

DRAFT Initial Study/  
Negative Declaration

Analyzing the Impact of  
Permanently Prohibiting  
Certain Wasteful Water Use  
Practices

November 2017

State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

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## NEGATIVE DECLARATION

1. Project title:	Analyzing the Impact of Permanently Prohibiting Certain Wasteful Water Use Practices
2. Lead Agency Name and Address:	State Water Resources Control Board 1001 I Street Sacramento, CA 95814
3. Contact person and Phone Number:	Charlotte Ely, Sr. Environmental Scientist (916) 319- 8564 Charlotte.Ely@waterboards.ca.gov
4. Project location:	California
5. Project sponsor's name and address:	State Water Resources Control Board Office of Research, Planning and Performance: Climate & Conservation Unit 1001 I Street, Sacramento, CA 95814
6. General plan designation:	N/A
7. Zoning:	N/A
8. Description of project:	<p>2012 through 2014 are on record as California’s driest three consecutive years. 2013 was the driest single year on record for numerous communities across the State, triggering emergency actions at State and local levels. The recent drought placed an even greater emphasis on urban water conservation and efficiency. Beginning in January 2014, with the Governor’s drought emergency proclamation, a series of successive executive orders directed Californians to conserve water via emergency conservation regulations. Between June 2014 and April 2017, the emergency regulations mandated urban water use reductions that resulted in the conservation of over 3.5 million acre-feet.</p> <p>The 2014-2015 drought-related actions and response activities were followed by Executive Orders (EO) B-37-16 in May 2016 and B-40-17 in April 2017. The EOs tasked State agencies with establishing a long-term framework for water conservation and drought planning. The EO actions are organized around four primary objectives: using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning.</p> <p>To eliminate water waste, the State Water Resources Control Board (State Water Board or Board) has been directed to permanently prohibit practices that waste water. The purpose of this draft Initial Study/Negative Declaration is to evaluate the potential environmental effects that permanently prohibiting certain wasteful water use practices could have on California’s environment. The wasteful water uses prohibited by the proposed regulation build on the existing emergency conservation regulations and include the following:</p>

- The application of water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
- The use of a hose that dispenses water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;
- The application of potable water to driveways and sidewalks;
- The use of potable water in an ornamental fountain or other decorative water feature, except where the water is part of a recirculating system;
- The application of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall of at least one-tenth of an inch;
- The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;
- The irrigation of turf on public street medians or publically owned or maintained landscaped areas between the street and sidewalk, except where the turf serves a community or neighborhood function.

The proposed regulation also requires specific actions of the Commercial, Industrial, and Institutional (CII) sector:

- Hotels and motels must provide guests with the option of having towels and linens laundered, and prominently display this option.

The proposed regulation also prohibits specific actions of local agencies and homeowners' associations:

- Cities, counties, and cities and counties may not prevent or punish residents for water conservation in violation of existing statutes.
- Homeowners' associations may not prevent or punish residents for landscaping that reduces watering during a declared drought emergency in violation of existing statutes or prevent or punish residents for water conservation in violation of certain existing statutes.

This draft Initial Study/Negative Declaration evaluates how those actions could impact California's environment. Because many of the required actions in general do not have the potential to cause a substantial impact on the environment, the analysis focuses primarily on those prohibitions that would reduce outdoor water waste, such as those prohibitions addressing wasteful irrigation practices.

As much as 50% of water used outdoor is wasted (WSP 2003; IRWD 2004) and lost to wind, evaporation or runoff (EPA 2013). Accordingly, the draft Initial Study/Negative Declaration examines in depth how and whether the proposed regulation would affect runoff and how changes in runoff could affect California's environment, especially surface waters and the biological resources dependent on those waters.

For some California streams, runoff in the summer – when rainfall is low and irrigation is high— can represent a sizable percentage of total flow. For example, in 2013, runoff and other unaccounted sources represented 16.6 percent of the Los Angeles River’s dry weather flow (TNC 2016). Reducing flow can be detrimental, disrupting hydrological connectivity, which directly (e.g., habitat loss) and indirectly (e.g., altered food webs) affects stream ecosystems (Lake 2003). This analysis evaluates the potential impacts of the proposed regulation, focusing primarily on the prohibitions that could reduce outdoor water waste and thereby reduce dry-weather runoff. The relevant prohibitions include those addressing landscape irrigation, car washing and street washing practices.

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

California is the most populous state in the Nation, with 39,524,000 people as of January 2017 (DOF 2017). It is the third largest state in the Nation, covering 163,696 square miles (Census 2009). If people were evenly distributed throughout the State, there would be approximately 250 individuals per square mile. That, however, is not the case. In 2010, 95% of Californians occupied 5.3 percent of state’s land area (U.S. Census 2012). Although the proposed regulation would apply to water use statewide, this draft Initial Study/Negative Declaration focuses primarily on how the proposed regulation —especially those prohibitions addressing outdoor waste waste— would affect California’s environment in *urban areas*.

The analysis focuses on urban areas for several reasons. First, *urban areas* are, by definition, densely populated areas. The U.S. Census delineates urban areas using population density thresholds. Previously, it was 1,000 persons per square mile (ppsm); in the 2010 census, it was lowered to 500 ppsm<sup>1</sup> (76 FR 53030). Population affects how and how much water is consumed (Hoekstra and Mekonnen 2012). Where more people live in an area, more water will be consumed and more water may be wasted. The analysis focuses on urban areas because 1) urban areas are likely to cumulatively use significant volumes of water subject to the proposed restrictions (and, conversely, sparsely populated areas are not likely to use significant volumes of water that would be affected by the proposed restrictions); and 2) a reduction in the flow of wasted water from the prohibited (outdoor) activities may reduce dry-weather runoff and thereby affect California’s environment.

Secondly, the analysis focuses on urban areas because they often contain a higher percentage of impervious areas, where hardscapes (e.g., buildings, pavement) cover the land surface. In general, urbanization increases the area of impervious surfaces (Paul and Meyer 2001). As impervious surfaces increase, less water infiltrates into soils and more water runs off the landscape and into stream channels, increasing flow volume and speed, altering morphology and flow patterns (Dunne and Leopold 1978). The analysis reasonably assumes that, in these modified watersheds, runoff that would have otherwise soaked into the ground instead flows across hardscapes to the nearest channel. While those flows are artificial, they may in some cases, by themselves or in combination with natural flows, support biological resources. Reducing those flows by reducing the dry weather runoff resulting from the wasteful water use practices addressed by the proposed regulation could have a detrimental impact in such

<sup>1</sup> The 500 ppsm threshold captures those areas containing a mix of residential and nonresidential urban uses.

channels and on the biological resources dependent on them.

Third, in many rural areas, water is sourced from local streams and/or aquifers. Nearly 600 special purpose local agencies in California obtain water from local sources (WEF 2017). In these instances, prohibiting wasteful outdoor water use practices such that dry-weather runoff volumes decrease would likely have no or very little effect on the water source. Water conserved as a result of the proposed regulation would not be diverted in the first place, obviating potential concerns over diminished return flows.

Because rural areas are neither densely populated nor significantly covered by impervious surfaces, and, in many cases, the water waste prohibited by the proposed regulation would simply remain in the local streams and/or groundwater basins, this document does not include a detailed analysis of rural areas, as there is no reasonable likelihood of significant impacts in those areas. Instead it focuses on urban areas as the places where there may be significant impacts. **Figure 1: Urban Areas of California** shows California's urban areas.<sup>2</sup>

Many of these urban areas, however, would not be impacted by the proposed regulation. In evaluating the potential impacts of the proposed regulation, the analysis must consider the influence of existing rules, regulations, ordinances, permits and policies. For many areas of the State, existing permits and policies already prohibit the wasteful water uses that would be prohibited by the proposed regulation.

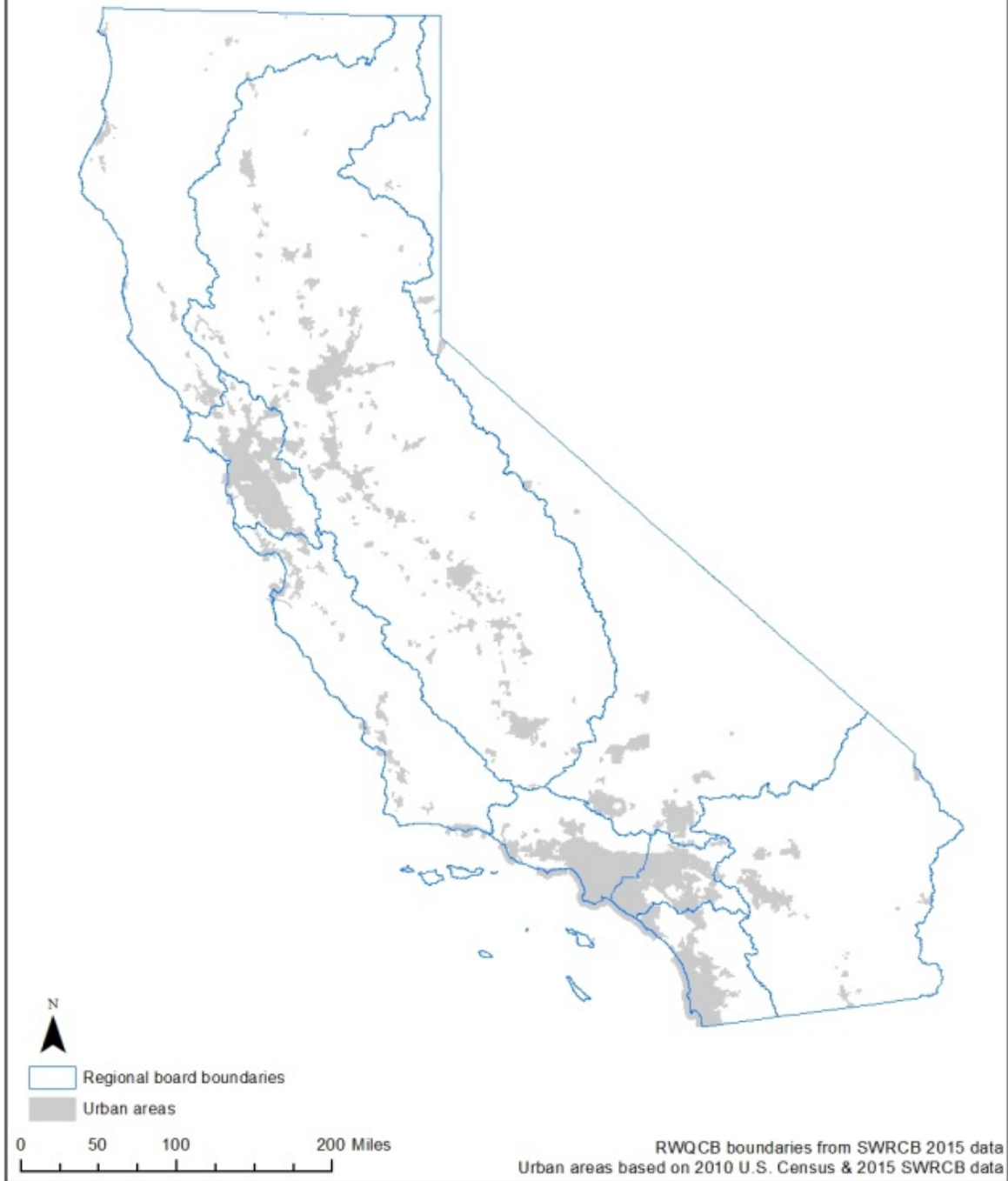
While the proposed regulation would be the first statewide regulation to permanently prohibit the identified wasteful water use practices, statewide prohibitions have been in place since July 2014, when the State Water Board first included them in emergency conservation regulations. Additionally, as required under the Clean Water Act (CWA), Municipal Separate Storm Sewer System (MS4) Phase I and II permits either prohibit the discharge of, or require Best Management Practices (BMPs) to control, runoff from sources such as street wash-, over irrigation-, and residential car wash water. Also, many water districts have long-term water use policies in place restricting outdoor water use practices, either mirroring or substantially similar to those that would be prohibited by the proposed regulation (Appendix A).

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<sup>2</sup> Urban areas were mapped using the SWRCB's 2015 "City Boundaries" layer, derived from the Tax Area Services Section of the California Board of Equalization 2013-2015 data release and the U.S. Census Bureau's 2010 decennial "urban areas" layer, which consists of *urbanized areas* of 50,000 or more people; *urban clusters* of at least 2,500 and less than 50,000 people (**urban clusters include unincorporated areas**).



### Urban areas



**Figure 1: Urban Areas of California**

### **Drought Emergency Water Conservation Regulations**

The Board's drought emergency water conservation regulations were first adopted in July 2014. Since then, they have been readopted several times, most recently in February 2017. During this period they have been in place continually, with some modifications. For the most part, the prohibited practices did not change as the regulations were modified and readopted. In April 2017, in response to Governor Brown's ending of the drought emergency, the State Water Board rescinded elements of the drought emergency water conservation regulations, but not the prohibitions against wasteful water use practices. Those prohibitions—addressing almost exactly the same wasteful water use practices as the proposed permanent conservation regulation—remain in effect through November 2017. At the time of this document's circulation, the entire State is subject to these prohibitions.

However, as the purpose of this document is to analyze the potential impact of the proposed *permanent* conservation regulation, the Board's drought emergency water conservation regulations have been excluded from the environmental baseline because they were *temporary* measures and were adopted while the Governor had suspended CEQA review for certain drought emergency actions, including the Board's drought emergency water conservation regulations. This analysis does, however, consider the influence of other rules, regulations, ordinances, permits and policies that would continue to be in place regardless of a drought emergency declaration, as those are appropriately part of the environmental and regulatory baseline.

### **Permits**

In meeting CWA permit requirements, many California communities already address some or all of the wasteful outdoor water use practices that would be prohibited by the proposed regulation. Since 1990, the California Regional Water Quality Control Boards (Regional Water Boards) have issued Phase 1 MS4 permits for medium and large municipalities. Table 6 in Appendix A shows which of the Phase 1 permits require permittees to address street wash-, over irrigation-, and residential car wash water runoff.

Since 2003, the State Water Board has issued the Phase II permit, providing permit coverage for smaller municipalities. The general permit prohibits the discharge of street wash water. It also requires the control of "discharges *in excess of* an amount deemed to be incidental..." defining incidental as "unintended amounts...of runoff" (State Water Board 2013 at p. 17). Runoff volumes *in excess of incidental* volumes from sources such as residential car washes and over irrigation of landscapes are therefore currently required to be controlled pursuant to these permits.

### **Urban Water Management Plans**

Additionally, many water districts have long-term water use policies in place restricting certain outdoor water uses or restricting outdoor water use under certain parameters. Urban water suppliers<sup>3</sup> have been required to develop Urban Water Management Plans (UWMPs) since 1983. The Water Code requires the Plans to include information about demand

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<sup>3</sup> Urban water suppliers are defined as water districts providing over 3,000 acre-feet of water annually or serving more than 3,000 urban connections.

management measures including "water waste prevention ordinances" (Wat. Code, § 10631, subd. (f)) and, as part of drought contingency planning, "....mandatory prohibitions against specific water use practices during water shortages...." (Wat. Code, § 10632). Furthermore, communities throughout the state have prohibited wasteful water use practices independently of state requirements.

### **Analytical scope**

In the areas where local rules, regulations, ordinances, permits and/or policies already restrict or regulate runoff from outdoor water use activities, the proposed regulation would not create new prohibitions and would therefore not cause any independent significant effect on the environment. In those urban areas where there are no such permits or policies in place, the State Water Board has undertaken additional analysis.

There is no possibility of significant impacts to the environment in areas where these prohibitions already exist in the same or a substantially similar form to the prohibitions in the proposed regulation. Furthermore, there is no possibility of significant impacts to the environment from those requirements or prohibitions in the proposed regulation that apply indoors only (e.g. prohibiting restaurants from serving water except upon request) in any area, regardless of existing plans or prohibitions.

Accordingly, in evaluating the potential environmental impacts of permanently prohibiting the identified wasteful water use practices, the potentially affected area—that is, the areas where the prohibitions have the potential to cause any impacts whatsoever— is limited to urban communities where Phase 1 and Phase 2 MS4 permits do not already prohibit and/or require BMPs to address street wash-, over irrigation-, and residential car wash water; and to those communities that have not independently or via required UWMPs enacted equivalent ordinances, rules, or policies to restrict outdoor water use (See Appendix A and Figure 2).

### **Summary of findings**

The proposed regulation would not have a significant effect on the environment. Without accompanying changes in pricing or mandatory production quantity reductions, type-of-use restrictions (a.k.a., prohibitions) alone achieve modest reductions (Dixon and Moore 1996, Olmstead and Stavins 2009, Mini 2015, Manago and Hogue 2017). The proposed regulation would only prohibit certain wasteful water use practices. Because the regulation would not also require water agencies to change rates in a manner to incentivize the mandated conservation practices, or to achieve percent reductions as required under the most effect iterations of the drought emergency water conservation regulations, the analysis assumes modest reductions due to the proposed regulation. If the proposed regulation were to result in additional water savings (i.e., conservation greater than what would occur without the proposed regulation), the Water Board anticipates those savings would be commensurate with the conservation the prohibitions catalyzed under the drought emergency water conservation regulations. The Water Board assumes that 1 percent of the total June 2014 to April 2017 savings are attributable to the prohibitions for reasons described in the Biological Resources section.

