

# San Francisco Bay Area Integrated Regional Water Management Plan

## Planning Grant Proposal Pursuant to Proposition 50, Chapter 8

### WORK PLAN

#### **Watershed Management and Habitat Protection and Restoration and Flood Protection and Stormwater Management Functional Areas**

## 1 BACKGROUND

San Francisco Bay Area water, wastewater, flood protection and stormwater management agencies; cities and counties represented by the Association of Bay Area Governments; and watershed management interests represented by the California Coastal Conservancy and non-governmental environmental organizations have signed a Letter of Mutual Understandings (LOMU) to develop a Bay Area Integrated Regional Water Management Plan (IRWMP) for the entire nine-county San Francisco Bay Area. Since the signing of the LOMU some of the approaches to developing the IRWMP have changed slightly and they may continue to change throughout the process.

The LOMU calls for developing a plan that includes four functional service areas related to water management. These functional areas are (1) Water Supply and Water Quality, (2) Clean Water (wastewater) and Recycled Water, (3) Flood Protection and Stormwater Management, and (4) Watershed Management and Habitat Protection and Restoration. Each of the functional areas is led by a technical coordinating committee (TCC) made up of representatives from agencies and organizations involved in that function. The overall IRWMP also is led by a TCC comprised of representatives of all four functional areas. This San Francisco Bay Area (Bay Area) TCC makes ultimate decisions on the preparation of the IRWMP, grant proposals and other such decisions.

While a considerable amount of time, effort and financial resources have gone into and continue to go into the preparation of the IRWMP on the part of water agencies and the Coastal Conservancy, other entities, such as flood protection agencies and environmental organizations, are limited in their ability to finance the preparation of the plan. For this reason, the Bay Area TCC has determined it to be in the best interest of the Bay Area to seek two planning grants under Proposition 50, Chapter 8. The grants will be for different purposes but will be complementary in that both will lead to completion of the IRWMP. One of the grants will be used to complete the planning within the functional areas of *Water Supply and Water Quality* and *Wastewater and Recycled Water*. The other will be used to complete the planning within the functional areas of *Watershed Management and Habitat Protection and Restoration* and *Flood Protection and Stormwater Management*. Funds from both grants will be used, then, to integrate the four functional areas into the Bay Area IRWMP.

Both grant proposals outline a work plan. The organization of the two work plans is identical to (1) facilitate the coordinated work in the Bay Area and (2) to help state staff review the grant proposals. After the title of each section or subtask there is an explanation in parenthesis to help the reader know if

the section or subtask applies principally to this work plan, the work plan in the other grant proposal or to both proposals as a collaborative effort. The attached proposed budget also makes this distinction.

This Work Plan is for the planning efforts to be undertaken by the entities engaged in *Watershed Management and Habitat Protection and Restoration* and *Flood Protection and Stormwater Management*. It is attached to the proposal as **Att3\_PG\_WorkPlan\_1of9**.

For ease in reading, the *Water Supply and Water Quality and Wastewater and Recycled Water Work Plan* is usually hereinafter referred to simply as the “*Water and Wastewater Work Plan*” and the *Watershed Management and Habitat Protection and Restoration and Flood Protection and Stormwater Management Work Plan* as the “*Watershed Management and Flood Protection Work Plan*.”

In addition to this Work Plan, other attachments have been submitted with this Planning Grant Proposal. Several attachments are mentioned in the Work Plan. The following is a list of all the attachments. Please note that there are no Attachments 4 and 5 because, although there are neighborhoods that could be classified as disadvantage, there are no eligible disadvantaged communities in the Bay Area. Consequently a waiver of the match funds is not being requested. Please note, however, that *environmental justice* is addressed below in Subtask 1.12 and Subtask 3.1.14, *Stakeholder Involvement*.

Attachment #	Attachment Title	File Name
Attachment 1	Authorizing Documentation	Att1_PG_AuthDoc_1of1
Attachment 2	Eligible Applicant Documentation	Att2_PG_EligDoc_1of1
Attachment 3	Work Plan	Att3_PG_WorkPlan_1of9
	Letter of Mutual Understandings (LOMU)	Att3_PG_WorkPlan_2of9
	Digital geographic file (i.e. shape file) of the San Francisco Bay Area in NAD27 UTM10	Att3_PG_WorkPlan_3of9
	Template: Flood Protection and Stormwater Management Section; Individual Agency Data Summary	Att3_PG_WorkPlan_4of9
	Scope of Work: Flood Protection and Stormwater Management Section of the San Francisco Bay Area IRWMP	Att3_PG_WorkPlan_5of9
	Work Plan: Watershed Management, Habitat Protection and Restoration Section of the San Francisco Bay Area IRWMP	Att3_PG_WorkPlan_6of9
	Scope of Work: Watershed Management, Habitat Protection and Restoration Section of the San Francisco Bay Area IRWMP	Att3_PG_WorkPlan_7of9
	Work Plan Budget	Att3_PG_WorkPlan_8of9
	Work Plan Schedule	Att3_PG_WorkPlan_9of9
Attachment 4	Disadvantaged Community Supporting Information	Not Applicable
Attachment 5	Certification of Understanding – Reduced Funding Match Request	Not Applicable

The information that follows in this Work Plan is presented in the general order requested in the Guidelines and Proposal Solicitation Package. Where appropriate, other information has been added in order to better outline and explain this proposal.

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## 1.1 Description of Regional Water Management Group

This *Watershed Management and Flood Protection Work Plan* to develop in concert with the *Water and Wastewater Work Plan* an Integrated Regional Water Management Plan (IRWMP) for the San Francisco Bay Area has been prepared under the direction of the following Bay Area agencies and organizations that are involved in water management planning and related efforts for the region. Agencies noted with an asterisk (\*) are those that have responsibilities for *Watershed Management and Habitat Protection and Restoration* and/or *Flood Protection and Stormwater Management*.

