

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

320 West 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6660 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles/>

**ORDER NO. R4-2015-XXXX
FILE NO. 11-087
CI NO. 10042**

**WASTE DISCHARGE REQUIREMENTS AND
WATER RECYCLING REQUIREMENTS
FOR
CITY OF MALIBU
(MALIBU CIVIC CENTER WASTEWATER TREATMENT FACILITY – PHASES I & II
PROJECTS)**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

INTRODUCTION

1. Residences, businesses, and public facilities in the City of Malibu (City) use on-site wastewater disposal systems (OWDSs) to discharge sewage to the subsurface and underlying groundwater. In several areas of the City, high flows of wastewater from these OWDSs coupled with unfavorable hydrogeological conditions have raised concerns about reliance on OWDSs. The Malibu Civic Center Area alone (Figure 1) with relatively intensive land use activities by more than 400 dischargers, generates up to 119,000 gallons per day (GPD) of wastewater, which pollutes groundwater and surface water with nitrates, bacteria, and other waste constituents.
 - A. Basin Plan Prohibition - To address the pollution caused by OWDSs in the Malibu Civic Center Area, the Regional Board on November 5, 2009, adopted an amendment to Chapter IV of the *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) to prohibit OWDSs in the Malibu Civic Center Area (and a small portion of unincorporated Los Angeles County) through Resolution No. R4-2009-007 (Basin Plan Amendment). On September 21, 2010, the State Water Resources Control Board (State Water Board) approved Resolution No. R4-2009-007. Subsequently, the Office of Administrative Law (OAL) approved Resolution No. R4-2009-007 on December 23, 2010. The Basin Plan Amendment became effective on December 23, 2010. The Basin Plan Amendment immediately prohibits all new OWDSs in the Malibu Civic Center Area, with the exception of certain specific projects identified in Table 4-zz, which were deemed by the Regional Board to be existing OWDSs. The Basin Plan Amendment prohibits all discharges from existing OWDSs, including those projects identified on Table 4-zz, in accordance with a phased schedule. Existing OWDSs in commercial areas must cease discharges by November 5, 2015 (Phase I); existing OWDSs in residential areas must cease discharges by November 5, 2019 (Phase II). The Basin Plan Amendment does not prevent repairs, maintenance, and upgrades to existing

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OWDSs prior to November 5, 2019, provided that such repairs, maintenance, and upgrades do not expand the capacity of the OWDSs or increase flows of wastewaters. The Basin Plan Amendment explicitly states:

“This prohibition does not preclude a publicly owned, community-based, solution that includes specific wastewater disposal sites subject to waste discharge requirements to be prescribed by the Regional Board.”

- B. Memorandum of Understanding (MOU) – To assist in the implementation of the Basin Plan Amendment, the Regional Board, the State Water Board, and the City entered into an MOU, regarding “*Phased Implementation of Basin Plan Amendment Prohibiting On-site Wastewater Disposal Systems in the Malibu Civic Center Area*”, which was revised on December 4, 2014. In the MOU, the City agreed to construct one or more centralized wastewater treatment facilities – the Malibu Civic Center Wastewater Treatment Facility (Civic Center Facility) - to provide sewer treatment for commercial and residential properties in the prohibition area. The MOU sets forth a three phase process: (1) facility construction and connection to commercial properties (Phase I); construction and connection to a portion of residential properties (Phase II), and construction and connection of the remaining residential properties (Phase III) if necessary after completion of a water quality sampling property to determine whether implementation of Phases I and II have resulted in a meaningful decrease in bacteria and nitrogen in Malibu Lagoon.
- 2. The Civic Center Facility, a Publicly-Owned Treatment Works (POTW), will eliminate discharges from OWDSs in the Malibu Civic Center Area via the following three (3) phases:
 - A. Phase I – Connection of commercial properties, colored with yellow in Figure 2, to the Civic Center Facility by June 30, 2017;
 - B. Phase II – Connection of residential properties, colored with coral in Figure 2, to the Civic Center Facility by November 5, 2022; and,
 - C. Phase III – Connection of remaining residential properties and HRL, colored with fuchsia in Figure 2, to the Civic Center Facility by November 5, 2025.

PURPOSE OF ORDER

- 3. Pursuant to California Water Code (CWC) sections 13260 and 13522.5, the City submitted a Report of Waste Discharge (ROWD) to the Regional Board on April 3, 2014 to apply for Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs) authorizing the City to discharge tertiary-treated wastewater for Phase I and Phase II from the Civic Center Facility to groundwater through injection, irrigation, percolation, and/or other non-potable recycled water applications that comply with California Code of Regulations (CCR), title 22, division 4, chapter 3 (hereafter “Title 22”).
- 4. The City is responsible for the discharge of waste and the production, distribution and application of recycled water under WDRs/WRRs pursuant to CWC sections 13263 and 13523.1 (Master Reclamation Permit) for the Civic Center Facility – Phases I & II Projects. The City is responsible for processing individual end-use application, inspecting point-of-

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use facilities, and ensuring end-users' compliance with the water recycling requirements contained in this Order. The City is responsible for compliance with the requirements in this Order.

5. The Regional Board staff conducted an inspection of the Civic Center Facility site on September 17, 2014. The purpose of this inspection was to verify the information provided in the ROWD, the surface and groundwater monitoring workplan, and the Phase I Title 22 Engineering Report submitted to the Regional Board on April 3, 2014, May 30, 2014, and August 18, 2014, respectively. Regional Board staff visited the sites of the Civic Center Facility, injection wells, groundwater monitoring wells, Malibu Lagoon and near-shore ocean surface water monitoring stations, and Winter Canyon and its drain to the ocean outfall.
6. For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the City.

CIVIC CENTER FACILITY – PHASES I & II PROJECTS

7. Description of Civic Center Facility Vicinity

- A. The Civic Center Facility (34° 2' 9.35" N, 118° 41' 55.50" W) is sited on a 4.1 acre parcel at 24000 Civic Center Way, the intersection of Civic Center Way and East Pacific Coast Highway (the west side of the Malibu Civic Center Area) and approximately 1,700 feet southwest of the Malibu City Hall (Figure 1). The Civic Center Facility will serve business, residential, and public properties within the Malibu Civic Center Area.
- B. The Malibu Civic Center Area is generally defined as follows:
 - a. Westerly to the City boundary along Malibu Canyon Road;
 - b. Northerly to the ridgeline including the City and a small portion of the County of Los Angeles;
 - c. Easterly to Sweetwater Mesa; and,
 - d. Southerly to Santa Monica Bay.

The Malibu Civic Center Area has a residential population estimated at 1,300. The area also serves as the core of the City's business, cultural and commercial activities.

- C. The area is not defined according to municipal borders or parcel lines. Rather, the area subject to the prohibition is delineated according to hydrogeological parameters and drainage patterns; as groundwater flow roughly mimics surface drainage, the prohibition boundary follows a topographic high surrounding both the Winter Canyon and lower Malibu Creek (also known as Malibu Valley) watersheds. All properties extending seaward of this boundary to the ocean are subject to the prohibition, including the coastal strips along the Pacific Coast Highway stretching from Amarillo Beach to Surfrider Beach. This entire area, which is referred to as the “Malibu Civic

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Center Area,” totals 2.2 square miles of which 1.5 square miles and 0.7 square miles are within the City and the unincorporated area of County of Los Angeles, respectively.

- D. The Malibu Civic Center Area is categorized in the Basin Plan Hydrologic Unit 404.21 including Amarillo Beach, Malibu Beach, and Malibu Lagoon.

GROUNDWATER BASIN CHARACTERISTICS

- 8. The Malibu Valley Groundwater Basin beneath the Malibu Civic Center Area is a small alluvial basin and located along the Los Angeles County coastline. The basin is bounded by the Pacific Ocean on the south, and by the Santa Monica Mountains, composed of non-water-bearing Tertiary age rocks, on all remaining sides. The valley is typified by steep canyons that generally run north to south, and is flanked on both sides by canyons - Sweetwater Canyon to the east, and Winter Canyon to the west. The basin drains to Malibu Creek and Santa Monica Bay.

Water-bearing formations in the Malibu Valley Groundwater Basin can be generally subdivided into four categories or strata (layers) as follows:

- A. Shallow Alluvium – a shallow zone of permeable alluvial sediments consisting of silts and sands;
- B. Low Permeability Zone – a fine-grained estuarine deposits consisting of clay and silt layers;
- C. Civic Center Gravels – a lower/deeper aquifer with coarse-grained stratum consisting of sands, gravel, and cobbles; and,
- D. Bedrock – zones of unconsolidated materials containing permeable sand and gravel deposits.

