CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2013-0009

WASTE DISCHARGE REQUIREMENTS

FOR
CALAVERAS COUNTY WATER DISTRICT
DOUGLAS FLAT/VALLECITO WASTEWATER TREATMENT FACILITY
CALAVERAS COUNTY

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

1. On 26 June 2012, Calaveras County Water District (CCWD) (hereafter "Discharger") submitted a Report of Waste Discharge (RWD) to update existing Waste Discharge Requirements (WDRs) for the Douglas Flat/Vallecito Wastewater Treatment Facility (WWTF). Additional information was submitted in October 2012.

2. For the purposes of this Order, the term "Wastewater Treatment Facility" shall mean the wastewater collection system, the wastewater treatment units, the disinfection system, the storage pond, and the land application areas (LAAs).

3. The Discharger owns and operates the WWTF, and is responsible for compliance with the WDRs.

4. The facility is located on Holiday Mine Road off State Route 4 in Calaveras County (Sections 17 and 20, T3N, R14E, MDB&M), approximately 0.5 miles south of Douglas Flat and 1.5 miles northeast of Vallecito on Assessor's Parcel Numbers 66-040-01, 66-040-02, 66-024-07, 66-024-049 and 66-022-086. The location of the WWTF is shown on Attachment A, which is attached hereto and made part of this Order by reference.

5. WDRs Order 92-018, adopted by the Central Valley Water Board on 24 January 1992, prescribes requirements for the WWTF and allows a monthly average flow of 65,000 gallons per day (gpd). The Discharger is making significant improvements to the WWTF and has requested that the Board increase the flow limit to an average dry weather flow (ADWF) of 75,000 gpd.

Existing Facility and Discharge

6. The WWTF occupies approximately 96 acres and serves the Douglas and Vallecito communities, which had a combined estimated population of 610 in 2010. The total number of sewer connections at build-out is estimated to be 315, including 250 connections for existing residential, five connections for existing commercial, and 60 connections for infill. Based on one percent annual population growth, the

projected population in the service area for the year 2030 is 720, which will require approximately 45 infill sewer connections.

7. The existing WWTF has two parallel activated sludge treatment units (the Douglas Flat and Vallecito units), a chlorine disinfection system, an effluent storage pond, sludge drying beds, and approximately 60 acres of LAAs with a net area of 26 acres for irrigation. The Douglas Flat unit was built in 1970 and the Vallecito unit was added in 1987. Each treatment unit has an aeration basin, a secondary clarifier, and an anaerobic digester.

8. The effluent storage pond used to be two storage ponds operated in series. The Discharger recently converted the two ponds into one by removing the interior berm that separated the two ponds, which increased the total storage capacity. The storage pond and the LAAs are shown on Attachment B, which is attached hereto and made part of this Order by reference.

9. The combined effluent flows from the Douglas Flat and Vallecito treatment units are disinfected in a chlorine contact chamber. The disinfected wastewater is discharged into the effluent storage pond and then applied to the spray field LAAs via sprinkler systems. Solids and sludge are currently dried in the sludge drying beds on-site during summer months in order to meet the pathogen and vector attraction reduction requirements for Class B biosolids, but a new sludge handing system is under construction. All biosolids are currently applied as a soil amendment to offsite lands regulated under separate WDRs.

10. The storage pond is lined with clay. Design data for the effluent storage pond are summarized in the following table.

Surface Area [1] (acres)	Depth (feet)	Volume [1] (acre-feet)	Effective Dates
6.6	11.5	45.7	Before 20 November 2012
7.0	13.5	59.2	After 20 November 2012

[1] Measured at two feet of freeboard.

11. The LAAs are located within a small ridge between Coyote Creek and Little Dry Creek. The setback distances from the LAAs to Little Dry Creek and Coyote Creek are approximately 120 feet and 320 feet, respectively. The LAAs do not have tailwater or runoff control structures. Tailwater runoff from LAAs with sprinkler systems can be prevented by carefully timing and monitoring irrigation events to ensure that applied wastewater remains within the LAAs. The Discharger will apply the wastewater to the LAAs at rates that will prevent runoff. The brush and weed vegetation on the LAAs is maintained annually by the California Department of Forestry and Fire Protection.

12. The facility is controlled by a Supervisory Control and Data Acquisition system. Alarms alert operators of any issues related to treatment processes, water levels, electrical failures, or other issues that may cause an interruption or potential bypass of the treatment system.

13. The following table summarizes recent influent flow rates.

Influent Flow Rates

Month	2007 (mgd)	2008 (mgd)	2009 (mgd)	2010 (mgd)	2011 (mgd)	2012 (mgd)
January	0.057	0.063	0.062*	0.085*	0.088*	0.058
February	0.076	0.064	0.080*	0.085*	0.089*	0.055
March	0.055	0.046	0.076*	0.076*	0.116*	0.070
April	0.048	0.043	0.066*	0.081*	0.089*	0.067
May	0.045	0.048	0.073*	0.064*	0.070*	0.047
June	0.051	0.051	0.068*	0.065*	0.059*	0.046
July	0.053	0.053	0.064*	0.066*	0.083*	--
August	0.000	0.053	0.068*	0.064*	0.073*	--
September	0.048	0.050	0.066*	0.067*	0.057	--
October	0.041	0.047	0.063*	0.066*	0.055	--
November	0.039	0.046	0.062*	0.091*	0.055	--
December	0.038	0.058*	0.065*	0.119*	0.052	--
Yearly Average	0.046	0.052	0.068	0.077	0.074	0.057

* As discussed below, these flow rates are known to be erroneously high.

Some monthly average flows exceeded the current monthly average flow limit of 65,000 gpd. The annual averages from 2009 through 2011 are higher than in the years of 2007, 2008 and 2012. However, the Discharger stated that contractors had mistakenly calibrated the trapezoidal flume flow meters as Parshall flumes yearly between December 2008 and September 2011, when the Discharger corrected the error. The Discharger states that no new sewer connections have been added to the wastewater collection system during the last several years, so influent flow rates should not have changed significantly; therefore, the influent flow rates monitored during that period are not representative of actual influent rates due to the miscalibration.

14. The influent and effluent analytical results for January 2009 through December 2011 are summarized below. The influent samples were collected at the headworks and effluent samples were collected from the downstream of the disinfection tank.

Influent and Effluent Constituent Concentrations

	Influent			Effluent		
Constituent	Min.	Max.	Ave.	Min.	Max.	Ave.
Biochemical oxygen demand (mg/L) [1]	34	510	152	1	14	5.4
Total dissolved solids (mg/l) [1]	--	--	--	108	626	357
Electrical conductivity (µmhos/cm) [1]	--	--	--	264	989	589
Total coliform organisms (MPN/100 mL) [1]	--	--	--	<2	280	5
Nitrate nitrogen (mg/L) [2]	--	--	--	19	19	19
Sodium (mg/L) [3]	--	--	--	52	142	93
Chloride (mg/L) [3]	--	--	--	38	58	51

1. Based on monthly monitoring reports.
2. Based on 2010 Annual Report.
3. Annual monitoring results.

Facility Improvements and Discharge

15. In October 2011, the Discharger received $4.42 million in funding from the State Water Resources Control Board (State Water Board) for WWTF improvements, including the installation of membrane biological reactors (MBRs), an ultraviolet (UV) light disinfection system, and a belt press for sludge dewatering. The updated facility will be able to produce tertiary treated wastewater for potential beneficial reuse. The Discharger expects to complete construction of these improvements by December 2012.

