CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0057

FOR

TESORO VIEJO MASTER MUTUAL WATER COMPANY
TESORO VIEJO WASTEWATER TREATMENT FACILITY
MADERA COUNTY

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

1. On 19 August 2015, the Tesoro Viejo Master Mutual Water Company (hereafter Company or Discharger) in conjunction with Tesoro Viejo, Inc. submitted a Report of Waste Discharge (RWD) and applied for Waste Discharge Requirements (WDRs) to discharge tertiary treated wastewater from a new wastewater treatment facility to be constructed for the proposed Tesoro Viejo Master Planned Community in Madera County. Additional information to complete the RWD was submitted on 17 February 2016.

2. Included with the RWD is a technical report prepared by Kennedy Jenks Consultants on behalf of the Discharger and a draft Title 22 Engineering Report, which was submitted to the State Water Resources Control Board, Division of Drinking Water (DDW) for use of recycled water.

3. The proposed wastewater treatment facility will treat domestic wastewater for the Tesoro Viejo Master Planned Community (or Development). The Development is a proposed mixed use master-planned community consisting primarily of residential units with some minor areas designated for institutional, recreational, commercial, and light industrial uses. At build out the Development will comprise approximately 1,600 acres in southeastern Madera County approximately nine miles north of Fresno as shown on Attachment A, which is attached hereto and made a part of this Order by reference.

4. Tesoro Viejo, Inc., the project developer, will undertake obligation for the Development including construction of the wet utilities related to the sewer collection system, and proposed water and wastewater treatment facilities. Tesoro Viejo, Inc. shall transfer ownership and operation of these facilities to the Company at the time of start-up.

5. The Company, created in 2006, will be the agency responsible for providing potable water along with wastewater collection, treatment, and disposal services for the Development and shall be responsible for compliance with these WDRs. The Company will have a long-term contractual relationship with Tesoro Viejo, Inc., to provide water and sewer service to the Development as it is built.

6. The wastewater treatment facility (WWTF) for the proposed Development will be constructed in phases to allow for expansion as the Development grows. The WWTF will provide tertiary treatment with ultraviolet (UV) disinfection to produce Title 22 recycled water for unrestricted reuse. These WDRs will regulate the WWTF for the first three phases identified as Phase A, Phase B, and Phase 1. Based on projections, at the completion of Phase I the WWTF will meet wastewater treatment demands for the Development till 2022, which will be comprised of approximately 1,800 residential units, and some commercial and public facilities.

7. Source water for the Development will be primarily surface water from the San Joaquin River, which will be treated at a regional water treatment facility owned and operated by the Company. The character of the potable water supply is summarized below.

TABLE 1. Source Water

Parameter/Constituent	Units	Result
pH	s.u.	7.3
Electrical Conductivity (EC)	umhos/cm	20 – 145
Total Dissolved Solids (TDS)	mg/L	37
Bicarbonate	mg/L	20.4
Calcium	mg/L	3.4
Chloride	mg/L	4.4
Magnesium	mg/L	1
Nitrate as nitrogen (NO_3-N)	mg/L	<1
Sodium	mg/L	4
Sulfate	mg/L	1.7
Iron	mg/L	0.72
Manganese	mg/L	0.12

Wastewater Treatment and Disposal

8. The WWTF will be constructed on a 9.1 acre parcel set aside for wastewater treatment on the southwestern edge of the Development east of State Route 41 and south of Road 204, as shown on Attachment A.

9. According to the RWD, the WWTF will include an influent pump station and head works, flow equalization, fine screening, advanced biological treatment, an anoxic zone to provide for nitrogen reduction, UV disinfection, solids handling, and recycled water storage, as shown on Attachment B and made a part of this Order by reference.

10. For the first two phases, Phase A and Phase B, the WWTF will consist of membrane bioreactor (MBR) package plants with average maximum dry weather design flows of 0.25 million gallons per day (mgd) and 0.5 mgd, respectively. When flows approach the capacity for Phase B, construction will begin on Phase I, which will consist of a permanent

Membrane Bioreactor (MBR) system with an anoxic tank, swing air tank, aerobic tank, post-anoxic tank, and a 0.4 million gallon flow equalization tank.

11. Because this will be a new WWTF, there is no existing effluent data available. The anticipated effluent quality, presented below, is based on the proposed treatment process and data from similar existing WWTFs.

TABLE 2. Effluent Quality

Parameter/Constituent	Units	Result
pH	pH units	6.5 – 8.5
Electrical Conductivity (EC)	umhos/cm	< 600
Ammonia as nitrogen	mg/L	<1
Biochemical Oxygen Demand (BOD)	mg/L	< 10
Total Suspended Solids (TSS)	mg/L	< 10
Chloride	mg/L	< 40
Sodium	mg/L	< 60
Total Dissolved Solids (TDS)	mg/L	< 400
Total Nitrogen (TN)	mg/L	<10

12. Wasted sludge from the treatment process will be stored in sludge holding tank(s), and hauled off-site for treatment and disposal at another WWTF in the area. During construction of Phase 1, an integrated sludge storage tank will be included in the main structure for the treatment system.

13. The WWTF will have reliability and redundancy features that will include: (a) standby power, (b) redundant machinery and/or components to allow for uninterrupted operation, (c) automated controls, monitoring, and alarm systems, and (d) emergency storage for effluent that does not meet Title 22 requirements for unrestricted reuse.

14. After treatment and disinfection, the effluent will be discharged to recycled water storage ponds prior to reuse. The ponds will incorporate a 50 mil HDPE liner. For Phase A and Phase B recycled water storage will be provided by one pond with a designed capacity of 1.56 million gallons. There will also be a second lined pond with a capacity of 0.84 million gallons used for emergency storage of recycled water that does not meet Title 22 requirements (off-spec recycled water). After construction of the Phase 1 wastewater treatment system, all off-spec recycled water will be returned to the headworks of the WWTF for further treatment and the emergency storage pond will be used for storage of recycled water bringing the total available storage capacity to 2.4 million gallons.

15. The disinfected tertiary treated effluent will be used for irrigation of crops and landscaping within the Development and on land currently owned by Rio Mesa Holdings, LLC. Together these properties make up the "Use Areas" for recycled water.

16. Recycled water will be applied at agronomic rates. According to the RWD the following areas will be available for the application of recycled water during the three phases:

TABLE 3. Available Land Application Areas

Phase	Turf Grass	Landscape Vegetation	Forage/Sudan (Double crop)	Vineyard	Total
Phase A	29 acres	27 acres	67 acres	61 acres	184 acres
Phase B	58 acres	54 acres	67 acres	61 acres	240 acres
Phase 1	138 acres	150 acres	175 acres	0 acres	463 acres

17. The RWD includes a water balance prepared by Kennedy Jenks Consultants that estimates the amount of recycled water produced annually for Phase A, Phase B, and Phase 1 will be approximately 200 acre-feet, 396-acre feet, and 795 acre-feet, respectively. Based on the water balance, including total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns, the Use Areas and recycled water storage ponds will provide sufficient storage and disposal capacity for the proposed WWTF.

Water Recycling Regulatory Considerations

18. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organism as indicator organisms. Title 22 of the California Code of Regulations ("Title 22") establishes criteria for the use of recycled water. This Order implements the applicable portions of the Title 22 water recycling regulations.

