, therefore the storage pond clay seal was performing adequately when last monitored in 2002.
35. Groundwater monitoring well MW 98-2 was successfully sampled eight times between October 1998 and March 2002, which provides for excellent background conditions at the spray disposal field. Depths to groundwater varied between 7 to 11 feet below grade surface. Water quality indicators include specific conductance, pH, total dissolved solids, chloride, sodium, boron, nitrate as nitrate, and Total Kjeldahl Nitrogen. Samples showed all constituents were below the drinking water maximum contaminant levels established by the California Department of Public Health and the U.S. Environmental Protection Agency.

### **Domestic Water Supply**

36. Domestic water supply comes from well(s) located in the Ohlone Valley approximately one mile northeast of the Facility. The water supply draws from a depth of 140-feet below grade surface. Water quality indicators establish it as a good water source with the exception of elevated iron and manganese concentrations.
37. Iron and manganese is removed from the water supply through the use of a filter and chlorine dosing system. The filter backwash effluent is discharged directly to the storage pond.

**MONITORING PROGRAM**

38. Monitoring and Reporting Program No. R3-2013-0010 (MRP) is a part of the proposed Order. The MRP requires routine water supply, influent, effluent, groundwater, and facility monitoring to verify compliance and ensure protection of groundwater quality.
39. Additions to the MRP include Influent Monitoring, Recycled Water Use Area Monitoring, Disposal Area Monitoring, Solids/Biosolids Monitoring, and Equipment Calibration.
40. Monitoring reports are due quarterly by February 20, May 20, August 20, and November 20.

**BASIN PLAN**

41. The Water Board has adopted the Water Quality Control Plan for the Central Coast Basin (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. This Order implements the Basin Plan.
42. The Basin Plan designates the existing and anticipated beneficial uses of groundwater basins as:
  - a. Municipal and Domestic Water Supply
  - b. Agricultural Water Supply
  - c. Tastes and Odors
  - d. Radioactivity
43. The Whitehouse Creek is the closest surface water body to the Facility disposal and reuse areas. The Basin Plan does not designate existing and anticipated beneficial uses of Whitehouse Creek. However, Whitehouse Creek is similar to Gazos Creek (located to the north) in terms of geology, climate, population and vegetation. Therefore, the presumed present and anticipated beneficial uses of Whitehouse Creek that could be affected by the discharge include:
  - a. Agricultural Water Supply
  - b. Groundwater Recharge
  - c. Water Contact Recreation
  - d. Non-Contact Water Recreation
  - e. Wildlife Habitat
  - f. Fish Spawning, Reproduction, and/or Early Development
  - g. Fish Migration
  - h. Cold Fresh-water Habitat
44. For receiving waters with designated beneficial uses of municipal and domestic water supply, the Basin Plan establishes the primary drinking water maximum contaminant levels (MCLs), listed at Title 22 of the California Code of Regulations, Sections 64431 (inorganic compounds) and 64444 (organic compounds), as applicable water quality objectives.

45. This Order implements the Basin Plan's water quality objectives for both groundwater and surface water bodies.

### **Anti-Degradation**

46. Antidegradation: State Water Board Resolution No. 68-16 *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain 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 a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

*Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

The discharges regulated by this Order are subject to waste discharge requirements that will result in best practicable treatment or control, the prevention of pollution and nuisance, and maintenance of the highest water quality consistent with maximum benefit to the people of the State.

### **RECYCLED WATER POLICY**

47. The Strategic Plan Update 2008-2012 for the Water Boards includes a priority to increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate water flows for fish and wildlife habitat. The State Water Resources Control Board adopted the Recycled Water Policy via Resolution No. 2009-0011 on February 3, 2009<sup>2</sup>. The Recycled Water Policy is intended to support the Strategic Plan priority to Promote Sustainable Local Water Supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in reduction in greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water.
48. The Recycled Water Policy calls for the development of regional groundwater basin/sub-basin salt/nutrient management plans. The State Water Resources Control Board recognizes that, pursuant to the letter from statewide water and wastewater entities<sup>3</sup> dated December 19, 2008, and attached to Resolution No. 2009-0011 adopting the Recycled

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<sup>2</sup> [http://www.swrcb.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2009/rs2009\\_0011.pdf](http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf)

<sup>3</sup> [http://www.waterboards.ca.gov/board\\_info/agendas/2009/feb/020309\\_7\\_%20rw\\_policy\\_funding\\_letter.pdf](http://www.waterboards.ca.gov/board_info/agendas/2009/feb/020309_7_%20rw_policy_funding_letter.pdf)

Water Policy, the local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California, including compliance with CEQA and participation by Water Board staff.

49. It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Resources Control Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or sub-regional salt and nutrient management plans rather than through imposing requirements solely on individual projects. The Water Board finds that a combination of regional management plans and individual or programmatic project requirements may be necessary to protect beneficial uses.

