MITIGATED NEGATIVE DECLARATION
Pursuant to Public Resources Code Section 21080(c)

To: Office of Planning & Research
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

From: State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812-0100

Project Title: Statewide General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater (General Order)

Applicant: State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812-0100

Project Description: The proposed project is the adoption General Waste Discharge Requirements (General Order) to regulate aquifer storage and recovery (ASR) projects that inject treated drinking water into an aquifer for storage and later extraction for municipal and domestic water supply.

The intent of the General Order is to provide a streamlined permitting process and consistent requirements statewide to ensure safe, reliable storage of high quality water in existing aquifers for use during times when water supply is low, consistent with state and federal water quality law. The State Water Board, acting as lead agency, is completing an environmental review process as required by the California Environmental Quality Act prior to adopting the General Order.

Determination: The State Water Resources Control Board has determined that the proposed project will have a less-than-significant effect on the environment for the reasons specified in the attached Initial Study.

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Adopted at a meeting of the State Water Resources Control Board held on September 19, 2012.

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore
Board Member Felicia Marcus

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

September 19, 2012

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

GENERAL WASTE DISCHARGE REQUIREMENTS FOR AQUIFER STORAGE AND RECOVERY PROJECTS THAT INJECT DRINKING WATER INTO GROUNDWATER

California State Water Resources Control Board
Division of Water Quality
Sacramento, California
September 19, 2012

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION ANALYSIS
AND
STAFF REPORT

GENERAL WASTE DISCHARGE REQUIREMENTS FOR
AQUIFER STORAGE AND RECOVERY PROJECTS
THAT INJECT DRINKING WATER INTO GROUNDWATER

1. PROJECT DESCRIPTION

Aquifer Storage and Recovery (ASR) projects are being considered in many areas throughout California to increase underground water supplies by injecting water into an aquifer in times of abundant supply, and later extracting water when it is needed. Restrictions associated with construction and expansion of water storage reservoirs have resulted in increased proposed ASR projects. This trend is expected to continue.

It is in the best interest of the state to develop a comprehensive regulatory approach for ASR projects that use aquifer injection. The proposed regulatory approach is state-wide General Waste Discharge Requirements (General Order) for certain ASR projects. The General Order will provide a consistent statewide approach to regulation of these ASR projects, encourage Best Practicable Treatment or Control (BPTC) for ASR project operators, and streamline the permitting process.

It is anticipated that there will be a large variation in the size of ASR projects regulated under the proposed General Order. ASR projects could vary from single well projects to large well fields. Also, it is expected that knowledge of aquifer characteristics will vary from region to region. Pilot tests may be performed for ASR projects where there is limited information about aquifer characteristics; however, pilot tests may not be needed when the aquifer characteristics of well fields and groundwater quality have been adequately characterized.

The proposed General Order would regulate ASR projects that involve injection of treated drinking water into an aquifer via one or more injection wells. All injection and extraction wells would be constructed in accordance with the California Well Standards by a licensed well driller under the supervision of a California licensed engineer or geologist. The well construction details and lithologic log would be known and the well construction (well screen, filter pack, annular seal) would limit the injection to specific aquifer target zones at the injection wells. Water injected into an aquifer would be drinking water that has been treated to comply with the requirements of a California Department of Public Health (CDPH) domestic water supply permit. Projects would not be eligible for coverage under the General Order if the discharge would violate State Water Board Resolution 68-16 (the Antidegradation Policy) or would negatively impact a groundwater cleanup project. The General Order would not apply to operation of an ASR system where such operations are restricted or prohibited by local agency ordinance, prohibition, or other applicable law or regulation.

Coverage will be granted only to applicants whose projects are consistent with the project description provided in this Initial Study and who have completed a subsequent site-specific impacts analysis pursuant to CEQA.

1.1 Lead Agency

Under CEQA, the lead agency is the public agency with primary responsibility over the proposed project. The State Water Board is the lead agency under CEQA for this project because of its regulatory authority over water quality and use of Class V injection wells in California.

1.2 Responsible and Trustee Agencies

ASR projects are regulated both by the United States Environmental Protection Agency (U.S. EPA) and California EPA (Cal/EPA). At the federal level, the program is implemented through the Underground Injection Control Program, which implements the pollution prevention provision of the Safe Drinking Water Act. At the state level, California Water Code section 13260 requires a report of the discharge from any person operating or proposing to construct an injection well.

U.S. EPA classifies ASR wells as "Class V" injection wells. The wells are regulated through a "permit by rule" process. Injection wells are authorized unless or until a contamination incident or other cause for concern prompts further investigation. In lieu of site-specific permits, EPA may request more details from an ASR project operator, and/or issue Best Management Practices.

1.3 Public Review and Comment

This Initial Study is available for a 30-day public review period beginning August 13, 2012, and ending on September 13, 2012. Written comments may be submitted by September 13, 2012, at 12 noon to:

Jeanine Townsend, Clerk to the Board
State Water Resources Control board
1001 I Street, 24th Floor
Sacramento, CA 95814

Comment letters may be submitted by email to commentletters@waterboards.ca.gov (if less than 15 megabytes in total size) or by fax at (916) 341-5620. For email submittals, please indicate in the subject line: "**Comment Letter-General Waste Discharge Requirements for ASR Projects**."

1.4 Purpose and Project Objectives

The purpose of this Initial Study is to evaluate the potential environmental effects of the proposed project. The project is General Waste Discharge Requirements that provide uniform interpretation of state standards to ensure the safe, reliable use of aquifers to store fresh water during periods of abundant supply for use during periods of lower supply, consistent with state and federal water quality law. The General Order is intended to satisfy the requirements of Water Code sections 13263 and 13264 and is intended for discharges of potable water for aquifer storage and later recovery. One purpose of the General Order is to help streamline the regulatory process for such projects. The project objectives are summarized in Table 1.

Table 1

Objectives of Statewide General Waste Discharge Requirements for Aquifer Storage and Recovery Projects That Inject Drinking Water Into Groundwater

• Comply with California Water Code sections 13263 and 13264.
• Provide uniform interpretation of state standards to ensure the safe, reliable storage of drinking water in aquifers for later use as a municipal/domestic supply.
• Help streamline the regulatory process for authorizations to use aquifer storage and recovery.

2. CEQA REQUIREMENTS

CEQA requires that most plans and discretionary action of public agencies (e.g., the adoption of a permit) be evaluated to determine and publicly disclose potential environmental impacts.

Following preliminary review, the Lead Agency is required to complete an Initial Study to determine whether the project may have a significant effect on the environment. If the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment, the lead agency may prepare a negative declaration.

2.1 Scope of Environmental Analysis

CEQA has specific provisions that establish the scope of the environmental analysis required for the adoption of the proposed General Order. CEQA limits the scope to an environmental analysis of the reasonably foreseeable methods of compliance with the General Order. Section 15063 of the CEQA Guidelines requires that all phases of project planning, implementation, and operation must be considered in the Initial Study.

This Initial Study describes a reasonable range of alternatives to the proposed project that could feasibly enable the project's basic objectives to be met. The alternatives to the proposed project have been identified by discussions with stakeholders, including conversations with the Regional Water Quality Control Boards (Regional Water Boards) and CDPH.

