CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2007-0140

WASTE DISCHARGE REQUIREMENTS

FOR

PACIFIC US REAL ESTATE GROUP
SILVERTIP RESORT VILLAGE WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

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

1. Pacific US Real Estate Group (Discharger), a California corporation, submitted a *Report of Waste Discharge* (RWD), dated 25 August 2004, in support of discharge to land of wastewater from the proposed SilverTip Resort and Conference Center Facilities (Resort) On-site Wastewater Treatment Facility and Reclamation System. Additional information to complete the RWD (*Report of Waste Discharge Supplement*) was received 14 January 2005.

2. The proposed Resort will be in the unincorporated community of Fish Camp at the intersection of State Route 41 and Fish Camp Lane. Fish Camp is within the Sierra National Forest, approximately 13 miles north of Oakhurst and 1.5 miles south of the Highway 41 entrance (south entrance) to Yosemite National Park.

3. The proposed Resort is in Section 23, T5, R21, MDM&B, as shown in Attachment A, which is attached hereto and made part of this Order by reference. The proposed Resort site will comprise approximately 47.3 acres, which will include Fish Camp Lane and Assessor Parcel Numbers 010-550-035, 010-550-054, 010-550-055, and 010-550-056.

4. The proposed Resort site will be divided into three parcels: one 11.03-acre parcel; one 23.09 acre parcel, and one 11.5 acre parcel.

5. The area of the proposed Resort, as shown in Attachment B, which is attached hereto and made a part of this Order by reference, will include the following features:

   a. A 137 room hotel;
   b. A large conference center;
   c. 30 cabins for hotel guest use;
   d. Up to 4 small conference centers covering 8,000 sq. ft.;
   e. A tennis court;
   f. An exterior swimming pool and deck;
   g. Three decorative ponds
   h. Parking for 359 vehicles;
   i. A two story commercial building;

j. Housing for employees;
k. Associated accessory uses;
l. An effluent storage tank;
m. A potable water storage tank;
n. Parking, roadways, pathways, utility line extensions, etc.; and
o. An onsite wastewater disposal system.

Wastewater Treatment Facility

6. The RWD presents information on site conditions, wastewater quantity and quality, source water quantity and quality, the wastewater collection system, the treatment process, and the management and disposal of effluent.

7. The treatment facility will be in the northeast corner of the proposed Resort as shown in Attachment B. The proposed wastewater treatment facility (WWTF) will consist of a wastewater collection system comprised of a series of septic tanks and associated piping and a treatment facility that will provide tertiary treatment of the wastewater. The treatment process will include flow equalization, trickling filter secondary treatment with interstage clarification, denitrification, microfiltration, and ultraviolet light disinfection. A process flow diagram is presented in Attachment C, which is attached hereto and made a part of this Order by reference.

8. The WWTF has a design monthly average daily flow of about 35,000 gallons per day and a maximum daily flow of about 73,000 gallons per day (gpd). The Discharger will operate the WWTF and will employ a Grade 3 Certified Wastewater Treatment Plant Operator.

9. The septic tank collection system separates solids and provides pretreatment of the wastewater prior to discharge to the treatment facility. Effluent will be discharged from the tanks either by gravity or by induced pressure depending upon the location of the tanks with respect to the treatment facility.

10. The septic tanks will require periodic pumping to remove septage. Septage will be collected by a conventional septic vacuum truck and will be transported to a regional septage disposal facility.

11. The proposed microfiltration should produce effluent with a turbidity of less than 0.2 Nephelometric turbidity units consistent with the California Code of Regulations (CCR) Title 22, Section 60301.320. Combining microfiltration with ultraviolet disinfection reduces the amount of chemicals needed for tertiary treatment. A backup hypochlorite system will be in place in case of failure of the microfiltration/UV disinfection system. The effluent quality will comply with DHS Title 22 CCR standards for ”disinfected tertiary recycled water.”

12. The WWTF will be designed for continuous operation with backup systems for component malfunction and primary power outage. All critical mechanical components will have duplex or redundant units as backup. In the event of a malfunction, the secondary unit will automatically be started by the system. A standby power generator will provide power in case of a power outage.

13. In the event the backup systems fail, an on-site emergency storage pond will be built to provide storage of the temporary discharge. The basin will be designed to hold a 3-day storage volume of the average daily maximum flow or about 219,000 gallons per day.

14. The Discharger used published data and data from the nearby Tenaya Lodge to characterize the anticipated influent and effluent with and without recycling of effluent for toilet flushing. The RWD characterizes the influent and effluent (discharge) as follows:

Constituent	Supply Water[1]	Influent Concentration	Influent Concentration (with Toilet Return)	Effluent Concentration
Biochemical Oxygen Demand	0	450	---	10
Suspended Solids	0	600	---	10
Total Dissolved Solids	110	385	503	385/503
Specific Conductivity	160 umhos/cm	370 umhos/cm	---	500 umhos/cm + source water
Calcium	20	35	---	---
Magnesium	4	14	---	---
Sodium	8	78	108	78/108
Chloride	1	76	108	76/108
Hardness	65	135	---	---
Total Nitrogen	0	60	---	10/25
Total Phosphorus	0	17	---	12
Potassium	2	12	---	---

1. All units are in milligrams per liter (mg/L) unless noted otherwise.

15. The Discharger proposes to discharge tertiary treated wastewater to a leachfield during the winter months (approximately November through April) and recycle water for landscape irrigation during the summer months (typically from May through October). Recycled water may be used for toilet flushing year round. Additionally, recycled water will be used to fill a 510,000 to 750,000 gallon effluent storage tank. The tank allows

wastewater to be applied at controlled rates to the leachfield and spray fields and allows use of wastewater for fire suppression activities.

16. An average of 36 acre-feet per year of effluent will be generated by the proposed Resort. The Resort will use approximately 19 acre feet for landscape irrigation with the other 17 acre feet to be discharged to the proposed leachfield.

17. The proposed leachfield will be at the southwestern corner of the property on a north/northeast-facing slope. The preliminary leachfield design includes about 2,700 feet of trenches that will accept up to 23,500 gpd. The final design has yet to be submitted and will be required as discussed in Provisions H.12 and H.13 of this Order.

18. Tertiary treated wastewater will be used to irrigate approximately 5 acres of landscaped areas as well as forested open space areas. The areas to be irrigated include 1.97 acres of meadow area, 0.57 acres of greenbelts, 2.34 acres of road slopes, 0.25 acres of Motel landscaping, and 0.14 acres of commercial landscaping. A detailed Use Area Management Plan will be included in the Title 22 Engineering Report as required by Provision H.11.a of this Order.

19. For the purposes of this Order, the term “wastewater treatment facility” or “WWTF” shall mean the wastewater collection system and septic tanks, the wastewater treatment system and sludge handling facilities, the recycled water distribution system, any storage facilities, the leachfield, and the landscape irrigation areas.

Site-Specific Conditions

20. The discharge area lies within the San Joaquin Basin, specifically the South Fork of the Merced River Hydrologic Area (No. 537.40) of the San Joaquin Valley, as depicted on interagency hydrologic maps prepared by the California Department of Water Resources (DWR) in Spring 1986. Areal topography indicates that the area consists of a west to east forested secondary canyon with slopes from 15 to 35 percent. The slopes flatten out to a meadow area (Big Meadow), which slopes gently to the east/northeast. The proposed leachfield area is on a north/northeast-facing slope with a slope of approximately 30 percent (about 1,500 feet per mile) that drains to Big Creek along a portion of the eastern property boundary.

21. The community of Fish Camp and the proposed Resort are surrounded by the Sierra National Forest with elevations in the town area ranging from about 4,950 feet to 5,300 feet. The Fish Camp area is characterized by mild summers and wet winters with abundant snowfall. The rainy season generally extends from October through May. Occasional rains occur from June through September, but average rainfall in these months is minimal (less than 0.2 inches in June through August and less than 1 inch in September). Average annual precipitation in the Fish Camp area is about 42 inches per year and the temperatures average between 25 and 78 degrees Fahrenheit.

22. According to the RWD, the Discharger shall design, install, and maintain onsite runoff attenuation facilities capable of reducing 100-year storm runoff events to those that equal the existing runoff for the site (no net increase in runoff). Control measures are to include some or all of the following: sedimentation/detention ponds, silt fences, special inlet structures, and hydroseeding. However, the Discharger has not submitted formal storm water runoff control plans detailing the methods to be employed.

23. Federal Emergency Management Agency (FEMA) flood zone maps for the area have not been published as FEMA has listed the site in an area that has no special flood hazards. FEMA has a "Panel" system that divides the areas covered by the separate maps or panels. The proposed Resort is in an unincorporated portion of Mariposa County in FEMA Panel Number 060634-0016-A. Footnotes to the panel indicate that no panel was printed because there are no special flood hazards in the area.

24. While FEMA maps are not available, the Discharger did assess flood potential from Big Creek, which is present along the eastern boundary of the property. Big Creek is subject to storm overflow of up to ten feet above normal water levels. A stream gauge is operated on Big Creek by the U.S. Forest Service upstream of Fish Camp. Typical stream flow from May to October is between 0.5 to 50 cubic feet per second (cfs) with typical stream flows being less than 20 cfs. Anticipated storm water flows are on the order of 4,000 cfs.

25. A ten-foot storm overflow would be below the proposed elevation of the WWTF, which is proposed at just above 4,980 feet above mean sea level. Calculations by Provost and Pritchard indicate it would require stream flows of 25,000 to 30,000 cfs to inundate the proposed WWTF.

26. Land uses in the Fish Camp area include single and multi-family residential, rural residential, resort commercial, general forest, and native pasture designations. The Fish Camp community is surrounded by National Forest Land with private timber holdings present to the west.

27. Weathering of the granitic bedrock has produced residual soils and decomposed bedrock. Area soils in the forested area are reported by the Forest Service to be of the Chaix-Holland complex. These soils are reported to be well-drained, grayish brown sandy loams with depths of 36 to 66 inches overlying weathered or decomposed bedrock. Percolation testing results in the area of the proposed leachfield ranged from about 6 to 13 minutes per inch. Soils in the area are alluvial deposits that are moderately well drained, brown sandy clay loams and sandy loams. The soils contain rock and gravel sized particles of the decomposed granites. Weathered/decomposed bedrock ranges from 10 to 90 feet deep beneath the proposed Resort area. The thickness of the weathered bedrock in the meadow area is reported to be 10 to 35 feet, with depths of up to 90 feet identified in the sloped areas. Percolation testing results of the weathered/decomposed bedrock exhibits rapid percolation with rates that ranged from 1.2 to 5.2 minutes per inch.