### **ENVIRONMENTAL REVIEW**

50. The County of San Mateo Planning Commission certified a final Environmental Impact Report on December 14, 1989, in accordance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et. seq.) and the California Code of Regulations. The report determined there are no significant adverse environmental effects or that all potentially significant adverse effects can be avoided through implementation of mitigation measures. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface and ground waters will be implemented through this Order.
51. These waste discharge requirements are for an existing facility and are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et. seq.) in accordance with Section 15301, Article 19, Chapter 3, Division 6, Title 14 of the California Code of Regulations.

### **IMPORTANCE OF RECYCLED WATER**

52. California Water Code Section 13510 states that the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.
53. California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water demands of the State.

### **GENERAL FINDINGS**

54. No discharge of waste to waters of the State creates a vested right to continue the discharge. All discharges of waste into waters of the State are privileges, not rights. A permit is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations) and requirements necessary to implement water quality control



plans, protect beneficial uses, and prevent nuisance. Compliance with this Order should ensure that water quality is protected.

55. The Discharger's wastewater flows are less than one million gallons per day (MGD) therefore, storm water discharges from the facility are not subject to the State Water Resources Control Board's General Industrial Activities Storm Water Permit.
56. On April 5, 2013, the Water Board notified the Discharger and other interested parties of its intent to prescribe Supplier and Distributor MRR for the Discharger's Facility and associated reuse areas, respectively. In addition, the Water Board provided the public with an opportunity for a public hearing and the opportunity to submit written comments.
57. The Water Board has consulted with the State of California Department of Public Health (DPH) and has incorporated the recommendations from the DPH regarding the regulation of this discharge into the Order. Water Board staff has ensured the protection of public health, safety, and welfare through the adoption of this Order. The requirements of this Order conform with and implement the water reclamation criteria of the DPH and California Code of Regulations, Title 22, Chapter 3 to protect the public health, safety, and welfare.
58. The Water Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings at a public meeting held July 11, 2013.
59. Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days of the adoption date of this Order, except that if the thirtieth day following the date of the order falls on a Saturday, Sunday, or state holiday, the petition must be received by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.
60. Requirements specified in this Order are intended to ensure proper treatment and handling of recycled domestic wastewater for the protection of public health and does not pose a significant threat to surface water or underlying groundwater resources.
61. This Order contains restrictions on individual pollutants. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law. The individual water quality-based effluent limitations are based on the Basin Plan. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. The requirements of the Order take into consideration past, present, and probable future beneficial uses of the receiving waters, the environmental characteristics, including water quality, coordinated control of all factors which affect water quality in the area, and the need to develop and use recycled water.

**IT IS HEREBY ORDERED**, that to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. Pursuant to authority in Sections 13263, 13267, and 13523.1 of the California Water Code, that Reynolds Resorts – Costanoa, LLC, its agents, successors, and assigns, may produce, store and distribute reclaimed wastewater provided it complies with the following:<sup>4</sup>

Footnotes are listed throughout these requirements to indicate the source of requirements specified. Numbered footnotes generally reference code sections for direct citations. Footnote acronyms are as follows:

BPJ	Best Professional Judgment of Regional Water Quality Control Board Staff
ROWD	Reynolds Resorts, Costanoa - LLC. Report of Waste Discharge, August 2012
40CFR	Title 40 Code of Federal Regulations
BP	Central Coast Regional Water Quality Control Plan
DPH	California Department of Public Health
T22	Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria
CWC	Porter-Cologne Water Quality Control Act (California Water Code)

The Discharger shall comply with all Prohibitions, Specifications, and Provisions as applicable. The Supplier and Distributor shall comply with the specific Supplier Requirements and Distributor/User Requirements, respectively.

## A. PROHIBITIONS

1. Discharge of treated wastewater to areas other than the storage pond, spray disposal field, or areas of authorized reuse as shown in Attachment B is prohibited.<sup>ROWD, BPJ</sup>
2. Discharge of untreated or partially treated wastes to areas other than the spray disposal field, including overflows, bypasses, seepages, and spills, is prohibited.<sup>BPJ, PC</sup>
3. Discharge of treated wastewater within 50 feet of all active or inactive water supply wells is prohibited.<sup>DPH</sup>
4. A discharge of sludge, residues, or any other wastes into surface waters or into any area where it may be washed into surface water is prohibited.<sup>PC</sup>

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<sup>4</sup> General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984, and are included as part of this Order.