19. Effluent from the WWTF will be treated to meet the requirements for disinfected tertiary recycled water, under Title 22, section 60301, and is approved for use on food crops, including edible root crops, where the recycled water comes in contact with the edible portion of the crop; parks and playgrounds; school yards; residential landscaping; unrestricted access golf courses; and any other irrigation use specified in Title 22, section 60304, and not prohibited by other sections of the California Code of Regulations.

20. Title 22, section 60323, requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards to DDW for approval. The Discharger has not received approval yet from DDW on its Title 22 Engineering Report for the distribution and use of recycled water.

This Order includes a provision requiring the Discharger to submit a copy of the final Title 22 Engineering Report with letter from DDW approving the Title 22 Engineering Report (including approval of the design and field commissioning tests/demonstration and long term operation and maintenance of the UV disinfection system) prior to start-up of the WWTF and initiation of wastewater recycling.

21. On 3 February 2009, the State Water Board adopted Resolution 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy). The Recycled Water Policy promotes the use of recycled water to achieve sustainable local water supplies and reduce greenhouse gases.

22. On 23 April 2009, the Central Valley Water Board adopted Resolution R5-2009-0028, *In Support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants* (the "Regionalization Resolution"). The Regionalization Resolution encourages water recycling, water conservation, and the regionalization of wastewater treatment facilities. It requires dischargers to document:

    a. Efforts to promote new or expanded wastewater recycling opportunities and programs;
    b. Water conservation measures; and
    c. Regional wastewater management opportunities and solutions (e.g. regionalization).

    Recycling of effluent by the Discharger is consistent with the intent of the State Water Board's Recycled Water Policy and the Central Valley Water Board's Regionalization Resolution.

23. On 3 June 2014, the State Water Board adopted Water Quality Order 2014-0090-DWQ, *General Waste Discharge Requirements for Recycled Water Use* (Recycling General Order). The Recycling General Order includes prohibitions, specifications, and administrative requirements for the production and application of recycled municipal wastewater for non-potable uses.

    This Order includes a provision requiring the Company to submit a Notice of Intent (NOI) and obtain coverage under the Recycling General Order 2014-0090-DWQ, or any subsequent revisions, prior to start-up of wastewater recycling operations.

Sanitary Sewer Overflow

24. The sanitary sewer collection system will consist of sewer pipes, manholes, and/or other conveyance system elements to direct raw sewage to the WWTF. A "sanitary sewer overflow" (SSO) is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the WWTF. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary

sewer system and discharges to these facilities are not considered SSOs, provided that the waste is fully contained within these temporary storage/conveyance facilities.

25. SSOs consist of varying mixtures of domestic and commercial wastewater, depending on land uses in the sewage collection system. The most common causes of SSOs are grease blockages, root blockages, debris, sewer line flood damage, manhole structural failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and/or contractor caused blockages.

26. SSOs often contain pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, suspended solids, and other pollutants. SSOs to surface waters can cause temporary exceedances of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair recreational use and aesthetic enjoyment of the area.

27. On 2 May 2006, the State Water Board adopted a General Sanitary Sewer System Order (Water Quality Order 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*) (the "General Order"). Order 2006-0003-DWQ requires that all public agencies that own or operate sanitary sewers systems greater than one mile in length comply with the General Order. The collection system for the Development will be greater than one mile in length; therefore, the Discharger will need to apply for coverage under the General Order.

Site-Specific Conditions

28. Climate in the Central Valley is characterized by dry summers and mild winters. The rainy season generally extends from November through April. Occasional rains occur during the spring and fall months, but summer months are dry. Based on publications from the Department of Water Resources and the Western Regional Climate Center, annual rainfall for the Fresno and Madera area is about 14 inches, with a 100-year-return-period wet year rainfall of about 25 inches. From the California Irrigation Management System (CIMIS), the mean reference evapotranspiration rate (ETo) for the nearby station at Fresno State University is about 55.6 inches per year.

29. According to Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service, soils in the vicinity of the WWTF site and Use Areas are predominately Redding gravelly loam, Ramona sandy loam, and Whitney and Rocklin sandy loam. These soil types are well drained to moderately well drained with permeabilities of about 0.2 to 0.57 inches per hour.

30. According to the Federal Emergency Management Agency maps (Map Number 06039C1210 E) the WWTF and Use Areas lie in Zone X, areas determined to be outside the 500-year floodplain, with less than a 0.2% annual chance of flooding.

31. The site is generally undeveloped and consists primarily of open, rural residential, and agricultural lands. The Development is bounded on the east by the Sumner Hill development and the San Joaquin River, to the south by agricultural land, to the west by the Bonadelle Ranchos Nine development, and to the north by Little Table Mountain. Primary crops grown in the area include hay and grain crops, vineyards, citrus, and blueberries. Irrigation water in the area is a combination of groundwater and surface water.

Groundwater Considerations

32. According to the Department of Water Resources (DWR) Groundwater Elevation Maps (Spring 2010), first encountered groundwater in the vicinity of the proposed Development occurs at about 200 feet below ground surface (bgs). Regional groundwater flow in the area is to the southwest away from the San Joaquin River.

33. The RWD describes a groundwater investigation to evaluate groundwater depth, flow direction, and water quality in the vicinity of the Development and proposed WWTF and recycle Use Areas. As part of a 2012 investigation, conducted by Kenneth D. Schmidt and Associates, several wells were installed within the proposed Development and groundwater samples were collected and analyzed.

34. The groundwater investigation identified a shallow perched zone at depths ranging from about 12 to 40 feet bgs in the northern portion of the Development likely due to recharge from Little Table Mountain. Groundwater flow direction in this shallow zone is to the south, slightly different from the deeper regional aquifer. Groundwater elevation in this shallow zone is higher in the northern portion of the Development, but appears to drop and likely merges with deeper groundwater as the distance increases down-gradient of Little Table Mountain.

35. Groundwater samples were collected from several wells within the Development in order to characterize shallow and deep groundwater quality in the area. The results of the groundwater sampling are presented in the tables below.

TABLE 4. Shallow Groundwater Quality

Year	pH	EC[1]	Bicarbonate	TDS[2]	Sodium	Chloride	Nitrate as Nitrogen
	pH Units	umhos/cm	mg/L	mg/L	mg/L	mg/L	mg/L
2006	7.2	656	187	429	56	76	9.2
2011	7.5	457	166	307	28	23	7.8
Average[3]	7.3	557	176	332	42	50	8.5

1. Electrical Conductivity.
2. Total Dissolved Solids.
3. Average of samples from all wells collected from 2006 and 2011.

TABLE 5. Deep Groundwater Quality

Year	pH	EC[1]	Bicarbonate	TDS[2]	Sodium	Chloride	Nitrate as Nitrogen
	pH Units	umhos/cm	mg/L	mg/L	mg/L	mg/L	mg/L
2010	6.4	280	90	195	16	15	6.6
2011	7.4	287	90	230	16	15	6.3
Average[3]	6.8	284	90	213	16	15	6.4

1. Electrical Conductivity
2. Total Dissolved Solids
3. Average of samples from all wells collected in 2010 and 2011.

36. Based on the groundwater investigation, groundwater quality beneath the Development is of good quality. Shallow groundwater beneath the northern portion of the site is of slightly poorer quality than the deeper groundwater. However, the WWTF and recycled Use Areas are on the southern half of the Development where this shallow perched zone was not encountered.