Groundwater Considerations

28. Regional groundwater is contained in fractured bedrock and to a lesser extent in alluvial/weathered bedrock deposits. Seven wells on the subject property tap the fractured bedrock aquifer. Five of these wells (STR-1 through STR-5) tap deeper fractures. Well STR 4 supplements spring water that is currently used to provide water to the residences in the Fish Camp Subdivision Block D, the Post Office, the closed Chevron Gasoline Station, the Keller cabin, and the Winterberg parcel. Well STR 5 will be the water supply for the proposed Resort. Two wells (YACSD 1 and YACSD 2) tap shallower fractures and provide water to the Yosemite Alpine Village Community Service District (YACSD). The YACSD wells were designed to supply water to up to 46 users in the Yosemite Alpine Village Subdivision. The location of these bedrock supply wells are shown on Attachment B, which is attached hereto and made a part of this Order by reference.

Well No.[1]	Well Depth[2]	Production Zones[3]	Cased Depth	DTW[4]	Production Data
STR 1	700’	152’, **562’**	100’	85’	3 – 4 gpm[5]
STR 2	823’	204’, 400’, **823’**	60’	86’	32 gpm[5]
STR 3	1,000’	425’, **750’**	80’	114’	11 gpm[5]
STR 4	950’	125’, **685’**	32’ – 55’	116’	5 gpm[5]
STR 5	525’	370’, **520’**	15 ‘ - 50’	73’	104 gpm[5]
YACSD 1	320’	NA[6]	NA[6]	14’	NA[6]
YACSD 2	230’	NA[6]	NA[6]	6’	NA[6]

1. Well designations: STR is Silvertip Resort. YACSD is Yosemite Alpine Community Services District.
2. All measurements are in feet below the ground surface.
3. Production zones shown in bold are the primary production zones for the well.
4. Depth to water (DTW) data obtained on 3 November 1999.
5. Gallons per minute (gpm).
6. Not available (NA).

29. Quality of the water produced from the fractured bedrock aquifer is excellent and is summarized in the following table.

SilverTip Resort
Bedrock Wells Analytical Data
(Units in milligram per liter unless noted otherwise)

Constituents	STR 2	STR 3	STR 4	STR 5
Calcium	24	21	18	20
Magnesium	5	5	4	3
Sodium	9	8	9	8

SilverTip Resort
Bedrock Wells Analytical Data
(Units in milligram per liter unless noted otherwise)

Bicarbonate	122	116	95	88
Sulfate	2	2	3	2
Chloride	1	1	<1	3
Nitrate	<0.4	<0.4	<0.4	3.5
pH (su)	7.3	7.2	7.0	7.3
Electrical Conductivity (umhos/cm)	193	188	157	161
Total Dissolved Solids	138	113	111	123
Alpha Activity (pico curies per liter)	10	9	10	6

30. Water level measurements shown in the preceding table indicated depths to water in the fractured bedrock wells ranging from six (6) to 116 feet bgs. The water levels in the YACSD wells are significantly less than water levels in the STR wells due to their shallow depth (< 320 feet bgs) when compared to the STR wells. The water levels in the STR wells are 60 to 100 feet deeper than the YACSD wells due to the presence of unfractured bedrock between the shallow and deeper fractures.

31. The resulting groundwater elevations indicate an eastward direction of flow in these wells, but these levels are piezometric surface readings that are above the true groundwater level due to induced pressure from the overlying bedrock. These readings are not indicative of a uniform groundwater table or the direction of groundwater flow. The actual depth to the water production zones is much greater than the piezometric groundwater levels as shown in the previous table. Groundwater flow and movement in igneous bedrock environments is controlled primarily by flow through fractures and the direction is dictated by the orientation of the fractures in the region and by locations of groundwater recharge and discharge .

32. Groundwater is also present beneath the proposed Resort in weathered bedrock and alluvial deposits overlying the granitic bedrock aquifer. Four shallow test wells (TW-1 through TW-4) were installed in and around the meadow area in 1988. The wells are reported to be constructed of 8-inch steel casing and the depths of each of the test wells is shown on the following table. Other construction details (screened intervals, filter material, location of seals, etc) are unknown. Three monitoring wells (W-1, W-2, and W-3) were installed in the area of the proposed leachfield in 1998. The approximate location of the wells is shown on Attachment B, which is attached hereto and made a part of this

Order by reference. Depth to water data and the total depth of each well are presented in the following table.

SilverTip Resort
Shallow Groundwater Monitoring Well Details

Well Number	Total Well Depth[1]	Depth to Water[2]
W-1	22’	Dry
W-2	50’	47.2’
W-3	51’	41.7’
TW-1	7’	NA
TW-2	29’	NA
TW-3	35’	NA
TW-4	54’	NA

1. Well depths reported in approximate feet below the ground surface.
2. Depth to water reported in feet below the top of the well casing.

33. Available depth to groundwater data indicates the depth is variable beneath the area of the proposed leachfield. Historical data indicate rises during precipitation and snowmelt periods, and declines during the summer. Well W-1 has generally been dry since it was installed with some water (less than 2 feet standing in the well) in 2000. Well W-2 has had depths ranging from about 33.5 to 45 feet bgs. Well W-3 had had depths ranging between about 27 and 39 feet bgs. No depth to water data was available for the test wells in the meadow area.

34. A sample of the shallow groundwater was collected from Well W-3 on 19 November 2004 and the analytical results are included in the following table.

SilverTip Resort
Shallow Alluvial/Weathered Zone Aquifer Analytical Data

Constituent	Well W-3
Boron	< 0.1 milligrams per liter (mg/L)
Copper	< 10 micrograms per liter (ug/L)
Iron	< 50 ug/L
Manganese	< 10 ug/L
Zinc	80 ug/L
Calcium	7 milligrams per liter (mg/L)
Magnesium	< 1.0 mg/L
Sodium	5 mg/L

SilverTip Resort
Shallow Alluvial/Weathered Zone Aquifer Analytical Data

Bicarbonate	40 mg/L
Sulfate	< 1.0 mg/L
Chloride	< 1.0 mg/L
Nitrate	<0.4 mg/L
pH	5.9 standard pH units
Electrical Conductivity	68 micromhos per centimeter
Total Dissolved Solids	50 mg/L

35. The existing shallow groundwater monitoring network will require additional monitoring wells to adequately monitor shallow groundwater in the area of the proposed Resort. Wells W-1, W-2, and W-3 are all within the proposed leachfield area and may provide useful information regarding mounding in the vicinity of the leachfield. However, during the November 2004 sampling event, well W-1 was dry and well W-2 had an obstruction that would not allow for the collection of a sample. Well W-3 was the only well from which a sample could be collected. Well construction details are not available for test wells TW-1 through TW-4, but it is unlikely these wells will meet the current State requirements for monitoring wells. Four to five monitoring wells will likely be required to adequately monitor shallow groundwater near the proposed leachfield and the spray field application areas. The Discharger's groundwater consultant, Kenneth Schmidt and Associates, indicates three additional wells would be required, one in the interpreted upgradient direction (south/southeast) of the proposed leachfield, and two wells downgradient of the proposed leachfield. Additionally, one well should be placed in the meadow area below the proposed spray field. These wells will provide upgradient and downgradient coverage of water quality with respect to the leachfield and spray field application areas.

Surface Water Considerations

36. Big Creek, a perennial stream that is a tributary to the South Fork of the Merced River is present along the eastern property boundary. As discussed in Finding 24, the typical flow is 0.5 to 50 cfs, with storm flows of 4,000 cfs.

37. Groundwater quality in Big Creek is excellent (high quality). Samples collected In November 1999 provide the following results.

SilverTip Resort
Big Creek Analytical Data

Constituent	Units	Analytical Results
Calcium	Milligrams per liter (mg/L)	17
Magnesium	mg/L	2.2

Constituent	Units	Analytical Results
Sodium	mg/L	3.1
Potassium	mg/L	1.1
Hydroxide	mg/L	Not detected (ND)
Carbonate	mg/L	ND
Bicarbonate	mg/L	70
Sulfate	mg/L	ND
Chloride	mg/L	1.7
Nitrate	mg/L	ND
Ammonia as Nitrogen	mg/L	0.02
Organic Nitrogen	mg/L	ND
pH	Standard pH Units	7.59
Specific Conductivity (EC)	micromhos per centimeter	119
Total Dissolved Solids (TDS)	mg/L	87

Basin Plan, Beneficial Uses, and Regulatory Considerations

38. The Facility and WWTF are in the San Joaquin Basin. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.

39. The Basin Plan incorporates State Water Resources Control Board (hereafter State Water Board) Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California* (State "Antidegradation Policy" or Resolution 68-16).

40. The Basin Plan establishes a policy to implement State Water Board Resolution No. 77-1, *Policy with Respect to Water Reclamation in California,* which encourages the use of recycled water to replace or supplement the use of freshwater of better quality water. The Regional Water Board's Wastewater Reuse Policy identifies possible reuse options as including irrigation and groundwater recharge.

41. Surface drainage is to Big Creek, which is tributary to the South Fork of the Merced River. The beneficial uses of Merced River above McClure Lake are municipal and domestic supply; agricultural supply (irrigation); industrial supply (power generation), water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; and wildlife habitat.

42. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

43. The Basin Plan includes a water quality objective for Chemical Constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in the following provisions of Title 22, California Code of Regulations: Table 64431-A (Inorganic Chemicals) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) of Section 64449, and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

44. Title 22 in Table 64449-B establishes recommended, upper, and short term ranges for EC, TDS, chloride, and sulfate. The recommended and upper ranges are 900 and 1,600 uS/cm for EC, 500 and 1,000 mg/L for TDS, and 250 and 500 mg/L for chloride and for sulfate, respectively.

45. The *Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition,* contains salt management requirements that have been successfully implemented for several decades. Widespread and long-term compliance with these requirements justify them as appropriate best practicable control measures for salinity applicable to discharges in the Sacramento River and San Joaquin River Basins. The Tulare Lake Basin Plan establishes several salt management requirements, including:

    a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.

    b. Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.