Given that the proposed regulation alone is unlikely to result in significant water savings, even within the potentially affected area, it is reasonable to conclude that, when fully implemented, the proposed regulation is unlikely to reduce dry-weather runoff such that dry-weather stream flows significantly decrease and affect biological resources, such as special status species, riparian areas, and wetlands. The impacts, if any, are assumed to be less than significant, particularly as reductions in dry-weather runoff could help reinstate historic flow regimes, which would support the variable and dynamic conditions favored by native species. The proposed regulation could additionally benefit California’s environment by reducing greenhouse gas emissions, improving water quality and slowing growth in urban water demand, allowing utilities to delay or avoid investing in costly new sources.

The statewide drought emergency is over but the long-term challenge of water allocation between urban, agricultural, and environmental uses remains. For the fifth consecutive year, dry conditions persist in areas of the state, with limited drinking water supplies in disadvantaged communities. Additionally, water for agricultural production and environmental habitat remains diminished, groundwater basins severely depleted and California’s forests ravaged—with as many as 100 million trees killed by drought. These conditions will persist and intensify as warmer winter temperatures driven by climate change reduce water held in the Sierra Nevada snowpack and result in drier soil conditions.

A changing climate and a growing population are two of many interacting factors exacerbating conditions of great need and relative scarcity. Water conservation is the easiest, most efficient, and most cost-effective way to quickly reduce water demand and extend supplies, providing flexibility for all California communities. The prohibitions that would be enacted by the proposed regulation represent a necessary and practical step forward.

10. Other public agencies whose approval is required:	No
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	No

**Urban areas without equivalent requirements prohibiting:**  
The application of water directly onto driveways and sidewalks  
The application of water to outdoor landscapes in a manner that causes runoff  
The use of a hose to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle



Figure 2: Potentially Affected Area

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

Aesthetics	Agricultural Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Greenhouse Gas Emissions	Hazards and Hazardous Materials	Hydrology/Water Quality
Land use/Planning	Mineral Resources	Noise
Population/Housing	Public Services	Recreation
Transportation/Traffic	Utilities/Services Systems	Mandatory Findings of Significance
Tribal cultural resources		

### 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.

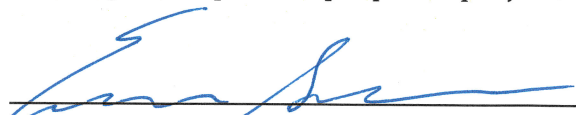
X

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.

  
\_\_\_\_\_  
Eileen Sobeck, Executive Director, State Water Board

Nov. 2, 2017  
\_\_\_\_\_  
Date

## EVALUATION OF ENVIRONMENTAL IMPACTS

This section identifies the environmental impacts of this project by answering questions from Appendix G of the CEQA Guidelines, the Environmental Checklist Form. The environmental issues evaluated in this chapter include:

Aesthetics	Agricultural Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Greenhouse Gas Emissions	Hazards and Hazardous Materials	Hydrology/Water Quality
Land use/Planning	Mineral Resources	Noise
Population/Housing	Public Services	Recreation
Transportation/Traffic	Utilities/Services Systems	Mandatory Findings of Significance

All analyses take account the entire action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Impacts are categorized as follows:

Potentially Significant Impact is appropriate if there is substantial evidence that an effect is significant, or where the established threshold has been exceeded. If there are one or more “Potentially Significant Impact” entries when the determination is made, an Environmental Impact Report (EIR) may be required.

Less Than Significant with Mitigation Incorporated applies where the incorporation of mitigation measures would reduce an effect from Potentially Significant Impact to a Less Than Significant Impact. Mitigation measures are prescribed to reduce the effect to a less than significant level.

Less Than Significant applies when the project will affect or is affected by the environment, but based on sources cited in the report, the impact will not have an adverse effect. For the purpose of this report, beneficial impacts are also identified as less than significant. The benefit is identified in the discussion of impacts, which follows each checklist category.

A No Impact answer is adequately supported if referenced information sources show that the impact simply does not apply to projects like the one involved. A No Impact Answer is explained where it is based on project-specific factors as well as general standards.

## ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AESTHETICS.</b> Would the project:				
Have a substantial adverse effect on a scenic vista?				X
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?			X	
Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				X

### Affected Environment:

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The visual landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. Some of the prohibitions in the proposed regulation pertain only to indoor activities (e.g. serving drinking water other than upon request) and do not have the potential to impact any of the categories of aesthetic resources. The only potential environmental effects regarding aesthetics pertain to reduced outdoor water waste. The proposed regulation would have no impact or a less than significant impact on aesthetic resources.

### Discussion:

*Have a substantial adverse effect on a scenic vista?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and have no potential to impact a scenic vista.

*Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

**Less Than Significant Impact.** The proposed regulation prohibits wasteful and excessive urban water use practices. It is unlikely that any of the prohibited water use practices are currently in place within a State scenic highway (e.g., the irrigation of a scenic



resource) but, to the extent that a wasteful water use practice prohibited by the regulation does occur within a State scenic highway, there is no possibility that the regulation would substantially damage scenic resources, as discussed in the following section. As such, any impacts of the regulation would be less than significant.

*Substantially degrade the existing visual character or quality of the site and its surroundings?*

**Less Than Significant Impact.** The proposed regulation prohibits wasteful and excessive urban water use practices. Some water users may misinterpret the prohibitions and respond in a manner that reduces the irrigation of urban trees. If this were to happen, it could degrade the character or quality of an area by diminishing the quality and extent of canopy cover and/or by reducing the number and vitality of trees. This response, while possible, is unlikely to be widespread or substantial, and therefore would not substantially degrade the existing visual character or quality of a site or its surroundings. Furthermore, where urban trees form a substantial or important part of the visual character or quality of a site or area, the people responsible for complying with the regulation's prohibitions will likely exercise due care and respond to the prohibitions in an appropriate manner that fully or best preserves those trees. To ensure the proposed regulation is not implemented such that people stop watering or improperly water trees, the State Water Board will continue working with Save Our Water—California's official statewide conservation education program— and urban water suppliers to raise awareness of the importance of proper tree care.

The prohibitions on cities, counties, cities and counties and homeowners' associations enforcing certain rules relating to architectural or landscape plans merely add the possibility of monetary penalties for cities, counties, cities and counties and homeowners' associations violating existing statutory prohibitions, and therefore would not create a new potentially significant impact.

*Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?*

**No impact.** The proposed regulation would not create a new source of light or glare.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AGRICULTURAL AND FOREST RESOURCES.</b> Would the project:				
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 a non-agricultural use?				X
Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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
Result in the loss of forest land or conversion of forest land to non-forest use?				X
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 forestland to non-forest use?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on agricultural and forest resources.

**Discussion:**

*Have a substantial adverse effect Prime Farmland, Unique Farmland, or Farmland of Statewide Importance?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and has no potential to impact agricultural and forest resources. The proposed regulation would not affect farmland. The proposed project would not convert farmland to a non-agricultural use.

*Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and has no potential to impact agricultural and forest resources. None of the prohibited uses constitute “agricultural use” or other uses protected and/or preserved by

contracts under the Williamson Act. Therefore, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

*Conflict with existing zoning for, or cause rezoning of, forest land, or timberland zoned Timberland Production?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and has no potential to impact agricultural and forest resources. They would not impact forest or timberland.

*Result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and has no potential to impact agricultural and forest resources.

*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?*

**No Impact.** The proposed regulation prohibits wasteful and excessive urban water use practices and has no potential to impact agricultural and forest resources.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AIR QUALITY.</b> Would the project:				
Conflict with or obstruct implementation of the applicable air quality plan?				X
Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
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
Expose sensitive receptors to substantial pollutant concentrations?				X
Create objectionable odors affecting a substantial number of people?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on air quality.

**Discussion:**

*Conflict with or obstruct implementation of the applicable air quality plan?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices; it does not prohibit watering of outdoor landscapes in general. The proposed regulation has no potential to impact air quality. The proposed regulation would not conflict with or obstruct air quality plans.

*Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices; it does not prohibit watering of outdoor landscapes in general. The proposed regulation has no potential to impact air quality. The proposed regulation would not violate any air quality standards or substantially contribute *to an existing or projected air quality violation.*

*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?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices; it does not prohibit watering of outdoor landscapes in general. The proposed regulation has no potential to impact air quality. The proposed regulation would not result in any net increase of criteria pollutants for which any region of the state is in non-attainment under applicable air quality standards.

*Expose sensitive receptors to substantial pollutant concentrations?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices; it does not prohibit watering of outdoor landscapes in general. The proposed regulation has no potential to impact air quality. The proposed regulation would not expose sensitive receptors to pollutants.

*Create objectionable odors affecting a substantial number of people?*

**No impact.** The proposed regulation prohibits wasteful and excessive urban water use practices; it does not prohibit watering of outdoor landscapes in general. The proposed regulation has no potential to impact air quality. The proposed regulation would not create any objectionable odors.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>BIOLOGICAL RESOURCES.</b> Would the project:				
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	
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 Wildlife or U.S. Fish and Wildlife Service?			X	
Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?			X	
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
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. Some of the prohibitions in the proposed regulation pertains only to indoor activities and do not have the potential to impact any of the categories of biological resources. The only potential environmental effects regarding biological resources pertain to reduced outdoor water waste. The proposed regulation would have no impact or a less than significant impact on biological resources.

Water running off urban landscapes flows over impervious surfaces, collecting pollutants as it's conveyed through ditches, canals, and pipes and then discharged into streams, rivers, and other surface waters. While designed to manage stormwater, these Municipal Separate Storm Sewer Systems (MS4s) also carry "non-stormwater" or dry-weather runoff. Dry-weather runoff from sources such as over-irrigation of outdoor landscapes can be substantial, although it varies depending on numerous factors, such as location. The highest rates of outdoor water use are in the hot, dry areas of the state and in communities where

water is inexpensive (Pacific Institute 2014). In these areas, outdoor water use can account for up to 80 percent of the total (Hanak and Davis 2006). Just as the amount of water used outdoor varies, so too does the amount of water wasted. Several studies have found that as much as 50 percent of water used outdoor is wasted (WSP 2003; IRWD 2004) and lost to wind, evaporation or runoff (EPA 2013).

For some California streams, runoff in the summer – when rainfall is low and irrigation is high— can represent a sizable percentage of total flow. For example, in 2013, runoff and other unaccounted sources represented 16 percent of the Los Angeles River’s dry weather flow (See Table 1— the *Industrial, Irrigation Runoff & Unaccounted Flow* column). In the upper Los Angeles River watershed, vegetation is common where there are both soft-bottomed segments and persistent dry-weather flows. When not cleared for flood control purposes, vegetation can develop into substantial riparian habitats supporting sensitive species such as least Bell’s vireo and southwest flycatcher (Ramboll 2015). Significant reductions in dry-weather runoff in water-scarce regions could adversely affect riparian habitat and/or such special status species now dependent on artificial year-round flow.

Annual Dry Weather (Non-Flood) Surface Flow in Acre-Feet							
<i>Water Year</i>	<i>Total</i>	<i>Rising Groundwater in Narrows</i>	<i>Owens River Water Discharges</i>	<i>Industrial, Irrigation Runoff &amp; Unaccounted Flow</i>	<i>Burbank WRP</i>	<i>Glendale -LA WRP</i>	<i>Tillman WRP</i>
Late 1800s	1,500-7,000	1,500-7,000	N/A	N/A	N/A	N/A	N/A
1928-29	650	---	650	---	N/A	N/A	N/A
1951-52	6,290	3,110	1,430	1,750	N/A	N/A	N/A
1971-72	11,821	3,602	---	5,126	3,093	N/A	N/A
1982-83	20,070	3,460	---	9,922	4,670	3,018	N/A
1993-94	91,083	2,952	---	7,071	5,320	12,576	63,164
2004-05	77,137	6,309	---	9,186	8,119	11,378	42,145
2012-13	69,6919	1,754	---	<b>11,584</b>	7.422	12,898	35,961

Table 1: Components of dry-weather surface water flow in the LA River (TNC 2016).

There are two primary reasons why the proposed regulation is, in general, unlikely to reduce dry-weather runoff such that that summer flows significantly decrease. First, most of the state’s urban areas have permits and/or policies in place prohibiting wasteful water use practices that result in dry-weather runoff (including those urban areas within the Los Angeles (LA) River watershed<sup>4</sup>; see also Figure 2). Secondly, the proposed regulation is

<sup>4</sup> The specific situation in the LA River may not fit neatly into the general rule, however. As described above, notwithstanding existing permits and policies prohibiting similar practices to those that would be prohibited by the proposed regulation, some percentage of the river’s dry weather surface flow consistently comes from runoff and other unaccounted sources. In the LA River, the proposed regulation would not significantly impact biological resources for several reasons. First, as previously noted, riparian habitat in the upper watershed is regularly cleared for flood control purposes. The regular and intentional destruction of any habitat that may be supported in part by dry-weather runoff would by itself make any impact to that habitat from the possible reduction in feeder flows less than significant. Second, “Irrigation Runoff & Unaccounted Flow” includes sources other than those affected by the proposed prohibitions.

unlikely to catalyze substantial water savings, as only prohibiting wasteful uses has been shown to conserve relatively little compared to other conservation strategies.

Type-of-use restrictions (a.k.a., prohibitions), without accompanying changes in pricing, achieve modest reductions (Dixon and Moore 1996, Olmstead and Stavins 2009, Mini 2015, Manago and Hogue 2017). For example, when the Los Angeles Department of Water and Power (LADWP) instituted mandatory outdoor water restrictions in 2008, the rate of outdoor water use declined 6 percent compared to an averaged 2001-2007 baseline; when LADWP additionally raised rates, the rate of outdoor use declined by an average of 35 percent between 2009 and 2014 (Manago and Hogue 2017).

Water demand tends to decrease as prices increase. Rates can be strategically used to influence demand, particularly outdoor residential demand, which is more elastic (i.e., more responsive to changes in price) than residential indoor demand (Epsey and Shaw 1997, Dalhusien 2003, Olmstead 2007, Baerenklau et al 2013). The proposed regulation would only prohibit certain wasteful water use practices. Because it would not also require water agencies to change rates in a manner to incentivize the mandated conservation practices, the analysis assumes the prohibitions themselves will not lead to significant water savings.

The State Water Board assumes that the proposed regulation would result in savings commensurate with the savings attributable to the prohibitions under the emergency conservation regulations. The Water Board estimates that 1 percent of the June 2014 to April 2017 savings (12,498 acre-feet per year) are due to the prohibitions. See Table 2.

<i>Hydrologic Region</i>	<i>AF Saved from June 2014 to April 2017</i>	<i>AF Saved due to prohibitions</i>	<i>Annual AF Savings due to prohibitions</i>
	A	B	C
Central Coast	131,150	1,312	463
Colorado River	115,850	1,158	409
North Coast	27,905	279	98
North Lahontan	8,504	85	30
Sacramento River	509,086	5,091	1,795
San Francisco Bay	582,310	5,823	2,054
San Joaquin River	238,309	2,383	840
South Coast	1,538,675	15,387	5,426
South Lahontan	84,976	850	300
Tulare Lake	304,592	3,046	1,074
<b>Total</b>	<b>3,541,357</b>	<b>35,414</b>	<b>12,489</b>

Table 2: Statewide Water Conservation by hydrologic region (June 2014-April 2017)

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For these reasons the LA River basin, which is unique in a number of ways that put it on the high-end of potential impacts from reductions in urban outdoor irrigation, would similarly see a less than significant impact from the proposed regulation.



To estimate the water savings, the Water Board relied on the Urban Water Production and Conservation Reporting database. In July 2014, the Water Board first adopted drought emergency conservation regulations. Among other actions, the emergency regulations required urban water suppliers to submit to the Water Board monthly reports including information about current and 2013 (baseline) monthly production volumes. Comparing current production data to the baseline enables the Board to track water savings over time.

The State Water Board has calculated cumulative water savings and monthly water savings every month since this type of water use reporting became required. The Board's monthly calculation indicates how much water suppliers have conserved since the emergency regulations were first adopted in June 2014. Column A of Table 2 shows how much water Californians saved in each hydrologic region between June 2014 and April 2017 (a 2.8-year period). For reasons described in subsequent paragraphs, the State Water Board attributes 1% of those savings to prohibitions against wasteful water uses. Column B shows the cumulative savings due to the prohibitions ( $A \times 1\%$ ); column C, the annually averaged savings over the 2.8-year period.

The total reported savings from 2014-2017 (i.e., the 3.5 million AF) reflect not only the prohibitions (required by the emergency conservation regulations) but also the 2014 drought proclamation (Office of the Governor 2014) and the 2015 mandate (Office of the Governor 2015). The 2014 proclamation called on Californians to voluntarily conserve water, with a goal of reducing statewide urban water use by 20 percent. Between April 2014 and April 2015, statewide conservation efforts reached 9 percent, based on water use data reported to the Board. With drought conditions worsening in 2015, on April 2, 2015, the Governor Brown issued Executive Order B-29-15, mandating, among other things, that Californians reduce statewide potable urban water use by 25 percent. When the Governor's mandate went into effect, Californians responded immediately, reducing water use by 23.9 percent between June 2015 and June 2016. The State Water Board assumes the voluntary goal and the mandatory reductions resulted in most of the total water savings, and that the prohibitions alone resulted in a much smaller portion.

The total reported savings additionally reflect the impact of pre-existing policies. California became the first state to adopt a water use efficiency target with the passage of SB X7-7 in 2009. SB X7-7 mandated the state achieve a 20 percent reduction in urban per capita use by 2020. The reduction goal is also known as "20x2020." SB X7-7 directed water suppliers to develop individual targets for water use based on a historic per capita baseline. The savings observed between June 2014 and April 2017 additionally reflect the past and on-going work of water agencies to reduce urban water use 20 percent against that baseline by 2020.