37. With the proposed treatment and nitrification/denitrification to reduce nitrogen concentrations in the effluent to <10 mg/L, storage of wastewater in lined ponds and application at agronomic rates, the discharge from the proposed WWTF is not expected to significantly degrade groundwater quality.

Basin Plan, Beneficial Uses, and Water Quality Objectives

38. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised April 2016* (the "Basin Plan") designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Board. In accordance with Water Code section 13263(a), these waste discharge requirements implement the Basin Plan.

39. The WWTF and recycled Use Areas are within the Berenda Hydrologic Area (No. 545.30) of the San Joaquin Valley Floor Hydrologic Unit, as depicted on interagency hydrologic maps prepared by State Water Board and Department of Water Resources, revised in August 1986. Local drainage is to the San Joaquin River. The beneficial uses of the San Joaquin River from Friant Dam to the Mendota Pool, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; industrial process supply; water contact recreation; non-contact water recreation; warm and cold freshwater habitat; migration of warm and cold aquatic organisms; warm water spawning; and wildlife habitat.

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

41. 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.

42. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any 7-day period shall be less than 2.2 MPN per 100 mL in groundwater with a beneficial use of municipal and domestic supply.

43. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum requires waters designated as domestic or municipal supply to meet the maximum contaminant levels (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.

44. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.

45. 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. 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.

46. 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 of less than 700 umhos/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.

47. Many surface waters and local groundwater supplies have been degraded with salt. In some areas, the high salinity is naturally occurring, but in many areas it is due to the acts of man. In 2006, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program.

Antidegradation Analysis

48. State Water Board Resolution No. 68-16 ("*Policy with Respect to Maintaining High Quality Water of the State*") (the "Antidegradation Policy") prohibits degradation of groundwater unless it has been shown that:

    a. 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;

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

    c. The discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and

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

49. The RWD included an antidegradation analysis that evaluated the potential for the discharge to impact groundwater quality. The antidegradation analysis looked at EC, TDS, nitrate, chloride, sodium, and boron. Concentrations of these constituents in infiltrated water were estimated by performing a site-wide water balance, taking into account contributions from precipitation, recycled water, and supplemental irrigation water. The antidegradation analysis found there would be some degradation with respect to EC, and TDS; however, the degradation would not affect beneficial uses or cause EC, and TDS in groundwater to exceed applicable water quality objectives.

50. The WWTF described in Findings 8 through 17 will provide treatment and control of the discharge that incorporates:

    a. Use of advanced activated sludge treatment systems with nitrification/denitrification to reduce total nitrogen concentrations in the effluent to 10 mg/L or less;

    b. Temporary storage of treated effluent in lined ponds;

    c. Application of disinfected tertiary treated wastewater for irrigation at rates that will not exceed reasonable agronomic demand in the areas where effluent will be recycled;

    d. Certified operators to ensure proper operation and maintenance of the treatment systems;

    e. Proper sludge handling and off-site disposal; and

    f. Source water, discharge, and land application monitoring.

The preceding treatment and control practices can be considered BPTC for the purposes of Resolution 68-16.

51. Degradation of groundwater by some of the typical waste constituents of concern (e.g., EC and nitrate) released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the State. The technology, energy, and waste management advantages of a municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts 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 therefore provides sufficient reason to accommodate planned growth and allow for limited groundwater degradation.

Antidegradation Conclusions

52. The discharge and the potential for groundwater degradation allowed in this Order is consistent with Resolution 68-16 since: (a) the limited degradation allowed by this Order will not unreasonably affect present and anticipated beneficial uses or result in water quality less than water quality objectives, (b) the Discharger will implement BPTC to minimize degradation, and (c) the limited degradation is of maximum benefit to the people of the State.

53. This Order establishes groundwater limitations that allow some degradation, but that will not unreasonably threaten present and future anticipated beneficial uses of groundwater or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

CEQA

54. The proposed WWTF was reviewed as part of the Tesoro Viejo Specific Plan and Revised Environmental Impact Report (REIR), which was certified by the Madera County Board of Supervisors in accordance with the California Environmental Quality Act (CEQA) on 5 November 2012 (SCH #2006111123).

55. Acting as a responsible agency pursuant to CEQA, Central Valley Water Board staff reviewed the Final REIR and concurred that the project as proposed will not have a significant impact on water quality. The Central Valley Water Board further finds that since the EIR was certified; (1) there have been no substantial changes to the proposed WWTF; (2) and no new information of substantial importance to the proposed WWTF has become available.

56. This Order includes effluent limitations for flow, total nitrogen, BOD, TSS, and total coliform organisms. Compliance with these limitations and the associated monitoring and reporting program will ensure that any potential impacts to water quality will not be significant.

Other Regulatory Considerations

57. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

58. Based on the threat and complexity of the discharge, the Tesoro Viejo WWTF is determined to be classified as 2B as defined below:

    a. Category 2 threat to water quality: " Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."

    b. Category B complexity: "Any discharger not included in 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."

59. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. 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 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 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.

60. 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 biological treatment systems and clarifiers 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 storage ponds, and recycled Use Areas 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 and recycled Use Area does not need to be managed as hazardous waste.

61. On 1 April 2014, the State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities. Order 2014-0057-DWQ superseded State Water Board Order 97-03-DWQ (NPDES General Permit CAS000001) and became effective on 1 July 2015. Order 2014-0057-DWQ requires all applicable industrial dischargers to apply for coverage under the General Order by the effective date.

    Until construction of Phase 1, the design flow of the WWTF will be less than 1.0 mgd and the Discharger is not required to apply for coverage under the industrial storm water General Permit. Once the WWTF reaches a design flow of 1.0 mgd (i.e., upon construction of Phase 1), the Discharger will be required to apply for coverage under the industrial storm water General Permit, or demonstrate that all storm water will be retained on-site and will not discharge into a water of the U.S.

62. Water Code section 13267(b) states that:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or

> discharging, or who proposes to discharge waste within its region… 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 report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and monitoring reports required by the attached MRP R5-2016-0057 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the wastewater treatment facilities that discharge the waste subject to this Order.

63. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 Code of Federal Regulations (CFR) part 503, Standards for the Use or Disposal of Sewage Sludge, which establish management criteria for protection of ground and surface waters, sets limits and application rates for heavy metals, and establishes stabilization and disinfection criteria. However, 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 EPA.

64. 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.

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

Public Notice

66. 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 conditions of discharge of this Order.

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

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

IT IS HEREBY ORDERED that pursuant to Water Code sections 13263 and 13267, Tesoro Viejo Master Mutual Water Company, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

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

2. Bypass or overflow of untreated wastes, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, is prohibited.

3. Discharge of hazardous wastes, as that term is defined in California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.

4. Discharge of waste in a manner or location other than that described herein or in the RWD is prohibited.

5. Discharge of toxic substances into the wastewater treatment system such that biological treatment mechanisms are disrupted is prohibited.

6. Discharge of recycled water to the recycled Use Areas is prohibited until the Discharger has provided an approved Title 22 Engineering Report and obtained coverage under the Recycling General Order as specified in Provision H.19.

B. Flow Limitations

1. The average monthly dry weather flow from the WWTF shall not exceed 0.25 mgd. [Monitored at EFF-001]

2. After satisfying Provision H.21, the average monthly dry weather flow shall not exceed 0.5 mgd. [Monitored at EFF-001].