- **\*Alameda County Public Works Agency (ACPWA).** ACPWA is responsible for maintaining the infrastructure of Alameda County. It plans, designs, and inspects the construction of county road and flood projects. The County's flood control infrastructure (creeks, channels, pipelines, and storm drains) helps prevent water from backing up and flooding County streets and land. There are 22 pump stations within Alameda County that pump excess flood waters into the Bay.
- **Alameda County Water District (ACWD).** ACWD was established in 1914 to protect the local groundwater basin, conserve the waters of Alameda Creek Watershed and develop supplemental water supplies for agricultural use. Today, the District is a retail water purveyor serving a population of over 323,000 in Southern Alameda County.
- **\*Association of Bay Area Governments (ABAG).** ABAG is owned and operated by the cities and counties of the San Francisco Bay Area. It was established in 1961 to protect local control, plan for the future, and promote cooperation on area-wide issues. In ABAG's region there are 101 cities and the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. More than 6 million people live in this 7,000 square mile area.
- **\*Bay Area Clean Water Agencies (BACWA).** BACWA members own and operate publicly owned treatment works (POTWs) that discharge to the waters of San Francisco Bay Estuary. Together, BACWA's members serve over 6 million people in the nine-county Bay Area, treating all domestic, commercial and a significant amount of industrial wastewater.
- **\*Bay Area Stormwater Management Agencies Association (BASMAA).** The Bay Area Stormwater Management Agencies Association (BASMAA) is a consortium of the eight San Francisco Bay Area municipal storm water programs. With other participating entities BASMAA represents more than 90 agencies, including 79 cities and six counties, and the bulk of the watershed immediately surrounding San Francisco Bay. BASMAA was started in response to the National Pollutant Discharge Elimination System (NPDES) permitting program for storm water in an effort to promote regional consistency and to facilitate efficient use of public resources. The organization grew from the bottom up to focus on regional challenges and opportunities to improving the quality of storm water runoff to the San Francisco Bay and Delta.
- **Bay Area Water Supply and Conservation Agency (BAWSCA).** BAWSCA represents the interests of 26 cities and water districts and two private utilities that purchase water on a wholesale basis from the San Francisco Public Utilities Commission (SFPUC) regional water system. BAWSCA member agencies currently serve 1.7 million people residing in Alameda, Santa Clara and San Mateo counties.
- **\*California State Coastal Conservancy (CCC).** The California State Coastal Conservancy, established in 1976, is a non-regulatory state agency that employs innovative approaches to purchase, protect, restore, and enhance coastal resources, and to provide access to the shore. The Legislature created the Coastal Conservancy as a unique entity with flexible powers to serve as an intermediary among government, non-governmental organizations, citizens, and the private sector

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in recognition that creative approaches would be needed to preserve California's coast and San Francisco Bay lands for future generations. The San Francisco Bay Area Conservancy Program (Bay Program), administered by the Coastal Conservancy, was established in 1998 to address the natural resource and recreational goals of the nine-county Bay Area in a coordinated and comprehensive way.

- **Contra Costa Water District (CCWD).** CCWD was formed in 1936 to provide water for irrigation and industry. Today, CCWD acts as both a retail and wholesale water distributor and currently serves approximately 500,000 people in north, central and east Contra Costa County.
- **\*Contra Costa County Flood Control and Water Conservation District (CCCFCWCD).** CCCFCWCD manages the flood and storm waters in Contra Costa County, develops flood control plans, establishes and collects appropriate development fees, and coordinates the implementation of the plans through development review and capital improvement projects as fees accrue. The District coordinates with local, state, and federal agencies for the planning and implementing flood control projects. The District maintains and manages flood control facilities and has authority to conserve flood waters for beneficial purposes by spreading, storing, retaining and causing them to percolate into the soil for groundwater recharge. The District cooperates with other agencies to provide recreation opportunities within lands it manages where feasible.
- **East Bay Municipal Utility District (EBMUD).** Formed in 1923, EBMUD supplies high-quality water and provides wastewater treatment for approximately 1.3 million people in a 321-square-mile area covering parts of Alameda and Contra Costa counties.
- **Marin Municipal Water District (MMWD).** Formed in 1911, MMWD currently provides high quality drinking water to 185,000 people in a 147-square-mile area of Marin County.
- **\*City of Napa.** The City of Napa manages local and imported water supplies to provide safe, reliable, high quality water to 81,000 residents in and around the city limits
- **\*North Bay Watershed Association (NBWA).** The North Bay Watershed Association is a partnership of fifteen public agencies in Marin, Sonoma, and Napa counties dedicated to facilitating projects and activities across political boundaries to promote the stewardship of the San Pablo Bay watershed. Agencies participate in the NBWA to discuss issues of common interest, explore ways to work collaboratively on water resources projects of regional concern, and share information about projects, regulations, and technical issues.
- **\*The Bay Institute (TBI).** The TBI is a non-profit organization dedicated to the protection and restoration of the ecosystems of San Francisco Bay, the Sacramento-San Joaquin Delta, and the rivers, streams, and watersheds tributary to the Estuary. Since its founding in 1981, TBI has pioneered an advocacy and education approach to San Francisco Bay issues that considers not just the Bay, but the entire ecosystem related to the Bay as a single, interdependent watershed. With top-notch scientific, technical and policy staff, TBI educates the public, advocates for responsible environmental policies and improved water management. TBI was one of three environmental organizations that negotiated and signed the historic Bay-Delta Accord.
- **\*San Francisco Estuary Institute (SFEI).** SFEI was founded as a non-profit organization in 1994 to foster the development of the scientific understanding needed to protect and enhance the San Francisco Estuary. The Institute is governed by a Board of Directors composed of Bay Area scientists, environmentalists, regulators, local governments, and industries. SFEI fills the niche between environmental science and environmental management and policy for the San Francisco Estuary and its watershed. Its bylaws prohibit it from advocating management or policy solutions. Institute staff conduct science studies, synthesize data and information, and collaborate with other scientists to provide a holistic integration of information from many disciplines that supports

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management activities or demonstrates the potential implications of different management scenarios to environmental management agencies and other stakeholders.

- **\*San Francisco Estuary Project (SFEP).** SFEP is a joint federal/state/local partnership established in 1987 under the Clean Water Act's Section 320: National Estuary Program. It is a cooperative effort to promote effective management of the Bay-Delta Estuary and to restore water quality and natural resources while maintaining the region's economic vitality. The SFEP's purpose is to oversee and track the implementation of the Comprehensive Conservation and Management Plan (CCMP) for the San Francisco Estuary. The San Francisco Bay Regional Water Quality Control Board is the lead agency for carrying out the CCMP.
- **\*San Francisco Public Utilities Commission (SFPUC).** SFPUC owns and operates a regional water system that delivers water to its 28 wholesale customers (1.7 million residents of Santa Clara, Alameda and San Mateo Counties), and its retail customers (775,000 residents of San Francisco). The SFPUC also provides wastewater service and municipal power to the residents of San Francisco.
- **\*San Mateo County Flood Control District (SMCFCD).** SMCFCD is a countywide special district that was created by State legislation in order to provide a mechanism to finance flood control projects. There are currently three active flood control zones: Colma Creek, San Bruno Creek and San Francisquito Creek.
- **\*Santa Clara Basin Watershed Management Initiative (WMI).** The Santa Clara Basin Watershed Management Initiative was formed in 1996 as a collaborative effort of representatives from Santa Clara County and South Bay businesses and industrial sectors; professional and trade organizations; civic, environmental, resource conservation, and agricultural groups; regional and local public agencies; and the general public. The WMI addresses issues in water rights and water supply reliability; flood management; regulatory compliance; land use and public awareness and involvement.
- **\*Santa Clara Valley Water District (SCVWD).** SCVWD manages wholesale drinking water resources for Santa Clara County and provides stewardship for the county's vast watersheds including its reservoirs, groundwater basins and over 700 miles of streams. The District encompasses all of the county's 1,300 square miles and serves the area's 15 cities, 1.7 million residents, and more than 200,000 commuters.
- **\*Solano County Water Agency (Solano CWA).** Solano CWA provides water supply and flood control activities for the cities and irrigation districts in Solano County and parts of Yolo County. Solano CWA delivers untreated water to its wholesale customers who represent over 400,000 residents.
- **\*Sonoma County Water Agency (Sonoma CWA).** Created in 1949, Sonoma CWA is a water wholesaler that provides drinking water supplies to approximately 570,000 residents of Sonoma and Marin Counties. Sonoma CWA also provides sanitation and flood control services to the residents of Sonoma County.
- **\*Zone 7 Water Agency (Zone 7).** Zone 7 was formed in 1957 to manage the local groundwater basin, and to provide flood protection and water supplies for the Livermore-Amador Valley. Zone 7 currently provides water supplies to approximately 190,000 residents within the Cities of Dublin, Livermore, and Pleasanton and provides flood protection within the Livermore-Amador Valley, which includes the unincorporated area of East Alameda County.

