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Colorado River Basin Regional Water Quality Control Board

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**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER**

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**Effective Date:** September 6, 2017

Reg. Meas. ID:	413225
Place ID:	835202
WDID:	7A133151001
USACOE#:	SPL-2017-00136

**Program Type:** Fill/Excavation

**Project Type:** Alternative energy (Other)

**Project:** Hell's Kitchen Geothermal Exploration Project (Project)

**Applicant:** Hell's Kitchen Geothermal, LLC

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**Water Board Contact Person:**

If you have any questions, please call Colorado River Basin Regional Water Quality Control Board (Colorado River Basin Water Board) Staff listed above or (760) 346-7491 and ask to speak with the Water Quality Certification and Wetlands Unit Program Manager.

- Attachment A** Maps
- Attachment B** Receiving Waters, Impact, and Mitigation Information
- Attachment C** CEQA Findings and Facts
- Attachment D** Signatory Requirements

## **I. Order**

This Clean Water Act (CWA) section 401 Water Quality Certification action and Order (Order) is issued at the request of Hell's Kitchen Geothermal, LLC (herein after Permittee) for the Project. This Order is for the purpose described in application submitted by the Permittee. The application was received on May 16, 2017. The application was deemed complete on July 25, 2017.

## **II. Public Notice**

Public notice (5-16-2017) was done on May 16, 2017 and completed on June 5, 2017.

## **III. Project Purpose**

The geothermal exploration project is needed to test and evaluate the economic viability of geothermal resource development within Hell's Kitchen Geothermal, LLC (HKG's) lease area.

## **IV. Project Description**

HKG proposes to conduct exploration of the geothermal resources within HKG's lease area. The geothermal exploration projects includes construction of the following well pads and access routes within waters of the U.S.:

- Well Pad 4
- Access to Well Pad 4 using construction mats
- Well Pad 1

HKG would begin geothermal exploration activities at Well Pad 4. If the geothermal exploration and testing are successful at Well Pad 4, HKG would not construct Well Pad 1 and would not conduct geothermal exploration in other areas. If geothermal exploration at Well Pad 4 is not successful, HKG would move to Well Pad 1. Geothermal well drilling and testing activities will be similar at Well Pads 4 and 1. HKG will implement water quality best management practices prior to and during construction.

### **Well Pads**

Prior to fill placement in waters of the U.S., a geotechnical fabric or equivalent material will be used to limit the mixing of fill with surface soils. A berm would be constructed around the well pad perimeter. The berm would have an average height of 1 foot and a total width of 6 feet including 2:1 slopes on either side. The berm would be constructed using imported Class 2 fill. A 20-foot wide access road would be constructed around the perimeter of the well pad. The remainder of the well pad would be constructed on imported fill materials to an elevation of approximately 2 to 3 feet above the existing site grade. The fill materials would be compacted to engineered specifications.

### **Construction Mats**

Construction mats would be used to access Well Pad 4 for site preparation activities and exploratory drilling. Mats will consist of triple stacked timber and will be approximately 20 feet long, 4 feet wide, and 36 inches high. Equipment used to install mats would consist of a flatbed truck carrying mats and an excavator or crane that would place mats in sequence until reaching the well pad site. The construction mats will be removed upon completion of all geothermal exploration activities requiring access to Well Pad 4. Removal will involve an excavator or crane along with a flatbed truck to receive mat sections as they are removed.

### **Geothermal Test Wells**

Up to two geothermal test wells would be constructed at each well pad (one for production of geothermal fluids and one for reinjection). The geothermal exploration wells would be drilled using a large rotary drilling rig. The wells would be designed with a 6-1/8" open hole completion to 8,000 feet below ground surface with casing set at 4,000 feet. The wells would be drilled with water-based mud to circulate the drill cuttings to the surface. The typical drill rig and associated support equipment (rig floor and stands; draw works; derrick; drill pipe; trailers; mud, fuel, and water tanks; diesel generators; air compressors; etc.) would be brought to the prepared well pad. The well bore would be drilled using non-toxic, temperature stable gel-based drilling mud to circulate the cuttings to the surface where they would be removed from the drilling mud. The mud would then be recirculated. Cuttings would be captured in mud tanks; all drill cuttings and fluids would be contained within tanks and trucked off-site rather than discharged to a mud pit. Additives would be added to the drilling mud as needed to prevent corrosion, increase mud weight, and prevent mud loss. Cleanout, short-term flow, and injection tests would be conducted while the drill rig is still over the well.

### **Permanent Well Pad and Facilities**

The surface facilities remaining at the test wells would consist of several valves on top of the surface casing, which would be chained and locked. An approximately 12-foot by 12-foot (144 square feet) pad would house each well. The exploration well would remain on the site for future use if the exploration is successful, or the well would be plugged and abandoned in accordance with CDOGGR requirements if the exploration is not successful. Abandonment of a geothermal well involves plugging the well bore with clean drilling mud and cement sufficient to ensure that fluids would not move across into different aquifers.

### **Restoration**

At the completion of the geothermal testing, all equipment would be removed from the well pad and the well pad fill would be removed from the site with the exception of the permanent well head. Site restoration would be completed in accordance with the conditions of Nationwide Permit 33 and the approved Restoration Plan.

## **V. Project Location**

The Hell's Kitchen Geothermal Exploration Project would be located in Imperial County, California on undeveloped lands bordering the Salton Sea near Mullet Island. A regional location map is provided in Figure 1 of Attachment A and a road map with waters clearly indicated is provided in Figure 2. Geothermal exploration activities would occur within Sections 3 and 10 of Township 11, Range 13 East San Bernardino Base and Meridian.

## **VI. Project Impact and Receiving Waters Information**

The Project is located within the jurisdiction of Colorado River Basin Regional Water Quality Control Board. Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the applicable water quality control plan (Basin Plan) for the region and other plans and policies which may be accessed online at: [http://www.waterboards.ca.gov/plans\\_policies/](http://www.waterboards.ca.gov/plans_policies/). The Basin Plan includes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies.