5. Discharge of waste classified as “hazardous” or “designated” as defined in CCR, Title 23, Chapter 15, Section 2521 (a) and CWC Section 13173, respectively, to any part of the wastewater disposal system is prohibited.
6. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in section 13050(m) of the California Water Code.<sup>CWC</sup>
7. Daily average flow rates through the Facility tertiary treatment system surpassing the capacity of the chlorine contact basin are prohibited.
8. Use of recycled water for irrigation is prohibited during periods of rainfall or when soils are saturated such that ponding or runoff occurs.<sup>BPJ</sup>
9. Application of recycled water at rates or volume which will exceed vegetative demand or soil moisture conditions is prohibited.<sup>DPH</sup>
10. Recycled water shall not be discharged from the Facility’s storage pond, or other containment, other than for designated irrigation or other approved reuse applications in accordance with this Order.<sup>BPJ</sup>
11. There shall be no cross-connections between the potable water supply and pipes containing recycled water. Supplementing recycled water with water used for domestic supply shall not be allowed except through an air-gap separation, which complies with the requirements of Section 7602(a) and 7603(b) of Title 17, California Code of Regulations (CCR).<sup>DPH</sup>
12. In accordance with CCR Title 17, Section 7604(c)(2), a reduced pressure principle backflow device shall be provided at premises where recycled water is used and there is no interconnection with the potable water system.<sup>5, BPJ, T22, DPH</sup>
11. Transportation of undisinfected recycled water within a pipeline used to transport disinfected tertiary treated recycled water is prohibited.<sup>DPH</sup>
12. Use of disinfected recycled water for direct human consumption or for processing of food or drink intended for human consumption is prohibited.<sup>DPH</sup>

## **B. SPECIFICATIONS**

### **Flow and General Limitations**

1. Annual dry weather average influent wastewater flow to the Facility shall not exceed 0.022 MGD. Peak daily flow shall not exceed 0.024 MGD.<sup>ROWD, BPJ,</sup>
2. The effluent pH shall not be less than 6.5 or greater than 8.4.<sup>BP</sup>
3. Odors associated with the treatment and disposal of wastewater shall not be perceivable beyond the limits of the Discharger’s property boundary.

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<sup>5</sup> This requirement does not apply to premises as defined by CCR Title 17, Table 1 Sections 7604(c)(1) and (c)(3).

4. The uppermost one foot in the storage pond shall have a dissolved oxygen concentration greater than 1.0 mg/L.
5. The Facility effluent shall not exceed the following effluent limitations:

**Table 1 : Effluent<sup>a</sup> Limitations**

Parameter	Daily Maximum (mg/L) <sup>b</sup>	Monthly (30-day) Average (mg/L)
BOD <sub>5</sub>	25	10
Total Suspended Solids <sup>a</sup>	15	10
Total Nitrogen (as N)	10	--
Total Dissolved Solids	--	550
Sodium	--	200
Chloride	--	150
Boron	--	0.20
Sulfate	--	50
Formaldehyde	--	0.10
1,4-Dichlorobenzene	--	0.005
Methanol	--	0.012

Note:

- a. As measured after filtration and prior to disinfection.
- b. mg/L = milligrams per liter
- c. Compliance with annual averages will be determined on a rolling 12-month basis.

### Disinfected Tertiary Recycled Water Limitations

6. The Supplier shall ensure that treated effluent put to use for disinfected tertiary recycled water applications shall be an adequately oxidized, filtered, and disinfected water, as defined in CCR Title 22, Division 4, Chapter 3, Sections 60301-60335 or equivalent.
7. The turbidity of the filtered wastewater shall not exceed any of the following:<sup>6, 7, 8</sup>
  - a. An average of 2 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.

<sup>6</sup> CCR Title 22, Div. 4, Chap.3, Section 60301.320

<sup>7</sup> Compliance with the daily average operating filter effluent turbidity must be determined by averaging the levels of recorded turbidity taken at four-hour intervals over a 24-hour period. Should the continuous turbidity meter and recorder fail, grab sampling at minimum frequency of 1.2-hours may be substituted for a period of up to 24-hours.

<sup>8</sup> Pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes.

8. Disinfected tertiary recycled water shall not contain total coliform concentrations exceeding the following limits:<sup>9</sup>
  - a. the seven-day median concentration must not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters (ml); and
  - b. concentrations must not exceed an MPN of 23 per 100 ml in more than one sample taken over a 30-day period;
  - c. no sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.
9. The chlorine residual within the disinfection process following filtration shall provide a CT value<sup>10</sup> of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow in each contact basin or other equivalent measure of disinfection approved by the Executive Officer.

### Operations and Maintenance

10. The tertiary treatment system will be used in accordance with the manufacturer's specifications and operated as described in the Discharger's Operations and Maintenance manual.

