

1.1 Introduction

This document provides an aquatic resource inventory, classification, and functional description for a 173,680-acre area of East Contra Costa County, California (Figure 1-1). This area, referred to herein as the “inventory area,” corresponds to the planning boundaries of the East Contra Costa County Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP). The proponents of the HCP/NCCP are Contra Costa County, the Contra Costa County Flood Control and Water Conservation District (County Flood District), Contra Costa Water District (CCWD), East Bay Regional Park District (EBRPD), and the Cities of Clayton, Pittsburg, Brentwood, and Oakley. These proponents formed a joint powers authority, referred to as the East Contra Costa County Habitat Conservation Plan Association (HCPA), to lead development of the HCP/NCCP. Although the City of Antioch is not participating in the HCP/NCCP, the HCP/NCCP inventory area includes Antioch.

This wetlands inventory and assessment was conducted in support of a regional planning, conservation, and permitting effort coordinated by the HCPA and the U.S. Army Corps of Engineers (USACE). The primary goal of this inventory is to provide a baseline record of waters of the United States (WoUS), including wetlands, on a regional scale throughout the inventory area. This report was specifically designed to support the HCPA’s application to the USACE for a series of Regional General Permits (RGPs) in the inventory area that are expected to replace the existing Nationwide Permit Program. These RGPs will be bundled into a Regional Permit Program (RPP) that will provide a customized and streamlined wetlands permitting system for many projects in the inventory area, particularly those that receive coverage under the HCP/NCCP for impacts on listed species.

An important secondary goal of this inventory is to improve the HCP/NCCP by providing additional information on WoUS in the inventory area. Many WoUS in the inventory area provide important habitat for species proposed for coverage in the HCP/NCCP. Conservation measures in the HCP/NCCP will benefit from the information in this report on these key habitats.

This report describes the following in regard to WoUS.

- The locations of these features.
- The spatial extent of these features.
- The regional hydrogeomorphic context in which WoUS are formed and persist.
- The habitat, hydrology, and water quality functions that these WoUS provide.
- The overall functional value of WoUS in the study area.
- Management considerations to help promote conservation of these systems and minimize impacts on them.

The East Contra Costa County HCP/NCCP calls for preservation of approximately 30,000 acres of land in the inventory area to offset the impacts of expanding urban development in the participating cities. Data in this report will be used to predict the impact of this development on WoUS on a regional scale and to determine the level of conservation expected from assembly of the HCP/NCCP Preserve System. These data will also help to identify opportunities to mitigate potential future impacts on WoUS and their subbasins through comprehensive consideration of WoUS functioning on a landscape level.

It is important to note that this report presents the existing conditions of WoUS on a regional scale. As described later in this chapter, mapping of WoUS is based on coarse-level data and reconnaissance field verification. Data presented in this report are not based on site-specific wetland delineations according to approved USACE methodology. This report should not be used for project-level analysis and cannot be substituted for site-specific wetland delineations.

1.2 Organization of this Report

This report is organized into five chapters. Chapter 1 is this introductory chapter. Chapter 2 presents the methodology for the WoUS inventory and mapping. Chapter 2 also presents the approach to WoUS classification used in this report. That approach is based on a classification of physiographic regions in the inventory area. Individual subbasin drainages are identified according to the physiographic region that characterizes them most strongly (Figures 1-2 and 1-3). Chapter 3 presents the regional physical setting used to establish a context for the hydrologic conditions that support WoUS creation and introduces the following four physiographic regions identified in the inventory area.

- Montane region.
- Foothills/upper valley region.

- Lower valley/plain region.
- Sacramento–San Joaquin Delta region.

Chapter 4 describes the WoUS types found in the study region according to their general geomorphic requirements, location, extent, habitat functions, hydrologic functions, and water quality functions. Chapter 5 describes individual subbasins in greater detail. Subbasin assessments include specific discussions of subbasin physical conditions relevant for WoUS support; WoUS types found in the subbasin; WoUS functions in the subbasin; management consideration for WoUS conservation, impact avoidance, and enhancement in the subbasin; and WoUS valuation within the subbasin.

Appendices are included at the end of the inventory report. These are the waters of the U.S. Inventory Table (Appendix A) and the photo atlas for the inventory area (Appendix B). A separate document, the Regional Permit Program, contains a protocol for use of this inventory report for future assessments. The table in Appendix A lists and categorizes all WoUS mapped in the inventory area. The photo atlas displays the number, location, and surrounding area of each WoUS type mapped in the inventory area.

In sum, this effort seeks to conduct a regional approach to preservation, enhancement, and management of WoUS through two steps:

- establishing the baseline conditions of WoUS in an inventory, classification, and functional description at the subbasin scale; and
- providing an analysis of hydrogeomorphic conditions supporting WoUS by subbasin. This analysis is accompanied by a review of opportunities and constraints to preserve and restore WoUS and the physical processes that support their longer-term sustainability.

1.3 Terminology

Waters of the United States, or WoUS, is the encompassing term for areas that qualify for federal regulation under Section 404 of the Clean Water Act.

Wetlands are a subcategory of WoUS. For regulatory purposes, *wetlands* are defined as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (CFR 328.3, CFR 230.3). WoUS include features such as reservoirs and creeks that may not be vegetated and are therefore not defined as wetlands.

Isolated wetlands are those that are not bordering, contiguous with, or neighboring WoUS or other wetlands, and are not usually considered jurisdictional. Wetlands would probably be considered isolated if they were

hydrologically isolated from both fluvial and tidal surface hydrology, were not part of a larger wetland or vernal pool complex, and occurred in a closed basin that is not a headwater connected to a larger watershed. A USACE regulatory specialist will confirm final determination of adjacency or isolation.

A *watershed* is all of the upstream land (and subsurface groundwater) that drains to a particular point along a stream or river. *Subbasins* are considered “nested” watersheds within the larger principal watershed units (i.e., Sand Creek drainage is a subbasin of the Marsh Creek watershed). The term subbasin is also applied to smaller independent watersheds that may be isolated or adjacent to principal regional scale watersheds. This inventory does not attempt to determine whether individual wetlands within the inventory area are jurisdictional.

Hydrogeomorphic refers to water-related landform-shaping processes. For this study, these physical processes are typically the governing forces that influence the setting or capacity of WoUS to exist and persist.