CEQA

46. Mariposa County, as CEQA Lead Agency, circulated a Draft Environmental Impact Report (EIR) in July 2001 for public review and comment. Following the receipt of comments from various agencies and interested parties, the county circulated a Revised Draft EIR in September 2002. The County considered potential environmental impacts, including impacts to groundwater and surface water, in the Draft EIR and Revised Draft EIR.

Regional Water Board Staff reviewed and commented on the Draft and Revised Draft EIRs.

47. As a comment to the Draft EIR, Regional Water Board staff requested the Discharger prepare an Antidegradation Analysis to satisfy the provisions of Resolution 68-16 and the federal antidegradation policy as prescribed by 40 CFR 131.12. The Discharger submitted an *Antidegradation Analysis for Silvertip Resort Village Wastewater* prepared in October 1999 and a *Final Antidegradation Analysis* was presented in September 2001. To address further comments to the Draft EIR, the Discharger submitted a *Hydrogeologic Conditions and Wastewater Management Plan* report in March 2002.

48. Based on the analyses in the Draft EIR and Revised Draft EIR, including the documents described in Finding 47 and comments from Regional Water Board staff, the County determined that the following potentially significant impacts relative to the WWTF exist. The Final EIR determined that the impacts would be reduced to less than significant given the following mitigation measures, which are followed by the applicable waste discharge requirements in brackets:

Impact	Mitigation Measures
Reduction in water quality of Big Creek due to erosion.	Install and maintain pollution control measures during construction and operation. [Discharge Specification B.7; Provision H.15]
Degradation of water quality in surface water due to discharge of treated effluent.	Treat to Title 22 standards, including disinfection, denitrification, oxidation, clarification, coagulation, and filtration suitable for unrestricted irrigation (i.e., landscape). [Discharge Specification B.6; Effluent Limitations C.3 through C.5; Provision H.11.a] In order to prevent overloading of the proposed leachfield, the Discharger shall base the winter subsurface disposal capacity of the leachfield on the maximum monthly average flow during the wet season (October–May). [Provision H.12] Design leaching trenches to prevent fine soil migration into drainage rock. A minimum 100 percent replacement area will be set aside in case of failure of the proposed subsurface system. [Provision H.12]

Impact	Mitigation Measures
	Investigate the recycling of treated effluent for toilet flushing and fire suppression systems. [Provision H.11.d]
Degradation of water quality in groundwater due to discharge of treated effluent.	In addition to the above, monitor groundwater quality [Provisions H.2 and H.11.b] Construct supply wells in accordance with minimum setbacks in the Uniform Plumbing Code and DWR. Construct wells downgradient of the disposal system with sanitary seals extending to unfractured bedrock (or at least 50 feet). Remove existing septic systems on the project site. [Provision H.1 (Standard Provision C.6); Provision H.12. In addition, County Well ordinances and permitting requirements will be enforced by the County Building Department]
Degradation of water quality in surface water due to runoff from parking lots, roads, snow removal and deicing, etc.	Install and maintain pollution control measures, including use of Best Management Practices (BMPs) in accordance with a written Storm Water Pollution Prevention Plan. [Discharge Specification B.7; Provision H.15] Limit the change in turbidity of Big Creek to Basin Plan limits. Monitor turbidity in Big Creek upstream and downstream of the point of discharge. [Discharge Specification B.7; Provisions H.2 and H.15] Monitor any constructed storm water conveyance channels for sediment annually and certify they do not pose a threat to Big Creek. Submit a work plan if turbidity exceeds limits. [Discharge Specification B.7; Provisions H.2 and H.15]
Runoff exceeding capacity of stormwater drainage system.	Design, install, and maintain runoff attenuation facilities to reduce the runoff generated by a 100-year event to those rates

Impact	Mitigation Measures
	currently generated by the site. [In accordance with the EIR, compliance with this measure is to be determined by the Mariposa County Public Works Department. Also applicable is Discharge Specification B.7].
Swimming Pool drainage adversely affecting operation of the WWTF	Drain the indoor and outdoor pools in the fall on an alternating annual schedule. Dechlorinate drain water and meter into the plant over a one to two week period. Mix and dilute pool drain water with influent in an equalization tank. [Provision H.14].
Lack of disposal capacity for sludge or biosolids generated by the WWTF	Haul all sludge or biosolids to a permitted biosolids disposal or reuse site. [Sludge Specifications E.1 through E.5]
Odors from the treatment or emergency storage of wastewater.	Equip the WWTF with odor containment, ventilation, and scrubbing systems. Equip emergency storage ponds with aerators and washdown facilities. [In accordance with the EIR, compliance with this measure is to be determined by the Mariposa County Air Pollution Control District and the County Health Department. Also applicable are Discharge Specification B.4 and Provision H.1 (Standard Provision A.11)]

49. On 2 December 2003, Mariposa County adopted a Statement of Overriding Considerations that concluded that the benefits of the project were sufficient to override any unmitigated impacts. The overriding considerations include: the high quality, historic architectural style of the buildings; reinforcement of Fish Camp as a community center in furtherance of the County General Plan; lack of feasible alternative sites; generation of substantial revenue; and evidence that market forces support such a project.

50. In December 2003, Mariposa County certified a Final EIR, including the mitigation measures described in Finding 48 and the Statement of Overriding Considerations described in Finding 49. Mariposa County found that any degradation that would occur is justified by the benefits of the project, and therefore, in the best interest of the people of

the State. The Regional Water Board reviewed the Final EIR and the mitigation measures it included. The Regional Water Board, as a public agency responsible for protecting surface water and groundwater, must consider the environmental effects to water quality identified in the EIR and adopt measures to mitigate those effects. The Final EIR adequately describes the potential degradation of surface water and groundwater and includes adequate mitigation measures, which are incorporated into this Order, to protect the beneficial uses of those waters.

Antidegradation Analysis

51. State Water Resources Control Board Resolution No. 68-16 prohibits degradation of groundwater unless it has been shown that:

    a. The degradation is consistent with the maximum benefit to the people of the State;

    b. The degradation will not unreasonably affect present and anticipated future beneficial uses;

    c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and

    d. The discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation.

52. The economic prosperity of local communities is of maximum benefit to the people of California. As described in Mariposa's Statement of Overriding Considerations, the Resort will add high quality commercial, lodging, and residential uses to the area; will diversify the County's economy and develop additional tourist facilities; and will generate substantial revenues in excess of service costs.

53. This Order establishes terms and conditions of discharge, including relevant mitigation measures described in the Final EIR, to ensure the discharge does not unreasonably affect present and anticipated beneficial uses. This Order includes groundwater limitations that apply water quality objectives established in the Basin Plan to protect the beneficial uses of groundwater. The Basin Plan includes narrative water quality objectives stating that groundwater shall not contain adverse taste or odor producing substances, or contain toxic substances that adversely affect plant life. A specific groundwater limit for EC was not included as the effluent limit of 500 + source water will result in a discharge that is anticipated to be below 700 umhos/cm, which is is less than the lowest taste and odor threshold in Title 22 for drinking water (900 umhos/cm) and lower than is necessary to grow the most salt sensitive crops (700 umhos/cm).

54. The WWTF will be a state-of-the-art system and represents the best practicable treatment available. Proposed best practicable treatment or control (BPTC) measures include:

a. Alarm and automatic flow diversion systems to prevent system bypass or overflow;

b. Tertiary treatment of the wastewater;

c. A nitrogen removal treatment process;

d. Microfiltration of treated effluent;

e. UV Disinfection of treated effluent;

f. Recycled water application at plant uptake (for nitrogen and water) rates;

g. Appropriate biosolids storage and disposal practices;

h. An Operation and Maintenance (O&M) manual; and

i, A minimum Grade III Certified Operator to insure proper operation and maintenance.

55. As detailed above, the discharge as authorized herein is consistent with Resolution 68-16 because it is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated future beneficial uses, will not result in water quality less than that prescribed in state and regional policies, and employs BPTC.

Water Recycling Criteria

56. Domestic wastewater contains pathogens harmful to humans that are typically measured by means of total or fecal coliform, as indicator organisms. California Department of Health Services (DHS), which has primary statewide responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations, Section 60301 et seq., (hereafter Title 22) for the use of recycled water and has developed guidelines for specific uses. Revisions of the water recycling criteria in Title 22 became effective on 2 December 2000. The revised Title 22 expands the range of allowable uses of recycled water, establishes criteria for these uses, and clarifies some of the ambiguity contained in the previous regulations.

57. The 1988 Memorandum of Agreement (MOA) between DHS and the State Water Resources Control Board on the use of recycled water establishes basic principles relative to the agencies and the regional water boards. Under terms of the MOA, the Board implements Title 22 and DHS recommendations for the protection of public health. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.

58. Title 22 requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards. The

Discharger has not submitted an engineering report to DHS pursuant to Title 22 for on-site water reclamation operations.

59. State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water, and the Water Recycling Law (California Water Code Section 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.

Other Regulatory Considerations

60. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in Title 40, Code of Federal Regulations, Part 503, Standards for the Use or Disposal of Sewage Sludge, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA. The Report of Waste Discharge states that all biosolids will be hauled to a separate permitted facility.

61. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells, as described in the *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards*: *State of California Bulletin 94-81 (December 1981).* These standards and any more stringent standards adopted by the state or county pursuant to California Water Code (CWC) Section 13801, apply to all monitoring wells.

62. Federal Regulations require the Discharger to comply with National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 for Discharges of Storm Water Associated with Construction Activity during construction of the Resort. Before construction begins, the Discharger must submit a fee and Notice of Intent (NOI) to comply with the permit, including a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain, at a minimum, a description of measures to prevent or eliminate unauthorized non-storm water discharges and both temporary (e.g., fiber rolls, silt fences, etc.) and permanent (e.g., vegetated swales, riparian buffers, etc.) best management practices (BMPs) to prevent pollutants from discharging with storm water.

63. The discharge authorized herein and the treatment and the storage facilities associated with the discharge, except for discharges to land and residual sludge and solid waste, are exempt from the requirements of Title 27. The exemption, pursuant to Title 27 section 220090(a), is based on the following:

    a. The waste consists primarily of domestic sewage and treated effluent;

    b. The waste discharge requirements are consistent with water quality objectives; and

c. The treatment and storage facilities described herein are comparable in function to a municipal wastewater treatment plant.