3. After satisfying Provision H.22, the average monthly dry weather flow shall not exceed 1.0 mgd. [Monitored at EFF-001]

C. Effluent Limitations

As determined by collecting samples from monitoring location EFF-001, effluent discharged to the recycled water storage pond(s) shall not exceed the following limitations:

1. The BOD 5-day @ 20°C, total suspended solids, and total nitrogen limitations shown in the following table:

Effluent Limitations

Parameter	Units	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5[1]	mg/L	10	20	--	--
Total Suspended Solids	mg/L	10	20	--	--
Total Nitrogen	mg/L	10	--	--	--

[1.] 5-day Biochemical Oxygen Demand at 20°C.

2. The median concentration of total coliform organisms in the disinfected effluent from the WWTF shall not exceed the following:

   a. A most probable number (MPN) of 2.2 total coliform bacteria per 100 milliliters utilizing the bacteriological results of the last seven days for which the analyses have been completed;

   b. An MPN of 23 total coliform bacteria per 100 milliliters in more than one sample in any 30-day period; and

   c. An MPN of 240 total coliform bacteria per 100 milliliters at any one time.

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

3. The discharge shall remain within the permitted waste treatment/containment structures and approved recycled Use Areas at all times.

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

5. All wastewater discharged shall be oxidized, coagulated (if necessary), filtered, and disinfected.

6. The Discharger shall comply with all terms and conditions of the most current Title 22 regulations pertaining to the production and use of recycled water.

7. The turbidity of filtered effluent from the WWTF, prior to disinfection, shall not exceed:

   a. 0.2 NTU more than 5 percent of the time during a 24-hour period; and

   b. 0.5 NTU at any time.

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

9. Public contact with effluent (treatment works, storage ponds, etc.) shall be precluded through such means as fences, signs, or acceptable alternatives.

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

11. Wastewater discharged to the ponds shall not have a pH less than 6.0 or greater than 9.0 at the time of discharge.

12. 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.

13. On or about **1 October** of each year, available pond storage capacity shall be at least equal to the volume necessary to comply with Discharge Specification D.12.

14. All ponds shall be managed to prevent breeding of mosquitoes. In particular,

   a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.

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

   c. Dead algae, vegetation and other 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.

E. Ultraviolet Disinfection System Operating Specifications

The following specifications apply to operation of the Ultraviolet (UV) disinfection system at the WWTF:

1. Prior to the initial discharge from the WWTF, the Discharger shall submit to the Executive Officer a copy of a letter from DDW stating that all UV disinfection system pre-operation acceptance conditions specified by DDW have been satisfied.

2. The WWTF shall be operated in accordance with an Operations Plan approved by DDW, which specifies clearly the operational limits and responses required for critical alarms. A copy of the approved operations plan shall be maintained at the site and be readily available to operations personnel and regulatory agencies.

3. The Discharger shall operate the UV disinfection system to provide a minimum UV dose per channel of 80 milijoules per square centimeter (mJ/cm^2) at peak daily flow, and shall maintain an adequate dose for disinfection at all times.

4. The Discharger shall provide continuous, reliable monitoring of UV dose, flow, UV transmittance, UV power, UV intensity, lamp age, and turbidity.

5. UV transmittance meters, UV intensity sensors, and flow meters must be properly calibrated to ensure proper disinfection.

6. At least monthly, all UV transmittance meters, UV intensity sensors, and flow meters must be properly calibrated in accordance with the frequency and parameters specified in the approved Operations Plan.

7. Flow meters measuring flows through the UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods.

8. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operations manual for physical wear (e.g., scouring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

9. The lamp sleeves shall be cleaned or replaced periodically, as necessary, to comply with these and DDW requirements, or sooner, if there are indications that the lamps

are failing to provide adequate disinfection. Lamp age and replacement records shall be maintained on-site.

10. The UV system must be operated with a built-in automatic reliability feature that must be triggered by critical alarm setpoints. Conditions that shall initiate shut down of the WWTF and divert flow include: UV operational dose lower than 80 mJ/cm^2, UV transmittance lower than 55% at 254 nm, effluent total coliform organisms greater than 240 MPN/100 ml, turbidity prior to disinfection greater than 10 NTU, UV transmittance meter failure, intensity sensor failure, multiple lamp failure, or reactor failure. Central Valley Water Board staff shall be notified within 24 hours of WWTF shut down or flow diversion.

11. A quick reference Operation Data Sheet shall be posted at the WWTF and include the following information:

    a. The alarm set points for tertiary turbidity, high flow, and UV dose;
    b. The volumes for high turbidity, high flow, and low UV dose, when flow must be diverted;
    c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, UV transmittance, and UV intensity;
    d. The required frequency of mechanical cleaning/wiping and equipment inspection; and
    e. The UV lamp age tracking procedures and replacement intervals.

12. Equipment substitutions are not acceptable without an adequate demonstration of equivalent disinfection performance.

F. Solids Disposal Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advance wastewater treatment processes. Solid waste refers to grit and screening material 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 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, aeration basins, ponds, clarifiers, etc., as needed to ensure optimal plant operation.

2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property.

3. Any handling and storage of residual sludge, solid waste, and biosolids on property of 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.

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

5. 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 or a local (e.g., county) program authorized by a regional water board. In most cases, this means the General Biosolids Order (State Water 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 authorized by the General Biosolids Order, the Discharger must file a complete Notice of Intent for each project.

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.

G. Groundwater Limitations

Release of waste constituents from any treatment, reclamation or storage component associated with the discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background quality, whichever is greater:

1. Nitrate as Nitrogen of 10 mg/L.

2. EC of 900 umhos/cm.

3. Total coliform organisms level of 2.2 MPN/100 mL over any 7-day period.

4. For constituents identified in Title 22 of the California Code of Regulations, the MCLs quantified therein.

H. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements,* dated 1 March 1991 (Standard Provisions), which are part of this Order.

2. The Discharger shall comply with MRP R5-2016-0057, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.

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

4. The Discharger shall provide certified WWTF operators in accordance with Title 23, division 3, chapter 26.

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

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

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

8. 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."

9. A discharger whose waste flows have been increasing, or is projected to increase, shall estimate when flows will reach the hydraulic and treatment capacity 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 a projection shows that capacity of any part of the facilities may be exceeded within four years, the Discharger shall notify the Central Valley Water Board by **31 January**.

10. As a means of discerning compliance with Discharge Specification D.10, the dissolved oxygen (DO) content in the upper one foot of any wastewater storage or percolation pond shall not be less than 1.0 mg/L for three consecutive 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 Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

11. The Discharger shall maintain and operate ponds sufficiently to protect the integrity of containment levees and prevent overtopping or overflows. 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 shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain permanent markers with calibration that indicates the water level at the design capacity and enables determination of available operational freeboard.

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

13. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.

14. The Discharger shall comply with the requirements of the Water Quality Order 2006-0003-DWQ *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (General WDRs), 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 District 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.

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 land or waste treatment and storage facilities owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

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

18. To verify performance for site-specific recycled water, **upon completion of construction and prior to operation**, an on-site check-point bioassay must be performed on the reactor using seeded MS2 coliphage as described in the August 2012 NWRI Guidelines. The on-site bioassay protocol must be approved by DDW and must be conducted over a range of flows. Results, documenting virus disinfection performance of the system to standards found in Title 22, must be submitted to DDW for approval.