### C. SUPPLIER AND DISTRIBUTOR REQUIREMENTS

1. The Supplier and Distributor must submit to the Water Board, the plan for the recycled water distribution system from the Facility to the use areas. The plan should show drawings and maps of the locations of the potable water, sewer, and recycled water pipelines. The drawings should indicate adequate separation between the recycled water and potable domestic water lines as required by California Waterworks Standards sections 64572(c) and (d). The recycled water and potable domestic water lines should be marked clearly or labeled using separate colors for identification. The Discharger must prepare as-built drawings and keep them on file.
2. Reclamation facilities shall be operated in conformance with," the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*.
3. Personnel involved in producing, transporting, or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water. <sup>T22, BPJ</sup>
4. Personnel involved in inspecting, maintaining or operating any distribution system equipment for recycled water shall be informed of the possible health hazards that may result from contact and use of recycled water. <sup>T22, BPJ</sup>
5. Delivery of recycled water shall cease during any period the Facility fails to produce "disinfected tertiary recycled water" meeting performance criteria specified in sections B.7, B.8, and B.9 of this Order. The delivery of recycled water shall not be resumed until all conditions which caused the limits to be violated have been corrected and effluent in the storage pond is suitable for disinfected tertiary recycled water applications. <sup>BPJ</sup>

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<sup>9</sup> CCR Title 22, Div. 4, Chap.3, Section 60301.230

<sup>10</sup> The product of total chlorine residual and modal contact time measured at the same point.

6. All recycled effluent impoundments, disposal fields, and use areas shall have posted (in English and Spanish) signage to warn the public recycled wastewater is being stored or used.  
*BPJ*
7. Recycled water use areas shall be properly labeled and regularly inspected to ensure proper operation, absence of leaks, and absence of illegal connections.  
*BPJ, T22*
8. The recycled effluent storage pond shall have no less than two feet<sup>11</sup> of freeboard (measured vertically, from the water surface up to the point on the surrounding berm or dike having the lowest elevation and not including engineered outlet structures) at all times and shall be designed and constructed to prevent overtopping as a result of windy storm conditions. To determine pond freeboard, the Discharger shall install and maintain permanent markers with calibration indicating the water level at design capacity and available operational freeboard.  
*BPJ*
9. The Supplier and Distributor shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Supplier, Distributor or Users to achieve compliance with this Order.
10. The Supplier and Distributor shall implement, and ensure that Users implement annual employee training to ensure proper operation of reclamation facilities, worker protection, and compliance with this Order.
11. The Supplier and Distributor shall ensure that all above-ground equipment, including pumps, piping, storage pond, and valves, etc., under their respective control which may at any time contain reclaimed water, shall be adequately and clearly identified with warning signs. The Supplier and Distributor shall make all necessary provisions to inform the public that the water being stored or distributed is reclaimed domestic wastewater and is unfit for human consumption. The Supplier and Distributor shall ensure that each User complies with these requirements for all above-ground equipment under a User's control.
12. The Facility shall be managed so as to minimize mosquito-breeding habitat.  
*BPJ*

### **Alarms**<sup>12</sup>

13. Alarm devices required for various unit processes as specified in other sections of this Order shall be installed to provide warning of:
  - a. Loss of power from the normal power supply.
  - b. Failure of a biological treatment process.
  - c. Failure of a disinfection process.
  - d. Failure of a filtration process.

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<sup>11</sup> Lesser freeboard, no less than one foot, is acceptable for below grade impoundments, and may be approved by the Executive Officer for above ground impoundments if documented by a registered civil engineer that structural integrity and required capacity will not be compromised with the proposed freeboard.

<sup>12</sup> CCR Title 22, Div. 4, Chap. 3, Section 60335

- e. Any other specific process failure for which warning is required by the Water Board.

All required alarm devices shall be independent of the normal power supply of the Facility.

- 14. The person to be warned shall be the plant operator, superintendent, or any other responsible person designated by the management of the reclamation plant and capable of taking prompt corrective action.
- 15. Individual alarm devices may be connected to a master alarm to sound at a location where it can be conveniently observed by the attendant. In case the reclamation plant is not attended full time, a 24-hour autodialer notifying operation staff of any alarm shall be installed or other alarm(s) shall be connected to sound at a police station, fire station or other full-time service unit with which arrangements have been made to alert the person in charge at times that the reclamation plant is unattended.

### **Power Supply**<sup>13</sup>

- 16. The power supply shall be provided with one of the following reliability features:
  - a. Alarm and standby power source.
  - b. Alarm and automatically actuated short-term retention or disposal provisions as specified in Title 22 Section 60341.
  - c. Automatically actuated long-term storage or disposal provisions as specified in Title 22 Section 60341.

### **Flexibility of Design**<sup>14</sup>

- 17. The design of process piping, equipment arrangement, and unit structures in the Facility must allow for efficiency and convenience in operation and maintenance and provide flexibility of operation to permit the highest possible degree of treatment to be obtained under varying circumstances.

### **Personnel**<sup>15</sup>

- 18. The Facility shall be provided with a sufficient number of qualified personnel to operate the Facility effectively so as to achieve the required level of treatment at all times.
- 19. Qualified personnel shall be those meeting requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

### **Maintenance**<sup>16</sup>

- 20. A preventive maintenance program shall be provided at the Facility to ensure that all equipment is kept in a reliable operating condition.