16. The updated WWTF will consist of a grit removal unit, a flow equalization tank, two fine screens, two MBR units, a sludge holding tank, a sludge belt press, a dry sludge storage area, a UV disinfection system, the existing storage pond, and the existing spray field LAAs. A standby generator was installed to provide backup power. The updated WWTF will be controlled by the Supervisory Control and Data Acquisition system.

17. The new structures are located on the existing site; many of the old facilities are being converted or replaced. The existing 40,000- gallon Vallecito aeration tank will be used as a flow equalization basin. The new MBR units, the belt press, and the UV disinfection system were installed on the footprint of the existing drying beds, as shown on Attachment B.

18. The updated WWTF has two parallel 0.1-MGD MBR basins for redundancy to allow one unit to be temporarily taken out of service for maintenance. A typical MBR unit has three zones: anoxic, pre-aeration and membranes. The returned activated sludge is first introduced and mixed with the plant influent in the anoxic zone. Then, the mixed liquor is pumped into the pre-aeration zone where the wastewater is treated by conventional aeration. The pre-aeration zone effluent passes through the

membrane zone where the wastewater is separated from the activated sludge. A significant amount of air must be introduced below the membrane units for scouring.

19. The new UV disinfection system consists of three banks of lights, with two banks scheduled for online operation and one bank provided as backup. The UV disinfection system provides a minimum dose of 80 mJ/cm^2 at 65 percent UV transmittance. UV disinfection is preferable to chlorine disinfection because it reduces effluent salinity and prevents the formation of chlorination by-products.

20. Raw wastewater will be mechanically screened and then conveyed to the equalization tank, a MBR unit, and the UV disinfection system. The disinfected wastewater will be discharged into the storage pond and then applied to the LAAs. Solid waste from the fine screen and the waste activated sludge will be dewatered by the 0.7-meter belt filter press. The dewatered sludge will be tested and stored in a roofed dry sludge storage area on site in order to meet the requirements for Class B biosolids, and then removed for off-site disposal. The dry sludge storage area has a concrete floor with curbs to prevent leachate infiltration and runoff.

21. The RWD projected the treated wastewater quality for the updated WWTF as follows:

Parameter	Units	Influent	Effluent
Total carbonaceous BOD	mg/L	175	0.82
Total suspended solids	mg/L	175	ND
Nitrate nitrogen	mg/L	--	6.9
Total coliform organisms	MPN/100 mL	--	2.2 [1] , 23 [2]

[1] As a 7-day median.
[2] Daily maximum.

22. In order to obtain the storage capacity for the proposed ADWF limit of 75,000 gpd, the Discharger increased the pond berm height by two feet in November 2012. On 13 December 2012, the Discharger submitted a Storage Pond Expansion Completion Report, which indicates that the pond storage capacity was increased from 45.7 ac-ft. to 59.2 ac-ft. at two feet of freeboard. The water balance, based on the completion of the storage pond expansion, shows that the WWTF has sufficient capacity for an ADWF of 75,000 gpd (based on the months of July through September) and an annual total influent flow rate of 32.9 million gallons.

Site-Specific Conditions

23. The potable water supply for the Douglas Flat/Vallecito communities is provided by Union Public Utility District. The raw potable water comes from McKay's Point Dam. Based on Union Public Utility District's Consumer Confidence Reports in 2008 and 2010, the chemical character of the potable water supply is summarized below.

Annual Water Supply Analytical Results

Parameter	Units	2008	2010	Average
Total dissolved solids	mg/L	72	80	76
Electrical conductivity	umhos/cm	61	104	82
Total hardness	mg/L	22	35	29
Chloride	mg/L	5.0	6.4	5.7
Sodium	mg/L	6.8	10	8.4
Sulfate	mg/L	5.0	12	8.4

24. The wastewater treatment plant and the effluent storage pond are located on the west side of the valley of Coyote Creek at an approximate elevation of 1,880 feet mean sea level (MSL). The LAAs are across a small ridge with southeast-facing slopes in the watershed of Little Dry Creek. The LAA elevations range between 1,880 feet and 2,000 feet MSL. All areas of the facilities are outside of the 100-year flood zone.

25. The facility site is underlined by Miocene/Pliocene age Valley Springs Formations and younger Mehrten Formations, and unconsolidated alluvium or dredge tailings. Alluvium extends to a depth of 45 feet below ground surface (bgs) along the ridge. Bedrock was encountered at a depth of 22 feet bgs near Coyote Creek.

26. Annual precipitation in the vicinity averages approximately 33.4 inches, the 100-year total annual precipitation is approximately 61 inches, and the reference evapotranspiration rate is approximately 53 inches per year.

27. Surrounding land uses are primarily agricultural and residential.

Groundwater Considerations

28. In July and August 2012, the Discharger installed three groundwater monitoring wells MW-1, MW-2 and MW-3, as shown on Attachment B. MW-1 is upgradient of the WWTF, and MW-2 and MW-3 are downgradient of the effluent storage pond and the LAAs, respectively. Based on the monitoring well boring logs, soils at the existing WWTF are typically cobbles and loose gravels, and soft sandstone or volcanic ash of the Valley Springs Formation. The following table presents a summary of the monitoring well construction details.

Monitoring Well ID	Depth (feet)	Screen Interval (feet, bgs)	Range of Depth to water (feet)	Groundwater Elevation (feet, msl) [1]
MW-1	30	15-30	21.77 to 22.25	1903.18
MW-2	44.5	29.5-44.5	7.93 to 8.44	1875.19

Monitoring Well ID	Depth (feet)	Screen Interval (feet, bgs)	Range of Depth to water (feet)	Groundwater Elevation (feet, msl) [1]
MW-3	25	10-25	14.6 to 14.84	1867.64

[1.] Data recorded on 5 September 2012.

29. The Discharger has performed groundwater monitoring three times since the wells were installed: in August and September 2012. During that period, the groundwater gradients ranged from 0.004 to 0.02 feet/foot; groundwater flowed from north to south. Groundwater analytical data from the three groundwater sampling events are summarized below.

