3. 3 CONTRA COSTA WATERSHED MANAGEMENT AREA

Overview

Contra Costa County (Figure 3-2), located in the geographic center of our Region, is bounded by San Francisco Bay and San Pablo Bay to the west, Suisun Bay and the channels of the Sacramento and San Joaquin Rivers to the north, Alameda County to the south, and to the east by San Joaquin County. The total area is approximately 800 square miles and contains a population of close to one million people (2000 census). The County includes 19 municipalities and a large unincorporated area, particularly in the eastern portion of the County. The predominant economic resources of the county include the petroleum and chemical industries and agriculture, which is made up primarily of range and pasturelands.

The County can be divided into 3 geographic areas: West County, Central County, and East County. Approximately three-fifths of the County is within the boundary of Region 2's jurisdiction, including all of West and Central County and small portions of the East County. The remainder of the East County is within the jurisdiction of the Central Valley Regional Board, Region 5. *West County* includes a highly urbanized strip along the shores of San Francisco Bay and Carquinez Strait and the Highway 80 corridor, with a mixture of residential and commercial and industrial uses. Major industries in this area include petroleum refineries and chemical companies. *Central County* includes major urban centers along Interstate 680 and Highway 24, as well as the industrialized area along the eastern Carquinez Strait, and the open space areas of Mt. Diablo State Park and other public lands of the East Bay Regional Park District, California Department of Parks and Recreation, East Bay Municipal Utility District, and Contra Costa County Water District. *East County* is predominantly undeveloped with agricultural uses comprising 70% of the watershed. Urbanized land uses comprise only 13% of the land area and the major receiving water is the Delta.

Watershed Descriptions

Contra Costa County has 31 major watersheds and sub-watersheds containing more than 1300 miles of creeks and drainages. All but eight of these watersheds are entirely within Contra Costa County. The largest watersheds in Contra Costa County within Region 2 boundaries are Walnut Creek (93,556 acres), San Ramon Creek (tributary to Walnut Creek, 32,915 acres), and San Pablo Creek (27,640 acres). The County also includes the upper portion of the 700 square mile Alameda Creek watershed, which is one of the most important watersheds in the Bay Area for both habitat and public drinking water supply. While the Walnut Creek Watershed is very large and spans many cities, many of the other watersheds are conveniently "community-sized". For instance, Alhambra and Pinole Creeks are closely identified with (and are important features of) the Cities of Martinez and Pinole respectively.

Two major complexes of mountains, ridges, and hills define the physical and hydrological landscape of the County. The first of these ridgeline complexes centers on Mount Diablo, which rises to 3,849 feet above sea level near the center of the County,

and extends south to the Altamont Pass area and the remainder of the Diablo Range in Alameda County. The second major complex of hills and ridges lies between the eastern shore of San Francisco Bay and the major valleys in the center of the County. Las Trampas Ridge, the Oakland-Berkeley Hills, and the Briones Hills are some of the well-known features in this second area.

Tectonic processes created these mountain and ridge complexes, as the Pacific Plate has slipped northward past the North American Plate. Like a piece of fabric that folds and creases when the edges are pulled in different directions, the surface of Contra Costa County has been pulled northward on the bay shore and southward along the edge of the Central Valley, creating a series of ridges and valleys. Due to the orientation of the tectonic movement, ridgelines in the County often run from the northwest to the southeast. These mountain and ridge complexes form the headwaters for nearly all the creeks in the County. Most of these headwater areas have rugged terrain and are not heavily populated or developed. Many headwater areas are used for private rangeland, public parks and watershed land. As creeks flow down to major valleys and coastal plains, the surrounding watershed becomes increasingly developed.

Significant Watershed Issues

New development is a major watershed issue in Contra Costa as in the rest of the Bay Area. A large focus of Water Board staff efforts is on working with the Contra Costa Clean Water Program to implement their stormwater permit and on working with agencies and private parties on water quality certifications. Major issues include stream and wetland impacts from proposed new development and existing development; water quality impairment from pesticides, fertilizers, animal waste, automobiles, and other typical urban runoff pollutants; changes to the hydrograph of watersheds due to development and increase of impervious surfaces; and water quality impacts from industrial and commercial site development.

Both new and existing development are primarily concentrated in valley floors and coastal plains, but development pressure means that hillside properties are being increasingly developed. Environmental problems may be aggravated if growth is not managed carefully, particularly in hillside areas where land clearing exacerbates erosion and impacts stream corridors. There is increased pressure on creeks and wetlands, and the challenge is to preserve creek functions and meet no net loss of wetlands criteria. Land use planning agencies in the County are now attempting to work together to develop creative solutions to these problems. One of these is the development of a Regional Habitat Management Plan by the County for East Contra Costa, to identify habitats, habitat needs, and mitigation sites.