The California Coastal Conservancy is submitting this proposal for the IRWMP Planning Grant on behalf of the agencies and organizations identified with an asterisk (\*) above. As indicated earlier, most of these agencies and organizations have signed the Letter of Mutual Understanding (LOMU) proposing to

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develop the Bay Area IRWMP. The LOMU, attached as *Att3\_PG\_WorkPlan\_2of9*, established the following goals for development of the Plan:

1. Facilitate regional cooperation in the following areas:
  - Water Supply Reliability
  - Water Recycling
  - Desalination
  - Water Conservation
  - Water Quality Improvements
  - Storm Water Capture and Management
  - Flood Management
  - Recreation and Access
  - Wetlands Enhancement and Creation
  - Environmental Habitat Protection and Improvement
2. Foster coordination, collaboration and communication amongst participating agencies to achieve greater efficiencies, enhance public services, and build public support for vital plans and projects.

The IRWMP will be developed by participating agencies and associations responsible for management of water and natural resources in the nine counties comprising the San Francisco Bay Area. In order to qualify for implementation grants provided for in Proposition 50, Chapter 8, the IRWMP will be completed and adopted by the appropriate agencies by January 1, 2007.

The Coastal Conservancy is the agency that would contract with the state should a planning grant be awarded. Attached to the proposal as *Att1\_PG\_AuthDoc\_1of1* is the *Authorizing Documentation*. Also attached as *Att2\_PG\_EligDoc\_1of1*, is the *Eligible Applicant Documentation*. The Coastal Conservancy with other participating agencies will enter into an agreement setting forth terms which shall ensure performance of the Work Plan and tracking of funds as required by state guidelines.

## **1.2 Description of the San Francisco Bay Area Region**

The proposed IRWMP will cover the San Francisco Bay Region, which includes the following nine counties: Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, Marin, Napa, Solano and Sonoma counties (see **Figure 1**). The geographic extent of this region is the San Francisco Bay Area watershed which falls under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (Region 2). A geographic file depicting the region (NAD 27 UTM 10 shape file) is attached to this proposal as *Att3\_PG\_WorkPlan\_3of9*, but because of its size it has been submitted on a CD. The CD is labeled as follows:

California State Coastal Conservancy  
Integrated Regional Water Management Planning Grant - Proposition 50, Chapter 8  
San Francisco Bay Area Integrated Regional Water Management Plan  
Watershed Management and Flood Protection Work Plan  
PIN # 5038  
*Att3\_PG\_WorkPlan\_3of9* (digital geographic file of the San Francisco Bay Area in NAD27 UTM10)

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**Figure 1 – Counties of the San Francisco Bay Area**



**Population/Demographics.** With over 6.5 million people, the Bay Area is the fifth largest metropolitan area in the United States. The region is home to a diverse population which includes Caucasians (58%), Asians (19%), Hispanics (19%), African Americans (8%) and Pacific Islanders, American Indians and individuals of mixed ethnicities.<sup>1</sup>

**Economy.** With an economy of almost \$300 billion, the Bay Area ranks as the 24<sup>th</sup> largest economy in the world. On a per capita basis, it ranks ahead of all national economies, including the United States. The region is at the cutting edge of global technology and is a leader in many key indicators of regional, national and global competitiveness.<sup>2</sup> Water supply reliability and water quality are key economic issues, especially during droughts when deliveries may be reduced to homes and businesses.

### **Land Use**

Portions of the region are highly urbanized and include the San Francisco, Oakland, and San Jose metropolitan areas. Agricultural acreage occurs mostly in the north and northeast in Napa, Marin, Sonoma, and Solano counties. Santa Clara, Alameda and Contra Costa counties also have significant agricultural acreage at the edge of the urban development. The predominant crops are grapes along with fruit and nut trees, hay production, and dairy and livestock operations. In the area along the ocean coastline south of the Golden Gate, more than half of the irrigated acres are in high-value specialty crops, such as artichokes, strawberries or flowers.

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<sup>1</sup> 2000 U.S. Census.

<sup>2</sup> Bay Area Economic Forum: [www.bayeconfor.org/baefregion.html](http://www.bayeconfor.org/baefregion.html)

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The Bay Region boasts significant Pacific Coast marshes such as Pescadero and Tomales Bay marshes as well as San Francisco Bay itself. San Francisco Bay is an estuary with a deep central channel, broad mudflats and fringing marsh. The Bay is commonly divided into the South, Central, and North Bay. The North Bay is more brackish while the South and Central bays are more marine dominated. Suisun Marsh in between the North Bay and the Delta is the largest contiguous brackish water marsh remaining on the west coast of North America, providing more than 10% of California's remaining wetlands.

The combined flows of the Sacramento and San Joaquin watersheds flow through the Delta and into the Bay. Delta outflow interacts with tides to determine how far salt water intrudes from the ocean into the San Francisco Bay Estuary. The resulting salinity gradients influence the distribution of many estuarine fishes and invertebrates as well as plants, birds, and animals in wetlands areas. Delta outflow varies with hydrology, reservoir releases, and diversions upstream.

**Figure 2** shows existing land use in the year 2000 in the San Francisco Bay Area. **Figure 3** indicates Bay Area land-use patterns. **Figure 4** shows urban land use in acres. **Figure 5** shows non-urban land use in acres.