Well ID	Date	TDS (mg/L)	FDS (mg/L)	Nitrate nitrogen (mg/L)	Total Kjeldahl nitrogen (mg/L)	Total coliform organisms (MPN/100 mL)	Sodium (mg/L)	Chloride (mg/L)
MW-1	8/8/2012	326	249	4.3	<1.0	>1600	26	35
	9/4/2012	310	238	4.5	<1.0	920	25	32
	9/5/2012	329	251	4.6	<1.0	79	23	34
	Average	322	246	4.5	<1.0	--	25	34
MW-2	8/8/2012	231	196	0.37	<1.0	4.0	9.0	4.8
	9/4/2012	233	200	0.34	<1.0	<1.8	12	5.0
	9/5/2012	232	193	0.37	<1.0	<1.8	9.6	4.8
	Average	232	196	0.36	<1.0	--	10	4.9
MW-3	8/8/2012	422	354	0.23	<1.0	920	7.9	4.6
	9/4/2012	409	353	0.22	<1.0	<1.8	8.2	4.2
	9/5/2012	415	359	0.024	<1.0	23	8.3	4.5
	Average	415	355	0.16	<1.0	--	8.1	4.4

30. Based on the limited groundwater monitoring completed to date, a discussion of groundwater conditions at the WWTF site is presented below:

a. Although the discharge may have caused some groundwater degradation, the TDS concentrations in all monitoring wells were less than the recommended secondary maximum concentration limit (MCL) of 500 mg/L for TDS.

b. Based on the limited groundwater monitoring data above, the discharge does not appear to have degraded groundwater quality with respect to nitrate nitrogen. The groundwater nitrate nitrogen concentrations in all wells were less than the primary MCL of 10 mg/L for nitrate nitrogen.

c. The first monitoring event data showed high levels of total coliform in MW-1 and MW-2. However, the data for subsequent monitoring events indicate declining trends. Based on the available data, it appears that the groundwater samples collected during well construction may have been cross-contaminated. Although the past practices posed some threat of groundwater degradation from coliform organisms, the new WWTF does not.

Basin Plan, Beneficial Uses, and Regulatory Considerations

31. 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 Water Board. Pursuant to Water Code section13263(a), waste discharge requirements must implement the Basin Plan.

32. Local drainage is to Coyote Creek and Little Dry Creek, which are tributary to the New Melones Reservoir. The beneficial uses of New Melones Reservoir, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; hydropower generation; water contact recreation; non-contact water recreation; cold freshwater habitat; and wildlife habitat.

33. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, and industrial supply.

34. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

35. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MPN groundwater.

36. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley 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.

37. In summary, the narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

38. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

39. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 µmhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 µmhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Antidegradation Analysis

40. State Water Resources Control Board Resolution 68-16 (*Policy with Respect to Maintaining High Quality Waters of the State*) (hereafter "Resolution 68-16") prohibits degradation of high-quality water 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.

41. Degradation of groundwater by some of the typical waste constituents associated with discharges from a municipal wastewater utility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

42. The Discharger has been monitoring groundwater quality at the site since 2012. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility is based on existing background groundwater quality.

43. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), nutrients, and coliform organisms, as discussed below:

    a. The Secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. The current effluent TDS average of 357 mg/L and groundwater TDS averages (from 322 to 425 mg/L) are less than the recommended Secondary MCL of 500 mg/L. The RWD did not project the effluent TDS concentration of the updated WWTF; however, it is expected to be less than the current level due to the elimination of chlorine disinfection. Therefore, the discharge is not likely to degrade groundwater quality due to increased salinity.

    b. For nutrients such as nitrate, the potential for degradation depends not only on the quality of the treated effluent, but on the ability of the vadose zone below the effluent storage pond to provide an environment conducive to nitrification and denitrification, which converts the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The projected effluent total nitrogen of the updated WWTF is 6.9 mg/L and the nitrate nitrogen concentration of background groundwater averages 4.5 mg/L. Effluent and groundwater monitoring data to date for the wastewater treatment plant site do not indicate degradation due to nitrate, and the plants grown at the LAAs should remove most of the nitrogen in the applied wastewater. However, groundwater is shallow, so there is some threat that the discharge could cause degradation for nitrate. The primary MCL for nitrate is 10 mg/L as nitrogen. It is therefore appropriate to adopt an effluent limit of 10 mg/L total nitrogen and a groundwater limit of 10 mg/L nitrate as nitrogen.

    c. Because the WWTF provides a high level of containment and disinfection prior to discharge, coliform organisms do not pose a threat to groundwater quality. Although the current disinfection system is capable of achieving the highest level of pathogen reduction, it is not necessary to require that level of disinfection at this time. This Order requires that the disinfected effluent contain no more than 23 MPN/100 mL of total coliform organisms as a monthly median.

44. After the upgrades described in Finding 15 are completed, the Discharger will provide treatment and control of the discharge that incorporates:

    a. Tertiary treatment;

    b. UV light disinfection;

    c. Reinforced concrete treatment structures;

    d. A clay-lined effluent storage pond;

    e. A Supervisory Control and Data Acquisition System to monitor the WWTF remotely; and

    f. Certified operators to assure proper operation and maintenance.

45. The treatment or control measures described in Finding 44 are considered BPTC for this small community. This Order establishes limitations that ensure the protection of present and anticipated future beneficial uses, and that are consistent with the Basin Plan and the policies contained therein. The limited degradation that may occur as a result of this discharge is consistent with the maximum benefit to the people of the state as described in Finding 41. Therefore, this Order is consistent with Resolution 68-16. Should groundwater monitoring data reveal degradation beyond that anticipated in this Order, the Discharger may be required to evaluate and implement additional treatment or control measures.

Other Regulatory Considerations

46. Based on the threat and complexity of the discharge, the facility is determined to be classified as 3B as defined below:

    a. Category 3 threat to water quality: "Those discharges of waste that could degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2."

    b. Category B complexity, defined as: "Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."

47. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> (a) Sewage - Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.
>
> (b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

(1) the applicable regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

48. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:

    a. The treatment system and effluent storage pond are exempt pursuant to Title 27, section 20090(a) because they are treatment and .storage facilities associated with a municipal domestic wastewater treatment plant.

    b. The spray field LAAs are exempt pursuant to Title 27, section 20090(b) because:

        i. The Central Valley Water Board is issuing WDRs.

        ii. The discharge is in compliance with the Basin Plan, and;

        iii. The treated effluent discharged to the ponds does not need to be managed as hazardous waste.

49. Although the WWTF is exempt from Title 27, the statistical data analysis methods of Title 27, section 20415(e) are appropriate for determining whether the discharge complies with Groundwater Limitations specified in this Order.

50. The State Water Board adopted Order 97-03-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment facility has a design capacity of less than 1.0 MGD. The Discharger is therefore not required to obtain coverage under NPDES General Permit CAS000001.

51. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems General Order 2006-0003-DWQ (the General Order). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with the Order. The WWTF includes more than one mile of sewer lines and is regulated under General Order 2006-0003-DWQ.

52. Water Code section 13267(b) states:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports 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.

The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2013-0009 are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

53. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *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 Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

54. On 5 April 2011, the Calaveras County Water District adopted a Negative Declaration for the MBR improvement project pursuant to the California Environmental Quality Act ("CEQA"). The Calaveras County Water District's CEQA analysis of the project, defined as the replacement and reconstruction of the two package treatment units, influent screen, disinfection system and sludge handling facility, concluded that it would have no impact on hydrology and water quality. This Order places additional regulatory requirements on the operation of the WWTF that will ensure the continued protection of groundwater and the environment. This action is therefore exempt from the provisions of CEQA in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting … of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review.

55. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard 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.

56. The Central Valley Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing

agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.

57. Pursuant to Water Code 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.

Public Notice

58. All 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.

59. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

60. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order 92-018 is rescinded except for purposes of enforcement and, pursuant to Water Code sections 13263 and 13267, the Calaveras County Water District, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

A. Discharge Prohibitions

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

2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 23, section 2510 et seq., is prohibited.

3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, is prohibited.

4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.

5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.