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary

purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

Project impact and receiving waters information can be found in Attachment B. Table 1 of Attachment B shows the receiving waters and beneficial uses of waters of the state impacted by the Project.

**VII. Description of Direct Impacts to Waters of the U.S.**

Waters of the U.S. will be impacted by the placement of Class 2 fill material for the construction of Well Pad 4 and construction of Well Pads 1, if needed. Drill rig mats will be placed for access to Well Pad 4. The rig mats will be removed at the completion of geothermal exploration activities. The proposed impacts are detailed below. Maps showing the project impacts are found in Attachment A of this Order.

**Well Pad 4 and Access**

Well Pad 4 would be located on a mixture of freshwater alkaline marsh and riparian scrub. Construction of the well pad would result in permanent impacts to approximately 0.01 acres and 24 linear feet of riparian scrub. Temporary impacts of approximately 0.66 acres and 390 linear feet of freshwater alkaline marsh and 2.64 acres and 380 linear feet of riparian scrub would result.

**Well Pad 1**

Well Pad 1 is located largely in an upland area with some smaller wetland features. There will be no permanent impacts to the wetland features. Temporary impacts of approximately 0.073 acres and 24 linear feet to vegetated alkali playa and 0.006 acres and 16 linear feet to tamarisk scrub would occur in the event that Well Pad 1 is constructed.

Total Project fill/excavation quantities for all impacts are summarized in Table 1. Permanent impacts are categorized as those resulting in a physical loss in area and also those degrading ecological condition only.

Table 1: Total Project Fill/Excavation Quantity									
Aquatic Resource Type	Temporary Impact <sup>1</sup>			Permanent Impact					
				Physical Loss of Area			Degradation of Ecological Condition Only		
	Acres	CY <sup>2</sup>	LF	Acres	CY	LF	Acres	CY	LF
Lake									
Ocean/bay/estuary									
Riparian Zone									
Stream Channel									
Vernal Pool									
Wetland	3.37	16,907	910	0.01	20	24			

<sup>1</sup> Includes only temporary direct impacts to waters of the state and does not include upland areas of temporary disturbance which could result in a discharge to waters of the state.

<sup>2</sup> Cubic Yards (CY); Linear Feet (LF)

## VIII. Description of Indirect Impacts to Waters of the U.S.

The Colorado River Basin Water Board recognizes the potential for indirect impacts to waters of the state associated with the Project. Indirect impacts likely associated with the proposed project include altered hydrology and water quality and introduction of non-native invasive species.

**Altered Hydrology and Water Quality:** The placement of structures in waters of the U.S. and in adjacent floodplains could alter hydrology through increased runoff volumes and result in indirect impacts to flow velocities as well as erosion and accretion patterns. Disturbed soils may accelerate erosion and increase sediment in storm water runoff to receiving waters, causing increased turbidity and sedimentation. The potential for increased soil erosion and sedimentation would be greatest in areas of steep terrain. In addition, chemicals, liquid products, petroleum products (fuels), may be spilled or leaked and may have the potential to be transported via storm runoff into downstream receiving waters. Erosion, sedimentation, and inadvertent release of contaminants would be minimized through the use of site-specific BMPs identified below.

**Non-native, Invasive Species:** During construction, there is a potential for the spread of invasive species through the inadvertent introduction of such species from construction equipment and other outside sources. Invasive plant species could alter habitats and displace native species over time, leading to a shift in vegetation communities and negative impacts to native pollinators.

## IX. Avoidance and Minimization

Project engineers considered design measures to minimize impacts to waters of the U.S. prior to filing this Pre-Construction Notification (PCN). The project design was revised as follows to minimize impacts on waters of the U.S. and wetlands:

- The move-on area for Well Pads 1 and 3 was reconfigured to avoid all jurisdictional waters (avoided 0.12 acre of impacts to wetlands)
- Well Pad 1 was shifted south to reduce impacts on wetlands (avoided 0.17 acre of alkali playa impacts)
- Well Pad 2 and move-on area were relocated to mudflat areas to avoid impacts on alkali playa wetlands
- Well Pad 4 was located at the end of a proposed Salton Sea Management Plan (SSMP) future berm to collocate the access route with the future berm location
- Access to Well Pad 4 would be provided via construction rig mats to avoid discharge of fill materials

### **Minimization Measures**

Minimization measures that would be implemented to reduce the adverse environmental effects of the projects are provided below.

**Prepare Storm Water Pollution Prevention Plan (SWPPP), and Implement Best Management Practices (BMPs) Prior to Construction and Site Restoration.** Project proponents or project construction contractors for future renewable energy facilities would be required to prepare a project-specific SWPPP and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible

parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by each project applicant prior to commencement of work and shall be made conditions of the contract with each contractor selected to build and decommission future renewable energy facilities developed under the proposed Project. The SWPPP(s) shall, at a minimum, incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Dewatering and/or flow diversion practices, if required (see Mitigation Measure HYDRO-1b)
- Sediment control practices (temporary sediment basins, fiber rolls)
- Temporary and post-construction on-site and off-site runoff controls
- Special considerations and BMPs for water crossings, wetlands, and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis placed on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Given that Imperial Valley Drains would accept runoff from areas within the Salton Trough and are listed as impaired for sediment, the SWPPP shall include BMPs sufficient for Risk Level 2 projects. BMPs for soil stabilization and erosion control practices and sediment control practices would also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

**Earthen Berms and Silt Fence.** Berms will be construction around the perimeter of drilling pads in order to contain any sediment in stormwater runoff and to protect water quality downslope of construction. Silt fence will be installed to reinforce berms along access roads to ensure that sediment is controlled in any potential runoff.

**Brine Disposal.** All brines will be stored on site and transported to a facility for proper disposal or injected into another well head. No brines will be stored or produced onto the surface.