The alternatives to the proposed project described in the sections that follow include an alternative regulatory approach and a "No-Project" alternative. Specifically this Initial Study includes the following elements:

- A brief description of the proposed activity with respect to water quality standards. In this case, the proposed activity is the adoption of a General Order for ASR projects that use direct injection of drinking water.
- Reasonable alternatives to the proposed activity.
- Mitigation measures to minimize any significant adverse environmental impacts of the proposed activity.

Additionally, CEQA and the CEQA Guidelines require the following:

1. An analysis of the reasonably foreseeable environmental impacts of the methods of compliance. These methods may be employed to comply with the General Order. Reasonably foreseeable methods of compliance are described in Section 4. Sections 5 and 6 identify the environmental impacts associated with the methods of compliance.
2. An analysis of the reasonably foreseeable feasible mitigation measures relating to those impacts. This discussion is also in Section 5.
3. An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts. This discussion is in Section 6.

Additionally, the CEQA Guidelines require that the Initial Study consider a reasonable range of the following:

1. Environmental factors (Section 5).
2. Technical factors (Section 5).
3. Population (Section 5).
4. Geographic areas (Section 5).
5. Specific sites (Section 5).

A "reasonable range" does not require an examination of every site, but a reasonably representative sample of them. The statute specifically states that the agency shall not conduct a "project level analysis."[1] Rather, a project level analysis must be performed by the applicants that choose to seek coverage pursuant to the General Order.

The State Water Board is prohibited from specifying the manner of compliance with its regulations, and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the individual ASR project proponents. In preparing this environmental analysis, the State Water Board has considered the pertinent requirements of state law.

The State Water Board believes that the proposed project, the other regulatory alternatives described below, and the No-Project Alternative adequately cover the full range of alternatives needed "to foster meaningful public participation and informed decision making" and should be sufficient to "permit a reasoned choice."

3.0 APPLICABLE STATUTE, REGULATION, AND POLICY

3.1 California Water Code

Water Code section13260 states in part:

> *All of the following persons shall file with the appropriate regional board a report of the discharge, containing the information which may be required by the regional board: (3) Any person operating, or proposing to construct, an injection well.*

Water Code section13051 states in part:

> *As used in this division, "injection well" means any bored , drilled, or driven shaft, dug pit, or hole in the ground into which waste or fluid is discharged, and any associated subsurface appurtenances, and the depth of which is greater than the circumference of the shaft, pit, or hole.*

[1] Public Resources Code section 21159(d).

Water Code section 13263(i) states in part:

> *The state board or a regional board may prescribe general waste discharge requirements for a category of discharges if the state board or the regional board finds or determines that all of the following criteria apply to the discharges in that category:*
>
> *1) The discharges are produced by the same or similar operations.*
> *2) The discharges involve the same or similar types of waste.*
> *3) The discharges require the same or similar treatment standards.*
> *4) The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.*

ASR projects that inject treated drinking water comply with the above criteria and therefore a general order is appropriate.

Water Code section13264 states in part:

> *No person shall initiate any new discharge of waste or make any material changes in any discharge, or initiate a discharge to, make any material changes in a discharge to, or construct, an injection well, prior to the filing of the report required by Section 13260 and no person shall take any of these actions after filing the report but before whichever of the following occurs first: (1) The issuance of waste discharge requirements pursuant to Section 13263.*

3.2 Antidegradation Policy

The Implementation Plans of the various Water Quality Control Plans (Basin Plans) establish procedures for the implementation of the antidegradation directives of the State Water Board. In general, the prevention of degradation of high quality groundwater and surface waters is a high priority of the California Water Boards.

In 1968, the State Water Board adopted Resolution 68-16 which states:

1. *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.*
2. *Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

Any activity that results in the degradation of the quality of waters of the state must be required to employ best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest quality of water will be maintained consistent with maximum benefit to the people of the state. Resolution 68-16 and the antidegradation implementation plans of the various Water Quality Control Plans are collectively known as the "Antidegradation Policy."

Degradation of groundwater by constituents in treated drinking water after effective source control, treatment, and control may be determined to be consistent with maximum benefit to the people of California. This determination is based on considerations of reasonableness under the circumstances of the ASR project. Factors to be considered include:

- Past, present, and probable beneficial uses of the receiving water (as specified in the applicable Water Quality Control Plan);
- Economic and social costs, tangible and intangible, of the ASR project compared to the benefits;
- Environmental aspects of the ASR project; and
- Implementation of feasible alternative treatment or control methods.

The proposed General Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water as follows:

- This General Order requires that ASR projects not:
    - Cause groundwater to exceed any water quality objective;
    - Unreasonably affect beneficial uses; or
    - Cause a condition of pollution or nuisance.

This General Order requires implementation of best practicable treatment or control (BPTC). BPTC measures may include, but are not limited to:

- Injection of potable water produced in compliance with a CDPH domestic water supply permit.
- Adequate characterization of source water quality. If source water quality is variable through the year, the project will be operated to optimize use of better quality water during injection cycles.
- Design and operation of an ASR project to minimize adverse aquifer conditions and geochemistry.
- Additional treatment when necessary to fully protect all beneficial uses.
- Reduction of dissolved oxygen in water prior to injection (if oxygen reduction treatment will not create additional water quality issues).
- Groundwater monitoring of the injection/extraction wells and groundwater monitoring wells to evaluate the potential for groundwater quality changes.
- Design of groundwater monitoring networks to address the frequent changes in groundwater flow direction that can be caused by operation of an ASR project.
- Regular evaluation of changing Maximum Contaminant Level (MCLs), Water Quality Objectives, and emerging constituents of concern and their impact on the ASR project.
- An Operation & Maintenance (O&M) Plan.
- Trained ASR project personnel.

ASR projects regulated by the General Order will provide both economic and environmental benefits. Subsurface storage of water also eliminates the land use and environmental impacts of surface storage of water in tanks and reservoirs. Design and construction of ASR projects will enhance local employment, specifically during the design and construction phase, and will provide opportunity for expanded economic activity as a result of improved water supply reliability. For these and other reasons, limited degradation of water quality that may occur in some cases as a result of ASR projects regulated under this General Order is consistent with maximum benefit to the people of the state. This General Order also requires enrolled ASR projects to meet water quality objectives of the respective Basin Plans. In addition, prior to groundwater injection for storage, the water must be treated to meet the drinking water standards.

4. ANALYSIS OF REASONABLY FORESEEABLE METHODS OF COMPLIANCE

The analysis of reasonably foreseeable methods of compliance is based on the alternative methods of compliance available for treatment of drinking water to meet state drinking water standards. Compliance will be achieved through implementation of BPTC to reduce the threat to water quality. The project proponent will be responsible for ensuring that water to be injected into an aquifer meets the quality standards of the General Order. Treatment may include any of the following processes:

- Physical filtration to remove sediments and other suspended solids;
- Activated carbon filtration to remove organic contaminants;
- Coagulation and flocculation to enhance removal of suspended solids;
- Precipitation or other chemical treatment to reduce concentrations of dissolved metals; and
- Disinfection using chlorine gas, sodium hypochlorite, or ultraviolet (UV) disinfection.