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<sup>13</sup> CCR Title 22, Div. 4, Chap. 3, Section 60337

<sup>14</sup> CCR Title 22, Div. 4, Chap. 3, Section 60333

<sup>15</sup> CCR Title 22, Div. 4, Chap. 3, Section 60325

<sup>16</sup> CCR Title 22, Div. 4, Chap. 3, Section 60327

21. Flow meters and other process instrumentation will be calibrated in accordance with manufactures' recommendations and best management practices for the industry.

### **Operating Records and Reports**<sup>17</sup>

22. Operating records shall be maintained at the Facility or a central depository within the operating area. These shall include: all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency disposal; all corrective or preventive action taken.
23. Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.
24. A monthly summary of operating records as specified in these requirements shall be filed with the self-monitoring report as required by Monitoring and Reporting Program No. R3-2013-0010 to the Water Board.<sup>18</sup>
25. Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to Water Board staff and the local environmental health officer at the numbers provided in the Monitoring and Reporting Requirements No. R3-2013-0010.

### **Bypass**<sup>19</sup>

26. There shall be no bypass of untreated or partially treated wastewater from the Facility or any intermediate unit processes to the point of use.

### **Off-Specification Effluent Contingency Plan**

27. In the event effluent discharged to the effluent impoundment does not meet the criteria for disinfected recycled water, the Supplier shall implement the Off-Specification Contingency Plan.<sup>20, ROWD</sup>
28. The Off-Specification Contingency Plan shall be reviewed and updated annually as necessary. A copy of the revised Off-Specification Contingency Plan or statement indicating the Plan has been reviewed shall be submitted to the Water Board as part of the annual monitoring report.<sup>BPJ</sup>
29. Alternative reuse methods for off-specification effluent may be implemented on an as needed basis if they meet the criteria for the "Uses of Recycled Water" contained in CCR

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<sup>17</sup> CCR Title 22, Div. 4, Chap. 3, Section 60329

<sup>18</sup> Per CCR Title 22 Div. 4, Chap. 3, Section 60301.740. "Regulatory agency" means the California Regional Water Quality Control Board(s) that have jurisdiction over the recycling plant and use areas.

<sup>19</sup> CCR Title 22, Div. 4, Chap. 3, Section 60331

<sup>20</sup> As required by Provision E.5 of this Order.



Title 22, Division. 4, Chapter 3, Article 3 (Sections 60303-60309) and prior approval is given by the Water Board.<sup>BPJ</sup>

### **Sludge and Solid Waste**

(Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment.)

30. Sludge and solid waste shall be removed from treatment facilities as needed to ensure optimal Facility operation.
31. Treatment and storage of sludge shall be confined on the site and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations (see below).
32. Any storage of residual sludge and solid waste shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
33. Sludge and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid Waste Discharge Requirements issued by the Water Board will satisfy this specification.

### **General Requirements**

34. Extraneous surface drainage shall be excluded from the Facility disposal spray field and storage pond.<sup>BPJ</sup>
35. Best management practices shall be implemented to minimize the inflow and infiltration of storm water and/or unauthorized wastewater into the Facility.<sup>BPJ</sup>
36. All storm water runoff contacting raw domestic wastewater or disinfected tertiary recycled water at the Facility shall be contained and managed as raw domestic wastewater.<sup>BPJ</sup>
37. The Distributor and Supplier shall ensure that the use area is inspected and tested for possible cross connections with the potable water system. The inspections and testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing shall be submitted to the Water Board within 30 days following completion of the inspection or testing<sup>21</sup>.

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<sup>21</sup> See Section D.35(c) of this Order.

**D. USER REQUIREMENTS**<sup>22</sup>

1. The application of disinfected tertiary recycled water is limited to the following areas pursuant to Title 22, Division 4, Chapter 3, of the California Code of Regulations:

## Surface irrigation:

- a. Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop,
- b. Parks and playgrounds,
- c. School yards,
- d. Residential landscaping,
- e. Unrestricted access golf courses,<sup>23</sup>
- f. Cemeteries
- g. Freeway landscaping
- h. Ornamental nursery stock, Christmas tree farms and sod farms,
- i. Fodder, fiber and pasture for animals producing milk for human consumption,
- j. Orchards and vineyards, and;
- k. Seed crops not eaten by humans.

## Other uses:

- a) Impoundments,
  - b) Industrial or commercial cooling or air conditioning that involves the use of a cooling tower, evaporative condenser, spraying or any mechanism that may create a mist,
  - c) Industrial boiler feed,
  - d) Flushing toilets and urinals,
  - e) Priming drain traps,
  - f) Industrial process water,
  - g) Structural and nonstructural fire fighting,
  - h) Mixing concrete,
  - i) Decorative fountains,
  - j) Commercial laundries,
  - k) Construction water for backfill consolidation, soil compaction, mixing concrete and dust control at construction sites,
  - l) Commercial car washes, including hand washes if the recycled water is not heated, where the general public is excluded from the washing process, and
  - m) Cleaning roads, sidewalks and outdoor work areas.
2. The Supplier and Distributor shall not add additional use areas or users other than those specified in User Requirement item D.1 above, unless the proposed use is submitted to and approved by the Executive Officer.
  3. No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