**Refueling and Maintenance:** Equipment refueling and maintenance will not be conducted within waters of the U.S. The contractor shall designate a refueling and maintenance area and refueling and maintenance shall be limited to the designated area(s). Fueling and maintenance areas will be located outside of ephemeral washes and on level areas. BMPs to contain any potential spills or leaks shall be available in the designated refueling and maintenance area.

**Hazardous Materials:** Construction will involve the use of equipment containing oil, gas, and hydraulic fluids and potentially other hazardous materials. Construction personnel will be educated on hazardous waste storage and disposal procedures. All hazardous waste should be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261–263. Hazardous materials will be stored away from drainage courses to prevent stormwater runoff. Containers will be labeled with the materials being stored and the date of storage. Containers will be covered when not in use and maintained free of accumulated rainwater and spills.

**Spill Containment and Clean Up:** Drip pans or absorbent materials will be placed under paving equipment when not in use. Any spills or leaks of oil or gas will be immediately contained, and contaminated soil will be removed from the site. Absorbent spill cleanup materials and spill kits will be kept onsite in the fueling areas and on fueling trucks. Drip pans or absorbent pads will be used during vehicle and equipment fueling. Fueling areas will be protected with berms and dikes to prevent runoff, and to contain spills.

**Sanitary and Septic Waste Management.** All sanitary facilities on site will be stored in proper containment and serviced on a regular basis to ensure cleanliness and decrease risk of discharge.

**Cuttings and Drilling Waste.** All cuttings and drilling waste will be stored on-site in enclosed tanks. When tanks are full and/or exploratory drilling is complete, tanks will be removed and drilling cuttings and waste will be disposed of according to applicable regulations.

**Solid Waste Management.** Solid waste will be properly contained in designated collection areas on site and regularly disposed of.

**Vehicle Parking:** Vehicles may be parked on well pads, move-on areas, existing roads, and in previously disturbed areas. Vehicles will not travel into or park in undisturbed areas.

**Mark Areas of Construction Boundaries.** All areas to be disturbed during construction of future renewable energy facilities developed under the proposed Project would be required to flag disturbance boundaries prior to construction. All disturbances would be confined to these flagged areas, and all employees would be instructed that their activities must be confined to locations within the flagged areas. Project proponents of future renewable energy facilities developed under the proposed Project would be required to have environmental monitors on-site during construction activities.

**Power Wash Equipment Prior to Arrival On-Site.** All construction equipment used during construction of future renewable energy facilities developed under the proposed Project would be required to be power washed prior to arrival at the future project site to prevent the transportation and establishment of noxious weeds in the project area.

## **X. Compensatory Mitigation**

Compensatory mitigation for temporary impacts to waters of the U.S. is not required as the temporary impact area will be restored to pre-construction conditions upon project completion and will not result in the temporal loss and/or degradation of ecological condition.

Permanent impacts will be approximately 0.01 acre and will not require compensatory mitigation.

## **XI. California Environmental Quality Act (CEQA)**

On June 14, 2017, the County of Imperial, as lead agency, certified an addendum to an Environmental Impact Report (EIR) (State Clearing House (SCH) No. 2014071062) for the Project and filed a Notice of Determination (NOD) at SCH on June 15, 2017. Pursuant to CEQA, the Colorado River Basin Water Board has made Findings of Facts (Findings) which support the issuance of this Order and are included in Attachment C.

## **XII. Petitions for Reconsideration**

Any person aggrieved by this action may petition the State Water Board to reconsider this Order in accordance with California Code of Regulations, title 23, section 3867. A petition for reconsideration must be submitted in writing and received within 30 calendar days of the issuance of this Order.

## **XIII. Fees Received**

An application fee of \$742.00 was received on May 7, 2017. The fee amount was determined as required by California Code of Regulations, title 23, sections 3833(b)(3) and 2200(a)(3), and was calculated as category A - Fill & Excavation Discharges (fee code 84) with the dredge and fill fee calculator. An additional fee of \$33,767.00 based on total Project impacts was received on August 31, 2017.

## **XIV. Conditions**

The Colorado River Basin Water Board has independently reviewed the record of the Project to analyze impacts to water quality and designated beneficial uses within the watershed of the Project. In accordance with this Order, the Permittee may proceed with the Project under the following terms and conditions:

### **A. Authorization**

1. Impacts to waters of the U.S. shall not exceed quantities shown in Table 1.
2. Permittee shall develop and implement a SWPPP in compliance with the State Water Resources Control Board Construction General Permit (Order No. 2009-0009-DWQ; NPDES No. CAS000002).
3. Permittee shall implement the BMPs described under Section IX, Avoidance and Minimization.
4. Discharges of pollutants associated with construction-related storm water runoff are subject to National Pollutant Discharge Elimination System permitting under CWA Section 402. The discharger must file a Notice of Intent with the State Water Resources Control Board to obtain coverage under the Construction General Permit.

### **B. Reporting and Notification Requirements**

#### **1. Project Reporting**

- a. **Monthly Reporting:** The Permittee shall submit a Monthly Report to the Colorado River Basin Water Board on the 15<sup>th</sup> of each month for duration of the construction phase (approximately 3 months) of the Project. Monthly reporting shall continue until

the Colorado River Basin Water Board issues a Notice of Project Complete Letter to the Permittee.

- b. Annual Reporting:** The Permittee shall submit an Annual Report each year on February 16. Annual reporting shall continue until a Notice of Project Complete Letter is issued to the Permittee.

**Other Reporting:** If pollutants are observed in surface water, the Applicant shall submit a report to the Colorado River Basin Water Board within 30-days after encountering the pollutants and describe actions taken to correct the problem and provide photographic documentation that supports the information in the report.

If repairs are required, the Permittee shall take pictures of the area where work needs to take place documenting the before and after conditions of the area; and shall maintain a daily log, for each site where work is taking place pursuant to this Order, while the Permittee conducts its repair activities. The log shall:

- Provide a general description of the repair work;
- Specify the date and daily starting and ending time for the repair work;
- Note key weather conditions (e.g., temperature, wind speed and direction, precipitation if any);
- Include notes from visual observations regarding the presence/absence of construction debris/trash (e.g., discarded filter fiber) and used oil (e.g., oil that leaks from construction equipment) in the area where the work is taken place.