6. Discharge of toxic substances into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted is prohibited.

B. Flow Limitations

1. **Effectively immediately**, influent flows to the WWTF shall not exceed the following limits:

Influent Flow Measurement	Flow Limit
Total Annual Flow [1]	32.9 MG
Average Dry Weather Flow [2]	75,000 gpd

[1] As determined by the total flow for the calendar year.

[2] As determined by the total flow for the months of July through September, inclusive, divided by 92 days.

C. Effluent Limitations

1. Effluent discharged to the effluent storage pond shall not exceed the following limits:

Constituent	Units	Monthly Average Limit [2]	Monthly Maximum Limit	Annual Average Limit
BOD_5 [1]	mg/L	40	80	--
Total Nitrogen as N	mg/L	10	--	--

[1] 5-day biochemical oxygen demand at 20˚C.

[2] Based on the average of all monitoring results for the calendar month.

2. Prior to discharge to the LAAs, effluent shall not exceed the following limits for total coliform organisms:

   a. The monthly median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 23 per 100 milliliters. Compliance with this requirement will be determined using weekly monitoring data for each calendar month.

   b. The number of total coliform bacteria shall not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30-day period.

   Compliance with this requirement shall be determined based on samples obtained at the effluent sampling location shown on Attachment C.

3. No wastewater contained in any pond shall have a pH of less than 6.5 or greater than 10.0.

D. Groundwater Limitations

Discharge of waste constituents from any portion of the WWTF shall not cause groundwater to:

1. Contain constituents in concentrations in excess of the following:
   a. Nitrate as nitrogen of 10 mg/L.
   b. For constituents identified in Title 22, the Primary and Secondary MCLs established therein.
2. Contain taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

Compliance with these limitations shall be determined annually based on intrawell comparison of downgradient well concentrations to the specified limitation using approved statistical methods.

E. Discharge Specifications

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

2. The discharge shall not cause degradation of any water supply.

3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.

5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

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

7. Public contact with wastewater shall be prevented through such means as fences, signs, or acceptable alternatives.

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

9. As a means of discerning compliance with Discharge Specification E.8., the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

10. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

11. The treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

12. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.10 and E.11.

13. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

    d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

14. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

15. Wastewater contained in any pond shall not have a pH less than 6.0 or greater than 9.0.

F. Land Application Area Specifications

1. Application of waste constituents to the LAAs shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the LAAs, including the nutritive value of organic and chemical fertilizers and wastewater shall not exceed the annual demand of the vegetation grown.

2. Wastewater shall not be discharged to the LAAs in a manner that causes wastewater to stand for greater than 48 hours.

3. Any irrigation runoff shall be confined to the LAAs and shall not enter any surface water drainage course or storm water drainage system.

4. Irrigation of the LAAs shall not be performed during precipitation or when the ground is saturated.

5. The Discharger shall cease spray irrigation of wastewater when winds exceed 30 mph.

6. Application of effluent shall comply with the following setback requirements:

Setback Definition[1]	Minimum Irrigation Setback (feet)
Edge of LAAs to property boundary	25
Edge of LAAs to public road	30
Edge of LAAs to irrigation well	100
Edge of LAAs to domestic well	100
Edge of LAAs to manmade or natural surface water drainage course [2] or spring	50

[1] As defined by the wetted area produced during irrigation.

[2] Excluding ditches used exclusively for tailwater return and drainages that do not discharge to surface waters.

G. Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations .

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.

2. Any handling and storage of residual sludge, solid waste, and biosolids at the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.

3. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

4. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board except in cases where a local (e.g., county) program has been authorized by a regional water board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order 2004-12-DWQ, “General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities”). For a biosolids use project to be covered by Order 2004-12-DWQ, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

5. Use and disposal of biosolids shall comply with the self-implementing federal regulations of 40 Code of Federal Regulations part 503, which are subject to enforcement by the U.S. EPA, not the Central Valley Water Board. If during the life of this Order, the State accepts primacy for implementation of part 503, the Central Valley Water Board may also initiate enforcement where appropriate.

6. 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.

H. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision H.4:

   a. By **1 July 2013**, the Discharger shall submit an *Improvements Completion Report* that certifies completion of the construction work for MBR units, UV disinfection system and other improvements, certifies that operation of the new treatment and effluent pumping system has begun.

   b. By **1 July 2013**, the Discharger shall submit a *Tailwater and LAA Setback Operational Procedure Plan* that describes in detail how the discharge will be managed and monitored to comply with the tailwater and the LAA setback requirements of this Order.

2. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain waste constituents in concentrations statistically greater than the groundwater limitations of this Order then, within **120 Days**, the Discharger shall submit a BPTC Evaluation Workplan that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine best practicable treatment and control. The workplan shall contain a preliminary evaluation of each component of the WWTF and effluent disposal system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year after receipt of comments on the workplan.

3. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by **31 January**.

4. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional’s signature and stamp.

5. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer, and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.

6. The Discharger shall comply with Monitoring and Reporting Program R5-2013-0009, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

7. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

9. The Discharger shall 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 includes 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 when the operation is necessary to achieve compliance with the conditions of this Order.

10. The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23, division 3, chapter 26.

11. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

12. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

13. The Discharger shall comply with the requirements of the Statewide General Waste Discharge Requirements (General WDRs) for Sanitary Sewer Systems (Water Quality Order 2006-0003), the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC), and any subsequent revisions thereto. Water Quality Order 2006-0003 and Order 2008-0002-EXEC require the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.

14. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

15. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

16. In the event of any change in control or ownership of the WWTF, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

17. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley 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 Water Code. The Executive Officer will submit transfer requests to the Central Valley Water Board so that the Board may consider transferring the ownership of this Order at one of its regularly scheduled meetings.

18. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

19. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

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 1 February 2013.

Original signed by

PAMELA C. CREEDON, Executive Officer

Lfu/alo: 12/31/2012

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
MONITORING AND REPORTING PROGRAM R5-2013-0009

FOR
CALAVERAS COUNTY WATER DISTRICT
DOUGLAS FLAT/VALLECITO WASTEWATER TREATMENT FACILITY
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) presents requirements for monitoring of wastewater influent, effluent, storage pond, groundwater and water supply. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Central Valley Water Board staff shall approve specific sampling locations prior to any sampling activities. All samples shall be representative of the volume and nature of the discharge. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

Field testing instruments (such as those used to test pH, wind speed, precipitation and electrical conductivity) may be used provided that:

1 The operator is trained in proper use and maintenance of the instruments;

2 The instruments are calibrated prior to each monitoring event;

3 The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency;

4 Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Influent samples shall be collected at the headworks prior to treatment. Grab samples will be considered to be representative of the influent. At a minimum, influent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow	gpd	Meter Observation	Daily	Monthly
BOD_5 [1]	mg/L	Grab	Monthly	Monthly
Electrical conductivity	µmhos/cm	Grab	Monthly	Monthly

[1] 5-day biochemical oxygen demand.