Figure 2 – Existing Land Uses

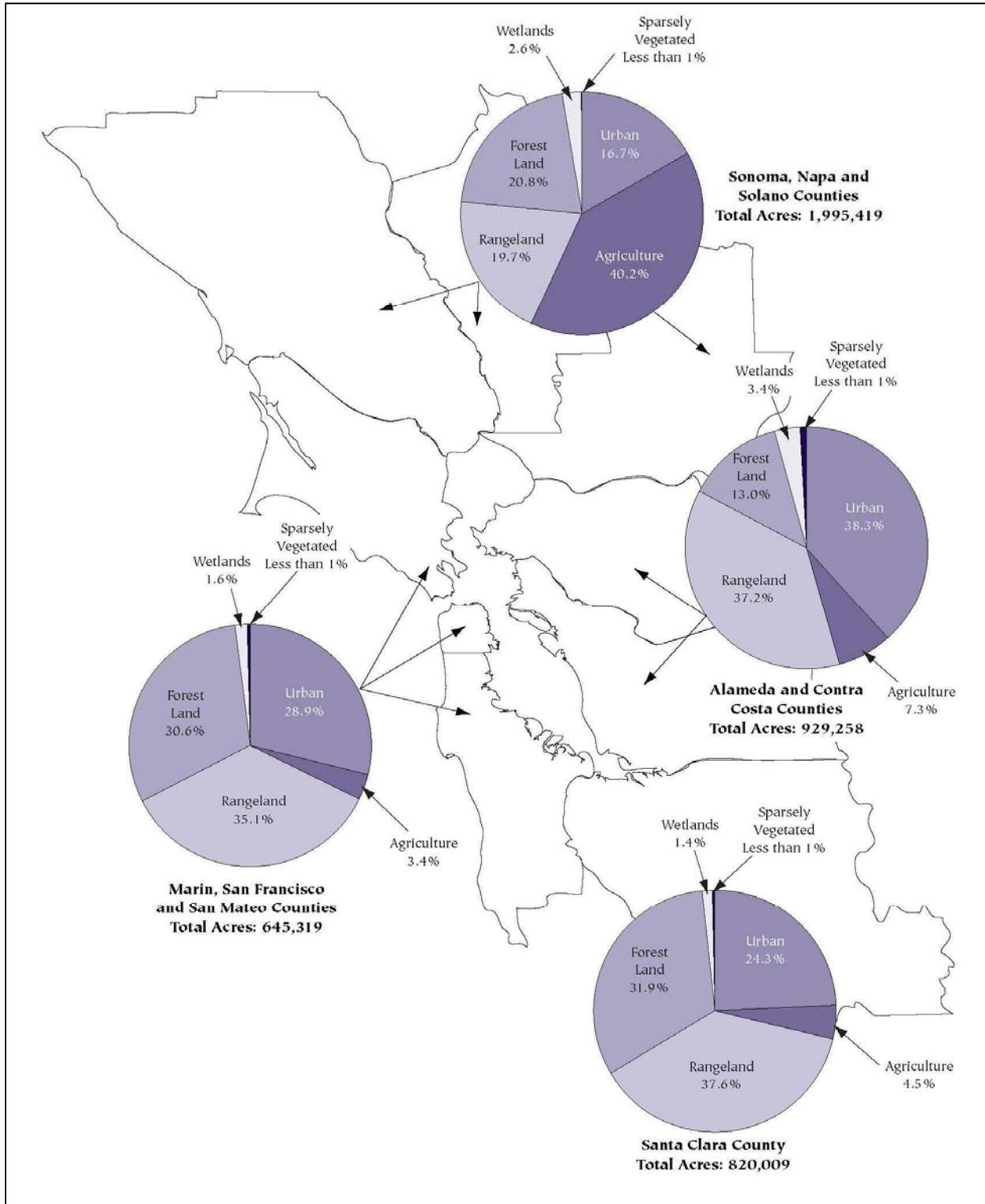


## Existing Land Use in 2000

Source: ABAG, December 2002

**ABAG**  
 Association of Bay Area Governments

**Figure 3 – Bay Area Land-Use Patterns**



**Figure 4 – Urban Land Use in Acres**

JURISDICTION: 9-County Bay Area NOTE: Mix Net/Gross Acres		TOTAL LAND (in acres): 4,390,005 2000 URBAN LAND (in acres): 1,075,200 NON-URBAN LAND (in acres): 3,314,805	
URBAN LAND IN 2000			
	ACRES		ACRES
TOTAL RESIDENTIAL LAND		TOTAL COMMERCIAL/SERVICES	
[excluding mixed use]:	578,553	[excluding mixed use]:	100,477
1 unit/1-5 acre lot (Rural Residential)	203,474	Subtotal-Commercial:	60,299
1-3 units/acre (Not Mobile Home Parks)	61,309	Retail/Wholesale	30,182
3-8 units/acre (Not Mobile Home Parks)	263,556	Research/Office	10,371
>8 units/acre Multifamily, Group Quarters	45,637	Comm. Outdoor Recreation	1,906
Mobile Home Parks	4,576	Other, Mixture or Unknown	17,840
		Subtotal-Education:	27,294
TOTAL MIXED RESIDENTIAL/		Educational Offices and Day Care	3,686
COMMERCIAL:	2,370	Elementary/Secondary	14,696
Within a Land Area	115	Colleges/Universities	8,628
Within a Building	185	Stadium Facilities	115
Mixture of Above or Unknown	2,070	University Housing	169
TOTAL MIXED COMMERCIAL/		Subtotal-Hospitals and	
INDUSTRIAL:	12,419	Health Care Facilities:	4,460
		Trauma Center Hospitals	363
TOTAL INDUSTRIAL [excluding mixed]:	66,885	Community or Local Hospitals	1,106
Light Industrial	27,007	Surgery Centers	7
Heavy Industrial	15,950	State Prisons	732
Salvage/Recycling, Mixture or Unknown	13,156	State Mental Health Facilities	1,854
Food Processing, Warehousing	10,772	Clinics and Long-Term Care	397
		Subtotal-Public Institutions:	8,424
TOTAL MAJOR INFRASTRUCTURE:	139,689	Convention Centers	131
Roads, Highway and Related Facilities	119,142	Sports Stadiums	282
Rail Stations, Yards and Related Facilities	2,293	Churches/Synagogues/Other	2,102
Airports	12,319	City Halls/County Administration	3,356
Ports	2,382	Local Jails	561
Power Facilities	549	Local Police/Fire/Emergency	71
Municipal Wastewater Facilities	1,167	Other-Comm. Centers/Libraries	1,922
Municipal Water Supply Facilities	703		
Communication Facilities	110	TOTAL URBAN OPEN:	145,039
Other, Unknown	1,024	Subtotal-Extensive Outdoor	
		Recreation:	27,061
TOTAL MILITARY:	29,770	Golf Courses	17,238
Military Residential	331	Racetracks	436
Military Hospital	862	Campgrounds and Other	9,387
Military Communications	1,641	Cemeteries:	3,667
Military Airport or Port	2,775	Vacant:	44,941
General Military	11,689	Vacant--Cleared for Redevelopment:	12,112
Open Military Lands	6,129	Vacant--Undeveloped:	47,207
Closed Military Facilities	7,984	Mixed Urban Open, Including Parks:	10,052
Source: Association of Bay Area Governments December 2002			

