



**Terry Tamminen**  
Secretary for  
Environmental  
Protection

# CLEAN WATER ACT §401 WATER QUALITY CERTIFICATION APPLICATION FORM

(Use only for multi-regional projects, otherwise use the appropriate Regional Board application form)



**Arnold Schwarzenegger**  
Governor

## 1. APPLICANT/AGENT INFORMATION

a) Applicant: Eagle Crest Energy Company	b) Agent <sup>1</sup> : Jeffrey G. Harvey, Ph.D. Owner's Representative Eagle Crest Energy, c/o HCG, LLC
Address: One El Paseo, Suite 204	Address: 1861 Coarse Gold Place
74199 El Paseo	Gold River, CA 95670
Palm Desert, CA 92260	
Phone No. 760-346-4900	Phone No. 916-799-6065
Fax No. 760-779-1836	Fax No. 916- 853-1267
E-mail Address: <a href="mailto:alowe@eaglecrestenergy.com">alowe@eaglecrestenergy.com</a>	E-mail Address: <a href="mailto:harvey-jeff@sbcglobal.net">harvey-jeff@sbcglobal.net</a>

Have you previously contacted the Regional Board staff regarding this project? If 'yes' provide information on date, person, and brief summary of subject matter.

Yes. Meeting with SWRCB, August 25, 2008, with Victoria Whitney, Division Chief; Jim Kassel, Assistant Division Chief, Division of Water Rights; Les Grober, Environmental Program Manager; Russ Kanz, Senior FERC Coordinator; Camilla Williams, Chief, Water Rights Processing Unit

## STATEMENT OF AUTHORIZATION

I hereby authorize Jeff Harvey to act in my behalf as my agent in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.

[Signature]  
Applicant's Signature

September 26, 2008  
Date

<sup>1</sup>Complete only if applicable

## 2. PROJECT DESCRIPTION

**a) Project Title:**  
**Eagle Mountain Pumped Storage Hydroelectric Project**

### Project Purpose:

The Eagle Crest Energy Company proposes to develop the Eagle Mountain Pumped Storage Hydroelectric Project in the Southern California Desert at an inactive iron mine site in Riverside County, located about half-way between Palm Springs and Blythe, California, near the Town of Desert Center (Figure 1). The proposed project is a hydroelectric pumped storage project that will provide up to 1300 MW system peaking capacity and system regulating benefits to southwestern electric utilities. The Project will use off-peak energy to pump water from the lower reservoir to the upper reservoir during periods of low electrical demand and generate valuable peak energy by passing the water from the upper to the lower reservoir through the generating units during periods of high electrical demand. The low demand periods are expected to be during weekday nights and throughout the weekend, and the high demand periods are expected to be in the daytime during week days, especially during the summer months. The Project will provide an economical supply of peaking capacity, as well as load following, electrical system regulation through spinning reserve, and immediately available standby generating capacity. These latter benefits are expected to increase stability of the electrical system and provide improved reliability, essential to integration of renewable wind and solar energy sources into the utility grid.

**b) Project Activities:**

The Project will have 1300 MW of generating capacity, using reversible pump-turbine units, four units of 325 MW each. All water conveyance and powerhouse elements will be constructed below ground. The project reservoirs will be formed by filling existing mining pits with water. The mining pits are currently empty and unused (Figure 2). There is an elevation difference between the reservoirs that will provide an average net head of 1410 feet. The proposed energy storage volume will permit operation of the Project at full capacity for 9 hours each weekday, with 8 hours of pumping each weekday night and additional pumping during the weekend to fully recharge the upper reservoir. The amount of active storage in the upper reservoir will be 17,700 acre-feet, providing 18.5 hours of energy storage at the maximum generating discharge. Water stored in the upper reservoir will provide approximately 22,200 megawatt hours (MWh) of on-peak generation.