19. **At least 90 days** prior to start-up of the WWTF and initiating discharge to the recycled Use Areas, the Discharger shall submit a Notice of Intent (NOI) for coverage under Water Quality Order 2014-0090-DWQ *Statewide General Waste Discharge Requirements for Recycled Water Use* (Recycling General Order) or any subsequent revisions. At a minimum the NOI needs to include: (a) type and level of wastewater

treatment; (b) description on where and how the recycled water will be applied; (c) contact information for recycled water producers and users; (d) rules and regulations for recycled water use, and responsibilities of personnel involved in the recycling water program; and (e) a copy of the final approved Title 22 Engineering Report prepared in accordance with Title 22, section 60323 with approval letter from DDW. This provision shall be considered satisfied when the Executive Officer issues a Notice of Applicability for coverage under the Recycling General Order.

20. The Discharger shall maintain an approved Title 22 Engineering Report with DDW consistent with approved recycled water uses.

21. **At least 60 days** prior to increasing the average monthly flow above 0.25 mgd, the Discharger shall submit an engineering certification showing that the WWTF and approved recycled "Use Areas" have sufficient treatment, storage, and disposal capacity to handle an average dry weather flow of 0.5 mgd and can comply with the terms and conditions of this Order. This provision will be considered satisfied following written acknowledgement from the Executive Officer that this criteria has been met.

22. **At least 60 days** prior to increasing the average monthly flow above 0.5 mgd, the Discharger shall submit an engineering certification showing that the WWTF and approved recycled "Use Areas" have sufficient treatment, storage, and disposal capacity to handle an average dry weather flow of 1.0 mgd and can comply with the terms and conditions of this Order. This provision will be considered satisfied following written acknowledgement from the Executive Officer that this criteria has been met.

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

24. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plant for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.

25. 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, section 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 filling petitions may be found on the Internet at:

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

or will be provided upon request.

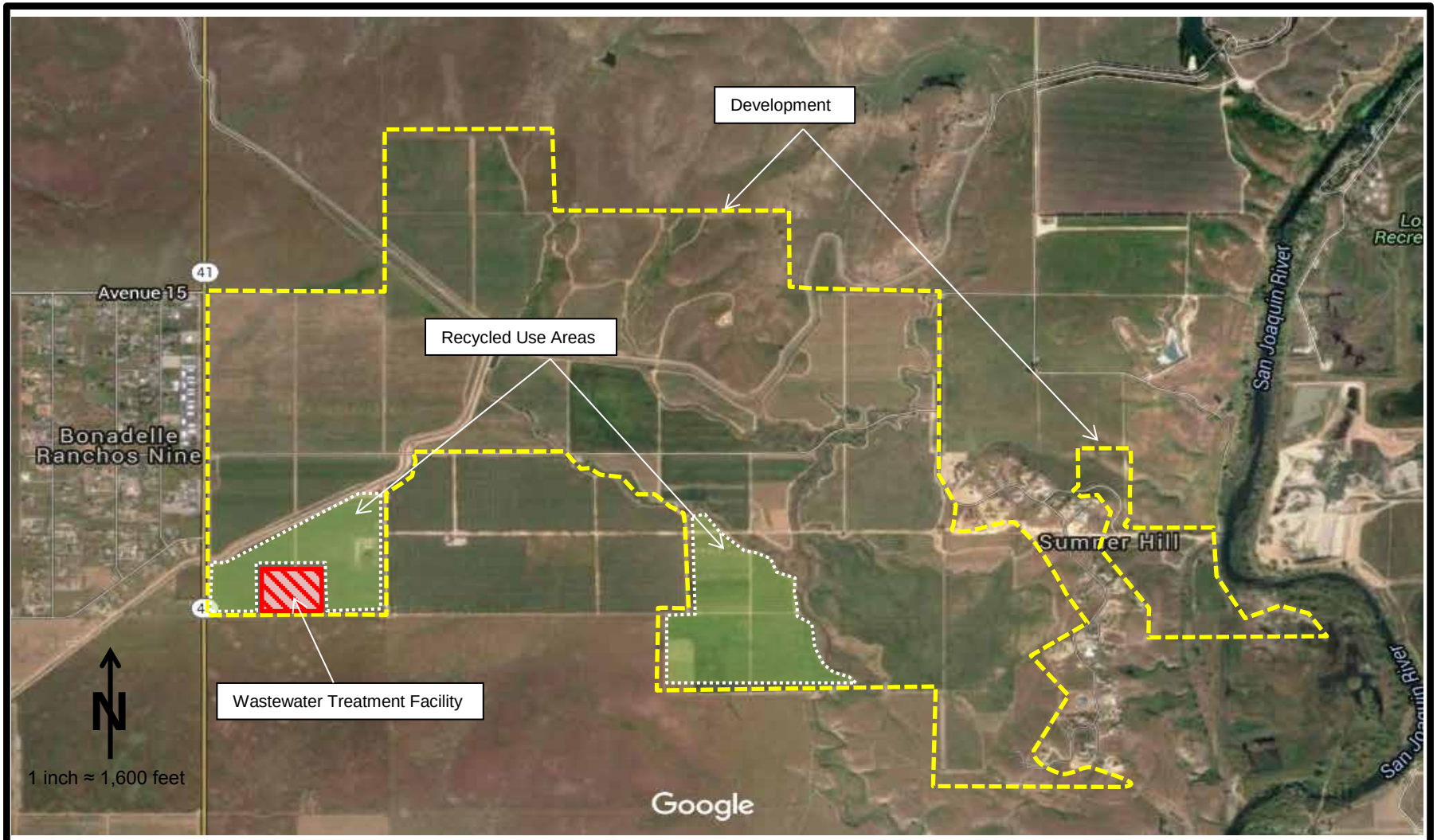
I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 24 June 2016.

Original signed by:

_____
PAMELA C. CREEDON, Executive Officer

Order Attachments:
A Site Location Map
B Process Flow Diagram

Monitoring and Reporting Program R5-2016-0057
Information Sheet
Standard Provisions (1 March 1991)