**Figure 5 – Non-Urban Land Use in Acres**

JURISDICTION: 9-County Bay Area NOTE: Mix Net/Gross Acres		TOTAL LAND (in acres): 4,390,005 2000 URBAN LAND (in acres): 1,075,200 NON-URBAN LAND (in acres): 3,314,805	
NON-URBAN LAND IN 2000			
	ACRES	ACRES	
TOTAL AGRICULTURE:	927,504	TOTAL FOREST LAND:	994,417
Cropland and Pasture	707,106	Deciduous	144,916
Orchards/Groves/Vineyards	213,941	Evergreen	429,795
Greenhouses	152	Mixed Forest	419,706
Confined Feeding	1,343		
Farmsteads and Inactive	4,961	TOTAL SPARSELY VEGETATED:	14,822
		Beaches	1,615
TOTAL RANGELAND:	1,273,425	Other Sand	98
Herbaceous Range	914,583	Bare Rock	1,351
Shrub and Brush	333,212	Mines/Quarries	6,400
Mixed Range	25,630	Transitional--Landfills	53
		Transitional--Other	432
TOTAL WETLANDS [Based on		Transitional--Mixture	1,488
U.S. Geological Survey Mapping]:	104,637	Mixed Sparsely Vegetated	3,387
Forested	7,036		
Non-Forested	58,239		
Salt Evaporators	38,612		
Unknown	750		
Source: Association of Bay Area Governments December 2002			

**Environmental Resources.** The Bay Area is part of the San Francisco Bay/Sacramento-San Joaquin Delta system, the largest estuary on the west coast of North and South America. The system’s freshwater streams, tidelands, marshlands, and rivers represent an environmentally sensitive ecosystem that supports over 750 plant and animal species. In addition, the system provides an important wintering site for migratory waterfowl and a spawning area for anadromous fish.

The Bay Area is currently home to 18 species that have been designated by state and federal agencies as threatened or endangered. These species include, but are not limited to Steelhead (*Oncorhynchus mykiss*); California red legged frog (*Rana aurora draytonii*); California tiger salamander (*Ambystoma californiense*); Salt marsh harvest mouse (*Reithrodontomys raviventris*); and the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*).<sup>3</sup>

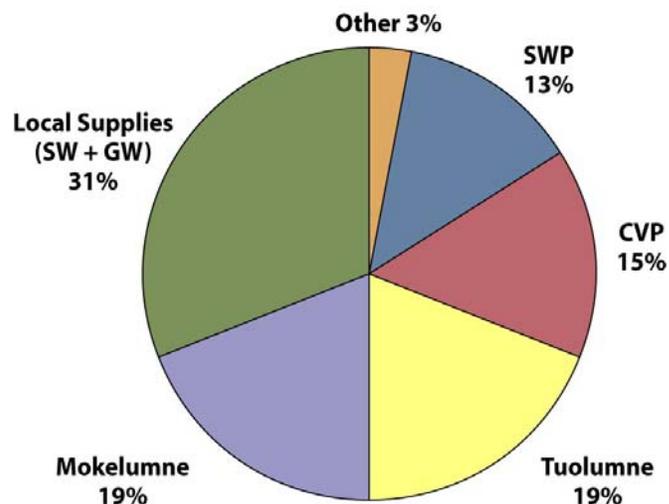
**Water Supplies.** As shown in **Figure 6**, the Bay Area water agencies manage a diverse portfolio of water supplies including:

- Local Supplies: Groundwater, Surface water
- Sierra Nevada Supplies: Tuolumne, Mokelumne
- Delta Supplies: State Water Project (SWP), Central Valley Project (CVP), other
- Other: Desalination, Recycled Water, Water Transfers

These supplies currently serve a municipal and industrial (M&I) demand of over 1.2 million acre-feet per year (AF/yr) for the Region. **Figure 7** shows the major water-related infrastructure for the Region.

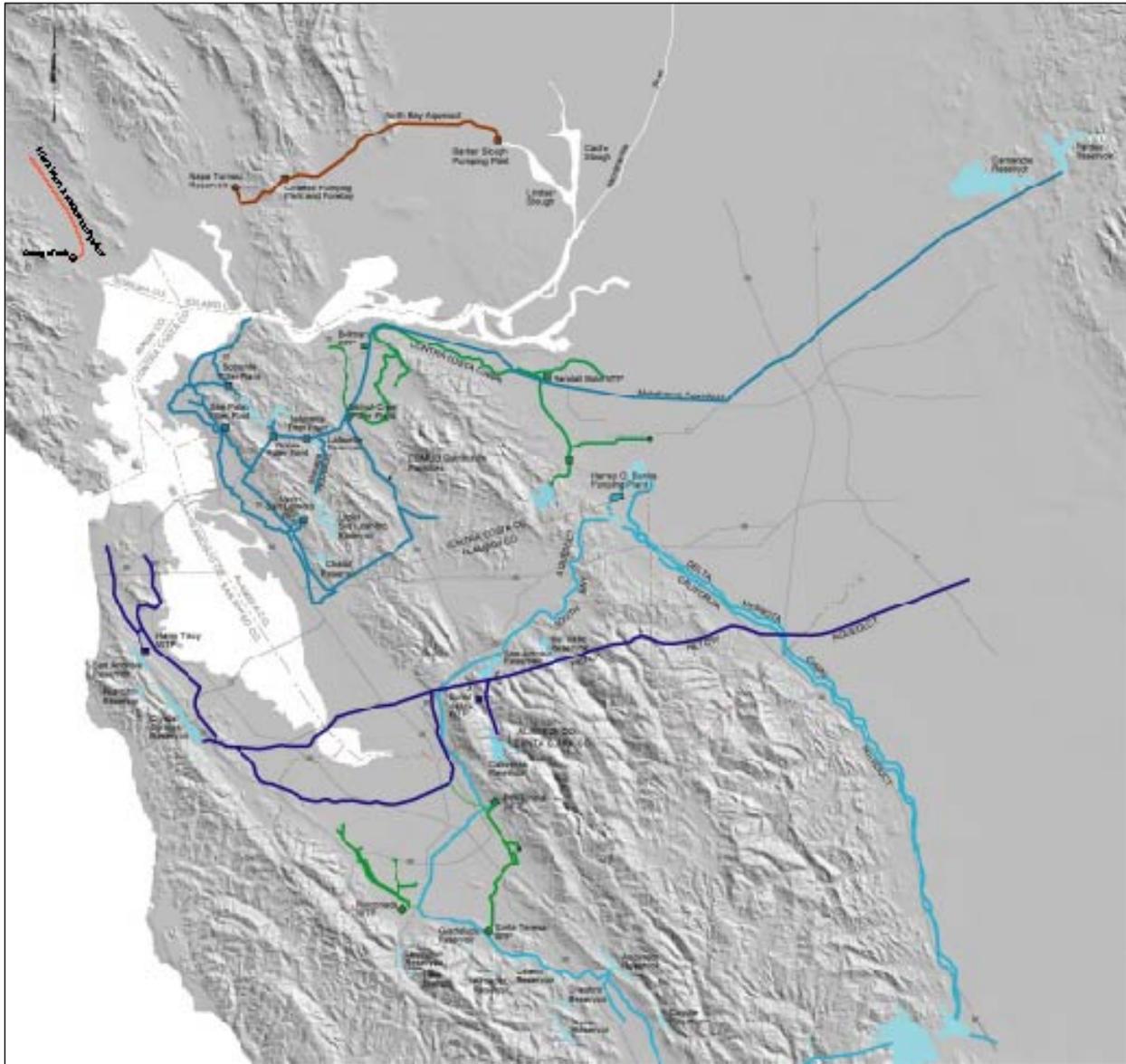
The Bay Area’s existing water supplies are sufficient to meet current demands under normal hydrologic conditions. However, if the Bay Area experiences another drought similar to the critically dry year of 1977 or the multi-year drought period of 1987-1992, existing water supplies will not be able to meet the needs of the Region.