9. Reports and Technical Memorandums

The City submitted the following reports for the design of the Civic Center Facility project:

- A. *Ocean Dilution Analysis*, dated March 18, 2014 – The City evaluated the potential impacts from injecting treated wastewater into the Malibu Valley Groundwater Basin.
- B. *Malibu Groundwater Injection Feasibility Project*, dated March 24, 2014 – The City collected site-specific data necessary to design an injection well system.
- C. *Sea Water Rise Analysis*, dated March 24, 2014 – The City identified areas within the City that may be flooded due to impacts associated with climate change.
- D. *Groundwater Modeling Analysis of Proposed Wastewater Dispersal – City of Malibu*, dated April 3, 2014 – The City evaluated the possible impacts on groundwater levels and groundwater flow resulting from the proposed subsurface injection of treated disinfected wastewater into deep coarse-grained alluvial deposits in the Malibu Civic Center Area. The model concluded that almost all injected wastewater will flow toward the Santa Monica Bay. The approximate model-estimated injection capacities

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for each of the two (2) proposed phases of development are as follows:

Phase 1 -- 311,000 GPD

Phase 2 -- 498,000 GPD

- E. *Assimilative Capacity and Antidegradation Analysis for Proposed Injection Dispersal*, dated May 15, 2014 – The City evaluated the potential groundwater quality impacts resulting from injecting treated wastewater into the Malibu Valley Groundwater Basin. The concentration of nitrate in groundwater at the lower aquifer where injection will occur is 3.6 mg/L. The model indicated that the injection of 100% of the wastewater with a nitrate concentration of 8 mg/L for 30 years will increase the nitrate concentration in the groundwater to between 4.1 mg/L and 4.9 mg/L, which will be a smaller increase than without injection. Without injection, the nitrate concentration will increase to 4.9 mg/L and 5.85 mg/L after 30 years due to the accumulation of nitrate from the discharges from the existing OWDSs.
- F. *Review of Nitrogen Limit Implications for Wastewater Treatment Facility*, May 27, 2014 – The City reviewed and compared treatment process, costs, and operation and maintenance efforts needed to achieve the nitrate as nitrogen effluent limit of 8 mg/L as compared to an effluent limit of 5 mg/L.
- G. *City of Malibu Engineer's Report for the Production, Distribution and Use of Recycled Water Phase 1 (Phase I Title 22 Engineering Report)*, August 20, 2014 – The City described the characteristics of treated wastewater generated from the Civic Center Facility, and the processes of treatment, distribution, disposal and reuse.
- H. *Simulation of Anticipated Injections in Groundwater Flow Model*, dated August 25, 2014 – The City indicated that the maximum volumes of 311,000 and 498,000 GPD can be effectively disposed via injection for Phases I and II, respectively.

10. **Civic Center Facility**

- A. The Civic Center Facility is owned and operated by the City.
- B. The Civic Center Facility is a tertiary-treated wastewater treatment plant, treating domestic and commercial wastewater generated within the Malibu Civic Center Area.
- C. The wastewater treatment processes of the Civic Center Facility include coarse and fine mechanical screening and grit removal for preliminary treatment of the influent wastewater. The effluent after the preliminary treatment flows to an equalization basin. The effluent of an equalization basin will flow to a Membrane Bioreactor (MBR) consisting of biological reactors and membrane-based solids removal. The MBR will provide carbonaceous oxidation, nitrification/denitrification and solids removal to meet the limits of the WDRs/WRRs. Disinfection of the treated effluent will be achieved by Ultraviolet (UV) disinfection. Disinfection will be followed by the addition of chlorine to maintain a chlorine residual in the distribution system to minimize microorganisms re-growth and bio-fouling in the pipelines and injection wells. Treated, disinfected effluent will be recycled within the community via a

recycled water distribution system. Effluent not used for landscape irrigation and/or injection via land disposal will be discharged at three percolation ponds (Figure 3 for the layout of treatment devices).

- a. **Coarse Screen** – Coarse screen used in the wastewater treatment plant removes solids, including typically wood, plastic materials, and rags.
- b. **Grit Removal** – Grit removal is used to remove as much sand and silt as possible to prevent wear on pumps, accumulations in bioreactor and membrane reactor, and clogging of sludge piping.
- c. **Fine Screen** – Fine screen with 2 millimeter openings removes inert solids before entering the bioreactor.
- d. **Flow Equalization** – Flow equalization basin provides a relatively constant flow rate to the subsequent treatment operations and processes.
- e. **Bioreactor** – The bacteria species *Nitrosomonas* and *Nitrobacter* in the bioreactor provide nitrification. *Nitrosomonas* and *Nitrobacter* convert ammonia to nitrite and nitrite to nitrate, respectively. *Pseudomonas* bacteria convert nitrite and nitrate to nitrogen.
- f. **Membrane Reactor** – Membrane reactor provides further carbonaceous oxidation and suspended solids removal.
- g. **UV Disinfection** – UV radiation penetrates an organism’s cell wall, and destroys/retards the cell’s ability to reproduce.
- h. **Chlorination** – Chlorination with sodium hypochlorite is used to minimize re-growth and bio-fouling of bacteria, pathogens, and viruses in the pipelines and injection wells.

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Table 1 lists additional treatment devices used in Phases I and II.

Table 1 – Treatment Devices of the Civic Center Facility at Phases I and II			
Treatment Device	Dimension/Spec	Volume per Treatment Device (Gallons)	Retention time (Hours)
Equalization Basin (1X)	<ul style="list-style-type: none"> • 30 feet (Wide) • 40 feet (Length) • 11 feet (Depth) 	<ul style="list-style-type: none"> • 99,000 	<ul style="list-style-type: none"> • 12.4 (Phase I) • 6.6 (Phase II)
Bioreactor (2X)	<ul style="list-style-type: none"> • 20 feet (Wide) • 50 feet (Length) • 16 ~ 17.6 feet (Depth) 	<ul style="list-style-type: none"> • Pre-Anoxic Basin: 24,500 • Aeration Basin: 65,000 • De-Oxygenation Basin: 11,000 • Post-Anoxic Basin: 21,100 	<ul style="list-style-type: none"> • 33.0 (Phase I) • 17.5 (Phase II)
Membrane Reactor (2X)	<ul style="list-style-type: none"> • Avg: 8.3 gpd/sf^[1] • Max: 9.7 gpd/sf • 17,760 sf^[2] membrane minimum 	<ul style="list-style-type: none"> • Tank volumes vary by manufacturer. 	Varies by manufacturer.
Ultra Violet	<ul style="list-style-type: none"> • 8 lamps per reactor 	<ul style="list-style-type: none"> • 0.1 Million per Day 	Varies by

Table 1 – Treatment Devices of the Civic Center Facility at Phases I and II			
Treatment Device	Dimension/Spec	Volume per Treatment Device (Gallons)	Retention time (Hours)
Reactor (3X)	minimum		manufacturer and lamp intensity and validation.

- [1]. gpd/sf: Gallons per day per square foot.
- [2]. sf: square foot

Sludge will be hauled to the Sanitation Districts of Los Angeles County Joint Water Pollution Control Plant, or other similar permitted facilities.

D. Design Capacities of the Civic Center Facility are specified in Table 2.

Table 2 – Design Capacities of the Civic Center Facility at Phases I and II	
Phase	Design Capacity (GPD)
I	191,000
II	361,000

E. Nitrate-N Reduction

Nitrate-N loading from OWDSs is approximately 20 mg/L. Effluent less than 8 mg/L of nitrate-N will be discharged from the Civic Center Facility after treatment. The proposed Project will reduce by approximately 60% the existing nitrate-N loading to the groundwater basin.

F. Treated Effluent Applications

The treated effluent of 191,000 GPD for Phase I and 361,000 GPD for Phase II from the Civic Center Facility is to be discharged through the following applications:

- a. Landscape Irrigation – Treated wastewater after disinfection will be recycled for landscape irrigation.
- b. Disposal via Groundwater Injection – Treated wastewater after disinfection will be injected to the Civic Center Gravels via three (3) injection wells W-1, W-2, and W-3, located approximately 1,000 to 1,500 feet southeast to the Civic Center Facility.
- c. Disposal via Percolation – The Winter Canyon Groundwater Basin beneath the Civic Center Facility will be used for percolation of the treated wastewater, if the treated wastewater is not recycled or injected into the lower aquifer of the Civic Center Gravels of the Malibu Valley Groundwater Basin. This method of disposal will serve as a backup and will only be used if needed (see Finding No. 13 for additional information).

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11. Wastewater Collection and Recycled Water Distribution Systems

- A. Pipeline Transmission – Figure 4 shows the extent and locations of the wastewater collection and recycled water distribution systems. Pipelines are designed in accordance with acceptable seismic safety standards so as to protect against the possibility of rupture.
- B. Wastewater and Recycled Water Pump Systems – Wastewater pump stations are located along pipeline alignments, below ground and on public rights-of-way and/or easements (Figure 4). Each wastewater pump station has odor controls. Two (2) recycled water pump stations are located at the Civic Center Facility site.

12. Injection Wells

Treated wastewater from the Civic Center Facility is to be disposed through three (3) injection wells W-1, W-2, and W-3 located at the southern boundary of the Malibu Colony Plaza and the northern side of Malibu Road (Figure 4). These wells are approximately 400 feet from each other and are in close proximity to the recycled water distribution system pipeline. Each injection well is 14 inches in diameter and is connected via subsurface and surface piping with the recycled water distribution line. Table 3 shows specifications of three (3) injection wells.

Table 3 – Specifications of Injection Wells	
	W-1, W-2, and W-3
Depth below Ground Surface (Feet)	170
Screen Intervals below Ground Surface (Feet)	55 - 134
Aquifer	Civic Center Gravels
Total Injection Rate ^[1] (GPM^[2])	130 (Phase I) and 250 (Phase II)

- [1]. The total daily injection rate at three injection wells is up to 130 GPM for Phase I and 250 GPM for Phase II. The actual injection rate at any well location will vary, depending on the flow rate of unused recycled water (which will be dependent on factors such as landscape irrigation demand, wastewater generation, and water discharge at percolation ponds).
- [2]. GPM: Gallons per minute.

13. Percolation Ponds

- A. Three (3) percolation ponds (Figure 2) in the Winter Canyon area are to be constructed at the site of the Civic Center Facility as a back-up method for disposal of recycled water into the Winter Canyon groundwater basin. Water that cannot be either reused through irrigation or disposed through injection wells will be pumped to percolation ponds then percolate into Winter Canyon groundwater basin, typically during periods when other facilities are unavailable because of an emergency or due to scheduled maintenance. Disposal to the percolation ponds will be alternated from pond to pond.
- B. The upper Winter Canyon is a separate groundwater system from the Malibu Valley Groundwater Basin underlying the majority of the Civic Center area, as determined

based on hydrogeological studies. It is estimated that the Winter Canyon groundwater basin can provide a percolation capacity of up to 100,000 GPD.

- C. Each percolation pond is approximately 120 feet long and 3 to 5 feet deep. Two of rectangular percolation ponds are approximately 20 feet wide and 2,700 square foot. The third percolation pond is approximately an irregular polygon, 20 to 40 feet wide, and 3,860 square foot. The percolation rate of soil beneath the percolation ponds is 1.5 feet per day.