EFFLUENT MONITORING

Effluent samples shall be obtained from the effluent monitoring point immediately downstream of the UV disinfection system prior to discharge to the storage pond. At a minimum, effluent monitoring shall include the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Turbidity [1]	NTU	Meter	Continuous [2]	Monthly
Total coliform organisms [3]	MPN /100 mL	Grab	Weekly	Monthly
Electrical conductivity	µmhos/cm	Grab	Weekly	Monthly
Total dissolved solids	mg/L	Grab	Monthly	Monthly
Total nitrogen	mg/L	Grab	Monthly	Monthly
BOD_5	mg/L	Grab	Weekly	Monthly
pH	pH units	Grab	Monthly	Monthly
Standard minerals [4]	mg/L	Grab	Annually	Annually

[1] Samples shall be obtained upstream of the UV system as shown on Attachment C.
[2] For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation.
[3] Using a minimum of 15 tubes or three dilutions.
[4] Standard minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

ULTRAVIOLET LIGHT (UV) DISINFECTION SYSTEM MONITORING

The UV disinfection system shall be monitored as specified below:

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	mgd	Meter	Continuous [1]	Monthly
Number of UV banks in operation	number	Meter	Continuous [1]	Monthly
UV transmittance	percent (%)	Meter	Continuous [1]	Monthly
UV power setting	percent (%)	Meter	Continuous [1]	Monthly
UV dose [2]	mJ/cm [2]	Calculated	Continuous [1]	Monthly

[1] For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation.

[2] Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. For the daily minimum UV dose, also report associated number of banks, gallons per minute per lamp, and UV transmittance used in the calculation. If effluent discharge has received less than the minimum UV dose, report the duration and dose calculation variables associated with each incident.

STORAGE POND MONITORING

The storage pond shall be sampled for the parameters specified below:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Dissolved oxygen[1]	mg/L	Grab	Weekly	Monthly
pH	Std.	Grab	Weekly	Monthly
Freeboard	0.1 feet	Observation	Weekly	Monthly
Berm condition	NA	Observation	Weekly	Monthly
Seepage [2]	NA	Observation	Weekly	Monthly
Odors	NA	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet.
[2] Pond containment berms and the dams shall be observed for signs of seepage or surfacing water along the exterior toe. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids.

LAND APPLICATION AREA MONITORING

The monitoring shall be conducted daily when the LAAs are used. A daily log of each inspection shall be kept at the facility and be submitted with the monthly monitoring reports. Photocopies of entries into an operator's field log are acceptable. The monthly report shall clearly states whether or not the LAAs were used during that month. Evidence of erosion, field saturation, irrigation runoff, or the presence of nuisance conditions shall be evaluated. Effluent monitoring results shall be used in calculations to determine loading rates at the LAAs. Monitoring of the LAAs shall include the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Wind speed	miles/hour	Meter observation	Daily	Monthly
Flow to each LAA	gpd	Meter observation	Daily	Monthly
Acreage applied	acres	Calculated	Daily	Monthly
Water application rate [1]	inches/day	Calculated	Daily	Monthly
Rainfall [2]	inches	Observation	Daily	Monthly
Total nitrogen loading rate [1]	lbs./ac/mont	Calculated	Monthly	Monthly
Tailwater runoff [3]	NA	Observation	Daily	Monthly

[1] Average calculated for each LAA.
[2] Rainfall data collected from the weather station that is nearest to the LAAs or a properly maintained on-site rain gauge.
[3] When wastewater is being applied to the land application areas, the entire application area shall be inspected **daily** to identify any equipment malfunction or other circumstance that might allow irrigation runoff to leave the area and/or create ponding conditions that violate the Waste Discharge Requirements.

GROUNDWATER MONITORING

This sampling program applies to all existing groundwater monitoring wells MW1, MW2, MW3, and any wells subsequently installed under direction of the Central Valley Water Board. **Sampling shall be conducted quarterly for four consecutive quarters and semi-annually thereafter.** Semi-annual groundwater monitoring shall occur in the first and the third quarter of each calendar year. Prior to sampling, groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected and analyzed using approved EPA methods or other methods approved by the Central Valley Water Board. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Groundwater elevation [1]	0.01 feet	Calculated	Quarterly [3]	Semi-annually
Depth to groundwater	0.01 feet	Measurement	Quarterly [3]	Semi-annually
Gradient	feet/foot	Calculated	Quarterly [3]	Semi-annually
Gradient direction	degrees	Calculated	Quarterly [3]	Semi-annually
pH	standard units	Grab	Quarterly [3]	Semi-annually
Electrical conductivity	µmhos/cm	Grab	Quarterly [3]	Semi-annually
Total dissolved solids	mg/L	Grab	Quarterly [3]	Semi-annually
Nitrate as N	mg/L	Grab	Quarterly [3]	Semi-annually
Standard minerals [2]	mg/L	Grab	Annually	Annually

[1] Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.

[2] Standard Minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

[3] Sampling shall be conducted quarterly for four consecutive quarters and semi-annually during the first and the third quarters thereafter.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following for each water source used during the previous year. As an alternative to annual water supply monitoring, the Discharger may submit results of the most current Department of Public Health Consumer Confidence Report.

Constituent	Units	Sampling and Reporting Frequency
Total dissolved solids	mg/L	Annually
Electrical conductivity	µmhos/cm	Annually
pH	standard units	Annually
Standard minerals [1]	mg/L	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride,

iron, magnesium, manganese, nitrogen, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

SLUDGE AND/OR BIOSOLIDS MONITORING

Sludge and/or biosolids monitoring shall be conducted as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4) at the following frequency, depending on volume of sludge generated and removed from the wastewater treatment system:

Volume Generated (dry metric tons/year)	Frequency
0 to 290	Annually
290 to 1,500	Quarterly
1,500 to 15,000	Bimonthly (six samples per year)
Greater than 15,000	Monthly

Sludge and/or biosolids samples shall be analyzed to determine the total concentration in mg/Kg for the following constituents:

Arsenic	Lead	Nickel
Cadmium	Mercury	Selenium
Copper	Molybdenum	Zinc
Total Nitrogen	Total Solids	

Sludge and/or biosolids monitoring records shall be retained for a minimum of five years in accordance with 40 CFR, Part 503.17. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis to report sludge monitoring.

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR, Part 503.32, and shall maintain records of the operational parameters used to comply with the Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b).

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, effluent, UV system, storage pond, sludge, and land application area monitoring.
2. A comparison of the monitoring data to the influent flow limitations, effluent limitations, and discharge specifications, and an explanation of any violation of those requirements. Data shall be presented in tabular format.
3. If requested by staff, copies of laboratory analytical report(s).
4. A calibration log verifying calibration of all monitoring instruments and devices used to fulfill the prescribed monitoring program.

