DOCKETED

Docket Number:	97-AFC-01C
Project Title:	High Desert Power Plant
TN #:	216175
Document Title:	Response to Mojave River Transition Zone Water Balance Study
Description:	CDFW response to GSI
Filer:	Nancee Murray
Organization:	California Department of Fish and Wildlife
Submitter Role:	Intervenor
Submission Date:	2/22/2017 11:25:23 AM
Docketed Date:	2/22/2017

State of California – Natural Resources Agency
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
1416 9th Street, 12th Floor
Sacramento, CA 95814
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

February 22, 2017

Commissioner Karen Douglas, Presiding Member
Commissioner Janea A. Scott, Associate Member
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

RE: High Desert Power Plant (HDPP) Project (97-AFC-01C)/HDPP Response to Mojave River Transition Zone Water Balance Study (TZ Water Balance Study)

Dear Commissioners Douglas and Scott:

The California Department of Fish and Wildlife (CDFW) has received the Technical Review of the CDFW Water Balance Study for the Transition Zone of the Mojave River Basin prepared by GSI Water Solutions, Inc. (GSI Technical Review) (TN#215765).

The TZ Water Balance Study of the Mojave River Basin was conducted by CDFW staff to better understand the hydrology of the Transition Zone (TZ) and how wastewater diversions away from the Mojave River might affect the depth of shallow groundwater of the TZ. Based on the analysis of the TZ and scientific literature, several conclusions were drawn related to groundwater levels and potential impacts to riparian vegetation within the TZ. The GSI Technical Review largely misunderstands the TZ Water Balance Study. For example, the GSI Technical Review states, "the TZ water balance is not defensible because most of the inputs are not measured or calibrated against field measurements."(GSI Technical Review, p. 3). CDFW did not present the TZ Water Balance Study as being a comprehensive field effort by CDFW to obtain all the inputs into the TZ. CDFW noted and cited previous work done and data collected by URS, the United States Geologic Survey and the Watermaster and heavily relied on data, analysis and assumptions made by those entities. Additionally, while CDFW staff have not personally measured most of the inputs, *many of the inputs are based on measured data*, as reported to and assembled by the Mojave Water Agency, in its capacity as Watermaster. For example, the annual discharge to the Transition Zone by the Victor Valley Water Reuse Authority (VVWRA) is a *measured* input. As is presented in the TZ Water Balance Study, the VVWRA *measured input* is the largest contributor to the water balance in the Transition Zone. (See TZ Water Balance Study, Table 3).

The GSI Technical Review goes on the state, "a well calibrated groundwater model of the TZ that is based on considerable additional data collection and monitoring would be needed to produce a water balance with the accuracy and precision necessary to develop meaningful and reliable thresholds." (GSI Technical Review, p. 8). While CDFW does not disagree that more data collection

and monitoring would be helpful, the cost of such additional data collection and monitoring should be borne by the applicant, and during the time that it takes to collect such data and perform that monitoring, interim conditions would need to be imposed on the HDPP operation.

The GSI Technical Report also suggests that the groundwater level triggers, proposed not in the TZ Water Balance Study but in the letter transmitting that study to the CEC staff, are "unnecessarily conservative" because the riparian vegetation has survived to date. (GSI Technical Review, p. 7). As previously noted by CDFW, preservation of the surface water and shallow groundwater in the TZ is critical for protecting the long-term survival of the riparian habitat and wildlife.(See 97-AFC-01C – Petition to Amend the High Desert Power Plant –DRAFT – Scope of Work for a Transition Zone Water Balance Study of Alto Sub-basin to Evaluate the Potential Impacts of Using Recycled Water from the VVWRA Treatment Plant, TN#212656.) Protection of riparian habitat and associated wildlife that is self-sustaining over time requires more than mere survival of the present stand of riparian vegetation. The survival of this important habitat component along the Mojave River requires regeneration in the form of recruitment and growth of new vegetation to replace older vegetation that eventually dies off over time. CDFW cited several studies conducted by the United States Geological Survey on the relationship between native vegetation and the hydrologic condition of the Mojave River, which helped inform the groundwater level triggers proposed by CDFW. In depth monitoring of the riparian habitat within the TZ has not been done so it is unknown at this time if recruitment and regeneration of the riparian habitat is occurring at a self-sustaining level to maintain the riparian habitat in its current condition or better over time.

CDFW submitted its TZ Water Balance Study on December 16, 2016, at the request of the California Energy Commission Committee (CEC Committee) reviewing the conditions of the HDPP Certification. HDPP submitted the GSI Technical Review to the CEC Committee on February 3, 2017. CDFW believes that all parties would benefit from a technical workshop, in Sacramento, where interested parties could ask and answer questions regarding the TZ Water Balance Study, the GSI Technical Review and HDPP's recently proposed soil and water conditions of certification submitted on February 6, 2017 Thank you.

Sincerely,

Nancee Murray
Attorney IV
California Department of Fish and Wildlife