CHAPTER 27.
CENTRAL CONTRA COSTA SANITARY DISTRICT ANNEX

27.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Shari Deutsch, Safety & Risk Management Administrator
5019 Imhoff Place
Martinez, CA 94553
Telephone: 925-229-7320
e-mail Address: sdeutsch@centralsan.org

Alternate Point of Contact

Randall Musgraves; Director of Administration
5019 Imhoff Place
Martinez, CA 94553
Telephone: 925-229-7305
e-mail Address: rmusgraves@centralsan.org

27.2 JURISDICTION PROFILE

The Central Contra Costa Sanitary District (CCCSD) receives its legal authority from the California Health and Safety Code, Division 6, Part 1. This statute is referred to as the Sanitary District Act of 1923. CCCSD is a Special District created in 1946 to provide wastewater collection and treatment to the residents and businesses in the central area of Contra Costa County. Over time, the District's service area has expanded to incorporate areas of new development and those areas where sewers have been constructed to replace septic systems. The District is governed by a five-member elected Board of Directors. The Board of Directors assumes responsibility for the adoption of this plan while the General Manager will oversee its implementation.

The District currently serves approximately 450,000 residents and 3,000 businesses in 10 cities within the central county area.

The District's headquarters and treatment plant are based in Martinez. The treatment plant is capable of treating 54 million gallons of wastewater per day and has handled up to 240 million gallons per day in wet weather. The District's collections system operation is based in Walnut Creek which allows crews to respond to emergencies within the service area in less than one hour. The collections system operation is responsible for the cleaning, maintenance and repair of the District's 1,500 miles of underground pipeline and its 18 pumping stations.

The District also operates a household hazardous waste collection facility, provides recycled water to customers for irrigation and other industrial uses, and manages a source control program with enforcement authority to prevent pollution from entering area waters.

Funding comes primarily through annual sewer service charges, ad valorem taxes, and sewer connection permit fees. However, the District has occasionally issued revenue bonds to finance capital improvements.

The following is a summary of key information about the jurisdiction:

- **Population Served—**Approximately 450,000 residents and 3,000 businesses
- **Land Area Served—**146 square miles
- **Value of Area Served—**N/A
- **Land Area Owned—**Approximately 420 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**

  - 37 process structures $42,109,898
  - 12 power structures $30,956,026
  - Piping throughout plant $47,907,981
  - 1500 miles of pipe throughout the District $663,693,000
  - 19 Pump Stations $26,456,644
  - 28 Tanks $181,526,889
  - 102 vehicles $5,463,600

- **Total Value of Critical Infrastructure/Equipment—**The total value of critical infrastructure and equipment owned by the jurisdiction is $998,114,038.
- **List of Critical Facilities Owned by the Jurisdiction:**
  - 13 Process Buildings $163,816,588
  - 12 Other Buildings $50,881,075
- **Total Value of Critical Facilities—**The total value of critical facilities owned by the jurisdiction is $203,149,453.
- **Current and Anticipated Service Trends—**According to County and City planners, the District's service area is comprised of high value land. As a result, development trends indicate higher residential densities and more compact commercial developments. Population growth will come from lot splits, infill development, construction of in-law units and a rise in multi-generational households. As a result, the District is focused on increasing the capacity of its current collections and treatment systems rather than on construction of new pipe segments.

The jurisdiction's boundaries are shown on Figure 27-1.

27.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 27-1 lists all past occurrences of natural hazards within the jurisdiction.