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<sup>22</sup> CCR Title 22, Div. 4, Chap. 3, Section 60310

<sup>23</sup> For golf course use, the scorecards must clearly state that reclaimed water is used for irrigation. *BPJ*

- a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
  - b. The well contains an annular seal that extends from the surface into the aquitard.
  - c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
  - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.
  - e. The owner of the well approves of the elimination of the buffer zone requirement.
4. No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.
  5. Any use of recycled water shall comply with the following:
    - a. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the Water Board.
    - b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
  6. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
  7. Spray irrigation of recycled water shall be accomplished at a time and in a manner to minimize ponding and the possibility of public contact with sprayed materials. <sup>BPJ</sup>
  8. No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.
  9. All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A of CCR Title 22, Section 60310. The Water Board may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Water Board that the alternative approach will ensure an equivalent degree of public notification.
  10. Except as allowed under section 7604 of title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
  11. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.
  12. The Distributor shall ensure that backflow prevention devices are in proper working order by testing initially and annually thereafter, in accordance with CCR Title 17, Section 7605. Reports of testing and maintenance shall be maintained by the Distributor.

### Design Requirements

13. The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.<sup>24</sup>
14. All pipes installed above or below the ground, on and after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape.<sup>25</sup>
15. The Distributor shall implement a Cross Connection Certification to protect the public water supply system. The Cross Connection Certification procedures shall be reviewed and updated annually as necessary. A copy of the revised Cross Connection Certification procedures or statement indicating the Cross Connection Certification procedures has been reviewed but not updated, shall be submitted to the Water Board as part of the Distributor's annual monitoring report.<sup>ROWD, BPJ</sup>

### Nutrient Management Plan

16. Hydraulic and nutrient loading rates for the application of disinfected tertiary recycled water shall be based on food crop, vegetation or landscaping consumption and tolerance and shall not exceed what is reasonable for production of the food crops, vegetation or landscaping (i.e., recycled water shall be applied in an amount that will not cause nitrogen within the root zone to exceed the agronomic demand for nitrogen and result in the leaching of nitrate to groundwater).<sup>BPJ</sup>
17. The Supplier and Distributor shall prepare and implement a Nutrient Management Plan (NMP) for the application of recycled water to protect the beneficial uses of groundwater. The NMP shall account for all nutrient loading to the application areas and ensure that the total amount of nitrogen applied does not exceed the amount of nitrogen required by the food crops, vegetation or landscaping being irrigated.
18. As part of the NMP, the Supplier and Distributor shall submit an annual report documenting allowable and actual nitrogen loading to the recycled water application areas. The report shall include, at a minimum:
  - a. Analysis of the contributing sources of nutrients being applied to the recycled water application areas;
  - b. Analysis of annual nitrogen loading to the basin and individual application areas from each contributing source;
  - c. Analysis of the allowable nutrient and hydraulic loading (based on limiting nitrogen loading) of recycled water based on characteristic effluent data for nitrogen, other contributing nitrogen sources, and the nutritive requirements of the application areas;
  - d. Comparison of the actual and allowable annual nitrogen loading rates;

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<sup>24</sup> CCR Title 22, Div. 4, Chap. 3, Section 60315

<sup>25</sup> California Health & Safety Code Section 116815

- e. Analysis of groundwater monitoring data for nitrogen constituents;
- f. Evaluation of potential impacts of nutrient loading on the groundwater basin;
- g. Evaluation of potential nutrient reduction measures; and,
- h. Recommendations and time schedules for the implementation of measures addressing excessive nitrogen loading (i.e. actual loading greater than allowable loading) as applicable.

19. **Annual NMP reports are due January 31<sup>st</sup> of each year** and may be included as part of the annual monitoring report. **The first annual NMP report is due January 31, 2015.** The NMP shall be reviewed and updated annually thereafter as necessary. A copy of the revised NMP or statement indicating the NMP has been reviewed but not updated, shall be submitted to the Water Board as part of the annual monitoring reports.

20. Additional annual NMP reports will not be required by the Supplier and Distributor if the following conditions are met:

- a. The initial nitrogen loading evaluation indicates the application of recycled water at appropriate hydraulic rates along with other nitrogen sources will not exceed the nutritive requirements of the food crops, vegetation or landscaping being irrigated;
- b. Recycled water is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;
- c. A NMP is implemented for the controlled application of fertilizers by landscaping contractors maintaining the application areas; and,
- d. Effluent nitrogen concentrations from the Facility regularly meet or are less than the effluent limitations of this Order and are stable.

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the loading evaluation.)