**c) Proposed Schedule** (start-up, duration, and completion dates):

Issuance of FERC license: 2010, Start construction 2012, Entire project commercial operation 2015/2016

**3. FEDERAL LICENSES/PERMITS****a) Federal Agency(ies)/File Number(s):**

U.S. Army Corps of Engineers\_\_\_\_\_

Other: Federal Energy Regulatory Commission  
Project Number P-13123

File No.(s) (if known)\_\_\_\_\_

**b) Permit Type(s)** (please provide permit number(s) if known):

Nationwide Permit No.(s)\_\_\_\_\_

Regional General Permit No.(s) \_\_\_\_\_

Individual Permit\_\_\_\_\_ Other\_\_\_\_\_

**c) Does the project require any Federal Application(s), Notification(s) or Correspondence?**

Yes  X  (attach copy[ies])

No \_\_\_\_\_ (attach detailed explanation)

**d) Provide copies of the license/permit/application. Draft license application issued June 16, 2008; additional copies hand delivered to SWRCB August 25, 2008.****4. OTHER LICENSES/PERMITS/AGREEMENTS****a) Please list all other required, including local regulatory approvals (submit final or draft copy if available). Include information on any de-watering, NPDES, and Storm Water permits.**

Agency	License/Permit/Agreement	Permit No.	Approval Date
Bureau of Land Management	Special Use Permit		
U.S. Fish and Wildlife Service	Biological opinion and incidental take statement – needed in the event that “take” is anticipated to occur		
California Dept. of Fish and Game	Notification of Lake or Streambed Alteration, California Endangered Species Act		

**b) Does the project require a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license?**

No \_\_\_\_\_

Yes  X  (attach application copy)

## 5. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Indicate CEQA Document (submit final or draft copy if available\*):

Type of CEQA Document	Date of filing of Notice of Exemption/ Preparation and Name of Lead Agency
Statutory Exemption/Class Title	
Categorical Exemption/Class Title	
Negative Declaration	
Mitigated Negative Declaration	
Environmental Impact Report	Applicant Prepared Environmental Assessment in CEQA EIR format for SWRCB use is in preparation

Note: Ample time must be provided to the certifying agency to properly review a final copy of valid CEQA documentation before certification can occur.

## 6. APPLICATION FEE

Provide an initial deposit of \$170,000.00 for the application. Please write a check made out to the State Water Resources Control Board.

Is a check enclosed? Yes X No.        Check Number        Amount \$170,000.00

## 7. PROJECT SITE DESCRIPTION – GENERAL (Include areas outside of US waters)

a) **Project Location** (attach map of suitable quality and detail):

Near community of Desert Center, Riverside County

Longitude/Latitude W 115° 30'9" N 33° 52'3"

b) **Total Project Size:** 2,676 acres        linear feet (if appropriate)

c) **Site description of the entire project area** (including areas outside of jurisdictional water of the US):  
The Project lies in the western Sonoran Desert, commonly called the "Colorado Desert." The project is located at the edge of the Eagle Mountains at elevations ranging from approximately 400 to 2500 feet. Parts of the project will be located on privately owned and leased lands, other parts will occupy lands administered by the Bureau of Land Management. There are no perennial streams or wetlands in the Project vicinity. Drainages in this area are generally limited to desert washes that are usually dry. As water from these washes quickly percolates into the surrounding ground, the establishment of wetland vegetation is precluded. The upper and lower reservoirs are sited in depleted mine pits, and will not be located on a surface water course. The reservoirs will receive only incidental runoff from small surrounding tributary runoff areas. Water to initially fill the reservoirs (24,200 acre-feet) and annual make-up water (2,300 acre-feet) will be pumped from groundwater within the Chuckwalla Valley. An alternative under investigation – and speculative at this time – includes obtaining surface water through purchase from outside the basin, delivered to the project via the Colorado River Aqueduct (CRA) located in close proximity to the lower reservoir. For use of the groundwater source, the applicant proposes to utilize either existing wells or new wells to be installed within or adjacent to a central collection pipeline corridor in proximity to the lower reservoir.

## 8. WATER BODY IMPACT

a) **Water Body Name(ies)**<sup>2</sup>:

Clearly indicate on a published map of suitable detail, quality, and scale (1:24K) to allow the certifying agency to easily identify the area(s) and water body(ies) receiving any discharge.

b) **Fill and Excavation:** Indicate in ACRES and/or LINEAR FEET the proposed waters to be impacted, and identify the impacts(s) as permanent and/or temporary for each water body type listed below:

Water Body Type	Permanent Impact		Temporary Impact	
	Acres	Linear Feet	Acres	Linear Feet
Wetland <sup>3</sup>	0	0	0	0
Streambed: 100% ephemeral	The attached maps show the stream channels that are present in the project area. None of these streams will be filled or excavated. However, the water pipeline be buried beneath several stream channels ("X" Stream and Big Wash). The exact location of the water pipeline is in final planning stages yet. The transmission line will also cross several stream channels ("X" Stream, Big Wash, "Y" Stream, Corn Springs Wash, and Ship Creek), but the towers will be located on upland areas and transmission lines will span stream channels. Access roads that cross stream channels already exist. Eagle Creek is a highly disturbed ephemeral wash in the existing Eagle Mountain Mine area. No new impacts to this stream channel are expected since project access will rely only upon existing roads.			
Lake/Reservoir	0	0	0	0
Ocean/Estuary/Bay	0	0	0	0
Riparian	0	0	0	0
Isolated Waters <sup>4</sup>	0	0	0	0

Provide the name, title, and affiliation of person that carried out wetland delineation.