B. Semi-Annual Monitoring Reports

Semi-annual monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of August** (for the first six months of the year) and **1st day of February the following year** (for the last six months of the year). The Semi-Annual Monitoring Reports shall include the following:

1. Results of groundwater monitoring for all monitoring and sampling events during the last six months;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. For each monitoring event:
    a. Calculation of groundwater elevations, determination of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any; and
    b. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
4. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
5. Summary data tables and graphs of historical and current water table elevations and analytical results;
6. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and

7. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be submitted to the Regional Board by **1 February** each year. The Annual Report shall include the following:

1. The results from annual monitoring of the effluent, groundwater, and water supply;
2. Average dry weather influent flow for the year, the monthly maximum influent flow for the year, total annual influent flow for the year; and a comparison of these results to the influent flow limitations of this Order.
3. A digital database (Microsoft Excel) containing historic groundwater and effluent data;
4. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and a forecast of the flows anticipated in the next year;
5. The results of sludge and/or biosolids monitoring for the calendar year, including:
    a. The amount of sludge generated that year and the amount accumulated on site at the end of the calendar year (in dry tons).
    b. For biosolids, documentation of pathogen reduction methods and vector attraction reduction methods employed, as required in 40 CFR Parts 503.17 and 503.27.
    c. A description of disposal methods, including the following information. If more than one method was used, include the amount of sludge disposed of by each method in dry tons.
        i. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
        ii. For off-site land application, include: the name and location of the site, and the Order number of any WDRs that regulate it.
        iii. For incineration, include: the name and location of the incineration facility.
        iv. For off-site composting, include: the name and location of the facility, and the Order number of any WDRs that regulate it.
6. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
7. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
8. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with California Code of Regulations, title 23, division 3, chapter 26;
9. A forecast of influent flows, as described in Standard Provision No. E.4; and
10. A statement of when the O&M Manual was last reviewed for adequacy, and a description of any changes made during the year.

A transmittal letter shall accompany each self-monitoring report. The letter shall include a discussion of all violations of the WDRs or this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: Original signed by
PAMELA C. CREEDON, Executive Officer

1 February 2013

(Date)

LF: 11/16/2012

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0009
CALAVERAS COUNTY WATER DISTRICT
DOUGLAS FLAT/VALLECITO WASTEWATER TREATMENT FACILITY
CALAVERAS COUNTY

Background

The Douglas Flat/Vallecito Wastewater Treatment Facility (WWTF) is located on Holiday Mine Road off State Route 4 in Calaveras County, approximately 0.5 miles south of Douglas Flat and 1.5 miles northeast of Vallecito, as shown on Attachment A.

The WWTF occupies approximately 96 acres and serves the Douglas and Vallecito communities, which had a combined estimated population of 610 in 2010. The total number of sewer connections at build-out is estimated to be 315, including 250 connections for existing residential, five connections for existing commercial, and 60 connections for infill. Based on one percent annual population growth, the projected population in the service area for the year 2030 is 720, which will require approximately 45 infill sewer connections.

WDRs Order 92-018, adopted by the Central Valley Water Board on 24 January 1992, prescribes requirements for the WWTF and allows a monthly average flow of 65,000 gallons per day (gpd). The Discharger is making significant improvements to the WWTF and has requested that the Board increase the flow limit to an average dry weather flow (ADWF) of 75,000 gpd.

The existing WWTF has two parallel activated sludge treatment units (the Douglas Flat and Vallecito units), a chlorine disinfection system, an effluent storage pond, sludge drying beds, and approximately 60 acres of LAAs with a net area of 26 acres for irrigation. The Douglas Flat unit was built in 1970 and the Vallecito unit was added in 1987. Each treatment unit has an aeration basin, a secondary clarifier, and an anaerobic digester.

The combined effluent flows from the Douglas Flat and Vallecito treatment units are disinfected in a chlorine contact chamber. The disinfected wastewater is discharged into the effluent storage pond and then applied to the spray field LAAs via sprinkler systems. Solids and sludge are currently dried in the sludge drying beds on-site during summer months in order to meet the pathogen and vector attraction reduction requirements for Class B biosolids, but a new sludge handing system is under construction. All biosolids are currently applied as a soil amendment to offsite lands regulated under separate WDRs.

Facility Improvements and Discharge

In October 2011, the Discharger received $4.42 million in funding from the State Water Resources Control Board (State Water Board) for WWTF improvements, including the installation of membrane biological reactors (MBRs), an ultraviolet (UV) light disinfection system, and a belt press for sludge dewatering. The updated facility will be able to produce tertiary treated wastewater for potential beneficial reuse. The Discharger expects to complete construction of these improvements by December 2012.

The updated WWTF will consist of a grit removal unit, a flow equalization tank, two fine screens, two MBR units, a sludge holding tank, a sludge belt press, a dry sludge storage area, a UV disinfection system, the existing storage pond, and the existing spray field LAAs. A standby generator was installed to provide backup power.

Discharge Prohibitions, Specifications and Provisions

The water balances included in the RWD addendum show that the WWTF has a sufficient capacity for an ADWF of 75,000 gpd (based on the months of July through September) and an annual total inflow rate of 32.9 million gallons.

In July and August 2012, the Discharger installed three groundwater monitoring wells MW-1, MW-2 and MW-3. MW-1 is upgradient of the WWTF, and MW-2 and MW-3 are downgradient of the effluent storage pond and the LAAs, respectively. The Discharger has performed groundwater monitoring three times since the wells were installed: in August and September 2012. During that period, the groundwater gradients ranged from 0.004 to 0.02 feet/foot; groundwater flowed from north to south.

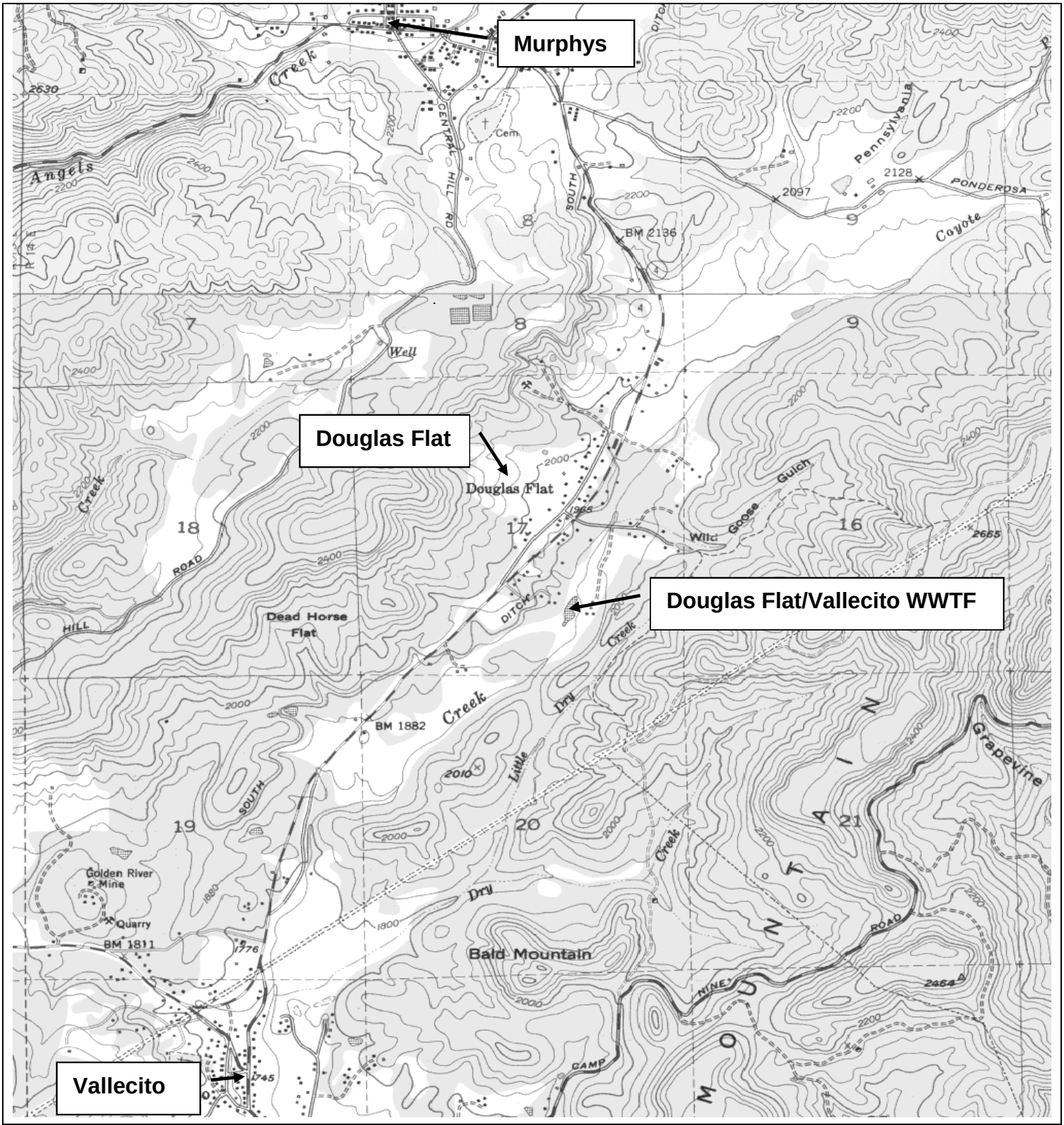
The current effluent TDS average of 357 mg/L and groundwater TDS averages (from 322 to 425 mg/L) are less than the recommended Secondary MCL of 500 mg/L. The RWD did not project the effluent TDS concentration of the updated WWTF; however, it is expected to be less than the current level due to the elimination of chlorine disinfection. Therefore, the discharge is not likely to degrade groundwater quality due to increased salinity.