**Within 30 days following completion of all repair work**, the Permittee shall submit to the Colorado River Basin Water Board a summary report of the key daily log entries. The summary report shall include the above-mentioned before and after pictures of the conditions of the area and shall be signed by the Permittee's Project Manager.

## 2. Project Status Notifications

- a. Commencement of Construction:** The Permittee shall submit a Commencement of Construction Report at least seven (7) days prior to start of initial ground disturbance activities.
- b. Request for Notice of Completion of Discharges Letter:** The Permittee shall submit a Request for Notice of Completion of Discharges Letter following completion of active Project construction activities, including any required restoration and permittee-responsible mitigation. This request shall be submitted to the Colorado River Basin Water Board staff within thirty (30) days following completion of all Project construction activities. Upon acceptance of the request, Colorado River Basin Water Board staff shall issue a Notice of Completion of Discharges Letter to the Permittee which will end the active discharge period and associated annual fees.
- c. Request for Notice of Project Complete Letter:** The Permittee shall submit a Request for Notice of Project Complete Letter when construction and/or any post-

construction monitoring is complete,<sup>3</sup> and no further Project activities will occur. This request shall be submitted to Colorado River Basin Water Board staff within thirty (30) days following completion of all Project activities. Upon approval of the request, the Colorado River Basin Water Board staff shall issue a Notice of Project Complete Letter to the Permittee which will end the post discharge monitoring period and associated annual fees.

**3. Conditional Notifications and Reports:** The following notifications and reports are required as appropriate.

**a. Accidental Discharges of Hazardous Materials<sup>4</sup>**

Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Wat. Code, § 13271):

- i. As soon as (A) Permittee has knowledge of the discharge or noncompliance, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures then:
  - first call – 911 (to notify local response agency)
  - then call – Office of Emergency Services (OES) State Warning Center at: (800) 852-7550 or (916) 845-8911
  - Lastly follow the required OES procedures as set forth in:<http://occupainfo.com/civicax/filebank/blobdload.aspx?BlobID=26396>  
[http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill\\_Booklet\\_Feb2014\\_FINAL\\_BW\\_Acc.pdf](http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf)
- ii. Following notification to OES, the Permittee shall notify Colorado River Basin Water Board, as soon as practicable (ideally within 24 hours). Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.
- iii. Within five (5) working days of notification to the Colorado River Basin Water Board, the Permittee shall submit an Accidental Discharge of Hazardous Material Report.

**b. Violation of Compliance with Water Quality Standards:** The Permittee shall notify the Colorado River Basin Water Board of any event causing a violation of compliance with water quality standards. Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.

- i. Examples of noncompliance events include: lack of storm water treatment following a rain event, discharges causing a visible plume in a water of the state, and water contact with uncured concrete.

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<sup>3</sup> Completion of post-construction monitoring shall be determined by Colorado River Basin Water Board staff and shall be contingent on successful attainment of restoration and mitigation performance criteria.

<sup>4</sup> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (Health & Saf. Code, § 25501.)

- ii. This notification must be followed within three (3) working days by submission of a Violation of Compliance with Water Quality Standards Report.
- c. Modifications to Project**  
Project modifications may require an amendment of this Order. The Permittee shall give advance notice to Colorado River Basin Water Board staff if Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority by submitting a Modifications to Project Report. The Permittee shall inform Colorado River Basin Water Board staff of any Project modifications that will interfere with the Permittee's compliance with this Order.
- d. Transfer of Property Ownership:** This Order is not transferable in its entirety or in part to any person or organization except after notice to the Colorado River Basin Water Board in accordance with the following terms:
- i. The Permittee shall notify the Colorado River Basin Water Board of any change in ownership or interest in ownership of the Project area by submitting a Transfer of Property Ownership Report. The Permittee and purchaser must sign and date the notification and provide such notification to the Colorado River Basin Water Board at least 10 days prior to the transfer of ownership.
  - ii. Until such time as this Order has been modified to name the purchaser as the permittee, the Permittee shall continue to be responsible for all requirements set forth in this Order.
- e. Transfer of Long-Term BMP Maintenance:** If maintenance responsibility for post-construction BMPs is legally transferred, the Permittee shall submit to the Colorado River Basin Water Board a copy of such documentation and shall provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer or designer specifications. The Permittee must provide such notification to the Colorado River Basin Water Board with a Transfer of Long-Term BMP Maintenance Report at least 10 days prior to the transfer of BMP maintenance responsibility.

### C. Water Quality Monitoring

1. **General:** If surface water is present, continuous visual surface water monitoring shall be conducted to detect accidental discharge of construction related pollutants (e.g. oil and grease or turbidity plume).
2. **Accidental Discharges/Noncompliance:** Upon occurrence of an accidental discharge of hazardous materials or a violation of compliance with a water quality standard, Colorado River Basin Water Board staff may require water quality monitoring based on the discharge constituents and/or related water quality objectives and beneficial uses.
3. **Post-Construction:** Visually inspect the Project site during the rainy season to ensure excessive erosion, stream instability, or other water quality pollution is not occurring in or downstream of the Project site. If water quality pollution is occurring, contact the Colorado River Basin Water Board staff member overseeing the Project within three (3)

working days. The Colorado River Basin Water Board may require the submission of a Violation of Compliance with Water Quality Standards Report. Additional permits may be required to carry out any necessary site remediation.

#### **D. Standard**

1. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330, and California Code of Regulations, title 23, chapter 28, Article 6 commencing with sections 3867-3869, inclusive. Additionally, the Colorado River Basin Water Board reserves the right to suspend, cancel, or modify and reissue this Order, after providing notice to the Permittee, if the Colorado River Basin Water Board determines that: the Project fails to comply with any of the conditions of this Order; or, when necessary to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) or federal Clean Water Act section 303 (33 U.S.C. § 1313). For purposes of Clean Water Act section 401(d), the condition constitutes a limitation necessary to assure compliance with water quality standards and appropriate requirements of state law.
2. This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to subsection 3855(b) of chapter 28, title 23 of the California Code of Regulations, and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties, processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order.