14. **Groundwater Monitoring Wells**

- A. Groundwater monitoring wells are used to ensure that the injection does not cause mounding of groundwater or cause the groundwater to exceed groundwater quality objectives set forth in Table 10 in the Malibu Civic Center Area.
- B. The groundwater monitoring well network consists of a total of nine (9) wells within the southern part of the Malibu Civic Center Area. Two (2) wells (TY-MW-1 and LAMW-5S) are in Winter Canyon, and provide water quality data downgradient and upgradient, respectively, of the Civic Center Facility. Four (4) wells (SMBRP-9, MCWP-MW04S, MCWP-MW07S, and SMBRP-12,) are screened in the shallow unconfined alluvial aquifer. Three (3) wells (MCWP-MW04D, MCWP-MW07D, and MCWP-MW09) are screened in the deeper Civic Center Gravels aquifer (Figure 5). More information of these groundwater monitoring wells is available in Table 4, Section IV. 3.A. of the accompanying Monitoring and Reporting Program CI No. 10042 (MRP).

15. **Surface Water Monitoring Stations**

A surface water monitoring program (Malibu Lagoon and near-shore ocean) evaluates the quality of surface waters and any improvement resulting from the implementation of Phases I and II. Six (6) stations are located at Malibu Lagoon, and four (4) stations are located at the near-shore ocean area along Malibu Road (Figure 6). The three (3) lagoon sampling locations will be evenly distributed along Malibu Creek north of Pacific Coast Highway (PCH), and the other three (3) sampling locations will be located across from Malibu Lagoon, south of PCH. The ocean samples will be collected along the beach adjacent to the southern edge of Malibu Bluffs Park to the mouth of Malibu Lagoon.

- 16. **Contingency Plan** – For the Phase I Project, the City has developed an Operation, Maintenance, and Monitoring Plan (OMM Plan) that incorporates specific procedures to be followed by operating staff for all potential emergencies or conditions. The OMM plan for the Phase I Project will ensure that equipment and facilities for treatment and injection operate at peak performance levels. The OMM Plan contained in the *Phase I Title 22 Engineering Report* was provided to the State Water Board's Division of Drinking Water (DDW) (formerly the State Department of Public Health) on August 21, 2014. The DDW approved it on September 18, 2014.
- 17. Regional Board staff consulted with following agencies regarding the Civic Center Facility project:

- A. The United State Environmental Protection Agency (USEPA) on April 21, 2014 and July 16, 2014 – Updated and discussed groundwater modeling results and the system design of the Civic Center Facility.
 - B. The DDW on December 18, 2012, July 23, 2013, September 5, 2013, and February 12, 2014 – Discussed the method of disposing of the treated effluent via injection wells.
18. On September 12, 2011, August 6, 2013, December 12, 2013, February 20, 2014, and January 7, 2015, the City conducted five (5) Technical Advisory Committee (TAC) meetings to receive input regarding the Civic Center Facility project. Attendees included college professors, environmental group, resource agencies, City’s Consultants and interested persons. The City provided the layout of the Civic Center Facility, the reuse of treated effluent, and the groundwater injection locations. The City also presented the results of special studies, including the model for injected wastewater flow and possible impacts to Malibu Creek and Lagoon.

APPLICABLE PLANS, POLICIES AND REGULATIONS

The following plans, policies and regulations apply to the discharges authorized by this Order to protect the waters of the state.

19. **Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan)** – On June 13, 1994, the Regional Board adopted a revised Basin Plan. The Basin Plan: (i) designates beneficial uses for surface and groundwater, (ii) establishes narrative and numeric water quality objectives that must be attained or maintained to protect the designated beneficial uses, and (iii) sets forth implementation programs to protect the beneficial uses of the waters of the state. The Basin Plan also incorporates State Water Board Resolution 68-16, Anti-degradation Policy (see Finding No. 24 below for detail). In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board’s Basin Plan. The Basin Plan has been amended occasionally since 1994.

The Basin Plan (Chapter 3) incorporates Title 22 CCR primary maximum contaminant levels (MCLs) by reference (see Finding No. 22 below for detail) as water quality objectives. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. The Title 22 CCR primary MCLs are applicable water quality objectives for a receiving water to protect beneficial uses when that receiving water is designated as municipal and domestic supply. Also, the Basin Plan specifies that “Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.” Therefore the Title 22 CCR secondary MCLs, which are limits based on aesthetic, organoleptic standards, are applicable water quality objectives for a receiving water to protect beneficial uses when that receiving water is designated as municipal and domestic supply. These water quality objectives are implemented in this Order to protect groundwater quality.

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In addition, the Basin Plan identifies beneficial uses based on State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the coastal areas in Table 4 and groundwater in Table 5 are as follows:

Table 4 – Basin Plan Beneficial Uses of Coastal Features	
Receiving Water	Beneficial Use(s)
Amarillo Beach (Hydro. Unit No. 404.21)	<u>Existing:</u> Navigation; water contact and non-contact recreation; commercial and sport fishing; marine habitat; wildlife habitat; and shellfish harvesting. <u>Potential:</u> Spawning, reproduction, and/or early development of fish.
Malibu Beach (Hydro. Unit No. 404.21)	<u>Existing:</u> Navigation; water contact and non-contact recreation; commercial and sport fishing; marine habitat; wildlife habitat; migration of aquatic organisms; spawning, reproduction, and/or early development of fish ^[1] ; and shellfish harvesting ^[2] .
Malibu Lagoon (Hydro. Unit No. 404.21)	<u>Existing:</u> Navigation; water contact and non-contact recreation; estuarine habitat; marine habitat; wildlife habitat; rare and endangered species ^[3] ; migration of aquatic organisms ^[4] ; spawning, reproduction, and/or early development of fish ^[4] ; and wetland habitat.

- [1]. Most frequently used grunion spawning beaches. Other beaches may be used as well.
- [2]. Areas exhibiting large shellfish populations include Malibu, Point Dume, Point Fermin, White Point and Zuma Beach.
- [3]. One or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
- [4]. Aquatic organisms utilize all bays, estuaries, lagoons and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas, which are heavily influenced by freshwater inputs.

Table 5 – Basin Plan Beneficial Uses of Groundwater	
Receiving Water	Beneficial Use(s)
Malibu Valley Groundwater (DWR Basin No. 4-22)	<u>Existing:</u> Agricultural supply. <u>Potential:</u> Municipal and domestic water supply; and industrial process supply.

Total Maximum Daily Loads (TMDLs). To restore water quality and impaired beneficial uses, USEPA and/or the Regional Board have adopted the following TMDLs, specified in Table 6:

Table 6 – TMDLs of Malibu Areas and Santa Monica Bay Beaches			
	Malibu Creek Watershed ^[1] Nutrient TMDLs	Malibu Creek and Lagoon Bacteria TMDLs	Santa Monica Bay Beaches Wet and Dry Bacteria TMDLs
Total Nitrogen ^[2] (04/15)	1.0 mg/L	---	---

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Table 6 – TMDLs of Malibu Areas and Santa Monica Bay Beaches			
	Malibu Creek Watershed ^[1] Nutrient TMDLs	Malibu Creek and Lagoon Bacteria TMDLs	Santa Monica Bay Beaches Wet and Dry Bacteria TMDLs
to 11/15)			
Total Nitrogen (11/16 to 04/14)	8.0 mg/L	---	---
Geometric Mean ^[3] Bacteria (04/01 to 10/31)	---	0-day exceedance	0-day exceedance
Geometric Mean Bacteria (11/01 to 03/31)	---	0-day exceedance	0-day exceedance
Single Sample ^[3] Bacteria (04/01 to 10/31)	---	0-day exceedance	0-day exceedance
Single Sample Dry Weather Bacteria (11/01 to 03/31)	---	≤ 3-day exceedances	≤ 3-day exceedances
Single Sample Wet Weather ^[4] Bacteria (11/01 to 03/31)	---	≤ 17-day exceedances	≤ 17-day exceedances

- [1]. Malibu Creek Watershed includes Malibu Lagoon.
- [2]. Total Nitrogen is the sum of nitrate (NO₃), nitrite (NO₂), organic nitrogen, and ammonia (all expressed as N).
- [3]. Basin Plan bacteria water quality limits are following:
 In Marine Waters Designated for Water Contact Recreation (REC-1)
1. Geometric Mean Limits
 - a. Total coliform density shall not exceed 1,000/100 ml.
 - b. Fecal coliform density shall not exceed 200/100 ml.
 - c. *Enterococcus* density shall not exceed 35/100 ml.
 2. Single Sample Limits
 - a. Total coliform density shall not exceed 10,000/100 ml.
 - b. Fecal coliform density shall not exceed 400/100 ml.
 - c. *Enterococcus* density shall not exceed 104/100 ml.
 - d. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
- In Fresh Waters Designated for Water Contact Recreation (REC-1) (not applicable to Santa Monica Bay Beaches Wet and Dry Bacteria TMDLs)
1. Geometric Mean Limits
 - a. *E. coli* density shall not exceed 126/100 ml.
 2. Single Sample Limits
 - a. *E. coli* density shall not exceed 235/100 ml.
- [4]. Wet weather is defined as days with rainfall ≥0.1 inch and the three (3) days following the rain event.

Based on the model assimilating the migration of wastewater after a period of 20 years, the injected wastewater will not reach Malibu Creek and Malibu Lagoon. Therefore, water quality limits prescribed in the Malibu Creek Watershed Nutrient TMDLs and Malibu Creek

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and Lagoon Bacteria TMDLs are not incorporated as water quality objectives since there is no discharge.

