Yolo Bypass Wildlife Area Habitat and Drainage Improvements Project

Consistency with the Delta Plan

Adaptive Management Element

The Yolo Bypass Wildlife Area Habitat and Drainage Improvements Project is located within the Yolo Bypass Wildlife Area and will be maintained and operated by California Department of Fish and Wildlife in accordance with the "*Yolo Bypass Wildlife Area Land Management Plan"* June 2008 (LMP). The land manage plan can be accessed at the website https://www.wildlife.ca.gov/Lands/Planning/Yolo-Bypass-WA . The first stated purpose of the LMP is to: Guide management of habitat, species, appropriate public uses and programs to achieve the CDFW mission. Chapter 5 - Management Goals, provides the framework and process for management and adaptive management for program, project, habitat and species goals. Adaptive management is defined in the LMP as "*a dynamic strategy in which management efforts are monitored regularly to assess their status and effectiveness. Monitoring results are then evaluated and used to update management goals and implementation strategies* (i.e., tasks)."

The scope of management activities are divided into eight LMP element sections: biological, agricultural resources, public-use, cultural resources, facility maintenance, scientific research and monitoring, fire management, and management coordination. Goals have been developed for each element. Goals and task details for natural communities related to the Project are described for: seasonal and permanent wetlands, agriculture, riparian, grasslands, upland, and aquatic ecosystems. Goals and tasks are further specified for the above sub elements at the level of species guilds. Tasks to implement each goal are described in detail. The assigned staff hours necessary to complete these tasks are described in a tabular format. Tasks are intended to sustain habitats for native plants and animals and provide other desired ecosystem services. At all times these habitats are managed to allow for necessary conveyance of flood flows in accordance with Sacramento River Flood Control Project(as updated in supplement, U.S. Army Corps of Engineers 2003), and pursuant to the MOU between DFG, State Reclamation Board, USFWS, and DWR regarding threatened and endangered species.

The LMP will require periodic revision to ensure that it is up to date, with respect to goals, changing needs and understanding of the best science. Ongoing adaptive management of the Yolo Bypass Wildlife Area and advancement of scientific knowledge regarding the area will result in new techniques and opportunities for more effective management of habitat. Operations and Maintenance actions in Chapter 6 of the Land Management Plan provide the planning context for adaptive management at the Yolo Basin Wildlife Area. The adaptive management step is built into O&M planning at the Task level for applicable scientific and cultural elements as well as natural community and species guild elements and sub-elements. The Adaptive management step is detailed to the responsible staff level including pay classification and time effort.

Wetland management techniques are built upon the prescriptions as described in *"A Guide to Wetland Habitat Management in the Central Valley"* (California Department of Fish and Game 1995) and have been adapted to specific environmental conditions within the Yolo Bypass and the need to remain

compatible with the flood control function of the Yolo Bypass. These tasks are based on nine years of experience in adaptively managing these communities on the original 3,700-acre Yolo Bypass Wildlife Area and five years of managing the newly acquired Glide and Los Rios properties. Actions proposed must comply with the federal and California Endangered Species Acts (ESA and CESA) and other regulations aimed at the protection of special-status species and sensitive habitats, including the current Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS), California Department of Water Resources (DWR), and the State Reclamation Board regarding the management of special status species at the Yolo Bypass Wildlife Area.

Water level manipulations described in the Project are appropriate and effective tools for wetland management operations. Monitoring of operations will be used to adaptively manage water levels such that flood-up and drainage fluctuations are well-timed and controlled. Manipulations are most effective on sites with (1) a dependable water supply, (2) an elevation gradient that permits complete water coverage at desired depths over a majority of the site, and (3) the proper type of water control structures that enable water to be supplied, distributed, and discharged effectively at desired rates. The size and location of structures are important, but water level manipulation themselves have important effects on plant composition, plant production, and avian use. Water distribution operations, management of seasonal and permanent wetlands, and biological monitoring are included in the Land Management Plan and will be adaptively managed as appropriate to maintain habitat according to species and habitat type objectives in the plan.