#### **E. General Compliance**

1. Failure to comply with any condition of this Order shall constitute a violation of the Porter-Cologne Water Quality Control Act and the Clean Water Act. The Permittee and/or discharger may then be subject to administrative and/or civil liability pursuant to Water Code section 13385.
2. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the Basin Plans by any applicable Colorado River Basin Water Board or any applicable State Water Board (collectively Water Boards) water quality control plan or policy. The source of any such discharge must be eliminated as soon as practicable.
3. In response to a suspected violation of any condition of this Order, the Colorado River Basin Water Board may require the holder of this Order to furnish, under penalty of perjury, any technical or monitoring reports the Water Boards deem appropriate, provide that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional

monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.

4. The Permittee must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support this Order; and all subsequent submittals required as part of this Order. The conditions within this Order and Attachments supersede conflicting provisions within Permittee submittals.
5. This Order and all of its conditions contained herein continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project. For purposes of Clean Water Act, section 401(d), this condition constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements of state law.
6. Construction General Permit Requirement: The Permittee shall maintain compliance with conditions described in, and required by, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ; NPDES No. CAS000002).

#### **F. Administrative**

1. Signatory requirements for all document submittals required by this Order are presented in Attachment D of this Order.
2. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531-1544). If a "take" will result from any act authorized under this Order held by the Permittee, the Permittee must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Permittee is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.
3. The Permittee shall grant Colorado River Basin Water Board staff, or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:
  - a. Enter upon the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records are kept.
  - b. Have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order.
  - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
  - d. Sample or monitor for the purposes of assuring Order compliance.
4. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project

site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors.

5. A copy of this Order must be available at the Project site(s) during construction for review by site personnel and agencies. All personnel performing work on the Project shall be familiar with the content of this Order and its posted location at the Project site.
6. Lake and Streambed Alteration Agreement – The Permittee shall submit a signed copy of the Department of Fish and Wildlife's lake and streambed alteration agreement to the Colorado River Basin Water Board immediately upon execution and prior to any discharge to waters of the state.

## **G. Construction**

### **Good Site Management "Housekeeping"**

1. Good site management "housekeeping", erosion control, sediment control, and other construction-related activities are described in Section IX.
2. A monitor shall be on site during grading and clearing activities to prevent impacts to special-status species and other biological resources, as well as document and report any construction-related incidences.
3. After completing the activities, the disturbed area shall be restored to pre-existing contours and conditions to the extent feasible.

### **Hazardous Materials**

4. No toxic and/or hazardous materials shall be stored near or within wash/drainage areas. To the extent practicable, these materials shall be stored offsite and placed in appropriate secondary containment.
5. No fueling or maintenance of equipment or vehicles shall occur adjacent or within the wash/drainage areas.

### **Post-Construction Storm Water Management**

6. Work shall not be conducted during rain events.

### **Roads**

7. Work and staging areas and temporary access routes shall be sized, located and flagged to limit potential impacts to natural areas. Previous disturbed areas shall be used to the extent feasible.

## **H. Mitigation for Temporary Impacts**

1. The Colorado River Basin Water Board may extend the monitoring period beyond requirements of the restoration plan upon a determination by Colorado River Basin Water Board Executive Director that the performance standards have not been met or are not likely to be met within the monitoring period.
2. If restoration of temporary impacts to waters of the state is not completed within 180 days of the impacts, compensatory mitigation may be required to offset temporal loss of waters of the state.

**XV. Water Quality Certification**

I hereby issue the Order for the Hell's Kitchen Geothermal Exploration Project 7A133151001 certifying that as long as all of the conditions listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards).

Except insofar as may be modified by any preceding conditions, all Order actions are contingent on: (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of this Order and the attachments to this Order; and, (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Regional Water Boards' Water Quality Control Plans and Policies.

*for* Frank Craig, AEO  
Jose L. Angel, P.E.  
Executive Officer  
Colorado River Basin Water Quality Control Board