20. Clean Water Act section **303(d) List** – In the 2006 Clean Water Act Section 303(d) list, approved by the United States Environmental Protection Agency (USEPA) on June 28, 2007, impairments to beneficial uses are formally identified for the following water resources:
 - a. Malibu Lagoon: impaired by Coliform Bacteria, Eutrophication.
 - b. Malibu Creek: impaired by Coliform Bacteria, Nutrients (Algae).
 - c. Malibu Beach: impaired by Indicator Bacteria.
 - d. Malibu Lagoon Beach (Surfrider Beach): impaired by Coliform Bacteria.
 - e. Carbon Beach: impaired by Indicator Bacteria.

21. **Ocean Plan** – The State Water Board adopted the *Water Quality Control Plan for Ocean Water of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, and 2012. The State Water Board adopted the latest amendment on October 16, 2010 and it became effective on July 1, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan does not directly apply to the discharge authorized by this Order, but is included herein as the basis for determining whether the discharge will result in improvements to ocean water quality. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized in Table 7 below:

Table 7 – Ocean Plan Beneficial Uses	
Receiving Water	Beneficial Use(s)
Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Area of Special Biological Significance ^[1] (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

[1]. There are no any ASBSs in the vicinity of the Malibu Valley.

22. **Title 22 CCR** –Title 22 CCR contains primary and secondary MCLs for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22 CCR. Title 22 primary MCLs (see Attachments A1 to A5) have been incorporated into the Basin Plan as water quality objectives. MCLs are used as the bases for effluent limits for discharges of recycled water in WDRs and WRRs to protect the designated beneficial uses of municipal and domestic supply.

23. **Recycled Water Policy** – State Water Board Resolution No. 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy), is intended to support the State Water Board’s Strategic Plan to promote sustainable local water supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in reduction in

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greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water generated from municipal wastewater sources in a manner that fully implements state and federal water quality laws.

24. **State Water Board Resolution No. 68-16** “Statement of Policy with Respect to Maintaining High Quality of Waters in California” (also called the “Anti-degradation Policy”) requires the Regional Board, in regulating the discharge of waste, to maintain the high quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the State Water Board’s policies (e.g., quality that exceeds water quality objectives). Further, any activity that produces waste must meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The discharge of waste authorized by this Order will cause some degradation of groundwater in the Civic Center Gravels. The current concentration of nitrate as nitrogen in groundwater in the area to be used for injection is 3.6 mg/L. The City prepared a study entitled “*Assimilative Capacity and Antidegradation Analysis for proposed injection*”, which concluded that the nitrate concentration in groundwater will continue to increase to between 4.9 mg/L and 5.85 mg/L after 30 years due to the continuous discharge from existing OWDSs if the Civic Center Facility is not available to treat wastes now being discharged from the OWDSs. The study also concluded that the discharge of treated wastewater with a nitrate concentration of 8 mg/L through injection wells, percolation, and infiltration of irrigation water will cause an increase in concentrations of nitrate in groundwater to between 4.1 mg/L and 4.9 mg/L after 30 years. By eliminating the use of OWDSs in the Malibu Civic Center Area and instead treating the wastewater using advanced tertiary treatment and discharging the treated wastewater to the groundwater using injection wells, percolation ponds, and irrigation, the nitrate concentration will increase to 4.1 mg/L from 3.6 mg/L after 30 years rather than to 4.9 mg/L after 30 years.

The Malibu Valley shallow groundwater basin is impaired by nitrate and bacteria. The operation of the Civic Center Facility will eliminate the nitrate loading to the shallow aquifer. The Civic Center Facility will use best practicable treatment or control in compliance with this Order. The Order requires the wastewater to be treated to, at a minimum, comply with water quality objectives set forth in the Basin Plan and the requirements of Title 22 Water Recycling Criteria to protect public health. The use of best practicable treatment or control required by this Order will result in compliance with the Basin Plan water quality objectives, including objectives for nitrate, other nitrogen-related compounds, and bacteria including total coliform and fecal coliform. This will assure that neither pollution nor nuisance will occur and that the highest water quality will be maintained.

The Civic Center Facility is designed to remove nitrogen-related compounds and bacteria, but not total dissolved solids, sulfate, chloride, and boron (collectively salts). Wastewater discharged either from the existing OWDSs, if the Civic Center Facility is not available, or from the Civic Center Facility, will result in the same impacts on the salt concentrations at the groundwater in the Malibu Valley Groundwater Basin.

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The discharge authorized by this Order is consistent with the maximum benefit of the people of the State. The Civic Center Facility will produce better quality effluent than that generated by the existing OWDSs because it will have significantly improved treatment of bacteria using ultraviolet disinfection and the nitrate loading to shallow aquifer is expected to be reduced by as much as 60%. The use of treated effluent for irrigation will result in conservation of potable water of up to approximately 43,000 GPD in Phase I and 97,000 GPD in Phase II. The use of OWDSs has resulted in impaired water quality in Malibu Creek and Malibu Lagoon and the aquifers underlying the Malibu Civic Center Area. The Civic Center Facility will replace the use of OWDSs with a much greater level of treatment and control, which will eliminate the impacts of those discharges on Malibu Creek, Malibu Lagoon, Santa Monica Bay and the groundwater.

25. **AB 685 – CWC Section 106** – 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 developed to protect human health and ensure that water is safe for domestic use.
26. These WDRs/WRRs are established pursuant to CWC section 13263 because this project has the potential to affect the quality of the waters of the State, to impact the beneficial uses of those waters, or to cause a nuisance. These WDRs/WRRs conform to CWC section 13523 and State Water Board Resolution 2009-011, the Recycled Water Policy, because they meet the need for recycled water use.
27. Section 13523 of the CWC provides that a Regional Board, after consulting with and receiving recommendations from DDW or its delegated local health agency, and after any necessary hearing, shall, if it determines such action to be necessary to protect the health, safety, or welfare of the public, prescribe water recycling requirements for water that is used or proposed to be used as recycled water. Section 13523 further provides at a minimum that the recycling requirements shall include, or be in conformance with, the statewide water recycling criteria established by DDW pursuant to Water Code Section 13521. DDW adopted revised Water Recycling Criteria (Chapter 3, Division 4, Title 22, CCR) that became effective on June 18, 2014. Criteria applicable to this recycling project are prescribed in this Order.
28. These WRRs are established pursuant to CWC section 13523. The WRRs prescribe the limits for recycled water and the City's responsibilities for the production and monitoring of recycled water. The City is also responsible for inspecting point-of-use facilities, and ensuring compliance with the WRRs contained in this Order.

The City prepared the *Phase I Title 22 Engineering Report*, dated August 2014, on its proposed production, distribution, and use of recycled water for irrigation as required by section 60323 of Title 22, CCR. On September 18, 2014, Engineering Report was approved by DDW with additional requirements, specified in Section VII.10. of this Order. All additional requirements had been incorporated with this Order and the accompanying MRP.

29. The requirements contained in this Order are in conformance with the goals and objectives of the Basin Plan and the Ocean Plan and implement the requirements of the CWC and Title 22.

30. **Publicly Owned Treatment Works (POTW)** – The term POTW means a treatment works as defined by section 212 of the federal Clean Water Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment facility. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such treatment works. (40 CFR 403.3(q)).

CEQA AND NOTIFICATION

31. The City is the lead agency for purposes of the California Environmental Quality Act (CEQA) (Pub. Res. Code §§21000 et seq). In accordance with CEQA, the City released a Notice of Preparation (NOP) on November 21, 2013. The NOP provided notice to the public and public agencies that an Environmental Impact Report (EIR) would be prepared for the construction of the Civic Center Facility Project and its discharge to groundwater. The Draft EIR and a Recirculated Draft EIR were released for public comment on May 30, 2014 and June 12, 2014, respectively, with notices published in the Malibu Times, notices mailed interested parties and circulation to response agencies through the State Clearinghouse (SCH No. 2013111075). On July 21, 2014, the City conducted a Planning Commission public hearing to accept verbal comments on the Draft EIR. Through this period, written and oral comments were received from a total of 32 agencies, organizations and individuals. The City has incorporated responses to all written and oral comments into the Final EIR. On December 15, 2014, the City Council held a public hearing and certified the Final EIR.
32. The Regional Water Board is a responsible agency for purposes of CEQA and has considered the EIR prepared by the City as required by the CEQA Guidelines (Title 14 CCR, Chap. 3, Section 15096). Because the EIR did not identify significant environmental effects with respect to water quality, this Order does not include specific mitigation measures for purposes of CEQA. The Regional Board has incorporated requirements into this Order to protect the quality of the waters of the state consistent with the applicable plans and policies that apply to the discharges regulated by this Order and has established a monitoring and reporting program to determine compliance with the terms of the Order and to assure protection of water quality.
33. **Public Notice** – On December 23, 2014, the Regional Board notified the City and interested agencies and persons via Lyriss mailing system, regular mails, and electronic mails on December 30, 2014 of its intent to issue WDRs/WRRs Order No. R4-2015-XXXX for the discharge to groundwater, distribution and use of secondary treated and disinfected effluent as recycled water, and has provided an opportunity to submit written comments.

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The Regional Board, in a public meeting, heard and considered all comments pertaining to these WDRS/WRRs.

IT IS HEREBY ORDERED that the City shall comply with the following:

I. INFLUENT LIMITS AND REQUIREMENTS

Influent wastewater shall be limited to wastewater only from the Malibu Civic Center Area.

II. TERTIARY-TREATED EFFLUENT/RECYCLED WATER LIMITS

1. The maximum quantities of the tertiary-treated effluent shall not exceed the design capacity of the Civic Center Facility, 191,000 GPD for Phase I and 361,000 GPD for Phase II.
2. The Title 22 recycled water for irrigation and groundwater disposal via injection shall not exceed the design capacities of the Civic Center Facility, specified in Table 8. Discharge of treated wastewater to groundwater through percolation shall not exceed the quantities specified in Table 8.