An area of major interest to the Water Board is the cleanup of the Concord Naval Weapons Station (CNWS). CNWS is a 12,800-acre site located in the north-central portion of Contra Costa County, of which 5,170 acres, known as the Inland Area, were used for weapons storage and maintenance. The remaining 7630 acres, known as the Tidal Area, includes large areas of wetlands and a deep-water port for weapons shipment

operations. The contamination in the northwestern area of the Tidal Area comes from past on-base waste disposal practices, including an estimated 3,000 tons of mixed wastes that were deposited in the landfill from the early 1940s to 1979, material and waste generated during the repackaging of conventional munitions, and chipped wood contaminated with pentachlorophenol (PCP). Investigations identified heavy metals to be the primary contaminants in these sites, but low levels of organochlorine pesticides, such as DDT and its breakdown products, and semi-volatile organic compounds (SVOCs) are also present. Other contaminated sites, located in both wetlands and upland habitat on the northeastern portion of the Tidal Area, are the result of private industrial activities on portions of property that was subsequently purchased by the Navy to create a buffer zone for the activity at the facility's piers. Issues include surface water/groundwater connections and potential for leakage from old underground storage tanks and from aboveground storage tanks.

Because of the large amount of public interest and numerous agencies involved at the CNWS, the decision-making process has been long and often difficult; however, the US EPA signed a ROD (Record of Decision) for the Tidal Area landfill capping in May 2004. The construction began in the summer of 2006, but was halted shortly afterward due to the discovery of live ordnance. The site was closed until the summer of 2007 while the Navy completed plans for how to handle other unexploded ordnance that is uncovered. The Navy is also preparing feasibility studies for the cleanup of the sloughs and sediment in the Litigation Area, a 300-acre site bordering Suisun Bay on the eastern side of the Tidal Area of the CNWS. This area was purchased by the Navy to create a buffer zone around the Tidal Area, but was found to be contaminated by several heavy metals by its previous industrial owners. Subsequent litigation with the prior owners was followed by soil excavation and removal in several areas, and studies are underway to remove remaining contamination.

The Department of Defense (DOD) announced in May 2005 that it had included the Inland Area of the CNWS on its list of recommended bases to be closed by the Base Realignment and Closure (BRAC) Commission. The Tidal portion of CNWS will also be transferred to the U.S. Army, and portions of the Inland Area may transfer to the DOD and/or other federal agencies, but the majority of this area is within the Concord city limits and will transfer to the City. The Concord City Council has been holding a series of scoping sessions and public meetings about the development potential for this area in order to develop a reuse plan. The Council agreed to set up a Community Advisory Committee representing neighborhoods, environmentalists, housing advocates and other interests, to help the City develop its plan. Water Board staff will continue to follow this planning process as issues of pollutant cleanup, stormwater runoff management, stream and wetland protection, and others will be integral to future development at this site. This will continue to be a major issue of coordination among many agencies and local stakeholders.

Of particular concern to creek and environmental groups is Mount Diablo Creek, the last free flowing creek in Contra Costa County, which flows through the center of the CNWS. The Contra Costa Resource Conservation District has been facilitating and coordinating a

watershed planning process to develop a Coordinated Resource Management Plan (CRMP) for the Mount Diablo watershed through funding from a Proposition 13 grant from Calfed, managed by Water Board staff. The Planning Group, made up of local stakeholders, has been meeting monthly since June 2005 and has reached consensus on a set of goals for the watershed as well as creek and watershed goals and objectives for the CNPS site. The Planning Group has submitted their recommendations to the City of Concord and hopes to have representation on the Community Advisory Committee.

Other significant issues in the watershed include wastewater discharges from major industries, increase of major industries in East County (e.g., two new proposed power plants with proposed water reclamation for cooling), and proposed redevelopment of several industrial sites, with potential use of wetlands for wastewater treatment along with traditional discharge methods. Issues related to NPDES permitted facilities include dioxin and selenium limits, the inclusion of pollution reduction and waste minimization requirements in industry permits, effluent toxicity from POTWs, and the development and implementation of mass reduction load at petroleum refineries. Issues of potential subsurface contamination that may not be reported to the Water Board or County Environmental Health continue to be a challenge. Another challenge is to work with local municipalities to identify industries that are not currently covered under industrial stormwater permits.

Watershed Groups and Watershed Management Efforts

The Contra Costa Watershed Forum (CCWF) is an outgrowth of the first countywide Creek and Watershed Symposium in 1999. The Forum is an open committee of some fifty organizations, including federal, state, and local agencies; local governments; professional watershed research organization; local non-profit environmental and education organizations; community volunteer groups; and private citizens. The CCWF meets bimonthly, and staff from the Contra Costa County Community Development Agency coordinate the meetings, provide the Forum members with meeting agendas, minutes, bimonthly newsletters, staff reports and related materials, and coordinate various subcommittee meetings and related activities.