The General Order will require that each applicant demonstrate that the water to be injected will be treated to meet drinking water standards by submitting a copy of the CDPH domestic water supply permit for the injectate source water.

The details of BPTC strategies will be based on project-specific conditions (e.g., supply water characteristics, aquifer water quality, soils and geology, etc.). Applications for coverage under the General Order will be required to include an analysis of the potential for groundwater quality to be impacted as a result of an ASR project.

If a pilot test will be performed, the available information may be limited until the pilot test is completed. In such cases, the General Order will allow a limited duration pilot test to acquire the information needed and the potential for degradation will be initially estimated by calculation and/or numeric modeling based on the available data.

5. ENVIRONMENTAL CHECKLIST AND DISCUSSION OF REASONABLY FORESEEABLE COMPLIANCE METHODS AND MITIGATION MEASURES

5.1 Environmental Setting

California is geographically diverse and includes desert, coastal, and alpine areas. Diversity of geography, temperature and moisture creates a significant diversity of biological resources. Nationwide, California has the largest number of species overall, and the most endemic species. California also has the highest number of rare species (species listed under the federal Endangered Species Act or the California Endangered Species Act), and about one-third of those species are at risk of local or global extinction.

California is divided geographically into ten bioregions, relatively large areas containing geographically distinct assemblages of natural communities and species. The names of these bioregions are Modoc, Klamath/North Coast, Sacramento Valley, Bay/Delta, Sierra, San Joaquin Valley, Central Coast, Mojave Desert, South Coast, and Colorado Desert. A brief description of each bioregion follows.

Modoc Bioregion - This bioregion is also referred to as the Modoc Plateau and the Southern Cascade Bioregions. The Modoc Bioregion extends across California's northeast corner from Oregon to Nevada, and south to the southern border of Lassen County. The physical geography of the region includes flats, basins, valleys, lava flows, and mountains. High desert and forests are the dominant vegetation communities. Several major lakes (Goose, Eagle, and Tule) and Mount Lassen (10,450 feet in elevation) are dominant physical features. The bioregion shares many similarities with the Great Basin region that forms much of its eastern boundary. The area's large lakes provide critical habitat for migratory birds (USGS 2003).

Counties within this bioregion include all or portions of Plumas, Siskiyou, Butte, Tehama, Shasta, Lassen, and Modoc, which support relatively sparse population bases including the municipalities of Susanville and Alturas. This bioregion comprises the northern quarter of the Lahontan Hydrologic Region.

Klamath/North Coast Bioregion - The Klamath/North Coast Bioregion extends roughly one-quarter of the way down the 1,100-mile coast and east across the Coastal Ranges and into the Cascades. The region extends from the Oregon border to Point Arena and from the continental shelf to the Central Valley, including the looming Mount Shasta (14,160 feet tall) near the eastern boundary. The region is one of rugged relief, with severely sheared, faulted, and folded mountains forming parallel ridges and river valleys. It also has coastal terraces, lagoons, and populated floodplains, as well as off-shore islands, estuaries, and subtidal deep-water habitats (USGS 2003). The California bioregional classification system does not include offshore and tidal areas. The marine portion of this bioregion is within two categories of California's marine and ocean classification system: Southern Oregonian Province and Central Ocean (CERES 2005). Numerous rivers in this region offer spawning grounds for anadromous fish (e.g., salmon), including the Eel, Trinity, Klamath, Russian, Smith, Salmon, Scott, Mad, and Mattole Rivers. Large lakes include Clear Lake, Whiskeytown Lake, Clair Engle Lake, and the western part of Shasta Lake. This bioregion includes all or portions of 10 counties: Del Norte, most of Siskiyou, Humboldt, Trinity, Mendocino, Lake, and the northwestern portions of Shasta, Tehama, Colusa, and Glenn.

The region's rugged and remote nature supports low population numbers. The largest cities in the region are Redding at the northern end of the Central Valley and Eureka in Arcata Bay. This bioregion encompasses all of the North Coast Hydrologic Region.

Sacramento Valley Bioregion - This bioregion makes up the northern portion of California's Great Valley, extending south roughly from Redding in the north to the northern edge of the Sacramento–San Joaquin River Delta (Delta) at the confluence of the Sacramento and American Rivers. The eastern boundary spans the northern third of the Sierra Nevada foothills. The landscape is relatively flat, consisting of basins, plains, terraces, alluvial fans, and scattered hills or buttes. Counties incorporated in this populated bioregion are Sutter, most of Sacramento, and Yolo and portions of Butte, Colusa, Glenn, Placer, Shasta, Tehama, and Yuba. Sacramento is the bioregion's largest city with other large cities including Redding, Chico, Davis, West Sacramento, and Roseville, making it the fourth most populous of the 10 bioregions. This bioregion covers a fraction of the Central Valley Hydrologic Region.

Bay/Delta Bioregion - The Bay/Delta bioregion extends from the Pacific Ocean to the Sacramento Valley and San Joaquin Valley bioregions to the northeast and southeast, and a short stretch of the eastern boundary joins the Sierra bioregion at Amador and Calaveras Counties. The bioregion is bounded by the Klamath/North Coast bioregion on the north and the Central Coast bioregion to the south (CERES 2005). The marine and ocean areas are categorized as the Oceanic bioregion and the northern portion of the Central Ocean bioregion. These bioregions include two-thirds of California's coast, extending down to Point Conception north of Santa Barbara. The Bay/Delta bioregion is one of the most populous, encompassing the San Francisco Bay Area and the Delta. The bioregion fans out from San Francisco Bay in a jagged semi-circle that takes in all or part of 12 counties: Marin, Contra Costa, Santa Clara, Alameda, Solano, San Mateo, San Francisco, Sonoma, Napa, San Joaquin, and parts of Sacramento and Yolo. Major cities include San Francisco, Santa Rosa, Oakland, Berkeley, Vallejo, Concord, and San Jose. Though of moderate size, the Bay/Delta bioregion is the second most populous bioregion. This bioregion contains portions of the San Francisco Bay and Central Valley Hydrologic Regions.

Sierra Bioregion - The Sierra bioregion is named for the Sierra Nevada mountain range that is approximately 380 miles long and extends from the Feather River in the north to Tejon Pass in the Tehachapi Mountains to the south. The bioregion extends along California's eastern boundary and is largely contiguous with Nevada. It is bounded on the west by the Sacramento Valley and San Joaquin bioregions. Included in the region are the headwaters of 24 river basins extending to the foothills on the west side and the base of the Sierra Nevada escarpment on the east side (USGS 2003). These watersheds generate much of California's water supply provided by runoff from the Sierra snowpack. Eighteen counties, or their eastern portions, make up the Sierra bioregion: Alpine, Amador, Butte, Calaveras, El Dorado, Fresno, Inyo, Kern, Madera, Mariposa, Mono, Nevada, Placer, Plumas, Sierra, Tulare, Tuolumne, and Yuba. The larger cities include Truckee, Placerville, Quincy, Auburn, South Lake Tahoe, and Bishop (CERES 2005). This bioregion encompasses portions of the Lahontan, Central Valley, and Mojave Hydrologic Regions.