The State Water Board also considered the role of Urban Water Management Plans (UWMPs, or Plans) in spurring water savings. The Urban Water Management Planning Act requires urban water suppliers to prepare and adopt a Plan, and to update it at least once every five years. The Plans provide a framework for long term water planning and must contain information about: water deliveries and uses; water supply sources; demand management measures; and water shortage contingency planning. The contingency analysis must include information about “mandatory prohibitions against specific water use practices....” (DWR 2016).

Within the UWMPs, mandatory prohibitions are contained within water shortage contingency plan (WSCP) stages, and vary by agency and by the declared water shortage stage. Typically, suppliers will include between three and five stages in a water shortage contingency analysis, with each subsequent stage reflecting decreasing water supplies (DWR 2016). Stages are defined at the urban supplier’s discretion: they can be defined quantitatively (e.g., Stage 1 represents a 10% supply reduction) or qualitatively (e.g., a stage 1 represents a "mild water shortage"). The higher the stage, the more stringent the prohibitions will be. See Table 3 for a hypothetical example.

<b>Stage</b>		<b>Example Prohibitions</b>
0	Normal	Application of potable water to outdoor landscapes in a manner that causes runoff.
1	Moderate	Hosing of hardscape surfaces, except where health and safety needs dictate.
2	Significant	Outdoor watering more than 3 days per week.
3	Severe	Outdoor watering more than 2 days per week.
4	Critical	Outdoor irrigation.

Table 3: Hypothetical example of the various stages of water shortage contingency plans. How urban water suppliers characterize shortage stages has been quite variable. There is an on-going effort to standardize water shortage contingency analyses.

During the recent California drought, urban water suppliers invoked WSCPs requiring significant conservation measures (as reported in the Water Production and Conservation Reporting database). For many utilities, later-stage prohibitions are considerably more restrictive than those required by the proposed regulation, suggesting that any savings due to the prohibitions required via the emergency conservation regulations would be small relative to those expected to be achieved via later-stage WSCPs.

Finally, the State Water Board based its assumption that 1 percent of the total reported savings can be attributed to the prohibitions on an examination of changes to outdoor winter water use. The Board examined outdoor winter water use because, according to the results of an analysis the Board completed (see Sample of UWMPs sub-section in the 399 supplement), only 16 of the 40 randomly sampled UWMPs included the prohibition restricting irrigation during and within 48 hours after measurable rainfall (the fifth

prohibition in Table 4). Looking at the relatively uncommon *no-irrigating-when-it's-raining* prohibition provided an opportunity to distinguish the influence of the state-mandated prohibitions from those attributable to locally-driven drought responses and policy choices.

	The application of water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property,....	The use of a hose that dispenses water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle.	The application of potable water to hardscapes.	The use of potable water in an ornamental fountain ..... unless with a recirculating system	The application of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall ...	The serving of drinking water other than upon request in eating or drinking establishments	The irrigation of turf on public street medians...	Hotels and motels must provide guests with the option of having towels and linens laundered, and prominently display this option.
Prohibition #	1	2	3	4	5	6	7*	8
% of suppliers w/ equivalent prohibitions	95%	98%	98%	88%	40%	80%	18%	65%

**Table 4: Percentage of sampled suppliers with Plans including equivalent prohibitions.**

\*Even fewer suppliers included prohibition 7 (irrigation of turf on public medians...) in Plans. Analyzing its impact would also provide an opportunity to distinguish the influence of the state-mandated prohibitions from those attributable to locally-driven drought responses and policy choices. However, the Water Board determined estimating its impact would be impossible given data constraints. See **Medians** sub-section of the 399 supplement.

To analyze the impact of the fifth prohibition, the Water Board compared pre-drought winter water use (2013) to winter water use during the drought (2014, 2015, and 2016). The Board first estimated what percentage of the reported winter savings occurred outdoors. The Water Board based the estimate of what percentage of the water savings occurred outdoors in part on a 2003 Pacific Institute document, *Waste Not, Want Not: The Potential for Urban Water Conservation in California* [Gleick et al, 2003]. In that document, Table 4 of Appendix B (Outdoor Residential Water Use and the Potential for Conservation) lists estimated average California outdoor water use each month of the year.

According to the Pacific Institute estimates, an average of 4 percent of California winter residential water use occurs outdoors. The Water Board assumed proportionate winter

water savings, i.e. that 4 percent of the water conserved during the winter months is due to outdoor water conservation measures. We then compared the gallons saved outdoors (Column D in Table 5) to the 2013 pre-drought winter baseline (Column A), which indicated that winter water savings represented, respectively, 0.36 percent, 0.72 percent, and 0.88 percent of the 2013 winter baselines in the 2014/15, 2015/16 and 2016/17 water years (Column E).

Winter <sup>1</sup> year	2013 winter baseline <sup>2</sup> (AF)	Winter production (AF)	AF saved	AF saved outdoors	% of 2013 baseline
	A	B	C (A-B)	D (C*4%)	E ({D/A} *100)
14/15	1.6 million	1.46 million	144 thousand	5.8 thousand	0.36%
15/16	1.58 million	1.29 million	288 thousand	11.5 thousand	0.72%
16/17	1.57 million	1.23 million	347 thousand	13.8 thousand	0.88%

**Table 5: Winter Water Savings due to the *no-irrigating-when-it's-raining* prohibition**

<sup>1</sup>Winter is December through March. <sup>2</sup> Since reporting began in June 2014, urban water suppliers have refined their 2013 baseline estimates. Hence, the 2013 baseline varies.

To distinguish the influence of the state-mandated prohibitions, the State Water Board assumed 1) that prohibitions 1-4, 6 and 8 will result in de minimis new savings, since most urban water suppliers already have equivalent prohibitions in place (Table 4); 2) the percent of the total estimated savings due to the *no-irrigating-when-its raining* prohibition is equal to the percent of outdoor winter savings relative to the 2013 winter baseline; and 3) that, because *no-irrigating-when-its raining* is a relatively rare prohibition, its impact is a reasonable proxy for estimating the percent estimated savings due to the prohibitions en masse. To account for additional savings potentially attributable to the other prohibitions, the State Water Board conservatively rounded the 0.65% average (i.e., (0.36% + 0.72% + 0.88%)/3) up to an even 1%.

To summarize, the Water Board assumes that comparing the 2013 winter water use baseline to outdoor winter water savings during the drought is the best approximation of the effects of the prohibitions en masse for the following reasons:

- The *no-irrigating-when-it's raining* prohibition will save the most water during the months of December-March, and is a relatively uncommon local prohibition (Table 4).
- Californians embraced other wintertime outdoor conservation measures, especially during the historic drought. Measures included not irrigating at all during the winter months. Inasmuch, attributing winter-time savings to the *no-irrigating-when-it's raining* prohibition is likely a conservative over-estimate of the prohibition's impact. Likewise, the estimate of the total volume saved likely overestimates the impact of the prohibitions in general.
- The impact of the prohibitions is relatively small given the influence of preexisting policies, such as UWMPs, SBX7-7, the 2014 proclamation calling on Californians to

voluntarily reduce water use by 20 percent, and the 2015 mandatory water use reductions.

The State Water Board, based on the best available data and studies, conservatively estimated that 1 percent of the cumulative statewide water savings, averaged over a 2.8 year period during the drought, (totaling 12, 489 AF/yr) may be attributable to all of the prohibitions mandated by the drought emergency conservation regulations. We assume that the proposed regulation would result in commensurate annual savings.

The proposed regulation will have a less than significant impact on biological resources. Without rate increases or mandatory water use reductions, type-of-use restrictions are unlikely to change customer outdoor water use such that dry-weather runoff significantly decreases and reduces summer urban stream flows to the detriment of biological resources. The Board's analysis of June 2014 to April 2017 monthly conservation data supports this conclusion, corroborating the findings of previous studies that conservation due to prohibitions, only, is a relatively small drop in the proverbial bucket. Although the Board reasonably assumes that the proposed regulation would not result in significantly reduced dry-weather runoff, if unforeseen changes in outdoor use do occur, such reductions could help reinstate historic flow regimes, which would support the variable and dynamic conditions favored by native species (Poff et al. 2008).

**Discussion:**

*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?*

**Less Than Significant Impact.** While the proposed regulation is unlikely to reduce dry-weather runoff such that that the flow of urban streams significantly decreases and detrimentally affects a special status species or its habitat, the analysis nonetheless evaluated prospective impacts to particular species in particular locations. To do so, the analysis relied on the California Natural Diversity Database (CNDDDB). CNDDDB is an inventory of the status and locations of rare plants and animals in California; it includes all federally and state listed plants and animals, all species that are candidates for listing, all species of special concern, and those species that are considered "sensitive" by government agencies and the conservation community. While the CNDDDB is the best available resource for considering the impacts the proposed regulation may have on rare species statewide, there are several limitations to using this database.

First, the CNDDDB is a positive detection database. Records indicate the **documented** presence of a species. Species that have **not** been observed, recorded, and included in the CNDDDB were therefore not included in the analysis. In determining potentially affected species, it is reasonable to assume that the analysis may not have considered all candidate, sensitive or special status species inhabiting the potentially affected area.

Secondly, when mapped, CNDDDB conveys the accuracy of a data point (i.e., a documented species occurrence) using differently sized circles: the bigger the circle, the less accurate the source information is. Source information may be less accurate because the observations took place many decades ago and the exact location is unclear or was not provided.<sup>5</sup> Potentially affected species were identified by comparing the CNDDDB data points to the potentially affected area (Figure 2, Appendix A), and selecting the overlapping occurrences.

The number of occurrences selected is sensitive to the spatial selection method used. Selecting those occurrences that “intersect” the potentially affected area could be very encompassing whereas selecting those occurrences “completely contained” in the potentially affected area could be very exclusionary. Considering the CNDDDB data limitations and intending to increase the probability that occurrences fall within the potentially affected area, the selection included those occurrences with “their centroid within” the potentially affected area. This effectively only included those species occurrences for which the center of the occurrence fell within the boundaries of the potentially affected area. Using the March 2017 CNDDDB, that spatial selection method yielded 469 documented species occurrences, wherein 172 unique species were documented (CDFW 2017) (Figure 3).

The analysis then evaluated the habitat types for the 172 species. See Appendix B. If the habitat type for a particular species could not realistically be significantly affected by the proposed regulation (e.g., chaparral or coastal scrub), the Water Board assumed “no impact” and those species were excluded from further analysis. Additionally, aquatic species were excluded from further analysis, as the benefits of improving water quality for endemic fish and amphibian species were assumed to outweigh the risks of potentially reducing water quantity by minimal amounts. See the HYDROLOGY AND WATER QUALITY section. Finally, exclusively vernal pools species were excluded from further analysis, as summer nuisance flows have been found to alter hydrology and species composition to the detriment of these sensitive seasonal wetlands and therefore any effect of the proposed

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<sup>5</sup> For example, the CNDDDB includes a *Canis lupus* (gray wolf) 1922 occurrence. Mapped, it appears as a relatively large circle. The centroid is the historical settlement of Straw, CA, and the radius stretches five miles. The observation is based on the following description: “In the summer of 1922, government men, trapping and poisoning around Straw, got four wolves along with more than 200 coyotes...” (CDFW 2017). The accuracy of the point is considered to be five miles.

regulation is assumed to be generally positive (USFWS 2005). Of the 172 unique species originally selected, 120 were excluded from further analysis.

The remaining 52 species relied on marsh, wetland, riparian, lake shore, stream bank or other similarly wet habitats. Based on additional research and information provided in the CNDDDB (including information about the sighting, such as the date, location, habitat description, and threats), the analysis concluded that the proposed regulation would have a less than significant impact. In many instances, the proposed regulation was assumed to have no impact or a less than significant impact because, while the observation point was near an *urban*<sup>6</sup> area, the currently prevailing land use is agricultural. Under these circumstances, dry-weather runoff attributable to the proposed prohibited uses was assumed to be a superfluous source, as agricultural runoff would be more likely to significantly augment local waterways; and the proposed prohibitions would not affect agricultural runoff.

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<sup>6</sup> Per the US Census delineation, an area with a population density of as 500 people or more per square mile.

## Species occurrences with “their centroid within” the potentially affected areas



The color-coded polygons indicate an individual species occurrence, per the March 2017 CNDDDB. Potentially affected species were identified by comparing the CNDDDB data points to potentially affected areas, and selecting the overlapping occurrences.

The zoomed-in area below shows several urban areas in Los Angeles, San Bernardino, and Riverside Counties.

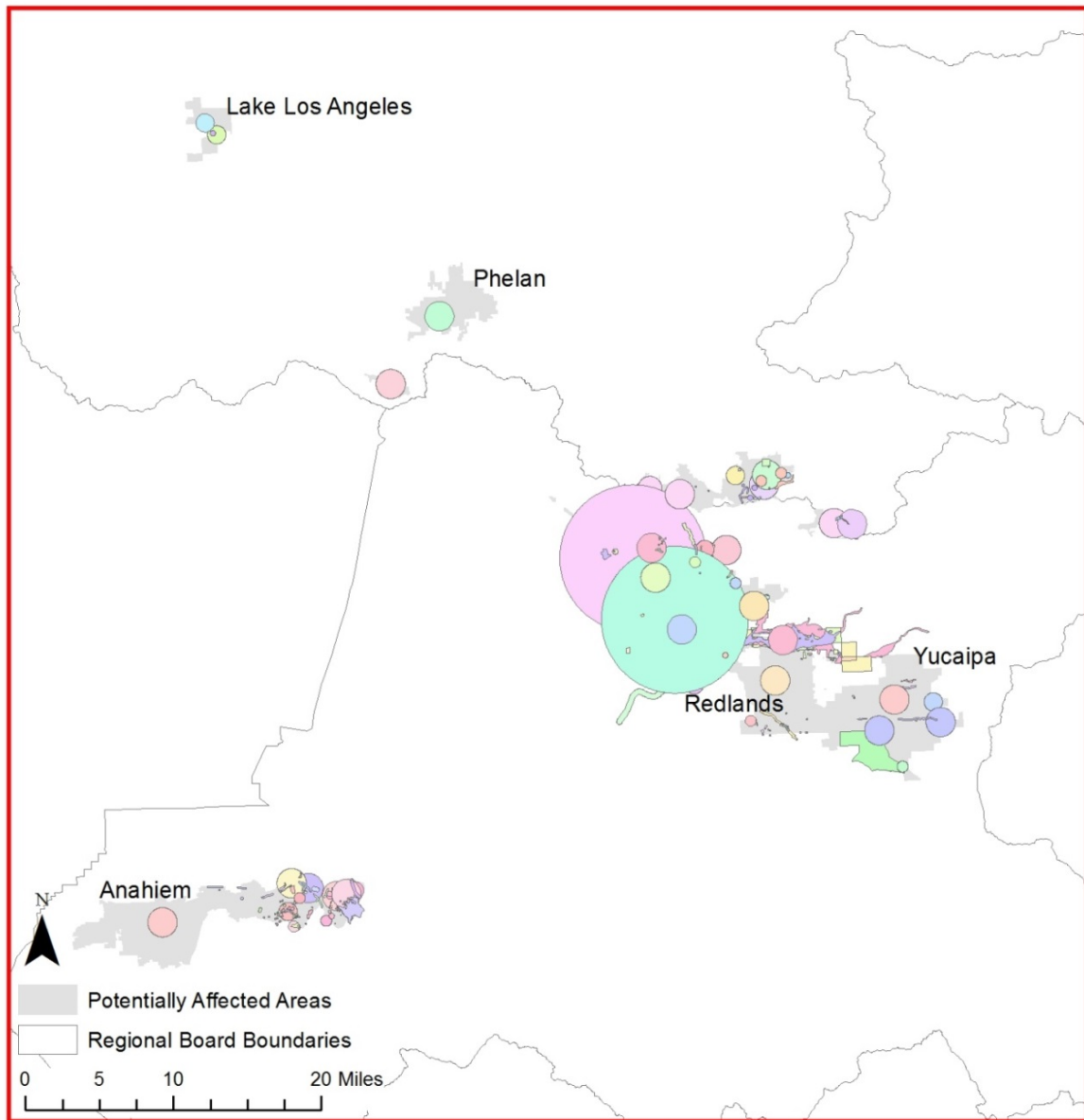


Figure 3: Species occurrences within the potentially affected area



The following paragraphs explain why the proposed regulation would have no impact or a less than significant impact on particular species in particular locations:

The selection included two occurrences of *Accipiter cooperii* (Cooper's Hawk). All occurrences were excluded from further analysis. The species is adaptable and successfully breeds in human-altered landscapes. In both urban and exurban areas, *A. cooperii* has been observed to occupy multiple tree types, including hydrophilic (e.g., cottonwoods), xeric (e.g., mesquite), and Mediterranean (e.g., oak) species (Boal and Mannan 1999). If the proposed regulation were to reduce the presence of hydrophilic tree types, *A. cooperii* would likely utilize alternative nesting sites. Therefore, the proposed regulation would have a less than significant impact.

The selection included eight occurrences of *Agelaius tricolor* (tricolored blackbird). All were excluded from further analysis. One occurrence was observed at a wetland preserve adjacent to natural hot springs and another at a naval air station's wastewater ponds. In these two instances, it was assumed unlikely the populations would be affected by summer nuisance flows or the lack thereof. Six additional occurrences were excluded from further analysis as individuals and/or colonies have not been observed in decades, and their habitat has since been removed. CNDDDB considers one such population "extirpated" and the other five "possibly extirpated." Therefore, the proposed regulation would have no impact or a less than significant impact.