The projected effluent total nitrogen of the updated WWTF is 6.9 mg/L and the nitrate nitrogen concentration of background groundwater averages 4.5 mg/L. Effluent and groundwater monitoring data to date for the wastewater treatment plant site do not indicate degradation due to nitrate, and the plants grown at the LAAs should remove most of the nitrogen in the applied wastewater. However, groundwater is shallow, so there is some threat that the discharge could cause degradation for nitrate. The primary MCL for nitrate is 10 mg/L as nitrogen. This Order therefore includes an effluent limit of 10 mg/L total nitrogen and a groundwater limit of 10 mg/L nitrate as nitrogen.

Because the WWTF provides a high level of containment and disinfection prior to discharge, coliform organisms do not pose a threat to groundwater quality.

The Provisions require that the proposed improvements be completed, as well as the submittal of Improvements Completion Report, a Tailwater and LAA Setback Operational Procedure Plan and a Storage Pond Expansion Completion Report.

The Monitoring and Reporting Program is designed to verify compliance with flow limits, effluent limitations, and operational requirements of the WDRs.

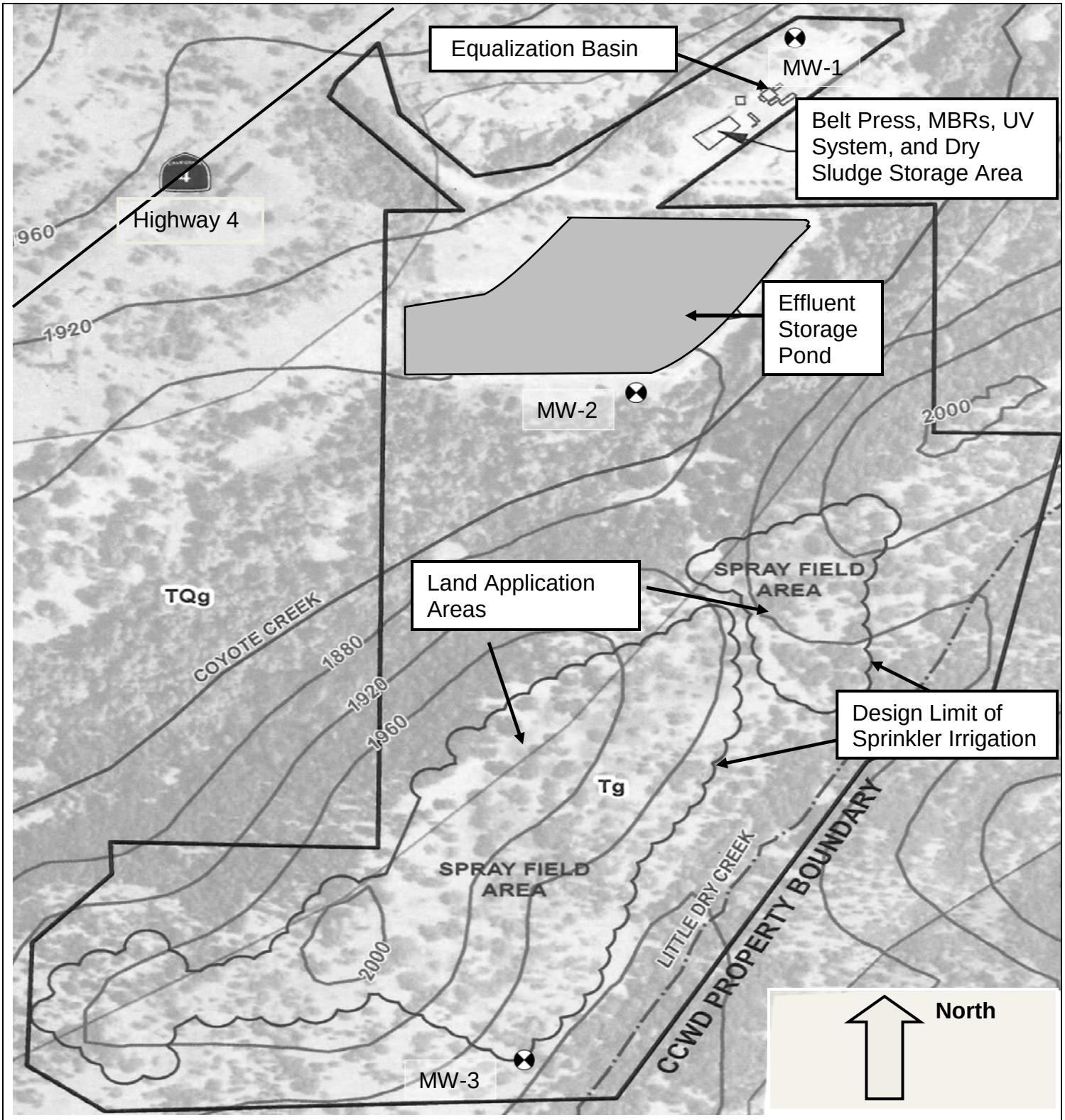


Drawing Reference:
USGS 7.5' Quadrangle
Murphys, CA

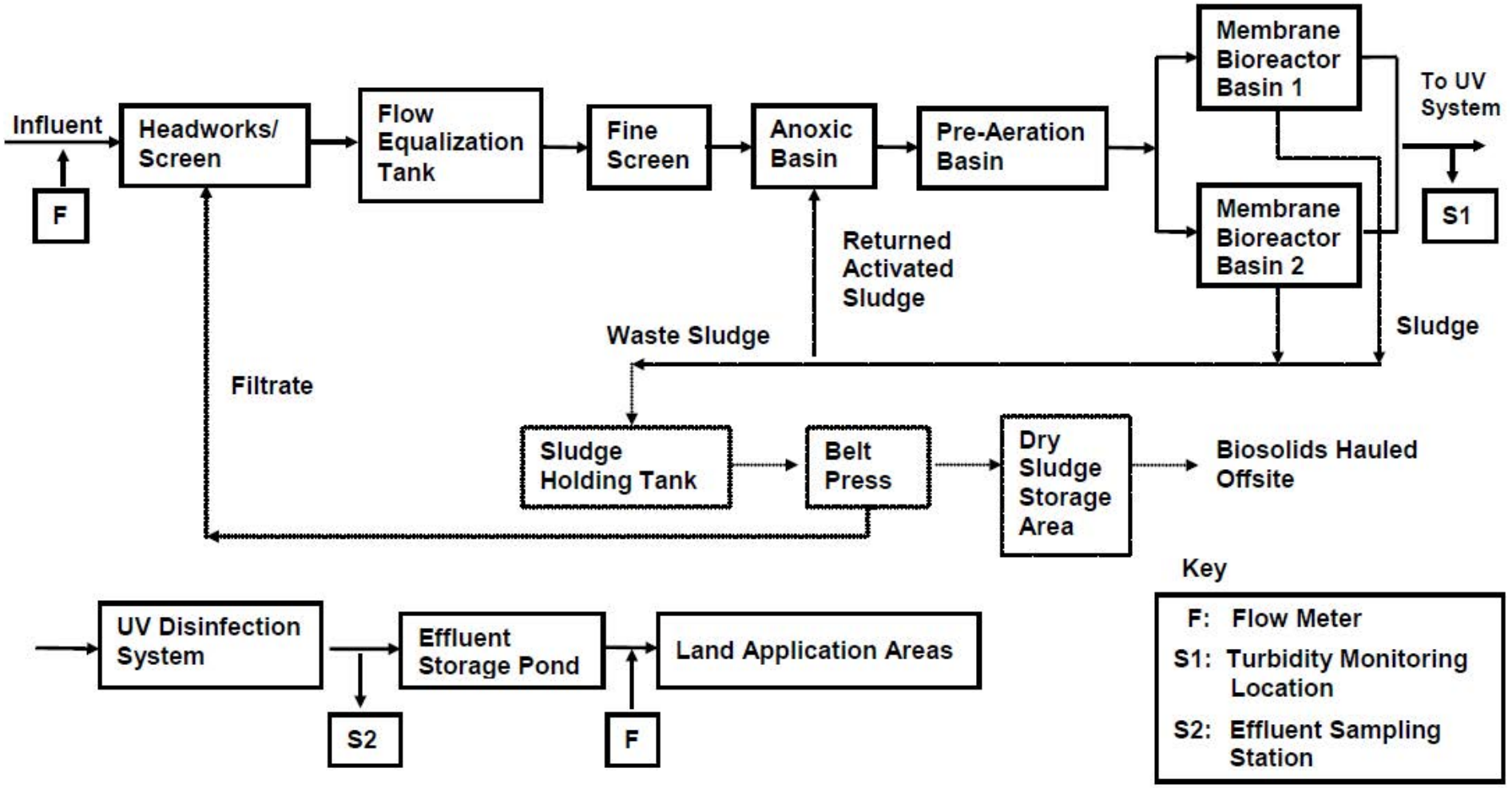
SITE LOCATION MAP
CALAVERAS COUNTY WATER DISTRICT
DOUGLAS FLAT/VALLECITO WWTF
CALAVERAS COUNTY

N
W E
S

1 in =3,125 ft



Drawing Reference: Figure 4, Geologic Map Workplan for Installation of Groundwater Monitor Wells May 2012, Condor Earth Technologies, Inc.	**SITE PLAN** CALAVERAS COUNTY WATER DISTRICT DOUGLAS FLAT/VALLECITO WWTF CALAVERAS COUNTY	Scale Approx. 1 in = 400 ft.



Drawing Reference: Calaveras County Water District Douglas Flat/Vallecito WWTF Report of Waste Discharge June 2012	**PROCESS SCHEMATIC** CALAVERAS COUNTY WATER DISTRICT DOUGLAS FLAT/VALLECITO WWTF CALAVERAS COUNTY	

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS FOR WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this Order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;

   d. A material change in the character, location, or volume of discharge.

4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:

   a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.

   b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.

   c. The addition of a major industrial, municipal or domestic waste discharge facility.

   d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:

   a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,

   b. Copy any records required to be kept under terms and conditions of this Order,

   c. Inspect at reasonable hours, monitoring equipment required by this Order, and

   d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.

9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.

11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.

12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** *[Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.]* as soon as it or its agents

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

   This plan shall:

   a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.

   b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.

   c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

   The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:

   a. <u>For a corporation</u>: by a principal executive officer of at least the level of senior vice-president.

   b. <u>For a partnership or sole proprietorship</u>: by a general partner or the proprietor.

   c. <u>For a municipality, state, federal or other public agency</u>: by either a principal executive officer or ranking elected or appointed official.

   d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;

      (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;

      (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