San Joaquin Valley Bioregion - The San Joaquin Valley bioregion is bordered by the Coast Ranges on the west and the southern two-thirds of the Sierra bioregion on the east. This bioregion is in the heart of California and is the state's top agricultural region, producing fruits and vegetables in its fertile soil. Eight counties are found within the bioregion: Kings, most of Fresno, Kern, Merced, and Stanislaus and portions of Madera, San Luis Obispo, and Tulare. This bioregion, the third most populous, still contributes to the state's top 10 counties in farm production value (CERES 2005). Large communities include Fresno, Merced, Modesto, and Bakersfield.

Central Coast Bioregion - The Central Coast Bioregion includes marine, freshwater, and terrestrial resources. The bioregion extends some 300 miles from just north of the city of Santa Cruz to just south of the city of Santa Barbara, and inland to the floor of the San Joaquin Valley. The edge of the continental shelf forms the western boundary; on the east the region borders the Central Valley bioregion. The marine and ocean areas are categorized as the Central Ocean bioregion and the Southern California Bight. These marine regions extend from Cape Mendocino in the north to Point Conception in the south (CERES 2005). The bioregion encompasses the counties of Santa Cruz, Monterey, San Benito, Santa Barbara, and portions of Los Angeles, San Luis Obispo, Fresno, Merced, Stanislaus, and Ventura. Large cities include Monterey, San Luis Obispo, and Santa Barbara. This bioregion also encompasses all of the Central Coast and Los Angeles Hydrologic Regions.

Mojave Desert Bioregion - The Mojave Desert Bioregion is located in southern California, southern Nevada, northeastern Arizona, and southwestern Utah. In California, the bioregion comprises the southeastern portion of the state, roughly east of the Sierra bioregion to the Transverse Ranges in the west, where this region abuts the Colorado Desert near Twentynine Palms. The geography is defined by widely separated mountain ranges and broad desert plains, and ranges in elevation from 280 feet below sea level in Death Valley National Park to over 11,000 feet on Telescope Peak. Much of the region is at elevations between 2,000 and 3,000 feet. Seven counties make up the Mojave bioregion: nearly all of San Bernardino, most of Inyo, the southeastern tips of Mono and Tulare, the eastern end of Kern, the northeastern desert area of Los Angeles, and a piece of north-central Riverside County. The largest cities are Palmdale, Victorville, Ridgecrest, and Barstow (CERES 2005). The Mojave Desert Bioregion is within the southern portion of the Lahontan Hydrologic Region.

Colorado Desert Bioregion - The Colorado Desert Bioregion is the western extension of the Sonoran Desert found primarily in Arizona and Mexico. The region occupies the southeastern area of California to the border with Arizona and Mexico. It includes the Imperial Valley and Colorado River and abuts the South Coast bioregion within the Peninsular Ranges. Elevation varies from 230 feet below sea level at the Salton Sea to over 8,000 feet in the Peninsular

Ranges, but averages around 1,000 feet. The landform is typified by alluvial fans, bajadas, playas, dunes, desert plains and steep sparsely vegetated mountains. Average precipitation is around 4 inches per year (USGS 2003). This sparsely populated bioregion encompasses all of Imperial County, the southeastern portion of Riverside County, the eastern end of San Bernardino County, and the eastern portion of San Diego County. Its most prominent cities are Palm Springs, Rancho Mirage, and El Centro (CERES 2005). This bioregion is completely within the Colorado River Hydrologic Region.

South Coast Bioregion - This bioregion encompasses terrestrial and marine resources from Point Conception on the north to the border with Mexico (USGS 2003). It extends from the outer edge of the continental shelf to the base of the Transverse and Peninsular Ranges. This bioregion is comprised of off-coast islands, narrow mountain ranges, broad fault blocks, alluvial lowlands, and coastal terraces. Elevation ranges from sea level to over 11,400 feet (San Gorgonio Mountain). The aquatic resources include subtidal and intertidal marine and deep water habitats (USGS 2003). The California classification system does not include offshore and tidal areas; however, this region is defined within the California ocean system as the Southern California Bight (CERES 2005). Counties included in this region are Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura. This region is highly populated and continues to grow at a high rate (USGS 2003). This bioregion spans the San Diego, Santa Ana and Los Angeles Hydrologic Regions.

5.2 Environmental Impacts

The proposed General Order would not, in itself, cause potential adverse environmental impacts. Potential impacts of ASR projects regulated under the proposed General Order are foreseeable only to a limited extent. The Water Boards are prohibited from specifying the manner of compliance in its Waste Discharge Requirements or other orders (Water Code section13360), and accordingly, actual environmental impacts will necessarily depend upon the compliance strategy selected by future project applicants. Therefore, until future ASR projects, which must comply with the proposed General Order, are identified and proposed, many physical changes cannot be fully anticipated. As a result, this analysis considers the environmental impacts from reasonably foreseeable methods of compliance with the requirements of this proposed General Order on a programmatic level. Individual ASR projects will be subject to project-level environmental review by the appropriate CEQA lead agency. If these environmental reviews identify significant environmental impacts, the lead agency must either mitigate those effects to less than significant levels or adopt a statement of overriding considerations that provides reasons for project approval despite potential significant environmental impacts.

With respect to reasonably foreseeable mitigation measures, the following analysis identifies self-implementing mitigation measures (e.g., air and noise impacts mitigated by compliance with air quality standards and local noise ordinances that automatically apply). Other mitigation measures will be imposed as appropriate by the regional water board as part of statutory mandates to protect water quality and beneficial uses (e.g., geology, soil, hydrology, and water quality impacts). Additional mitigation measures may be needed to mitigate impacts identified either by the lead agency, responsible agencies, or other public agencies (including the Regional Water Boards) with jurisdiction over the project. Public agencies approving ASR projects would be expected to incorporate any applicable mitigation measures either identified herein, or as needed, that are within their authorities.

Environmental factors checked below could be potentially affected by this project.

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

5.3 Initial Study Checklist

The CEQA Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of a proposed project to the physical environment. The Initial Study Checklist provides questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of the Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. The Appendix “G” Environmental Checklist Form has been modified to include a reference to Public Resources Code section 21083.3 and CEQA Guidelines Section 15183 in order to identify impact areas that do not require further analysis than that which was provided in a previously certified EIR. Impact questions and responses are included in both tabular and narrative formats for each of the 17 environmental topic areas.

There are five (5) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained below:

1) A "Potentially Significant Impact" answer is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially Significant Impact" entries are made, an EIR is required.

2) A "Potentially Significant Unless Mitigation Incorporated" answer is appropriate where the applicant has agreed to incorporate a mitigation measure to reduce an impact from "Potentially Significant" to a "Less than Significant." For instance, impacts to flood waters could be reduced from a “potentially significant impact” to a “less than significant impact” by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level. For the purpose of this project, this response means that mitigation has been incorporated as one or more requirements in the General Order itself.

3) A "Less Than Significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or that the application of development policies and standards to the project will reduce the impact(s) to a less than significant level. For instance, the application of local, state, and federal standards and regulations would reduce potential cultural resources impacts to a less than significant impact.

