DOCKETED	
Docket Number:	15-AFC-02
Project Title:	Mission Rock Energy Center
TN #:	212570
Document Title:	Mission Rock Comment at IH Comments: Mission Rock Comment at IH
Description:	N/A
Filer:	System
Organization:	Mission Rock Comment at IH
Submitter Role:	Public
Submission Date:	8/2/2016 11:45:48 AM
Docketed Date:	8/2/2016

Comment Received From: Mission Rock Comment at IH Submitted On: 8/2/2016 Docket Number: 15-AFC-02

Mission Rock Comment at IH

Additional submitted attachment is included below.

a variety of special status riparian species (Giessow et al. 2011). Because of the major role that weedy species like Arundo play in altering ecosystem function and reducing habitat suitability, significant effort has been expended to plan for their removal within the Santa Clara River watershed. While a watershed-wide control effort is probably the most effective long-term strategy for elimination of these species, smaller and more targeted removal efforts can enhance the quality of habitat along the river in the short-term, providing habitat for sensitive migratory bird species such as the Least Bell's Vireo (Vireo bellii pusillus). The restoration nodes approach is helping the Conservancy maximize the return on investment when completing small invasive species removal projects on the Lower Santa Clara River by guiding removal efforts to lands located within the conservation nodes. This ensures that the effort expended in weed removal results in the enhancement of larger blocks of contiguous native habitat. It also allows the Conservancy to create defensible Arundo-free zones containing high quality native habitat within the restoration nodes that that can serve as propagule sources for native plants and core habitat for a broad suite of native species. For example, avian monitoring shows that along the Santa Clara River, patches of native riparian habitat have the largest populations of sensitive species.

In addition to invasive species, climate change is one of the most critical threats to biodiversity (IPCC 2007). Landscapes that contain nodes of protected habitat are more likely to be resilient to climate-induced perturbations over time, such as increased periods of drought, flood, and fire. Restoring the conservation nodes along the length of the Santa Clara River will not only provide refugia for species adapting to a changing climate but will also allow the river and floodplain to perform a number of ecosystem services. These services include soil stabilization, water filtration and retention, and the retention of flood waters. Increased development pressure combined with climate variability can place significant pressure on the services once provided by river systems. A recent economic model of floodplain development on the Santa Clara River showed that with just 80% development of the floodplain, downstream flooding would increase by over 70% and damages would rise by over one billion dollars (VCWPD 2011). Protected and restored nodes of habitat along the Santa Clara River will hold and slow flood waters, providing natural flood control. This multi-benefit approach to conservation is proving to be not only cost effective but will ultimately enhance ecological resilience of the river and floodplain.

In conclusion, the Conservancy's property acquisition efforts along the Santa Clara River have already resulted in the protection of thousands of acres of riparian lands within priority conservation nodes. The organization has now begun to selectively plan for and implement restoration of degraded habitats within the nodes by controlling invasive species. The two-step (acquisition/restoration) approach, when applied selectively to lands within priority conservation nodes, will preserve and enhance the overall biodiversity and ecological function of the river, while also providing ecosystem services to human communities nearby.

References

- Beller, E.E., R.M. Grossinger, M.N. Salomon, S.J. Dark, E.D. Stein, B.K. Orr, P.W. Downs, T.R. Longcore, G.C. Coffman, A.A. Whipple, R.A. Askevold, B. Stanford and J.R. Beagle. 2011. Historical ecology of the lower Santa Clara River, Ventura River, and Oxnard Plain: An analysis of terrestrial, riverine, and coastal habitats. San Francisco Estuary Institute. Prepared for the State Coastal Conservancy, Oakland, CA.
- Giessow, J., J. Casanova, R. Leclerc, R. MacArthur, G. Fleming and J. Giessow. 2011. Arundo donax (giant reed): Distribution and Impact Report. California Invasive Plant Council (Cal-IPC).
- Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, UK: Cambridge University Press.
- MacArthur, R.H. and E.O. Wilson. 1967. The Theory of Island Biogeography. Princeton, NJ: Princeton University Press.
- Moreno-Mateos, D., M.E. Power, F.A. Comín and R. Yockteng. 2012. Structural and Functional Loss in Restored Wetland Ecosystems. *PLoS Biology* 10:e1001247.
- Myers, N., R.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonseca and J. Kent. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403:853–858.
- The Nature Conservancy (TNC). 1993. California Southwest Bioregional Conservation Analysis. The Nature Conservancy.
- The Nature Conservancy (TNC). 2006. Santa Clara River Upper Watershed Conservation Plan. The Nature Conservancy.
- The Nature Conservancy (TNC). 2008. Conservation Plan for the Lower Santa Clara River Watershed and Surrounding Areas. The Nature Conservancy.
- Ventura County Watershed Protection District (VCWPD). 2011. Hydraulic Impact Analysis of the Santa Clara River Floodplain Protection Program.
- Zedler, J.B. 1996. Coastal mitigation in Southern California: The need for a regional restoration strategy. *Ecological Applications* 6:84–93.