Table 8 – Maximum Discharge Quantities of Effluent and Maximum Quantities of Recycled Water Applications at Phase I and Phase II		
Phase	Maximum Volume Discharge from Civic Center Facility for Groundwater Injection and Recycled Water Used for Irrigation (GPD)	Groundwater Percolation as Backup (GPD)
I	191,000	50,000
II	361,000	100,000

3. The DDW has approved the use of recycle water for landscape irrigation for the Phase I project. If the City plans to use the recycled water for other purposes, the City must submit the request letter and the Title 22 Engineering Report to DDW and the Regional Board for review and approval.
4. Recycled water applications for Phase II is subject to DDW's approval. The City must furnish the Title 22 Engineering Report for Phase II recycled water use for DDW's approval prior to the application of recycled water produced by Phase II.
5. The effluent/recycled water shall not contain constituents with concentrations exceeding limits listed in Table 9.

Table 9 – Effluent/Recycled Water Limits						
Constituents	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Minimum ^[1]	Instantaneous Minimum ^[2]
Oil and grease	mg/L	10 ^[3]	---	15 ^[3]	---	---
Total suspended solids	mg/L	15 ^[3]	40 ^[3]	45 ^[3]	---	---
	% removal	≥ 85 ^[4]	---	---	---	---

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Table 9 – Effluent/Recycled Water Limits						
Constituents	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Minimum ^[1]	Instantaneous Minimum ^[2]
BOD _{5@20 °C}	mg/L	20 ^[3]	30 ^[3]	45 ^[3]	---	---
	% removal	≥ 85 ^[4]	---	---	---	---
pH	pH units	---	---	---	6.5 ^[3, 5]	8.5 ^[3, 5]
MBAS	mg/L	0.5 ^[6]	---	---	---	---
Nitrate + Nitrite as Nitrogen	mg/L	8 ^[7]	---	---	---	---
Nitrate as Nitrogen	mg/L	8 ^[7]	---	---	---	---
Nitrite as Nitrogen	mg/L	1 ^[8]	---	---	---	---
Total Dissolved Solids	mg/L	2,000 ^[8]	---	---	---	---
Sulfate	mg/L	500 ^[8]	---	---	---	---
Chloride	mg/L	500 ^[8]	---	---	---	---
Boron	mg/L	2.0 ^[8]	---	---	---	---

- [1]. Instantaneous Minimum Effluent Limit: The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limit).
- [2]. Instantaneous Maximum Effluent Limit: The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limit).
- [3]. Limits are based on best professional judgment. Limits adopted by this Regional Board exist in the permits for tertiary-treated wastewater treatment plants.
- [4]. Limits are based on secondary treatment requirements, 40 CFR section 133.102.
- [5]. Excursion from this range shall not be considered a violation provided the duration is not more than 10 minutes in a 24-hour period, and pH shall at all times be within 6 to 9.
- [6]. Basin Plan Title 22 Drinking Water Standard for methylene blue activated substances (MBAS).
- [7]. Limits are determined based on the model results, and to be consistent with State Water Board Resolution No. 68-16.
- [8]. Basin Plan Groundwater Quality Objective.

6. Recycled water used for irrigation and waste disposal via aquifer injection and groundwater percolation shall be limited to tertiary-treated and disinfected effluent only, as proposed. The tertiary-treated and disinfected effluent used as recycled water is wastewater that has been filtered and subsequently disinfected with UV that meets the following criteria:

- A. UV disinfection shall comply with the “Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse” (August 2012) published by the National Water Research Institute, which specifies for permeability of membrane filtration that:
 - a. The design UV dose shall be at least 80 millijoules per square centimeter (mJ/cm²) under maximum daily flow; and,

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- b. The filtered effluent UV transmittance shall be 65% or greater at 254 nanometer.

The City shall submit a performance testing protocol for the UV system prior to operation and submit results of the performance testing to the Executive Officer of the Regional Board and DDW as they become available.

- B. Effluent shall be, at all times, adequately disinfected and oxidized. In the event that the effluent exceeds any of the following, based on daily grab samples, the City shall suspend recycled water applications until such time that the cause of the failure has been identified and corrected. Any failure to meet the total coliform limits shall be reported to the DDW and the Regional Board in the next quarterly report.

- a. A 7-day median of 2.2 most probable number (MPN) per 100 milliliters for two (2) consecutive days;
- b. 23 MPN per 100 milliliters in more than one sample in any 30-day period; and,
- c. 240 MPN per 100 milliliters in any sample.

- C. A filtered wastewater shall be an oxidized wastewater that has been passed through membrane so that the turbidity of the filtered wastewater does not exceed any of the following:

- a. 0.2 Nephelometric Turbidity Unit (NTU) more than 5 percent of the time within a 24-hour period; and,
- b. 0.5 NTU at any time.

- 7. Maximum Contaminant Limits: The effluent shall not contain trace, toxic and other constituents in concentrations exceeding the applicable maximum contaminant levels (Attachment A) for drinking water established by the DDW in sections 64431 (Attachment A1), 64443 (Attachment A2), 64444 (Attachment A3), 64533 (Attachment A4), and 64449 (Attachment A5), Article 5, Chapter 15, Title 22 of the CCR, or subsequent revisions or at levels that adversely affect the beneficial uses of receiving groundwater. Concentrations of contaminants in the effluent shall, at all times, not exceed the following MCLs. In case of a violation of any primary or secondary MCL, the City shall notify and submit a report according to Provision IX.6. of this Order.

- A. Primary MCLs specified in Chapter 15, Domestic Water Quality and Monitoring, Title 22, CCR:

- a. Inorganic chemicals in Section 64431, Table 64431-A, except for nitrogen compounds, Attachment A1 of this Order;
- b. Radionuclides in Section 64443, Table 4, Attachment A2 of this Order; and,

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- c. Regulated organic chemicals in Section 64444, Table 64444-A, Attachment A3 of this Order.
- B. Primary MCLs for disinfection byproducts specified in Chapter 15.5, Article 2, Section 64533, Table 64533-A, Attachment A4 of this Order.
- C. Secondary MCLs in Chapter 15, Domestic Water Quality and Monitoring, Title 22, CCR, Table 64449-A, Attachment A5 of this Order.

III. GROUNDWATER LIMITS

- 1. Groundwater at Well Nos. SMBRP-9, SMBRP-12, LAMW-5S, TY-MW-1, MCWP-MW04D, MCWP-MW04S, MCWP-MW07S, and MCWP-MW09 shall not contain constituents with concentrations exceeding limits listed in Table 10.

Table 10 – Groundwater Limits				
Constituents	Units	Monthly Average	7-Day Average	Single Sample Maximum
Nitrate + Nitrite as Nitrogen (for Civic Center Gravels)	mg/L	5 ^[1]	---	---
Nitrate + Nitrite as Nitrogen (for Shallow Alluvium)	mg/L	10 ^[2]	---	---
Total Dissolved Solids	mg/L	2,000 ^[3]	---	---
Sulfate	mg/L	500 ^[3]	---	---
Chloride	mg/L	500 ^[3]	---	---
Boron	mg/L	2.0 ^[3]	---	---
Total coliform	MPN/100mL	---	1.1 ^[3]	---
Fecal coliform	MPN/100mL	---	1.1 ^[3]	---

- [1]. Limit for deep Well Nos. MCWP-MW09 and MCWP-MW04D is based on the anti-degradation analysis summarized in the report titled “*Assimilative Capacity and Antidegradation Analysis for Proposed Injection Dispersal*”, dated May 15, 2014
- [2]. Limit for shallow Well Nos. SMBRP-9, TY-MW-1, MCWP-MW04S, MCWP-MW07S, SMBRP-12, and LAMW-5S is based on Basin Plan Groundwater Quality Objectives.
- [3]. Basin Plan Groundwater Quality Objectives.

- 2. The City shall monitor groundwater in both the Shallow Alluvium and Civic Center Gravels for a minimum of two years prior to operation of the Civic Center Facility to establish ambient groundwater quality in both aquifers. The City shall demonstrate that the discharges from the Civic Center Facility do not contribute to the degradation of groundwater quality above either the limits specified in Table 10 or ambient groundwater quality as established by monitoring. This shall be accomplished by compliance with the effluent limits on Table 9.

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IV. SPECIFICATIONS FOR USE OF RECYCLED WATER

1. The City is the distributor of the recycled water and responsible for recycled water uses for landscape irrigation, specified in Table 8. The City shall submit a revised Title 22 Engineering Report to DDW and the Regional Board for review and approval, if additional recycled water use is proposed.
2. Recycled water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.
3. The delivery of recycled water to end-users shall be subject to DDW approval and/or its delegated local agency.
4. The Executive Officer of the Regional Board is delegated with authority to approve the new recycled water application(s), including quantity, upon the DDW's approval recommendation letter on a revised Title 22 Engineering Report received by this Regional Board.

V. USE AREA REQUIREMENTS

“Use area” means an area with defined boundaries, which may contain one or more facilities where recycled water is used. The City shall be responsible to ensure that all users of recycled water comply with the following:

1. No irrigation with, or impoundment of, disinfected secondary-treated recycled water shall take place within 900 feet of any domestic water supply well.
2. Recycled water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to prevent clogging of spray nozzles and over-watering, and minimize the production of runoff. Pipelines shall be maintained so as to prevent leakage.
3. Any incidental runoff from recycled water projects shall be handled as follows:
 - A. The discharge of recycled water to surface water is prohibited.
 - B. Discharges of recycled water to surface waters may only occur where regulated under a separate NPDES permit issued by the Regional Board.

Incidental runoff is defined as unintended small amounts (volume) of runoff from recycled water use areas, such as unintended, minimal over-spray from sprinklers that escapes the recycled water use area. Irrigation system maintenance shall be consistent with the requirements found in the State Board's Recycled Water Policy.

4. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain.
5. Recycled water shall not be used for irrigation during periods of rainfall and/or runoff.
6. Recycled water shall be retained on the designated area and shall not be allowed to escape as surface flow.

