CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER NO. R4-2024-0389
FILE NO. 17-082
CI-10771

WASTE DISCHARGE REQUIREMENTS AND WATER RECLAMATION REQUIREMENTS FOR METABOLIC STUDIO WATER TREATMENT PLANT

The following Discharger is subject to the Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) set forth in this Order.

Table 1. Discharger Information

Discharger/Permittee	Metabolic Studio, LLC
Facility Name	Metabolic Studio Water Treatment Plant
Facility Addresses	1745 North Spring Street, #4 and 1792 North Baker Street Los Angeles, CA 90012 Los Angeles County

Table 2. Discharge Information

Discharge Locations for Landscape Irrigation	• Los Angeles State Historic Park • Albion Riverside Park • Downey Recreation Center, excluding Downey Swimming Pool Facility
Discharge Description	Filtered and Disinfected River Water
Receiving Groundwater	Coastal Plain of Los Angeles-Central Subbasin (DWR Basin No. 4-11.04)

Table 3. Administrative Information

This Order was adopted on:	December 19, 2024
This Order shall become effective on:	December 19, 2024

I, Susana Arredondo, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on the date indicated above.

Jenny Newman

Digitally signed by Jenny Newman
Date: 2025.01.14 15:57:45 -08'00'

for Susana Arredondo, Executive Officer

Adopted: December 19, 2024

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

BACKGROUND

1. Metabolic Studio, LLC (Discharger) proposes a river water collection, treatment, storage, and distribution system project called Bending the River Back into the City Project (Bending the River Project). The Bending the River Project is located on 1792 North Baker Street and 1745 North Spring Street, #4, Los Angeles, both parcels owned by Metabolic Studio (Figure 1).

2. The Bending the River Project will convey water from the Los Angeles River (LA River), store the water in a stilling well[1] at the Metabolic Studio property, treat the water through filtration and disinfection to meet applicable water quality standards, store and distribute the treated river water on demand to nearby recreation areas for landscape irrigation.

3. The LA River is approximately 55 miles long and its tributaries drain an area of 824 square miles. The LA River flows through densely developed residential and commercial areas, and hence nutrients, salts, coliforms, and metals from the development or construction have degraded the water quality of the LA River. The discharges from the facilities and urban activities to the LA River are regulated by National Pollutant Discharge Elimination System (NPDES) permits, including general industrial or construction stormwater permits. The sources of the LA River consist of upwelling, incidental urban runoff, stormwater runoff, and effluents from the Publicly Owned Treatment Works (POTWs), including Donald C. Tillman Water Reclamation Plant (Tillman WRP), Burbank Water Reclamation Plant (Burbank WRP), and Los Angeles-Glendale Water Reclamation Plant (LA-Glendale WRP).

4. On March 7, 2014, the State Water Resources Control Board (State Water Board) Division of Water Rights authorized the diversion and use of water from the LA River by the right holder Lauren Bon under Water Rights Permit 21342. The maximum amount diverted under the water right shall not exceed 106 acre-feet per year (AFY)[2] at a maximum flowrate of 0.22 cubic feet per second[3] at the authorized areas (Figure 2).

5. On August 28, 2018, the Los Angeles Water Board authorized the Bending the River Project proposed by the Discharger under Clean Water Act section 401 (401 Certification). The project included the construction and operation of a water wheel and the construction of a side channel to the LA River to provide water for landscape

[1] A stilling well is a common device installed alongside waterways to provide access to the water and/or to accurately measure depth within a waterway by “stilling” the water. Water levels in the fully lined stilling well would rise and fall hydrostatically with the water level in the waterway.
[2] 106 acre-feet per year is approximately 94,630 gallons per day.
[3] 0.22 cubic feet per second is approximately 98.7 gallons per minute.

irrigation. The diversion construction plans were approved by the United States Army Corps of Engineers (USACE) under a section 408 permit, and the City of Los Angeles, as the owner of the underlying lands, granted access to the LA River channel. Following consultation with Los Angeles Water Board 401 Water Quality Certification Program staff, renewing the 401 Certification dated August 28, 2018 is not needed because the diversion structure was completed in October 2023, and hence the 401 Certification is no longer required. Additionally, staff confirmed that the project specified in the 401 Certification was closed on May 3, 2024.

Pursuant to Clean Water Act sections 404 and 408, the USACE granted permission and issued a section 404 permit on April 20, 2023, and a section 408 permit on April 28, 2023, for the Bending the River Project to modify the LA River to convey a portion of the flows for landscape irrigation.

6. The Discharger information and discharge locations are described below and summarized in Tables 1 and 2 above.

   A. The Discharger, as a treated river water producer and distributor, will own and operate the Metabolic Studio Water Treatment Plant (Metabolic Studio WTP) and is responsible for the treatment processes, filtered and disinfected river water quality, and groundwater quality impacted by the discharge. The Discharger is also responsible for compiling and submitting all monitoring data and reports to the Los Angeles Water Board.

   B. Metabolic Studio WTP will be a tertiary treatment system that treats water from the LA River. The treated river water will be used for landscape irrigation at the Los Angeles State Historic Park, the Albion Riverside Park, and the Downey Recreation Center excluding the swimming pool facility (Figures 2 and 3). The California Department of Parks and Recreation (California State Parks) and the City of Los Angeles Department of Recreation and Parks are the potential treated river water users.

7. Metabolic Studio WTP is required to meet all effluent limitations and recycled water criteria set forth in this Order.

REGULATORY AGENCY

8. The Los Angeles Water Board is the permitting agency for the discharge of filtered and disinfected river water from Metabolic Studio WTP through subsurface drip and surface spray landscape irrigation. The Los Angeles Water Board issues WDRs and WRRs to ensure that discharges of filtered and disinfected river water from Metabolic Studio WTP do not adversely affect the quality of groundwater and its beneficial uses.

9. The Los Angeles Water Board is required, pursuant to Water Code section 13523, to consult with and receive recommendations from the State Water Board Division of Drinking Water (DDW) regarding public health, safety, or welfare for recycled water landscape irrigation applications. Based on consultation with DDW staff, a Title

22 engineering report for landscape irrigation by the filtered and disinfected river water is not required and is not subject to DDW's review and approval.[4]

PURPOSE OF THIS ORDER

10. The purpose of this Order is to issue WDRs and WRRs for Metabolic Studio WTP to discharge filtered and disinfected river water for landscape irrigation.

    The Discharger submitted the following documents as part of the application process:

    A. On June 12, 2017, the Discharger filed a Report of Waste Discharge (ROWD) with the Los Angeles Water Board for the Bending the River Project, including a water wheel, rubber dam, stilling well, intake grate structure, underground intake pipes, and river water for irrigation.

    B. On December 7, 2022, the Discharger submitted a revised ROWD in response to the comments provided by Los Angeles Water Board staff on March 15, 2018.

    C. On March 10, 2023, the Discharger submitted another revised ROWD to pursue the Bending the River Project without construction of the water wheel and rubber dam as part of the water intake structure from the LA River. The modified project proposes a water stilling well that would be hydrologically connected to the LA River, as shown in Figures 4 and 5.

    D. On July 10, 2023, and February 2, 2024, the Discharger submitted supplemental information to provide other public agency approvals and clarification for the Bending the River Project.

11. Water Code section 13260 requires any person "proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system," to file a report of waste discharge. The term "waste" is defined in Water Code section 13050(d) to include "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, … prior to, and for purposes of, disposal." Although the river water is not defined as "waste," it contains waste substances and its diversion from the river and reuse for land application could affect the quality of the waters of the state. The river water contains various chemical and biological constituents, including total dissolved solids (TDS), salts (e.g., sulfate, chloride, boron), bacteria, nitrogen, priority pollutants, constituents of emerging concern, and metals.

12. Water Code section 13263(a) authorizes the Los Angeles Water Board, after any necessary hearing, to prescribe requirements as to the nature of any proposed

[4] On July 1, 2014, the administration of the Drinking Water Program was transferred from the Department of Public Health to the State Water Board and renamed the Division of Drinking Water.

discharge with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements must implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water code section 13241.

13. Water Code section 13267 authorizes the Los Angeles Water Board to require that any person who proposes to discharge treated effluent submit, under penalty of perjury, technical or monitoring program reports to the Los Angeles Water Board. The estimated costs of these reports are approximately between $25,000 and $50,000. The burden, including costs of these reports, bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports, which include protection of public health and the environment. This Order incorporates Monitoring and Reporting Program (MRP) No. CI-10771 for the Discharger (File No. 17-082), which is also necessary to ensure that the discharge of waste, and the use of filtered and disinfected river water, complies with this Order and is protective of human health and the environment.

14. This Order is adopted pursuant to Water Code sections 13263, 13267, and 13523. It sets forth requirements, prohibitions, and other conditions to implement the Basin Plan; prescribes the limits for discharge of treated river water and the Discharger's responsibilities for the production, distribution, monitoring, and application of river water recycling; and includes an MRP. The Discharger is responsible for inspecting point-of-use facilities and ensuring compliance with the WDRs and WRRs contained in this Order.

FACILITY AND TREATMENT PROCESS DESCRIPTION

15. Metabolic Studio WTP and Vicinity

    A. Metabolic Studio WTP is located at 1745 North Spring Street, #4, Los Angeles [Assessor's Parcel Number (APN) 5409-001-005] and 1792 North Baker Street, Los Angeles (APN 5409-001-010).

        i. Historical usage of the site was a commercial building comprised of textile shops and a former rail yard. The site is currently used for an art studio business.

        ii. On June 14, 2017, the County of Los Angeles Fire Department approved the *Soil Management Plan* dated March 6, 2017[5], for excavation work at the site planned as a part of the Bending the River Project. Subsequently,

[5] The June 14, 2017, letter from the Los Angeles County Fire Department referenced to a May 6, 2017, Soil Management Plan (SMP), but the correct SMP date is March 6, 2017.

the *Soil Management Plan Update*, dated December 19, 2022, was approved by the County of Los Angeles Fire Department on March 2, 2023.

B. The proposed landscape irrigation areas are described below and shown in Figure 3.

i. The Los Angeles State Historic Park, formerly known as the Union Pacific Railroad Cornfield Yard, is located at 1245 North Spring Street in Los Angeles (APN 5414-016-903), between North Broadway and North Spring Street in an industrial part of downtown Los Angeles. This site has been subdivided into three parcels: a 32-acre park, a 10-acre Metropolitan Transit Authority (MTA) railroad easement, and an 8-acre former Texaco gasoline station.

ii. The Albion Riverside Park, formerly known as Ross Swiss Dairy, is located at 1739 Albion Street in Los Angeles (APNs 5447-027-906, 5447-027-907, 5447-027-908) and is an approximately 4-acre community park owned by the City of Los Angeles since 2010.

iii. The Downey Recreation Center is located at 1772 North Spring Street in Los Angeles (APN 5447-026-900) and bordered by the former Ross Swiss Dairy (Albion Riverside Park) to the west, a continuation of the Downey Recreation Center to the north, and primarily residential and commercial operations to the east and south. The park was developed as the Downey Playground as early as 1953.