9/5/17  
Date



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Figure 1 Project Location

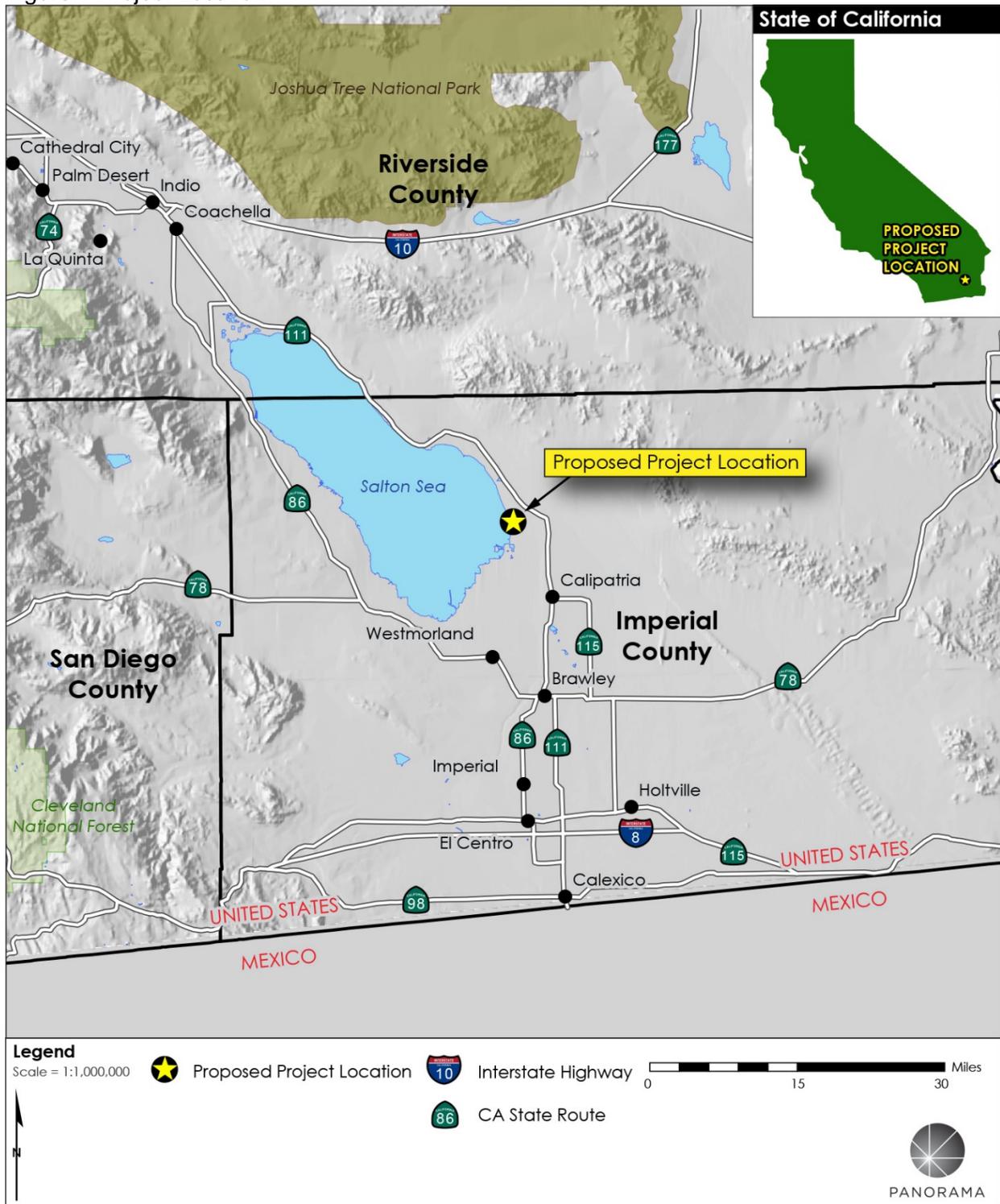


Figure 2 Project Area

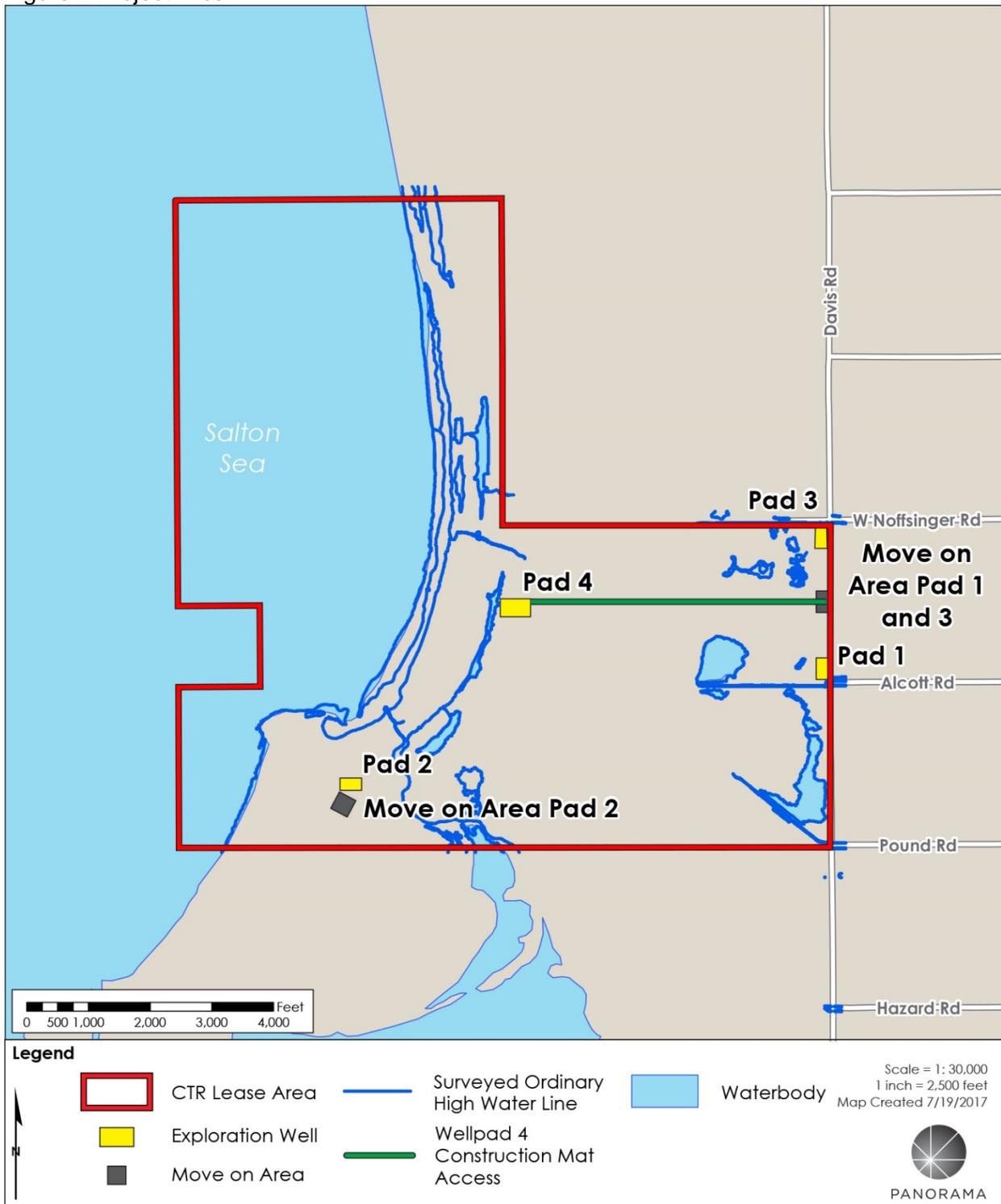


Figure 3 Well Pad 4

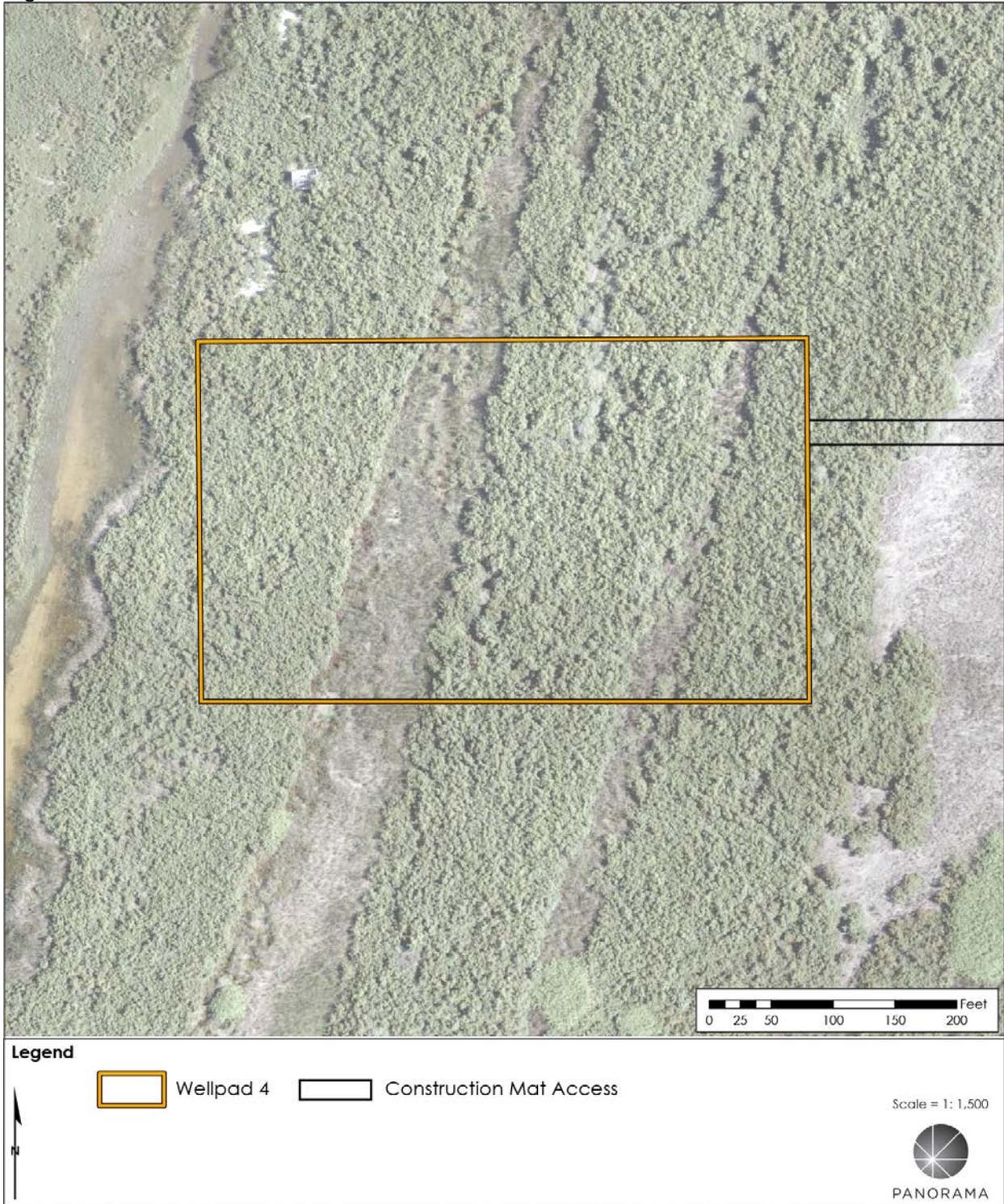


Figure 4 Well Pad 1





**Receiving Waters**

The following table shows the receiving waters associated with each impact and Permittee responsible mitigation site.

<b>Table 1: Receiving Water(s) Information</b>								
Non-Federal Waters	Impact Site ID	Waterbody Name	Impacted Aquatic Resource Type	Water Board Hydrologic Units	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant	eCRAM ID <sup>1</sup>
☐		<i>Wetlands adjacent to the Salton Sea</i>	<i>Riparian scrub and freshwater marsh</i>	18100200	Salton Sea	<i>AQUA, IND, REC1, REC2, WARM, WILD, RARE</i>	<i>Salton Sea: Arsenic, Chloropyrifos, DDT, Enterococcus, Nutrients, Salinity, Selenium</i>	

<sup>1</sup> California Rapid Assessment Method (CRAM) score of impacted sites provided by the Permittee.

**Individual Direct Impact Locations**

The following table shows individual impact locations.

<b>Table 2: Individual Direct Impact Information</b>											
Impact Site ID	Latitude	Longitude	Indirect Impact Requiring Mitigation		Direct Impact Duration	Dredge			Fill/Excavation		
			Yes	No		Acres	Cubic Yards	Linear Feet	Acres	Cubic Yards	Linear Feet
1 Well Pad 4	33.231099	-115.58795	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Temporary				3.3	16,667	500
					Permanent				0.1	20	24
2 Well Pad 1	33.2280919	-115.58021	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Temporary				0.07	240	40
					Permanent				0	0	0



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## **FINDINGS FOR CEQA EXEMPT PROJECTS**

Imperial County adopted an Addendum to the Renewable Energy & Transmission Element's Programmatic Final Environmental Impact Report for the Project on June 14, 2017.

The Colorado River Basin Water Board has determined that the issuance of this Order is exempt by statute pursuant to Section 15301 (c).

Specifically, the issuance of this Order and the activities described herein meet the exemption criteria under California Code of Regulations, title 14, section 15301 (c), Class 1 Categorical exemption.