The selection included one occurrence of *Alisma gramineum* (grass allisma). This occurrence was excluded from further analysis as it was last observed in 1935 north east (and upstream) of the nearby town, probably along the north fork of the Pitt River (CCH 2017). Urban runoff was reasonably assumed to be a superfluous source in comparison to the Pitt River watershed. If the plants are still there, it is unlikely the proposed regulation would affect them. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Antrozous pallidus* (pallid bat). Two bats were last observed in 1929 in the "general vicinity of Redlands" (CDFW 2017). *A. pallidus* prefers open, dry habitats, and forages over open ground (Zeiner et al. 1998). Until the 1950s, Redlands was part of the largest navel orange producing region in the world (Redlands 2017) and the population was less than 20,000 (US Census 1950). Orchards and fields dominated the landscaped (Figure 4). Today, the population has nearly quadrupled (Census 2015) and the area is largely urbanized (Figure 5). There is likely little suitable habitat for *A. pallidus*. If any individuals remain, it is highly unlikely that any preferred habitat is meaningfully fed by dry-weather runoff that could be reduced due to the prohibitions, and therefore the proposed regulation would have a less than significant impact.



Figure 4: 1950s Redlands (USDA 1953)



Figure 5: 2017 Redlands (Esri et al. 2017)

The selection included one occurrence of *Ardea herodias* (great blue heron). As the birds were observed in trees nearby an actively managed groundwater recharge basin that is not fed by dry-weather runoff from outdoor landscape irrigation water, it may be reasonably assumed that reduced urban runoff in the summer would not affect their viability. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Astragalus hornii* var. *hornii* (Horn's milk-vetch). This plant was last observed in the late 1800s; its habitat had been destroyed by cultivation by 1914. CNDBB considers the population extirpated. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Astragalus lemmonii* (Lemmon's milk-vetch) that was last observed in 1918. If plants are still present, it is unlikely that urban runoff significantly contributes to flows that the species relies upon; the primary land use in the area is agricultural. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Bombus caliginosus* (obscure bumble bee). This occurrence was excluded from further analysis. The proposed regulation may benefit native bees such as *B. caliginosus* because reduced dry weather flows would create more favorable conditions for native flora. Relatedly, these changes would reduce habitat for invasive plants and the introduced bees that use them (LeBuhn and Hatfield 2017). The proposed regulation would have a less than significant impact.

The selection included six occurrences of *Calochortus striatus* (alkali mariposa lily). These occurrences were removed from further analysis, as *C.striatus* is not found in wetter areas with permanent standing surface water (Greene & Sanders 1988). As the plant prefers **seasonally** moist alkaline habitats, it may be reasonably assumed that the proposed regulation would have no impact or would benefit it by reducing competition from invasive species.

The selection included two occurrences of *Castilleja lasiorhyncha* (San Bernardino Mountains owl clover). These occurrences were excluded from further analysis. *C. lasiorhyncha* is typically found in high elevation meadows, suggesting the species is adapted to distinct wet and dry seasons (Parker 2017). It may be reasonably assumed that the proposed regulation would either not affect it or would benefit it by reducing competition from invasive species.

The selection included one occurrence of *Carex lasiocarpa* (woolly-fruited sage). This occurrence was removed from further analysis as it was observed near an active spring. Urban runoff may be reasonably assumed to be a superfluous source, given the availability of spring water. Therefore, the proposed regulation would have no impact.

The selection included four occurrences of *Centromadia pungens* spp. *laevis* (smooth tarplant). These occurrences were excluded from further analysis. The species is commonly found in dry grasslands and seasonally wet habitats (Randall 1995). It may be reasonably assumed that the proposed regulation would either not affect it or would benefit it by reducing competition from invasive species unadapted to seasonally dry conditions. Therefore, the proposed regulation would have a less than significant impact.

The selection included two occurrences of *Coccyzus americanus occidentalis* (western yellow-billed cuckoo). Two of these occurrences were excluded from further analysis. Since the 1930s when the birds were last observed at both locations, extensive development has eliminated supporting habitat. CNDDDB considers one population “extirpated” and the other “possibly extirpated.” Therefore, the proposed regulation would have no impact.

The selection included two occurrences of *Crepis runcinata* (fiddleleaf hawksbeard) that were last observed in 1918 and 1927 “around” the towns of Loyalton and Bishop. *C.runcinata* is found on the east slope of the Sierra Nevada mountain range, in moist meadows and along rivers and streams (CCH 2017). It is unlikely that urban runoff significantly contributes to summer flows in either of these instances, as there are several sierra streams flowing down into the towns and, in Bishop, canals conveying snowmelt to the west and east. Therefore, the proposed regulation would have a less than significant impact.

The selection included four occurrences of *Corynorhinus townsendii* (Townsend's big-eared bat). All occurrences were removed from further analysis. One occurrence was excluded from further analysis as the habitat is within an agricultural area. While the observation took place not far from a residential area, runoff that could be affected by the proposed prohibitions was assumed a superfluous source and not needed to support the population. The remaining three occurrences were excluded from further analysis because the bat's likely sources of drinking water would be unaffected by reduced summer nuisance flows. One observation was in 1938 in a montane Kern County public park, where there is a large pond filled by natural springs and snowmelt (Swan 2017). The remaining two occurrences were in 1942 in an urban area containing only one open body of water: the wastewater treatment ponds southeast of town. The analysis assumes any individuals identified within the residential area were probably traveling from the likely roosting area (abandoned mines to north) to the closest potential water source (wastewater ponds to the south). The proposed regulation would have a less than significant impact.

The selection included two occurrences of *Empidonax trailii extimus* (southwestern willow flycatcher). One occurrence was removed from further analysis because the habitat is adjacent to agricultural land; in this instance, it is unlikely that runoff that could be affected by the proposed prohibitions significantly contributes to essential flows. The other occurrence was removed from further analysis as the habitat is along a mountain-fed stream, upslope from residential areas. It is unlikely that urban runoff contributes to any essential flows in the stream. Therefore, the proposed regulation would have a less than significant impact.

The selection included one occurrence of *Emys marmorata* (western pond turtle). This occurrence was excluded from further analysis as it was observed near agricultural fields. Accordingly, runoff that could be affected by the proposed prohibitions was assumed to be a superfluous source. Therefore, the proposed regulation would have a less than significant impact.

The selection included twelve occurrences of *Eriastrum densifolium* ssp. *sanctorum* (Santa Ana River woollystar). The *E. densifolium* is an early successional species that establishes following floods and is replaced by natural succession in the absence of periodic flooding. The species never occurs in sites with longer-lived species (USFW 2005). While flood control is a greater threat to its survival, competition from invasive plant species supported by year-round flow also threatens its habitat. It is assumed the proposed regulation would either not affect the species or would benefit it by reducing that competition. Therefore, proposed regulation would have a less than significant impact.

The selection included two occurrences of *Euderma maculatum* (spotted bat). One occurrence was excluded from further analysis because the habitat is within an agricultural area. It is unlikely runoff that could be affected by the proposed prohibitions significantly contributes to any flows that support *E. maculatum* habitat. The other was excluded from further analysis as the habitat was identified as within a city park, with irrigated lawns, cottonwood trees, a large pond and nearby flood-irrigated pastures. It is unlikely that urban runoff is supporting this population. Therefore, the proposed regulation would have a less than significant impact.

The selection included one occurrence of *Falco columbarius* (Merlin). This occurrence was excluded from further analysis, as it is a migratory bird that winters in California and summers in more northern climes (Warkentin et al. 2005). As the proposed regulation would only affect dry-weather urban runoff, the proposed regulation may reasonably be assumed to have no impact on the species.

The selection included one occurrence of *Fimbristylis thermalis* (hot springs fimbristylis). This occurrence was removed from further analysis because the plant was observed near an active hot springs. Urban runoff may be reasonably assumed to be a superfluous source. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Gratiola heterosepala* (Boggs Lake hedge-hyssop). The plants were last observed in 1929. This occurrence was excluded from further analysis because the small urban area in which it was observed is between two creeks with agricultural land on each side. Urban runoff that could be affected by the proposed prohibitions may be reasonably assumed to be a superfluous source. Therefore, the proposed regulation would have a less than significant impact.

The selection included one occurrence of *Grus Canadensis tabida* (greater sandhill crane). This occurrence was excluded from further analysis because the small urban area in which it was observed is surrounded by agricultural land. Urban runoff that could be affected by the proposed prohibitions can be reasonably assumed to superfluously contribute to adjacent stream flows. In addition, it is a migratory bird that winters in California and summers in more northern climes (Pogson and Lindstedt 1991), and any potential reductions in dry-weather flows can reasonably be assumed to be greatest in the summer, when outdoor water use is greatest. Therefore, the proposed regulation would have a less than significant impact.

The selection included one occurrence of *Hibiscus lasiocarpus var. occidentalis* (woolly rose-mallow). This occurrence was excluded from further analysis because it was near agricultural fields and adjacent to Discovery Bay, a waterfront community built on a

network of man-made dikes. Urban runoff that could be affected by the proposed prohibitions may be reasonably assumed to be a superfluous source. Therefore, the proposed regulation would have a less than significant impact.

The selection included two occurrences of *Icteria virens* (yellow-breasted chat). All occurrences were excluded from further analysis as the habitat is within an agricultural area. While not far from a residential area, it is unlikely that urban runoff that could be affected by the proposed prohibitions significantly contributes to essential flows. The proposed regulation would have a less than significant impact.

The selection included two occurrences of *Imperata brevifolia* (California satintail). All occurrences were excluded from further analysis. One occurrence was removed from further analysis because, per CNDDDB, the plants were observed adjacent to hot springs. In this instance, any urban runoff was assumed to be a superfluous source. The other occurrence was removed from further analysis because the plants were observed near City Creek. There is no residential development upslope of that particular stretch of City Creek, suggesting that the summer time flow comes from its headwaters in the San Bernardino Mountains (USGS 2017), not from urban runoff. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Lasiurus blossevillii* (western red bat). This occurrence was removed from further analysis. One individual was observed in a fig orchard in 1954. The majority of the land within and surrounding the occurrence location is to this day agricultural. It is unlikely that urban runoff significantly contributes to essential flows. Therefore, the proposed regulation would have a less than significant impact.

The selection included five occurrences of *Lasiurus xanthinus* (western yellow bat). All occurrences were excluded from further analysis because the species is adapted to dry conditions (Taylor 2017) and its preferred roosting sites, palm species (Ortiz and Barrows 2014), are similarly adapted to dry conditions (Pittenger et al. 2009). The proposed regulation would have a less than significant impact.

The selection included three occurrences of *Lasionycteris noctivagans* (silver-haired bat). All three occurrences were excluded from further analysis. Two were excluded from further analysis because the small urban areas in which they were observed are surrounded by agricultural land. Urban runoff may be reasonably assumed to be a superfluous source. The third was excluded because the small urban area in which it was observed is surrounded by a country club dotted with ponds and two man-made lakes covering nearly 300 acres. Urban runoff that could be affected by the proposed

prohibitions may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included two occurrences of *Lasthenia burkei* (Burke's goldfields). These occurrences were excluded from further analysis. One occurrence was located in "vernal pool habitat" and the other in a "small seasonal wetland" (CDFW 2017). Dry weather urban runoff was reasonably assumed to disturb rather than support these sensitive, ephemeral ecosystems. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Lepidium virginicum var. roinsonii* (Robinson's pepper-grass). This occurrence was removed from further analysis. While the species can be occasionally found in wetlands, it is more often found in chaparral or coastal scrub ecosystems. In this particular instance, it was last observed on a dry hillside in 1889. If any plants remain, the proposed regulation would have no impact.

The selection included one occurrence of *Lilium parryi* (lemon lily). This occurrence was removed from further analysis because it was observed along Deep Creek, a mountain stream with year-round flow. Even during the driest months (July-October) of the recent drought, monthly average flow never dropped below historic levels—0.1 cubic feet per second in September 1933 (USGS 2017b). Therefore, it may be reasonably assumed unlikely that urban runoff would significantly contribute to summer flows. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Lupinus citrinus var. citrinus* (orange lupine). This occurrence was removed from further analysis because it was observed upslope and across a highway from nearby residential areas. It was assumed unlikely that urban runoff that could be affected by the proposed prohibitions would significantly contribute to essential flows. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Melospiza melodia* (song sparrow). This occurrence was removed from further analysis because it was observed near agricultural fields. Urban runoff that could be affected by the proposed prohibitions may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Myotis yumanensis* (Yuma myotis). The occurrence was excluded from further analysis because the habitat is adjacent to a river and within a 140 acre regional park with large ponds. While not far from a residential area, it is unlikely that curtailing the wasteful outdoor water use practices of nearby properties

would affect the prospective water source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Nasturtium gambelii* (Gambel's water cress). This occurrence was removed from further analysis as it was last observed in the late 1900s at a historical hot springs that was drained in 1945 and is now a shopping center. CNDDDB considers it extirpated. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Plagiobothrys parishii* (Parish's popcornflower). This occurrence was removed from further analysis. While plants were observed in 1917, none were observed in a 1999 survey. CNDDDB considers it extirpated. Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Plebejus saepiolus aureolus* (San Gabriel Mountains blue butterfly). The only known population of the species was discovered in 1970, and last observed in 1985, the year after water to its only meadow habitat was diverted (Lucas et al 2014). This occurrence was removed from further analysis because the species is presumed extinct (Suckling et al. 2004). Therefore, the proposed regulation would have no impact.

The selection included one occurrence of *Ranunculus hydrocharoides* (frog's-bit buttercup). This occurrence was removed from further analysis because it was observed near agricultural fields. Dry-weather urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Rallus longirostris yumanensis* (Yuma clapper rail). This occurrence was removed from further analysis because the land surrounding the small urban area is agricultural. The nearby Alamo river flows year-round, dominated by treated wastewater and agricultural return water (RWQCB 7 1999). It is unlikely that urban runoff that could be affected by the proposed prohibitions significantly contributes to essential flows. Therefore, the proposed regulation would have a less than significant impact.

The selection included one occurrence of *Ribes divaricatum var. parishii* (Parish's gooseberry). This occurrence was removed from further analysis. While plants were observed in early 1900's, none were observed in a 1989 survey. The former creek is now a concrete-lined channel, making it essentially impossible that flows that could be affected by the proposed prohibitions could support this species. CNDDDB considers the species possibly extirpated. The proposed regulation would have a less than significant impact.



The selection included one occurrence of *Schoenus nigricans* (black bog-rush). This occurrence was removed from further analysis because it was observed near an active hot springs. Urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included three occurrences of *Sidalcea neomexicana* (salt-spring checkerbloom). One occurrence was removed from further analysis as it was last observed in 1952 in an old horse pasture that has since been developed. CNDDDB considers it “possibly extirpated.” The second occurrence was last observed in the late 1800s in the “vicinity of San Bernardino” (CCH 2017). The only suitable habitat within the location boundaries provided by CNDDDB appears to be a 40-acre city park with a large lake. Filled in the 1940s to create a fishing spot, the lake was once a marsh called “Garner’s swamp” (SBC Sentinel 2015), where the *S. neomexicana* may have been observed. If any plants remain to this day, it is unlikely they rely on summer runoff. “Seccombe Lake” is now maintained by the City of San Bernardino’s Parks, Recreation, and Community Services department. The third occurrence was last observed in 1891 around the historic Hunt ranch in an area that is now Wildwood Canyon California State Park. If any plants remain, urban runoff that could be affected by the proposed prohibitions unlikely contributes to their water needs, as the location is not within an urban area but in a separated valley adjacent to it. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Sidalcea pedata* (bird-foot checkerbloom). This occurrence was removed from further analysis because it was last observed in 1906 in a meadow that had disappeared by 1976. CNDDDB considers it extirpated. The proposed regulation would have no impact.

The selection included one occurrence of *Sphenopholis obtusata* (prairie wedge grass). This occurrence was removed from further analysis as it was observed immediately downstream of a golf course and the confluence of the San Timoteo Creek and the Santa Ana River. San Timoteo Creek flows year-round due to agricultural runoff and secondary treatment discharge from a wastewater treatment plant in the City of Yucaipa (Loma Linda 2007). Urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Thamnophis gigas* (giant gartersnake). This occurrence was removed from further analysis as it was observed near agricultural fields. Urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Thamnophis hammondi* (two-striped gartersnake). This occurrence was removed from further analysis because it was observed along East Twin Creek. The source of this water is Coldwater Canyon, where water flows at a minimum of 0.5 million gallons a day (San Bernardino 2005). Upslope of any urban development, a USGS gauging station for East Twin Creek has measured year-round flow since 1920 (USGS 2017c). Urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included one occurrence of *Toxostoma crissale* (Crissal thrasher). This occurrence was removed from further analysis because it was observed near agricultural fields. Urban runoff may be reasonably assumed to be a superfluous source. The proposed regulation would have a less than significant impact.

The selection included six occurrences of *Vireo bellii pusillus* (least Bell's vireo), all of which were removed from further analysis. One was excluded from further analysis because the observation took place in 1912, and not during a 2006-2007 resurvey project. CNDDDB considers that population possibly extirpated. Another was removed from further analysis because the habitat is within an agricultural area in San Timoteo Canyon. San Timoteo Creek flows year-round due to agricultural runoff and secondary treatment discharge from a wastewater treatment plant in the City of Yucaipa (Loma Linda 2007). It is unlikely that urban runoff that could be affected by the proposed prohibitions significantly contributes to essential flows. An occurrence at the confluence San Timoteo Creek and the Santa Ana River was also excluded from further analysis, as water from the effluent-dominant San Timoteo Creek and runoff from the adjacent golf course were assumed to render contributions from dry-weather urban runoff superfluous. Another three occurrences were observed along mountain-fed streams, upslope from urban areas; in these instances, it is unlikely that urban runoff contributes to any essential flows. For these six occurrences, the proposed regulation would have no impact or a less than significant impact.