4) A "No Impact" answer is appropriate where it can be clearly seen that the impact at hand does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area will clearly not have an adverse effect on agricultural resources or operations.

All answers must take account of the whole 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 except as provided for under CEQA Guidelines section 15183 and CEQA section 21083.3.

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the parentheses following each response. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

5.3.1 AESTHETICS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a-c) The proposed General Order would not directly create potential impacts to aesthetic resources. ASR projects potentially regulated under the proposed General Order would range from single well projects to large well fields, and consequently there would be variation in potential aesthetic impacts. Typical individual well sites are relatively small, approximately 50 feet by 100 feet, and generally unobtrusive. The most visible aspect of well sites would typically be pump station buildings, which are typically approximately 30 feet wide by 40 feet long and 16 feet high. Fencing could also be used, in lieu of a structure. Given the relatively unobtrusive appearance and small size of typical well sites, most of the reasonably foreseeable aesthetic impacts related to future well projects would be localized and temporary construction impacts.

d) The proposed General Order would not directly generate lighting and associated impacts. ASR Projects regulated under the proposed General Order would typically require nighttime lighting for limited periods during construction, typically lasting about 14 days when 24-hour drilling operations are required, and would be focused on drilling operations. Generally, upon completion of well drilling operations, operational equipment or materials used on project sites would not cause glare during day or night. However, individually proposed projects could generate new sources of light or glare depending on the specific design and location of the project.

Conclusion: The proposed General Order would result in less than significant impacts to aesthetic resources. ASR projects regulated under the proposed General Order would be subject to project-level CEQA review, at which time potential adverse impacts must be evaluated and appropriate mitigation measures implemented.

5.3.2 AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping & Monitoring Program of the California Resources Agency, to non-agricultural uses?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526)?	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

a-e) The proposed General Order itself would not directly result in potential impacts to agricultural or forest resources. ASR projects regulated under the proposed General Order could result in potential impacts to agriculture or forested resources, where future well sites are proposed within areas that could be categorized under the Farmland Mapping and Monitoring Program as Farmland of Statewide Importance.

Conclusion: The proposed General Order would result in less than significant impacts to agricultural or forest resources. ASR projects regulated under the proposed General Order would be subject to project-level CEQA review, at which time potential adverse impacts must be evaluated and appropriate mitigation measures implemented.

5.3.3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) 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 that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Regulatory Background

The existing air quality regulatory framework is complex and varies at the federal, state, and local levels throughout California. Multiple federal and state laws provide the California Air Resources Board and local air districts with authority to protect public health by regulating air contaminants with potential to cause adverse health effects.

California Clean Air Act Requirements

The California Health and Safety Code (H&SC) section 39607(e) requires the California Air Resources Control Board (CARB) to establish and periodically review and designate areas of California as attainment, nonattainment, or unclassified for State standards.

The CARB makes area designations for ten pollutants: ozone, suspended particulate matter (PM10 and PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles.

Federal Clean Air Act Requirements

Like the CARB, U.S. EPA designates areas for each pollutant for which there is a national ambient air quality standard: Ozone 8-Hour Standard, PM10, PM2.5, Carbon Monoxide, Nitrogen Dioxide, and Sulfur Dioxide.

Local Air Quality Management/Air Pollution Control

The State of California is divided into Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD); referred to herein as air districts. Air districts are county or regional governing authorities that have primary responsibility for controlling air pollution from stationary sources.

Project Impacts

a-b) The proposed General Order would not directly generate potential air quality impacts. ASR projects regulated under the proposed General Order may cause some impacts to air quality, but for a short duration during, construction activity. Construction equipment typically entails emissions of particulate matter, nitrogen oxides (NOx) and reactive organic gases (ROG). Although construction is temporary, emissions of these pollutants could contribute to existing non-attainment of air quality standards, or otherwise interfere with achieving air quality standards.

Operational emissions would vary based on characteristics of individual projects. Typically, sources of project emissions would include operation of well site equipment, including pumps, automatic valves, lighting, chlorination, power to operate facilities (e.g., electricity) and periodic vehicle trips for monitoring and maintenance.

c, d, e) The proposed General Order would not generate pollutants or odors, or cause exposure to pollutants. ASR projects regulated under the proposed General Order may increase the potential for a net increase of pollutants, and consequent exposure of sensitive receptors to project emissions, particularly on a temporary basis during construction activities. Local air districts require dust control measures either via grading ordinances or air quality regulations.

Conclusion: The proposed General Order would result in a less than significant impact to air quality. Air quality conditions vary widely throughout California, as do local regulations. ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be analyzed and implemented.

5.3.4. BIOLOGICAL RESOURCES. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the DFG or USFWS?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the DFG or USFWS?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, *etc.*) through direct removal, filling, hydrological interruption or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

a-e) The proposed General Order would not directly result in potential impacts to biological resources. ASR projects regulated under the proposed General Order could potentially result in adverse effects to biological resources. California contains a wide variety of bioregions, ranging from desert conditions below sea level, to coastal areas, to alpine areas of high elevations. Given the minimal size of typical individual projects, it is unlikely that ASR operations would significantly alter the overall amount of conserved or protected habitat areas. However, circumstances may occur where construction of ASR well sites could affect protected habitat (e.g., riparian or wetland habitat for special-status species).

Conclusion: The proposed project would result in a less significant impact on biological resources. ASR projects regulated under the proposed General Order may include potential impacts to biological resources, and would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.5. CULTURAL RESOURCES. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

(a-d) The proposed General Order would not directly cause potential impacts to cultural resources. ASR projects regulated under the proposed General Order could, depending on the location, involve potential adverse effects to cultural resources. Although ASR well sites are limited in size, given the drilling required, disturbance of resources would be a potential impact. Projects will be required to comply with Public Resource Code section 21159 to ensure implementation of necessary site specific actions to avoid, minimize, and mitigate potential impacts to significant historical, archaeological, and paleontological resources, or unique geological features.

Additionally, all future actions must comply with CEQA requirements for tribal consultation required by Senate Bill 18 (SB 18) (Stats 2004, Ch 905) and Government Code section 65352. SB 18 refers to “places, features, and objects” as described in Public Resource Code sections 5097.9 and 5097.993. Required actions involving construction already include a thorough

search of records, published literature, and databases, to avoid and minimize potential impacts to identified cultural resources.

In the event that avoidance is infeasible, ASR project proponents will be required to follow Native American Heritage Commission's mandate for Native American Human Burials and Skeletal Remains, in partnership with affected tribe(s), in order to adequately provide for recovering scientifically consequential information from the site. A report of excavation and data will be filed with the California Historical Resources Regional Information Center (COHP, 2001). In the event that ground disturbances uncover previously undiscovered or documented resources, California law protects Native American burials, and provides for sensitive treatment and disposition of those remains. (H&SC, section 7050.5; Pub. Resources Code, § 5097.9 et seq.)

Conclusion: The proposed General Order would result in less than significant impacts to cultural resources. ASR projects regulated under the proposed General Order may result in some impacts to cultural resources. Such future actions subject to this project would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented in accordance with local, state, and federal requirements.