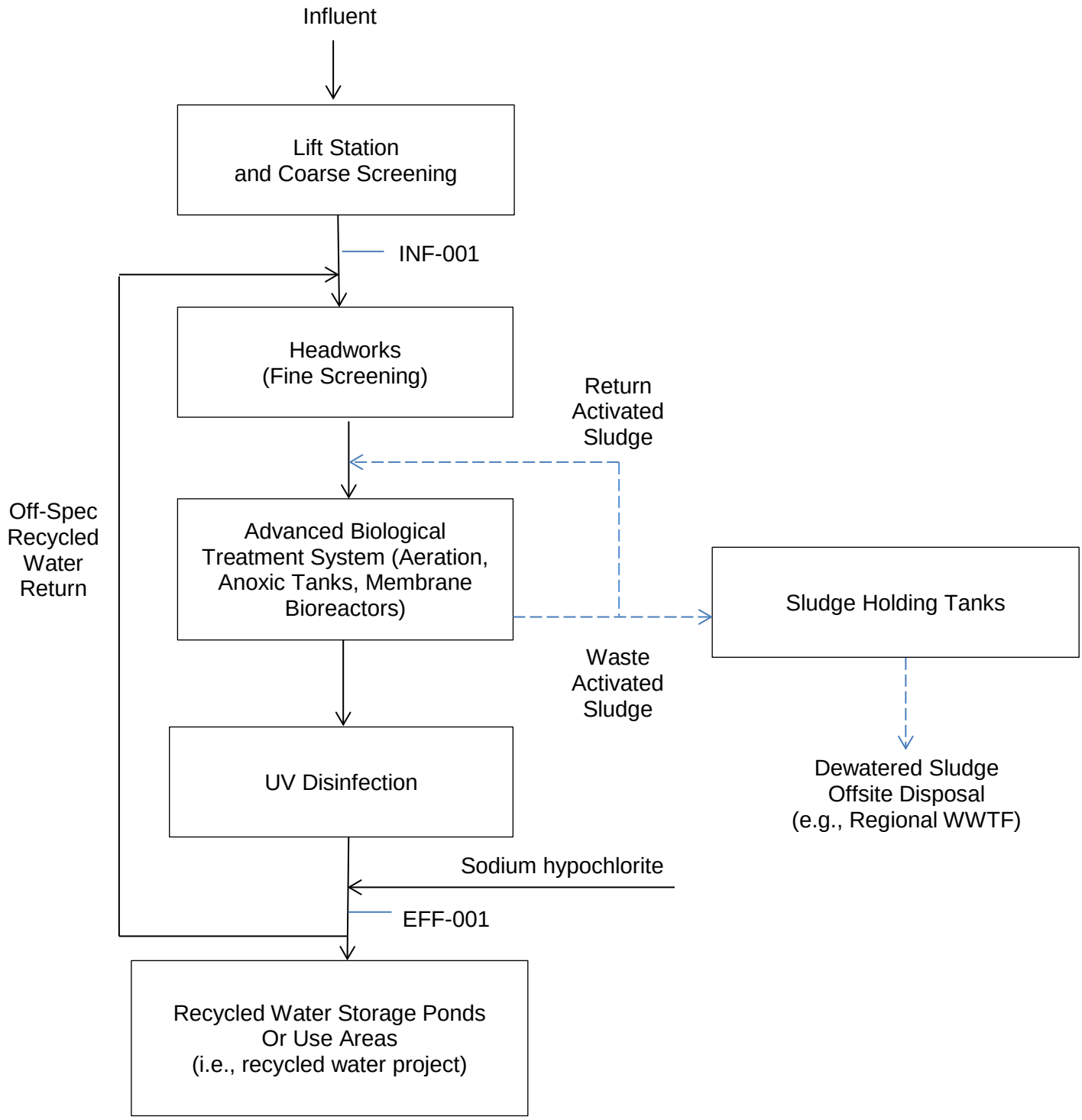


Drawing Reference: GOOGLE MAPS 2016

SITE LOCATION MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0057
FOR
TESORO VIEJO MASTER MUTUAL WATER COMPANY
TESORO VIEJO WASTEWATER TREATMENT FACILITY
MADERA COUNTY

ATTACHMENT A



NOT TO SCALE

Symbol	Description
→	Wastewater
- - →	Sludge

Sampling Points

INF-001	Influent
EFF-001	Effluent

PROCESS FLOW DIAGRAM

ORDER R5-2016-0057
WASTE DISCHARGE REQUIREMENTS
FOR
TESORO VIEJO MASTER MUTUAL WATER COMPANY
TESORO VIEJO WASTEWATER TREATMENT FACILITY
MADERA COUNTY

ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2016-0057

FOR

TESORO VIEJO MASTER MUTUAL WATER COMPANY
TESORO VIEJO WASTEWATER TREATMENT FACILITY
MADERA COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with ***Standard Provisions and Reporting Requirements for Waste Discharge Requirements***, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

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

A glossary of terms used within this MRP is included on page 8.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
INF-001	Location where a representative sample of the influent to the Wastewater Treatment Facility (WWTF) can be collected prior to any WWTF return flows or treatment processes.
EFF-001	Location where a representative sample of the effluent from the WWTF can be obtained after all treatment units prior to discharge to the recycled water storage ponds.
F-001	After the MBR unit and prior to disinfection.
PND-001 through PND-00X	Recycled water storage ponds
SPL-001	Source water supply
UVS-001	Ultraviolet light disinfection system
BIO-001	Sludge monitoring

INFLUENT MONITORING

The Discharger shall monitor domestic influent to the WWTF at INF-001 as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Monthly	BOD_5[1]	mg/L	Grab
Monthly	TSS[2]	mg/L	Grab

1. 5-day Biochemical Oxygen Demand at 20°C.
2. Total Suspended Solids.

EFFLUENT MONITORING

The Discharger shall monitor treated effluent from the WWTF at EFF-001 as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Daily	Total Coliform Organisms	MPN/100 mL	Grab
Weekly	pH	pH Units	Grab
Weekly	EC	umhos/cm	Grab
Weekly	BOD_5	mg/L	24-hour composite

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	TSS	mg/L	24-hour composite
Monthly	Total Dissolved Solids	mg/L	24-hour composite
Monthly	Nitrate as nitrogen	mg/L	24-hour composite
Monthly	Nitrite as nitrogen	mg/L	24-hour composite
Monthly	Ammonia as nitrogen	mg/L	24-hour composite
Monthly	Total Kjeldahl Nitrogen	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Annually	General Minerals[1,3]	various	24-hour composite
Annually	Metals[2,3]	various	24-hour composite

1. General minerals analysis shall include, alkalinity (as CaCO3), bicarbonate (as CaCO3), boron, calcium, carbonate (CaCO3), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS.
2. Metals analysis shall include; antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, lead, mercury, molybdenum, silver, thallium, vanadium, and zinc.
3. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

FILTRATION UNIT MONITORING

The Discharger shall the monitor the turbidity of the effluent at F-001 as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous[1]	Turbidity	NTU	Meter
Continuous	Filtration rate	gpd/ft^2	Calculation

1. Should the continuous turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours.

STORAGE POND MONITORING

The Discharger shall monitor the recycled water storage ponds at PND-001 through PND-00X as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	Dissolved Oxygen	mg/L	Grab[1]
Weekly	Freeboard	Feet[2]	Grab

1. Samples shall be collected at a depth of one foot from the surface of the pond, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
2. Freeboard shall be monitored to the nearest tenth of a foot.

The Discharger shall inspect the condition of the pond(s) at least once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water, along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating in the pond; and color of water in the pond (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.) A **summary** of the entries made in the log during each month shall be submitted along with the quarterly monitoring report.

SOURCE WATER MONITORING

Source water for the Development shall be monitored at SPL-001. If the source water is from more than one source, the results shall be presented as a flow-weighted average of all sources.

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	EC	mg/L	Grab
1/three years[1]	General Minerals[2]	various	Grab

1. Sample to be collected and analyzed for general minerals once following start-up of the WWTF than once every three years.
2. General minerals analysis shall include, alkalinity (as CaCO3), bicarbonate (as CaCO3), boron, calcium, carbonate (CaCO3), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

ULTRAVIOLET LIGHT DISINFECTION SYSTEM MONITORING

The Discharger shall monitor the Ultraviolet (UV) disinfection system at UVS-001 as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Continuous	Number of UV light banks in operation	Number	Meter
Continuous	UV Transmittance	Percent (%)	Meter
Continuous	UV Power setting	Percent (%)	Meter
Continuous	UV Intensity	mW/cm	Meter
Continuous	UV lamp hours of operation	Hours	Meter
Continuous	UV Dose	mW-sec/cm^2	Calculated

In addition, the Discharger shall also monitor the UV disinfection system for any additional parameters in accordance with its UV Disinfection System Operations Plan approved by the State Water Resources Control Board, Division of Drinking Water (DDW).