**Figure 6 – Bay Area Water Use by Supply Source**



<sup>3</sup> Source: CA Dept. of Fish & Game, Habitat Conservation Planning Branch

**Figure 7 – Major Water Related Infrastructure**



**Drinking Water Quality.** The quality of supplies used in the Bay Area varies by source. Supplies from the Sierra Nevada typically have the highest water quality with fewer salts and dissolved solids than Delta and local supplies. All treated water supplies delivered by Bay Area agencies are safe to drink and meet or exceed state and federal water quality standards.

**Receiving Water Quality.** Under Section 303(d) of the federal Clean Water Act, the San Francisco Bay Region (Region 2) has approximately 79 waterbodies impaired by pollutants such as diazinon, mercury, sediment, pathogens, exotic species, and others. The San Francisco Bay is itself listed as being impaired by several pollutants including chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PAHs, PCBs, and selenium.

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The San Francisco Bay RWQCB is currently working on the following Total Maximum Daily Loads (TMDLs) projects to identify the sources of pollutants and specify actions to reverse pollution trends:

- Napa River – Pathogens, Nutrients, Sediment
- San Francisco Bay – Copper, Exotic Species, Mercury, Nickel, PCBs
- San Francisco Bay Area Urban Creeks – Diazinon
- San Francisquito Creek – Sediment
- Sonoma Creek – Pathogens, Nutrients, Sediment
- Tomales Bay – Pathogens
- Walker Creek – Mercury

**Benefits of Integrated Planning.** The agencies and organizations participating in the development of the IRWMP for the Bay Area recognize that effective water resources management is a crucial underpinning to the Bay Area’s prosperity and continued leadership in economic development and environmental protection. Development of an IRWMP for the region offers the following advantages over individual local planning efforts:

- ✓ Fosters coordination, collaboration and communication between agencies.
- ✓ Avoids conflicts and duplication of efforts.
- ✓ Achieves greater efficiencies.
- ✓ Enhances public/stakeholder support.
- ✓ Enables identification of interdisciplinary synergies among water management strategies and stakeholders across the region.
- ✓ Maximizes benefits for the region.
- ✓ Maximizes communication by creating an interactive and expandable web-based data system describing projects, plans, polices and potential partners that can be useful for many local agencies.
- ✓ Creates a catalogue of “tools” (e.g. projection methodologies, best management practices, model plans and polices, etc.) that local agencies can use and adapt to meet their own needs.
- ✓ Enhances future funding and partnering opportunities for all agencies in the region.
- ✓ Maximizes opportunities for achieving multiple benefits for individual projects and programs, as well as benefits to the region.

### **1.3 Approach to Development of the IRWMP**

Given the large geographic scope of the Bay Area region (nine counties serving over 6.5 million people) and the wide range of water management strategies being implemented, the LOMU signed by the regional water management group outlined the following approach for development of an IRWMP for the Bay Area:

**1. Prepare Regional Documents by Functional Area.** This step involves compiling information from existing management plans into a regional document for each of the following functional areas:

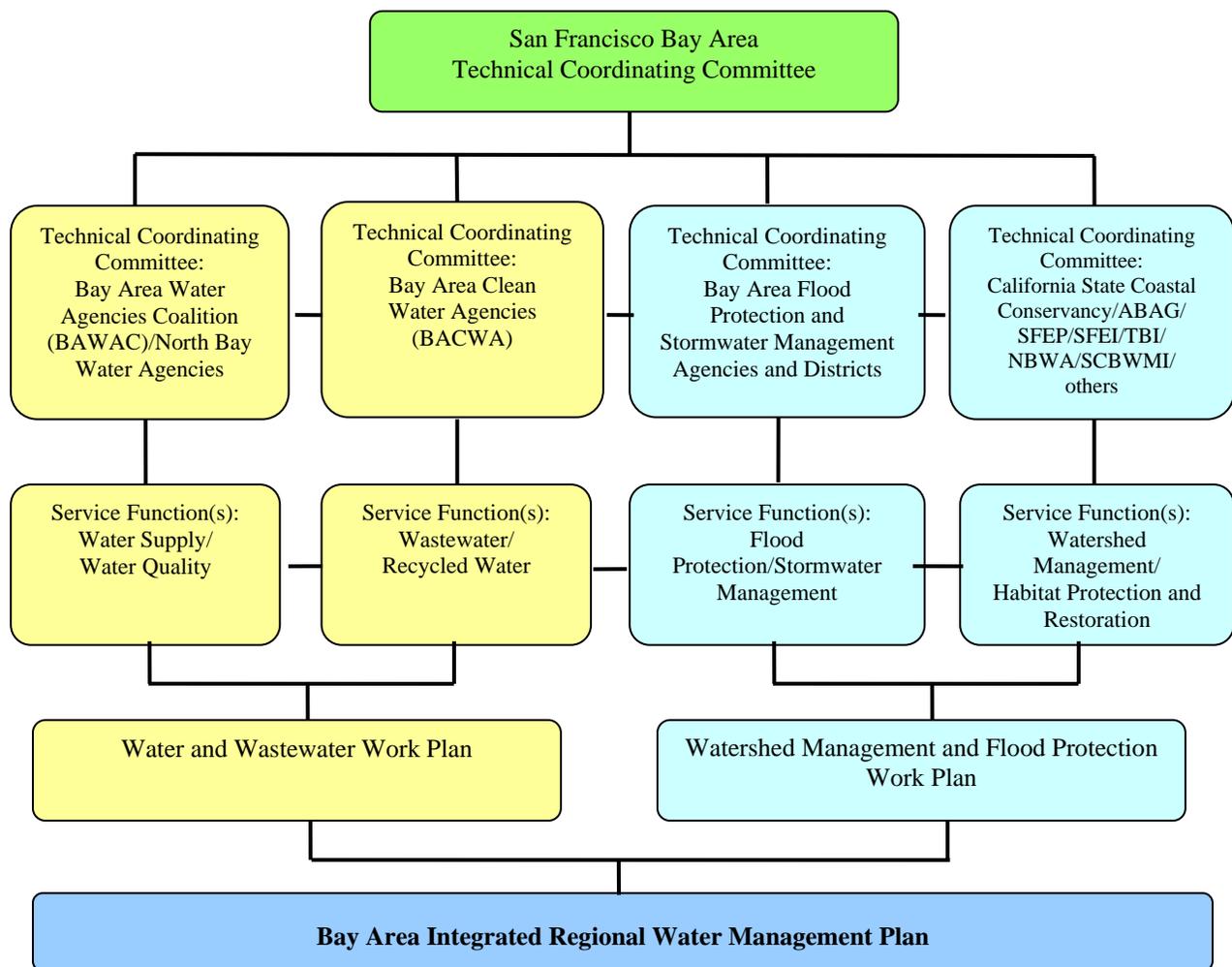
- Water Supply and Water Quality (WS-WQ)
- Wastewater and Recycled Water (WW-RW)
- Flood Protection and Storm Water Management (FP-SM)
- Watershed Management and Habitat Protection and Restoration (WM-HPR)