Not applicable.

c) **Dredging:** Volume (cubic yards) of dredged material to be discharged in waters of the United States. None.

e) **SWANCC:** Is the water body isolated (SWANCC-related)? Yes      No X

d) **Provide information on the Q<sub>2</sub>, Q<sub>10</sub>, Q<sub>100</sub> for pre- and post-project implementation.**

Except for the two reservoirs and inlet/outlet works at the two reservoirs, project facilities will be located below ground and will not alter flood flows in any drainage.

e) **Indicate type(s) of material proposed to be discharged in waters of the United States:** None. No waters of the U.S. are on project site

<sup>2</sup>Both US Army Corps of Engineer's jurisdictional- and non-jurisdictional or isolated waters (SWANCC).

<sup>3</sup>Per US Army Corps of Engineer's wetland delineation protocol.

<sup>4</sup>SWANCC-related (isolated) water body.

## 9. COMPENSATORY MITIGATION (Please complete attached Mitigation Checklist)

a) Is compensatory mitigation proposed? Yes      No NA

b) Indicate in ACRES and LINEAR FEET (where appropriate) the total quantity of **waters of the United States** proposed to be Created, Restored and/or Enhanced for purposes of providing Compensatory Mitigation:

Water Body Type	Created	Restored	Enhanced	Set Aside for Protection
Wetland				
Streambed				
Lake/Reservoir				
Ocean/Estuary/Bay				
Riparian				
Isolated Waters				

c) If contributing to a Mitigation Bank provide the following:

Mitigation Bank Name:	
Name of Mitigation Bank Operator:	
Office Address of Operator/Phone Number:	
Mitigation Bank Location (Latitude/Longitude, County, and City):	
Mitigation Bank Water Body Type(s):	
Mitigation Area (acres or linear feet) and cost (dollar):	

d) Provide/attach a map with suitable detail, quality, and scale (1:24K) that will easily provide information as to the location(s) and water body(ies) of the mitigation area.

#### 10. THREATENED/ENDANGERED SPECIES

a) Does the project require coordination with the US Fish and Wildlife Service or National Marine Fisheries Service under the Federal Endangered Species Act?
Yes <u>  X  </u> (provide copies of Biological Report)      No <u>      </u> (provide basis of determination)
b) Does the project require coordination with the State of California Department of Fish and Game under the California Endangered Species Act?
Yes <u>  X  </u> (provide copies of Biological Report)      No <u>      </u> (provide basis of determination)



## 11. OTHER ACTIONS/BEST MANAGEMENT PRACTICES (BMPs)

**Briefly describe other actions/BMPs to be implemented to Avoid and/or Minimize impacts to waters of the United States, including preservation of habitats, erosion control measures, project scheduling, flow diversions, etc.**

Much of the excavation for the project will be performed within below-grade mine pits forming the project reservoirs and underground. Excavations for the two upper reservoir dams, excavations for construction aggregates, and excavations for ancillary project facilities and access roads, as well as all fill placements, will be managed to avoid soil erosion and movement of materials due to rainfall. Erosion control measures will include the normal practices used at construction sites where surface soils and rock excavations and fill placements are performed. These are silt fences, erosion blankets, slope contouring, and berming to detain surface runoff and keep sediments from reaching surface stream courses such as Eagle Creek. Owner will work closely with resource agencies prior to and during construction to identify and protect sensitive habitats for the desert tortoise and other wildlife species.

A water treatment system and groundwater protection program is planned, it is described in a separate attachment which contains information from the FERC license application.