The work of CCWF participants is premised on the notion that actions in a watershed are inter-related and, therefore, that broad participation and cooperation is needed to affect change. The members of the CCWF work together to find common approaches to making the County's variety of water resources into healthy, functional, attractive, and safe community assets. Since the inception of the CCWF, there has been a marked increase in watershed restoration and preservation activities, activism, and awareness. New volunteer groups have formed, and programs to educate, research and document the health of creeks and watersheds are more widely available.

The CCCWF also is an example to other counties and has shared their experience and expertise with other local agencies and watershed groups in the region. Under the auspices of the CCWF, the County has initiated creek surveys and volunteer monitoring. Approximately 1400 miles of creeks have been mapped with GIS, using staff and

volunteers. The CCWF and Contra Costa Clean Water Program sponsor a citizen bioassessment monitoring program that trains local citizens to do ongoing annual monitoring to collect baseline data and provide a tool for assessing pollutant impacts. The County has also prepared the *Contra Costa County Watershed Atlas*, a large format, full color, 150-page book of maps, statistics and text about the 28 major watersheds in the County. Though focused on the state of natural ecosystems on the watershed scale, the Atlas also provides information about the human community and the county as and eco-region. The County has also published an overview of the results of volunteer creek monitoring from 2001—2005 called *Data from the Creeks.* More information on the CCWF and the publications are available at www.cocowaterweb.org.

As noted above in the discussion about the CNWS, the Contra Costa RCD has been a strong partner in the Watershed Forum and has spearheaded a number of watershed planning and assessment efforts in the County. The Mt. Diablo Creek CRMP process is developing a watershed plan under a grant from Calfed that is managed by Water Board staff; they have also completed the *Mt. Diablo Creek Watershed Assessment* (January, 2006). The RCD worked with the NRCS and the San Francisco Estuary Institute to prepare a Sediment Source Analysis and Baseline Water Quality Study for Pinole Creek and the Pavon Creek Sub-basin Assessment (tributary to Pinole Creek). They also have helped to support the Alhambra Creek Watershed Council and Kirker Creek Advisory Group/Partners for the Watershed, as well as several other watersheds located in the Central Valley Region (including Marsh, Brushy, and Kellogg Creeks).

Proposed Workplan for FY 2010/11 and 2011/12

Urban Runoff

- Oversee Contra Costa Countywide Stormwater Program including: review annual report, follow up on requirements issued as a result of our review of the annual report/Program, oversee the initial implementation of their Hydrograph Modification Management Plan, and assist with runoff issues associated with construction and new development

Stream and Wetland Habitat Protection

- Take action on over 100 anticipated CWA Section 401water quality certifications, including appropriate WDRs and mitigation monitoring reports; for new development, inspect projects sites and take enforcement actions as necessary.

Impacts from Point Source Pollutants

- Reissue NPDES and Waste Discharge Permits as needed
- Complete pretreatment compliance inspections and conduct annual compliance inspections

Program implementation by RWQCB staff and local partners

- Take enforcement actions as needed
- Continue to support the Contra Costa County Watershed Forum and associated organizations through grant management and other activities. Encourage local community partnerships with local government (especially the Contra Costa Clean Water Program and Community Development Department)

- Encourage education of citizens on water quality issues, especially towards training of a County-wide volunteer-based water quality monitoring program
- Support grant funding to continue the volunteer-based water quality monitoring program; support watershed characterization efforts, conduct restoration and invasive species removal activities; and foster citizen water quality education programs.

High Priority Unfunded Activities

- Wastewater reuse - on-site alternative reclamation projects
- Grant management and administrative support

High Priority Projects for Grant Funding (both Water Board and County)

- Educating local officials of the value and importance of their creeks and encouraging development of ordinances that protect creeks and riparian areas
- Planning activities at county-wide as well as local watershed levels (through the Contra Costa Watershed Forum); long-term planning for new development mitigation issues (now under the auspices of the CCWF)
- Fostering creek groups and encouraging restoration projects
- Support for citizen monitoring, ongoing support for CCWF, land acquisitions, eradication of exotic plants, and restoring and protecting streams, with a priority focus on fish-bearing creeks.
- Funding for watershed management plans
- Partnering with Alameda County, developing a strategic plan for ongoing stewardship of restoration, and expanding the Stream Management Program for Private Landowners (SMPPL) within the County and in other counties.
- Riparian habitat and stream restoration projects, including further improvements to the Alhambra Creek watershed.
- Restoration activities for creek and floodplain restoration in Pinole Creek watershed

Figure 3-2. Contra Costa County Watersheds