The purpose of these four documents is to (1) identify specific needs and challenges relating to the specific functional area; (2) describe water management strategies and approaches to address these needs; and (3) develop a list of strategies and potential implementation projects that would maximize benefits and enhance opportunities for regional cooperation within a given functional area.

2. **Integrate Functional Area Documents into an IRWMP for the Bay Area.** This step involves integrating the four functional areas documents into an IRWMP for the Bay Area under the direction and guidance of the Bay Area Technical Coordinating Committee (TCC) comprised of representatives from each of the four functional areas. The Bay Area TCC will work with stakeholders to identify where potential linkages between functional areas occur and where they may further interrelate to develop truly multi-purpose regional projects (e.g., opportunities for combining wastewater treatment projects with water recycling needs or stormwater management projects with habitat restoration needs).

**Figure 8** displays how the work under each of these functional areas would be led by various regional groups. It also shows how the functional areas in each of the work plans would be integrated, and then the integration of the two work plans into the creation of the Bay Area IRWMP.

**Figure 8 – Approach to Development of the IRWMP**



Please see Subtask 1.1, *Project Management Team Communication and Coordination*, in Work Items below for a more detailed description of how the IRWMP is being developed under the project management leadership of the four functional area TCCs and the Bay Area TCC.

#### 1.4 Status of Current IRWMP Efforts

Work on the functional areas has begun and is in varying states of completion due to differences in availability of funds, staff, and other resources. A schedule depicting progress made to date and plans for completion of these documents is shown in **Figure 9**.

**Figure 9 – Functional Area Documents Schedule**

Functional Area Document	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	J	F	M	A	M	J	J	A	S	O	N	D
WS-WQ												
WW-RW												
FP-SM												
WM-HP&R												

#### Water Supply and Water Quality Functional Area Document

Bay Area Water Agencies Coalition (BAWAC) member agencies (ACWD, BAWSCA, CCWD, EBMUD, SFPUC, SCVWD, and Zone 7) and North Bay water agencies (MMWD, City of Napa, Sonoma CWA, and Solano CWA) have recently completed the WS-WQ Functional Area Document. It is anticipated that this document will need to be updated to reflect additional information made available as part of the 2005 Urban Water Management Plans and to include the most up-to-date list of projects identified to address water supply and water quality related issues. The scope of this effort is described further in Subtask 2.1 of the Work Items. If awarded, completion of this work would be funded in part from monies received through a Proposition 50, Chapter 8, planning grant submitted by the water and wastewater agencies.

#### Wastewater and Recycled Water Functional Area Document

BACWA is leading the effort to prepare the WW-RW Functional Area Document. Work on this document is anticipated to be completed by December 2005. In 1999, a major regional recycling report was published, entitled Bay Area Regional Water Recycling Program. Additional work planned consists of addressing regional wastewater issues such as TMDLs through the Clean Estuary Partnership (BACWA, BASMAA and SFRWQCB), regional biosolids planning and pollution prevention as well as filling missing data gaps in existing recycling reports. The effort is described further in Subtask 2.2 of the Work Items. If awarded, completion of this work also would be funded in part from monies received through a Proposition 50, Chapter 8, planning grant submitted by the water and wastewater agencies.

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## Flood Protection and Stormwater Management Functional Area Document

Six Bay Area flood protection and stormwater management agencies are taking the lead in preparing this document. The agencies are Alameda County Public Works Agency, Contra Costa Public Works Department, Santa Clara Valley Water District, San Mateo County Flood Control District, Sonoma County Water Agency, Zone 7 Water Agency. The goal of the document is to identify and address the major flood protection and stormwater management objectives and conflicts for the watersheds in the region. The work will include identifying opportunities and efficiencies possible by working collaboratively within the region towards multi-benefit, multi-beneficiary management of resources. Most of the participating agencies already have completed a template to help in this effort. It is attached as *Att3\_PG\_WorkPlan\_4of9*. The scope of work for Morrison & Associates, Inc., for completion of this functional area document also is attached as *Att3\_PG\_WorkPlan\_5of9*. It is anticipated that much of the work will be completed by September 2005. Additional work beyond the existing scope will be required, however, to fill in missing data gaps and to include some flood protection agencies not now participating in the effort because of cost constraints. This effort is described further as part of Subtask 2.3 of the Work Items. If awarded, completion of this work would be funded in part from monies received through a Proposition 50, Chapter 8, planning grant submitted by the watershed management, flood protection and stormwater management agencies and organizations.

## Watershed Management and Habitat Protection and Restoration Functional Area Document

The Watershed Management/Habitat Protection and Restoration (WM-HPR) Functional Area Document is being developed under the leadership and principal funding of the California State Coastal Conservancy, its consultants (Jones & Stokes Associates, San Francisco Estuary Institute, MIG, and Association of Bay Area Governments/San Francisco Estuary Project), and a Technical Coordinating Committee (including representatives from the Regional Water Quality Control Board, San Francisco Bay Region; California Bay Delta Authority; San Francisco Bay Conservation & Development Commission; The Bay Institute; Bay Area Open Space Council; San Francisco Public Utilities Commission; Santa Clara Valley Water District; Sonoma County Water Agency; Sonoma Ecology Center; Clean South Bay; and others). The objectives of the Watershed Management/Habitat Protection and Restoration (WM-HPR) component are multi faceted, and include: compiling existing data into a geographic information system (GIS) and web database; developing scientifically valid goals to prioritize water quality, species recovery, and habitat protection/restoration objectives; describing and inventorying existing plans, projects, and conditions; and evaluating/prioritizing potential restoration projects. A work plan for Jones & Stokes is attached as *Att3\_PG\_WorkPlan\_6of9*. A scope of work for the Association of Bay Area Governments (ABAG) is attached as *Att3\_PG\_WorkPlan\_7of9*. It is anticipated that most of this work will be completed by December 2005. Additional work beyond the existing scope is described in Subtask 2.4 of the Work Items.