In summary, the proposed regulation is unlikely to significantly reduce dry-weather runoff such that that essential flows significantly decrease and affect a special status species or its habitat. If any, the impacts are assumed to be less than significant. None of the species occurrences analyzed would be detrimentally impacted by reduced dry-weather runoff from over-irrigation-, car wash- or street wash water.

*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 Wildlife or U.S. Fish and Wildlife Service?*

**Less Than Significant Impact.** To identify what water bodies may be affected by the proposed regulation, the analysis relied on the California Aquatic Resources Inventory (CARI). CARI is a Geographic Information System dataset of wetlands, streams, and riparian areas consisting of polygon and line features that are standardized to a common wetland classification system. CARI consists of Wetlands (polygons) and Streams (lines). The selection included those water bodies “intersecting” the potentially affected area. This spatial selection method included those aquatic resources for which any portion of the stream “line” or wetland “polygon” intersected any part of the potentially affected area. That spatial selection method yielded 1,649 streams and 810 wetlands. See Table 6.

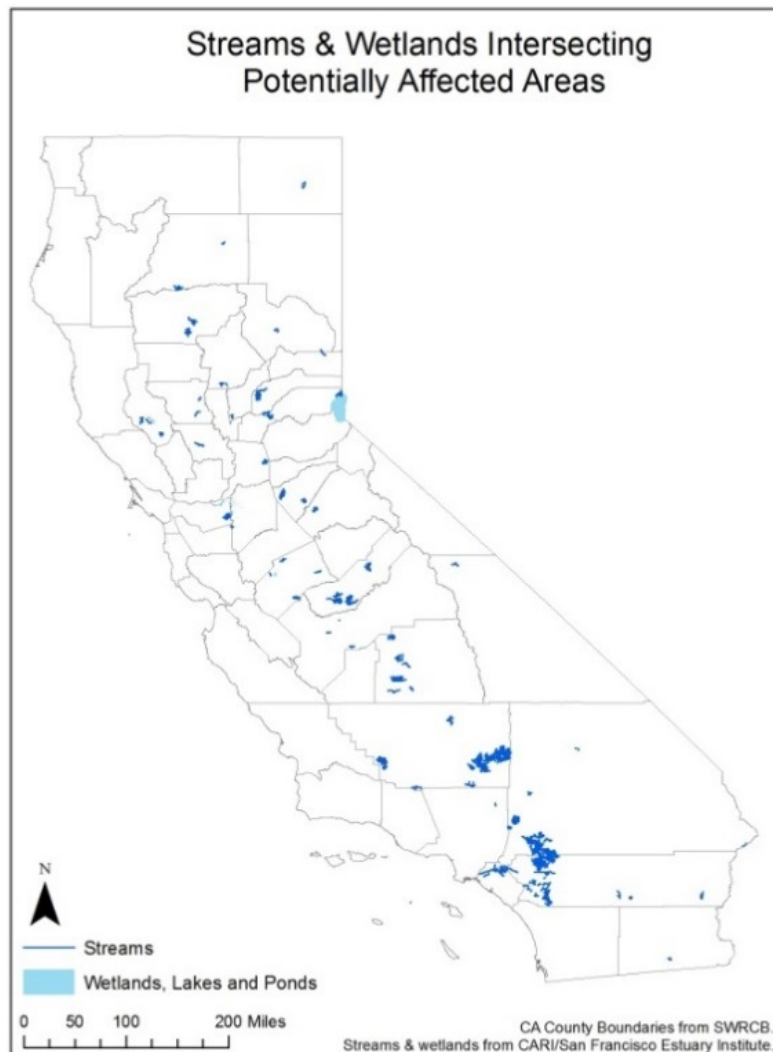


Figure 6: Aquatic resources in the potentially affected area

While the proposed regulation is unlikely to reduce dry-weather runoff such that the flow of urban streams significantly decreases and detrimentally affects riparian habitat, the analysis nonetheless evaluated prospective impacts to riparian habitat.

For riparian habitat along historically seasonal streams, the proposed regulation could be beneficial. Throughout California, some once ephemeral streams have become perennial, particularly in urban areas, due to imported water and impervious surfaces modifying watershed hydrology. Urbanization increases the area of impervious surfaces (Paul and Meyer 2001). As impervious surfaces increase, less rainfall infiltrates into soils and more water runs off the landscape and into the stream channel, increasing flow volume and speed, altering morphology and flow patterns (Dunne and Leopold 1978). Where this occurs, it represents a significant change from historic natural conditions, and has altered stream ecology. As written in *The Natural Flow Regime: A paradigm for river conservation and restoration*, seasonal and annual variability provide:

...ephemeral, seasonal, and persistent types of habitat, ranging from free-flowing, to standing, to no water. This predictable diversity of in-channel and floodplain habitat types has promoted the evolution of species that exploit the habitat mosaic created and maintained by hydrologic variability. For many riverine species, completion of the life cycle requires an array of different habitat types, whose availability over time is regulated by the flow regime. Indeed, adaptation to this environmental dynamism allows aquatic and floodplain species to persist in the face of seemingly harsh conditions, such as floods and droughts, that regularly destroy and re-create habitat elements.

From an evolutionary perspective, the pattern of spatial and temporal habitat dynamics influences the relative success of a species in a particular environmental setting. This habitat template, which is dictated largely by flow regime, creates both subtle and profound differences in the natural histories of species in different segments of their ranges. It also influences species distribution and abundance, as well as ecosystem function. Human alteration of flow regime changes the established pattern of natural hydrologic variation and disturbance, thereby altering habitat dynamics and creating new conditions to which the native biota may be poorly adapted (Poff et al. 2008).

The Board's analysis has found that the proposed regulation would lead to minimal changes in outdoor water use and would therefore not result in substantive reductions in dry-weather runoff that, in turn, significantly decrease stream flows and riparian areas. However, if the prohibitions were to reduce dry-weather runoff more than a de minimis amount in any particular area, the change would be, in general, beneficial in that it could help reinstate historic flow regimes.

A recent study compared the influence of local water restrictions on two watersheds: the Ballona and Topanga Creek watersheds in Los Angeles County. While the flow of the highly modified Ballona Creek (54 percent impervious watershed) was measurably reduced as residents decreased outdoor water use in response to mandated restrictions and increased water rates, the flow of the comparably natural Topanga Creek (1 percent impervious) was not. Historically, Ballona Creek had no flow during the summer months; that changed in 1940, as the watershed rapidly developed. The reduced flow pattern observed as residents conserved water (2009-2014) mirrors flows observed in the mid- to late 1940s (Manago and Hogue 2017), suggesting that continued conservation could support efforts to recreate seasonal flow patterns.

Reinstated historic flow regimes could help restore natural habitat. For example, in the Los Peñasquitos watershed in San Diego, CA, increased urbanization resulted in an incised channel, year-round flow, and far more riparian vegetation. Starting in 1975, unrelated to increased rainfall, dry-weather flow began to increase at a rate of 13 percent per year; simultaneously, riparian vegetation increased—by 40 percent between 1977 and 2000 (White and Greer 2002). Prior to development in the watershed, sycamores and live oaks dominated the landscape; as flow increased, willows became dominant. The study concluded that, as urbanization continues, species suited to modified conditions would thrive at the expense of those better suited to past conditions. To the extent there is suitable habitat, water conservation could support restoration efforts along historically seasonal urban streams.

In sum, the proposed regulation is unlikely to reduce dry-weather runoff such that that stream flows significantly decrease and affect riparian areas. Any impacts are assumed to be less than significant. However, if the proposed regulation were to unexpectedly reduce dry-weather runoff such that any stream flows significantly decreased, the change would represent a generally beneficial return to historic flow regimes and could recreate the variable and dynamic conditions favored by native species.

*Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?*

**Less Than Significant Impact.** The proposed regulation would have a less than significant impact on federally protected wetlands, as it is unlikely the prohibitions would reduce dry-weather runoff (see Riparian Impact discussion) and hence freshwater inputs to wetlands. However, if the proposed regulation were to unexpectedly result in reduced freshwater inputs to wetlands, many of the wetlands within the potentially affected area

would benefit. Using the CARI database, the analysis identified 810 wetlands. See Figure 6. These wetlands are categorized as either riverine, depressional, lacustrine, or slope. The following paragraphs describe the less than significant impacts the proposed regulation would have on each of these categories of wetlands.

### **Riverine**

A riverine wetland consists of the riverine channel and its active floodplain, plus any portions of the adjacent riparian areas that are likely to be strongly linked to the channel and immediate flood plain (Collins et al. 2012). Of the wetlands within the potentially affected area, eleven are riverine wetlands: ten of which are a sub-category of riverine wetlands referred to as fluvial channels, defined as natural channels that meander and have variable width due to natural formative processes; and one of which is a sub-category of riverine wetland referred to as a tidal channel, defined as tidal natural channels that meander and have variable width due to natural formative processes (SFEI 2011).

The prohibitions are unlikely to significantly reduce dry weather runoff and hence would not reduce freshwater inputs into wetlands. Accordingly, the proposed regulation would have a less than significant impact on riverine wetlands. However, even if the proposed regulation were to result in reduced dry weather runoff, the particular riverine wetlands within the potentially affected area would not be impacted. The identified fluvial channels flow through two urban areas, Lake of the Pines and Rancho Murrieta, and two watersheds, the Bear and Consumnes, respectively. In these instances, rain and seasonal groundwater dominate stream flows (Lane et al. 2017). The identified tidal channel flows through Discovery Bay, a waterfront community built on a network of man-made dikes. In both of these situations, dry-water runoff is a superfluous source of flow and not needed to maintain riverine wetlands.

### **Depressional**

Depressional wetlands occur in topographic lows, allowing the accumulation of surface water. These can occur as isolated basins or as a complex of shallows; they can be perennial or seasonal; and they can be natural or artificial. Natural depressional wetlands include ponds on fault traces (e.g. sag ponds, snow melt ponds), valley bottoms (e.g. cutoff ox-bows on floodplains), and on broad saddles along ridge (e.g. kettle-holes in moraines); artificial depressional wetlands include stormwater treatment ponds, duck ponds, stock ponds, and water hazards on golf course (Collins et al. 2012). Of the 810 wetlands identified in the CARI database, 732 are depressional.

#### *Seasonal depressional wetlands*

Of the 732 depressional wetlands identified in the CARI database, 321 are seasonal. The proposed regulation would have a less than significant impact on the seasonal depressional wetlands within the potentially affected area. If the proposed regulation were to reduce dry-weather runoff, the prohibitions would benefit seasonal wetlands by maintaining natural hydrology and habitat for native species, and by improving water quality.

#### *Perennial depressional wetlands*

Of the 732 depressional wetlands identified, 411 are perennial. Of those, 311 are artificial, which would not be impacted by the proposed regulation, as they are maintained infrastructure (e.g., wastewater ponds) that would be unaffected by reduced dry-weather runoff. The CARI database identifies 100 wetlands in the potentially affected area that are natural perennial depressional wetlands. If the proposed regulation were to result in significantly reduced freshwater inputs, natural perennial depressional wetlands could be impacted, potentially detrimentally, as water quantity could decrease, or beneficially, as water quality may improve. However, as the proposed regulation would not result in significantly reduced dry-weather runoff and hence freshwater inputs, the prohibitions would have a less than significant impact on natural perennial depressional wetlands.

#### **Vernal Pool**

Vernal pools are ephemeral wetlands that form in shallow depressions underlain by bedrock or by an impervious, near-surface soil horizon. These depressions fill with rainwater and runoff during the winter and may remain inundated until spring or early summer, sometimes filling and emptying repeatedly during the wet season (Collins et al. 2012). Of the CARI-identified wetlands within the potentially affected area, one is a vernal pool. The proposed regulation is unlikely to significantly reduce dry-weather runoff. However, if the prohibitions were to significantly reduce dry-weather runoff, vernal pools would benefit. Summer nuisance flows into vernal pools have been found to alter the hydrology and species composition of these sensitive ephemeral systems (USFWS 2005).

#### **Lacustrine**

Lacustrine systems are still, freshwater bodies that usually exceed 8 hectares in total area during the dry season and that usually have a maximum dry season depth of at least 2m. They are deeper and larger than depressional wetlands or vernal pools (Collins et al. 2012).

Of the CARI-identified wetlands within the potentially affected area, thirty-eight are lacustrine. Those wetlands either border lakes or reservoirs. If the proposed regulation were to result in significantly reduced freshwater inputs, this would have a less than significant impact on lacustrine wetlands in the potentially affected area. Those that border lakes would not be affected as their primary water source is snowmelt; inasmuch, it is reasonable to assume urban runoff is a superfluous source. Those wetlands bordering

reservoirs would potentially benefit, as conserved water would not be supplied to customers but rather would remain in the reservoir. However, the proposed regulation would not significantly reduce dry-weather runoff and hence freshwater inputs and therefore would have no impact on lacustrine wetlands.

### **Slope**

Slope wetlands form due to seasonal or perennial emergence of groundwater into the root zone or across the ground surface. Their hydroperiods are mainly controlled by unidirectional subsurface flow (Collins et al. 2012). Of the CARI-identified wetlands within the potentially affected area, twenty-five are slope wetlands, all of which are located within the Incline Village urban cluster adjacent to Lake Tahoe on the CA-NV border.

The hydrology of slope wetlands (such as springs and wet meadows) is controlled mainly by groundwater levels. The proposed regulation would have a less than significant impact on these systems. The prohibitions are unlikely to significantly reduce dry weather runoff such that recharge decreases, groundwater levels fall, and groundwater-dependent ecosystems dry up. In the Tahoe area particularly, a relative abundance of snowmelt and rainfall recharges shallow aquifers (Huntington and Niswonger 2012). Within the Incline Village cluster, what dry-weather urban runoff enters the aquifer would be a superfluous source; it is reasonable to assume that reducing any such runoff would not affect slope wetlands.

In summary, if the proposed regulation were to unexpectedly reduce significant quantities of dry-weather runoff in a particular area such that freshwater inputs significantly decreased, this would have no impact on artificial perennial depressional wetlands; a less than significant impact on natural perennial depressional, riverine lake, and slope wetlands; and a potentially beneficial impact on seasonal depressional wetlands and vernal pools. However, the proposed regulation is unlikely to reduce dry-weather runoff such that freshwater inputs decrease and significantly impact wetlands. The proposed regulation would have a less than significant impact on wetlands.

*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?*

**No impact.** See above. The proposed regulation is unlikely to reduce dry-weather runoff such that that summer flows significantly decrease and adversely interfere with the movement of native resident or migratory fish. Nor is the proposed regulation expected to interfere with wildlife corridors or to impede the use of native wildlife nursery sites.



*Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**Less Than Significant Impact.** The proposed regulation prohibits wasteful and excessive urban water use practices. Some water users can be anticipated to misinterpret the prohibitions and respond in a manner that reduces the watering of urban trees. If this were to happen, it could degrade the character or quality of an area by diminishing the quality and extent of canopy cover and/or by reducing the number and vitality of trees. This response, while possible, is not required and is unlikely to be widespread or substantial, and therefore would not substantially degrade the existing visual character or quality of a site or its surroundings. Furthermore, where urban trees form a substantial or important part of the visual character or quality of a site or area, the people responsible for complying with the regulation's prohibitions would likely exercise due care and respond to the prohibitions in an appropriate manner that fully or best preserves those trees. To ensure the proposed regulation is not implemented such that people stop watering or improperly water trees in conflict with any local policies or ordinances, the State Water Board will continue working with Save Our Water—California's official statewide conservation education program— and urban water suppliers to raise awareness of the importance of proper tree care.

*Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?*

**No impact.** The proposed regulation is not known to or expected to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or State habitat conservation plan.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>CULTURAL RESOURCES.</b> Would the project:				
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
Disturb any human remains, including those interred outside of formal cemeteries?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on cultural resources.

**Discussion:**

*Cause a substantial adverse change in the significance of a historical resource?*

**No impact.** The proposed regulation would not cause a substantial adverse change in the significance of a historical resource.

*Cause a substantial adverse change in the significance of an archaeological resource?*

**No impact.** The proposed regulation would not cause a substantial adverse change in the significance of an archaeological resource.

*Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**No impact.** The proposed regulation would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

*Disturb any human remains, including those interred outside of formal cemeteries?*

**No impact.** The proposed regulation would not disturb any human remains, including those interred outside of formal cemeteries.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>GEOLOGY AND SOILS.</b> Would the project:				
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: 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? Strong seismic ground shaking? Seismic-related ground failure, including liquefaction? Landslides?				X
Result in substantial soil erosion or the loss of topsoil?				X
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
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
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on geology and soils.

**Discussion:**

*Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault? Strong seismic ground shaking? Seismic-related ground failure, including liquefaction? Landslides?*

**No impact.** The proposed regulation would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction) or landslides.

*Result in substantial soil erosion or the loss of topsoil?*

**No impact.** The proposed regulation would not result in substantial soil erosion or the loss of topsoil.

*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?*

**No impact.** The proposed regulation would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the regulation, and potentially result in on- or off-site landslide.

*Be located on expansive soil, creating substantial risks to life or property?*

**No impact.** The proposed regulation would not be located on expansive soil, creating substantial risks to life or property.

*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?*

**No impact.** The proposed regulation would not affect the ability of soils to adequately support the use of septic tanks or alternative waste water disposal systems.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>GREENHOUSE GAS EMISSIONS.</b> Would the project:				
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X
Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on greenhouse gas emissions.