5.3.6. GEOLOGY and SOILS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines & Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

a) The proposed project would not directly result in potential impacts associated with geology and soils. Future ASR projects regulated under the proposed General Order could include potential geologic and soil-related impacts. There is wide variation in the state relative to seismic risk with respect to faulting, ground shaking, seismically related ground failure, and liquefaction. Future actions would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be analyzed and implemented in accordance with applicable local, state and federal requirements. For example, in accordance with California law, all structures associated with ASR well sites would be constructed in compliance with Uniform Building Code (UBC) and California Building Code (CBC) standards for seismic safety.

b) The proposed General Order itself would not have the potential to cause soil erosion. Construction of future ASR projects regulated under the proposed General Order would necessarily involve excavation, grading, and surface soil disturbance in construction areas. Local governments typically have established protocols for construction projects to minimize soil erosion and sedimentation, and minimize storm water runoff. These future projects would be required to undergo project-level CEQA review, at which times potential adverse impacts and appropriate mitigation measures will be analyzed and implemented in accordance with applicable local, state and federal requirements (e.g., applicability of the NPDES Storm Water Construction General Order, and associated Storm Water Pollution Prevention Plan).

c–e) The proposed General Order itself would not have the potential to cause impacts associated with soil instability, etc. Future ASR projects subject to the proposed General Order would be required to evaluate site-specific risk factors and conduct appropriate analyses of geologic, geotechnical, and soils to minimize potential impacts. The proposed General Order provides a framework for determining appropriate soil conditions for ASR projects. Avoidance of potential impacts includes locating project sites on appropriate soil types and slopes, compliance with design standards, installation regulations, and building codes.

Conclusion: The proposed General Order would result in less than significant impacts associated with geology and soils. Future ASR projects regulated under the proposed General Order could involve potential geologic or soils impacts and would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.7. GREENHOUSE GAS EMISSIONS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Regulatory Background

Greenhouse Gas Emissions and Global Climate Change

Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006 (AB 32), mandates that California reduce its greenhouse gas emissions to 1990 levels by 2020. The proposed policy would not conflict with AB 32. Any future requirements for reduction of greenhouse gas emissions from construction or

transportation equipment would need to be complied with and the proposed policy would not interfere with any future requirements related to greenhouse gas emissions.

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. It is exacerbated by greenhouse gases, which trap heat in the atmosphere (thus the "greenhouse" effect). Greenhouse gases include carbon dioxide, methane, and nitrous oxide, and are emitted by natural processes and human activities. Greenhouse gas accumulates in the atmosphere and regulates Earth's temperature, and is natural and desirable as without it Earth's surface would be significantly cooler, and generally uninhabitable by current standards. The effects of Global Climate change at levels exceeding natural and desirable levels includes increased drought and associated increase in wildfires, increased flooding events, and increased vector-borne disease.

Project Impacts

The proposed General Order itself would not generate greenhouse gas emissions, or effects associated with adaptation to global climate change. ASR projects regulated under the proposed General Order would generate greenhouse gases during construction, and potentially from power necessary for well operation. Relative to global contributions, the greenhouse gas contribution from ASR wells would generally be considered negligible.

Also, ASR is a method of conjunctive use, which is a sustainable approach compared to standard methods of transporting water resources within California, which requires expending substantial energy resources, and comprises a significant portion of the state greenhouse gas inventory. The proposed General Order is also consistent with State Water Board Resolution 2008-0030, which directs Water Boards to "require…climate change considerations, in all future policies, guidelines, and regulatory actions." The sustainable aspect of the project is supportive of the goals of Assembly Bill (AB) 32, which requires that statewide greenhouse gas emissions be reduced to 1990 levels by 2020. Conjunctive use programs, such as ASR, directly address this potential issue as a method of increasing sustainable local water supply.

Conclusion: The proposed General Order would not directly generate greenhouse gases. Further, the nature of ASR operations is conservation-oriented. ASR projects covered under the proposed General Order would necessarily generate greenhouse gas emissions from construction, operations and maintenance. ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.8. HAZARDS and HAZARDOUS MATERIALS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a-c) Construction Related Hazards - The proposed General Order, in itself, would not directly result in potential hazards or impacts associated with hazardous materials. ASR projects regulated under the proposed General Order could cause impacts associated with hazardous materials or substances. Construction activities typically require materials such as diesel fuel, gasoline, oil, and grease. Construction, transportation, storage and disposal of hazardous materials would be carried out in compliance with federal, state, and local regulations. Compliance with requirements of local grading and building ordinances, California Occupational Health and Safety Administration (Cal OSHA) and local safety regulations would prevent accidents involving release of hazardous materials into the environment.

Operational Hazards - ASR operations may utilize water treatment chemicals. Disinfection by chlorination can be accomplished by bulk delivery or manual mixing of a solution of hypochlorite to produce the desired percent solution strength. Storage tanks used for chlorine solution are suitable for the intended use of the solution stored and often located inside well buildings. The solution is usually conveyed automatically via chemical monitoring pumps and related piping and appurtenances. In such cases, no special containment or handling procedures are required.

Potential risks of exposure to disinfection chemicals would be minimal with proper handling and storage procedures. Compliance with CalOSHA requirements, and local safety regulations would help prevent accidents involving release of hazardous materials into the environment.
d) The proposed General Order would not result in impacts associated with projects being located on a site that is included on a list of hazardous materials sites the presence of hazardous materials or contaminated soils would preclude location of an ASR well at a site.
e, f) The proposed General Order would not involve activities that could result in a safety hazard for people residing or working near an airport, nor would ASR projects regulated under the proposed General Order. Therefore, no impact would result.

g) The proposed General Order itself would not result in physical changes that would interfere with emergency plans. ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time the potential for adverse impacts and mitigation measures will be analyzed and implemented regarding maintaining emergency access.
h) The proposed project would not create a use that would expose people or structures to hazards related to wildland fires. Therefore, there would be no impact.

Conclusion: The proposed General Order would not directly cause potential hazards or impacts associated with hazardous materials. ASR projects regulated under the proposed General Order could potentially cause hazard-related impacts and would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.9. HYDROLOGY and WATER QUALITY. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a,f) The proposed General Order, in itself, would not directly result in potential hydrology or water quality impacts, but ASR projects regulated under the proposed General Order may cause potential water quality impacts. ASR projects are generally operated as “one-well” or “multi-well” systems. In the one-well system, water is injected into, and removed from the same well. In multi-well systems, water is injected into a well and that water is removed from a different well, wells, or a combination of the injection well and the different well(s).

ASR projects may impact groundwater quality by causing degradation with disinfection by-products, salinity species, metals, pesticides, pharmaceuticals and personal care products. With the exception of disinfection by-products and certain metals that may become dissolved in the aquifer through geochemical reactions, these constituents of concern, if present, would be the result of storm water runoff and wastewater discharged into the water source upstream of the water supply intake system.

Introduction of disinfection by-products into the aquifer could be reduced or eliminated completely by two primary means: use of non-chemical disinfection methods or treatment after disinfection to remove disinfection by-products.