BIOSOLIDS/SLUDGE MONITORING

To ensure that industrial and other discharges to the WWTF are not interfering with treatment processes, the Discharger shall collect a composite sample of the sludge annually, as set forth by Title 40 CFR Part 503.16. Any Notice of Necessary Information (NANI) form prepared for submittal to the United States Environmental Protection Agency shall be forwarded to the appropriate Regional Water Board.

Composite samples shall be collected at BIO-001 in accordance with the Environmental Protection Agency's *POTW Sludge Sampling and Analysis Guidance Document* (EPA/833B89100, August 1989) and tested for the following metals:

Arsenic	Lead	Nickel
Cadmium	Mercury	Selenium
Copper	Molybdenum	Zinc

The control of pathogens and the reduction of vector attraction shall be achieved in accordance with the Environmental Protections Agency's *Control of Pathogens and Vectors in Sewage Sludge* (EPA/625-R-92/013, July 2003).

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, a log should be complete enough to serve as a basis for part of the annual reporting requirements.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports,** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report:	**1 May**
Second Quarter Monitoring Report:	**1 August**
Third Quarter Monitoring Report:	**1 November**
Fourth Quarter Monitoring Report:	**1 February**.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5B20NC00105, Facility Name: Tesoro Viejo WWTF, Order: R5-2016-0057

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the discharge complies with waste discharge requirements. In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less

than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

In the future, the State or Central Valley Water Board may notify the Discharger to electronically submit and upload monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site http://www.waterboards.ca.gov/ciwqs/index.html or similar system. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting:

1. Tabulated results of influent and effluent monitoring specified on pages 2 and 3. The table shall include the running 7-day median total coliform calculation, and maximum coliform detection.
2. For each month of the quarter, calculation of the maximum daily flow, monthly average flow, and cumulative annual flow.
3. For each month of the quarter, calculation of the average monthly effluent BOD_5, TSS, total nitrogen, and EC.

Filtration Unit Reporting:

1. The maximum daily turbidity measured at F-001.
2. If the turbidity measured at F-001 is ever greater than 0.5 NTU, the amount of time the turbidity is greater than 0.5 NTU shall be reported.
3. The maximum daily filtration rate.

Storage Pond Reporting:

4. The results of the routine monitoring specified on page 3.

Source Water Reporting:

1. The results of the source water monitoring specified on page 4. If multiple sources are used the Discharger, shall calculate the flow-weighted average concentrations for the specified constituents. Results must include supporting calculations, if required.

Ultraviolet Light Disinfection Reporting:

1. For each day of the month, the minimum UV operations dose, and minimum UV transmittance.
2. Results of any additional monitoring required by DDW.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Facility Information:

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal, include telephone numbers of persons to contact regarding the discharge for emergency and routine situations.
2. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
3. A statement on whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last review for adequacy.

Biosolids/Sludge Monitoring Reporting:

1. Annual production totals in dry tons or cubic yards.
2. A description of disposal methods, including location, and Order number of regulatory permit (if appropriate). If more than one method is used, include the percentage disposed of by each method.
3. Include results of monitoring specified on pages 4 and 5.
4. Include a demonstration that off-site disposal of biosolids is consistent with Title 27, division 2.

The Discharger shall implement the above monitoring program following start-up of the WWTF.

Original signed by:

Ordered by: _____

PAMELA C. CREEDON, Executive Officer

_____

(Date)

GLOSSARY

BOD_5	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in March and September.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:

Alkalinity (as CaCo3)	Carbonate (as CaCO3)	Magnesium	Sodium
Bicarbonate (as CaCO3)	Chloride	Manganese	Sulfate
Boron	Hardness	Nitrate	TDS
Calcium	Iron	Potassium	

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

INFORMATION SHEET

ORDER NO. R5-2016-0057
TESORO VIEJO MASTER MUTUAL WATER COMPANY
TESORO VIEJO WASTEWATER TREATMENT FACILITY
MADERA COUNTY

Background

The Tesoro Viejo Master Mutual Water Company (Company) in conjunction with Tesoro Viejo, Inc. submitted a Report of Waste Discharge (RWD), dated 19 August 2015, and applied for Waste Discharge Requirements (WDRs) to discharge tertiary disinfected wastewater from a new wastewater treatment facility to be constructed for the proposed Tesoro Viejo Master Planned Community (Development).

The Development is a proposed mixed use master-planned community in southeastern Madera County consisting primarily of residential units with some minor areas designated for institutional, recreational, commercial, and light industrial uses.

As described in the RWD, Tesoro Viejo, Inc., the project developer, will undertake development obligations for the Development including construction of the wet utilities related to the sewer collection system and proposed wastewater treatment facilities. Tesoro Viejo, Inc., shall transfer ownership and operation of these facilities to the Tesoro Viejo Master Mutual Water Company at the time of start-up.

The Tesoro Viejo Master Mutual Water Company (hereafter Discharger), created in 2006, will be the agency responsible for providing potable water along with wastewater collection, treatment, and disposal services for the Development, and will have a long-term contractual relationship with Tesoro Viejo, Inc., to provide water and sewer service to the new development as it is built.

Wastewater Treatment and Disposal

The wastewater treatment facility (WWTF) for the proposed Development will be constructed in phases to allow for expansion as the Development grows. The WWTF will provide tertiary treatment with ultraviolet (UV) disinfection and produce Title 22 recycled water for unrestricted reuse. These WDRs will regulate the WWTF for the first three phases identified as Phase A, Phase B, and Phase 1. Based on projections, the Phase I WWTF will meet wastewater treatment demands for the Development till 2022, which will be comprised of approximately 1,800 residential units, and some commercial and public facilities.

According to the RWD, the WWTF will include an influent pump station and head works, flow equalization, fine screening, advanced biological treatment, an anoxic tank to provide for nitrogen reduction, UV disinfection, solids handling, and recycled water and emergency storage. For the first two phases, Phase A and Phase B, the WWTF will consist of membrane bioreactor (MBR) package plants with average maximum dry weather design flows of 0.25 million gallons per day (mgd) and 0.5 mgd, respectively. When flows approach the capacity for the Phase B WWTF, construction will begin on Phase I, which will consist of a permanent Membrane Bioreactor (MBR) system with an anoxic tank, swing air tank, aerobic tank, post-anoxic tank, and a 0.4 million gallon flow equalization tank.

After treatment and disinfection, the effluent will be discharged to recycled water storage ponds prior to reuse. The ponds will incorporate a 50 mil HDPE liner. For Phase A and Phase B recycled water storage will be provided by one pond with a designed capacity of 1.56 million gallons. There will also be a second lined pond with a capacity of 0.84 million gallons used for emergency storage of recycled water that does not meet Title 22 requirements (off-spec recycled water). After construction of the Phase 1 wastewater treatment system, all off-spec recycled water will be returned to the headworks of the WWTF for further treatment and the emergency storage pond will be used for storage of recycled water bringing the total available storage capacity to 2.4 million gallons.