C. Metabolic Studio WTP and landscape irrigation areas overlie the Coastal Plain of Los Angeles-Central Subbasin (Subbasin) (California Department of Water Resource Basin No. 4-11.04), as defined in *Water Quality Control Plan for the Los Angeles Region* (Basin Plan), as illustrated in Figure 6.

16. Metabolic Studio WTP Treatment Process Units

A. Metabolic Studio WTP will have a treatment capacity of an average daily flowrate of 144,000 gallons per day (gpd). The effluent storage tank will have a storage capacity of 132,000 gallons, consisting of two 66,000-gallon tanks.

B. Metabolic Studio WTP process units consist of the intake unit, treatment unit, and distribution unit. The intake unit includes the LA River intake structure and still well, as shown in Figure 7. The treatment and distribution units comprise the following treatment processes: flow equalization, multimedia filtration, bag filtration, granular activated carbon (GAC) adsorption, ultraviolet (UV) and chlorine disinfection, effluent storage, and distribution system, as shown in Figures 8 and 9.

C. The wetland shown in Figure 7 will use untreated LA River water as an educational landscaping feature. The wetland will be lined to prevent untreated river water from percolating into the groundwater.

17. Metabolic Studio WTP Influent and Effluent Quality

A. The Discharger analyzed the LA River water sampled in 2012 and 2013. Most organic chemicals and metals were below analytical detection limits. The anticipated influent water quality for selected constituents is listed in Table 4.

Table 4. Characteristics of LA River Water for Selected Constituents

Constituent	Unit [1]	Concentration
Boron	mg/L	0.49
Chloride	mg/L	119.5
Escherichia coli (E.coli)	MPN/100 mL	490 [2]
Enterococcus	MPN/100 mL	120 [2]
Fecal coliform	MPN/100 mL	490 [2]
Nitrate as nitrogen	mg/L	4.4
Nitrite as nitrogen	mg/L	0.11
Nitrogen, Total	mg/L	6.9
Nitrogen, Total Kjeldahl	mg/L	2.4
pH	Standard unit	8.2
Sulfate	mg/L	126
Total coliform	MPN/100 mL	3,500 [2]
Total dissolved solids	mg/L	695
Total suspended solids	mg/L	13
Turbidity	NTU	4.2

Table notes:
[1] mg/L: milligrams per liter; MPN/100 mL: Most Probable Number per 100 milliliters; NTU: Nephelometric Turbidity Unit.
[2] Median concentration.

B. The effluent quality will meet water standards, including primary and secondary maximum contaminant levels (MCLs) for the drinking water and disinfected tertiary recycled water criteria specified in Title 22 of California Code and

Regulations (CCR). The proposed effluent quality is summarized in Table 5 below.

Table 5. Proposed Effluent Quality

Constituent	Unit	Concentration
Boron	mg/L	Less than 1.0
Chloride	mg/L	Less than 150
pH	pH unit	6.0 – 7.5
Sulfate	mg/L	Less than 250
Total coliform	MPN/100 mL	2.2; 23; 240 [1]
Total dissolved solids	mg/L	Less than 700
Total residual chlorine	mg/L	Less than 0.1
Turbidity	NTU	Less than 2
Viruses	Plaque-forming unit	Log-5 removal [2]

Table notes:
[1] Bacteriological results of the last seven days; one sample in any 30-day period; and any sample, respectively.
[2] 99.999% removal of plaque-forming units of F-specific bacteriophage MS2 or poliovirus.
[3] pH range is based on the irrigation uses for beneficial plant growth.

18. Irrigation Plan and Water Demand

A. The Los Angeles State Historic Park's irrigation plan estimates that the landscaped area is approximately 26.1 acres, and water demand for irrigation is 120,000 gpd during the dry season and 40,000 gpd during the wet season. Based on the agreement between the Los Angeles State Historic Park and the Discharger, 26 million gallons per year (approximately 71,233 gpd) will be allotted for the Los Angeles State Historic Park.

B. The Los Angeles Department of Public Works estimates that the landscaped area at the Albion Riverside Park and Downey Recreation Center is approximately 5.9 acres, and water demand for irrigation is approximately 25,000 gpd during the dry season and is expected to be lower during the wet season. Treated river water delivered to these sites is estimated to be 8.4 million gallons per year (approximately 23,014 gpd).

C. In addition, the Los Angeles Department of Water and Power will provide recycled water from the Los Angeles-Glendale Water Reclamation Plant to meet demands in the landscape irrigation areas prescribed in this Order under

WDRs Order No. R4-2007-0007 adopted by this Los Angeles Water Board on January 11, 2007, and amended by Order No. R4-2011-0035 on February 3, 2011.

19. History of Remediation Activities in the Vicinity of the Landscape Irrigation Areas

A. Los Angeles State Historic Park

The remediation activities at the 32-acre park area have been overseen by the California Department of Toxic Substances Control (DTSC) and the Los Angeles Water Board. Investigations between 1989 and 2001 indicated that the subject area was impacted with beryllium, total petroleum hydrocarbons as gasoline (TPH-g) and diesel (TPH-d), polynuclear aromatic hydrocarbons (PAHs), and chlorinated volatile organic compounds (VOCs) in shallow soil. TPH-g, TPH-d, and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in groundwater. Further investigation in 2014 indicated that groundwater was also impacted with arsenic and lead. Union Pacific Railroad continues groundwater monitoring at the subject site.

B. Albion Riverside Park

Prior to the City of Los Angeles's acquisition of Albion Riverside Park, the property was occupied by an Anheuser-Busch Brewery, a metal pipe manufacturer, an ice cream manufacturer, a junkyard and welding business, and the Ross Swiss Dairy Company.

Historically, four fuel underground storage tanks (USTs) at the property at 1739 Albion Street, Los Angeles were removed in 1991 and replaced with one 20,000-gallon diesel UST. In 2012, the replaced 20,000-gallon UST and a 2,380-gallon fuel oil UST were removed from the subject property. Subsurface investigations have been conducted since 1992 and have evaluated potential impacts to soil and groundwater. TPH, methyl t-butyl ether (MTBE), ethanol, and lead are chemicals of concern at the property. Chlorinated VOCs were detected intermittently in soil, soil vapor, and groundwater at low concentrations; however, the Environmental Site Characterization Report (Arcadis 2012) found that the remediation for chlorinated VOCs was not necessary because the levels were below various screening levels.

On September 27, 2012, the Los Angeles Water Board approved the remedial action plan for soil excavation for other contaminants (e.g., SVOCs, lead, arsenic). After reviewing groundwater data, on January 29, 2014, the Los Angeles Water Board approved the case closure for the subject property under the Low Threat UST Policy.

C. Downey Recreation Center

Historically, two closed cleanup sites: the former Ross Swiss Dairy (west) and Bill's Automotive (northeast) were found bordering the western and eastern sides of the site. After reviewing groundwater data, under the Low Threat UST Policy, the Los Angeles Water Board approved the case closure for the Ross Swiss Dairy at 1739 Albion Street, Los Angeles, on November 20, 1996, and for Bill's Automotive at 1796 North Spring Street, Los Angeles, on January 29, 2010.

HYDROGEOLOGY AND GROUNDWATER

20. The Central Subbasin occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. Groundwater in Holocene and Pleistocene age sediments is encountered at relatively shallow depths under unconfined and confined interconnected aquifer conditions, which can provide recharge to the Central Subbasin. The Central Subbasin contains many aquifers of permeable sands and gravels separated by semi-permeable to impermeable sandy clay to clay. The main productive freshwater-bearing sediments are contained within the Holocene alluvium, the Pleistocene Lakewood, and San Pedro Formations.

21. Historically, groundwater flow in the Central Subbasin has been from recharge areas in the northeast part of the Central Subbasin toward the Pacific Ocean in the southwest. Groundwater levels varied over a range of about 25 feet between 1961 and 1977 and have varied through a range of about 5 to 10 feet since 1996. The total dissolved solids (TDS) content in the Central Subbasin ranges from 200 to 2,500 mg/L, according to data from 293 public supply wells. The average TDS for these wells is 453 mg/L.

22. Metabolic Studio WTP and landscape irrigation area are located on the Central Subbasin. Therefore, the applicable groundwater quality objectives for the Central Subbasin are summarized in Table 6.

Table 6. Water Quality Objectives for the Central Subbasin

TDS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Boron (mg/L)	Nitrogen [1] (mg/L)	Coliform [2] (MPN/100 mL)
700	250	150	1.0	10	1.1

Table notes:
[1] Nitrogen includes nitrate as nitrogen plus nitrite as nitrogen.
[2] Coliform refers to either total coliform or fecal coliform.

23. The Salt and Nutrient Management Plan (SNMP) was developed in accordance with the *Water Quality Control Policy for Recycled Water* (Recycled Water Policy) to ensure protection of beneficial uses and allow for the sustainable use of groundwater resources. The SNMP includes a monitoring program, source identification,

assimilative capacity estimation, implementation measures to manage or reduce salt and nutrient loading in the basin.

The Los Angeles Water Board amended the Basin Plan to incorporate management measures in the Central Basin and West Coast Basin SNMP dated February 12, 2015, and Resolution No. R15-001, on June 5, 2015. The groundwater quality data were collected from 2007 through 2012. Table 7 summarizes ambient groundwater quality conditions and available assimilative capacity for the Central Subbasin. The available assimilative capacity is defined as the difference between the groundwater quality objectives of the Basin Plan and the ambient groundwater quality.

Table 7. Ambient Groundwater Quality in the Central Subbasin

Parameter	TDS (mg/L)	Chloride (mg/L)	Nitrate as nitrogen (mg/L)
Water Quality Objectives of the Central Subbasin	700	150	10
Ambient Groundwater Quality	640	81	0.15
Available Assimilative Capacity	60	69	9.85

APPLICABLE PLANS, POLICIES, AND REGULATIONS

24. ***Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*** **(Basin Plan)** – The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan (i) designates beneficial uses for surface and ground waters, (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, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Antidegradation Policy). In addition, the Basin Plan incorporates by reference applicable State Water Board and Los Angeles Water Board plans and policies and other pertinent water quality policies and regulations. Since 1994, numerous Basin Plan amendments have been adopted, and more current background, program, and geographical information have become available. This Order implements the plans, policies, and provisions of the Los Angeles Water Board's Basin Plan.

25. The Basin Plan (Chapter 3) establishes water quality objectives for groundwater. The chemical constituents and radioactivity water quality objectives for groundwater designated as domestic or municipal supply incorporate the primary and secondary MCLs for inorganic, organic, and radioactive contaminants in drinking water that are codified in CCR, title 22, division 1 (CCR Title 22). This incorporation by reference is prospective, including future changes to the incorporated provisions as the changes take effect. Also, the Basin Plan establishes the following taste and odor water quality objective for groundwater: "Groundwaters shall not contain taste or

odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." This Order established the effluent limits, equal to the groundwater quality objectives to protect groundwater quality.

26. In addition, the Basin Plan incorporates State Water Board Resolution No. 88-63, which established a state policy that all waters of the state, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic water supply. Beneficial uses applicable to the groundwater are shown in Table 8 below.

Table 8. Basin Plan Beneficial Uses of Groundwater

Receiving Water	Beneficial Uses
Coastal Plain of Los Angeles Groundwater Basin-Central Subbasin (DWR Basin No. 4-11.04)	Municipal and domestic supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).

27. **Assembly Bill No. 685 (AB 685) – Water Code section 106.3** – It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet MCLs developed to protect human health and ensure that water is safe for domestic use.

ANTIDEGRADATION POLICY

28. State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Antidegradation Policy) requires the Los Angeles Water Board, in regulating the discharge of waste, to maintain high-quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the State Water Board's policies (e.g., quality that exceeds water quality objectives).

29. **Antidegradation Analysis** – The Los Angeles Water Board finds that the discharge, as allowed in this Order, is consistent with Resolution No. 68-16 since this Order requires (1) compliance with the requirements set forth in this Order, including the use of best practicable treatment and control (BPTC) technology, (2) implementation of the MRP; and (3) regular monitoring of the discharge to comply with water quality objectives.

    In order to demonstrate compliance with the Antidegradation Policy and be consistent with the Recycled Water Policy, an individual project that utilizes less than 10 percent of the available assimilative capacity (or multiple projects utilizing less than 20 percent of the available assimilative capacity in a basin/subbasin) in a basin/subbasin needs to conduct an antidegradation analysis verifying the use of the assimilative capacity.

The Discharger conducted an antidegradation analysis to evaluate the potential discharge impact to groundwater in the Central Subbasin when Metabolic Studio WTP discharges 106 AFY at concentrations equivalent to the groundwater quality objectives to the Central Subbasin. Based on the groundwater analysis, the discharge from Metabolic Studio WTP will not cause an adverse impact to the Central Subbasin because the analysis indicates that it takes more than 14,000 years to reach 10% of the available assimilative capacity for TDS, chloride, and nitrate.

Additionally, this Order contains tasks for assuring that the best BPTC and the highest water quality are consistent with the maximum benefit to the people of the State, and therefore, the discharge is consistent with the Antidegradation Policy and Basin Plan. However, the Los Angeles Water Board will review this Order periodically and may revise requirements when necessary.

30. Water Code section 13263 requires the Los Angeles Water Board, after any necessary hearing, to prescribe requirements as to the nature of any proposed discharge with relation to the conditions existing in the disposal area or receiving waters upon or into which the discharge is made or proposed. The requirements must implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241[6]. Analysis of the Water Code 13241 factors is set forth below.

    A. Past, present, and probable future beneficial uses of water;

        The Bending the River Project will support water conservation by providing a source of irrigation water for the Los Angeles State Historic Park, the Albion Riverside Park, and the Downey Recreation Center in Los Angeles where is mild to hot year-round and mostly dry. Metabolic Studio WTP will produce treated water from the LA River that meets disinfected recycled water standards for landscape irrigation rather than use potable water or recycled water from domestic wastewater sources.

        The receiving water for discharges from Metabolic Studio WTP is the Coastal Plain of Los Angeles Groundwater Basin-Central Subbasin. The receiving water limitations in this Order are specified to maintain the beneficial uses of

[6] Water Code section 13241 requires the Los Angeles Water Board to consider certain factors when establishing water quality objectives, including: (a) Past, present, and probable future beneficial uses of water. (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto. (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area. (d) Economic considerations. (e) The need for developing housing within the region. (f) The need to develop and use recycled water.

this basin: municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).

Additionally, this Order specifies effluent limitations protective of the beneficial uses and includes effluent and receiving water monitoring and reporting requirements to verify that discharges will not adversely affect the beneficial uses of groundwater now or in the future. Therefore, this Order protects and maintains past, present, and probable future beneficial uses of water.

B. Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto;

This Order incorporates the site-specific water quality objectives for groundwater in the Basin Plan considering geology, hydrogeology, and hydrology. Although groundwater and/or soil at the site and irrigation areas were contaminated by pollutants and fully or partially remediated under the oversight of the regulatory agencies, the impacted areas have been developed as the public park and recreation center. Additionally, City of Los Angeles Department of Water and Power (LADWP) provides recycled water from the LA-Glendale WRP for the use of irrigation. Order No. R4-2022-0343 (NPDES No. CA0053953) indicates that the LA-Glendale WRP provides a total of 4.5 MGD for non-potable recycled water applications, including irrigation, parks and recreational, and industrial uses. Based on recent and historical data, the regional groundwater basin currently has high-quality water but is experiencing increases in salt and nitrogen loading from natural and anthropogenic sources. Metabolic Studio WTP will produce effluent quality that is better than or equivalent to the groundwater quality objectives and will comply with the state's Antidegradation Policy (Resolution No. 68-16). The project will therefore limit further groundwater degradation.

C. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area;

The water quality conditions that can be reasonably achieved are those consistent with the site-specific water quality objectives necessary to protect the beneficial uses of the groundwater basin, through the coordinated control of all factors that water quality in the area. The proposed Metabolic Studio WTP is designed by the Best Available Technology (BAT) and Best Conventional Pollutant Control Technology (BCPT) to treat selected constituents, such as pH, turbidity, and bacteria parameters, that may impact to groundwater quality, public health, and landscape plant growth.

D. Economic considerations;

The Legislature did not define "economic considerations" in Water Code section 13241. In *City of Duarte v. State Water Resources Control Board et al.*, the Court of Appeal held that "…the Water Control Boards are charged with

taking into account economic considerations, not merely costs of compliance with a permit … economic considerations also include, among other things, the costs of not addressing the problems of contaminated water." (*City of Duarte*, 60 Cal.App.5th at 258, 276 (considering 13241 factors in context of municipal separate storm sewer system or MS4 permit).) Indeed, the "manner in which the Water Control Boards consider and comply with Water Code section 13241 is within their discretion." (*Id.,* at p. 273, citing *City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1415.) Since the Los Angeles Water Board has broad discretion in how it considers this factor, the Board interprets this factor as not only requiring a consideration of the costs of compliance, but also other relevant economic factors such as the societal and environmental costs of not adequately controlling discharges.

The implementation of the Bending the River Project may save water costs and potable water sources for the community.

E. The need for developing housing within the region;

The United States Census reported that the population of the City of Los Angeles was 3,898,747 in 2020. This Bending the River Project may help offset the need for potable water for landscape irrigation. Therefore, the potable water offset by the Bending the River Project will be available for use by additional homes.

F. The need to develop and use recycled water;

The State Water Board adopted the Recycled Water Policy and encourages the increased use of recycled water in California: 714,000 AFY in 2015 to 1.5 million AFY by 2020 and to 2.5 million AFY by 2030. The Recycled Water Policy categorizes recycled water use as agricultural irrigation, landscape irrigation, golf course irrigation, commercial application, industrial application, geothermal energy production, non-potable uses, groundwater recharge, seawater intrusion barrier, reservoir water augmentation, raw water augmentation, and potable uses.

The Order authorized the Discharger to treat and discharge up to 106 AFY of filtered and disinfected river water for landscape irrigation. Therefore, the requirements of the Order promote the need to develop and use recycled water.

31. In accordance with Water Code section 13263(g), no discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into the waters of the state are privileges, not rights.

GLOBAL WARMING AND CLIMATE CHANGE

32. In Southern California, the predicted impacts of climate change are numerous, including the following.

    Annual average temperatures are expected to increase, coupled with a higher frequency of extreme heat days. A likely consequence of this warmer climate will be more severe drought periods, leading to an increase in the amount and intensity of fires and a longer fire season. In addition, precipitation patterns are likely to be modified.

    A decrease in snowfall, combined with warmer temperatures, will induce a decrease in the amount and duration of snowpack, an essential source of freshwater to the region. Although changes to mean precipitation are expected to be small, the increasing occurrence of extreme precipitation events will amplify the risk of flooding. These impacts may affect water quality in multiple ways, including decreases in stream flow, reductions in, and changes to, aquatic habitats, increases in surface water temperature, increases in pollutant levels, sedimentation, algal growth, and changes in salinity levels and acidification in coastal areas.

33. On March 7, 2017, the State Water Board adopted Resolution No. 2017-0012, *Comprehensive Response to Climate Change*, recognizing the challenges posed by climate change, directed state agencies to take climate change into account in their planning decisions, guided by the following principles: Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions; where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts; actions should protect the state's most vulnerable populations; and natural infrastructure solutions should be prioritized.

34. On May 10, 2018, the Los Angeles Water Board adopted Resolution No. R18-004, *A Resolution to Prioritize Actions to Adapt to Mitigate the Impacts of Climate Change on the Los Angeles Region's Water Resources and Associated Beneficial Uses*, which encourages mitigating direct and indirect impacts of climate change on water quality and beneficial uses.

35. Metabolic Studio WTP and the Los Angeles State Historic Park are located outside of the 100-year floodplain and hence no flooding issues are expected. Although the Albion Riverside Park and Downey Recreation Center are located within the 100-year floodplain, they have not been significantly impacted by flood events.

RATIONALE FOR EFFLUENT AND GROUNDWATER LIMITATIONS

36. The numeric effluent limitations prescribed by this Order are based on the following.

    A. Effluent limitations for TDS, sulfate, chloride, boron, nitrogen compounds, fecal coliform, and enterococcus are based on the Basin Plan groundwater quality objectives for the Central Subbasin.

B. Effluent limitations for turbidity and total coliform are technology-based requirements set forth in CCR Title 22 for recycled water.

C. Effluent limitation for pH is based on the National Secondary Drinking Water Standards established by the United States Environmental Protection Agency.

37. The numeric groundwater limitations prescribed by this Order are based on the following.

A. Since the ambient groundwater quality in the Central Subbasin is better than the Basin Plan water quality objectives, groundwater limitations for TDS, chloride, and nitrate as nitrogen are based on the ambient groundwater quality and the addition of 10 percent of the available assimilative capacity.

B. Groundwater limitations for sulfate and boron are based on the groundwater quality objectives for the Central Subbasin.

C. Groundwater limitations for nitrite as nitrogen and bacteria parameters are based on the groundwater objectives set forth by the Basin Plan.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

38. In accordance with the provision of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.), the City of Los Angeles Bureau of Engineering Environmental Management Group performed an initial study in 2014.

39. On March 5, 2014, the City Council of the City of Los Angeles as a lead agency approved the Bending the River Project and issued the Notice of Determination (NOD). The initial study indicated that the project would not have a significant effect on the environment and a Mitigated Negative Declaration for the project was issued.

40. In October 2022, an additional addendum to the CEQA study was prepared to address further updates to the Bending the River Project and concluded that potential environmental effects have been analyzed adequately and avoided or mitigated under the 2014 NOD, and hence no further action is required. Furthermore, the proposed project design has been modified to reduce overall impact to the environment, as shown in Figure 4.

PUBLIC NOTIFICATION

41. On October 29, 2024, the Los Angeles Water Board notified the Discharger, interested agencies, and parties of the intent to issue WDRs and WRRs for this facility and has provided an opportunity to submit written comments.

42. The Los Angeles Water Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

43. Any person affected by this action of the Los Angeles Water Board may petition the State Water Board to review the action in accordance with section 13320 of the Water Code and CCR, title 23, section 2050. The State Water Board (P.O. Box 100, Sacramento, California 95812) must receive the petition within 30 days of the date this Order is adopted. The regulations regarding petitions may be found at Water Quality Petitions | California State Water Resources Control Board.

IT IS HEREBY ORDERED that the Discharger, Metabolic Studio, LLC, shall be responsible for and shall comply with the following requirements in all operations and activities at Metabolic Studio WTP.

A. INFLUENT LIMITATIONS

Influent to Metabolic Studio WTP shall be limited to river water from the Los Angeles River.

B. EFFLUENT LIMITATIONS

1. Annual effluent discharged from Metabolic Studio WTP shall not exceed 106 AFY (approximately 34,540,206 gallons per year) from January 1 to December 31, and daily maximum flowrate shall not exceed 0.22 cubic foot per second (approximately 142,199 gpd), as authorized under Water Rights Permit 21342.

2. Effluent shall be sampled at the outlet of the effluent storage tank.

3. The pH of the effluent shall, at all times, be between 6.5 and 8.5 standard units.

4. Effluent quality shall not exceed the effluent limits listed in Table 9 below.

Table 9. Effluent Limitations

Constituents	Units	Daily Maximum	Monthly Average
$BOD_{5@20^oC}$	mg/L	15	10
Total suspended solids	mg/L	15	10
Oil and grease	mg/L	15	10
Total dissolved solids	mg/L	None	700
Sulfate	mg/L	None	250
Chloride	mg/L	None	150
Boron	mg/L	None	1.0
Total nitrogen	mg/L	None	10
Nitrate as nitrogen	mg/L	None	10

Constituents	Units	Daily Maximum	Monthly Average
Nitrite as nitrogen	mg/L	None	1
Total coliform	MPN/100 mL	None	1.1
Fecal coliform	MPN/100 mL	None	1.1
Enterococcus	MPN/100 mL	None	1.1

Table notes:

- Total nitrogen consists of ammonia as nitrogen, nitrite as nitrogen, nitrate as nitrogen, and organic nitrogen.
- The unit of MPN/100 mL denotes the most probable number per 100 milliliters.

5. The turbidity of the filtered effluent shall not exceed any of the following:

    a. An average of 2 Nephelometric Turbidity Unit (NTU) within a 24-hour period;

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

    c. 10 NTU at any time.

6. Effluent shall be filtered and subsequently disinfected with UV that meets the following criteria:

    a. The design UV dose shall be at least 100 millijoules per square centimeter (mJ/cm^2) under maximum day flow.

    b. The filtered effluent UV transmittance shall be 55% or greater at 254 nanometers (nm).

    c. The median concentration of total coliform bacteria measured in the disinfected effluent after the UV disinfection system and before the effluent storage tank shall not exceed 2.2 MPN/100 mL utilizing the bacteriological results of the last seven days and the number of total coliform bacteria shall not exceed 23 MPN/100mL in more than one sample in any 30-day period. No sample shall exceed 240 MPN/100 mL.

7. Effluent shall not contain trace, toxic, and other constituents in concentrations exceeding the applicable MCLs for drinking water established by the DDW in sections 64431, 64442, 64443, 64444, 64449, and 64533 of CCR title 22, division 4, or subsequent revisions, or at levels that adversely affect the beneficial uses of receiving groundwater. The effluent shall, at all times, not exceed the following MCLs (Attachment A).

a. Primary MCLs:

i. Inorganic chemicals in CCR Title 22, Division 4, Chapter 15, Section 64431, Table 64431-A (Attachment A-1);

ii. Radionuclides in CCR Title 22, Division 4, Chapter 15, Section 64442, Table 64442 (Attachment A-2) and Section 64443, Table 64443 (Attachment A-2); and

iii. Organic chemicals in CCR Title 22, Division 4, Chapter 15, Section 64444, Table 64444-A (Attachment A-3).

b. Secondary MCLs specified in CCR Title 22, Division 4, Chapter 15, Section 64449, Table 64449-A (Attachment A-4).

c. Disinfection byproducts specified in CCR Title 22, Division 4, Chapter 15.5 (Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors), Section 64533, Table 64533-A (Attachment A-5).

C. GROUNDWATER LIMITATIONS

1. The discharge of filtered and disinfected river water from Metabolic Studio WTP shall not cause any exceedance of the groundwater limitations in Table 10 below.

Table 10. Groundwater Limitations

Constituents	Units	Maximum
Total dissolved solids	mg/L	646
Sulfate	mg/L	250
Chloride	mg/L	87.9
Boron	mg/L	1.0
Nitrate as nitrogen	mg/L	1.135
Nitrite as nitrogen	mg/L	1
Nitrate as nitrogen plus nitrite as nitrogen	mg/L	2.135
Total coliform	MPN/100 mL	1.1
Fecal coliform	MPN/100 mL	1.1
Enterococcus	MPN/100 mL	1.1

2. Groundwater designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents and radionuclides in excess of the limits specified in Attachment A.

3. Groundwater shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial uses.

4. Groundwater shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

D. SPECIFICATIONS FOR PRODUCTION, OPERATIONS, AND USE OF RECYCLED WATER

1. The Discharger shall submit a revised ROWD to the Los Angeles Water Board for review and approval if additional river water recycling is proposed.

2. Treated river water shall not be used for direct human consumption or processing of foods or drink intended for human consumption.

3. The delivery of treated river water to new end-users shall be subject to California Department of Water Rights approval.

E. USE AREA REQUIREMENTS

"Use area" means an area with defined boundaries, which may contain one or more facilities where treated river water is used. The Discharger shall be responsible for ensuring that all users of treated river water comply with the following:

1. No irrigation with treated river water shall take place within 50 feet of any domestic water supply well.

2. There shall be no storage or impoundment of treated river water within 100 feet of any domestic water supply well.

3. Treated river water irrigation rates shall not exceed agronomic rates of the plants. Special precautions must be taken to prevent clogging of spray nozzles and over-watering and minimize surface runoff. Distribution pipelines shall be maintained to prevent leakage.

4. All above ground irrigation appurtenances need to be marked appropriately.

5. Any incidental runoff shall be handled as follows:

    a. The discharge of treated river water to surface water is prohibited.

    b. Discharges of treated river water to surface waters may only occur where regulated under a separate National Pollutant Discharge Elimination System (NPDES) permit issued by the Los Angeles Water Board.

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

6. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not reach any drinking water fountain.

7. Treated river water shall not be used for irrigation during periods of rainfall and/or runoff.

8. Treated river water shall be retained in the designated area and shall not create surface runoff.

9. All landscape irrigation areas 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, and that include the following wording: "RECYCLED WATER – DO NOT DRINK" as shown in Figure 10. Each sign shall also display an international symbol similar to that shown in Figure 10. An alternative signage and wording must be approved by the Executive Officer of the Los Angeles Water Board.

10. No physical connection shall be made or allowed to exist between any irrigation water piping and any piping conveying potable water, except as allowed under section 7604 of CCR title 17.

11. The portions of the irrigation 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 irrigation water piping system in areas subject to public access.

12. Treated river water use shall not result in earth movement in geologically unstable areas.

13. The Discharger shall develop the User Agreements and Ordinances with the potential non-potable users of treated river water. Copies of the User Agreements and Ordinances shall be provided to the Los Angeles Water Board.

14. Site supervisors shall be appointed for the irrigation water use areas, and their staff shall be trained on the hazards of working with treated river water and periodically retrained.

F. GENERAL REQUIREMENTS

1. Standby or emergency power generation facilities with a sufficient capacity shall be provided for treated river water storage during rainfall or in the event of plant upsets or outages and at times when irrigation cannot be practiced.

2. Adequate facilities shall be provided to protect Metabolic Studio WTP, treatment system devices, river water intake system, and distribution facilities from damage by storm flows and run-off or run-on generated by a 100-year return storm per 24-hour duration.

3. The treatment system, including the river water intake system that is a part of the treatment system and the distribution system, shall be maintained in such a manner that prevents surfacing or overflowing at any location.

4. A minimum of two feet of freeboard shall be maintained in the wetland to ensure that direct rainfall will not cause overtopping. The wetland shall be lined to prevent untreated river water from percolating into the groundwater.

5. No river water treatment and irrigation areas shall be located within 50 feet of any domestic water supply well.

6. There shall be no storage or impoundment of treated river water within 100 feet of any domestic water supply well.

7. The water treatment and use of treated river water shall not result in nuisance conditions caused by breeding of mosquitoes, gnats, midges, or other pests.

8. Any wastes that do not meet the requirements in this Order shall be held in impervious containers and discharged at a legal point of disposal.

G. PROHIBITIONS

1. There shall be no overflows or discharge of partially disinfected river water from the treatment, storage, or disposal facilities to adjacent drainage ways, adjacent properties, or waters of the State at any time.

2. Wastes discharged shall not impact adverse tastes, odors, color, foaming or other objectionable characteristics to the receiving water.

3. No part of the disposal system shall be closer than 100 feet to any water well.

4. Waste odors from treatment shall not be detected beyond the property line.

5. Wastes discharged from the treatment plant shall at no time contain any substances in concentrations toxic to the human, animal, plant, or aquatic life.

6. The discharge of wastes shall not create a condition of pollution, contamination, or nuisance.

7. Nutrient-containing waste discharged to the disposal areas shall not cause objectionable aquatic growth or degrade indigenous biota.

8. The disposal areas 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.

9. Bypass (the intentional diversion of the waste stream from any portion of a treatment facility) is prohibited. The Los Angeles Water Board may take enforcement action against the Discharger 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 downtime. This condition is not satisfied if adequate backup equipment should 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; and

    c. The Discharger submitted a notice at least 48 hours in advance of the need for a bypass to the Los Angeles Water Board.

10. Any discharge of waste from the treatment system (including the water intake system) at any point other than specifically described in this Order is prohibited and constitutes a violation of this Order.

11. No part of the treatment system and the disposal areas shall extend to a depth below ground where wastes may deleteriously affect an aquifer that is usable for beneficial purposes. At all times, a minimum of 10 feet of vertical separation between the disposal system and the highest historical groundwater elevation or the water table must be maintained.

12. Wastes shall not be disposed of in geologically unstable areas to cause earth movement.

13. Adequate facilities shall be provided to divert surface and stormwater away from the treatment plant and disposal system and from areas where any potential pollutants are stored.

14. Discharge of waste classified as "hazardous," as defined in section 2521(a) of CCR title 23, is prohibited. Discharge of waste classified as "designated," as defined in Water Code section 13173, in a manner that causes a violation of groundwater limitations is prohibited.

H. PROVISIONS

1. The Discharger shall comply with all applicable requirements set forth in Chapter 4.5 (commencing with section 13290) of Division 7 of the Water Code.

2. A copy of this Order shall be maintained at the facility and available at all times to operating personnel.

3. The Discharger shall file with the Los Angeles Water Board self-monitoring reports on work performed according to the detailed specifications contained in the MRP No. CI-10771 attached hereto and incorporated herein by reference, as directed by the Executive Office. The results of any monitoring done more frequently than required at the location and/or times specified in the MRP shall be reported to the Los Angeles Water Board. The Discharger shall comply with all of the provisions and requirements of the MRP.

4. Should effluent monitoring data indicate possible contamination of groundwater attributable to effluent from Metabolic Studio WTP, the Discharger shall submit, within 90 days after discovery of the problem, mitigation measures that will be taken, or have been taken, to prevent further degradation that may result from the discharge(s).

5. In accordance with Water Code section 13260(c), the Discharger shall file with the Los Angeles Water Board a report of any material change or proposed change in the character, location, or volume of the discharge. The Discharger shall submit at least 120 days prior to the proposed change an engineering report or addendum to the existing engineering report to the Los Angeles Water Board.

6. Spill Reporting Requirements

    a. **Initial Notification** – Although State and Los Angeles Water 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 Discharger shall make notifications as required below:

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger 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 waste that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of Water Code section 13271, the Discharger shall provide notification to the California Governor's Office of Emergency Services (Cal OES) of 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 hours after becoming aware of the release. CCR title 23, section 2250, established 1,000 gallons or more as a reportable quantity. The phone number for reporting these releases to Cal OES is (800) 852-7550. The Discharger shall also include public outreach in their emergency communications protocols, which may include media updates, social media postings, and community notices.

iii. The Discharger shall notify the Los Angeles Water Board of any unauthorized release of waste from Metabolic Studio WTP that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two hours after becoming aware of the release. The initial notification does not need to be made if the Discharger has notified Cal OES 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 Los Angeles Water Board is (213) 620-2150. The phone numbers for after-hours and weekend reporting of releases of sewage to the Los Angeles Water Board are (213) 305-2284 and (213) 305-2253.

At a minimum, the following information shall be provided to the Los Angeles Water Board:

- The location, date, and time of the release;
- The water body that may be impacted by the discharge;
- An estimate of the amount of waste released and the amount that reached the receiving water at the time of notification;
- If ongoing, the estimated flowrate of the release at the time of the notification;
- The name, organization, phone number, and email address of the reporting representative; and

- A certification that Cal OES 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 H of this Order, the Discharger shall monitor as required below:

To define the geographical extent of the spill's impact, the Discharger 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 Discharger shall analyze the samples for total and fecal coliform, *Escherichia coli* (*E. coli)*, 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 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 H.6.a above shall be followed:

i. As soon as possible, but not later than 24 hours after becoming aware of an unauthorized discharge of waste from its treatment plant to a water of the state, the Discharger shall submit a statement to the Los Angeles Water Board staff via email. If the discharge is 1,000 gallons or more, this statement shall certify that California Governor's Office of Emergency Services (Cal OES) has been notified of the discharge in accordance with Water Code 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:

- Agency, Order No., and MRP No.;
- The location, date, and time of the discharge;
- The water body that received the discharge;
- A description of the level of treatment of waste discharged;
- An initial estimate of the amount of waste released and the amount that reached the impacted water body;
- The Cal OES control number and the date and time that notification of the incident was provided to Cal OES; and
- The name of the local health officer or director of an environmental health representative notified (if contacted directly);

the date and time of notification; and the method of notification (e.g., phone, fax, email).

ii. A written preliminary report shall be submitted to the Los Angeles Water Board within five working days after disclosure of the incident via the State Water Board GeoTracker database under Global ID WDR100039730. 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 H.6.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.

d. **Records** – The Discharger shall prepare and maintain a record of all spills, overflows, or bypasses of untreated or partially treated river water from its collection system or Metabolic Studio WTP. This record shall be made available to the Los Angeles Water Board upon request, and a spill summary shall be included in the annual report, as required by MRP No. CI-10771. The record shall contain:

i. The date and time of each spill, overflow, or bypass;

ii. The location of each spill, overflow, or bypass;

iii. The estimated volume of each spill, overflow, or bypass, including gross volume, amount recovered, and amount not recovered, monitoring results as required by Section H.6.b above;

iv. The cause of each spill, overflow, or bypass;

v. Whether each spill, overflow, or bypass entered receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;

vi. Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and

vii. Emergency communications, such as media updates, social media postings, and community notices for purposes of public outreach.

7. The Discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

8. The Discharger shall ensure that the capacity of the disposal area is adequate for the discharge and that adequate steps are taken to accommodate system failures and/or to deal with the loss of the soil assimilative capacity.

9. The Discharger shall allow the treatment and disposal systems to be inspected annually during the life of this Order. The inspector shall specify the conditions of the treatment system and the disposal system. The inspector should also assess the capacities of the disposal systems.

10. The Discharger shall file a written report with the Los Angeles Water Board within 90 days after the average dry-weather flow for any month equals or exceeds 90 percent of the design capacity of the treatment and/or disposal facilities. The report shall detail provisions to cope with flows in excess of 90 percent of the design capacity.

11. For any violation of requirements in this Order, the Discharger shall notify the Los Angeles Water Board within 24 hours of knowledge of the violation either by telephone or electronic mail. The notification shall be followed by a written report within one week. The Discharger in the next monitoring report shall also confirm this information. In addition, the report shall include the reasons for the violations or adverse conditions, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.

12. This Order does not relieve the Discharger from the responsibility to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent the imposition of additional standards, requirements, or conditions by any other regulatory agency.

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

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

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

    c. A change in any condition or the discovery of any information that requires either a temporary or permanent reduction or elimination of the authorized discharge.

14. The Discharger shall furnish, within a reasonable time, any information the Los Angeles Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Los Angeles Water Board, upon request, copies of records required to be kept by this Order.

15. This Order includes the attached *Standard Provisions Applicable to Waste Discharge Requirements* (Attachment B), which are incorporated wherein by reference. If there is any conflict between the provisions stated herein and the

Standard Provisions Applicable to Waste Discharge Requirements, the provisions stated herein will prevail.

16. The Discharger shall allow the Los Angeles Water Board or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter the premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any locations.

17. The Discharger shall operate and maintain facilities, treatment operations, associated collection systems and outfalls in ways that preclude adverse impacts to surface or groundwater from impacts predicted due to climate change.

18. The Discharger shall submit the operation, maintenance, and monitoring plan (OMM Plan) to the Los Angeles Water Board prior to distributing the treated river water to the landscape irrigation areas. 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 scheduled for all monitoring equipment, process alarm set points, and response procedures for all alarms in each treatment process of Metabolic Studio WTP, including criteria for diverting filtered and disinfected river water if water quality requirements are not met, start-up, emergency response and contingency plans. During the first year of operation of Metabolic Studio WTP, all 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 Metabolic Studio WTP operations personnel. Significant changes in the operation of any of the treatment processes shall be reported to the Los Angeles Water Board.

I. REQUIREMENTS FOR DUAL-PLUMBED SYSTEMS

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 systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of CCR title 17, and that such connection has been approved by DDW and/or its delegated local agency.

3. The Discharger or its authorized agency shall not deliver recycled water to a facility using a dual-plumbed system unless the report required pursuant to section 13522.5 of the Water Code, which meets the requirements set forth in sections I.4 and/or I.5 of this Order, has been submitted and approved by DDW or its delegated local agency and the Los Angeles Water Board. The Los Angeles Water 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 by the Discharger or its authorized agency for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The inspections and the shutdown testing shall be performed by a cross-connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and shutdown testing for the prior year shall be submitted to DDW and the Los Angeles Water Board within 30 days following completion of the inspection or shutdown testing. The procedures used to conduct the shutdown testing must be described.

5. The Discharger 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 CCR title 17.

J. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section B of this Order will be determined as specified below:

1. General:

   Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitations. Where only one sample analysis is available in a specified time interval (e.g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample results show non-compliance with the average monthly limit and that sample result is used or compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

2. Monthly Average Effluent Limitation:

   If the average of daily discharges over a calendar month exceeds the monthly average effluent limitation for a given parameter in Table 9, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month, and the analytical result for that sample exceeds the monthly average effluent limitation, the Discharger will be considered out of compliance for that calendar month. However, the Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample is taken due to no daily discharge, no effluent compliance determination can be made for that calendar month.

3. Daily Maximum Effluent Limitation:

   If a daily discharge exceeds the daily maximum effluent limitation for a given parameter in Table 9, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no effluent compliance determination can be made for that day.

K. REOPENER

The Los Angeles Water Board will review this Order periodically and will revise requirements when necessary. This Order was developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans to assure compliance with them. If applicable laws and regulations change, including but not limited to, establishment of total maximum daily loads, or once new information is obtained that will change the overall

discharge and its potential to impact waters of the state, it may be appropriate to reopen this Order.

L. EFFECTIVE DATE

This Order becomes effective immediately upon its adoption.

I, Susana Arredondo, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 19, 2024.

Jenny Newman

Digitally signed by Jenny Newman
Date: 2025.01.14 16:00:58 -08'00'

for Susana Arredondo, Executive Officer

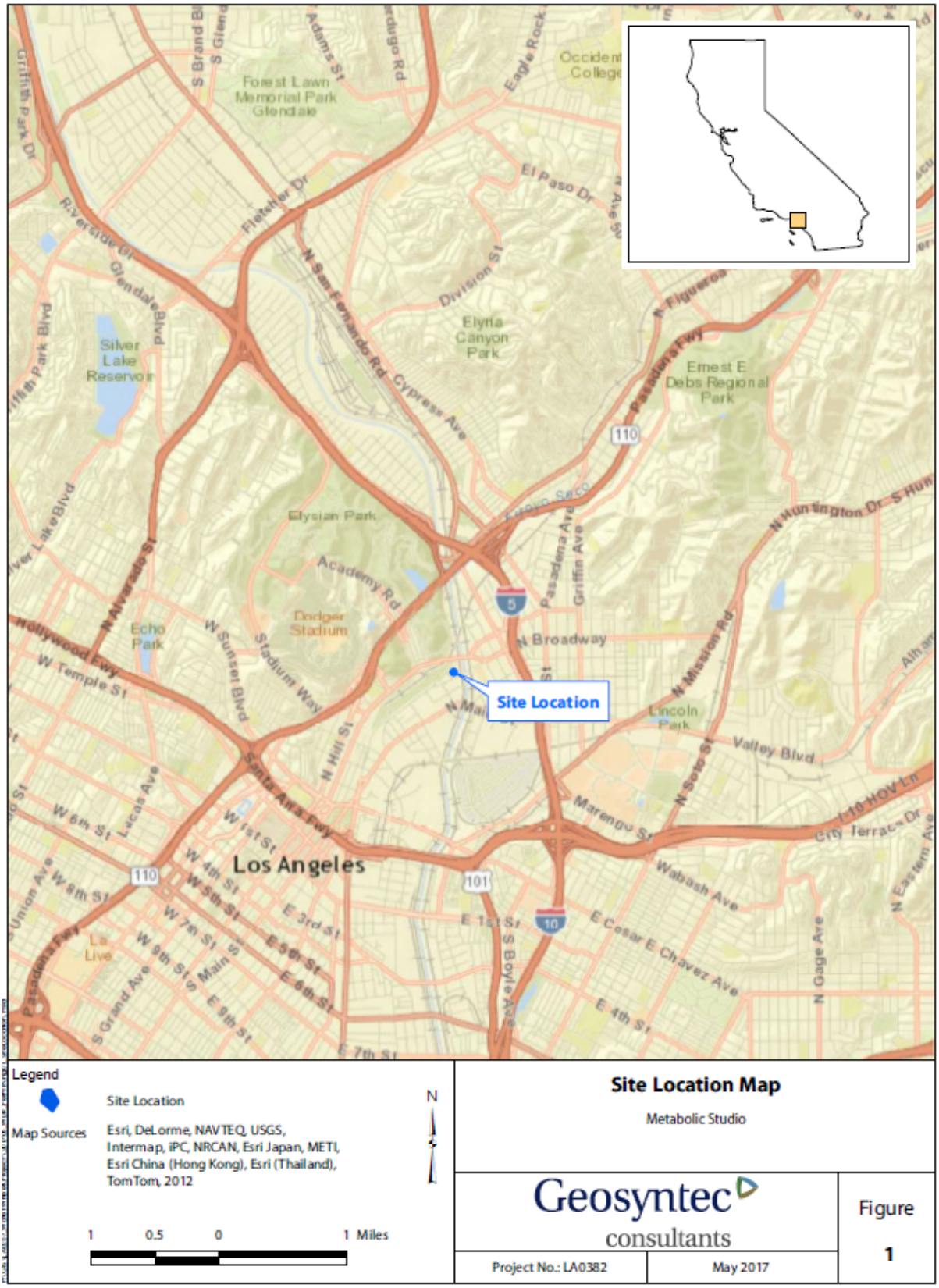

Figure 1. Bending the River Project Proposed by Metabolic Studio

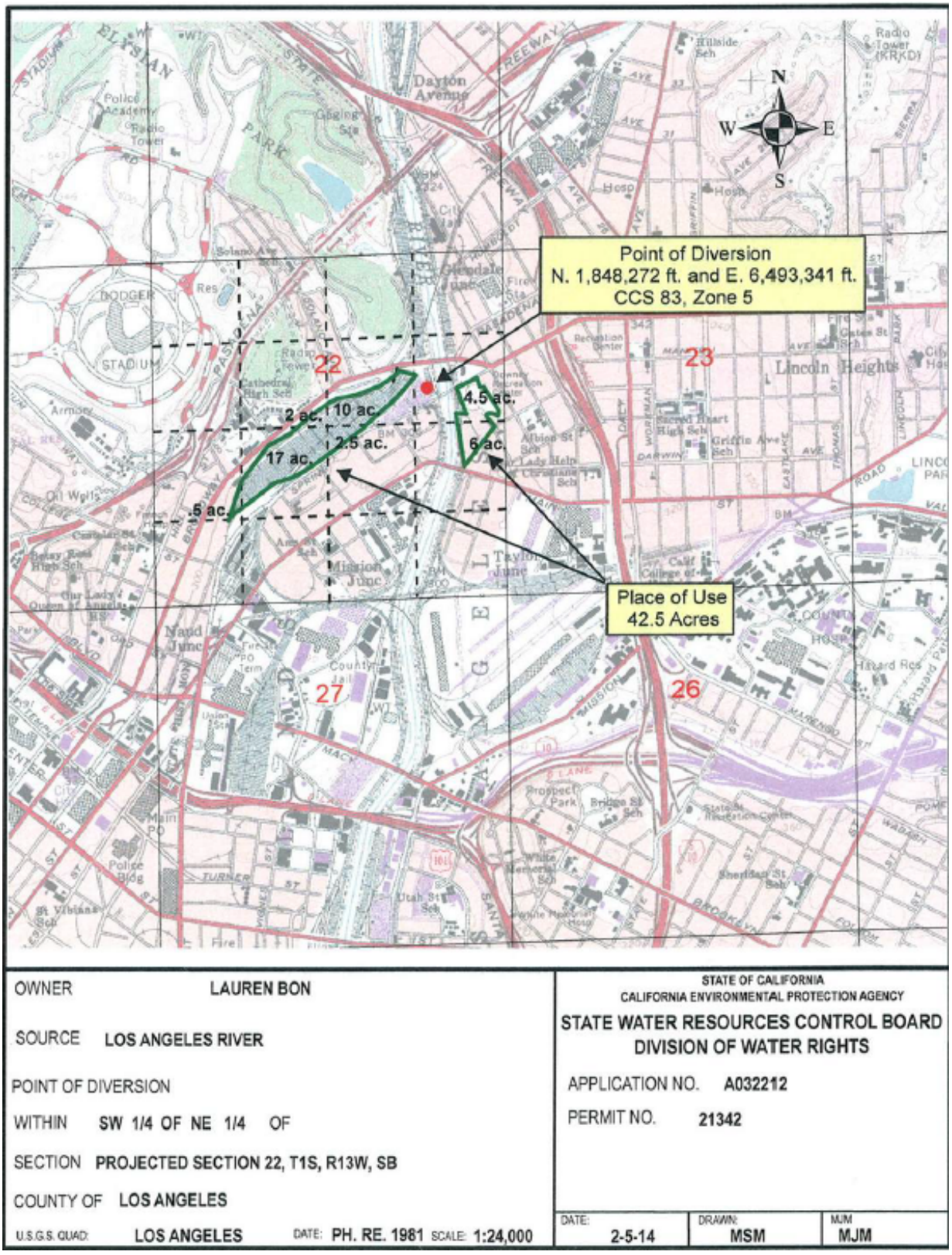

Figure 2. Landscape Irrigation Areas Authorized by the State Water Board Division of Water Rights

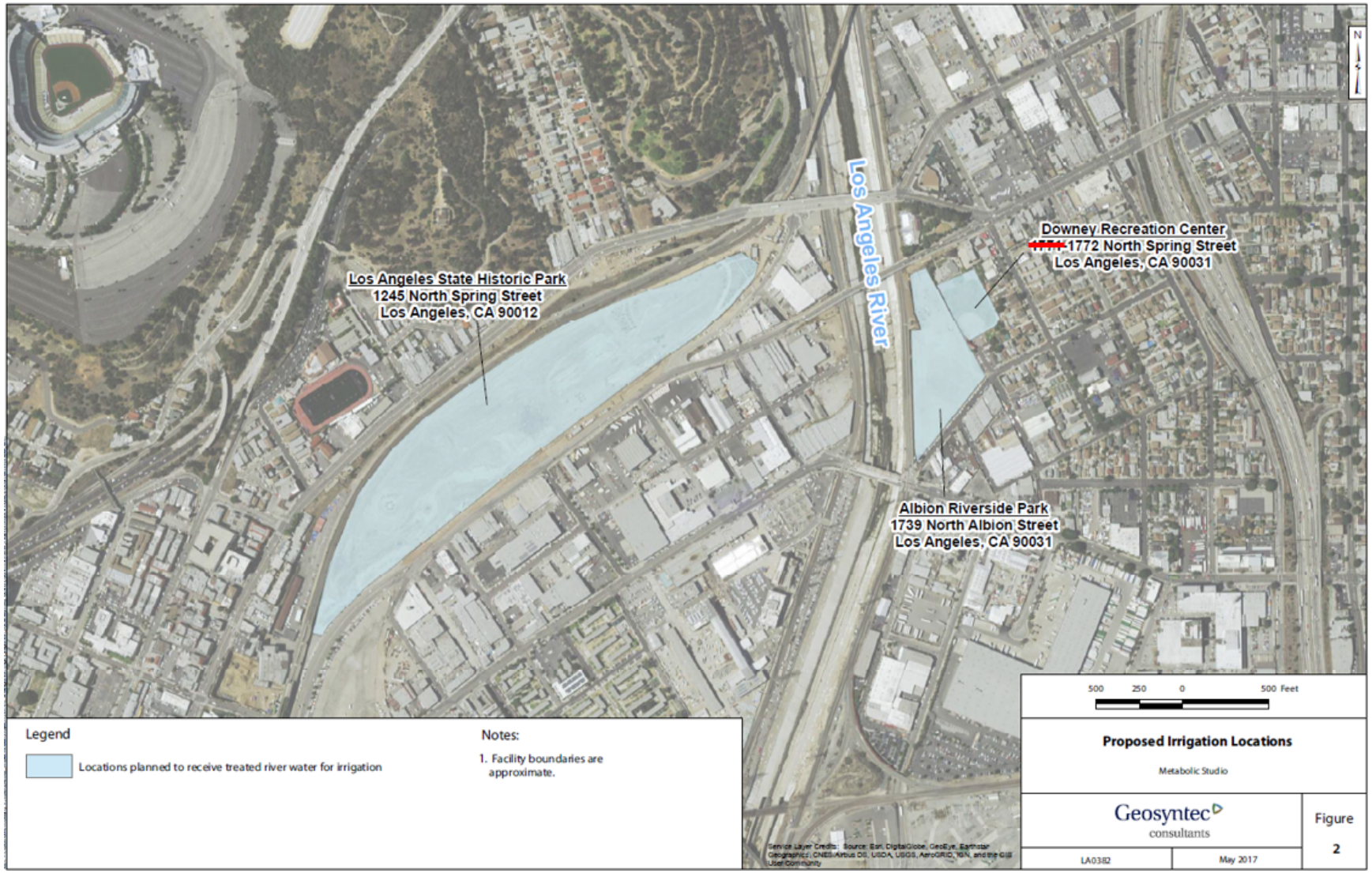

Figure 3. Proposed Landscape Irrigation Areas

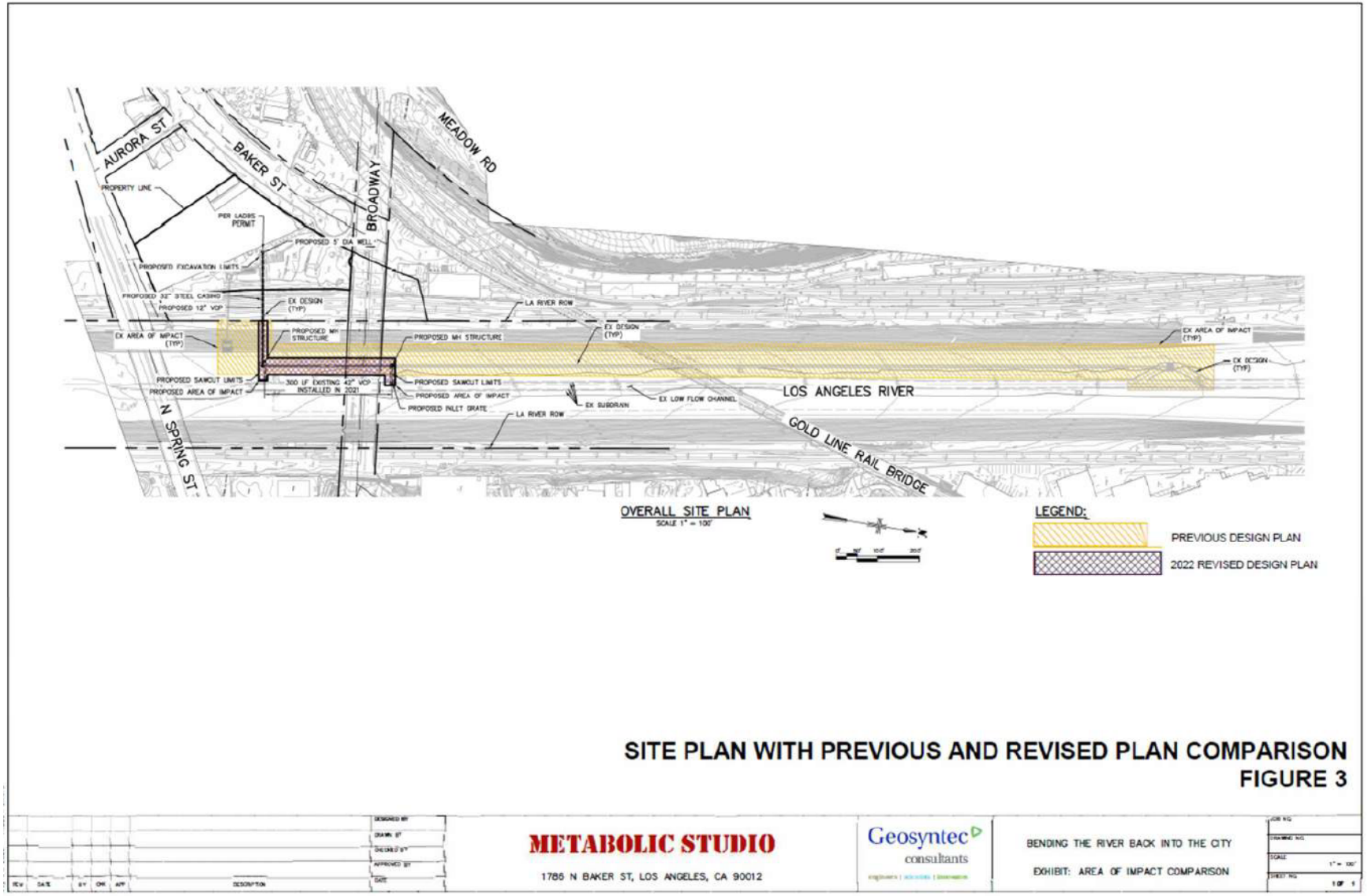

Figure 4. Site Plan for the Bending the River Project

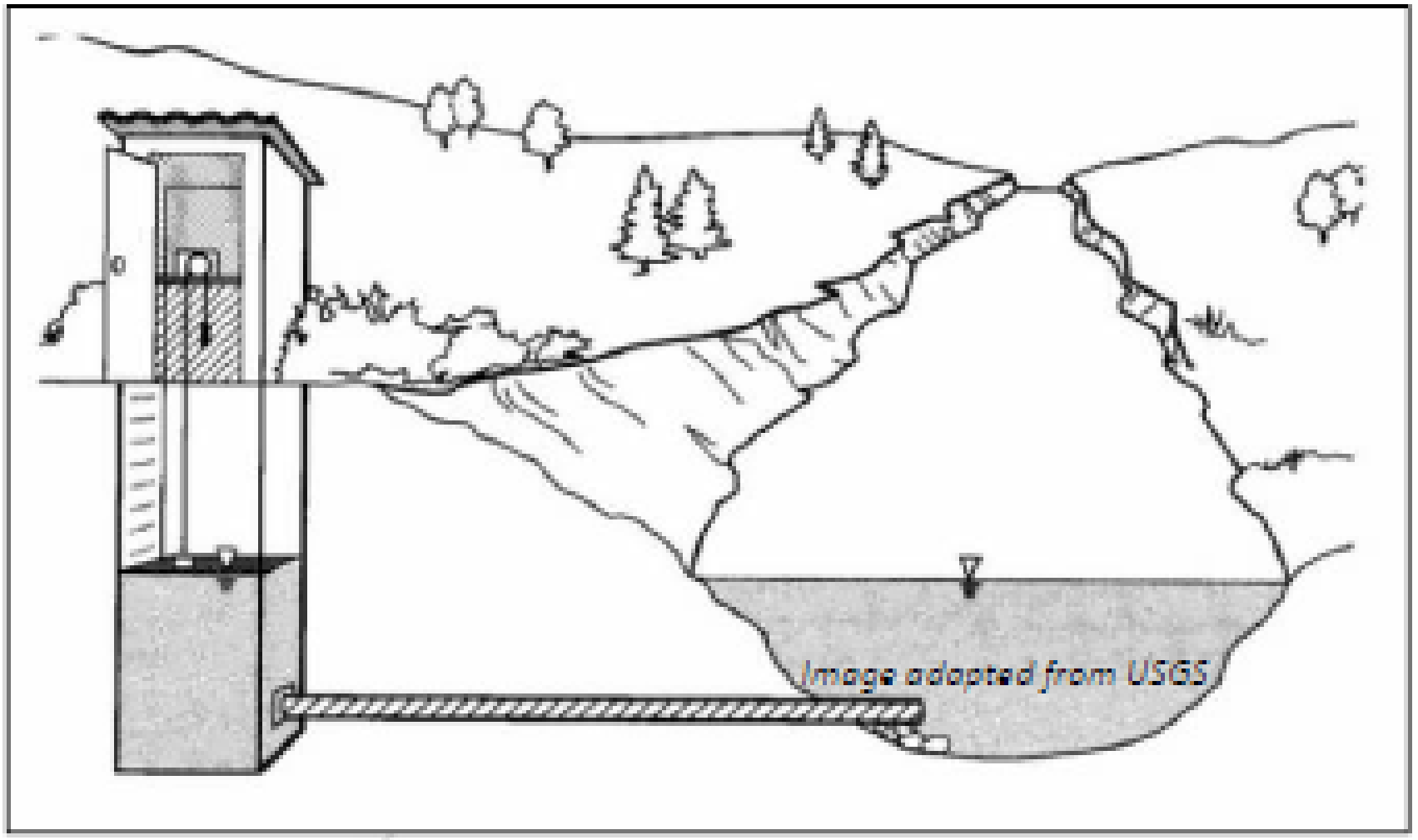

Figure 5. Concept of a Stilling Water Well

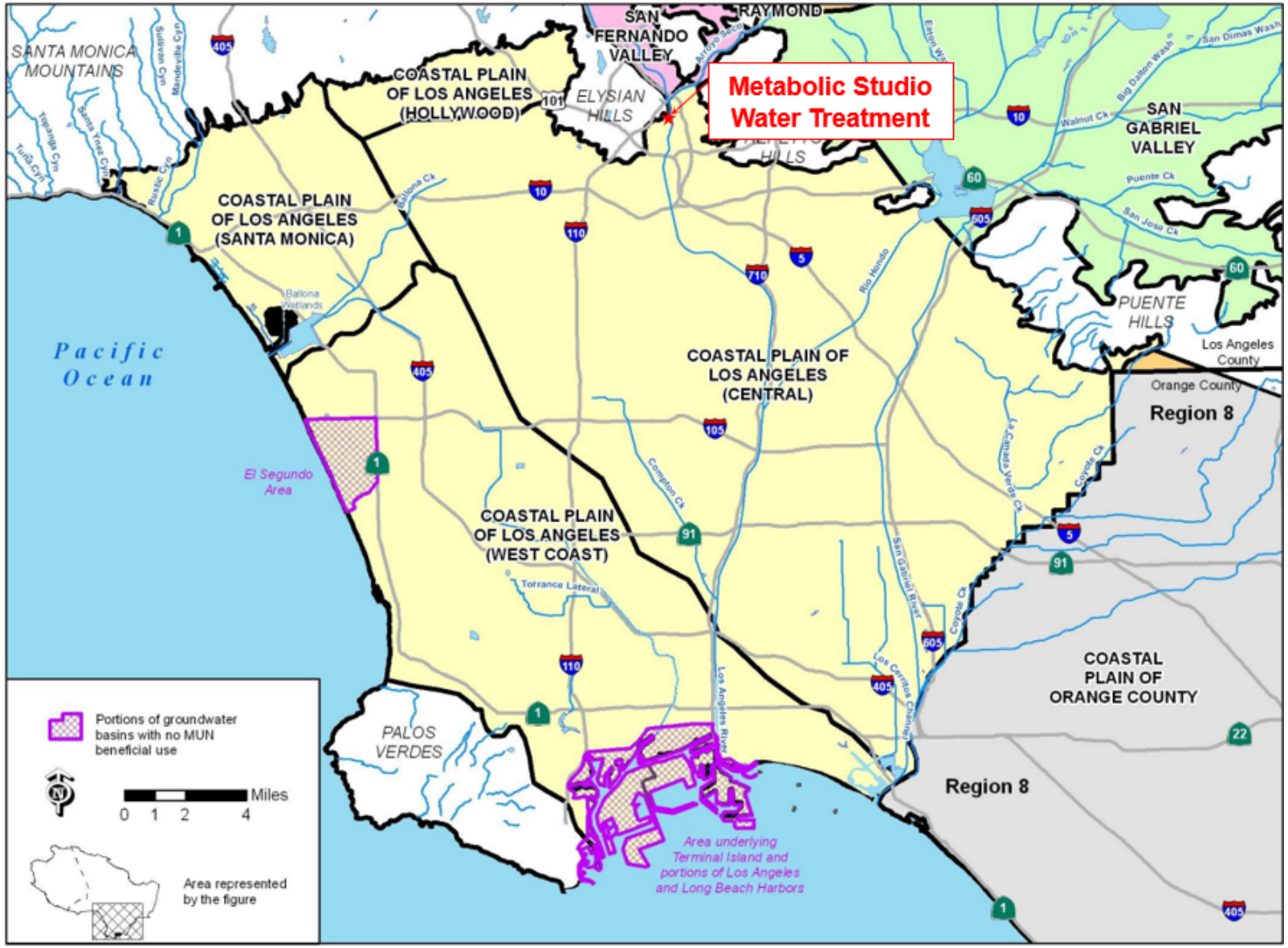

Figure 6. Coastal Plain of Los Angeles Groundwater Basin-Central Subbasin

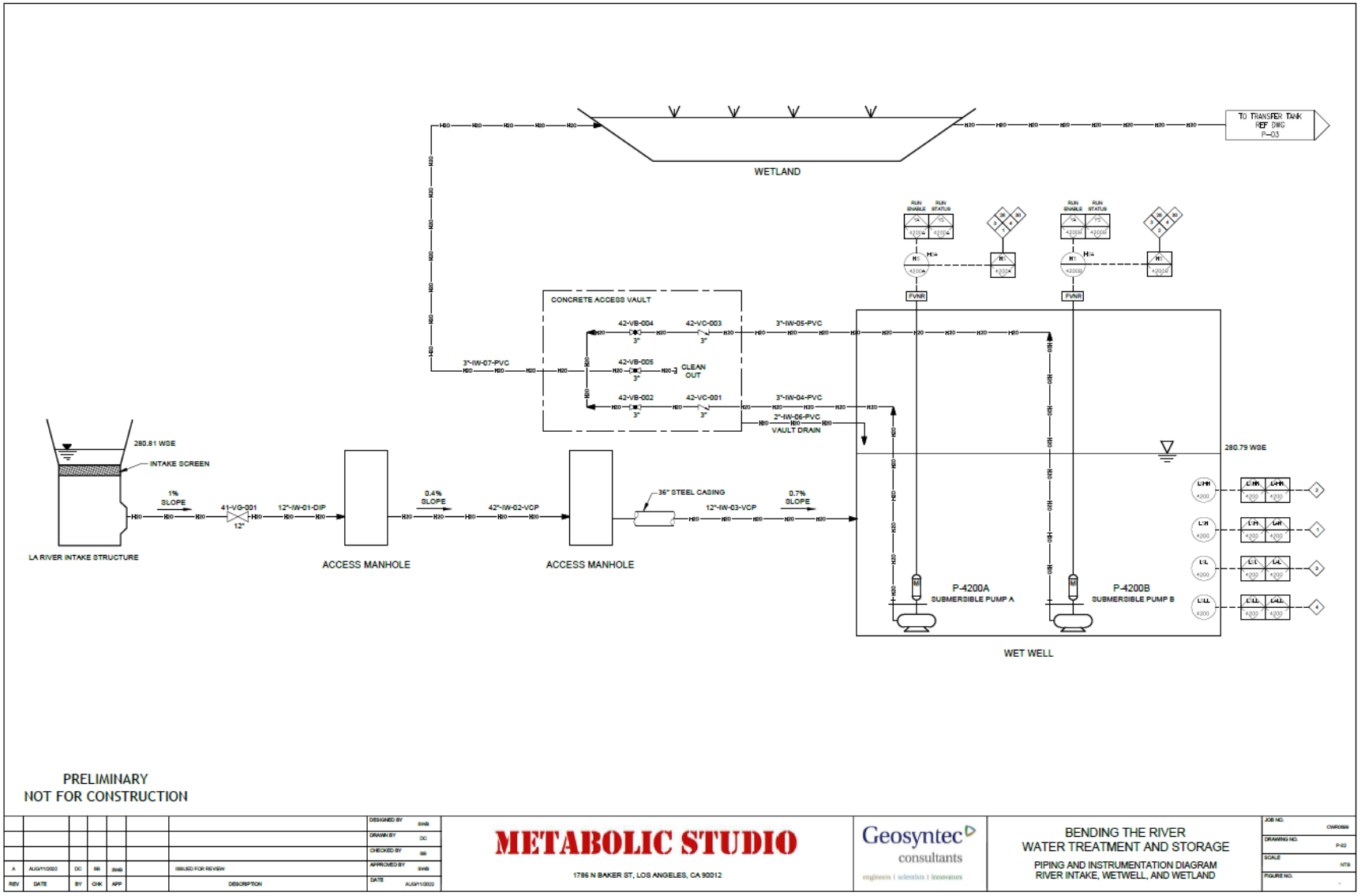

Figure 7. LA River Water Intake Process Flow Diagram

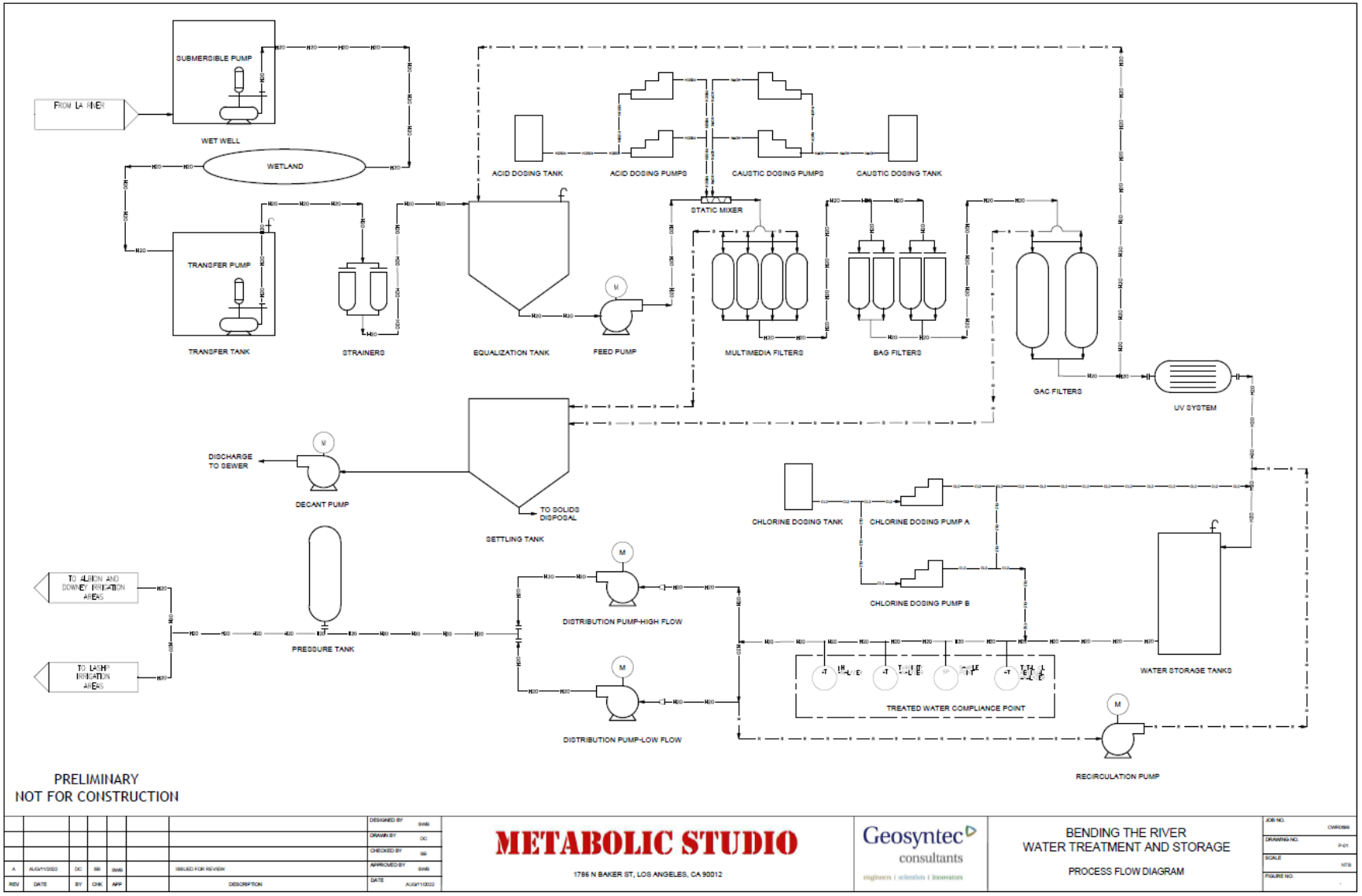

Figure 8. Metabolic Studio Water Treatment Plant Process Flow Diagram

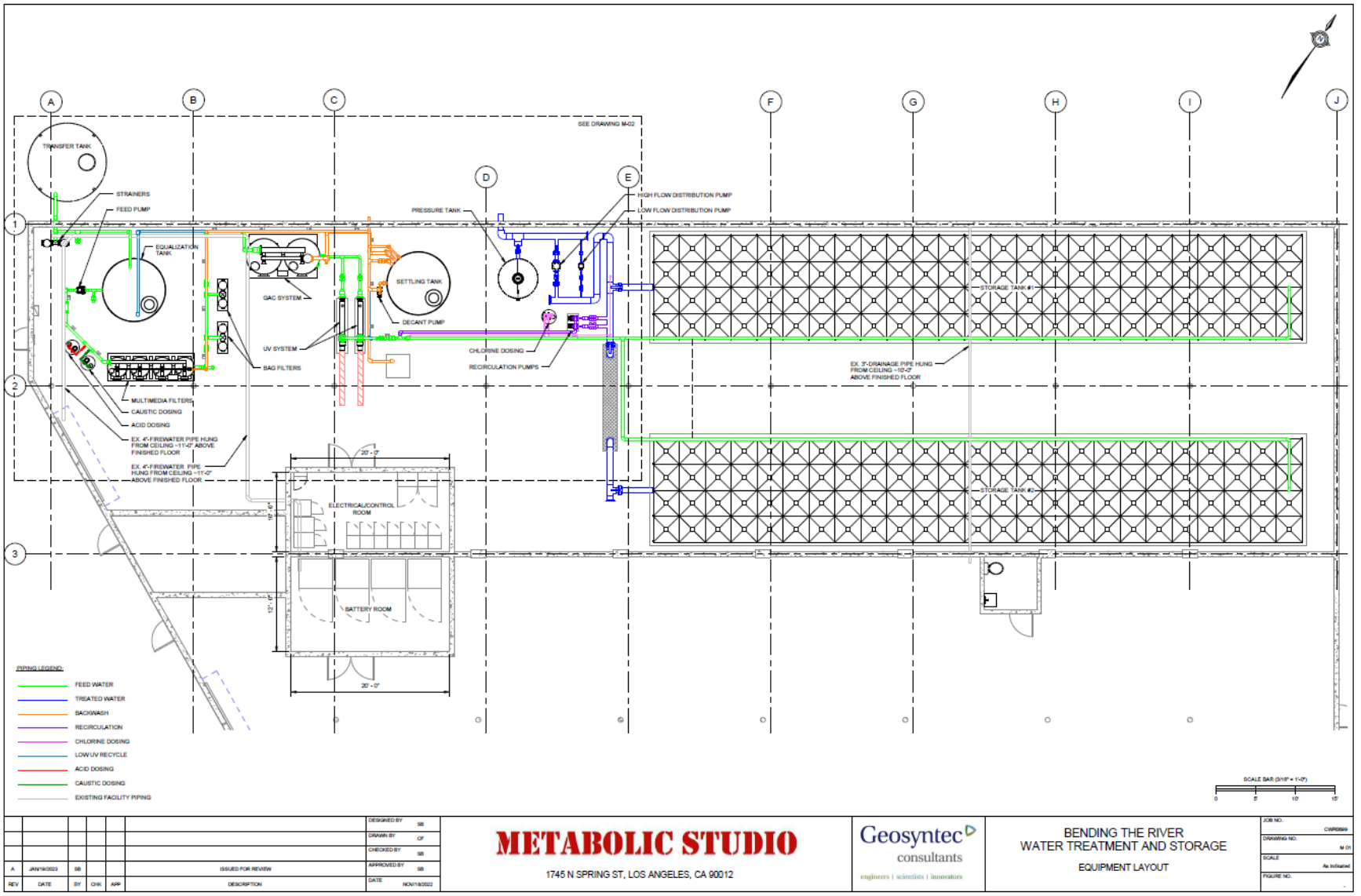

Figure 9. Metabolic Studio Water Treatment Plant Layout

Figure 10. Exhibit of "Recycled Water – Do Not Drink" Signage