# DOCKETED

| | |
|---|---|
| **Docket Number:** | 15-AFC-02 |
| **Project Title:** | Mission Rock Energy Center |
| **TN #:** | 212909 |
| **Document Title:** | Sierra Club Comments for Hearing Scheduled 8/26/16 |
| **Description:** | N/A |
| **Filer:** | System |
| **Organization:** | Nina Danza/Sierra Club Los Padres Chapter |
| **Submitter Role:** | Public |
| **Submission Date:** | 8/22/2016 4:34:51 PM |
| **Docketed Date:** | 8/22/2016 |

*Comment Received From: Nina Danza*
*Submitted On: 8/22/2016*
*Docket Number: 15-AFC-02*

## Sierra Club Comments for Hearing Scheduled 8/26/16

*Additional submitted attachment is included below.*

TO: California Energy Commission 8/26/16
FROM: Nina Danza, PE
Sierra Club Los Padres Chapter
RE: Mission Rock Energy Center (MREC)

Neither CEC nor Calpine have satisfactorily addressed or answered past comments and questions we submitted on the biological and soil/water issues. We request the following be brought up as part of the meeting 8/26/16. Please include ample time to discuss and resolve these issues if not during, then subsequent to the meeting.

SOILS/WATER

Placing a critical utility in the floodplain knowing a design storm is statistically certain to occur displays incredibly poor judgment and it is the responsibility of CEC to exercise far more prudence in serving the long term public interest. As we commented previously, it is a mistake to assume adequate flood protection is provided using FEMA and LORS as a basis of design. Those standards serve as insurance thresholds and have been deemed inappropriate as building standards by Association of State Floodplain Managers (ASFPM).

American Planning Association, in their Aug/Sept 2016 Planning Magazine, reports on the recent (April 2016) Texas flooding disaster as follows, and the CEC needs to acknowledge that the same situation exists for MREC:

> *"There's no question, development has exacerbated these [emergencies], says John Jacob, director of Texas A&M University's Texas Coastal Watershed Program. "It's disaster by design." In the 1970s and 1980s, builders erected lots of homes in the floodplain, and today's flooding is the fallout from those decisions, he says. It's harder to build in the floodplain now, he notes, but developers still push the limits of where they can build safely.*

FEMA has taken steps toward ending the economically destructive flood-urbanization cycle, and is in the process of changing their policies further due to climate change. An update last May marked their second major milestone as a leader in addressing a future under a changing climate. The CEC needs to understand the background behind and purpose of the new policy and use that information in reviewing MREC. FEMA specifically cites in their policy the following (ref: http://www.fema.gov/media-library-data/20130726-1919-25045-3330/508_climate_change_policy_statement.pdf) :

> *FEMA will promote building standards and practices, both within FEMA programs and in general, that consider the future impacts of climate change. FEMA currently promotes programmatic guidance and standards for use by SLTT partners to mitigate hazards through regulation of building and infrastructure construction. The current standards and guidance, based on today's climate, may not anticipate the risks structures will face as the climate changes. Therefore, it is important to review guidance and standards to determine the feasibility of incorporating future climate change considerations, and encourage the integration of adaptation measures into local planning and development practices.*

The Army Corps of Engineers (ACOE) has undertaken and continues to internalize technical solutions to overcome climate change. The CEC needs to study the ACOE methods developed over the past few years for climate change models and apply this expertise to the MREC location

and proposed engineering design. The ACOE Climate Adaptation Plan 2014 states (ref. http://www.usace.army.mil/Portals/2/docs/Sustainability/Performance_Plans/2014_USACE_Climate_Change_Adaptation_Plan.pdf ):

> *Our first hydrology guidance was on climate change considerations for inland hydrology released in May 2014:Engineering and Construction Bulletin (ECB) 2014-10, Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Design and Projects. This ECB outlines concepts, goals, and guidance and provides an example of how to incorporate new science and engineering in hydrologic analyses for new and existing USACE projects.*
>
> *The ECB establishes a procedure to perform a qualitative analysis of potential climate threats and impacts to USACE hydrology-related projects and operations. The method consists of a two phase process that first conducts an initial screening-level qualitative analysis to identify whether climate change is relevant to the project goals or design. If climate change is relevant to the project goals or designs, the second phase requires an evaluation of information gathered about impacts to the important hydrologic variables and the underlying physical processes such as changes in processes governing rainfall runoff or snowmelt. The information should be used to help identify opportunities to reduce potential vulnerabilities and increase resilience as a part of the project's authorized operations and also identify any caveats or particular issues associated with the data. The information gathered in the second phase can be included either in risk registers or separately in a manner consistent with risk characterization in planning and design studies, depending on the project phase.*

The President of the US has acknowledged and is in the process of changing the systemic problems that exist in floodplain-building policy. The CEC needs to study and incorporate all relevant, including but not limited to the following Executive Orders, and incorporate them as part of the decision making process for MREC:

> *Executive Order 13690 Establishing a Federal Flood Risk Management Standard (2015) https://www.gpo.gov/fdsys/pkg/DCPD-201500068/pdf/DCPD-201500068.pdf*
>
> *Executive Order 13653 Preparing the United States for the Impacts of Climate Change (2013) https://sftool.gov/learn/annotation/427/executive-order-13653-preparing-united-states-impacts-climate-change*

CEC data requests (and Calpine objections) include the following:

> *73.Describe the proposed side slopes, their construction (including any temporary construction disturbance outside the property line), and how they would be protected from erosion and scour during flooding.*
>
> *74.Discuss the expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters. Demonstrate that final construction would not exacerbate flooding of adjacent properties*
>
> *This detailed engineering information is determined during the engineering and design stages of the project that will occur only after the Application is approved and a decision is made to proceed with construction of the project. None of this information is reasonably available at this time, nor is such detailed information necessary for the Commission to make a decision on this Application. Therefore, the Applicant objects to*

*Data Requests 71, 73-75 because the information is not reasonably available and is not relevant to a decision the Commission must make on this Application*.

It is entirely reasonable at this time to request the proposed construction technology that would be used to floodproof the project. That information is essential to answer the questions: What is the risk associated with the various proposed construction methods? Is this project is going to rely on soil compaction, paved or rock surface treatment, embankments, levees, retaining walls, or something else for flood protection, and what is the associated scour/erosion risk? Engineered fill is the weakest foundation technology (compared to building on native soil, bedrock or on piles for example). In the immediate project area disastrous damage occurred to acceptably-constructed soil fill at the Sta Paula Airport runway due to river storm erosion/scour (2005). What technology is proposed to prevent a repeat scenario at MREC? In fact, there is no guaranteed floodproof technology and failures of the best available methods occur routinely and with increasing frequency particularly due to climate change. Will CEC use risk analysis information to formulate review and approval decisions of MREC proposed floodproofing technology? What hydraulic and sediment transport models are being used for the project design? Is climate change precipitation forecast incorporated into the models? Has the Army Corps of Engineers been consulted regarding utilizing their Santa Clara River Feasibility Hydraulic Study (2012) and if so, what are the assumptions in that model? Is there enough data to accurately model conditions at this site for climate change-influenced precipitation with associated increases in flow intensities and velocities? Is there a sediment transport model available, and if so, how robust is data from past events and does it incorporate future climate change-influenced events? If not, what assumptions are used for predicting scour and erosion? Are any models adequately accurate for predicting flood water heights, velocity, duration, rate of rise, and sediment transport on the Santa Clara River? If not, is it responsible to engineer flood protection at this location?

## BIOLOGICAL RESOURCES

CEC background includes the following:

*Background : The Santa Clara River is 0.45 mile (2,343 feet) from the project site.*

Why does the CEC state "the Santa Clara River is 0.45 mile (2,343 feet) from the project site"? Where does the CEC define the River? This river is not biologically defined simply where above-ground water is located. It is far more accurate to biologically define the Santa Clara River based on ecological factors such as the presence of riparian vegetation which otherwise would be absent except for the existence of the river environment. We suggest the project is not 0.45 mi from the Santa Clara River. We suggest it is in fact located within the river or perhaps a mere 500 feet from the Santa Clara River based on the presence of The Nature Conservancy property line which indicates valuable River biological resources.

CEC data requests include the following:

*22.Provide a habitat assessment for the southwestern willow flycatcher.*

Why are other endangered/threatened/special-concern species not part of the request? A wealth of species have been observed and the adjacent riparian habitat can support the following: arroyo toad, western pond turtle, western yellowbilled cuckoo, least bell's vireo, burrowing owl. A huge variety of common species is present.

Why doesn't the biological data request ask for impacts to the entire population of species, common, endangered/threatened and otherwise? Will CEC request analysis of impacts due to

noise, light especially nocturnal light, height/size and emissions from the power plant to the entire ecosystem of the Santa Clara River and not merely what effects will occur to individual plant and animal species from the transmission towers? Will CEC request analysis for impacts during various times of year, especially sensitive ecological periods such as nesting season? What are the projected cumulative changes to long-term population of animal species?

CEC data request (and Calpine objection) 28:

*28.Please provide a completed Notification of a Lake and Streambed Alteration*

The volume of fill proposed to raise the site 10' for flood protection is 161,333 cu yards or the equivalent of 75' height of soil on a standard football field. Why wouldn't a streambed alteration notification be reasonably necessary for this large volume of fill? Wouldn't this volume be considered substantial in diverting or obstructing the natural flow of a river? Isn't this volume a substantial change or use of any material from the bed, channel or bank of a river? We disagree with Calpine and corroborate with CEC that it is entirely reasonable to require a completed Notification of Lake and Streambed Alteration.