General Findings

64. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

65. The Regional Water Board will review this Order periodically and will revise requirements when necessary.

66. CWC Section 13267(b) states that: "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."

67. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2007-0140 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the Facility that discharges the waste subject to this Order.

Public Notice

68. All of the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

69. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

70. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the CWC, Pacific US Real Estate Group and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Bypass or overflow of untreated or partially treated waste, except as allowed by Standard Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.

3. Discharge of waste classified as 'hazardous', as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or 'designated' as defined in Section 13173 of the CWC, is prohibited.

4. The discharge of any wastewater other than that from domestic sources is prohibited.

B. Discharge Specifications

1. The discharge flow shall not exceed:

   a. A monthly average discharge flow of 33,500 gpd ; and

   b. A peak daily discharge flow of 74,000 gpd .

2. Wastewater treatment and use of recycled water shall not cause pollution or a nuisance as defined by Section 13050 of the CWC.

3. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes a violation of the Groundwater Limitations.

4. Objectionable odors shall not be perceivable beyond the limits of the Facility property at an intensity that creates or threatens to create nuisance conditions.

5. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge. The wastewater shall be filtered at all times.

6. The Discharger shall treat the wastewater such that it complies with Title 22 CCR, Section 60301.230 ("Disinfected Tertiary Recycled Water").

7. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

8. Depth to the anticipated highest level of groundwater below the bottom of the leachfield shall not be less than five feet.

9. Freeboard in the emergency storage pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.

C. Effluent Limitations:

1. The discharge shall not exceed the following effluent limitations:

Constituents[1]	Units[2]	Monthly Average	Daily Maximum	Daily Minimum
BOD_5	mg/L	10	20	---
TSS	mg/L	10	20	---
pH	s.u.	---	6.5	8.5
Fats, Oil, and Grease	mg/L	5	---	---
Nitrate as Nitrogen	mg/L	10	---	---

[1] Biochemical oxygen demand (BOD_5), total suspended solids (TSS).

[2] milligrams per liter (mg/L), standard pH Units (su), nephelometric turbidity units (ntu), micromhos per centimeter (umhos/cm), micrograms per liter (ug/L), most probable number per 100 milliliters (MPN/100 mL).

2. The monthly average EC of the discharge, shall not exceed the flow-weighted average EC of the source water plus 500 umhos/cm, or a maximum of 1,000 umhos/cm, whichever is less. The flow-weighted average for the source water shall be a moving average for the most recent twelve months.

3. Effluent discharged from the WWTF shall comply with the following limits for total coliform organisms:

   a. The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which the analyses have been completed.

   b. The number of total coliform bacteria shall not exceed an MPN of 23 milliliters in more than one sample in any 30-day period.

   c. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

4. Effluent discharged from the WWTF is to be tertiary treated and micro filtered prior to discharge to the leachfield and/or spray fields. Title 22 requires micro filtered effluent to not exceed any of the following with regards to turbidity:

   a. An average of 0.2 NTU more than 5 percent of the time within a 24-hour period.

   b. 0.5 NTU at any time.

5. Should the discharger choose to coagulate the wastewater and pass it through undisturbed soil or a filter media, Title 22 requires the effluent to not exceed any of the following with regards to turbidity:

   a. An average of 2.0 NTU within a 24-hour period.

   b. 5.0 NTU more than 5 percent of the time within a 24-hour period.

   c. 10.0 NTU at any time.

D. Recycling Specifications

Application of recycled water shall be confined to the designated application areas as defined in this Order.

1. Recycled water shall be used in compliance with Title 22, Division 4, Chapter 3, Article 3, *Uses of Recycled Water.*

2. Public contact with recycled water shall be controlled using signs and/or other appropriate means. Signs with proper wording (shown below) of a size no less than four inches high by eight inches wide shall be placed at all areas of public access and around the perimeter of all areas used for effluent disposal or conveyance to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in Attachment D, a part of this Order, and present the following wording:

   "RECYCLED WATER—DO NOT DRINK"

   "AGUA DE DESPERDICIO RECLAMADA—POR FAVOR NO TOME"

3. Recycled water controllers, valves, and similar appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles or locking mechanisms to prevent public access or tampering. Quick couplers, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibs shall not be used.

4. The Discharger shall maintain the following setback distances from areas irrigated with recycled water:

Setback Distance (feet)	To
50	Edge of land application area to domestic well
100	Wastewater/recycled water storage reservoir to domestic well
50	Land application areas to surface water

5. No physical connection shall exist between recycled water piping and any domestic water supply or domestic well, or between recycled water piping and any irrigation well that does not have an air gap or reduced pressure principle device.

6. Any irrigation runoff shall be confined to the recycled water use area, and shall not enter any surface water drainage course or stormwater drainage system unless the runoff does not pose a public health threat and is authorized by the regulatory agency.

7. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

8. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

9. Any connection between the recycled water conveyance system and any potable water conveyance system, groundwater supply well, or surface water supply source for the purpose of supplemental water shall be equipped with a DHS-approved backflow prevention device.

10. Application rates for recycled water shall not exceed nitrogen and water uptake rates considering the plant, soil, climate, and irrigation management system.

11. Sprinkler heads shall be of the type approved for recycled water and shall create a minimum amount of mist. Drainage through sprinkler heads is prohibited.

12. Irrigation with recycled water shall not be performed within 24-hours of a forecasted storm, during or within 24 hours after any precipitation event, nor when the ground is saturated.

13. The project shall include a weather station to measure wind velocity and other parameters needed to facilitate best management of recycled water application.

14. Land application areas that are spray irrigated and allow public access shall be irrigated during periods of minimal use (typically between 9 p.m. and 6 a.m.). Consideration shall be given to allow maximum drying time prior to subsequent public use.

15. Areas irrigated with recycled water shall be managed to prevent breeding of mosquitoes. More specifically:

    a. All applied irrigation water must infiltrate completely within a 48-hour period.

    b. Tailwater ditches not serving as wildlife habitat shall be maintained free of emergent, marginal, and floating vegetation.

    c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

16. If recycled water is used for construction purposes, it shall comply with the most current edition of *Guidelines for Use of Reclaimed Water for Construction Purposes*. Other uses of recycled water not specifically authorized herein shall be subject to the approval of the Executive Officer and shall comply with Title 22.

E. Sludge Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Residual sludge means sludge that will not be subject to further treatment at the WWTF.

1. Treatment and storage of sludge shall be confined to the treatment facility property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.

2. Sludge shall be removed from the septic tanks and the filtration devices as needed to ensure optimal operation and compliance with this Order.

3. Sludge 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 a regional water quality control board will satisfy this specification.

4. Any storage of solids and sludge on the Discharger's property shall be temporary and controlled and contained in accordance with the Discharger's approved Waste Management Plan.

5. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

F. Septic Tank Specifications

1. The Discharger shall inspect each septic tank at least annually. Properly maintain the septic tanks, including pumping a tank when any one of the following conditions exist, or can be reasonably projected to occur before the next inspection of a tank:

   a. The combined thickness of sludge and scum exceeds one third of the tank depth of the first compartment;

   b. The scum layer is within three inches of the outlet device; or

   c. The sludge layer is within eight inches of the outlet device.

2. The Discharger shall assure that haulers transporting solids off site for treatment, storage, use, or disposal are duly authorized to provide this service and take all necessary measures to keep the solids contained.

G. Groundwater Limitations

1. Release of waste constituents from any treatment or storage component associated with the WWTF shall not cause or contribute to groundwater:

   a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality (as determined in Finding 34 and updated as appropriate as a result of ongoing monitoring), whichever is greater:

      (i) Nitrate as nitrogen of 10 mg/L.

      (ii) Total coliform organisms of 2.2 MPN/100 mL.

      (iii) For constituents identified in Title 22, the MCLs quantified therein.

   b. Taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

H. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions(s).

2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2007-0140, which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.

3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.

4. The Discharger shall not allow pollutant-free wastewater to be discharged into the Facility collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.

5. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.

6. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with

the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Regional Water Board office.

9. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

10. The Discharger shall submit the technical reports and work plans required by this Order for Regional Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.

11. All of the following reports shall be submitted pursuant to Section 13267 of the CWC and shall be prepared as described in Provision H.6.

    a. By **30 April 2008,** the Discharger shall submit a Title 22 Engineering Report for the proposed Resort project in accordance with CCR Title 22 Section 60323. The report shall include a detailed Use Area Management Plan or the Discharger shall submit a Use Area Management Plan separately by the indicated date.

    b. By **1 March 2008,** the Discharger shall submit a Groundwater Water Monitoring Workplan prepared in accordance with, and including the items listed in Attachment E: *"Standard Requirements for Monitoring Well Installation Workplans and Reports."* The Workplan shall describe a proposed expansion to the existing monitoring well network specifically designed to ensure that background water quality is adequately characterized and any potential water quality impacts from discharge are detected. The system shall be designed to yield samples representative of the uppermost first encountered groundwater as well as samples representative of groundwater quality in the deeper fractured

bedrock aquifer. The Discharger shall include a discussion of the rationale of well placement in the requested Work Plan.

c. By **1 March 2008,** the Discharger shall submit a Surface Water Monitoring Workplan (can be combined with the Groundwater Workplan requested above). The workplan shall include the following surface water sampling locations:

   i. Seasonal seep sampling locations for the groundwater seeps located below the proposed leachfield;

   ii. Sample collection locations on the intermittent stream that discharges to Big Creek, at a point where the creek enters the subject property and just upstream from the discharge point into Big Creek location.

   iii. Sample collection locations on Big Creek, upgradient of the proposed Resort, adjacent to the proposed Resort, and downgradient of the proposed Resort.

d. By **30 April 2008**, the Discharger shall submit a technical report assessing the potential use of treated effluent for toilet flushing and fire suppression purposes.

12. The Discharger shall design the leachfield winter disposal capacity based on the maximum monthly average flow during the wet season (October through May) and shall design the leaching trenches to prevent fine soil migration into the underlying drainage rock. Leachfield design shall include a 100 percent replacement area. All existing septic systems at the project site shall be properly abandoned prior to construction of the Resort.

13. The Discharger shall design the leachfield so that the separation between the leachfield and nearest well (YACAD-2) is maximized and so that treated effluent is delivered to the furthest (western) end of the leachfield first and spread from that point.

14. The Discharger shall drain the two proposed swimming pools in the fall of alternate years after the high occupancy season when excess capacity exists in the WWTF. The drainage shall be metered into the WWTF over a one or two week period into a flow equalization basin/tank to allow for dilution and mixing.