**Discussion:**

*Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?*

**Less than Significant Impact.** The proposed regulation would not generate greenhouse gas (GHG) emissions, either directly or indirectly. It is more likely that the proposed regulation would reduce GHG emissions by reducing the amount of energy needed to transport and treat water to potable standards for urban uses. A considerable amount of energy is embedded in California’s water infrastructure. Over 19% of California’s energy is used to supply, treat, and consume water and then to collect and treat wastewater (CEC 2006). Of that, about 40% is consumed by the water sector itself— primarily for supply and conveyance but also for water distribution, water treatment, and wastewater collection and treatment; the remaining 60% is attributable to electricity used by customers as water is consumed—primarily for heating and pumping (Park and Croyle 2012). The energy intensity of a particular quantity of water depends on a number of factors, most importantly how (e.g., indoors or outdoors?) and where (e.g. San Francisco or Los Angeles?) it’s consumed.

The corollary is that the energy savings associated with conserving any given quantity of water will similarly depend on where and how it's used. Water conservation in Southern California will generally yield more energy savings from pumping and treating water than conservation efforts in Northern California, where water requires less energy to travel from the original source to the end-user. In addition, indoor water use generally offers the greatest energy savings because indoor users require wastewater collection, treatment, and discharge. Also, indoor use of hot water is particularly energy intensive due to the energy required for hot water heaters. Energy savings associated with conserving water outdoors would only be associated with reduced supply, conveyance, treatment and distribution (Elkind 2011). The proposed regulation would primarily result in reduced outdoor use. Any related energy savings and reductions in GHG emissions would come from outdoor conservation.

Approximately 7.2% of the state's overall electricity use is embedded in the supply, conveyance, treatment and distribution of water (Park and Croyle 2012). When water is conserved outdoors, the energy inputs embedded in those processes are avoided — and those avoided energy inputs vary considerably depending on where the water comes from and where it goes. To better understand the geographically variable energy intensities of water in California, the California Public Utilities Commission (CPUC) developed the Water-Energy calculator; it computes average outdoor energy intensities for each of California's hydrologic regions (CPUC 2017). Using those outdoor water use intensity values, the UC Davis Center for Water-Energy efficiency calculated the energy savings associated with the volume of water conserved during several months<sup>7</sup> of the declared drought emergency. The electricity savings from statewide water conservation totaled 460 GWh, the equivalent of taking about 50,000 cars off the road for a year (UC Davis 2017).

The proposed regulation, however, is unlikely to achieve such significant reductions in GHG emissions for several reasons. First, the majority of the State already has equivalent prohibitions in place. For those areas, the proposed regulation is not expected to catalyze savings beyond what existing permits and policies currently facilitate. Secondly, for those areas without equivalent prohibitions in place, the proposed regulation alone, without accompanying changes in pricing or mandatory water use or production quantity reductions, is expected to only achieve modest reductions (See Biological Resources section). Thus, the proposed regulation is unlikely to reduce outdoor water waste such that embedded energy and resulting GHG emissions significantly decrease. As any reductions in GHG emissions are beneficial, the impacts are assumed to be less than significant.

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<sup>7</sup> The UC Davis researchers used monthly consumption data from July 1 to September 30<sup>th</sup> 2015 and compared it to the same period in 2013.

*Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

**No impact.** The proposed regulation would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.



	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>HAZARDS.</b> Would the project:				
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
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
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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
For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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
For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact on hazards.

**Discussion:**

*Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**No impact.** The proposed regulation would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

*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?*

**No impact.** The proposed regulation would not 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.

*Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school?*

**No impact.** The proposed regulation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school.

*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?*

**No impact.** The proposed regulation would not be located on a site which is included on a list of hazardous materials sites and would not create a significant hazard to the public or the environment.

*For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?*

**No impact.** The proposed regulation may affect landscapes within or near airports, however there is no potential for proposed prohibitions to result in a safety hazard for people residing or working in the project area.

*For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

**No impact.** See above.

*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**No impact.** The proposed regulation would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

*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?*

**No impact.** The proposed regulation would not 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. The proposed regulation only prohibits overwatering of landscapes; to the extent existing landscapes are maintained for fire protection, the proposed regulation would not prohibit effective water application to keep buffer zones or other similar vegetated areas alive and functioning.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>HYDROLOGY AND WATER QUALITY.</b> Would the project:				
Violate any water quality standards or waste discharge requirements?			X	
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	
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
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
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
Otherwise substantially degrade water quality?				X
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
Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?				X
Inundation by seiche, tsunami, or mudflow?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on hydrology and water quality.

**Discussion:**

*Violate any water quality standards or waste discharge requirements?*

**Less than Significant Impact.** The proposed regulation could improve water quality. Dry-weather discharges contain pollutants that compromise aquatic ecosystems.

Dry-weather urban runoff can be a source of pesticides, nutrients, bacteria and metals. For arid and semi-arid streams dominated by urban runoff and effluent, pollutants conveyed during the dry-season can represent a substantial portion of total annual loading. Recent studies have shown that dry-weather loading of nutrients, pesticides, and other constituents can be a significant contributor of pollutants to receiving waters (Pitton et al. 2016, Stein and Ackerman 2007, Stein and Tiefenthaler 2005, McPherson et al. 2002, 2005). For example, dry-weather flows contribute more than 50 percent of the annual pollutant loads of some metals in Los Angeles basin watersheds (Stein and Ackerman 2007). A five-year study of eight California sites found that the majority (76 percent) of annual microbial loading occurred during the dry season (Reano et al. 2015).

Few studies have examined how reduced outdoor water use affects the water quality of runoff. However, an Orange County residential runoff reduction study found that increased outdoor water efficiency reduced the amount of runoff (by 50 percent at one site) while the concentration of pollutants such as nutrients, organophosphate pesticides, trace elements and bacteria remained the same (IRWD 2004), suggesting that total pollutant loading may have decreased dramatically (Oki and Haver 2011). If accompanied by increases in water rates and other conservation measures, the proposed regulation may benefit water quality by reducing the amount of runoff and, by extension, total pollutant loading.

*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)?*

**Less than Significant Impact.** The proposed regulation would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge. A 2016 USGS report examining recharge rates in the greater Los Angeles area indicates the role urban irrigation may play in modified urban watersheds. According to that report, urban irrigation constituted about 12 percent of the estimated 551 mm/year of water flowing into the watershed. Recharge averaged 45 mm/yr, or about 8 percent of total precipitation and urban irrigation inflow (Havesi and Johnson 2016). Given the relatively small contribution of urban irrigation, the minimal groundwater recharge rate, and that the prohibitions would not appreciably change the amount of water applied to urban landscapes, the proposed regulation is reasonably assumed to have a less than significant impact on groundwater supplies and groundwater recharge—in the Los Angeles Basin and in modified watersheds generally.

*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?*

**No impact.** Urban dry-weather runoff does contribute to stream flow. For example, in the segment of the Los Angeles River stretching from Los Feliz Boulevard to Taylor Yard, “industrial, irrigation runoff, and unaccounted flow” accounted for 10.3 million gallons a day (MGD), or 16.6%, of total dry-weather flow, in 2013 (TNC 2016; Table 1). However, the percentage of that water originating from the wasteful water use practices that would be prohibited by the proposed regulation is not thought to be so significant that reducing it would alter the existing drainage pattern of the LA river—or any urban stream. This is because 1) many urban waterways are channelized and relatively unaffected by changing flow regimes; and 2) dry-weather urban water runoff delivers a fraction of wet-weather urban runoff. Rather than redirecting or reshaping the course of the stream, dry-weather flow follows the drainage pattern established during the wet season. “Bankfull” floods fill the stream channel to the top of the bank and are thought to shape and maintain the morphology of stream channels (Leopold, 1994, Schumm and Lichty 1965).

*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?*

**No impact.** See above. The proposed regulation would not substantially alter the existing drainage pattern, nor increase the rate or amount of surface runoff.

*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?*

**No impact.** See above. The proposed regulation would, at best, decrease urban dry-weather runoff, potentially improving water quality by reducing pollutant loading. Wet weather runoff would not be affected, neither would the stormwater systems designed to manage that flow.

*Otherwise substantially degrade water quality?*

**No impact.** See above. On the contrary, it is more likely the proposed regulation could improve water quality in receiving waters due to lower runoff volume (Oki and Haver 2011; IRWD 2004).

*Place housing within a 100-year flood hazard area?*

**No impact.** The proposed regulation would not place housing with a flood plain.

*Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

**No impact.** The proposed regulation would not place any structures in a flood hazard area.

*Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?*

**No impact.** The proposed regulation would not expose people or structures to flood risk.

*Inundation by seiche, tsunami, or mudflow?*

**No impact.** The proposed regulation would not result in or increase the likelihood of seiche, tsunami, or mudflow.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>LAND USE PLANNING.</b> Would the project:				
Physically divide an established community?				X
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
Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on land use planning.

**Discussion:**

*Physically divide an established community?*

**No impact.** The proposed regulation would not physically divide an established community.

*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?*

**No impact.** The proposed regulation would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.



*Conflict with any applicable habitat conservation plan or natural community conservation plan?*

**No impact.** To the Board's knowledge, the proposed regulation would not conflict with any applicable habitat conservation plan or natural community conservation plan.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MINERAL RESOURCES.</b> Would the project:				
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
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on mineral resources.

**Discussion:**

*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?*

**No impact.** The proposed regulation would not result in the loss of availability of a known mineral resource.

*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?*

**No impact.** The proposed regulation would not result in the loss of availability of locally important mineral resource recovery site.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>NOISE.</b> Would the project:				
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
Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?				X
A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on noise.

**Discussion:**

*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?*

**No impact.** The proposed regulation would not affect noise levels.

*Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*

**No impact.** The proposed regulation would not affect noise levels.

*A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

**No impact.** The proposed regulation would not affect noise levels.

*A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

**No impact.** The proposed regulation would not affect noise levels.

*For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?*

**No impact.** The proposed regulation would not affect noise levels.

*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?*

**No impact.** The proposed regulation would not affect noise levels.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>POPULATION AND HOUSING.</b> Would the project:				
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
Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on air population and housing.

**Discussion:**

*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)?*

**No impact.** Improved long-term water use efficiency is a viable complement to — and sometimes a substitute for — investments in expanded water supplies and infrastructure. Efficiency paves a way to reduce long-term costs, and it is often the most cost-effective option available for securing “new” supply (AWE 2014). Water conserved as a result of the proposed regulation would complement on-going plans to accommodate a growing California population. However, this “new” supply would be unlikely to induce growth. Rather, it would support efforts to slow the growth in urban water demand (Hanak et al. 2012), allowing utilities to delay (or perhaps even avoid) investing in expensive and more environmentally destructive sources, such as dams.

*Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

**No impact.** The proposed regulation would not displace existing housing or necessitate replacement housing elsewhere.

*Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

**No impact.** The proposed regulation would not displace substantial numbers of people.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>PUBLIC SERVICES.</b> 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 service ratios, response times or other performance objectives for any of the public services:</p>				
Fire protection?				X
Police Protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on public services.

**Discussion:**

*Fire protection?*

**No impact.** The proposed regulation would not affect the provision of fire protection services.

*Police Protection?*

**No impact.** The proposed regulation would not affect the provision of police protection services.

*Schools?*

**No impact.** The proposed regulation would not affect the provision of school services.

*Parks?*

**No impact.** The proposed regulation would not affect the provision of park services.

*Other public facilities?*

**No impact.** The proposed regulation would not affect the provision of public services.



	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>RECREATION.</b> Would the project: 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
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

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on recreation.

**Discussion:**

*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?*

**No impact.** The proposed regulation would not affect the use of existing neighborhood and regional parks or other recreational facilities.

*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?*

**No impact.** The proposed regulation do not include recreational facilities or require that expansion of recreational facilities.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>TRANSPORTATION/TRAFFIC.</b> Would the project:				
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
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
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
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Result in inadequate emergency access?				X
Conflict with adopted polices, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on transportation/traffic.

**Discussion:**

*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?*

**No impact.** The proposed regulation would not conflict with a traffic plan, ordinance or policy.

*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?*

**No impact.** The proposed regulation would not conflict with a congestion management program.

*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?*

**No impact.** The proposed regulation would affect traffic patterns.

*Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**No impact.** The proposed regulation would not increase hazards or incompatible uses.

*Result in inadequate emergency access?*

**No impact.** The proposed regulation would not result in inadequate emergency access.

*Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

**No impact.** The proposed regulation would not conflict with adopted policies, plans or programs related to public transit bicycle, or pedestrian facilities; nor would it otherwise decrease the performance or safety of such facilities.

		Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>TRIBAL CULTURAL RESOURCES.</b> Would the project:					
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
i)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on tribal cultural resources.

**Discussion:**

*Would the project cause a substantial adverse change in the significance of a tribal cultural resource... and that is: listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).*

**No impact.** The proposed regulation would not affect any tribal cultural resources, including any resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

*Would the project cause a substantial adverse change in the significance of a tribal cultural resource... and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**No impact.** The proposed regulation would not affect any tribal cultural resources.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
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
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
Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
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
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
Comply with federal, State, and local statutes and regulations related to solid waste?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses. The proposed regulation would have no impact or a less than significant impact on utilities and service systems.

**Discussion:**

*Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

**No impact.** The proposed regulation would not exceed wastewater treatment requirements of any Regional Water Quality Control Board.

*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?*

**No impact.** The proposed regulation would not require or result in the construction of new or the expansion of existing water or wastewater treatment facilities.

*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?*

**No impact.** The proposed regulation would not require or result in the construction of new or the expansion of existing stormwater drainage facilities.

*Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

**No impact.** The proposed regulation would not require new water supplies.

*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?*

**No impact.** The proposed regulation would not require additional wastewater treatment facility capacity.

*Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

**No impact.** The proposed regulation would not affect landfill capacity.

*Comply with federal, State, and local statutes and regulations related to solid waste?*

**No impact.** The proposed regulation would not affect federal, State, and/or local statutes related to solid waste.

	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MANDATORY FINDINGS OF SIGNIFIGANCE.</b> Would the project:				
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	
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	
Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

**Affected Environment:**

The project location is the state of California. The potentially affected environment is within urban areas where there are no rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. The landscape in the potentially affected area is largely developed, consisting of residential, commercial, industrial, and institutional land uses.

**Discussion:**

*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?*

**Less Than Significant Impact.** Without rate increases, type-of-use restrictions are unlikely to change customer outdoor water use (Dixon & Moore 1996, Olmstead and Stavins 2009, Mini 2015, Manago and Hogue 2017) such that dry-weather runoff significantly decreases and reduces summer urban stream flows to the detriment of biological resources. The Board’s analysis of June 2014 to April 2017 monthly conservation data supports this conclusion, corroborating the findings of previous studies that conservation due to



prohibitions, only, is a relatively small drop in the proverbial bucket. The proposed regulation is unlikely to reduce dry-weather runoff such that that summer flows significantly decrease and adversely affect California's environment by reducing habitat for sensitive fish, wildlife or plant species.

*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.)*

**Less than Significant Impact.** The proposed regulation is part of a comprehensive framework to "Make Conservation a California Way of Life" (DWR et al. 2017). The Framework charges California agencies with implementing four inter-related objectives: using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning. The responsible agencies will undertake a suite of actions to implement the four objectives. These include implementing new statutory mandates, rulemaking proceedings, expanded technical assistance, and evaluation and certification of new technologies.

While a major undertaking, the effects of Framework implementation are not expected to significantly affect the environment. Future efforts to use water more wisely (e.g., the development of new water use targets) will be comprehensive and may compel urban water suppliers to increase rates to meet new ambitious water conservation goals. As rates rise, customers are more likely to substantively reduce use, particularly outdoor use, which may result in significantly less dry-weather runoff and possibly significantly less summer flow to aquatic resources. However, as with the proposed regulation, those forthcoming will be subject to environmental review. While presumed unlikely, any significant impacts would be mitigated. Moreover, as noted above, reduced dry weather flows may benefit native species [Lake 2003].

When viewed in connection with past, current, and future efforts, the cumulative effects of the proposed regulation would have a less than significant impact on California's environment.

*Does the project have environmental will cause substantial adverse effects on human beings, either directly or indirectly?*

**No impact.** The proposed regulation would not have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly.

## APPENDIX A: Determining the Potentially Affected Area

The potentially affected area consists of those communities that, absent the proposed regulation, will not have rules, regulations, ordinances, permits and/or policies in place prohibiting wasteful water use practices equivalent to those that would be prohibited by the proposed regulation. If a community is subject to a Municipal Separate Storm Sewer Systems (MS4) Phase I or Phase II permit effectively prohibiting equivalent wasteful water use practices, that community was excluded from the impact analysis. Likewise, if a community has enacted equivalent local rules, ordinances or policies, it was excluded from the impact analysis.

### *Excluding areas subject to equivalent Phase I or Phase II MS4 permit requirements*

Required by the federal Clean Water Act (CWA), National Pollutant Discharge Elimination System (NPDES) permits regulate the discharge of pollutants from point sources into waters of the United States. NPDES permits regulating discharges into MS4s must “effectively prohibit **non**-storm water discharges” [(402(p)(3)(B)(ii)]. Non-storm water discharges, also referred to as illicit<sup>8</sup> and/or dry-weather discharges, are defined as any discharges to an MS4 not composed entirely of storm water.

NPDES MS4 permits must address all sources of illicit discharges—with some exceptions. For example, runoff from irrigation water, landscape irrigation, and lawn watering (collectively referred to as *over-irrigation water* within this document), individual residential car washing, and street wash water are “categor(ies) of non-storm water discharges...(only to be) addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States” [40 CFR 122.26§2(B)].

If considered benign, a MS4 permit will explicitly allow those discharges. If identified as a significant source of pollutants, a permit will prohibit those discharges. If considered a relatively minor and/or an undocumented source of pollutants, a permit may require Best Management Practices (BMPs) to minimize or even eliminate those discharges. In California, many communities are subject to MS4 permits that address runoff from over-irrigation water, individual residential car wash water, and street wash water, either prohibiting discharges from those sources or requiring BMPs to control them.