The best non-chemical disinfection method available is treatment with ultraviolet (UV) light to destroy pathogens. This technology is widely available and its use for disinfecting treated wastewater is becoming more common for that use. However, UV disinfection is effectively prohibited for ASR projects that will utilize existing water treatment and distribution infrastructure because CDPH requires that water suppliers serving surface water to 10,000 or more people maintain a residual chlorine concentration in the distribution system to prevent pathogen regrowth. In situations where UV disinfection could be allowed, this would require the Permittee to construct a new disinfection system to replace one that is still functional. The capital cost of replacement would vary, but can reasonably be expected to range from a few to several million dollars per facility depending on the design flow rate, length and diameter of required conveyance piping, pump sizes and treatment systems required to meet drinking water standards.

There are several treatment technologies available to remove disinfection by-products that are trihalomethanes (bromoform, dibromochloromethane, and chloroform) and haloacetic acids (dichloroacetic, trichloroacetic, chloroacetic, bromoacetic, and dibromoacetic acids). The most common method to remove low concentrations of these constituents is granulated active carbon (GAC) adsorption, which involves passing the disinfected water through a vessel that contains GAC. The constituents are physically bound to the GAC by adsorption. As the adsorption sites are filled, the GAC must be changed to continue the process. The frequency of GAC replacement varies depending on the character of the disinfected water, the flow rate, and GAC vessel dimensions. Treating disinfected water to remove disinfection by-products would require the Permittee to construct a new treatment process at each injection well head to preserve chlorine residual within the distribution system that conveys treated water to the injection wells. The capital cost of GAC treatment would vary with the volume to be treated, but can reasonably be expected to range from a few to several million dollars per facility depending on the design flow rate, pump sizes, and size of the GAC treatment systems required to remove disinfection by-products.

Treatment technologies to remove salinity species and metals are also available. The most common broadly applicable technology is reverse osmosis, which physically separates ions from water. Reverse osmosis is an energy-intensive process and the infrastructure costs can reasonably be expected to range from a few to several million dollars depending on the design flow rate, quality of the raw water, desired quality of the treated water, and brine storage and disposal options. Reverse osmosis also generates a waste brine stream, which would create additional storage and disposal costs.

Although degradation could be further minimized by employing the treatment technologies described above, the cost of this level of treatment is far greater than the benefits to be obtained. Economic prosperity of communities and associated industries is of maximum benefit to the people of the state and is sufficient reason to allow groundwater degradation, provided that terms of the applicable Basin Plan and other applicable State and Regional Water Board policies are met. The proposed General Order prohibits groundwater quality impacts that result in exceedance of any water quality objective and requires that the injected water meet all drinking water standards.

As mitigation for potential groundwater quality degradation that does not exceed water quality objectives, applicants seeking coverage under the proposed General Order will be required to demonstrate that:

- Injected water complies with CDPH drinking water standards;
- Certain minimum treatment or control measures will be implemented; and
- The project will not cause exceedance of any applicable water quality objectives.

The proposed General Order requires the following:

1. Injected water is of a quality that will not result in exceedance of a water quality objective in compliance with the requirements of the Antidegradation Policy.
2. The ASR project will not negatively impact a groundwater cleanup project.
3. Injected water has been treated and delivered to the injection well consistent with the requirements of a CDPH domestic water supply permit.
4. At a minimum, the following treatment and control measures are required for all ASR projects:

    a. Treatment (typically flocculation, filtration, and disinfection to remove suspended solids and pathogenic microorganisms) so that all injected water is potable.
    b. Adequate characterization of source water quality. If source water quality is variable through the year, operate the ASR project to optimize use of better quality water during injection cycles.
    c. Design and operation of ASR projects to minimize adverse aquifer conditions and geochemistry.
    d. Additional treatment when necessary to fully protect all beneficial uses.
    e. Perform groundwater monitoring of the injection/extraction wells and groundwater monitoring wells to evaluate the potential for groundwater quality changes.
    f. Implementation of an Operation & Maintenance (O&M) Plan.

b) The objective of the ASR Program is to enhance, rather than deplete, groundwater resources by injecting water into an aquifer so that it can be used as a drinking water source later. However, some ASR projects might create a net deficit in the target aquifer volume or a lower the local groundwater table. ASR projects regulated under the General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

c,d,e) The proposed General Order itself would not directly increase impervious surface area. It is anticipated that the scope of future ASR well projects will vary widely, from a single ASR well to large well fields. Projects that would disturb one acre or more of land would be required to obtain coverage under the NPDES General Order for Discharges of Storm Water Associated with Construction Activities and would be required to implement BMPs as required to prevent erosion, siltation, flooding, or polluted runoff. Therefore impacts would be less than significant.

g) Housing is not an element of the proposed General Order, or associated future ASR well sites. Therefore, there would be no impact.

h) The proposed General Order would not create structures within a 100-year floodplain. If ASR wells are proposed within an area designated as an area of special flood hazard, the project would be constructed in compliance with the requirements of applicable local, state and federal regulations. Therefore, impacts would be less than significant.

i, j) The proposed General Order would not expose people or structures to risk of loss, injury, or death as a result of levee or dam failure, or inundation by seiche, tsunami, or mudflow. Therefore, there would be no impact.

Conclusion: The adoption of the proposed General Order would result in less than significant impacts to groundwater quality, because the proposed General Order includes mitigation requirements to protect water quality. These requirements include implementing BPTC as necessary to meet water quality objectives and monitoring of constituents of concern for early detection of any potential threat to the groundwater. ASR projects regulated under the proposed General Order may cause some hydrologic and water quality impacts. Projects seeking enrollment under the proposed General Order, however, would require a project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.10 LAND USE AND PLANNING. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

a-c) The proposed General Order itself would not cause potential land use impacts. Implementation of ASR projects regulated under the proposed General Order would require compliance with applicable land use plans, policies, and regulations by agencies, including habitat conservation areas or natural community conservation plan areas.

Conclusion: The proposed General Order itself would not affect land use or planning. ASR projects regulated under the proposed General Order could potentially impact land use, and would be subject to a project-level CEQA review based on the characteristics of the project. Appropriate mitigation measures associated with the land use plans, policies and regulations adopted by agencies with jurisdiction over the project would be identified for the purpose of avoiding or mitigating conflicting land uses.

5.3.11 MINERAL RESOURCES. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☒	☐

a, b) The proposed General Order would have no direct effects on mineral resources. Individual ASR projects would be subject to siting criteria of local authorities to establish appropriate locations for installation of ASR wells, and would address, on a site-specific basis any potential for a system to result in loss of availability of mineral resources.

Conclusion: The adoption of the proposed General Order would have a less than significant impacts to mineral resources. Future ASR well projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.12 NOISE. Would the project result in:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to, or generation of, excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing in or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?	☐	☐	☒	☐

a,d) Construction Noise - The proposed General Order itself would not directly generate potential noise impacts. Future ASR well projects regulated under the proposed General Order would involve potential noise impacts. Although individual projects will vary, drilling operations for ASR Wells typically occurs over a 4 to 6 week period, during which there would be approximately 14 days of intermittent continuous 24-hour drilling operations. This is necessary

in order to avoid caving of the borehole and possible loss of the well prior to completion. Noise levels at 50 feet away from the drilling location have been estimated at 55-65 dBA. [2]

c) Operational (Permanent) Noise and Vibration - The proposed project would not directly cause potential noise impacts, but would facilitate implementation of future actions with the potential for impacts. Noise from operation of future proposed wells and pump stations would typically be minimal, either because pump station buildings will be soundproofed or adequate distancing of pump stations from sensitive receptors to minimize noise. Based on information obtained from construction of existing wells; post drilling, construction activities, testing and operation of the wells would not cause substantial ground borne vibration or noise, and related impacts are considered less than significant.

e, f) The proposed project, in itself, would not have the potential to generate noise impacts. Future proposed individual well sites subject to the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented in accordance with local, state, and federal requirements.