## 12. PAST/FUTURE PROPOSALS BY THE APPLICANT

**Briefly list/describe any projects carried out in the last 5 years or planned for implementation in the next 5 years that are in any way related to the proposed activity or may impact the same receiving body of water. Include estimated adverse impacts.**

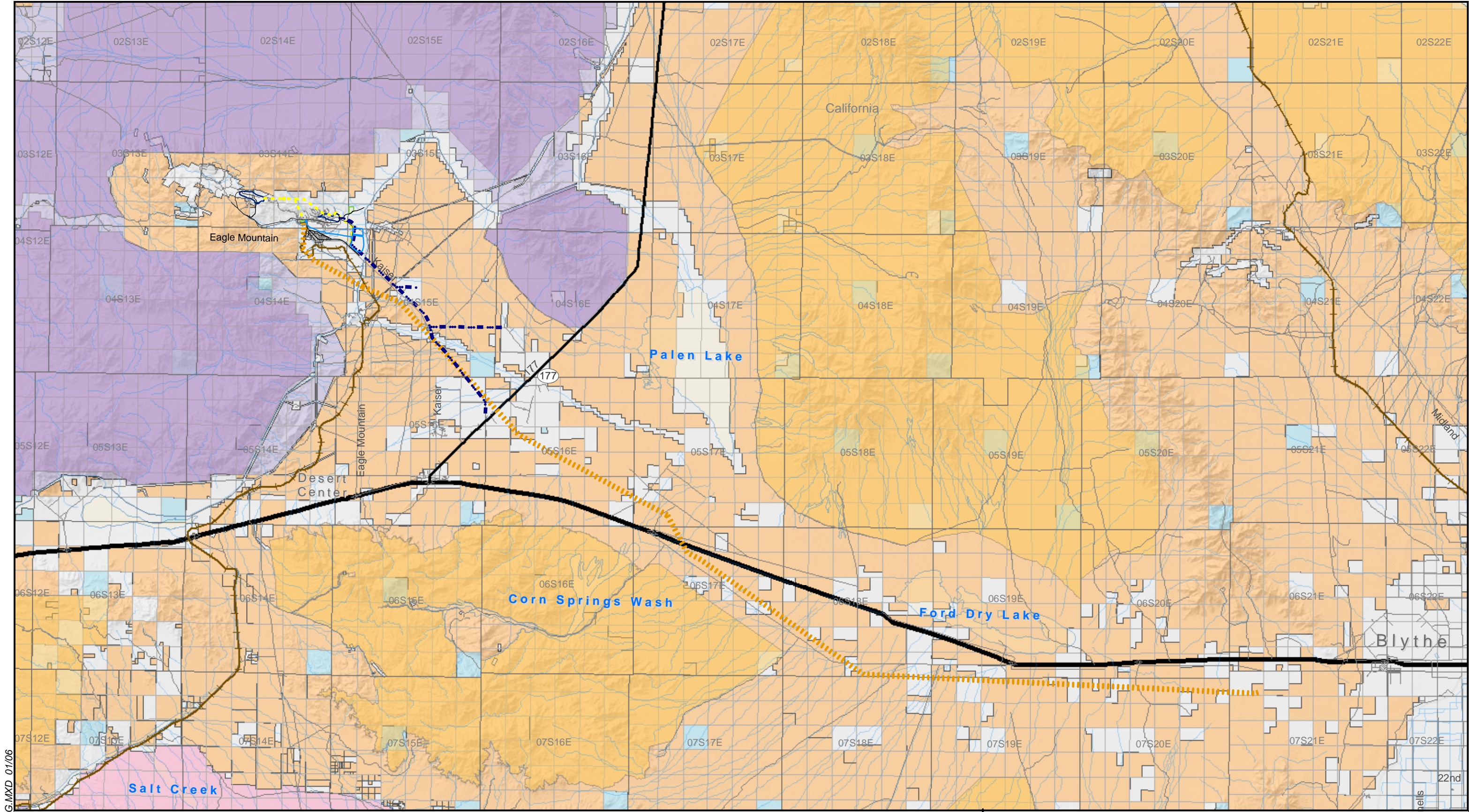
The applicant has not been involved in any other projects in the area, nor are any planned.

  
Applicant's Signature (or Agent)

September 26, 2008  
Date

For further information please  
email: [wqcert@swrcb.ca.gov](mailto:wqcert@swrcb.ca.gov)



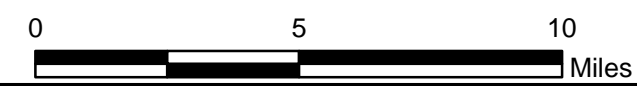


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- BLM
- BLM Wilderness
- U.S. Forest Service
- National Park Service
- National Park Service