There are nine California Regional Water Quality Control Boards (RWQCBs). Each of the Boards issue Phase I MS4 permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities within their jurisdiction. See Figure 7 for the RWQCB jurisdictional boundaries. Not all of the Phase I permits address

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<sup>8</sup> Non-storm water discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge them (EPA 2005).

the illicit discharges that would be addressed by the proposed regulation. For example, RWQCBs 1-3, 6, 8 & 9 prohibit the discharge of *street wash water* into the MS4; RWQCB 4 requires BMPs. RWQCBs 1, 2 & 4 require BMPs to address *over irrigation water*; 3 & 9 prohibit it.



**Figure 7: Regional Board boundaries**

See Table 6 for a summary of which of the proposed prohibited practices are addressed as illicit discharges under Phase I permits.

Proposed Prohibited Practices	Equivalent Illicit Discharge	Addressed by RWQCB-issued permit?
The application of water directly onto driveways and sidewalks;	Street wash water	R1: Prohibited
		R2: Prohibited
		R3 (Salinas): Prohibited
		R4: Required BMPs
		R5: No
		R6: Prohibited
		R7: No
		R8: Prohibited
		R9: Prohibited

<p>The application of water to outdoors landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, parking lots, or structures;</p>	<p>Over irrigation water</p>	R1: Required BMPs
<p>The application of water to outdoor landscapes during and within 48 hours after a measurable rainfall of at least one-tenth of one inch of rain.</p>		R2: Required BMPs
		R3 (Salinas): Prohibited
		R4: Required BMPs
		R5: No
		R6: No
		R7: No
		R8: No
		R9: Prohibited
	<p>The use of a hose that dispenses water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;</p>	<p>Residential car wash water</p>
R2: Required BMPs		
R3 (Salinas): BMPs (per incidental runoff requirements)		
R4: Required BMPs		
R5: No		
R6: No		
R7: No		
R8: No		
R9: Required BMPs		

Table 6: Comparing proposed prohibitions to current NPDES requirements.

The State Water Resources Control Board (SWRCB) issues the Phase II MS4 general permit, providing permit coverage for smaller municipalities (population less than 100,000). The permit applies to over 200 California communities<sup>9</sup> in 30 counties. The general permit prohibits the discharge of street wash water. It also requires the control of “discharges in excess of an amount deemed to be incidental...,” defining incidental as “unintended amounts...of runoff...” Runoff volumes **in excess** of incidental must be controlled. For example, the permit requires BMPs such as detecting and correcting leaks (e.g., from broken sprinkler heads), and not irrigating during precipitation events (SWRCB 2013).

The analysis assumes that MS4 permits addressing street wash water, over-irrigation water, and residential car wash water effectively prohibit the wasteful water use practices that would be prohibited by the proposed regulation. Therefore, all areas subject to relevant Phase I or Phase II permit requirements were excluded from the impact analysis. This was completed by comparing California urban areas (cities and unincorporated communities) to those identified as “traditional permittees” in the state’s 2013 Phase II general permit; and to those within the jurisdictions of RWQCB’s 1-4 and 9.

<sup>9</sup> CA communities are subject to the MS4 phase 2 permit if designated as an “urbanized area” by the US Census Bureau in the Decennial Census; if there are more than 10,000 people and a population density of at least 1,000 people per square mile; and/or if the local MS4 discharges into a waters of the U.S. See justification in the 2013 factsheet for SWRCB’s 2013 Phase II permit (SWRCB 2013a).

*Excluding areas that have enacted equivalent local requirements*

In addition to excluding from the analysis those areas subject to relevant MS4 Phase I or Phase II permit requirements, communities that have independently prohibited equivalent wasteful water use practices were also excluded from the impact analysis. Equivalent requirements include those that would prohibit 1) the application of water directly onto driveways and sidewalks; 2) the application of water to outdoor landscapes in a manner that causes runoff; and 3) the use of a hose to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle.

To determine which communities have enacted equivalent prohibitions, the analysis relied on the 2015 Urban Water Management Plans (UWMPs) and local ordinances. The Urban Water Management Planning Act requires urban water suppliers to prepare and adopt an UWMP, and to update that plan at least once every five years. The UWMPs provide a framework for long term water planning and must contain information about: water deliveries and uses; water supply sources; efficient water uses; demand management measures; and water shortage contingency planning. The water shortage contingency analysis must include information about “mandatory prohibitions against specific water use practices....” (DWR 2016).

Within the UWMPs, the mandatory prohibitions vary depending on what stage of water shortage has been declared. Typically, water agencies will include between three and five stages of action in a water shortage contingency analysis, with each subsequent stage reflecting decreasing water supplies (DWR 2016). Stages are defined at the urban supplier’s discretion: they can be defined quantitatively (e.g., Stage 1 represents a 10% supply reduction) or qualitatively (e.g., a stage 1 represents a “mild water shortage”). The higher the stage, the more stringent the prohibitions will be. See Table 7 for a hypothetical example.

Stage		Example Prohibitions
0	Normal	Application of potable water to outdoor landscapes in a manner that causes runoff.
1	Moderate	Hosing of hardscape surfaces, except where health and safety needs dictate.
2	Significant	Outdoor watering more than 3 days per week.
3	Severe	Outdoor watering more than 2 days per week.
4	Critical	Outdoor irrigation.

Table 7 (same as Table 2): Hypothetical example of the various stages of water shortage contingency plans. How urban water suppliers characterize shortage stages has been quite variable.

Of the California cities without equivalent conditions in MS4 Phase 1 or Phase 2 permits, the majority stipulated in their UWMPs permanent **and** Stage 1 prohibitions equivalent to those that would be prohibited by the proposed regulation. Because anthropogenic climate change has increased drought risk in California— suggesting that the co-occurring warm

and dry conditions that gave rise to the 2012-2015 drought are not “exceptional” but rather very probable (Diffenbaugh et al. 2015)— the analysis assumes that Stage-1 conditions are effectively the ‘new normal.’ Hence, communities with equivalent permanent **and** Stage 1 prohibitions were both excluded from the analysis.

In addition, several cities— including Clovis, Coachella, Fontana, Modesto, and Stockton— were excluded from the impact analysis. According to their UWMPs, these cities permanently prohibited or prohibited under Stage 1 conditions all but one of the wasteful outdoor water use practices to be prohibited by the proposed regulation. That outlying, or *missing*, prohibition would be triggered at a later stage. For example, according to the City of Clovis’ UWMP, “the use of potable water for washing hard surfaces” is prohibited at Stage 3. The City of Fontana (or, the San Gabriel Valley Water Company—Fontana Division) prohibits it at Stage 2.

However, these cities also prohibited other, more wasteful outdoor water use practices at early stages. For example, during Stage 1 conditions, the City of Modesto limits outdoor irrigation to certain days and times each week. At all stages, the City of Stockton requires that leaks, once identified by the homeowner, must be repaired within 48 hours. The impact of these unique prohibitions is assumed to be more significant than the impact ‘the missing prohibition’ would have if required permanently or under Stage 1 conditions. The analysis therefore considers its absence insignificant. Hence, the aforementioned cities were also excluded from the impact analysis.

Determining the potentially affected area required progressively narrowing the scope of the impact analysis. First, California cities with equivalent conditions in their MS4 Phase I or II permits were excluded. 114 cities remained. Of those, cities with UWMPs stipulating equivalent permanent or Stage 1 conditions were excluded. 47 cities remained. Of those, cities that have passed ordinances requiring equivalent prohibitions were excluded. 26 cities remained. Having excluded those cities with equivalent prohibitions required by either their 1) MS4 Phase I or II permit, 2) UWMPs or 3) Municipal code, the State Water Board determined the potentially affected area: it consists of 26 cities and scattered, unincorporated urban areas. See Figure **8**.

**Urban areas without equivalent requirements prohibiting:**

The application of water directly onto driveways and sidewalks

The application of water to outdoor landscapes in a manner that causes runoff

The use of a hose to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle

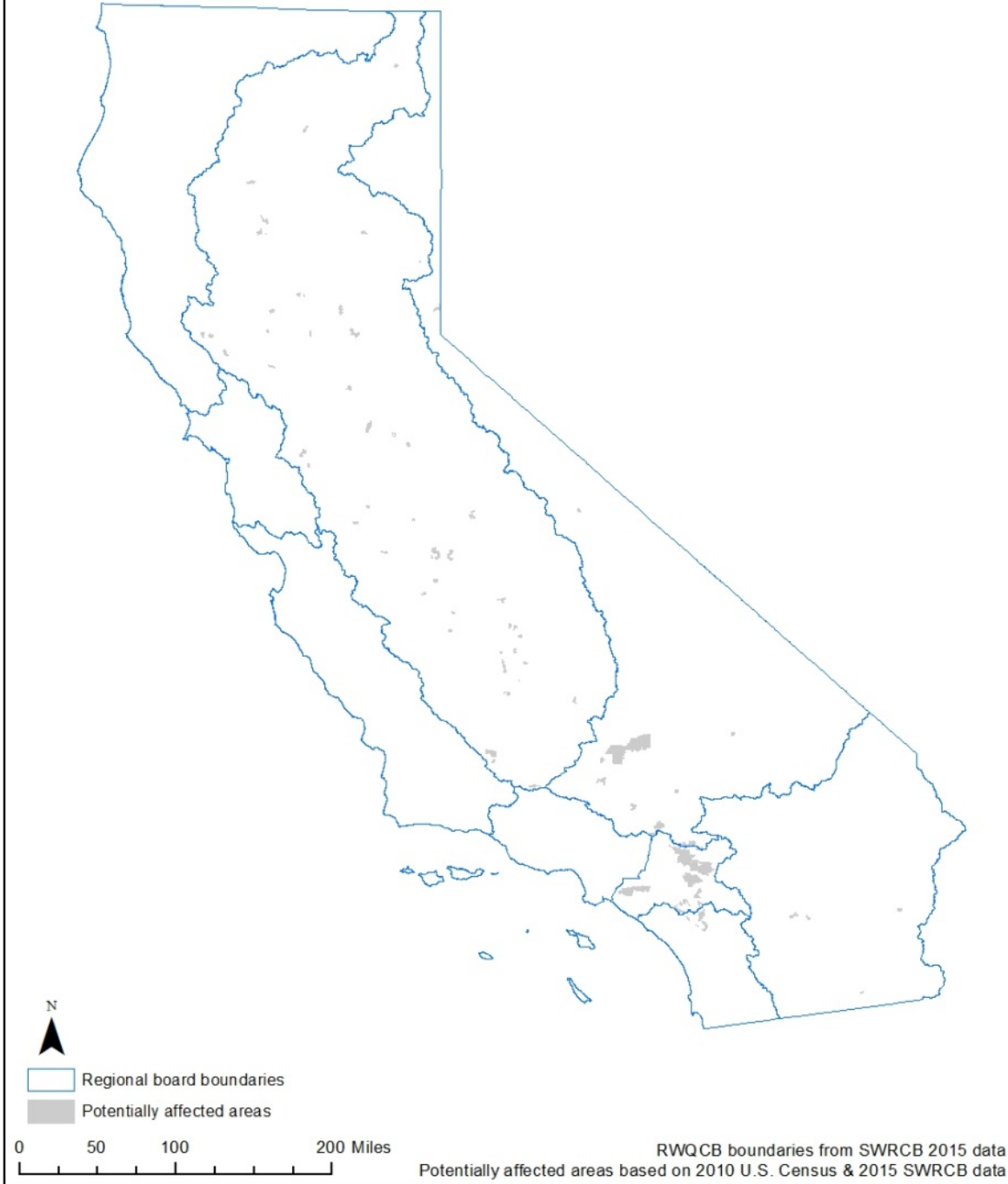


Figure 8: Potentially Affected Area (same as Figure 2)

## APPENDIX B: CNDDD Species Identified in the Potentially Affected Area

Scientific Name	Common Name	Habitat preference	Analysis
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	Sandy places in coastal-sage scrub, chaparral	Habitat Analysis: no impact
<i>Accipiter cooperii</i>	Cooper's hawk	Frequents landscapes where wooded areas occur in patches and groves.	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Agelaius tricolor</i>	tricolored blackbird	Frequents fresh emergent wetlands	<b>Species-specific analysis: no impact or a less than significant impact.</b>
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	Breeds and feeds on steep, dry, herbage-covered hillsides with scattered shrubs and rock outcrops	Habitat Analysis: no impact
<i>Alisma gramineum</i>	grass alisma	Ponds	<b>Species-specific analysis: no impact or a less than significant impact.</b>
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	Open slopes, sagebrush scrub, vertic clay	Habitat Analysis: no impact
<i>Allium marvinii</i>	Yucaipa onion	Dry slopes, ridges	Habitat Analysis: no impact
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	Washes, dry riverbeds	Habitat Analysis: no impact
<i>Ambystoma californiense</i>	California tiger salamander	Prime habitat in California is annual grassland, but seasonal ponds or vernal pools are crucial to breeding.	Habitat Analysis: no impact
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	Grassy, sparsely shrubby ground	Habitat Analysis: no impact
<i>Andrena blennospermatis</i>	Blennosperma vernal pool andrenid bee	Vernal pool	Habitat Analysis: no impact
<i>Anniella pulchra pulchra</i>	silvery legless lizard	Coastal dunes and sandy coastal grasslands	Habitat Analysis: no impact
<i>Antrozous pallidus</i>	pallid bat	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging	<b>Species-specific analysis: no impact or a less than significant impact.</b>
<i>Ardea herodias</i>	great blue heron	Secluded groves of tall trees near shallow-water feeding areas	<b>Species-specific analysis: no impact or a less than significant impact.</b>
<i>Arizona elegans occidentalis</i>	California glossy snake	Open sandy areas with scattered brush, but also found in rocky areas	Habitat Analysis: no impact
<i>Aspidoscelis hyperythra</i>	orangethroat whiptail	washes and other sandy areas with patches of brush and rocks	Habitat Analysis: no impact
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	Widely distributed in arid regions and does not require permanent water	Habitat Analysis: no impact
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	Disturbed areas in chaparral	Habitat Analysis: no impact
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	Salty flats, lake shores	<b>Species-specific analysis: no impact or a less than significant impact.</b>
<i>Astragalus lemmonii</i>	Lemmon's milk-vetch	Moist, alkaline meadows, lake shores	<b>Species-specific analysis: no impact or a</b>



			<b>less than significant impact.</b>
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Grasslands, grassy openings in woodland and chaparral, vertic clay, often serpentine	Habitat Analysis: no impact
Athene cunicularia	burrowing owl	open, dry grassland and desert habitats	Habitat Analysis: no impact
Atriplex cordulata var. erecticaulis	Earlimart orache	Saline or alkaline soils	Habitat Analysis: no impact
Balsamorhiza macrolepis	big-scale balsamroot	Open grassy or rocky slopes, valleys	Habitat Analysis: no impact
Berberis nevinii	Nevin's barberry	Sandy to gravelly soils, washes, chaparral	Habitat Analysis: no impact
Boechea dispar	pinyon rockcress	Rocky slopes, gravelly soil, in desert scrub, pinyon/juniper woodland	Habitat Analysis: no impact
Bombus caliginosus	obscure bumble bee	Open grassy coastal prairies and Coast Range meadow	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Bombus crotchii	Crotch bumble bee	Open grassland and scrub habitats	Habitat Analysis: no impact
Bombus morrisoni	Morrison bumble bee	Open dry scrub where it nests underground	Habitat Analysis: no impact
Bombus occidentalis	western bumble bee	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows	Habitat Analysis: no impact
Branchinecta lynchi	vernal pool fairy shrimp	Vernal pools	Habitat Analysis: no impact
Brodiaea filifolia	thread-leaved brodiaea	Grassland, vernal pools	Habitat Analysis: no impact
Buteo swainsoni	Swainson's hawk	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves.	Habitat Analysis: no impact
Calasellus californicus	An isopod	Found in freshwater habitats	Habitat Analysis: no impact
Calochortus plummerae	Plummer's mariposa-lily	Dry, rocky chaparral, yellow-pine forest	Habitat Analysis: no impact
Calochortus striatus	alkali mariposa-lily	Alkaline meadows, moist creosote-bush scrub	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Calochortus weedii var. intermedius	intermediate mariposa-lily	Dry, rocky, open slopes	Habitat Analysis: no impact
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	scrublands, grasslands, coniferous and broadleaf forests, and woodlands	Habitat Analysis: no impact
Canis lupus	gray wolf	Ranges in all northern habitats where there is suitable food, densities being highest where prey biomass is highest. Food is extremely variable, but the majority comprises large ungulates. Wolves will also eat smaller prey items, livestock, carrion, and garbage.	Habitat Analysis: no impact
Carex lasiocarpa	woolly-fruited sedge	Freshwater wetlands, wet banks, marshes	<b>Species-specific analysis: no impact or a less than significant impact.</b>

Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	Meadows, flats, open forest	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Catostomus fumeiventris	Owens sucker	Inhabits silty to rocky pools and runs of creeks.	Habitat Analysis: no impact
Catostomus santaanae	Santa Ana sucker	Inhabits clear, cool rocky pools and runs of creeks and small to medium rivers.	Habitat Analysis: no impact
Centromadia pungens ssp. laevis	smooth tarplant	Open, poorly drained flats, depressions, waterway banks and beds, grassland, disturbed sites	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Shrublands that vary from sparse desert shrublands to dense coastal scrub.	Habitat Analysis: no impact
Charina umbratica	southern rubber boa	Oak-conifer and mixed-conifer forests at elevations between roughly 5,000 to 8,200 ft. where rocks and logs or other debris provide shelter.	Habitat Analysis: no impact
Chorizanthe parryi var. parryi	Parry's spineflower	Sand	Habitat Analysis: no impact
Chorizanthe polygonoides var. longispina	long-spined spineflower	Sand	Habitat Analysis: no impact
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	Foothill woodland	Habitat Analysis: no impact
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Corynorhinus townsendii	Townsend's big-eared bat	Prefers mesic habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Drinks water. Relatively poor urine-concentrating ability in comparison to other southwestern bats.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Crepis runcinata	fiddleleaf hawkbeard	Moist, often alkaline meadows, especially in mountains.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Crotalus ruber	red-diamond rattlesnake	Rocky areas of tropical deciduous forest, ocean shores, desert scrub, thorn scrub, open chaparral, mesquite-cactus, and pine-oak woodland, sometimes also dunes, grassland, and cultivated areas between rock outcrops	Habitat Analysis: no impact
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	On herbs including Alternanthera, Dalea, Lythrum, Polygonum, and Xanthium	Habitat Analysis: no impact
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Crevice, shallow sand, grassland, pine/oak woodland	Habitat Analysis: no impact
Diadophis punctatus modestus	San Bernardino ringneck snake	Hard packed sandy cryptogamic soil among low hummocks with dry pools	Habitat Analysis: no impact
Diplacus pictus	calico monkeyflower	Bare, sunny, shrubby areas, around granite outcrops	Habitat Analysis: no impact
Dipodomys merriami parvus	San Bernardino kangaroo rat	Chaparral and coastal sage scrub	Habitat Analysis: no impact

Dipodomys nitratoides nitratoides	Tipton kangaroo rat	altbush scrub, valley sink scrub, and grassland habitats	Habitat Analysis: no impact
Dipodomys stephensi	Stephens' kangaroo rat	Annual grassland and coastal sage scrub with sparse shrub	Habitat Analysis: no impact
Dodecahema leptoceras	slender-horned spineflower	alluvial scrub habitats	Habitat Analysis: no impact
Dudleya multicaulis	many-stemmed dudleya	Heavy, often clay soils, coastal plains, sandstone outcrops	Habitat Analysis: no impact
Elanus leucurus	white-tailed kite	Uses herbaceous lowlands with variable tree growth, shrubs, sparse, chaparral, and almost any upland qirh sparse cover of shrubs to grasslands with a dense population of voles.	Habitat Analysis: no impact
Empidonax traillii extimus	southwestern willow flycatcher	Most numerous where extensive thickets of low, dense willows edge on wetmeadows, ponds, or backwaters.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Emys marmorata	western pond turtle	Rivers, lakes, streams, ponds, wetlands, vernal pools, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish water	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Eremalche kernensis	Kern mallow	Eroded hillsides, alkali flats	Habitat Analysis: no impact
Eremophila alpestris actia	California horned lark	Frequents grasslands and other open habitats with low, sparse vegetation.	Habitat Analysis: no impact
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Washes, floodplains, dry riverbeds	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Erigeron eatonii var. nevadincola	Nevada daisy	Open grassland, rocky flats, generally in sagebrush or pinyon/juniper scrub	Habitat Analysis: no impact
Eriophyllum mohavense	Barstow woolly sunflower	Creosote-bush scrub	Habitat Analysis: no impact
Eryngium racemosum	Delta button-celery	Poorly drained, fine, alkaline soils in grassland	Habitat Analysis: no impact
Eryngium spinosepalum	spiny-sepaled button-celery	Dry slopes in grassland	Habitat Analysis: no impact
Euchloe hyantis andrewsi	Andrew's marble butterfly	Rocky canyons, cliffs, moraines, gravelly flats	Habitat Analysis: no impact
Euderma maculatum	spotted bat	Prefers sites with adequate roosting habitat, such as cliffs. Feeds over water and along washes.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Eumops perotis californicus	western mastiff bat	Variety of habitats (from desert scrub to chaparral to oak woodland and into the ponderosa pine belt), with the species being present only where there are significant rock features, suitable for roosting.	Habitat Analysis: no impact
Extriplex joaquinana	San Joaquin spearscale	Alkaline soils	Habitat Analysis: no impact
Falco columbarius	merlin	Frequents open habitats at low elevation near water and tree stands. Favors coastlines, lakeshores, wetlands	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Fimbristylis thermalis	hot springs fimbristylis	Wet mineralized soils near hot springs and in seepage meadows	<b>Species-specific analysis: no impact or a less than significant</b>

			<b>impact.</b>
Gambelia sila	blunt-nosed leopard lizard	Sparsely vegetated scrub and grassland habitats in areas of low topographic relief. In areas of high relief, distribution is usually confined to broad sandy washes	Habitat Analysis: no impact
Glaucomys sabrinus californicus	San Bernardino flying squirrel	Coniferous and mixed forest, but will utilize deciduous woods and riparian woods	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Gopherus agassizii	desert tortoise	wide variety of habitats in arid and semiarid regions	Habitat Analysis: no impact
Gratiola heterosepala	Boggs Lake hedge-hyssop	Shallow water, margins of vernal pools	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Grus canadensis tabida	greater sandhill crane	When nesting, prefers open habitats with shallow lakes and fresh emergent wetlands	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Haliaeetus leucocephalus	bald eagle	Requires large, old-growth trees or snags in remote, mixed stands near water.	Habitat Analysis: no impact
Hesperocyparis forbesii	Tecate cypress	Chaparral	Habitat Analysis: no impact
Hesperolinon adenophyllum	glandular western flax	Serpentine, chaparral	Habitat Analysis: no impact
Heuchera parishii	Parish's alumroot	Rocky places	Habitat Analysis: no impact
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	Freshwater wetlands, wet banks, marshes	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Icteria virens	yellow-breasted chat	Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Imperata brevifolia	California satintail	Chaparral, Coastal Sage Scrub, Creosote Bush Scrub, wetland-riparian.	<b>Species-specific analysis: no impact or a less than significant impact.</b>
Incilius alvarius	Sonoran desert toad	Usually found in the vicinity of streams or other sources of water during periods of wet weather	Habitat Analysis: no impact
Ivesia aperta var. aperta	Sierra Valley ivesia	Dry, rocky meadows, generally volcanic soils	Habitat Analysis: no impact
Ivesia argyrocoma var. argyrocoma	silver-haired ivesia	Pebble plains	Habitat Analysis: no impact
Ivesia webberi	Webber's ivesia	Rocky clay in sagebrush flats	Habitat Analysis: no impact
Lanius ludovicianus	loggerhead shrike	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover	Habitat Analysis: no impact
Lasionycteris noctivagans	silver-haired bat	Primarily a forest dweller, feeding over streams, ponds, and open brushy areas.	<b>Species-specific analysis: no impact or a less than significant impact</b>
Lasiurus blossevillii	western red bat	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging	<b>Species-specific analysis: no impact or a less than significant impact</b>

Lasiurus cinereus	hoary bat	Saline or alkaline soils	Habitat Analysis: no impact
Lasiurus xanthinus	western yellow bat	Valley foothill riparian, desert riparian, desert wash, and palm oasis.	<b>Species-specific analysis: no impact or a less than significant impact</b>
Lasthenia burkei	Burke's goldfields	Vernal pools, wet meadows	<b>Species-specific analysis: no impact or a less than significant impact</b>
Layia munzii	Munz's tidy-tips	Alkaline clay soils	Habitat Analysis: no impact
Layia septentrionalis	Colusa layia	Serpentine or sandy soils	Habitat Analysis: no impact
Lepechinia cardiophylla	heart-leaved pitcher sage	Chaparral	Habitat Analysis: no impact
Lepidium jaredii ssp. album	Panoche pepper-grass	Alkali bottoms, slopes, washes, dry hillsides, vertic clay, acidic, gypsiferous	Habitat Analysis: no impact
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Dry, disturbed areas, bottomland, riverbanks, meadows, fields, pastures, cliffs, scrub	<b>Species-specific analysis: no impact or a less than significant impact</b>
Leptonycteris yerbabuenae	lesser long-nosed bat	Ranges from desert scrub in the southwestern United States and northern Mexico to high elevations on wooded mountains further south in Mexico	Habitat Analysis: no impact
Lilium parryi	lemon lily	Meadows, streams in montane conifer forest	<b>Species-specific analysis: no impact or a less than significant impact</b>
Linderiella occidentalis	California linderiella	Vernal pools	Habitat Analysis: no impact
Lithobates pipiens	northern leopard frog	This species occurs near permanent or semi-permanent water in many habitat types.	Habitat Analysis: no impact
Lupinus citrinus var. citrinus	orange lupine	Lake, pond shores, generally standing water	<b>Species-specific analysis: no impact or a less than significant impact</b>
Lycium parishii	Parish's desert-thorn	Sandy to rocky slopes, canyons	Habitat Analysis: no impact
Lytta hoppingi	Hopping's blister beetle	There is no published information on habitat or floral visitation records for Lytta hoppingi; found in the foothills in the southern end of the Central Valley (DFG). See <a href="https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=107591">https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=107591</a>	Habitat Analysis: no impact
Lytta morrisoni	Morrison's blister beetle	Chaparral, conifer woodland to forest, gravelly, dry slopes, flats	Habitat Analysis: no impact
Malacothamnus parishii	Parish's bush-mallow	Chaparral, Coastal Sage Scrub	Habitat Analysis: no impact
Melospiza melodia	song sparrow ("Modesto" population)	tidal salt marshes	<b>Species-specific analysis: no impact or a less than significant impact</b>
Monardella hypoleuca ssp. intermedia	intermediate monardella	Chaparral, oak woodland, occasionally conifer forest, dry slopes	Habitat Analysis: no impact

Myotis yumanensis	Yuma myotis	Distribution is closely tied to bodies of water (e.g., ponds), which it uses as foraging sites and sources of drinking water. Open forests and woodlands are optimal habitat.	<b>Species-specific analysis: no impact or a less than significant impact</b>
Nasturtium gambelii	Gambel's water cress	Marshes, streambanks, lake margins	<b>Species-specific analysis: no impact or a less than significant impact</b>
Nemacaulis denudata var. gracilis	slender cottonheads	Deserts	Habitat Analysis: no impact
Neotamias speciosus speciosus	lodgpole chipmunk	Open-canopy stages with some shrub cover	Habitat Analysis: no impact
Neotoma albigula venusta	Colorado Valley woodrat	Desert scrub with cacti or mesquite, with or without rock outcrops	Habitat Analysis: no impact
Neotoma lepida intermedia	San Diego desert woodrat	Moderate to dense canopies preferred. Desert woodrats are particularly abundant in rock outcrops and rocky cliffs and slopes	Habitat Analysis: no impact
Nolina cismontana	chaparral nolina	Dry chaparral of coastal mtns	Habitat Analysis: no impact
Nyctinomops femorosaccus	pocketed free-tailed bat	Prefers rocky desert areas with high cliffs or rock outcrops.	Habitat Analysis: no impact
Oliarces clara	cheeseweed owlfly	Bajadas	Habitat Analysis: no impact
Onychomys torridus tularensis	Tulare grasshopper mouse	Shortgrass prairies, and desert scrub.	Habitat Analysis: no impact
Opuntia basilaris var. brachyclada	short-joint beavertail	Chaparral, oak/pine woodland	Habitat Analysis: no impact
Pedimelum castoreum	Beaver Dam breadroot	Open areas, roadcuts	Habitat Analysis: no impact
Perideridia parishii ssp. parishii	Parish's yampah	Damp meadows	<b>Species-specific analysis: no impact or a less than significant impact</b>
Perognathus alticolus alticolus	white-eared pocket mouse	dry, open pine forest where bracken fern grows	Habitat Analysis: no impact
Perognathus inornatus	San Joaquin Pocket Mouse	dry, open, grassy or weedy ground, and arid annual grasslands, savanna, and desert-shrub associations with sandy washes or finely textured soil	Habitat Analysis: no impact
Perognathus longimembris brevinasus	Los Angeles pocket mouse	Sand	Habitat Analysis: no impact
Phrynosoma blainvillii	coast horned lizard	scrublands, grasslands, coniferous and broadleaf forests, and woodlands	Habitat Analysis: no impact
Phrynosoma mcallii	flat-tailed horned lizard	This species requires fine sand for shelter, moderately flat terrain, some vegetative cover and the presence of ants.	Habitat Analysis: no impact
Plagiobothrys parishii	Parish's popcornflower	Vernal pools, swales, roadside ditches	<b>Species-specific analysis: no impact or a less than significant impact</b>
Plebejus saepiolus aureolus	San Gabriel Mountains blue butterfly	Bogs, roadsides, stream edges, open fields, meadows, open forests	<b>Species-specific analysis: no impact or a less than significant impact</b>
Plebulina emigdionis	San Emigdio blue butterfly	Shadscale scrub in desert canyons and near washes.	Habitat Analysis: no impact

<i>Polioptila californica californica</i>	coastal California gnatcatcher	low, dense coastal scrub habitat in arid washes, on mesas, and on slopes of coastal hills	Habitat Analysis: no impact
<i>Polioptila melanura</i>	black-tailed gnatcatcher	Densely lined arroyos and washes dominated by creosote bush.	Habitat Analysis: no impact
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	Grassland, bare dark clay	Habitat Analysis: no impact
<i>Puccinellia simplex</i>	California alkali grass	Saline flats, mineral springs	Habitat Analysis: no impact
<i>Rallus longirostris yumanensis</i>	Yuma clapper rail	Requires emergent wetlands and tidal sloughs. Occasionally uses ecotone between wetland and adjacent upland vegetation.	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Rana boylei</i>	foothill yellow-legged frog	Moist places, drying riverbeds	Habitat Analysis: no impact
<i>Rana muscosa</i>	southern mountain yellow-legged frog	streams, lakes and ponds in montane riparian, and a variety of other habitats.	Habitat Analysis: no impact
<i>Ranunculus hydrocharoides</i>	frog's-bit buttercup	Wet ground, shallow water, creek edges, lakes	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	Delhi Sands formation	Habitat Analysis: no impact
<i>Rhinichthys osculus</i> ssp. 2	Owens speckled dace	Occurs in rocky riffles, runs and pools of headwaters, creeks and small to medium rivers	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Rhinichthys osculus</i> ssp. 3	Santa Ana speckled dace	Occurs in rocky riffles, runs and pools of headwaters, creeks and small to medium rivers	Habitat Analysis: no impact
<i>Ribes divaricatum</i> var. parishii	Parish's gooseberry	Moist woodlands	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Riparia riparia</i>	bank swallow	Requires vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, and the ocean for nesting.	Habitat Analysis: no impact
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	Able to thrive in most environments, making use of whatever cover is available...Water is probably not required	Habitat Analysis: no impact
<i>Schoenus nigricans</i>	black bog-rush	Marshes, swamps, springs, generally alkaline soils	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Setophaga petechia</i>	yellow warbler	Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season.	Habitat Analysis: no impact
<i>Sidalcea covillei</i>	Owens Valley checkerbloom	Alkaline flats	Habitat Analysis: no impact
<i>Sidalcea neomexicana</i>	Salt Spring checkerbloom	Alkaline springs, marshes	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Sidalcea pedata</i>	bird-foot checkerbloom	Moist meadows in open woodland	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Spea hammondi</i>	western spadefoot	Prefers edges or habitat mosaics that have trees for roosting and open areas for	Habitat Analysis: no impact

		foraging	
<i>Sphenopholis obtusata</i>	prairie wedge grass	Wet, alkaline soil around desert springs, mud flats	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Streptanthus campestris</i>	southern jewelflower	Open, rocky conifer forest, chaparral, woodland	Habitat Analysis: no impact
<i>Stylocline citroleum</i>	oil neststraw	Open, stable, often crusted sand, clay, dry drainage edges, between <i>Atriplex</i> shrubs	Habitat Analysis: no impact
<i>Symphotrichum defoliatum</i>	San Bernardino aster	Grassland, disturbed places	Habitat Analysis: no impact
<i>Taxidea taxus</i>	American badger	dry, open grasslands, fields, and pastures	Habitat Analysis: no impact
<i>Thamnophis gigas</i>	giant gartersnake	Saline depressions	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Thamnophis hammondi</i>	two-striped gartersnake	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats.	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Toxostoma crissale</i>	Crissal thrasher	Frequents dense thickets in desert riparian and desert wash habitats.	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Toxostoma lecontei</i>	Le Conte's thrasher	open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; Apparently does not require drinking water (Sheppard 1970).	Habitat Analysis: no impact
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	Alkaline soils, low hills, valleys	Habitat Analysis: no impact
<i>Vireo bellii pusillus</i>	least Bell's vireo	Inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically associated with willow, cottonwood, baccharis, wild blackberry, or mesquite in desert localities.	<b>Species-specific analysis: no impact or a less than significant impact</b>
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	scattered, shrubby vegetation with little human disturbance	Habitat Analysis: no impact
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	High elevation barren, conifer and shrub habitats; montane meadows; subalpine woodlands and fell-fields	Habitat Analysis: no impact
<i>Xerospermophilus mohavensis</i>	Mohave ground squirrel	arid flat terrains with desert shrubs	Habitat Analysis: no impact
<i>Xerospermophilus tereticaudus chlorus</i>	Palm Springs round-tailed ground squirrel	Prefers open, flat, grassy areas in fine-textured, sandy soil.	Habitat Analysis: no impact

Habitat information from The University of California Berkeley's "Jepson eFlora" database, CalFlora, the Consortium of California Herbaria, the California Department of Fish and Wildlife's "Life history and range" database, the International Union for Conservation of Natures (ICUN) "Red List" database, the Butterflies and Months of North America database, Fish Base, and/or the University of Michigan's Animal Diversity Web (ADW) database.



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