21. Discharges that exceed the hydraulic loading rate based on the nutritive requirements of the receiving vegetation may be allowable on a case-by-case basis upon request by the Distributor and approval by the Executive Officer given the following conditions are met:

- a. The nitrogen loading evaluation indicates the land application of wastewater at appropriate hydraulic rates (based on soil permeability) will not exceed the nutritive requirements of the vegetation being irrigated by more than a total nitrogen concentration as determined by the following equation<sup>26</sup>:

$$\Delta N = (\text{TOC} - 5) / 2$$

$\Delta N$  = Maximum amount of nitrogen that can be effectively denitrified (mg/L)

TOC = Total organic carbon wastewater (mg/L)

- b. Wastewater is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;

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<sup>26</sup> Maximum of nitrogen that can be effectively denitrified during rapid infiltration under optimum operating conditions; Metcalf and Eddy, Third Ed., 1991, page 972.

- c. Effluent nitrogen concentrations from the Facility regularly meet or are less than the effluent limitations of this Order and are stable; and,
- d. The Discharger provides an assimilative capacity analysis and nitrogen balance showing that the additional nutrient loading to the groundwater basin will not cause or contribute to exceedances of water quality objectives for nitrate in groundwater

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the assimilative capacity analysis and nitrogen balance.)

### **Salinity Management Program**

22. The Supplier and Distributor shall implement a Salinity Management Program (SMP) to document salt loading and evaluate and implement measures for the reduction of salt loading as the result of the application of recycled water. Salt reduction measures shall focus on all potential salt contributions from the water supply and industrial uses as applicable prior to disposal. The Supplier and Distributor shall evaluate limiting water softeners and conditioners under California Health and Safety Code Section 116786.
23. As part of the SMP, the Supplier and Distributor shall submit an annual report documenting salt loading and salt reduction efforts. This report shall include, at a minimum:
  - a. Analysis of annual salt (TDS, sodium, chloride, sulfate, and boron) loading to the basin;
  - b. Analysis of the contributing sources of salt mass in the recycled water (including the evaporative concentration of salts within the effluent storage ponds);
  - c. Analysis of groundwater monitoring data for salt constituents;
  - d. Evaluation of potential impacts of salt loading on the groundwater basin;
  - e. Evaluation of potential salt reduction measures;
  - f. Summary of existing salt reduction measures and their impact; and,
  - g. Recommendations and time schedules for implementation of proposed salt reduction measures.

**Annual SMP reports are due January 31<sup>st</sup> of each year** and may be included as part of the annual monitoring report. **The first annual SMP report is due January 31, 2015.**

### **Groundwater Limitations**

24. The discharge shall not cause the pH of underlying groundwater to exceed 8.3 or fall below 6.5. <sup>BP</sup>
25. The use or disposal of treated wastewater shall not cause the median concentration of coliform organisms in groundwater over any seven-day period to be more than 2.2 MPN per 100 ml. <sup>BP, BPJ</sup>
26. The use or disposal of treated wastewater shall not cause a statistically significant increase of mineral or organic constituent concentrations in underlying groundwater, as determined by statistical analysis of samples collected from wells in the vicinity of the disposal area. <sup>BP</sup>  
<sup>BPJ</sup>

27. The use or disposal of treated wastewater shall not cause nitrate concentrations in affected groundwater to exceed 8 mg/L (as N) and shall not cause a statistically significant increase of nitrate concentrations in underlying groundwater.<sup>27, BPJ, BP</sup>
28. The use or disposal of treated wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.<sup>BP</sup>
29. To protect the *domestic supply* beneficial uses of groundwater underlying the use or disposal areas, the application of treated wastewater shall not cause groundwater to:<sup>BP, BPJ, T22</sup>
  - a. Exceed the Primary Maximum Contaminant Levels for organic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.
  - b. Exceed the Primary Maximum Contaminant Levels for inorganic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.
  - c. Exceed the levels for radionuclides set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443.
30. The use or disposal of treated wastewater shall not cause radionuclides to be present in groundwater in concentrations that are deleterious to human, plant, animal, or aquatic life, or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.<sup>BP</sup>

#### **Individual Recycled Water Use Permits**

31. The Discharger may not issue Individual Recycled Water Use permits.
32. The Water Board will issue Individual Recycled Water Use permits in accordance with the approved rules and regulations as set forth in this Order, which form the basis of permitted recycled water use by specific individual Users. Individual Users are those entities other than the Supplier and Distributor as described in this Order.

#### **Dual-Plumbed Recycled Water System**

33. The potable water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of Section 7602 (a) and 7603 (a) of Title 17, CCR, and that such connection has been approved by DPH.
34. The Distributor shall not deliver recycled water to a facility using a dual-plumbed system unless the report required pursuant to Section 13522.5 of the California Water Code, and which meets the requirements set forth in requirement D.35 of this Order, has been submitted and approved by the Water Board.
35. The report pursuant to Section 13522.5 of the California Water Code shall contain the following information for dual-plumbed systems, in addition to the information required by Section 60323 of Title 22, CCR (Engineering Report):

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<sup>27</sup> The evaluation of this requirement will consider pre-existing conditions based on available characteristic groundwater quality data in the vicinity of the use areas.