The disinfected tertiary treated effluent will be used for irrigation of crops and landscaping within the Development and on land currently owned by Rio Mesa Holdings, LLC. Together these properties make up the "Use Areas" for recycled water. The recycled water will be applied at agronomic rates. According to the RWD, for Phase A the Development will have approximately 184 acres of land available for irrigation with recycled water; for Phase B the Development will have approximately 240 acres of land available for irrigation with recycled water; and for Phase 1 the Development will have approximately 463 acres of land available for irrigation with recycled water.

Because this will be a new WWTF, there is no existing effluent data available. Anticipated effluent quality for the WWTF based on the proposed treatment process and similar existing WWTFs is presented below:

Parameter/Constituent	Units	Effluent Quality
pH	pH units	6.5 – 8.5
Electrical Conductivity (EC)	umhos/cm	< 600
Ammonia as nitrogen	mg/L	<1
Biochemical Oxygen Demand (BOD)	mg/L	< 10
Total Suspended Solids (TSS)	mg/L	< 10
Chloride	mg/L	< 40
Sodium	mg/L	< 60
Total Dissolved Solids (TDS)	mg/L	< 400
Total Nitrogen (TN)	mg/L	<10

Solids

Wasted sludge from the treatment process will be stored in sludge holding tank(s), and hauled off-site for further treatment and disposal at another WWTF in the area. During construction of Phase 1, an integrated sludge storage tank will be included in the main structure for the treatment system.

Source Water: Source water for the Development will be primarily surface water from the San Joaquin River, with an EC of about 20 to 145 umhos/cm, TDS of about 37 mg/L, and nitrate as nitrogen (NO_3-N) of <1 mg/L.

Groundwater Conditions
According to the Department of Water Resources Groundwater Elevation Maps (Spring 2010) first encountered groundwater in the vicinity of the proposed development occurs at about 200 feet below ground surface (bgs). Regional flow in the area is to the southwest away from the San Joaquin River.

The RWD describes a groundwater investigation to evaluate groundwater depth, flow direction, and water quality in the vicinity of the Development and proposed WWTF and recycle Use Areas. The groundwater investigation identified a shallow perched zone at depths ranging from about 12 to 40 feet bgs in the northern portion of the Development likely due to recharge from Little Table Mountain. Groundwater flow direction in this shallow zone is to the south, slightly different from the deeper regional aquifer. Groundwater elevation in this shallow zone is higher in the northern portion of the Development, but appears to drop and likely merges with deeper groundwater as the distance increases down-gradient of Little Table Mountain.

As part of this investigation, groundwater samples were collected from several wells installed within the proposed Development boundaries. Based on the groundwater investigation, groundwater beneath the Development is of good quality. Shallow groundwater in the northern half of the site is of slightly poorer quality with an average EC of about 557 umhos/cm, TDS of about 332 mg/L, and nitrate as nitrogen of about 8.5 mg/L. However, the WWTF and recycled Use Areas on the southern half of the Development, where this shallow perched zone was not encountered, was of better quality with an EC of about 280 umhos/cm, TDS of about 213 mg/L, and nitrate as nitrogen of about 6.4 mg/L.

With the proposed treatment and nitrification/denitrification to reduce nitrogen concentrations in the effluent to <10 mg/L, storage of wastewater in lined ponds and application at agronomic rates the discharge from the proposed WWTF is not expected to significantly degrade groundwater quality. Therefore, groundwater monitoring is not being required at this time.

Basin Plan, Beneficial Uses, and Regulatory Considerations
The WWTF and recycled Use Areas lie within the Berenda Hydrologic Area (545.3) of the San Joaquin Valley Floor Hydraulic Unit. Local drainage is to the San Joaquin River between Friant Dam and the Mendota Pool.

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, revised April 2016 (Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Board. Beneficial uses often determine the water quality objectives that apply to a water body. The receiving water for this discharge is groundwater. The beneficial uses of groundwater in the

area are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

Antidegradation
State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality of Waters in California (Anti-Degradation Policy), requires the regional water boards to maintain high quality waters of the State until it is demonstrated that any change in quality will not result in water quality less than that described in State and Regional Water Board policies or exceed water quality objectives, will not unreasonably affect beneficial uses and is consistent with the maximum benefit to the people of the State.

Degradation of groundwater by some of the typical waste constituents of concern (e.g., EC and nitrate) released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the State. The technology, energy, and waste management advantages of a municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts 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 therefore provides sufficient reason to accommodate planned growth and allow for limited groundwater degradation.

As discussed in the Findings in the WDRs the discharge as authorized by this Order may cause some minor groundwater degradation, but is not expected to affect present and anticipated future beneficial uses or result in groundwater quality that exceeds water quality objectives. The Discharger provides or will provide as a condition of this Order treatment and control measures intended to minimize degradation to the extent feasible. This Order establishes groundwater limitations that allow some degradation, but that will not unreasonably threaten present and future anticipated beneficial uses of groundwater or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

Title 27
Title 27 of the California Code of Regulations, section 20005 et seq (Title 27) contains regulations to address certain discharges to land. Unless exempt, the release of designated waste is subject to full containment pursuant to Title 27 requirements. Title 27 Section 20090(a) exempts discharges of domestic sewage, which are regulated by WDRs; and Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards and other Title 27 requirements provided the following conditions are met:

a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;

b. The discharge is in compliance with the applicable basin plan; and

c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

The discharge meets the above requirements and is therefore exempt from Title 27.

CEQA
The proposed WWTF was reviewed as part of the Tesoro Viejo Specific Plan and Revised Environmental Impact Report (REIR), which was certified by the Madera County Board of Supervisors in accordance with the California Environmental Quality Act (CEQA) on 5 November 2012 (SCH #2006111123).

Acting as a responsible agency pursuant to CEQA, Central Valley Water Board staff reviewed the Final REIR and concurred that the project as proposed will not have a significant impact on water quality. Further, this Order includes effluent limitations for flow, total nitrogen, BOD, TSS, and total coliform organisms, and sets specific specifications for turbidity and operation of the UV disinfection system. Compliance with these conditions and the associated monitoring and reporting program will ensure that any impacts to water quality are less than significant.

Proposed Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions
The proposed Order would prohibit discharge to surface waters and surface water drainage courses.

The proposed Order sets effluent limits for flow, BOD, TSS, total nitrogen, and total coliform organisms. In addition, the proposed Order sets specific specifications for turbidity and operation of the UV disinfection system.

The proposed Order sets groundwater limitations at the primary and recommended secondary MCLs for nitrate as nitrogen, and electrical conductivity; total coliform organisms; and the constituents identified in Title 22 of the California Code of Regulations, for which MCLs exist.

The proposed Order also requires submittal of a copy of the final approved Title 22 Engineering Report with approval letter from the State Water Board, Division of Drinking Water (DDW) and a Notice of Intent (NOI) for coverage under the Water Quality Order 2014-0090-DWQ, *General Waste Discharge Requirements for Recycled Water Use* (Recycling General Order) or any subsequent revisions, prior to the start-up of the WWTF and initiation of wastewater recycling operations.

Monitoring Requirements
Section 13267 of the Water Code authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of waste discharges on waters of the State. Water Code section 13268 authorizes assessment of administrative civil liabilities to address non-compliance, when appropriate.

The proposed Order includes influent, effluent, source water, pond, and sludge monitoring. This monitoring is necessary to evaluate the potential for degradation resulting from the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.