      (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

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

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.

5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

   California Regional Water Quality Control Board
   Central Valley Region
   11020 Sun Center Drive, #200
   Rancho Cordova, CA 95670-6114
   Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.
   or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).

2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

   Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

a. the date, exact place, and time of sampling or measurements,
b. the individual(s) who performed the sampling of the measurements,
c. the date(s) analyses were performed,
d. the individual(s) who performed the analyses,
e. the laboratory which performed the analysis,
f. the analytical techniques or methods used, and
g. the results of such analyses.

4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.

5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.

6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:

   a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.

   b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.

4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.

2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:

   a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and

      (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or

   b. (1) by-pass is required for essential maintenance to assure efficient operation; and

      (2) neither effluent nor receiving water limitations are exceeded; and

      (3) the discharger notifies the Board ten days in advance.

   The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

a. an upset occurred and the cause(s) can be identified;

b. the permitted facility was being properly operated at the time of the upset;

c. the discharger submitted notice of the upset as required in paragraph B.1. above; and

d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.

5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

6. Definitions

   a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

   b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

      Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

   c. The monthly average concentration is the arithmetic mean of measurements made during the month.

   d. The "daily maximum" **discharge** is the total discharge by volume during any day.

e. The "daily maximum" **concentration** is the highest measurement made on any single discrete sample or composite sample.

f. A "grab" sample is any sample collected in less than 15 minutes.

g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;

(1) at equal time intervals, with a maximum interval of one hour

(2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the inddustrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent that the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:

(1) Complied with baseline monitoring report requirements (where applicable);

(2) Consistently achieved compliance;

(3) Inconsistently achieved compliance;

(4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);

(5) Complied with schedule to achieve compliance (include the date final compliance is required);

(6) Did not achieve compliance and not on a compliance schedule;

(7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

(1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;

(2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

(5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;

(6) Restriction of flow to the treatment plant; or

(7) Disconnection from discharge to the treatment plant.

g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.

h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

i. A summary of public participation activities to involve and inform the public.

j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers