# INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR

# CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM IRRIGATED AGRICULTUAL LANDS WITHIN THE LOS ANGELES REGION

# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

# LOS ANGELES REGION

**February 18, 2016**

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## Environmental Checklist Form

1. **Project title:** Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Agricultural Lands within the Los Angeles Region

2. **Lead agency name and address:** California Regional Water Quality Control Board,
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4. **Project location:** Los Angeles Region

5. **Project sponsor's name and address:** Not Applicable

6. **General plan designation:** Not applicable

7. **Zoning:** Not applicable

8. **Description of project:**

   The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) will consider adoption of a Conditional Waiver of waste discharge requirements (WDRs) for discharges from irrigated agricultural lands within the Los Angeles Region (Conditional Waiver). California Water Code (CWC) section 13269 authorizes the Regional Water Board to conditionally waive WDRs for a specific discharge or specific type of discharge provided that the waiver (i) be consistent with any applicable water quality control plans; (ii) be "in the public interest;" (iii) contain conditions; (iv) not exceed five years in duration, but may be renewed in up to five-year increments; and (v) include monitoring provisions. CWC section 13269(e) states that the Regional Water Board shall require compliance with the conditions of the waiver.

   The proposed Conditional Waiver is a renewal of previous Conditional Waivers adopted in 2005 by Order No. R4-2005-0080, in 2010 by Order No. R4-2010-0186, and in 2015 by Order No. R4-2015-0202.

   Based upon the information contained in the Environmental Checklist, the Regional Water Board finds that the proposed Conditional Waiver represents a more stringent level of regulatory conditions than currently in place and, as mitigated, will not result in a significant adverse effect on the environment. Potential impacts to the environment that could result from the Conditional Waiver would be due to implementation of management measures to comply with the Conditional Waiver. There are feasible mitigation measures that can substantially reduce any significant adverse impact provided that the dischargers comply with the terms of the Conditional Waiver, including monitoring provisions.

**9. Surrounding land uses and setting:**

The Conditional Waiver applies to discharges from irrigated agricultural lands within the jurisdiction of the Regional Water Board, including the coastal watersheds of Los Angeles and Ventura Counties.

**10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):** None

## Environmental Factors List

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project:

| | | |
|---|---|---|
| ☐ Aesthetics | X Agriculture and Forestry Resources | ☐ Air Quality |
| X Biological Resources | ☐ Cultural Resources | X Geology/Soils |
| ☐ Greenhouse Gas Emissions | ☐ Hazards/Hazardous Materials | X Hydrology/Water Quality |
| ☐ Land Use/Planning | ☐ Mineral Resources | ☐ Noise |
| ☐ Population/Housing | ☐ Public Services | ☐ Recreation |
| ☐ Transportation/Traffic | ☐Utilities/Service Systems | ☐ Mandatory Findings of Significance |

## Determination:

On the basis of this initial evaluation:

□ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

x I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

□ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

□ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

□ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable

standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

SAMUEL UNGER, P.E. DATED
EXECUTIVE OFFICER

# 1 Initial Study

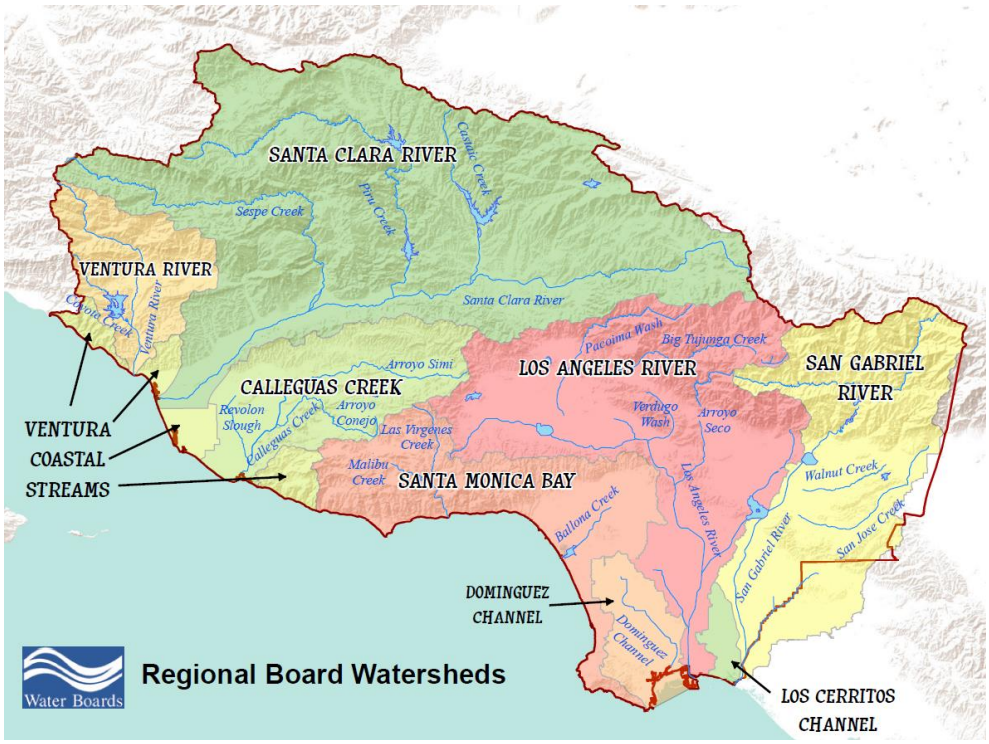
## 1.1 Project Purpose

The purpose of the project is to adopt an Order establishing a Conditional Waiver for Discharges from Irrigated Agricultural Lands (Conditional Waiver or Order) and Monitoring and Reporting Programs that would regulate the discharges of waste from irrigated agricultural lands, including but not limited to, land planted for row, vineyard, pasture, field and tree crops, nurseries, nursery stock production, wholesale nurseries, and greenhouse operations with permeable floors that are not subject to Waste Discharge Requirements (WDRs). The Conditional Waiver requires dischargers to (1) prepare monitoring plans, conduct monitoring, and report annually on monitoring results, including the identification of Water Quality Benchmark[1] exceedances; (2) develop, as required, a water quality management plan (WQMP), which identifies management practices that will address Water Quality Benchmark exceedances; (3) implement the WQMP and management practices to attain Water Quality Benchmarks; and (4) assess the effectiveness of implemented management practices in attaining Water Quality Benchmarks and, when necessary to attain Water Quality Benchmarks, identify, implement, or upgrade management practices. The Conditional Waiver also requires that, if TMDL-associated Water Quality Benchmarks are not attained within a reasonable time schedule, then discharges from irrigated agricultural lands comply with discharge limitations. Finally, the Conditional Waiver requires dischargers to implement management practices that minimize excess nutrient application relative to crop need and to conduct groundwater monitoring to assess trends in groundwater quality beneath irrigated agricultural lands to evaluate whether management practices implemented to improve groundwater quality are effective.

## 1.2 Location

The proposed Conditional Waiver applies to discharges from all irrigated lands within the jurisdiction of the Los Angeles Regional Water Quality Control Board, including the coastal watersheds of Los Angeles County and Ventura County.

1 "Water Quality Benchmark" means discharge prohibitions and narrative or numeric water quality objectives, a water quality objective established by an applicable Statewide plan or policy, criteria established by USEPA (including those in the California Toxics Rule and the applicable portions of the National Toxics Rule), and load allocations established pursuant to a total maximum daily load (TMDL) (whether established in the Basin Plan or other lawful means).




## 1.3 Background

### 1.3.1 The California Water Code

Water Code section 13260(a)(1) requires that any person discharging waste or proposing to discharge waste within the Regional Water Board's jurisdiction that could affect the quality of the waters of the state, shall file a Report of Waste Discharge (ROWD) with the Regional Water Board. The Regional Water Board may issue waste discharge requirements (WDRs) as authorized by Water Code section 13263(a).
Water Code section 13269 authorizes the Regional Water Board to conditionally waive the provisions of Water Code sections 13260(a)(1) [requirement to submit an ROWD] and 13263(a) [issuance of WDRs]. The waiver of WDRs must (i) be consistent with any applicable water quality control plans; (ii) be "in the public interest;" (iii) contain conditions; (iv) not exceed five years in duration, but may be renewed in up to five-year increments; and (v) include monitoring provisions.

### 1.3.2 Nonpoint Source Program Plan and Nonpoint Source Implementation and Enforcement Policy

The State Water Resources Control Board has adopted the "Plan for California's Nonpoint Source Pollution Control Program" (Nonpoint Source Program Plan) dated August 2015 and the "Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program" (Nonpoint Source Policy) dated May 2004. The

purpose of the Nonpoint Source Program Plan is to improve the State's ability to effectively manage nonpoint source pollution and conform to the requirements of the federal Clean Water Act and the federal Coastal Zone Management Act. The Nonpoint Source Policy explains the authorities used to implement and enforce the Nonpoint Source Program Plan and describes three options for addressing nonpoint source pollution: (1) waste discharge requirements, (2) conditional waivers of waste discharge requirements, and (3) discharge prohibitions. The policy also describes implementation programs to prevent and/or reduce nonpoint source pollution including antidegradation requirements, management practices, time schedules, feedback to Regional Water Board to evaluate the program progress, and appropriate Board actions to correct program deficiencies, if necessary.

The Nonpoint Source Policy requires that Nonpoint Source implementation programs include five key elements: (1) the purpose of the program must be stated and the program must address Nonpoint Source pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements; (2) the program must describe the practices to be implemented and processes to be used to select and verify proper implementation of practices; (3) where it is necessary to allow time to achieve water quality requirements, the program must include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching specified requirements; (4) the program must include feedback mechanisms to determine whether the program is achieving its purpose or whether additional or different practices are required; and (5) the program must state the consequences of failure to achieve the stated purpose.

### 1.3.3 Basin Plan

The Water Quality Control Plan for the Los Angeles Region (Basin Plan) requires the implementation of management practices to achieve compliance with applicable water quality objectives, prohibitions, and TMDLs and to protect the beneficial uses of the waters of the state within the Los Angeles Region.

Beneficial uses designated for groundwater and surface water in the Basin Plan include:

- Municipal and Domestic Supply
- Agricultural Supply
- Industrial Process Supply
- Industrial Service Supply
- Groundwater Recharge
- Freshwater Replenishment
- Water Contact Recreation
- Non-contact Water Recreation
- Commercial and Sport Fishing
- Aquaculture
- Water Freshwater Habitat
- Cold Freshwater Habitat
- Estuarine Habitat
- Wetland Habitat
- Wildlife Habitat
- Preservation of Biological Habitat
- Rare, Threatened, or Endangered Species
- Migration of Aquatic Organisms

- Navigation
- Inland Saline Water Habitat
- Spawning, Reproduction, and Early Development
- Hydropower Generation
- Marine Habitat
- Shellfish Harvesting

TMDLs adopted by the Regional Water Board that assign allocations to agricultural dischargers are listed below:

| **Pesticides and PCBs** |
|---|
| Calleguas Creek Watershed and Mugu Lagoon Organochlorine Pesticides, PCBs, and Siltation TMDL (Resolution No. R05-010) |
| Calleguas Creek Watershed and Mugu Lagoon Toxicity, Chlorpyrifos, and Diazinon TMDL (Resolution No. R05-009) |
| McGrath Lake PCBs, Pesticides, and Sediment Toxicity (Resolution No. R09-006) |
| Oxnard Drain No. 3 Pesticides, PCBs, and Sediment Toxicity TMDL (U.S. EPA-established TMDL) |
| Santa Clara River Estuary Toxaphene TMDL |
| **Nutrients** |
| Santa Clara River Nitrogen Compounds TMDL (Resolution No. R03-011) |
| Calleguas Creek Watershed Nitrogen Compounds and Related Effects TMDL (Resolution No. R08-009) |
| Malibu Creek Watershed Nutrients TMDL (U.S. EPA-established TMDL) |
| Los Angeles Area Lakes Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs TMDLs (U.S. EPA-established TMDL) |
| Ventura River Algae (Resolution No. R12-011) |
| Malibu Creek and Lagoon TMDLs for Sedimentation and Nutrients to Address Benthic Community Impairments (U.S. EPA-established TMDL) |
| **Trash** |
| Ventura River Estuary Trash TMDL (Resolution No. R07-008) |
| Revolon Slough and Beardsley Wash Trash TMDL (Resolution No. R07-007) |
| **Metals** |
| Calleguas Creek Watershed and Mugu Lagoon Metals and Selenium TMDL (Resolution No. R06-012) |
| **Salts** |
| Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS (Salts) TMDL (Resolution No. R07-016) |
| Upper Santa Clara River Chloride TMDL, Revisions (Resolution No. R14-010) |
| **Bacteria** |
| Santa Clara River Bacteria (Resolution No. R10-006) |

### 1.3.4 Agriculture in the Los Angeles Region

The Los Angeles Region has approximately 97,000 acres of agriculture under irrigation and approximately 2,100 operations that are, or may be, discharging waste from irrigated agricultural lands to waters of the state.

The Region's agriculture is concentrated in Ventura County where the value of production in 2014 was $2.14 billion (County of Ventura, 2015). Ventura County ranked No. 9 among California counties in total crop value in 2012, according to the California Department of Food and Agriculture, and the most recent national data put Ventura

County at No. 10 among all counties in the United States (Farm Bureau of Ventura County, 2015). Major crops in Ventura County include strawberries, avocado, citrus, vegetables, nursery stock, and cut flowers (County of Ventura, 2015). The majority of agriculture in Ventura County is located in the Calleguas Creek, Santa Clara River, and Ventura River watersheds.

There is also diverse crop production in Los Angeles County. The value of production in 2014 was $229 million (County of Los Angeles, 2015). Leading agricultural commodities in Los Angeles County include woody ornamentals, root vegetables, bedding plants, and alfalfa hay (County of Los Angeles, 2015). The main growing region for food crops in the county is the Antelope Valley, which lies in Los Angeles County, but not in the jurisdiction of the Los Angeles Water Quality Control Board. It is estimated that approximately 3,500 acres of Los Angeles County crops lie within the Los Angeles Water Quality Control Board Region and may be covered by the Conditional Waiver. These areas of irrigated agricultural land are dispersed, non-contiguous, and interspersed with other land uses, such as urban and industrial land uses.

The agricultural industry in the Los Angeles Region is diverse, as are the mechanisms by which the industry may create nonpoint source water pollution. Practices associated with irrigated agriculture may concentrate and/or mobilize pollutants, including pesticides, excess nutrients, trash, and sediment via irrigation and drainage return flow, storm water runoff, percolation to groundwater, and subsurface drainage.

Annual monitoring reports, submitted during the first and second term of the conditional waiver of waste discharge requirements adopted by Order No. R4-2005-0080 and Order No. 2010-0186, have documented water quality that exceed Water Quality Benchmarks in receiving waters (agriculture drains and tributaries) and edge of field monitoring sites. Water Quality Benchmark exceedances have been documented in every monitored watershed within the Los Angeles Region. Two categories of wastes frequently reported in agricultural discharges that impair waters of the state in the Los Angeles Region are pesticides and biostimulatory substances (e.g., nitrogen).

Water quality impacts from agricultural discharges represent the baseline for this initial study. The discharges covered by the proposed Conditional Waiver already occur. The proper baseline is the set of environmental conditions existing at the time the environmental analysis was commenced (14 C.C.R. § 15125(a)). The baseline environmental conditions for this project necessarily include the existing levels and types of irrigated runoff and the existing polluted condition of the receiving waterbodies. This project analysis is, therefore, tailored to changes in the physical environment as a result of the proposed Conditional Waiver.

### 1.3.5 Pollutants of Concern

The 2008-10 Clean Water Act Section 303(d) list of impaired water bodies in the Los Angeles Region identifies agriculture as a potential source of pollutants that impair water

quality and beneficial uses of numerous waters of the state within the Region. There are 16 TMDLs in the Los Angeles Region for sediment, pesticides, nutrients, bacteria, trash, and salts, which identify irrigated agricultural lands as a source of pollutants and assign load allocations to irrigated agricultural lands.

Annual monitoring reports, submitted during the first and second term of the Conditional Waiver adopted by Order No. R4-2005-0080 and Order No. 2010-0186, have documented water quality that exceeds Water Quality Benchmarks at receiving water (agriculture drains and tributaries) and edge of field monitoring sites. Water Quality Benchmark exceedances have been documented in every monitored watershed within the Los Angeles Region. Two categories of wastes frequently reported in agricultural discharges that impair waters of the state in the Los Angeles Region are pesticides and biostimulatory substances (e.g., nitrogen).

Irrigated agricultural discharges can impact groundwater quality. A review of groundwater quality data in the Los Angeles Region reveals that groundwater is polluted with pollutants, such as nitrate, which are contained in irrigated agricultural discharges. Data obtained from the State's Groundwater Ambient Monitoring and Assessment (GAMA) program and the Ventura County Watershed Protection District groundwater monitoring program demonstrate that groundwater basins underlying areas with irrigated agricultural lands contain levels of nitrate that exceed water quality objectives, including state drinking water standards. A recent study on the effects of irrigated land discharges on groundwater quality funded by the State Water Board showed that nitrate applied to irrigated agricultural lands is not completely taken up in the root zone of crops and can percolate to groundwater (Modifying Agricultural Practices, Nutrients, and Pesticides, Calleguas Creek and Santa Clara River. United Water Conservation District, August 31, 2007, SWRCB Grant No. 04-073-554-1). The study did not quantify the loading of nitrate from irrigated agricultural lands to groundwater, but they provide evidence that irrigated agricultural practices are a potential source of groundwater pollution in the Los Angeles Region.

A brief review of impacts caused by pollutants from agriculture activities and a list of potential controls are provided below:

*1.3.5.1 Sedimentation*

Agriculture may cause erosion directly through application of irrigation water, or indirectly through land management practices that exacerbate erosion due to storm flows. Sediment contained in runoff from agricultural lands may carry certain pesticides to surface waters where they contaminate the food chain and affect beneficial uses of water. Excess sedimentation degrades the natural environment, diminishing the health, numbers, and diversity of wildlife and habitat, destabilizing the physical landscape, and increasing the costs of water resource management. Simple methods can be used to minimize sedimentation, such as reducing the amount of irrigation water, using buffer strips and sedimentation basins to control excess sediments from reaching the water bodies, using

minimum cultivation practices, constructing properly engineered dirt roads and culverts, installing soil and water recapture systems, and employing erosion control practices.

*1.3.5.2 Salinity*

Salinity is a major problem for the environment and agriculture because it negatively impacts diversity, growth rates and other physiological functions of plant and animal populations. As salinity increases, surface and ground water municipal and agricultural beneficial uses may become impaired. Irrigation practices can mobilize naturally occurring salts from the soil, concentrate salts from supply water, and deposit the salts into shallow soil. Salts move with the percolation of water below the crop root zone and can be captured by drainage systems, enter into the groundwater, or become immobilized within the soil structure. Salinity impacts can be minimized by improved irrigation management practices.

*1.3.5.3 Nutrients*

Agriculturally derived nutrients include fertilizers, soil and plant amendments, food processing by-product effluent, and animal waste. The effects of nutrients can be two-fold. First, if concentration is high, toxicity can occur resulting in injury, necrosis or death to plants and animals. Second, cumulative effects cause eutrophication (impairing habitats and recreational uses and eventually leading to a reduction of dissolved oxygen) which creates anaerobic aquatic conditions thereby limiting or killing oxygen dependent organisms. Nutrients are transported to groundwater by irrigation, and to surface waters by irrigation, tile drains, and rainfall runoff. Several watersheds in the Los Angeles Region have serious nutrient problems. Nutrient impacts can be reduced by applying less crop amendment, using better methods to recover lost nutrients and waste, planting cover crops, treating runoff with chemical or biological treatment, or implementing other management practices.

*1.3.5.4 Pesticides*

Pesticides may impact beneficial uses through direct toxic effects on the organisms themselves or through indirect effects on their food chain. Pesticides include a wide variety of chemicals with both short and long-term effects and various chemical properties. Their entry into surface or ground waters may be caused by irrigation return flows, tile drainage or stormwater runoff. Water-soluble pesticides may be carried directly into surface waters or adsorbed to sediment prior to transportation. Pesticide impacts can be minimize by reducing the quantity and toxicity of the pesticides used, using a more direct application method that reduces the amount used or the amount available to the environment, implementing management practices that minimize erosion and sediment runoff, or switching to crops that require less toxic pesticides.

*1.3.5.5 Bacteria*

Bacteria may impact the beneficial uses of the State's waters by reducing the fishable and swimable qualities of the water body. High bacteria concentrations can cause human illness or contaminate food sources so that they are unfit for consumption. Water that comes into contact with human or animal waste can mobilize bacteria in that waste. This type of contact can occur where waste is used as part of a standard agricultural operation or where animals have used the field, wetland or pasture prior to irrigation or a storm event causing discharges to receiving waters. Limiting the amount of water contact with animal waste and minimizing irrigation return flows and runoff can reduce bacteria impacts from agriculture.

## 1.4 Project Description

The purpose of this project is to renew the 2010 Conditional Waiver of Waste Discharge Requirements for discharges from irrigated lands (Order No. R4-2010-0186), and its subsequent 2015 short-term extension (Order No. R4-2015-0202), with revised conditions. The proposed 2016 Conditional Waiver would regulate discharges of waste from irrigated agricultural lands in a manner protective of water quality and consistent with the Porter-Cologne Water Quality Control Act (Water Code Div. 7) and associated plans and policies.

Irrigated agricultural lands are those lands where water is applied for producing crops and includes, but is not limited to, lands planted for row, vineyard, pasture, field and tree crops, nurseries, nursery stock production, wholesale nurseries, and greenhouse operations with permeable floors, which are not subject to waste discharge requirements, including Municipal Separate Storm Sewer System (MS4) or other National Pollutant Discharge Elimination System (NPDES) permits.

The Conditional Waiver sets forth conditions that will require dischargers to conduct a monitoring and reporting program to determine the effects of their discharge on water quality. The Conditional Waiver also requires dischargers to implement and evaluate management practices that will result in achieving compliance with water quality objectives and water quality criteria in the waters of the state, and to conduct activities in a manner to prevent nuisance.

The 2016 Conditional Waiver differs from previous conditional waivers by containing more specific monitoring and reporting requirements for the preparation of Water Quality Management Plans (WQMPs) in order to better assess effectiveness of management practices, and more specific time schedules and requirements to ensure that Water Quality Benchmarks will ultimately be attained.

### 1.4.1 Waiver Conditions

Key provisions of the Conditional Waiver include requiring those persons who obtain coverage under the Conditional Waiver to:

(1) prepare monitoring plans, conduct monitoring, and report annually on monitoring results, including the identification of Water Quality Benchmark exceedances;
(2) develop, as required, a WQMP, which identifies management practices that will address Water Quality Benchmark exceedances;
(3) implement the WQMP and management practices to attain Water Quality Benchmarks;
(4) assess the effectiveness of implemented management practices in attaining Water Quality Benchmarks and, when necessary to attain Water Quality Benchmarks, identify, implement, or upgrade management practices, and
(5) if Water Quality Benchmarks are not attained within a reasonable time schedule, then comply with water quality limitations.

The Conditional Waiver also requires dischargers to implement management practices that minimize excess nutrient application relative to crop need and to conduct groundwater monitoring to assess trends in groundwater quality beneath irrigated agriculture lands and confirm that management practices implemented to improve groundwater quality are effective.

### 1.4.2 Monitoring and Reporting Requirements

Monitoring and Reporting Requirements are included as attachments to the Order authorizing the Conditional Waiver. Dischargers may elect to enroll as an individual or as a member of a Discharger Group. There are three sets of Monitoring and Reporting Requirements included in the Order: one for individual dischargers, one for Discharger Groups in Ventura, and one for Discharger Groups in Los Angeles.

Irrigated agriculture in Los Angeles County and Ventura County differ from each other with respect to the size of operations, number of operations, types of crops grown, surrounding land uses, and TMDL findings and requirements. Therefore, the Conditional Waiver contains separate Monitoring and Reporting Requirements for Discharger Groups in Los Angeles County and Ventura County.

Individual Dischargers or Discharger Groups must prepare a Monitoring and Reporting Plan (MRP) in accordance with the Monitoring and Reporting Requirements to verify the adequacy and effectiveness of the conditions contained in the Conditional Waiver. The MRP shall be sufficient to (1) assess the impacts of waste discharges from irrigated agricultural lands on waters of the state, (2) evaluate the effectiveness of management practices to control waste discharges, (3) track progress in reducing the amount of waste discharged to waters of the state to improve water quality and protect beneficial uses, and

(4) assess compliance with discharge limitations, where applicable. The Executive Officer of the Regional Water Board may revise monitoring and reporting requirements based on site-specific conditions.

The Conditional Waiver requires that if, based on monitoring, Water Quality Benchmarks are not attained, Individual Dischargers or Discharger Groups shall develop a WQMP to address exceedances of Water Quality Benchmarks. The WQMP shall outline specific steps with milestones that work toward attainment of Water Quality Benchmarks through the implementation of management practices. If Water Quality Benchmarks are not attained within a reasonable time schedule, then the Conditional Waiver requires compliance with individual discharge limitations.

This Conditional Waiver also requires dischargers to implement management practices that minimize excess nutrient application relative to crop need and to conduct groundwater monitoring to assess trends in groundwater quality beneath irrigated agriculture lands and confirm that management practices implemented to improve groundwater quality are effective.

### 1.4.3 The Project's Physical Changes to the Environment

The analysis of the potential physical changes in the environment are set forth in the environmental checklist contained in section 2. In summary, the analysis considers the physical impacts that would likely occur as a result of the implementation of management practices to comply with the Conditional Waiver.

The limited monitoring activities proposed under the Conditional Waiver are not anticipated to require any physical changes to the environment. Sampling and monitoring activities are often transient, do not require heavy equipment, and do not disturb the soil or watercourse. These types of activities provide information regarding the physical environment such that any changes resulting from implementation of the Conditional Waiver are documented; however, the monitoring activities themselves are not anticipated to significantly alter the physical environment.

As described in more detail as part of the environmental checklist, some management practices may result in physical changes to the environment. These management practices would be triggered if the discharges from irrigated agricultural lands are shown to be causing exceedances of Water Quality Benchmarks, as identified in the Conditional Waiver. Any adverse environmental effects resulting from implementation of the Conditional Waiver can and should be mitigated. Mitigation measures are discussed in the following analysis.

The Regional Water Board is prohibited with specifying the means of compliance with the Conditional Waiver; thus, the specific implementation actions or mix of management practices (MPs) that dischargers may select cannot be evaluated and it would be

speculative to attempt such an analysis at this time. However, reasonably foreseeable means of compliance are discussed in the following analysis. Implementation of management practices required by the Conditional Waiver are anticipated to have a net positive environmental impact, including but not limited to improvements in water quality.

### 1.4.4 Alternatives to the Project

The requirements of the conditional waivers adopted by Order Nos. R4-2005-0080, R4-2010-0186, and R4-2015-0202 have thus far resulted in extensive water quality monitoring, ongoing grower education and outreach, and implementation of new and/or improved management practices. These activities represent significant strides toward the improvement and protection of water quality. The proposed Conditional Waiver would continue similar activities as those conducted under the first two terms of the Waiver, but with some enhancements and additions to provide assurance that discharges from irrigated agricultural lands will be adequately managed to attain water quality standards in receiving waters.

In developing the Conditional Waiver, the Regional Water Board staff has considered alternatives to the project. The two alternatives to the Conditional Waiver analyzed are the "no action" and "waste discharge requirement" alternatives.

1) No action. The first alternative to adoption of the Conditional Waiver is to take no formal action to renew the existing Conditional Waiver. The "no action" alternative does not comply with the Water Code because it would not result in regulation of the discharges of waste from irrigated lands.

2) Waste Discharge Requirements (WDRs). This alternative consists of issuing WDRs to agricultural dischargers. This alternative would result in similar environmental impacts and benefits as those of the proposed project, the Conditional Waiver. However, this alternative would be unnecessarily exhaustive of limited Regional Water Board staff resources. This alternative would also preclude the option of reconsidering the Conditional Waiver every five years.

## 1.5 Environmental Setting

The Regional Water Board has jurisdiction over all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the eastern Los Angeles County line, and the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). The project encompasses all of the irrigated land in the Los Angeles Region including within the watersheds of Santa Clara River, Ventura River, Calleguas Creek, Malibu Creek, Los Angeles River, San Gabriel River, and other coastal streams.

Most of the Los Angeles Region lies within the western portion of the Transverse Ranges Geomorphic Province. Major mountain ranges within the Los Angeles Region include San Gabriel Mountains, Santa Monica Mountains, Simi Hills, and Santa Ynez Mountains. With prevailing winds from the west and northwest, moist air from the Pacific Ocean is carried inland in the Los Angeles Region until it forced upward by the mountains. The resulting storms, common from November through March, are followed by dry periods during the summer months. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the Region. Some physical characteristics of the Region are listed below:

| CHARACTERISTICS | MEASURE |
|---|---|
| Area of region | 4,288 square smiles |
| Streams | 6,455 miles |
| Lakes | 17,126 acres |
| Mainland coast | 120 mile |

| CHARACTERISTICS | NUMBER |
|---|---|
| Ground Water Basins | 53 |
| Areas of Special Biological Significance | 9 |

Diversity in topography, soil, and microclimates of the Region supports a corresponding variety of plant and animal communities. However, increasing urbanization and development have resulted in the loss of habitat and a decline in biological diversity. As a result, several native flora and fauna species have been listed as rare, endangered or threatened. Habitats that support rare, endangered, threatened, or other sensitive plant or animal species are unique habitats in terms of their physical, geographical, and biological characteristics. Many unique habitats, including coastal wetlands and lagoons, are found along the southern coast of Ventura County. These areas provide habitats for many fish, birds, invertebrates, sea lions, and for other marine and estuarine species. Mugu Lagoon is the most extensive wetland in the Region and supports a rich diversity of fish and wildlife. Other wetlands in Ventura County include McGrath Lake, Ormond Beach, and the estuaries at the mouths of the Ventura and Santa Clara River. The County of Los Angeles has designated sixty Significant Ecological Areas (SEAs) within the County. Malibu Lagoon supports two important plant communities, the coastal salt marsh and coastal strand, and is an important refuge for migrating birds.

# 2 CEQA Checklist

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **I. AESTHETICS**<br>Would the project: | | | | |
| a. Have a substantial adverse effect on a scenic vista? | | | | X |
| b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | X |
| c. Substantially degrade the existing visual character or quality of the site and its surroundings? | | | | X |
| d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | | X |
| **II. AGRICULTURE AND FOREST RESOURCES** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Boards. Would the project: | | | | |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | X | | |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | X | | |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | | | X | |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | | | X | |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | | X | | |
| **III. AIR QUALITY**<br>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a. Conflict with or obstruct implementation of the applicable air quality plan? | | | | X |
| b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | X | |
| c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | | X | |
| d. Expose sensitive receptors to substantial pollutant concentrations? | | | | X |
| e. Create objectionable odors affecting a substantial number of people? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **IV. BIOLOGICAL RESOURCES**<br>Would the project: | | | | |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | X | | |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | | X | | |
| c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal, pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | X | | |
| d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | X | | |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | X |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | X |
| **V. CULTURAL RESOURCES**<br>Would the project: | | | | |
| a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | | | | X |
| c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | X |
| d. Disturb any human remains, including those interred outside of formal cemeteries? | | | | X |
| **VI. GEOLOGY AND SOILS** Would the project: | | | | |
| a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | X |
| ii. Strong seismic ground snaking? | | | | X |
| iii. Seismic-related ground failure, including liquefaction? | | | | X |
| iv. Landslides? | | | | X |
| b. Result in substantial soil erosion or the loss of topsoil? | | | | X |
| c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | X | | |
| d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | | | | X |
| **VII. GREENHOUSE GAS EMISSIONS** Would the project: | | | | |
| a. Generate Greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | X | |
| b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | | | X | |
| **VIII. HAZARDS AND HAZARDOUS MATERIALS** Would the project: | | | | |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | X | |
| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | X | |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | X | |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | | X |
| e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| project area? | | | | |
| g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | X |
| h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | X |
| **IX. HYDROLOGY AND WATER QUALITY** Would the project: | | | | |
| a. Violate any water quality standards or waste discharge requirements? | | | | X |
| b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | X | |
| c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | | X | |
| d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | | | X |
| e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | | X |
| f. Otherwise substantially degrade water quality? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | X |
| h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | X | | |
| i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | X |
| j. Inundation by seiche, tsunami, or mudflow? | | | | X |
| **X. LAND USE AND PLANNING** - Would the project: | | | | |
| a. Physically divide an established community? | | | | X |
| b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | X | |
| c. Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | X | |
| **XI. MINERAL RESOURCES** - Would the project: | | | | |
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | X |
| b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | X |
| **XII. NOISE** - Would the project result in: | | | | |
| a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | | X |
| c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |
| f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |
| **XIII. POPULATION AND HOUSING** - Would the project: | | | | |
| a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | | X |
| b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | X |
| c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | X |
| **XIV. PUBLIC SERVICES** | | | | |
| a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| service ratios, response times or other performance objectives for any of the public services:<br>Fire protection?<br>Police protection?<br>Schools?<br>Parks?<br>Other public facilities? | | | | |
| **XV. RECREATION** | | | | |
| a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | | X |
| b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | X |
| **XVI. TRANSPORTATION/TRAFFIC** - Would the project: | | | | |
| a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | | | | X |
| b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | | | | X |
| c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | X |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | X |
| e. Result in inadequate emergency access? | | | | X |
| f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | | | | X |
| **XVII. UTILITIES AND SERVICE SYSTEMS** - Would the project: | | | | |
| a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | | X |
| b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | X |
| c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | X |
| d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | X |
| e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | X |
| f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | X | |
| g. Comply with federal, state, and local statutes and regulations related to solid waste? | | | X | |

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XVIII. MANDATORY FINDINGS OF SIGNIFICANCE** | | | | |
| a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | X | |
| b. Does the project have impacts that are individually limited, but cumulatively considerable? ( "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | | | | X |
| c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | | X |

# 3 Discussion of Environmental Impacts

As discussed in section 1.3.4, the baseline for this initial study and environmental impact evaluation is current conditions, including agricultural discharges already occurring and Management Practices (MPs) implemented in response to previous conditional waivers. CEQA analysis was previously completed for the 2005 Conditional Waiver and these documents were utilized during the renewal of the Conditional Waiver in 2010. Potential environmental impacts evaluated here include those impacts that may result from implementation of proposed changes to the Conditional Waiver as well as actions taken to implement the 2010 Conditional Waiver. The proposed Conditional Waiver will result in more widespread implementation of management practices for irrigation management, erosion control, pesticide management, and nutrient management.

Monitoring and Reporting Requirements proposed in the 2016 Conditional Waiver require the general types of MPs listed below, in addition to other MPs evaluated during adoption of the 2005 Conditional Waiver. The environmental impacts of some of the

general types of MPs listed below were also evaluated during CEQA analysis for 2005 Conditional Waiver; however they may be implemented more extensively in the Los Angeles Region by the 2016 Conditional Waiver and thus are considered in this environmental impact evaluation as well.

- Treatment systems
- Reduce sediment in runoff
- Stormwater runoff filtration and/or infiltration
- Improved Irrigation Efficiency

Descriptions of some specific MPs that foreseeably will be used for each category type listed above are detailed below. The environmental impacts of these MPs are analyzed throughout this evaluation.

## 3.1 Management Practice (MP) Descriptions

Treatment systems

*Tailwater recovery system*- A facility to collect, store, and transport irrigation tailwater for reuse in a farm irrigation distribution system. The purpose of the practice is to conserve farm irrigation water supplies and water quality by collecting the water that runs off the field surface for reuse in the farm irrigation system.

This practice involves planning and designing a tailwater recovery system, including pickup ditches, sumps, pits, and pipelines. A sump or pit is always needed to store the tailwater until it is redistributed in the farm irrigation system. The pits may be small or large depending on the type of recycling pump and other components of the irrigation delivery system. All tailwater recovery systems require facilities of some kind to convey the tailwater from the storage pit to the point of reentry into the farm irrigation system. (NRCS, Practice Code 447)

*Denitrifying Bioreactor* - An edge of field structure containing a carbon source, such as wood chips, installed to reduce the concentration of nitrate-nitrogen in subsurface agricultural drainage flow via enhanced denitrification (NRCS, 2016).

Reduce sediment in runoff

*Cover Crop*- Cover crops include grasses, legumes and forbs for seasonal cover and other conservation purposes. Cover crops can be used as an MP to attain the following results: reduce erosion from wind and water, increase soil organic matter content, capture and recycle or redistribute nutrients in the soil profile, promote biological nitrogen fixation, increase biodiversity, suppress weed growth, provide supplemental forage, soil moisture management, reduce particulate emissions into the atmosphere, minimize and reduce soil compaction (NRCS Conservation Practices Standard, Code 340).

*Mulching*- Mulching entails applying plant residues or other suitable materials produced off site, to the land surface. Mulching can be used as an MP to attain the following results: conserve soil moisture, moderate soil temperature, provide erosion control, suppress weed growth, facilitate the establishment of vegetative cover, improve soil condition, and reduce airborne particulates (NRCS Conservation Practices Standard, Code 484). The NRCS Conservation Practice Standard for Mulching specifies that mulching should be applied at a rate to achieve a minimum of 70 percent ground cover to provide erosion control. According to the NRCS Field Office Technical Guide (FOTG) for mulching, the reported lifespan for this practice is one year, but local NRCS staff has reported that woody mulch can last two to three years and mulch residue can last up to five years (NRCS, 2000).

*Catchment ponds*- Large ponds that prevent movement of sediment offsite. The ponds capture and reuse surface runoff. They are typically located at the low point in the field and must be maintained if used to trap sediment. These systems also can provide improved water management.

*Tailend berms*- Constructed earthen berms that slow down water, allowing sediments to settle out. These can replace tail-end "V" ditches.

*Sediment traps*- A variation on catchment ponds and berms. The traps are typically located on the tail end of a field and must be maintained.

Stormwater runoff filtration and/or infiltration

*Vegetated Swales*- Vegetated swales are constructed drainage ways used to convey stormwater runoff. Vegetation in swales allows for the filtering of pollutants, and infiltration of runoff into groundwater. Broad swales on flat slopes with dense vegetation are the most effective at reducing the volume of runoff and pollutant removal. Swales planted with native vegetation offer higher resistance to flow and provide a better environment for filtering and trapping pollutants from stormwater. Vegetated swales generally have a trapezoidal or parabolic shape with relatively flat side slopes. Individual vegetated swales generally treat small drainage areas (five acres or less).

*Filter Strips*- Filter strips are densely vegetated, uniformly graded areas that treat sheet flow from adjacent impervious surfaces. They reduce runoff velocities and trap sediment and other pollutants as they settle out. The reduced velocities also result in some infiltration. Filter strips are commonly planted with turf grass, but they may also employ native vegetation. Trees and shrubs may be used to create visual screening and physical barriers. According to the NRCS Conservation Practice Standard for Filter Strips (Code 393), a filter strip is a strip or area of vegetation that lies between cropland and riparian areas. Filter strips treat runoff and are not part of

the adjacent cropland rotation. Overland flow entering the filter strip must be sheet flow and concentrated flow must be dispersed (NRCS, 2000).

*Bioretention* - Bioretention uses a combination of soils and woody and herbaceous plants to remove pollutants from stormwater runoff. Runoff is conveyed to the treatment area, which consists of a grass buffer strip, sand bed, ponding area, organic or mulch layer, planting soil, and plants. The sand bed slows the runoff's velocity and distributes it evenly along the length of the ponding area. The ponding area has a surface organic layer and/or ground cover and the underlying planting soil. The ponding area is graded, and the center is depressed. Water is ponded to a depth of approximately 6 inches and either infiltrates the ground or is evapotranspired. Bioretention removes pollutants through both physical and biological processes. Common particulates removed include particulate organic matter, phosphorus, and suspended solids.

*Infiltration Basin*- An infiltration basin is an impoundment that captures stormwater and allows it to infiltrate into the ground over a period of days. The basin temporarily stores runoff for a storm of a specific design frequency. The bottom of the basin is vegetated, enabling deep rooted plants to increase the infiltration capacity of the basin. The roots create conduits for the water to infiltrate. Soil needs to be permeable enough to allow the water to infiltrate, but not so permeable that the water infiltrates too quickly and does not have ample time to be treated. The applicability of an infiltration basin is dependent on soil type, slope, depth to the water table, depth to the bedrock or impermeable layer, contributing watershed area, land use, and proximity to wells and surface waters. Infiltration basins generally require pretreatment of stormwater to remove large particulates and suspended solids before entering the basin.

Improved Irrigation Efficiency

*Soil water monitoring*- Monitoring soil water depletion through field sensors, California Irrigation Management and Information System (CIMIS), or moisture by feel analysis is important for determining when to irrigate. If the soil water profile is too high when irrigating, deep percolation or surface water runoff may increase. If previous irrigations have sealed the soil surface, it may be necessary to cultivate the furrows to break up the surface skin so that the irrigation water can infiltrate.

*Application depth*- Proper depth of application is important for preventing the movement of nitrates and other mobile constituents to groundwater. The depth of application is a function of the soil type, irrigation system, and existing soil water depletion.

*Timing of irrigation*- Proper timing of irrigations reduces crop stress and susceptibility to disease and pest infestation. It also reduces the potential for runoff due to overwatering and thus the likelihood that nutrients or pesticides will be transported off site. Soil water content and the depth of application should be monitored to ensure that irrigation does not occur too early or too late.

*Low-volume irrigation systems* - Low-volume irrigation systems such as drip tapes or micro sprinklers are effective in preventing irrigation water runoff. A well-designed system loses practically no water through runoff, deep percolation, or evaporation.

## 3.2 Environmental Impact Evaluation

### I. Aesthetics

Impact: No Impact

The small size and scale of MPs foreseeably implemented to comply with the Conditional Waiver are unlikely to result in significant aesthetic impacts because they are at or below grade and will not be visible.

### II. Agriculture and Forest Resources

Impact: Less than Significant with Mitigation

Some of the larger structural MPs to reduce sediment in runoff or filter/infiltrate stormwater runoff, such as catchment ponds, filter strips, and infiltration basins, could affect the amount of land used for agricultural use if they were placed on farms in areas that were otherwise used to plant crops. Because the Regional Water Board cannot specify the manner of compliance with the Conditional Waiver, the Regional Water Board cannot determine the exact location of MPs.

A search of the *California Important Farmland Finder* (http://maps.conservation.ca.gov/ciff/ciff.html), hosted by the Department of Conservation, on February 1, 2016 identified areas of Prime Farmland, Unique Farmland and Farmland of Statewide Importance within the Los Angeles Region. Potential implementation of MPs on these lands should adhere to appropriate restrictions applicable to the particular farmland designation.

The California Land Conservation Act (Government Code Section 51200 et seq.) of 1965, commonly known as the Williamson Act, provides a tax incentive for the voluntary enrollment of agricultural and open space lands in contracts between local government and landowners. The contract enforceably restricts the land to agricultural and open space uses and compatible uses defined in state law and local ordinances. An agricultural preserve, which is established by local government, defines the boundary of an area within which a city or county will enter into contracts with landowners. The State of California has the following policies regarding public acquisition of and locating public improvements on lands in agricultural preserves and on lands under Williamson Act contracts (Government Code Sections 51290–51295):

> (a) It is the policy of the state to avoid, whenever practicable, the location of any federal, state, or local public improvements and any improvements of public utilities, and the acquisition of land therefore in agricultural preserves.
>
> (b) It is further the policy of the state that whenever it is necessary to locate such an improvement within an agricultural preserve, the improvement shall, whenever practicable, be located upon land other than land under a contract pursuant to this chapter.
>
> (c) It is further the policy of the state that any agency or entity proposing to locate such an improvement shall, in considering the relative costs of parcels of land and the development of improvements, give consideration to the value to the public, as indicated in Article 2 (commencing with Section 51220), of land, and particularly prime agricultural land, within an agricultural preserve.

As of March 2015, there are no Williamson Act contracts within Los Angeles County. There are Williamson Act contracts within Ventura County that must be considered during implementation of MPs to comply with the Conditional Waiver.

Portions of the Los Angeles Region are under the jurisdiction of the U.S. Forest Service (USFS) as part of either the Angeles National Forest or the Los Padres National Forest. Implementation of the Conditional Waiver is not expected to result in loss of forest land or conversion of forest land to non-forest use because irrigated agriculture is not occurring nor will it likely occur in the portions on the Los Angeles Region that are forest land.

Mitigation Measures

The Conditional Waiver does not propose or require any person to take agricultural lands out of production. Some MPs to reduce sediment in runoff or filter/infiltrate stormwater runoff, such as catchment ponds, filter strips, and infiltration basins, could take some farm land out of production if they were placed on farms in areas that were otherwise used to plant crops. In general, these MPs are not expected to have an adverse environmental effect and should have an overall positive environmental impact because they will eliminate or reduce discharges of waste to waters of the state that have severely impacted the beneficial uses. To the extent possible, these MPs should be implemented in a way that does not result in reduction in acreage of any agricultural crop. To mitigate the potential reduction in crop acreage, dischargers could plant ground cover that would serve as both agricultural land and reduce sediment runoff and infiltrate stormwater. Dischargers could eliminate activities that cause erosion such that larger projects to retain sediment or runoff are not necessary. Many of these strategies may actually improve agricultural resources by reducing the loss of topsoil or improving soil quality. Local

zoning plans should be consulted regarding existing zoning for agricultural use as individual MPs are selected by growers to implement the Conditional Waiver. The Conditional Waiver does not relieve the Discharger of the requirement to comply with other required local, State, and federal permits for the construction of facilities necessary for compliance with this Order.

## III. Air Quality

Impact: Less than Significant Impact

Air quality in the Los Angeles Region falls under the jurisdiction of the California Air Resources Board (ARB) and local air quality management districts: South Coast Air Quality management District (SCAQMD) and the Ventura County Air Pollution Control District (VCAPCD). The ARB is responsible for controlling mobile emission sources statewide, while the air quality management districts are responsible for enforcing the standards that apply to stationary sources. The SCAQMD is currently designated as nonattainment for the State and federal particulate and ozone standards. The VCAPCD is currently designated as nonattainment for ozone. It also exceeds the state standards for ozone and particulate matter.

The potential MPs may result in air quality impacts from short-term emissions due to construction-related equipment and vehicles. The types of equipment and vehicles to construct MPs would not differ from the types of equipment and vehicles used in crop production. Emission levels for potentially emitted pollutants are expected to be below Air Quality Significance thresholds considering the scale of the Conditional Waiver. The number of vehicle trips necessary to comply with the Conditional Waiver would not cause significant emissions over baseline conditions in the region and are not likely to be increased over the previous Conditional Waiver term.

## IV. Biological Resources

Impact: Less than Significant with Mitigation

It is possible that improved irrigation efficiency in some areas will result in reduced flows, especially during the summer. These reduced flows could have a potential impact on special status species, riparian habitat, wetlands, and movement of fish. There are special status species in the Los Angeles Region in areas where there is irrigated agricultural land and downstream of areas where there is irrigated agricultural land. Reduced flow may have the potential to significantly impact these species. However, many streams and rivers in the Los Angeles region would not flow during the summer months under natural conditions, and reduction in summer flows will not likely affect native plants and animals that are adapted to such hydrologic regimes. In addition, reduced withdrawals of water for irrigation uses in some locations will allow surface and groundwater flows to return to, or more closely approximate, natural flows and will either

cause no impact or improve habitat by allowing it to return to a natural state. For the plants and animals that are adapted to the altered flow regime in the Los Angeles Region and that are found near agricultural tail water and/or tile drains, continuing to discharge water with excessive levels of pesticides and nutrients is not an environmentally desirable situation.

Installation of some MPs, depending on their location, could also result in temporary habitat disturbances resulting from transport of equipment and personnel, which could result in direct or indirect impacts to special-status species.

Mitigation Measures

Potential mitigation measures to prevent reduced flows or to reduce the impact due to reduced flows include phasing in MPs that could result in reduced flows and implementing MPs that will effectively treat the water to remove pollutants, but not necessarily reduce flows.

Potential mitigation measures to reduce habitat impacts due to construction of MPs include conducting a biological survey and/or a search of the California Natural Diversity Database (CNDDB) to confirm that any potentially special-status plant and animal species in the site area are properly identified and protected as necessary.

To evaluate the effectiveness of mitigation measures, the Conditional Waiver requires Dischargers to develop an individual WQMP, or to complete a farm evaluation plan or respond to the survey/questionnaire developed by the Discharger Group for the purpose of assessing MP implementation. In addition, the Conditional Waiver does not authorize the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code section 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. section 1531 to 1544).

## V. Cultural Resources

Impact: No Impact

Implementation of the proposed Conditional Waiver is not likely to affect cultural resources. None of the potential practices that growers might implement are likely to change the significance of any historical or archaeological resource, destroy a unique paleontological resource or geologic feature, or disturb any human remains.

## VI. Geology and Soils

Impact: Less than Significant with Mitigation

The implementation of agricultural MPs would not expose people or structures to potential substantial adverse seismic-related effects. Nor would MPs result in soil erosion or loss of topsoil because they will be designed to reduce erosion and thus will have a long term positive impact on the local soils.

Implementation of some structural MPs could result in unstable soil conditions by increasing the rate at which water is discharged to the ground.

Mitigation Measures

Proper sizing and siting is necessary to ensure that MPs are installed away from areas with loose or compressible soils, areas with slopes that could destabilize from increased groundwater flow. Standard construction techniques, including but not limited to, shoring, piling, and soil stabilization can also mitigate potential short-term impacts. To evaluate the effectiveness of mitigation measures, the Conditional Waiver requires Dischargers to develop an individual WQMP, or to complete a farm evaluation plan or respond to the survey/questionnaire developed by the Discharger Group for the purpose of assessing MP implementation.

## VII. Greenhouse Gas Emissions

Impact: Less than Significant

In 2006, California passed AB 32, the Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas emissions reduction goal into law. The current 2020 GHG emission limit is 431 million metric tons of CO2 equivalents (MMTCO2e) (ARB, 2014). The 2020 target of 431 MMTCO2e requires the reduction of 78 MMTCO2e, or approximately 15 percent, from the State's projected 2020 emissions of 509 MMTCO2e.

In June 2008, the ARB published its Climate Change Scoping Plan (ARB, 2008). An update to the Climate Change Scoping Plan was published in May 2014 (ARB, 2014). The Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California. When compared to the estimated greenhouse gas reduction goal of 78 million tons CO2e by 2020, and the benchmark of 25,000 MMTCO2e used to determine greenhouse gas emission reporting requirements for major facilities, the relative contributions of the Conditional Waiver implementation program to greenhouse gas emissions are small and would not conflict with the state's ability to meet AB 32 goals.

Implementation of various MPs could cause an increase in air pollutant emissions, including greenhouse gas emissions, but these activities would be the same as typical activities occurring in agricultural areas and would not be significant to cause climate change.

Increased vegetation may result from implementation of reasonably foreseeable MPs including cover crops, vegetated swales, filter strips, bioretention, and infiltration basins. This increased vegetation would have a positive impact as they remove greenhouse gases from the atmosphere.

## VIII. Hazards and Hazardous Materials

Impact: Less than Significant

The Department of Pesticide Regulation examines hazards posed by pesticides to workers and the public during its regulatory process. Each product is evaluated for potential hazards and any conditions necessary for the safe use of the material are required on the label or in specific regulations. Some of these requirements include use of protective clothing and respirators, use of a closed system for mixing and loading, or special training requirements for workers applying the pesticide. Implementation of the Conditional Waiver should not result in any increased exposure to hazards or hazardous material and may reduce exposure as growers implement pest management techniques that reduce applications in order to minimize potential runoff.

It is not foreseeable that implementation of the Conditional Waiver would result in MPs located at hazardous materials sites, an airport-related or private air-strip related safety hazard, an impact on emergency response and evacuation plans, or exposure of people or property to wildland fires.

## IX. Hydrology and Water Quality

Impact: Less than Significant with Mitigation

The purpose of the Conditional Waiver is to attain water quality standards throughout the Los Angeles Region; as such, implementation efforts should have a positive effect on water quality.

A change in the quantity of ground waters may occur if compliance with the Conditional Waiver is achieved through significant infiltration of stormwater, but this would be a positive change.

The implementation of stormwater infiltration MPs or other MPs that collect and/or inhibit runoff could alter the existing drainage pattern of the site or area, but not in a manner which would result in substantial erosion or siltation on- or off-site increase the rate or amount of surface runoff. For example, vegetated swales would change drainage patterns by increasing absorption rates, which would reduce the amount of surface runoff to the receiving waters. Potential impacts to the course of flow of flood waters may be considered a positive impact, as stormwater infiltration MPs are likely to reduce the flow rate need for additional stormwater conveyance infrastructure.

Implementation of MPs may result in the placement of structures within the 100-year flood zone and they may impede or slow overland flow if not properly designed and maintained. Permits for the placement of such structures would be required.

The MPs that would be used to implement the Conditional Waiver are intended to improve water quality and would not result in the construction of the type of structures that would expose people to a significant risk of loss, injury or death involving flooding or increase the risk of seiche, tsunami, or mudflow.

Mitigation Measures

To mitigate potential impacts of MPs regarding impeding flood flows, the MPs should be designed to allow adequate drainage of water and maintained to remove clogged material. To evaluate the effectiveness of mitigation measures, the Conditional Waiver requires Dischargers to develop an individual WQMP, or to complete a farm evaluation plan or respond to the survey/questionnaire developed by the Discharger Group for the purpose of assessing MP implementation. The Conditional Waiver does not relieve the Discharger of the requirement to comply with other required local, State, and federal permits for the construction of facilities necessary for compliance with this Order.

X. Land Use and Planning

Impact: Less than Significant

Implementation of MPs should not result in above-ground infrastructure that would disrupt, divide, or isolate existing communities or land uses. MPs would all occur on land already zoned for agriculture.

Potential conflicts with land use plans or conservation plans are best addressed by the growers during implementation of the Conditional Waiver. Since the Regional Water Board cannot specify the manner of compliance with the Conditional Waiver, the Regional Water Board cannot specify the exact location of MPs. Dischargers will need to identify local conservation plans to ensure that MPs comply with permitted use regulations and are consistent with any applicable habitat conservation plan or natural community conservation plan.

XI. Mineral Resources

Impact: No Impact

The effect of the proposed Conditional Waiver should be limited to land currently under agricultural production, and there is not expected to result in any impact to mineral resources.

XII. Noise

Impact: No Impact

The Conditional Waiver is not expected to have any impact on noise in the project area.

XIII. Population and Housing

Impact: Less than Significant

It is not foreseeable that implementation of MPs to comply with the Conditional Waiver would induce significant population growth, displace existing housing, or displace people.

XIV. Public Services

Impact: No Impact

The Conditional Waiver will be implemented by private growers on private land and not result in the provision of or need for new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives.

XV. Recreation

Impact: No Impact

The Conditional Waiver will be implemented by private growers on private land and therefore will not increase the use, or include or require the construction of parks or other recreational facilities.

XVI. Transportation/Traffic

Impact: No Impact

The proposed Conditional waiver is not expected to have an impact on transportation/traffic.

XVII. Utilities and Service Systems

Impact: Less than Significant

The purpose of the Conditional Waiver is to improve water quality and contain conditions to protect water quality; consequently, implementation efforts to comply with the Conditional Waiver should have a positive impact on water quality. Reasonably foreseeable implementation measures would meet all wastewater treatment requirements of the Regional Water Board because any compliance measure involving a treatment facility would be permitted by the Regional Water Board.

It is not foreseeable that implementation of the Conditional Waiver will necessitate increased treatment capacities of wastewater treatment facilities or result in the construction of new storm water drainage facilities. Structural MPs foreseeable to comply with the Conditional Waiver are designed to infiltrate, reuse, and otherwise retain water on site, thus potentially reducing the volume of water requiring treatment at wastewater treatment facilities. Infiltration MPs have the potential to recharge groundwater aquifers, thereby having a positive impact on water supply.

It is not reasonably foreseeable that implementation of MPs to comply with the Conditional Waiver will result in a substantial increase in the need for new water supply systems or substantial alterations to water utilities. Compliance options will not result in the development of any large residential, retail, industrial or other development projects that would significantly increase the demand on the current water supply facilities or require new water supply facilities.

Compliance with the Conditional Waiver is not expected to require new or substantial alterations to the solid waste disposal as the reasonably foreseeable MPs are not anticipated to generate significant amounts of solid wastes. Nominal amounts of construction debris may be generated by installation of structural MPs. Construction debris can be reused on site, recycled at aggregate recycling centers, or disposed of in landfills. Existing landfills in the area should have adequate capacity to accommodate this limited amount of construction debris. It is not foreseeable that this proposal will result in a need for new systems, or substantial alterations to solid waste and disposal utilities. In addition, persons implementing MPs to comply with the Conditional Waiver must comply with applicable federal, state, and local statutes and regulations related to solid waste.

## XVIII. Mandatory Findings of Significance

Impact: Less than significant

The adoption of the Conditional Waiver is not expected to result in significant impacts on the environment. As identified in this document, there are available reasonable mitigation measures to reduce any potentially significant adverse environmental impacts that could be associated with the reasonably foreseeable methods to comply with the conditions of the waiver. The implementation of this Conditional Waiver will result in improved water quality in the waters of the region and will have significant beneficial impacts to the environment over the long term. Each MP is expected to have nominal environmental

impacts if implemented properly. Mitigation measures are available to reduce effects of these impacts.

The project will not cause substantial adverse effects on human beings. It is not expected that implementation of the Conditional Waiver will cause cumulatively considerable negative impacts. The implementation of this Conditional Waiver will result in improved water quality in the waters of the region and will have significant beneficial impacts to the environment over the long term.

The initial study for the Conditional Waiver and this checklist provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented MPs will not have a significant adverse effect on the environment.

# 4 Public Participation and Agency Consultation

Interested persons, agencies and the public have been consulted throughout the development of the proposed Conditional Waiver. Regional Water Board staff met with, or contacted by phone or email, agricultural industry representatives, environmental groups, and local entities such as the county Resource Conservation District. Staff has consulted with the California Department of Food and Agriculture, the United States Environmental Protection Agency Department of Pesticide Regulation, and the USDA Natural Resources Conservation Service prior to completing the draft proposed Conditional Waiver and Initial Study.

# 5 References

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