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7. All recycled water use areas that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: “RECYCLED WATER – DO NOT DRINK” as shown in Figure 7. Each sign shall display an international symbol similar to that shown in Figure 7. An alternative signage and wording may be used upon approval by the Executive Officer of the Regional Board.
8. No physical connection shall be made or allowed to exist between any recycled water piping and any piping conveying potable water, except as allowed under Section 7604 of Title 17, CCR.
9. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs (a faucet or similar device to which a common garden hose can be readily attached). Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.
10. Recycled water use shall not result in earth movement in geologically unstable areas.

VI. REQUIREMENTS FOR DUAL-PLUMBED SYSTEM

1. “Dual plumbed” means a system that utilizes separated piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:
 - A. To serve plumbing outlets (excluding fire suppression systems) within a building; or,
 - B. Outdoor landscape irrigation at individual residences.
2. The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two (2) systems is protected by an air gap separation which complies with the requirements of Section 7602 (a) and 7603 (a) of Title 17, CCR, and that such connection has been approved by the DDW and/or its delegated local agency.
3. The City shall not deliver recycled water to a facility using a dual-plumbed system unless the report required pursuant to Section 13522.5 of the CWC, and which meets the requirements set forth in sections VI.4. and/or VI.5. of this Order, has been submitted, and approved by, DDW or its delegated local agency and the Regional Board. The Regional Board shall be furnished with a copy of the DDW approval within 30 days following the approval.
4. Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the dual-plumbed system within each facility and use site shall be inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four (4) years. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the

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American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and testing for the prior year shall be submitted to the DDW within 30 days following completion of the inspection or testing.

5. The City shall notify DDW of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of discovery of the incident.
6. Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with Section 7605 of Title 17, CCR.

VII. GENERAL REQUIREMENTS

1. Bypass, discharge, or delivery to the use area of inadequately treated recycled water, at any time, is prohibited.
2. The recycling facility and areas where any potential pollutants are stored shall be adequately protected from inundation and damage by storm flows and runoff.
3. Adequate freeboard and/or protection shall be maintained in the recycled water storage tanks and process tanks to ensure that direct rainfall will not cause overtopping.
4. The wastewater treatment and use of recycled water shall not result in nuisance conditions caused by breeding of mosquitoes, gnats, midges, or other pests.
5. Odors of sewage origin shall not be perceivable any time outside the boundary of the treatment facility.
6. The City shall, at all times, properly operate and maintain all treatment facilities and control systems (and related appurtenances), which are installed or used by the City to achieve compliance with the conditions of this Order. Proper operation and maintenance includes: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls (including appropriate quality assurance procedures).
7. Any wastes that do not meet the foregoing requirements shall be held in impervious containers and discharged at a legal point of disposal.
8. A copy of these requirements shall be maintained at the wastewater treatment facility so as to be available at all times to operating personnel.
9. Based on DDW's conditional approval letter, dated September 18, 2014 to the Regional Board, the City shall fulfill the following requirements:
 - A. The *Phase I Title 22 Engineering Report* is acceptable for the intended use of the recycled water generated by the Civic Center Facility for landscape irrigation only. If the City plans to pursue additional recycled water uses, the

City must submit an engineering report to DDW and the Regional Board for review and approval.

- B. The City shall establish an ordinance to regulate any new wells proposed in the Civic Center Area. The ordinance shall protect the beneficial uses of groundwater and human health. Such an ordinance must be established prior to the initiation of the Civic Center Facility operation.
- C. Backflow devices are required to prevent cross contamination, as the Civic Center Facility will be able to access potable water should recycled water deliveries not be available. A swing tee or removable pipe section will be included at the Civic Center Facility site, and appropriate backflow prevention measures will be taken as part of the connection process. In accordance with Section 7604 of the Title 17, Table 1(c)(1), air-gap devices shall be provided at premises where the public water system is used to supplement the recycled water supply. An air-gap separation shall be at least double the diameter of the supply pipe and in no case shall this separation be less than one inch pursuant to Section 7602. The location of an-air-gap separation shall be located as close as practical to the user's connection pursuant to Section 7603. The DDW recommends the City to obtain certified cross connection control specialist(s) to inspect and test for potential cross connections.
- D. The City shall provide uninterrupted chlorine feed pursuant to Section 60353 of Title 22.
- E. The off-spec (inadequately treated) water shall be diverted to an equalization basin. Off-spec water must either be directed back to the head of the Civic Center Facility for another treatment. The City must consult with the Regional Board for the requirements of disposing treated or inadequately treated recycled water.
- F. In accordance with Section 60321(a) of Title 22, disinfected tertiary recycled water shall be sampled at least once daily for total coliform bacteria. The coliform samples must be taken when the Civic Center Facility is in operation. The samples shall be taken from the disinfected effluent and analyzed by an approval laboratory. The results of total coliform bacteria shall be reported quarterly to the regulatory agencies.
- G. In accordance with Section 60321(b) of Title 22, turbidity must be sampled continuously using a continuous turbidity meter and recorder. The turbidity samples must be taken at intervals of no more than 1.2 hours over a 24-hour period to determine compliance for turbidity. If the continuous turbidity meter and recorder failed, grab sampling may be substituted for a period of up to 24-hours. The results of t shall be reported quarterly to the regulatory agencies.

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- H. In accordance with Section 64572(d) of Title 22, crossing of potable and non-potable water pipeline shall be constructed no less than 45-degrees and potable water pipeline shall be at least one foot above that pipeline. No connection joints shall be made in the water main within four horizontal feet of the non-potable pipeline.
- 10. Ponds will be maintained to ensure that percolation rate at the pond bottom will not decrease over time. The City shall submit the as-built dimensions of three percolation ponds to the Regional Board, when they built with the Civic Center Facility.
- 11. The distribution and irrigation systems shall be maintained by the City.
- 12. The quality of treated wastewater shall continue to improve after being injected and migrating through aquifer that is defined as part of the treatment zone in the subsurface.

VIII. PROHIBITIONS

- 1. Wastes discharged and recycled water applications shall not contain tastes, odors, color, foaming, any materials, or other objectionable characteristics in concentrations that would:
 - A. Affect human, animal, and plant life;
 - B. Cause nuisance or adversely affect the beneficial uses and quality of the receiving groundwater; and,
 - C. Impact ocean water that may be in hydraulic connection with groundwater.
- 2. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in CWC Section 13173, in a manner that causes violation of receiving water limits, is prohibited.
- 3. The recycled water storage basin and storage tank shall not contain floating materials, including solids, foams or scum in concentrations that cause nuisance, adversely affect beneficial uses, or serve as a substrate for undesirable bacterial or algae growth or insect vectors.
- 4. There shall be no onsite disposal of sludge. Sludge-drying activities are allowed, but only as an intermediate treatment prior to offsite disposal. Any offsite disposal of wastewater or sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a California Regional Board or comparable regulatory entity, and which is in full compliance therewith. Any wastewater or sludge handling shall be in such a manner as to prevent its reaching surface waters or watercourses.
- 5. Odors originating at this facility shall not be perceivable beyond the limits of the facility property owned by the City.

6. No new connections may be made without notification to the Regional Board.
7. The discharge of waste shall not create a condition of pollution, contamination, or nuisance.
8. Bypass, discharge or overflow of untreated wastes, except as allowed by Section VIII.9. of this Order, is prohibited.
9. Bypass (the intentional diversion of waste stream from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the City for bypass unless:
 - A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that cause them to become inoperable, or substantial and permanent loss in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.)
 - B. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment shall have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance.
 - C. The City must submit written notice at least 24 hours in advance of the need for a bypass to the Regional Board Executive Officer.
10. Any discharge of wastewater from the treatment system (including the wastewater collection system) at any point other than specifically described in this Order and except as provided for in Section VIII.9 of this Order, is prohibited.
11. Any injection of treated wastewater at any point(s) other than three (3) injection wells defined in this Order is prohibited.
12. The discharge of effluent, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the land application area.

IX. PROVISIONS

1. The City shall submit plans for any change of the recycled water project to and obtain approval from DDW and the Regional Board. The American Water Works Association Guidelines for the Distribution of Non-Potable Water shall be followed, including installation of purple pipe, adequate signs, etc. As-built drawings shall show the final locations of the potable water, sewer, and recycled water pipelines; and indicate adequate separation between the recycled water and potable domestic water lines, which shall also be marked clearly or labeled using separate colors for identification. In addition, a copy of each application to DDW for a recycled water project shall be delivered to the Regional Board for inclusion in the administrative file.

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2. If the recycled water system lateral pipelines are located on an easement contiguous to a homeowners private property and where there is a reasonable probability that an illegal or accidental connection to the recycled water line could be made, the City shall provide a buffer zone or other necessary measures between the recycled water lines and the easement to prevent any illegal or accidental connection to the recycled water lines. The City shall notify such homeowners about the recycled water lateral and restrictions on usage of recycled water.
3. The City shall inspect the recycled water use areas on a periodic basis. A report of findings of the inspection shall be submitted to DDW and the Regional Board.
4. The City shall submit to the Regional Board, under penalty of perjury, technical self-monitoring reports according to the specifications contained in the Monitoring and Reporting Program as directed by the Executive Officer.
5. The City shall notify DDW and this Regional Board by telephone or electronic means within 24 hours of knowledge of any violations of recycled water use conditions, any adverse conditions as a result of the use of recycled water and any discharge exceeding the effluent limits prescribed in this Order from the Civic Center Facility or/and the recycled water storage basin; written confirmation shall follow within 5 working days from date of notification, unless otherwise specified in this Order. The report shall include, but not limited to, the following information, as appropriate:
 - A. Nature and extent of the violation;
 - B. Date and time: when the violation started, when compliance was achieved; and, when injection was suspended and restored, as applicable;
 - C. Duration of violation;
 - D. Cause(s) of violation;
 - E. Corrective and/or remedial actions taken and/or will be taken with time schedule for implementation to prevent future violations; and
 - F. Impact of the violation.
6. The direct use of disinfected recycled water for irrigation and unpaved roadway dust control could affect the public health, safety, or welfare; requirements for such uses are therefore necessary in accordance with Section 13523 of the CWC.
7. The 50,000-gallon recycled water storage tank shall comply with the following provisions:
 - A. The recycled water storage tank is designed not to spill during wet months. Under this circumstance, spills that occur under extreme weather conditions or emergencies should not be considered for enforcement.
 - B. The recycled water storage tank can be drained and refilled with potable water or flushed with potable water prior to the onset of the wet season. Flushing will not displace all of the recycled water but the water quality threat is minimal.