15. At least **90 days prior to** any construction activity at the Resort, the Discharger shall submit a Notice of Intent (NOI) to comply with NPDES General Permit No. CAS000002 for Discharges of Storm Water Associated with Construction Activity. The NOI shall include a site map, the appropriate fee to the State Water Resources Control Board; and a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain, at a minimum, all items listed in Section A of the General Permit including proposed measures to prevent or eliminate unauthorized non-

storm water discharges, and proposed temporary and permanent (i.e., post-construction) best management practices (BMPs) to prevent pollutants from discharging with storm water during construction and operation of the Resort.

16. If the Regional Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

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 2007.

PAMELA C. CREEDON, Executive Officer

Order Attachments:

See next page.

Order Attachments:

Monitoring and Reporting Program No. R5-2007-0140
A Discharge Vicinity Map
B Facility Site Map
C Wastewater Flow Generation Diagram
D International Symbol for Recycled Water
E *Standard Monitoring Well Provisions for Waste Discharge Requirements*
Information Sheet
Standard Provisions (1 March 1991)

jsp/dkp 5 October 2007

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0140
FOR
PACIFIC US REAL ESTATE
SILVERTIP RESORT VILLAGE
WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Regional Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Regional Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991. The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Water Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:
1. the operator is trained in the proper use of the instrument;
2. the instruments are calibrated prior to each use;
3. instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. field calibration reports are submitted as described in the “Reporting” section of this MRP.

In addition to details specified in Standard Provision, Provisions for Monitoring C.3, records of monitoring information shall also include the following:
1. Method detection limit (MDL);
2. Reporting limit (RL) (i.e., a practical quantitation limit or PQL); and
3. Documentation of cation/anion balance for general minerals analysis of supply water, and groundwater samples.

All laboratory results shall be reported down to the MDL. Non-detect results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods, shall be flagged as estimated.

All analyses shall be performed in accordance with the latest edition of *Guidelines Establishing Test Procedures for Analysis of Pollutants*, promulgated by EPA (40 CFR 136) or other procedures approved by the Executive Officer, provided the methods have method detection limits equal to or lower than the analytical methods specified in this

MRP. In reporting data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with EPA's Guidelines. Analyses may also comply with the methods and holding times specified in: *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, 1983); *Methods for Determination of Inorganic Substance in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and Wastewater,* 20th Edition (WEF, APHA, AWWA); and *Soil, Plant and Water Reference Methods for the Western Region*, 2003, 2nd Edition, 2003.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

INFLUENT MONITORING

The Discharger shall collect influent samples at the inlet to the treatment facility prior to any treatment of waste. Time of a grab sample shall be recorded. Influent monitoring shall include at least the following:

Constituent	Units	Type of Sample	Sampling Frequency
Flow	mgd	Continuous	Daily[1]
Monthly Average Flow	mgd	Computed	Monthly
BOD_5[2]	mg/L	8-hr Composite[3]	Weekly
Total Suspended Solids	mg/L	8-hr Composite[3]	Weekly

[1] Sample frequencies referenced hereafter in this program as daily shall not include weekends or holidays.

[2] Five-day, 20°C biochemical oxygen demand

[3] 8-hour composite sampling as referred to in this program shall be flow-proportioned

EFFLUENT MONITORING

The Discharger shall collect effluent samples at a point in the system following treatment and before discharge to the leachfield or spray fields. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency[1]
Turbidity	ntu	Flow	Continuous
Total Coliform Organisms	MPN/100 mL	Grab	Daily/Weekly[2, 3]
pH	pH Units	Grab	Weekly
BOD:			
Concentration	mg/L	8-hr Composite	Weekly

Monthly Average	mg/L	Calculated	Monthly
TSS:			
Concentration	mg/L	8-hr Composite[4]	Weekly
Monthly Average	mg/L	Calculated	Monthly
Salinity:			
EC[5]	µmhos/cm	8-hr Composite[4]	Monthly
TDS [6]	mg/L	8-hr Composite[4]	Monthly
Chloride	mg/L	8-hr Composite[4]	Monthly
Nitrogen Forms:			
Nitrate (as N)	mg/L	8-hr Composite[4]	Monthly
Total Kjeldahl Nitrogen (TKN)	mg/L	8-hr Composite[4]	Monthly
Total Nitrogen	mg/L	Calculated	Monthly
General Minerals[7]	mg/L	Grab	Annually[6]

1 If results of monitoring a pollutant appear to indicate either the failure to achieve the design treatment goals of the wastewater treatment facility (e.g., the monthly mean for BOD_5 or TSS exceeds 10 mg/L) or potential upset of the treatment process, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such treatment failures, if any, and aid in identification and resolution of the problem.

2 Total coliform sampling shall be performed daily on each day that recycled water is used for irrigation, and weekly when discharged to the leachfield.

3 Total coliform analysis shall be conducted using State Method 9221B.

4 Flow proportioned.

5 Electrical conductivity at 25°C.

6 Total dissolved solids (TDS) referenced hereafter in this program shall be determined using Environmental Protection Agency (EPA) Method No. 160.1 for combined organic and inorganic TDS and EPA Method No. 160.4 for inorganic TDS or equivalent analytical procedures specified in 40 Code of Federal Regulations (CFR) Part 136.

7 General Minerals as referred to in this program shall include the constituents in the General Minerals Analyte List presented below.

8 In October

General Minerals Analyte List[1]

Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	pH
Arsenic	Chloride	Potassium
Bicarbonate (as $CaCO_3$)	Electrical Conductivity (EC)	Sulfate
Boron	Hardness (as $CaCO_3$)	Sodium
Calcium	Magnesium	Total Dissolved Solids

1. General minerals lists may vary, depending on the laboratory, but shall include at least the above analytes and properties. An anion/cation balance demonstrating that analyses are complete shall accompany the results.

RESERVOIR MONITORING

It is not anticipated that the emergency storage reservoir will typically contain treated wastewater, but in the event it is used, the emergency storage reservoir shall be sampled systematically for the parameters specified below.

Constituent/Parameter	Units	Type of Sample	Sampling Frequency
Dissolved Oxygen[1] (DO)	mg/L	Grab[2]	Weekly
Freeboard[3]	feet[4]	Observation	Weekly

1 To address potential for the creation of objectionable odors, the DO content in the upper zone (one foot) of either effluent storage reservoir should not be les than 1.0 mg/L for three consecutive sampling events. If results of monitoring indicate DO concentrations less than 1.0 mg/L, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such low concentrations of DO, if any, and aid in identification and resolution of the problem.

2 Samples shall be collected at a depth of one foot from the storage reservoirs, opposite the inlet, and analyzed for DO. Samples shall be collected between 0700 and 0900 hours.

3 To prevent overtopping, overflows, or levee failures, freeboard in the reservoirs should never be less than two feet in the reservoir (measured vertically).

4 Freeboard shall be monitored to the nearest tenth of a foot.

In addition, the Discharger shall inspect the condition of the emergency storage reservoir once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the storage and disposal pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log during each month shall be submitted along with the monitoring report the following month.

GROUNDWATER MONITORING

The exact number of shallow and deep groundwater monitoring wells to be sampled has yet to be determined. The Discharger shall submit a Groundwater Monitoring Work Plan proposing the wells that will comprise the proposed monitoring well network as required in Provision H 11.b of the proposed WDRs.

Concurrently with groundwater quality sampling, the Discharger shall measure the water level in each well as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundreds above mean sea level). The horizontal geodetic location of each monitoring well shall be provided where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum.

Prior to collecting samples and after measuring the water level, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and

casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

The Discharger shall include in its submittal of groundwater elevation data, a contour map based on said data showing the gradient and direction of groundwater flow under/around the facility and effluent disposal area(s). The groundwater contour map shall also include the location of the monitoring wells and active storage and land disposal areas (i.e., areas receiving treated effluent).

Samples shall be collected from approved monitoring wells at the frequency listed and analyzed for the following constituents:

Constituent/Parameter	Units[1]	Type of Sample	Frequency
Depth to groundwater	Feet[2]	Measured	Quarterly[3]
Groundwater elevation	Feet above mean sea level	Calculated	Quarterly[3]
Nitrogen compounds:			
Nitrate (as NO_3-N)	mg/L	Grab	Quarterly[3]
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly[3]
Total Nitrogen (as N)	mg/L	Calculated	Quarterly[3]
Salinity:			
Electrical Conductivity (EC)	umhos/cm	Grab	Quarterly[3]
Chloride	mg/L	Grab	Quarterly[3]
General Minerals[5]	mg/L	Grab	Quarterly[3,6]

1. Milligrams per liter (mg/L), micromhos per centimeter (umhos/cm).
2. Reported in feet below the ground surface to the nearest hundredth of a foot.
3. January, April, July and October.
4. Individual trihalomethane constituent concentrations shall be identified using EPA method No. 8260B or equivalent.
5. General minerals lists may vary, depending on the laboratory, but shall include at least the analytes and properties listed in the General Minerals Analyte List included herein in the Effluent Monitoring section. An anion/cation balance demonstrating that analyses are complete shall accompany the results.
6. Collection of samples for general mineral analysis shall be conducted quarterly for a period of two years to allow for the collection of a statistically viable data set. The frequency shall change to annually (once a year in October) once eight sampling events have been completed and the results reported.

SURFACE WATER MONITORING

The Discharger shall establish surface water sample collection points on Big Creek (upstream and downstream of the proposed Resort) and at the point where the intermittent stream that crosses the site discharges to Big Creek. Samples will be collected during two storm events, weekly from November through June, and monthly from July through October. Samples shall be collected from approved sample collection points at the frequency listed and analyzed for the following constituents:

Constituent/Parameter	Units[1]	Type of Sample	Frequency
Electrical Conductivity	umhos/cm	Grab	See below[2]
Turbidity	ntu	Grab	See below[2]

1. Nephelometric turbidity units (ntu), milligrams per liter (mg/L).
2. From two storm events and at least weekly from November through June, and monthly from July through October.

WATER SUPPLY MONITORING

The proposed source of water for the Resort is well STR5. The supply water shall be monitored as follows:

Constituent	Units	Measurement	Frequency
EC[1]	µmhos/cm	Grab	Quarterly[2]
General Minerals[3]	mg/L	Grab	Annually[4]

1 EC shall be reported as a flow-weighted average from all supply wells/springs. Include copies of supporting calculations with monitoring reports.

2 January, April, July and October.

3 General minerals lists may vary, depending on the laboratory, but shall include at least the analytes and properties listed in the General Minerals Analyte List included herein in the Effluent Monitoring section. An anion/cation balance demonstrating that analyses are complete shall accompany the results.

4 In October.

USE AREA MONITORING

Monitoring of both the leachfield area and sprayfield area shall be conducted daily (when recycled water is being applied) and the results shall be included in an annual monitoring report. The Use Areas shall be visually inspected for evidence of erosion, field saturation, runoff, daylighting of effluent in the leach field area, and/or the presence of nuisance conditions. Effluent analytical monitoring results shall be used in calculations to ascertain loading rates at the application area. Monitoring of the land application areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency
Acreage Applied[1]	Acres	Calculated	Daily[2]
Application Rate[3]	Gal/acre/day	Calculated	Daily[2]
BOD_5 Loading Rate[3]	lbs/acre/day	Calculated[4]	Monthly
Total Nitrogen Loading Rate[3]	lbs/acre/month	Calculated[4]	Monthly

[1] Land application areas shall be clearly identified.

[2] While recycled water is being applied and for at least 48-hours following application.

[3] For each land application area.

[4] BOD_5 and Total Nitrogen loading rates shall be calculated using the daily applied volume of wastewater, daily application area, and a running average of the three most recent results of BOD_5 and Total Nitrogen, which shall also be reported along with supporting calculations.

REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions and Reporting Requirements. Daily, weekly, semi-monthly, and monthly data shall be reported in monthly monitoring reports.

Monitoring data and/or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. When reports contain laboratory analyses performed by the Discharger and the chief plant operator is not in the direct line of supervision of the laboratory, reports must also be signed and certified by the chief of the laboratory.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the discharge monitoring report.

A. Monthly Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly monitoring reports shall be submitted to the Regional Board **by the 1st day of the second month following sampling** (i.e., the January Report is due by 1 March). At a minimum, the reports shall include at the minimum:

1. Results of influent, effluent, and use area (land application) monitoring;

2. Calculated Monthly Average Daily Flow;

3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;

4. Copies of laboratory analytical reports; and

5. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Reports

***Wastewater**:* Daily, weekly, monthly, and quarterly monitoring data shall be reported in quarterly monitoring reports. Quarterly monitoring reports shall be submitted to the Regional Water Board **by the 1st day of the second month after the calendar quarter** (i.e., the 1st Quarter Report is due by 1 May, 2nd Quarter Report is due by 1 August, and the 3rd Quarter Report is due 1 November). The monthly reports required on 1 May, 1 August, and 1 November shall be combined with the quarterly report for ease of submittal. Quarterly monitoring reports shall include all monitoring data required in the monthly monitoring schedule, and the data from quarterly effluent and water supply monitoring events.

Groundwater and Surface Water: Quarterly groundwater and surface water monitoring data shall be reported in quarterly monitoring reports and submitted to the Regional Water Board as detailed in the previous section. Quarterly monitoring reports shall include all monitoring data required from quarterly monitoring events. The quarterly monitoring reports shall contain:

1. Quarterly groundwater contour maps;

2. Graphs of the laboratory analytical data for all samples taken from each well/sample location within at least the previous five calendar years. Each such graph shall plot over time for a given monitoring well the concentration of one or more waste constituents; and

All monitoring analytical data obtained during the quarter presented in tabular form and included with previous data obtained for the given well/sampling location.

C. Annual Reports

Wastewater: An Annual Report shall be prepared as a fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule plus the results of any annually sampled constituents (general minerals, selected metals, etc). The Annual Report shall be submitted to the Regional Board **by 1 February of the year following the year the samples**

were collected. In addition to the data normally presented, the Annual Report shall include the following:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal;

2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations;

3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (standard Provision C.4);

4. A statement whether the current operation and maintenance manual, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy;

5. The results of an annual evaluation conducted pursuant to Standard Provisions E.4 and a figure depicting monthly average discharge flow for the previous five calendar years;

6. The most recent water supply report including laboratory data;

7. A summary of sludge monitoring, including:

    a. Annual sludge production in dry tons and percent solids;

    b. A schematic diagram showing sludge handling facilities and solids flow diagram; and

    c. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of sludge production disposed of by each method.

        i. For **landfill disposal**, include (a) the Order numbers that regulate the landfill(s) used, (b) the present classifications of the landfill(s) used, and (c) the names and locations of the facilities receiving the sludge.
        ii. For **land application**, include: (a) the locations of the site(s), and (b) the Order number of any WDRs that regulates the site(s).
        iii. For **incineration**, include: (a) the names and location of the site(s) where sludge incineration occurs, (b) the Order numbers

of WDRs that regulate the site(s), (c) the disposal method of ash, and (d) the names and locations of facilities receiving ash (if applicable); and

iv. For **composting**, include: (a) the location of the site(s), and (b) the order numbers of any WDRs that regulate the site(s).

8. A summary of all recycled water operations for the previous year (i.e., from October through September). The summary shall discuss total monthly water application; total wastewater recycled annually; total nutrient loading annually from applied wastewater, biosolids, and chemical fertilizers; and total estimated amount of nutrients removed through crop harvest. The summary shall also review the Use Area Management Plan and make recommendations regarding continuation or modification of the plan. In short, the summary shall present a mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations.

9. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

10. A statement regarding whether the current operation and maintenance manual, and contingency plan, reflect the groundwater cleanup system as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.

Groundwater and Surface Water: An Annual Monitoring Report shall be prepared as a fourth quarter monitoring report. The Annual Monitoring Report will include all groundwater and surface water monitoring data required in the monthly/quarterly groundwater monitoring schedule plus the results of any annually sampled constituents (general minerals, selected metals, etc). The Annual Monitoring Report shall be submitted to the Regional Board **by 1 February of the year following the year the samples were collected.** In addition to the data normally presented in the quarterly monitoring reports, the Annual Report shall include the following:

1. Quarterly groundwater contour maps from the previous four quarters;

2. Graphs of the analytical data for all samples collected from each monitoring well for at least five calender years. Each such graph shall plot over time for a given monitoring well the concentration of one or more waste constituents specified herein and selected in concurrence with Regional Water Board staff. Graphs shall be plotted at a scale appropriate to show trends or variations in water quality, and shall plot each datum, rather than plotting mean values.

3. All monitoring data obtained during the previous monitring events for at least the last five calendar years.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

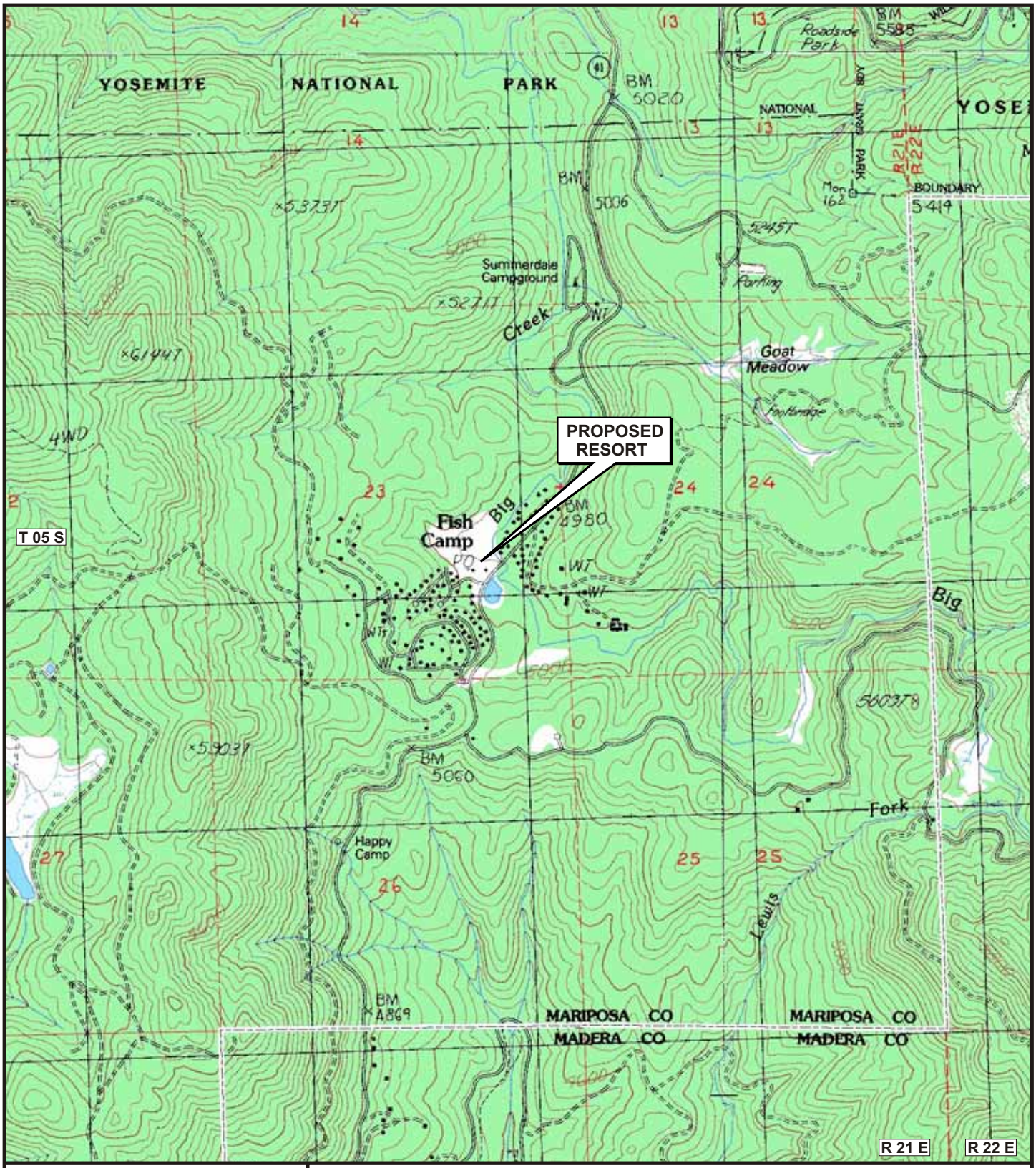
A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____26 October 2007_____
(Date)