Additionally, the Colorado River Basin Water Board concludes that no exceptions to the CEQA exemption apply to the activities approved by this Order.

### **A. Environmental Review**

On June 14, 2017, the Imperial, as lead agency, certified an Addendum to the Renewable Energy & Transmission Element's Programmatic Final Environmental Impact Report (PFEIR)) (State Clearinghouse (SCH) No. 2014071062 for the Project and filed a Notice of Determination (NOD) at the SCH on June 15, 2017. The Colorado River Basin Water Board is a responsible agency under CEQA (Pub. Resources Code, § 21069) and in making its determinations and findings, must presume that Imperial County's certified environmental document comports with the requirements of CEQA and is valid. (Pub. Resources Code, § 21167.3.) The Colorado River Basin Water Board has reviewed and considered the environmental document and finds that the environmental document prepared by Imperial County addresses the Project's water resource impacts. (Cal. Code Regs., tit. 14, § 15096, subd. (f).) The environmental document includes the mitigation monitoring and reporting program (MMRP) developed by Imperial County for all mitigation measures that have been adopted for the Project to reduce potential significant impacts. (Pub. Resources Code, § 21081.6, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (d).)

### **B. Incorporation by Reference**

Pursuant to CEQA, these Findings of Facts (Findings) support the issuance of this Order based on the Project Addendum to the PFEIR, the application for this Order, and other supplemental documentation, including Imperial County Notification of Action.

All CEQA project impacts, including those discussed in subsection C below, are analyzed in detail in the Project Addendum to the PFEIR which is incorporated herein by reference.

Requirements under the purview of the Colorado River Basin Water Board in the MMRP are incorporated herein by reference.

The Permittee's application for this Order, including all supplemental information provided, is incorporated herein by reference.

### **C. Findings**

The Addendum to the PFEIR describes the potential significant environmental effects to water resources. Having considered the whole of the record, the Colorado River Basin Water Board makes the following findings:

- (1) Findings regarding impacts that will be avoided or mitigated to a less than significant level. (Pub. Resources Code, § 21081, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)

(a) Adequacy of Prior Environmental Reviews

All of the environmental effects of implementation of the Imperial County Renewable Energy and Transmission Element, have been adequately addressed in the 2015 Final PEIR: (1) have been mitigated or avoided as a result of the prior CEQA documentation and findings adopted in connection with prior environmental reports, (2) have been examined at a sufficient level of detail in the prior CEQA documentation to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the Project, or (3) cannot be mitigated to avoid or substantially lessen the significant impacts despite the County's willingness to accept all feasible mitigation measures, and the only purpose of including analysis of such effects in another environmental impact report would be to put the agency in a position to adopt a statement of overriding considerations with respect to the effects.

The Project is in every way consistent with the original intent and goals of the Imperial County Renewable Energy and Transmission Element. The Project meets the criteria for tiering defined in Guidelines Section 15152(e). These Findings incorporate and reaffirm the Imperial County Renewable Energy and Transmission Element Findings and related Findings for Addendum #1, to address cumulative impacts consistent with Guidelines Section 15130(d).

The Project is within the scope of the Imperial County Renewable Energy and Transmission Element analyzed by the 2015 Final PEIR and does not implicate any of the conditions set forth in Section 21166 of the CEQA or CEQA Guidelines Section 15162 requiring the preparation of a subsequent EIR. No new significant environmental impacts have been identified in connection with the Project that were not considered in the 2015 Final PEIR. As a result, no new environmental impacts are anticipated to occur and no new mitigation measures will be required other than as addressed in the 2015 Final PEIR. The potential environment effects of the implementation of the Imperial County Renewable Energy and Transmission Element, have been fully addressed by the 2015 Final PEIR and Addendum #1.

(b) Criteria for an Addendum

Addendum #1 for the Project concludes that none of the conditions or circumstances that would require preparation of a subsequent or supplemental EIR pursuant to Public Resources Code, Section 21166 exists in connection with the Project. As described in Addendum #1, the Project implements the Imperial County Renewable Energy and Transmission Element and does not alter the projections of development anticipated under the 2015 Final PEIR.

(c) Incorporation by Reference

These Findings incorporate by reference in their entirety the text of Addendum #1 prepared for the Project, the 2015 Final PEIR. Without limitation, this incorporation is intended to elaborate on the scope and nature of the Project, potential environmental impacts that could result from the Project and the basis for determining the significance of the Project's impacts.

(d) Mitigation Monitoring and Reporting Program

CEQA requires the Lead Agency approving a project to adopt a monitoring program for changes to the project that it adopts or makes a condition of project approval, including mitigation measures intended to eliminate or reduce potentially significant impacts of the Project, in order to ensure compliance during project implementation. Mitigation measures required as part of the Project, incorporates relevant and previously-adopted 2015 Final PEIR mitigation measures and continuing best practices that will be monitored pursuant to the existing 2015 Final PEIR monitoring programs previously-adopted by the County in connection with its respective approvals of the 2015 Final PEIR.

**D. Determination**

The Colorado River Basin Water Board has determined that the Project, when implemented in accordance with the MMRP and the conditions in this Order, will not result in any significant adverse water quality or supply impacts. (Cal. Code Regs., tit. 14, § 15096, subd. (h).)



Attachment D  
Signatory Requirements

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## SIGNATORY REQUIREMENTS

*All Documents Submitted In Compliance With This Order  
Shall Meet The Following Signatory Requirements:*

1. All applications, reports, or information submitted to the Colorado River Basin Water Quality Control Board (Colorado River Basin Water Board) must be signed and certified as follows:
  - a) For a corporation, by a responsible corporate officer of at least the level of vice-president.
  - b) For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
  - c) For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
2. A duly authorized representative of a person designated in items 1.a through 1.c above may sign documents if:
  - a) The authorization is made in writing by a person described in items 1.a through 1.c above.
  - b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
  - c) The written authorization is submitted to the State Water Board Staff Contact prior to submitting any documents listed in item 1 above.
3. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."