- U.S. Bureau of Reclamation
- Military
- State
- Unclassified

- Transmission Lines
- Pipeline

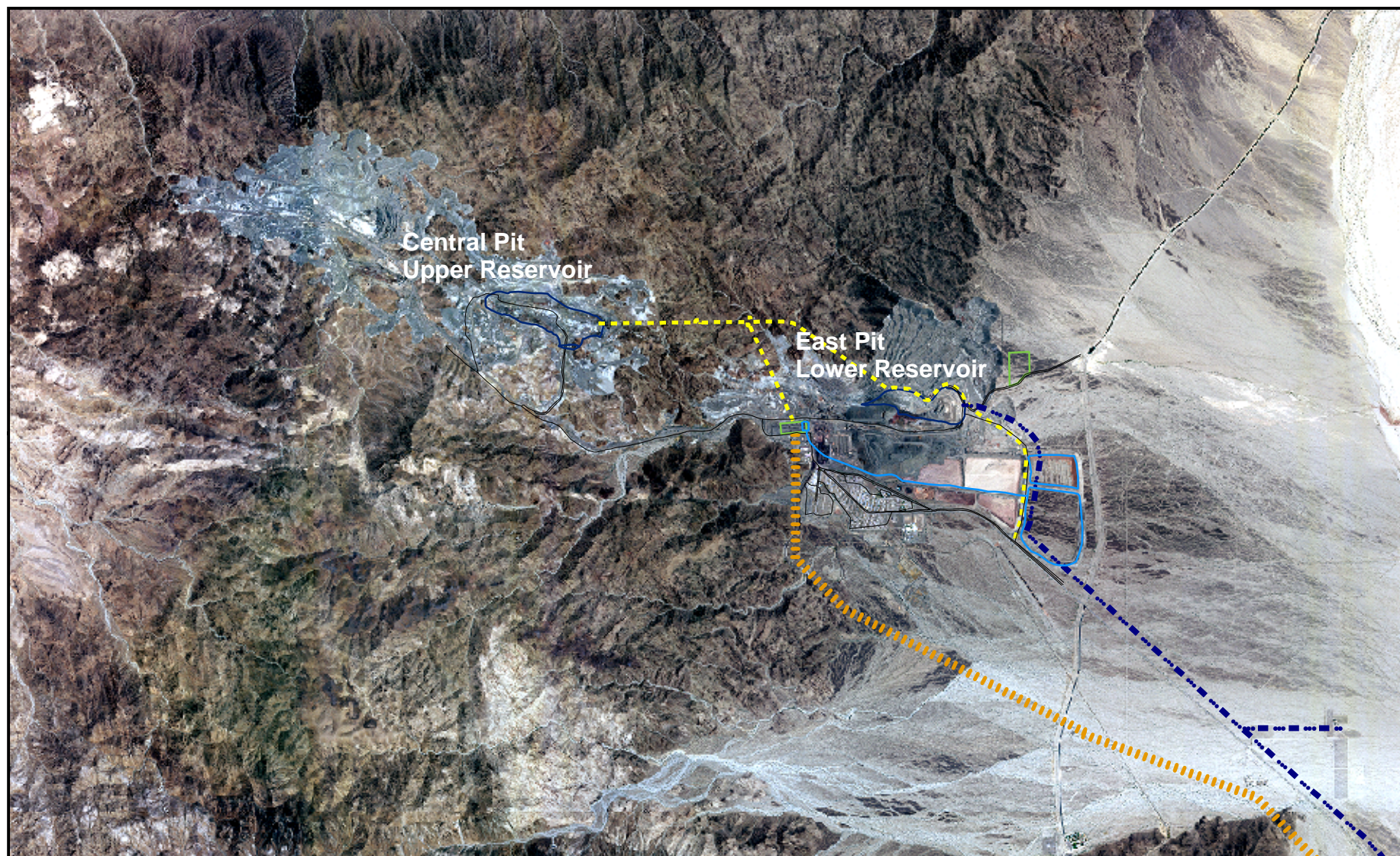


Eagle Mountain  
Pumped Storage  
Eagle Mountain, California  
Eagle Crest Energy Co.

**GEI** Consultants  
Project 080470

**LAND OWNERSHIP  
IN THE PROJECT AREA**  
December 2007 Figure 1





SOURCE: USDA FSA Aerial  
Photography Field Office:  
County image mosaic for  
Riverside, CA (2005)



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Miles

Eagle Mountain Pumped Storage  
Eagle Mountain, California

Eagle Crest Energy Company



Project 080470

AERIAL OVERVIEW  
OF PROJECT SITE

December 2007 Figure 2