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8. This Order does not exempt the City from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize the recycling and use facilities; and they leave unaffected any further constraint on the use of recycled water at certain site(s) that may be contained in other statutes or required by other agencies.
9. This Order does not alleviate the responsibility of the City to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of the recycled water distribution facility shall be contingent upon issuance of all necessary requirements and permits, including a conditional use permit.
10. After notice and opportunity for a hearing, this Order may be modified, revoked and reissued, or terminated for cause, that include, but is not limited to: failure to comply with any condition in this Order, endangerment of human health or environment resulting from the permitted activities in this Order, obtaining this Order by misrepresentation or failure to disclose all relevant facts, and acquisition of new information which could have justified the application of different conditions if known at the time of Order adoption.

The filing of a request by the City for modification, revocation and reissuance, or termination of the Order; or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

11. The City shall furnish, within a reasonable time, any information that the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The City shall also furnish the Regional Board, upon request, with copies of records required to be kept under this Order for at least three (3) years.
12. In an enforcement action, it shall not be a defense for the City that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the City shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost.
13. This Order includes “Standard Provisions Applicable to Waste Discharge Requirements” (Attachment B – Standard Provisions). In the event of conflict between provisions stated herein and the Standard Provisions, the provisions stated herein prevail.
14. This Order includes the WDRs/WRRs and the attached MRP (CI No. 10042). If there is any conflict among provisions stated in the MRP and these WDRs/WRRs, those provisions stated herein before prevail.
15. After a year of injecting treated wastewater into the aquifers, the City shall update the OMM Plan and submit it to the Regional Board for review and approval, if there is

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any change to the original OMM Plan. The Civic Center Facility shall be operated in accordance with the approved OMM Plan.

The OMM Plan shall cover critical operational parameters to include routine testing procedures for optimization of the UV dose for disinfection and reduction of light-sensitive contaminants, and all treatment processes, maintenance and calibration schedules for all monitoring equipment, process alarm set points, and response procedures for all alarms in each treatment process of the Civic Center Facility, including criteria for diverting recycled water if water quality requirements are not met, start-up, emergency response and contingency plans. During the first year of operation of the Civic Center Facility, all treatment processes shall be optimized to reduce contaminant levels. The results of these initial optimization efforts shall be incorporated into the updated OMM Plan. The OMM Plan shall include staffing levels with applicable certification levels for the Civic Center Facility operations personnel. Significant changes in the operation of any of the treatment processes shall be reported to the DDW and the Regional Board. Changes in the approved OMM Plan must be approved by the DDW and the Regional Board prior to instituting changes.

Six (6) months prior to initiating Phase II Project planning, the City shall submit the Phase II Title 22 Engineering Report, with necessary updates, to DDW and the Regional Board for approval. The City shall furnish a copy of DDW's approval letter of the Phase II Title 22 Engineering Report to the Regional Board. The City is not allowed to use any recycled water prior to receiving the DDW's approval letter.

16. For any material change or proposed change in character, location or volume of recycled water, or its uses, the City shall submit at least 120 days prior to the proposed change an engineering report or addendum to the existing engineering report to the Regional Board and DDW [pursuant to CWC, section 13522.5 and CCR, Title 22, Section 60320.080] for approval. The Title 22 Engineering Report shall be prepared by a qualified engineer and geologist, registered or certified in the State of California. However, replacement of injection wells will not require a report of material change, or filing of a new Report of Waste Discharge.
17. The City shall provide an Annual Report described in the MRP to this Regional Board.
18. In order to limit the presence of constituents of concerns specified in Section II in the effluent and the recycled water including regulated and unregulated contaminants identified in Attachments A1 to A5 and Attachments C to E of the accompanying MRP, the City shall, for the purposes of protecting public health, ensure that its equipment and facilities for treatment and disposal operate at levels of peak performance.
19. Spill Clean-Up Contingency Plan (SCP) Requirements – Within ninety (90) days, the City is required to submit a SCP, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the City's collection system or treatment facilities. At a minimum, this SCP shall include sections on spill clean-up and containment measures, public notification, and monitoring. The City shall review and amend this SCP as

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appropriate after each spill from the Civic Center Facility or in the service area of the Civic Center Facility. The City shall include a discussion in the annual summary report of any modifications to the SCP and the application of the SCP to all spills during the year.

20. Construction, Operation, and Maintenance Requirements

- A. The Civic Center Facility subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, Title 23, division 3, chapter 26 (Section 13625 - 13633).
- B. The City shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the City shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.
- C. The City shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

21. Sludge Disposal Requirements

- A. All sludge generated at the wastewater treatment plant will be disposed of, treated, or applied to land in accordance with federal regulations contained in 40 CFR part 503. These requirements are enforceable by USEPA.
- B. The City shall ensure compliance with the requirements in State Water Board Order No. 2004-10-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 those sites receiving the City's biosolids which a Regional Water Quality Control Board has placed under this general order, and with the requirements in individual Waste Discharge Requirements (WDRs) issued by a Regional Board for sites receiving the City's biosolids.
- C. The City shall comply, if applicable, with WDRs issued by other Regional Boards to which jurisdiction the biosolids are transported and applied.
- D. The City shall furnish this Regional Board with a copy of any report submitted to USEPA, the State Water Board or other Regional Board, with respect to municipal sludge or biosolids.

22. Collection System Requirements

The State Water Board adopted General WDRs for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory

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approach to address SSO. The SSO WDRs require public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. The City's collection system is part of the system that is subject to the WQ Order No. 2006-0003. As such, the City must properly operate and maintain its collection system (40 CFR part 122.41(e)). The City must report any non-compliance (40 CFR part 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR part 122.41(d)).

23. Spill Reporting Requirements

A. **Initial Notification** – Although State and Regional Board staff do not have duties as first responders, this requirement is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. For certain spills, overflows and bypasses, the City shall make notifications as required below:

- a. In accordance with the requirements of Health and Safety Code section 5411.5, the City shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but no later than two (2) hours after becoming aware of the release.
- b. In accordance with the requirements of CWC section 13271, the City shall provide notification to the California Emergency Management Agency (Cal EMA) of the release of reportable quantities of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but not later than two (2) hours after becoming aware of the release. CCR, Title 23, section 2250, established 1,000 gallons or more as a reportable quantity of sewage. The phone number for reporting these releases to the Cal EMA is (800) 852-7550.
- c. The City shall notify the Regional Board of any unauthorized release of sewage from the Civic Center Facility that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two (2) hours after becoming aware of the release. This initial notification does not need to be made if the City has notified Cal EMA and the local health officer or the director of environmental health with jurisdiction over the affected waterbody. The phone number for reporting these releases of sewage to the Regional Board is (213) 576-6683. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Board are (213) 305-2284 and (213) 305-2253.

At a minimum, the following information shall be provided to the Regional Board:

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- i. The location, date, and time of the release;
- ii. The water body that may be impacted by the discharge;
- iii. An estimate of the amount of sewage or other waste released and the amount that reached the receiving water at the time of notification;
- iv. If ongoing, the estimated flow rate of the release at the time of the notification;
- v. The name, organization, phone number and email address of the reporting representative; and,
- vi. A certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the possibly affected water bodies have been notified of the discharge.

B. Monitoring – For spills, overflows and bypasses reported under Section IX.23.A., the City shall monitor as required below:

To define the geographical extent of spill's impact, the City shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the State (including surface and ground waters). The City shall analyze the samples for total and fecal coliforms, E. coli (if fecal coliform test shows positive), enterococcus, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible and safe). This monitoring shall be done on a daily basis from time the spill is known until the results of two (2) consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

C. Reporting – The initial notification required under Section IX.23.A. shall be followed by:

- a. As soon as possible, but not later than twenty-four (24) hours after becoming aware of an unauthorized discharge of sewage or other waste from its wastewater treatment plant to a water of the state, the City shall submit a statement to Regional Board staff via email. If the discharge is 1,000 gallons or more, this statement shall certify that Cal EMA has been notified of the discharge in accordance with CWC section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:
 - i. Agency, Order No., and MRP CI No.;
 - ii. The location, date, and time of the discharge;

- iii. The water body that received the discharge;
 - iv. A description of the level of treatment of the sewage or other waste discharged;
 - v. An initial estimate of the amount of sewage or other waste released and the amount that reached the impacted water body;
 - vi. The Cal EMA control number and the date and time that notification of the incident was provided to Cal EMA; and,
 - vii. The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).
- b. A written preliminary report shall be submitted to the Regional Board within five (5) working days after disclosure of the incident via the State Board GeoTracker database under Global ID WDR100000359. The final written report shall be included in the next quarterly monitoring report submitted to the GeoTracker database above. The written report shall document the information required in paragraph Section IX.23.D. below, monitoring results and any other information required in provisions of the Standard Provisions document including corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.
- c. The City shall include a certification in the annual summary report (due according to the schedule in the accompanying MRP) that states that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components were maintained and tested in accordance with the City's preventive maintenance plan. Any deviations from or modifications to the Plan shall be discussed.
- D. **Records** – The City shall prepare and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or Civic Center Facility. This record shall be made available to the Regional Board upon request and a spill summary shall be included in the annual report, as required in the MRP CI No. 10042. The record shall contain:
- a. The date and time of each spill, overflow, or bypass;
 - b. The location of each spill, overflow, or bypass;
 - c. The estimated volume of each spill, overflow, or bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by Section IX.23.B.;
 - d. The cause of each spill, overflow, or bypass;

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- e. Whether each spill, overflow, or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;
- f. Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and
- g. The mandatory information included in Sanitary Sewer Overflows (SSO) online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSO WDR.

E. **Activities Coordination** – The Regional Board expects that the City will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this WDRs/WRRs permit, and (ii) the SSO WDRs.

F. **Consistency with SSO WDRs** – The requirements contained in this Order in Sections IX.19. (SCP Requirements), IX.20. (Construction, Operation, and Maintenance Requirements), and IX.23. (Spill Reporting Requirements) are intended to be consistent with the requirements of the SSO WDRs. The Regional Board recognizes that there may be some overlap between the WDRs/WRRs permit provisions and SSO WDRs requirements. The requirements of the SSO WDRs are considered the minimum thresholds (see Finding 11 of WQ Order No. 2006-0003). To encourage efficiency, the Regional Board will accept the documentation prepared by the City under the SSO WDRs for compliance purposes, as satisfying the requirements in Sections IX.19., IX.20., and IX.23. provided the more stringent provisions enumerated in this Order, have also been addressed.

24. Constituents of Emerging Concerns (CEC) Requirements

A. In recent years, the Regional Board has incorporated monitoring of a select group of anthropogenic chemicals, particularly pesticides, pharmaceuticals and personal care products, known collectively as CECs, into permits to better understand the propensity, persistence and effects of CECs in our environment. Recently adopted permits in this region contain requirements for CEC effluent monitoring, including identification of the CECs to be monitored in the effluent, sample type, sampling frequency, and sampling methodology.

B. The City shall monitor the CECs in the effluent discharge as listed in Attachment C. Monitoring results shall be reported as part of the annual report. Analysis under this section is for monitoring purposes only. Analytical results will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR part 136.

X. REOPENER

This Order may be reopened any time at the Regional Board's discretion to include the most scientifically relevant, and appropriate limits or other requirements for the Civic

Center Facility and may specifically be reopened to make revisions consistent with an approved salt and nutrient management plan.

XI. EFFECTIVE DATE OF THE ORDER

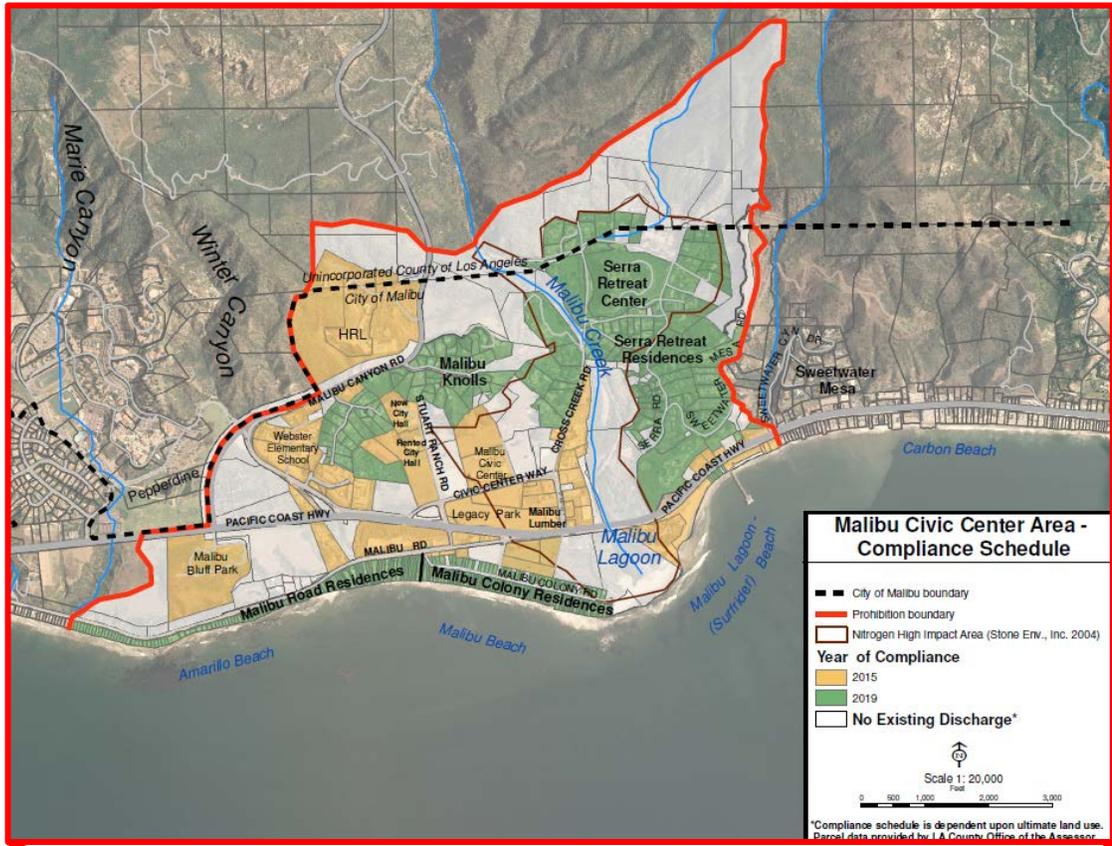
This Order takes effect upon its adoption.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on March 12, 2015.

Samuel Unger, P.E.
Executive Officer

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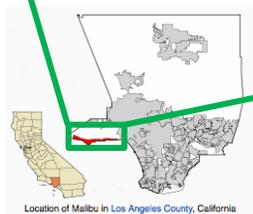
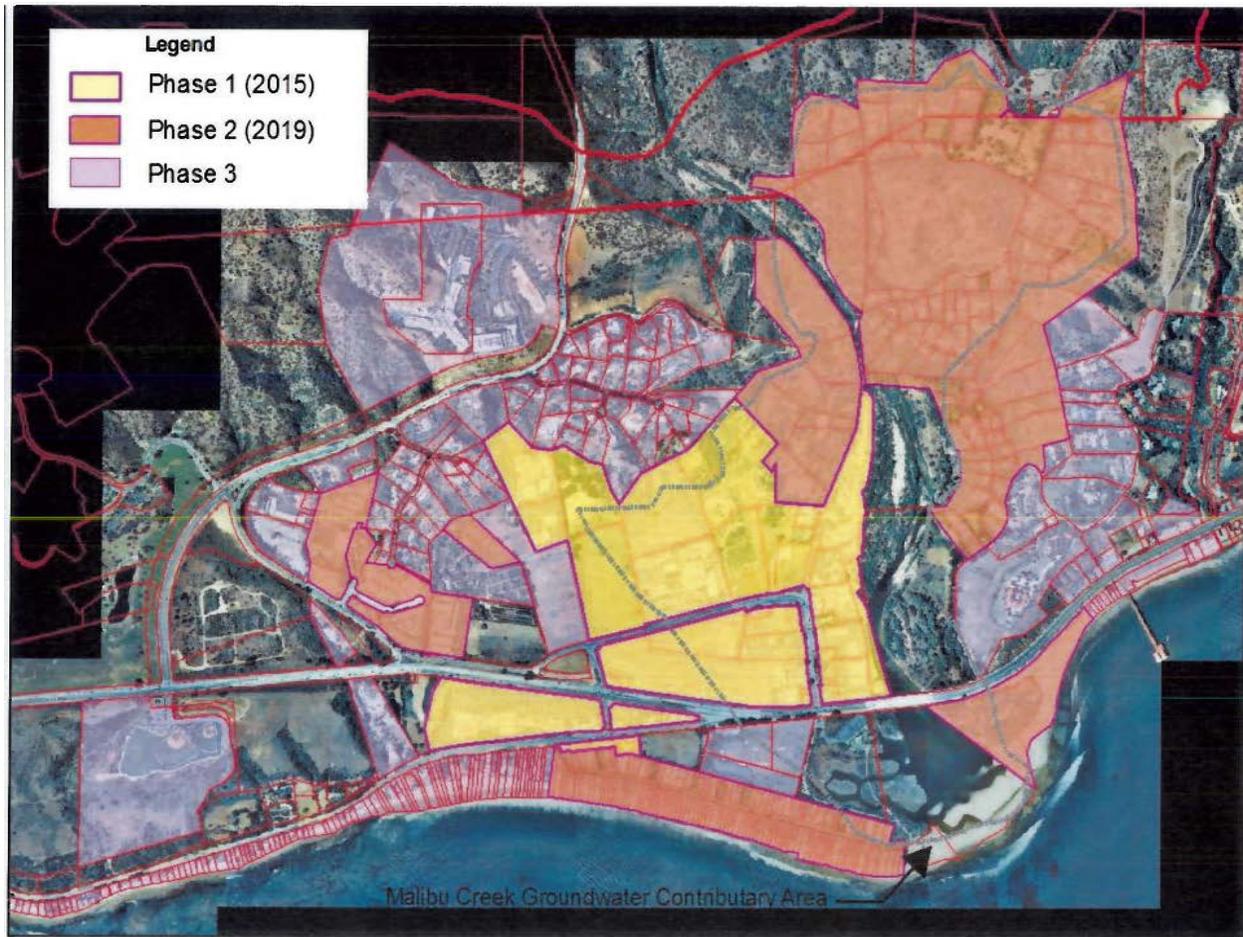


Figure 1 – Malibu Civic Center Area



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Figure 2 – Civic Center Wastewater Treatment Facility Phasing Options



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Figure 3 – Layouts of Malibu Civic Center Wastewater Treatment Facility



Figure 4 – Locations of Malibu Civic Center Wastewater Treatment Facility, Wastewater Collection and Recycled Water Pipelines, Wastewater and Recycled Water Pump Stations, and Injection Wells



Figure 5 – Locations of Groundwater Monitoring Wells and Injection Wells



Figure 6 – Locations of Surface Water Monitoring Stations



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Figure 7 – Exhibition of “Recycled Water – Do Not Drink”