jsp/DKP/kes 10/05/07



Map Source:
FISH CAMP 7.5 Minute USGS Quadrangle
Section 23, T05S, R21E, MDB&M

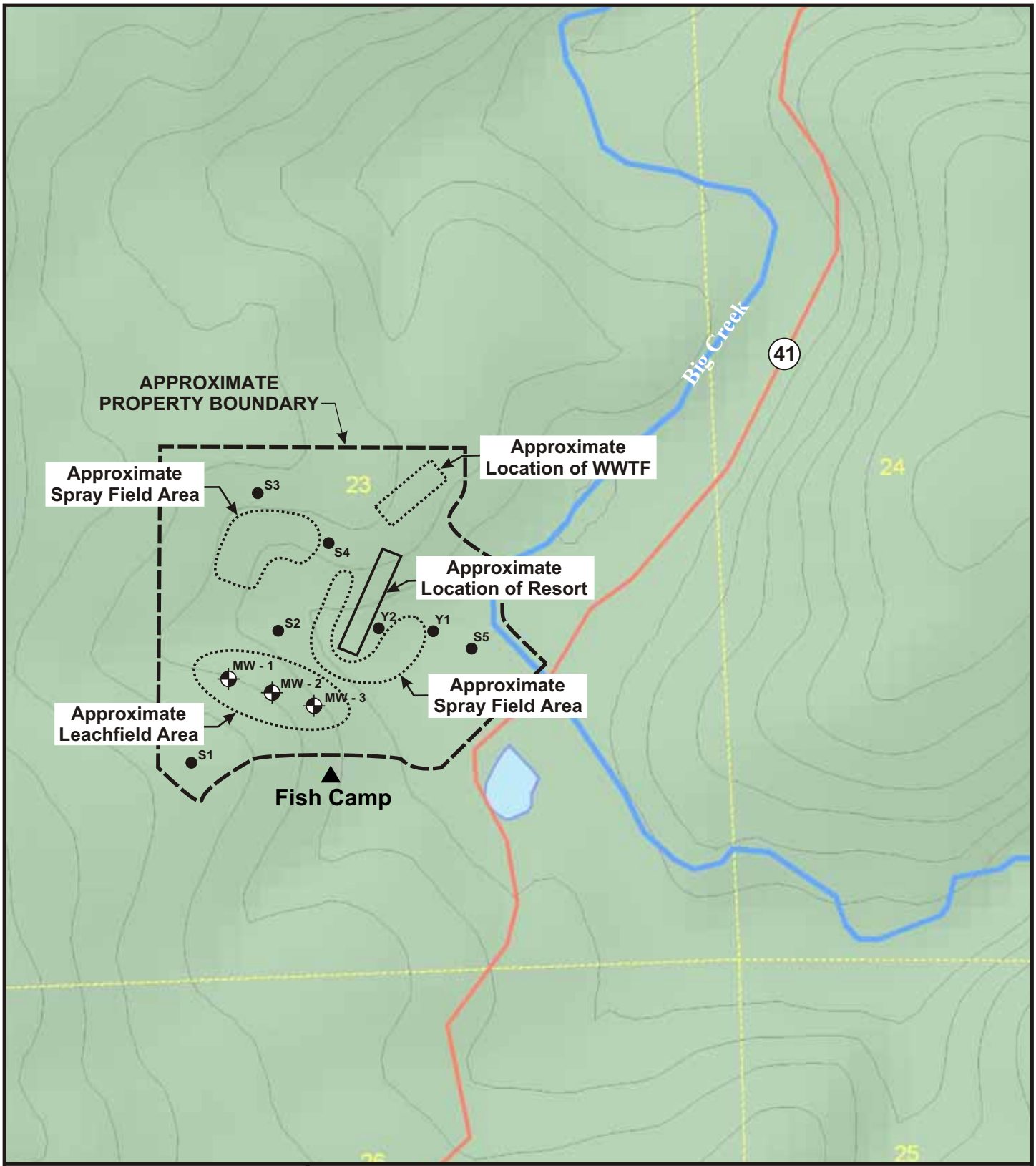
SCALE
1 INCH = 2,000 FEET

SITE LOCATION MAP

ORDER NO. R5 -2007-0140

WASTE DISCHARGE REQUIREMENTS
FOR
PACIFIC US REAL ESTATE GROUP
SILVER TIP RESORT VILLAGE
MARIPOSA COUNTY

ATTACHMENT A



LEGEND

Note: All well locations and resort features shown are approximate.

MW - 1 Monitoring Well

S1 Supply Well

SCALE IN FEET

250 0 250 500

SITE PLAN MAP

ORDER NO. R5 -2007-0140

WASTE DISCHARGE REQUIREMENTS

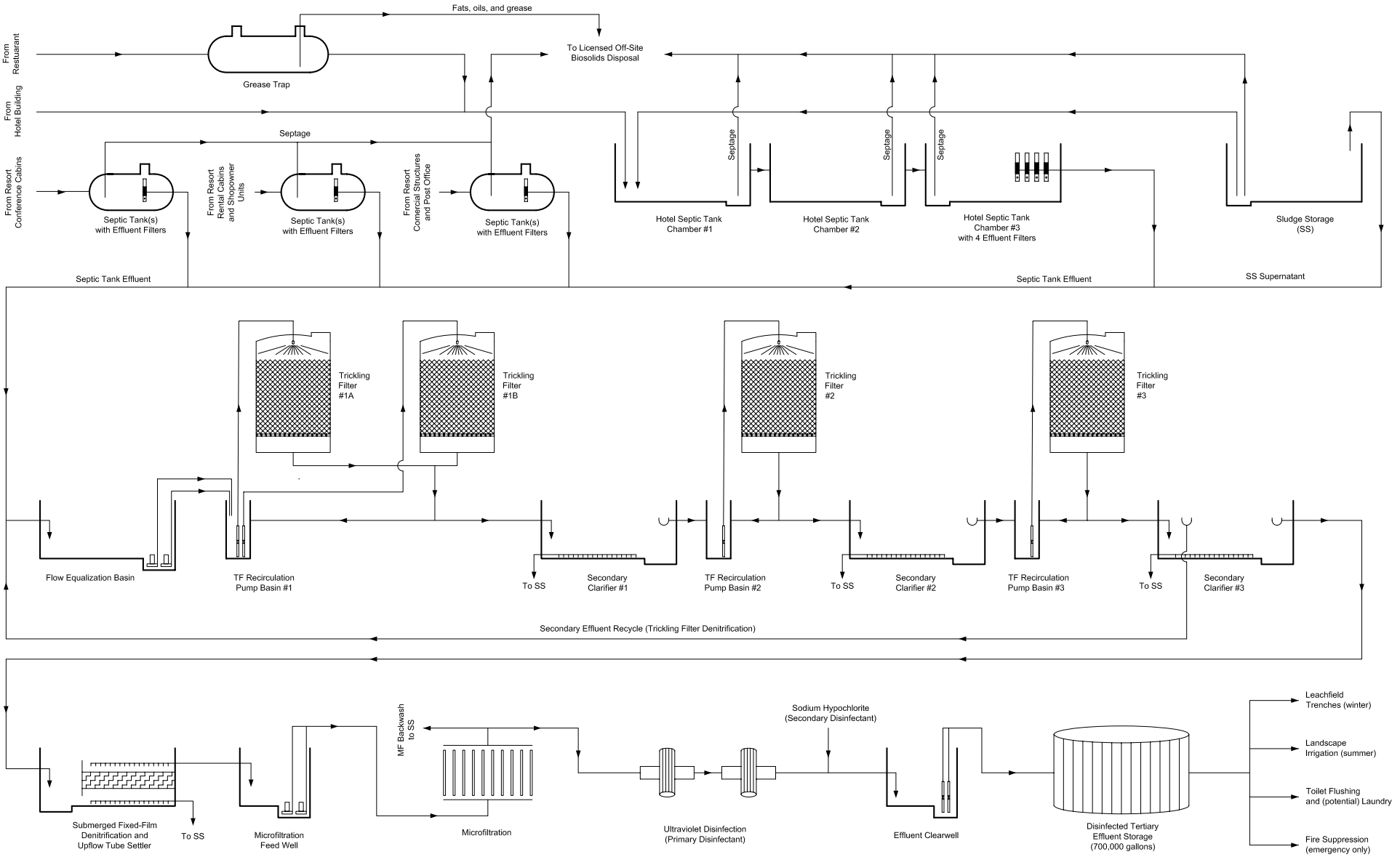
FOR

PACIFIC US REAL ESTATE GROUP

SILVER TIP RESORT VILLAGE

MARIPOSA COUNTY

ATTACHMENT B



WASTEWATER TREATMENT PLANT FLOW DIAGRAM

ORDER NO. R5 -2007-0140

WASTE DISCHARGE REQUIREMENTS

FOR

PACIFIC US REAL ESTATE GROUP

SILVER TIP RESORT VILLAGE

MARIPOSA COUNTY

ATTACHMENT C

NONPOTABLE WATER INTERNATIONAL SYMBOL

ORDER NO. R5 -2007-0140

WASTE DISCHARGE REQUIREMENTS

FOR

PACIFIC US REAL ESTATE GROUP

SILVER TIP RESORT VILLAGE

MARIPOSA COUNTY

ATTACHMENT D

WDRs ORDER NO. R5-2007-0140
ATTACHMENT E
STANDARD REQUIREMENTS FOR
MONITORING WELL INSTALLATION WORK PLANS AND
MONITORING WELL INSTALLATION REPORTS

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

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

The monitoring well installation work plan shall contain, at a minimum, the following 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 water bodies and drainage courses, 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
   Cuttings disposal methods
   Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods

C. Monitoring Well Design (in graphic form with rationale provided in narrative 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, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedures for:

- 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

SECTION 2 - Monitoring Well Installation Report

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 work plan.