Conclusion: The adoption of the proposed General Order would result in less than significant noise. Future ASR projects covered by the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented in accordance with local, state, and federal requirements.

5.3.13 POPULATION AND HOUSING. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area either directly (*e.g.*, by proposing new homes and businesses) or indirectly (*e.g.*, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

(a-c) A project that removes an obstacle to growth is generally considered growth inducing. The proposed General Order is not in itself growth-inducing, as it is a state-wide regulatory mechanism to improve consistency between regions, and streamline analysis and permitting of proposed individual ASR projects. It is anticipated that there will be a large variation in the size of ASR projects regulated under the proposed General Order. Projects could range from single well projects to large well fields. Ultimately, future ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, and based on the specific characteristics of the project, the potential for adverse impacts and appropriate mitigation measures associated with induced population growth will be analyzed and implemented as determined by the implementing lead agency.

[2] City of Roseville Diamond Creek Well Project, Initial Study/Mitigated Negative Declaration February 2002.

Conclusion: The proposed General Order will cause less than significant impacts to population and housing. Future actions implemented under the proposed General Order would be required to undergo project-level CEQA review, and based on the specific characteristics of the project, the potential for adverse impacts and appropriate mitigation measures associated with displaced housing and population will be evaluated and implemented.

5.3.14 PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

a–e) The proposed General Order would not add new residents or change land uses, therefore would not generate a demand for new fire protection, police protection, schools, parks, or related services. No additional public services would be required.

Conclusion: The proposed General Order will cause less than significant impacts to public services. Future ASR projects regulated by the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.14 RECREATION. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

a–e) The proposed General Order would not add new residents or change land uses, therefore would not generate a demand for new fire protection, police protection, schools, parks, or related services. No additional public services would be required.

Conclusion: The proposed General Order will cause less than significant impacts on recreation. Future ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.15 TRANSPORTATION / TRAFFIC. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

a,b,g) The proposed General Order would not result in potential adverse impacts to transportation services or facilities. ASR projects regulated under the proposed General Order could involve potential transportation impacts. ASR well sites typically involve a very limited number of vehicle trips, however it is anticipated that the size of future projects will vary. ASR projects regulated under the General Order would be required to undergo project-level CEQA review. Based on the characteristics of the project, potential traffic-related impacts and appropriate mitigation measures would be identified to avoid or mitigate impacts to transportation capacity.

c) The proposed General Order would not affect air traffic patterns. ASR projects regulated under the proposed General Order would not involve aircraft operations. Therefore, there would be no impact.

d,e,f) The proposed General Order would not cause transportation impacts. However, ASR projects regulated under the General Order could involve impacts, particularly during project construction. Most local jurisdictions have established procedures to ensure adequate access for emergency vehicles during roadway construction, or maintenance. Any construction activity would be temporary and subject to applicable construction standards and ordinances. ASR projects regulated under the General Order would be required to undergo project-level CEQA review. Based on the characteristics of the project, potential traffic-related impacts and appropriate mitigation measures would be identified to avoid or mitigate transportation/traffic impacts.

Conclusion: The proposed General Order would result in less than significant impacts on transportation or traffic. ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.16 UTILITIES AND SERVICE SYSTEMS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

a-c) The proposed General Order itself would not have the potential to adversely affect water treatment facilities or storm water drainage. ASR projects regulated under the proposed General Order could have potential for impacts to utilities. It is anticipated that these projects would vary in terms of size and footprint, and subsequent increased impervious surfaces and associated runoff. Required CEQA analysis of ASR projects regulated under the proposed General Order would evaluate potential impacts of erosion, siltation, flooding, or polluted runoff, all of which addressed by state regulations, including applicable NPDES permits; corresponding Urban Storm Water Quality Management and Discharge Control Ordinances; and implementation of BMPs.

d,e) The proposed General Order would not cause potential adverse impacts to water and wastewater services or facilities. ASR projects regulated under the proposed General Order would improve water supply reliability and provide backup water supply, and would not consume additional water supplies. ASR projects regulated under the General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

f, g) The proposed General Order would not cause potential adverse impacts to solid waste services or landfill facilities. ASR projects regulated under the proposed General Order could involve potential impacts, as some solid waste would be generated during the construction phase. Such wastes would be disposed of in accordance with federal, state, and local regulations. ASR projects regulated under the General Order would be required to undergo project-level CEQA review. Based on the characteristics of the project, the potential for generation and disposal of solid waste, and appropriate mitigation measures would be identified to avoid or mitigate impacts.

Conclusion: The proposed General Order will cause less than significant impacts to water, wastewater, storm water, and solid waste services and facilities. ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented.

5.3.17 MANDATORY FINDINGS OF SIGNIFICANCE.

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

a) The Biological Resources section of this initial study concludes that the proposed General Order in itself would not directly create potential impacts to biological resources. Future ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA review, at which time potential adverse impacts and appropriate mitigation measures will be evaluated and implemented in accordance with the local, state, and federal requirements.

Similarly, the Cultural Resources section of this initial study concludes that the proposed General Order in itself would not directly create potential impacts to Cultural resources. It is anticipated that, statewide, future ASR projects will vary widely in terms of size. Ultimately, these future ASR projects will be subject to CEQA review as determined by proposing lead agencies, and potential impacts to cultural resources would be prevented or mitigated to a less than significant level.

Based upon these analyses, the proposed project will not: degrade the quality of the environment; substantially reduce the habitat of 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 major periods of California's history or prehistory.

b) The Proposed Project in itself would not result in cumulative impacts. The project is a regulatory mechanism intended to facilitate ASR as method to increase water supply reliability and provide supplemental water storage during periods of drought. Individual ASR projects regulated under the proposed General Order would be required to undergo project-level CEQA

review, at which time potential cumulative impacts and appropriate mitigation measures will be evaluated and implemented.

c) The Proposed Project would result in less than significant impacts on the environments, wildlife, and human beings. The project would facilitate ASR as method to increase water supply reliability and provide supplemental water storage during periods of drought. Individual ASR projects would be required to undergo project-level CEQA review, at which time potential cumulative impacts and appropriate mitigation measures will be evaluated and implemented.

6.0 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.	☐
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 MITGATED 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. ☐

Anne Olsen 9/19/2012
(Name) Date

Senior Water Resource Control Engineer
(Title)

Reviewed by:

Gordon Jones 9/19/2012
Date

9-19-2012
Date

Authority: Public Resources Code, Division 13. Environmental Quality. Sections 21000 et seq.