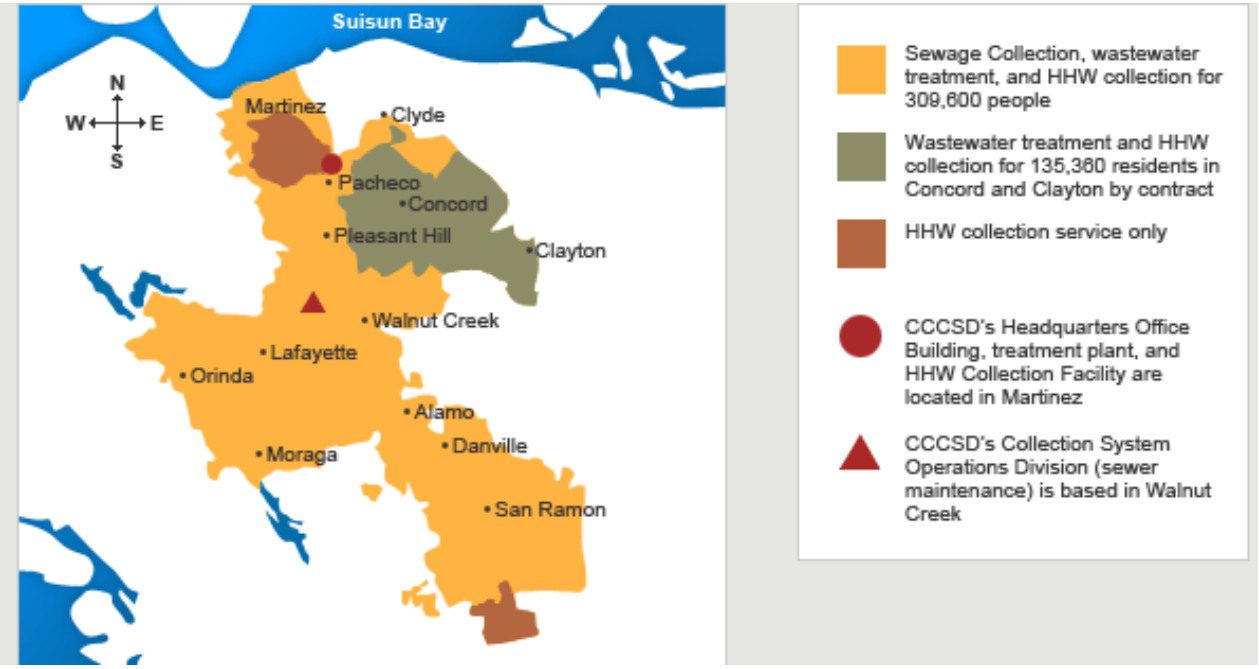
27.4 HAZARD RISK RANKING

Table 27-2 presents the ranking of the hazards of concern.

27.5 APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- California Department of Public Health
- California and US Environmental Protection Agencies
- California Code of Regulations
- Federal Endangered Species Act
- California Environmental Quality Act (CEQA)



□ *Figure 27-1. Central Contra Costa Sanitary District Boundaries*

- National Pollutant Discharge Elimination System (NPDES)
- Statewide General Waste Discharge Requirements
- Contra Costa County Operational Area Hazard Mitigation Plan
- 10 Year Capital Improvement Plan
- Sewer System Management Plan
- Collections System Master Plan
- Treatment Plant Master Plan

27.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 27-3.

27.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 27-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 27-5 identifies the priority for each initiative. Table 27-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

27.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Ongoing research to evaluate the impact of new legislative or regulatory requirements on the collections system and treatment plant insofar as they affect the location and operations of facilities and equipment in areas exposed to natural hazards.

More detailed seismic risk assessments of major pipelines and pump stations along the Hwy 24 corridor and in the central Walnut Creek area.

Further study of soil stability in areas previously affected by wet weather events and identification of projects to reduce the risk of pipe failure in those areas.

27.9 ADDITIONAL COMMENTS

The Central Contra Costa Sanitary District is an award winning agency with a mission to protect public health and the environment and a commitment to excellence and continuous improvement. Our commitment is evident in the District's violation-free operation, awards and recognition, expanded programs and services and its outreach and education programs:

- Awards: In recent years the District has received the following awards and recognitions:
  - National Association of Clean Water Agencies' (NACWA) Peak Performance Platinum Award for eleven years of violation-free operations
  - California Water Environment Association 2008 awards for
    - Large Treatment Plant of the Year
    - Engineering Research Achievement Award for the Aeration Air Renovations Project
    - Large Collection System of the Year
  - California Association of Sanitation Agencies (CASA) 2008 Innovation Award for development of a Wastewater and Water Operator Training Program
- Expanded Services and Programs: In addition to collecting and treating wastewater, the District also:
  - Operates a Household Hazardous Waste Collection Facility
  - Supports area pharmaceutical collections programs to keep drugs out of the water system
  - Sponsors job training by offering college-level courses in Wastewater and Water Operator Training through a local community college.
- Community Education and Outreach: The District also sponsors a number of programs to educate and inform our community about our services, our goals and our environmental stewardship. These programs include:
  - Sponsorship of "Sewer Science" classes in area high schools and "Water Wizards" classes in area elementary schools.
  - Sponsorship of the "Delta Discovery" program, a day cruise on the Delta that shows children how water ecosystems work. Over 2,000 children participate in this program every year.
  - Production of numerous publications and information sheets on a variety of topics including a tri-annual newsletter sent to all households and businesses in the service area
  - Speakers Bureau
  - Plant Tours
  - Support of the Integrated Pest Management program and Master Gardener program through the University of California Extension