A. General Information:
- Purpose of the well installation project
- Number of monitoring wells installed and identifying label(s) for each
- Brief description of geologic and hydrogeologic conditions encountered during well installation
- Topographic map showing facility location, roads, surface water bodies
- Large-scaled site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, 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
- Well boring log (provide for each well)
  - Well boring number and date drilled
  - Borehole diameter and total depth
  - Total depth of open hole (i.e., 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 (provide for each well):
- Well construction diagram including:
  - Monitoring well number and date constructed
  - Casing and screen material, diameter, and centralizer spacing (if needed)
  - Length of well casing
  - Length and position of slotted casing and size of perforations
  - 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 (provide for each well):
- Date(s) and method of development

How well development completion was determined
Volume of water purged from well and method of development water disposal

F. Well Survey (provide for each well):
Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot)
Ground surface elevation (feet above mean sea level to within 0.01 foot)
Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale)
Present the well survey report data in a table

G. Water Sampling:

Date(s) of sampling	Sample identification
How well was purged	Analytical methods used
How many well volumes purged	Laboratory analytical data sheets
Levels of temperature, EC, and pH at stabilization	Water level elevation(s)
Sample collection, handling, and preservation methods	Groundwater contour map

H. Soil Sampling (if applicable):
Date(s) of sampling
Sample collection, handling, and preservation methods
Sample identification
Analytical methods used
Laboratory analytical data sheets
Present soil sampling data in a table

I. Well Completion Report(s) (as defined in California Water Code §13751). Blank forms are available from California Department of Water Resources' website **www.water.ca.gov**. Submit this section under separate cover.

J. Appendix - include, at a minimum, copies of the following:
County-issued well construction permits
Registered engineer or licensed surveyor's report and field notes
Field notes from well development

INFORMATION SHEET

ORDER NO. R5-2007-0140
PACIFIC US REAL ESTATE GROUP
SILVERTIP RESORT VILLAGE
WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

Background

The Pacific US Real Estate Group (Discharger) proposes to construct and operate a wastewater collection, treatment, and disposal facility (WWTF) at the proposed SilverTip Resort Village in Fish Camp, Mariposa County (Resort). The WWTF was designed and constructed to process all of the wastewater generated from the Resort. No outside sewer mains will be connected to the Resort WWTF. The WWTF will be designed to have a monthly average daily flow of 33,500 gallons per day (gpd) and a peak daily flow of 74,000 gpd.

A portion of the property previously contained the original SilverTip Resort, which included a hotel and restaurant. The hotel burned down in 1981 and the restaurant has been vacant since. The Regional Water Board issued a Clean Up and Abatement order in August 1980 to the then property owner Mr. Robert Keller in response to the surfacing of sewage in the adjacent meadow due to septic tank overflow. BSK and Associates evaluated the then existing septic system and prepared a report in January 1981 indicating the existing septic system was undersized for the load it was sustaining and provided plans for enlarging the system. The work was not completed due to the fire that destroyed the hotel. The former septic system is not an issue with the proposed Resort as wastewater will now be tertiary treated before disposal either in a new leachfield or spray field areas.

The Discharger submitted a report of waste discharge (RWD) dated 25 August 2004, for a new WWTF to serve the proposed Resort. The proposed WWTF will consist of a septic tank effluent wastewater collection system and a tertiary wastewater treatment system. The treatment process will include flow equalization, trickling filter secondary treatment with interstage clarification, denitrification, microfiltration, and ultraviolet light disinfection. The effluent quality will comply with DHS Title 22 CCR standards for ‘”disinfected tertiary recycled water.”

The Discharger proposes to discharge tertiary treated wastewater to a leachfield during the winter months (approximately November through April) and will be used for landscape irrigation and toilet flushing during the summer months (typically from May through October). Recycled water will also be used to fill a 510,000 to 750,000 gallon effluent storage tank. The tank allows wastewater to be applied at controlled rates to the leachfield and spray fields and allows use of wastewater for fire suppression activities.

Solids and Biosolids Disposal

The accumulated solids in the septic tanks will require periodic removal and disposal. Septage will be removed by a conventional septic tank vacuum truck and disposed of at a regional septage disposal facility approved by Mariposa County. Screenings from the microfiltration process are estimated to generate about 3,000 to 6,000 gallons per month of total liquid solids

including septage removal. Disposal options include liquid disposal by tanker truck and/or dewatered residual disposal by solid waste transport. The final method has not been determined at this time and will require approval from Mariposa County.

Basin Plan, Beneficial Uses, and Regulatory Considerations

One of the greatest long-term problem facing California's groundwater is increasing salinity. The Tulare Lake Basin Plan's salt management requirements have been successfully implemented for several decades. Widespread and long-term compliance with these requirements justify them as appropriate best practicable control measures for salinity applicable to discharges in the Sacramento River and San Joaquin River Basins. The Regional Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental electrical conductivity (EC) limitation of 500 umhos/cm as the measure of the maximum permissible addition of salt constituents through use. A more restrictive limitation on salt constituents added through use is appropriate where necessary to assure compliance with a groundwater limitation for any constituent established by the Regional Water Board.

Antidegradation

The antidegradation directives of State Water Board Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the Basin Plan.

Certain domestic wastewater constituents are not fully amenable to waste treatment and control and it is reasonable to expect some impact on groundwater. The Order acknowledges that some degradation may occur as a result of the application of tertiary treated wastewater to land. Mariposa County adopted a Statement of Overriding Considerations that concluded that the benefits of the project were sufficient to override any unmitigated impacts. The overriding considerations include: the high quality, historic architectural style of the buildings; reinforcement of Fish Camp as a community center in furtherance of the County General Plan; lack of feasible alternative sites; generation of substantial revenue; and evidence that market forces support such a project. Based on the analyses in Mariposa County's EIR and its Statement of Overriding Considerations, and the state-of-the-art treatment and control practices described below, such degradation is consistent with maximum benefit to the people of the State and consistent with the Antidegradation Policy.

Treatment Technology and Control

The Discharger provides treatment and control of the discharge that incorporates:

a. Alarm and automatic flow diversion systems to prevent system bypass or overflow;

b. A nitrogen removal treatment process;

c. Microfiltration of treated effluent;

d. UV Disinfection of treated effluent;

e. Recycled water application at plant uptake (for nitrogen and water) rates;

f. Appropriate biosolids storage and disposal practices;

g. An Operation and Maintenance (O&M) manual; and

h. Certified operators (minimum Grade III) to insure proper operation and maintenance.

Groundwater Conditions

Regional groundwater is contained in both fractured bedrock and to a lesser extent in alluvial deposits overlying the bedrock. The Discharger has indicated the direction of groundwater flow is to the north/northeast near the leachfield. The depth to shallow groundwater is about 10 to 45 feet bgs with groundwater being closer top the surface in the meadow area and greater beneath the forested slope areas. This uppermost groundwater layer is reported to be separated from the underlying bedrock aquifer by unfractured bedrock that acts as a semi-confining layer or aquitard. Depth to groundwater data for the SilverTip resort bedrock wells (STR1 through STR5) indicates the deeper fractured bedrock wells have groundwater depths ranging from about 60 to 115 feet bgs.

Analytical results for samples of both the shallow and deeper aquifers indicate excellent water quality. A surface water sample from Big Creek was reported to have electrical conductivity (EC) concentration of 119 micromhos per centimeter (umhos/cm), total dissolved solids (TDS) concentrations of about 87 milligrams per liter (mg/L), a pH of 7.59 standard pH units (su), and a chloride concentration of 1.7 mg/L. Bedrock water samples indicate similar concentrations with EC concentrations between 157 and 188 umhos/cm, TDS concentrations of 111 to 123 mg/L, pH values of 6.99 to 7.31, and chloride concentrations from non-detect to 3.5 mg/L.

Title 27

Title 27, CCR, section 20005 et seq. (Title 27), contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are

part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge (for the purposes of the proposed Order, sludge that will not be subjected to further treatment by the WWTF) is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment plant can be allowed without requiring compliance with Title 27, but only if resulting degradation of groundwater is in accordance with the Basin Plan.

CEQA
The County of Mariposa circulated a Draft Environmental Impact Report (EIR) in July 2001. The Public review period was from July 1 to October 1, 2001. Comments to the Draft EIR by various agencies and citizens resulted in the preparation of an *Antidegradation Analysis* (September 2001) and a *Hydrogeologic Conditions and Wastewater Management Plan Supplemental Report* (March 2002). The Draft EIR identified several potential significant effects that were subject of the information presented in the two previously mentioned reports. Due to comments received, the County of Mariposa recirculated Section 3.4 of the Draft EIR. Due to new information provided following the initial circulation of the Draft EIR, Mariposa County prepared a revised Draft EIR in September 2002.

The County of Mariposa certified a Final EIR in February 2003 in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended). The project was then challenged under provisions of the California Environmental Quality Act (CEQA). A hearing on the Writ of Mandate was held in December 2004 and denied. That result was subsequently appealed and that appeal was denied in December 2005.

Proposed Order Terms and Conditions

Discharge Prohibitions, Specifications and Provisions
The proposed Order prohibits discharge to surface waters and water drainage courses and cross connection between potable water and well water piping with recycled water piping. The discharge specification regarding EC is consistent with Regional Water Board policy for effluent salinity limitation of the monthly flow-weighted average EC of the source water plus 500 umhos/cm.

The effluent limits prescribed in the proposed Order for total settleable solids (TSS) and BOD_5 are based on the predicted water quality as stated in the RWD. The proposed Order's Discharge Specification C.1 requires the Discharger provide a reduction to a concentration of 10 mg/L of both 5-day BOD and TSS. In order to protect public health and safety, the

proposed Order requires the Discharger to comply with the provisions of Title 22 and to implement best management practices with respect to recycled water application (application at reasonable rates considering the crop, soil, and climate).

Monitoring Requirements
Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years, there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes influent and effluent monitoring requirements, recycled water storage, pond monitoring, recycled water land application area monitoring, groundwater monitoring, surface water monitoring, sludge monitoring, and water supply monitoring. The monitoring is necessary to evaluate groundwater quality and the extent of the potential degradation and pollution from the discharge. The proposed Order includes monitoring of recycling activities to check compliance with Title 22 and the terms and conditions of the proposed Order.

The Discharger does not yet have an adequate groundwater or surface water monitoring networks. Work Plans detailing the proposed monitoring networks are required under Provision H.11. The discharger must monitor groundwater and surface water for constituents present in the discharge that are capable of reaching groundwater and violating groundwater limitations if its treatment and control, and any dependency of the process on sustained environmental attenuation, proves inadequate. For constituents listed in Section G, Groundwater Limitations, of the WDR, the Discharger must, as a part of each monitoring event, compare concentrations of constituents found in each monitoring well (or similar type of groundwater monitoring device) to the background concentrations or to prescribed numerical limitations to determine compliance.

Reopener
The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if applicable laws and regulations change.

jsp:09/21/2007