- a. A detailed description of the intended use site identifying the following:
    - i) The number, location, and type of facilities within the use area proposing to use dual-plumbed systems;
    - ii) The average number of persons estimated to be served by each facility on a daily basis;
    - iii) The specific boundaries of the proposed use site including a map showing the location of each facility to be served;
    - iv) The person or persons responsible for operation of the dual-plumbed system at each facility; and
    - v) The specific use to be made of the recycled water at each facility.
  - b. Plans and specifications describing the following:
    - i) Proposed piping system to be used;
    - ii) Pipe locations of both the recycled and potable systems;
    - iii) Type and location of the outlets and plumbing fixtures that will be accessible to the public; and
    - iv) The methods and devices to be used to prevent backflow of recycled water into the public water system.
  - c. The methods to be used by the Producer to ensure that the installation and operation of the dual-plumbed system will not result in cross connections between the recycled water piping system and the potable water piping system. These shall include a description of pressure, dye or other test methods to be used to test the system every four years.
36. Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the dual-plumbed system within each facility and use site shall be inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in requirement D.35(c), above, of this Order. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and testing for the prior year shall be submitted to the Water Board within 30 days following completion of the inspection or testing.
37. The Producer shall notify the Water Board of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of discovery of the incident.

## **E. PROVISIONS**

1. Order No. R3-2013-0010 rescinds the Discharger's enrollment in WDR Order No. 89-23.
2. The Supplier and Distributor shall comply with all applicable requirements of Monitoring and Reporting Program No. R3-2013-0010 as adopted by the Water Board and as may be amended by the Executive Officer. The Supplier and Distributor shall be responsible for collecting necessary data and reports from the Users. The Supplier and Distributor shall require Users to appoint and train a Reclaimed Water Supervisor and to submit on-



site observation reports and use data to the Supplier and Distributor, who will compile and file self-monitoring reports with the Water Board. The Supplier and Distributor, at its discretion, may appoint and train the Users' Reclaimed Water Supervisors and collect on-site observation reports and use data.

3. The Supplier shall be responsible for ensuring and documenting that reclaimed water meets the quality standards of this Order. The Distributor shall be responsible for regulating the design, construction, maintenance and operation of recycled water transport facilities, application areas and associated appurtenances owned and operated by the Users and for ensuring that Users meet all water application, operations and maintenance requirements of this Order. The Distributor shall conduct periodic inspections of User facilities and conduct monitoring and reporting to document compliance with the conditions of this Order.
4. The Supplier shall develop an Off-Specification Contingency Plan. The Off-Specification Contingency Plan must be submitted to the Water Board for approval **by November 11, 2013.**
5. The Supplier shall develop an Operations and Maintenance (O&M) manual for the Facility. The finalized O&M manual must incorporate the following items:
  - List of process control alarm set points and shutdown features.
  - Procedures, frequencies, and the agency and/or contractor responsible for testing proper operation of the alarm set points,
  - Procedures, frequencies, and the agency and/or contractor responsible for testing proper operation of the shutdown features,
  - Detailed discussion of follow up actions required if alarms are to sound or shutdown features are activated.
  - Detailed discussion indicating steps taken to determine compliance with the Order.
  - List of required checks and calibration procedures for the turbidity meters and chlorine analyzers.

The O&M manual must be submitted to the Water Board for approval by **November 11, 2013.**

6. The Supplier, Distributor, and Users shall permit the Water Board staff or its authorized representative in accordance with California Water code section 13267(c):
  - Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order,
  - Access to and copy of any records that must be kept under conditions of this Order,
  - Inspection of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order,
  - To photograph, sample, and monitor for the purpose of assuring compliance with this Order.

7. For any extension or expansion of the recycled water system or use areas not covered by the Discharger's Report of Waste Discharge, the Producer shall submit to the Water Board an addendum to the Report of Waste Discharge for approval.
8. Upon Executive Officer approval, additional flow may be allowed at the Facility.
9. The Supplier and Distributor shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984 with the exception of A.14. The Water Board will revise this Order periodically and may revise these requirements when necessary.
10. Pursuant to CCR Title 23, Division 3, Chapter 9, , the Discharger must submit a written report to the Executive Officer not later than **January 31, 2018**, addressing:
  - a. Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
  - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.
11. The Supplier and Distributor shall install a diversion pipe that transports off-specification wastewater to a 5-acre disposal field by July 11, 2014.

I, **KENNETH A. HARRIS Jr., Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted July 11, 2013.

Ordered By:

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Executive Officer

CRD126-01

Paper File: Reynolds Resorts - Costanoa, LLC

Electronic File: S:\WDR\WDR Facilities\San Mateo County\Costanoa\New Reclamation Order\Final\MASTER MRR R3-2013-0010v2.docx