TABLE 27-1.
NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster #	Date	Preliminary Damage Assessment
Severe Weather	NA	3/2/2009	$1,600
Severe Weather	NA	2/17/2009	$1,600
Severe Weather	NA	10/23/2007	$1,600
Storm, Severe Weather, Landslides	NA	12/2005-1/2006	$648,900
Storm, Severe Weather, Landslides	NA	1/1997-12/1998	$621,000
Landslide	NA	3/2006	$185,000
Storm, Severe Weather, Landslides	NA	3/1/1995	$180,000
Storm, Severe Weather, Landslides	FEMA-979	1/20/1993	$248,000
Storm, Severe Weather, Landslides	NA	11/19/1991	$215,000
Storm, Severe Weather, Landslides	FEMA-758	2/17/1986	$260,500
Storm, Severe Weather, Landslides	NA	2/26/1983	$394,200
Storm, Severe Weather, Landslides	NA	1/25/1983	$629,200
Storm, Severe Weather, Landslides	NA	3/30/1982	$658,600
Storm, Severe Weather, Landslides	NA	1/3/1982	$549,000

TABLE 27-2.
HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Weather	36
3	Landslide	36
4	Flood	36
5	Wildfire	12
6	Drought	12
7	Dam Failure	6

TABLE 27-3.
COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

TABLE 27-4.
HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Initiative 1—District Building Seismic Improvements						
Existing	Earthquake, Severe Weather, Flood	1, 2, 7, 10, 13	CCCSD	$6 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM, HMGP	Short Term
Initiative 2—Collections System Renovations (Short Term)						
Existing	Earthquake, Severe Weather, Landslide, Flood	1, 6, 10, 13	CCCSD	$14.6 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM Program	Short Term
Initiative 3—Collections System Renovations (Long Term)						
Existing	Earthquake, Severe Weather, Landslide, Flood	1, 6, 10, 13	CCCSD	$38 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM Program	Long Term
Initiative 4—Wet Weather Bypass Improvements						
New	Earthquake, Severe Weather, Flood	1, 10, 13	CCCSD	$3.3 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, ARRA Grants, PDM Program	Short Term

TABLE 27-4 (continued).
HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Initiative 5—EBMUD Watershed Pump Stations and Force Main Improvements/Upgrades						
Existing	Earthquake, Severe Weather, Landslide, Flood	1, 10, 13, 16	CCCSD	$5.1 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM Program	Long Term
Initiative 6—Treatment Plant Seismic Improvements						
Existing	Earthquake, Severe Weather, Flood	1, 2, 7, 13	CCCSD	$8 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM, HMGP	Long Term
Initiative 7—Primary Treatment Expansion						
New	Earthquake, Severe Weather, Flood	1, 10, 13	CCCSD	$26 m	Property Tax, Sewer Service Charges, Debt Financing, Interest on Investments, PDM Program	Long Term
Initiative 8—Support County-wide initiatives identified in Volume 1.						
New & Existing	All Hazards	All	County	Low	District Funds	Short Term, ongoing
Initiative 9—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New & Existing	All Hazards	All	County	Low	District Funds, FEMA Mitigation Grant Funding for 5-year update	Short Term, ongoing
Initiative 10—Integrate Local Hazard Mitigation Plan into the Safety Element of the General Plan						
New & Existing	All Hazards	4, 5, 14	County	Low	District Funds	Short Term, ongoing

TABLE 27-5.
MITIGATION STRATEGY PRIORITY SCHEDULE

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority[a]
1	5	High	Medium	Yes	Yes	Yes	High
2	3	Medium	Low	Yes	Yes	Yes	High
3	4	Medium	Medium	Yes	Yes	Yes	Medium
4	3	High	Low	Yes	Yes	Yes	High
5	4	Medium	Medium	Yes	Yes	Yes	Medium
6	4	Medium	Medium	Yes	Yes	Yes	Medium
7	3	Medium	Medium	Yes	Yes	Yes	Low
8	16	Medium	Low	Yes	No	No	High
9	16	Medium	Low	Yes	Yes	Yes	High
10	3	Low	Low	Yes	No	Yes	High

a. Explanation of priorities
- High Priority: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
- Medium Priority: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
- Low Priority: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

TABLE 27-6.
ANALYSIS OF MITIGATION INITIATIVES

	Initiative Addressing Hazard, by Mitigation Type					
Hazard Type	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	9, 10		8, 9			
Earthquake	6, 9, 10	2, 3	8, 9	5, 7	1, 4	
Flood	7, 9, 10	1, 2, 3	8, 9	6	4, 5	
Landslide	2, 3, 9, 10		8, 9		5	
Severe Weather	1, 5 6, 9, 10	7	8, 9	2, 3	4	
Dam Failure	9, 10		8, 9			
Wild Fire	9, 10		8, 9			

Notes:
1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.