### 1.5 Planning Objectives

Objectives relating to major water related issues and conflicts within the region are first being developed for each functional area based on input from the water agencies, wastewater agencies, flood control districts and watershed groups. **Table 1** lists the planning objectives established thus far for the *Watershed and Flood Protection* functional areas to address the needs of the region. These objectives will be further refined with input from project stakeholders as the four functional area documents are integrated into the overall IRWMP. (Please Subtask 3.1.3 in the Work Items for more detail.)

**Table 1 – Draft IRWMP Objectives** (*addresses only the objectives in the Watershed Management and Flood Protection Work Plan*)

Objective	Sub-objective
<b>WATERSHED MANAGEMENT AND HABITAT RESTORATION AND PROTECTION</b>	
<p><b>Protect and restore ecosystems and habitat</b></p> <p><b>and</b></p> <p><b>Improve watershed management</b></p>	<ul style="list-style-type: none"> <li>• Provide a regional mechanism to coordinate and augment on-going implementation of programs and projects to protect, restore, and enhance habitat for fish and wildlife.</li> <li>• Establish the framework for protection and restoration of habitat directly associated with water resources; including streams, wetlands, and other bodies of water within the watersheds and subregions.</li> <li>• Assemble existing relevant data and information regarding ecological processes and environmental resources within the watersheds and subregions.</li> <li>• Identify data gaps in the available body of knowledge.</li> <li>• Develop a list of current and potential future habitat protection/restoration and watershed management projects. Define criteria and mechanisms for prioritizing projects within the watersheds and subregions.</li> </ul>
<b>FLOOD PROTECTION AND STORMWATER MANAGEMENT</b>	
<b>Maximize Protection of Life and Property</b>	<ul style="list-style-type: none"> <li>• Plan and implement flood control improvement projects to manage flood flows from large storm events (i.e. 100-year storms) and resolve or avoid flooding problems.</li> <li>• Assure private and public projects collect and convey stormwater safely and to established standards.</li> <li>• Adhere to and update design standards</li> <li>• Monitor and maintain existing facilities to design capacities.</li> <li>• Develop long term funding solutions for increasing maintenance costs.</li> <li>• Cooperate, participate and promote involvement with local, state, and federal agencies with public health, safety and security objectives (e.g. vector control, emergency planning and response).</li> </ul>
<b>Maximize Habitat Protection Consistent with Flood Protection Objectives</b>	<ul style="list-style-type: none"> <li>• Enhance and maintain aquatic and riparian habitat associated with streams and wetlands.</li> <li>• Maximize watershed stewardship.</li> <li>• Promote stream restoration to maintain or enhance natural functions and hydrologic capacity</li> <li>• Collaborate with local communities and interest groups to implement these efforts.</li> <li>• Maximize, promote, and sustain native species.</li> <li>• Maximize invasive species removal.</li> </ul>

Objective	Sub-objective
<b>Minimize Non-Point Source Pollution</b>	<ul style="list-style-type: none"> <li>• Maximize public outreach and education.</li> <li>• Maximize use of best management practices.</li> <li>• Maximize monitoring programs.</li> </ul>
<b>Maximize Erosion and Sedimentation Control</b>	<ul style="list-style-type: none"> <li>• Maximize erosion and sediment control strategies and maintenance activities</li> <li>• Maximize hydromodification management.</li> </ul>
<b>Maximize Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Improve and enhance surface water quality.</li> <li>• Maximize public outreach and education of best management practices.</li> <li>• Maximize monitoring programs.</li> </ul>

## 1.6 Integration of Water Management Strategies

Specific water management and related strategies are being developed first at each functional area level based on input from the water agencies, wastewater agencies, flood control districts, stormwater agencies and watershed interests. As noted in Section 1.4, the four functional area documents are at varying stages of completion and therefore a comprehensive list of water management strategies is not yet complete. However, the following is a list of preliminary water management strategies to be considered in the overall IRWMP. This list will be further refined as the functional area documents are integrated into an overall IRWMP. (Please see Subtask 3.1.4 in the Work Items for more detail.)

- Ecosystem Restoration
- Environmental Habitat Protection and Improvement
- Flood Management
- Groundwater Management
- Recreation and Public Access
- Stormwater Capture and Management
- Water Conservation
- Water Recycling
- Wetlands Enhancement and Creation
- Conjunctive Use
- Desalination
- Imported Water
- Land Use Planning
- Non-Point Source Pollution Control
- Surface Storage
- Watershed Planning
- Water and Wastewater Treatment
- Water Transfers
- Groundwater Banking

This preliminary list incorporates the water management strategies included in Table A-1 of the IRMWP Guidelines as well as additional water management strategies currently being implemented in the Bay Area. These strategies work together to achieve established water management objectives relating to the four functional areas: (1) *Water Supply and Water Quality*; (2) *Wastewater and Recycled Water*; (3) *Flood Protection and Stormwater Management*; and (4) *Watershed Management and Habitat Protection and Restoration*.

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## **1.7 Plan Implementation**

At this time most implementation efforts are expected to be handled at the agency or multi-agency level. A new regional entity responsible for all implementation efforts is not expected. The process for implementing the Bay Area IRMWP will be discussed further during development of the IRWMP. The logistics relating to Plan implementation will be developed following integration of the four functional area documents into an overall IRWMP for the Bay Area. The process for identifying, integrating and prioritizing the IRWMP projects is further described in Subtasks 3.1.5, 3.1.6 and 3.1.7 of the Work Items.

## **1.8 Impacts and Benefits**

Many of the existing plans that will be the basis for the Bay Area IRWMP include extensive reviews of impacts and benefits. The overall IRWMP will build on this and add more detail during integration of the four functional documents into an overall IRMWP for the Bay Area. The process for determining impacts and benefits of plan development and implementation is described further in Subtask 3.1.8 of the Work Items.

## **1.9 Data and Technical Analysis**

The attachments to this and the other proposal that reflect the work in each functional area provide a comprehensive summary of the types and amount of data available to support development of the plan. The data included in these documents are based, or will be based, on individual planning documents and studies provided by each participating agency and organization including but not limited to:

- Urban Water Management Plans
- Integrated Water Resources Plans
- Groundwater Management Plans
- Watershed Management Plans
- Habitat Conservation Plans
- Stormwater Management Plans
- Flood Management Plans
- Water Quality Plans
- Capital Improvement Plans
- Integrated Resource Plans of agencies
- Bay Area Regional Water Recycling Program (BARWRP)
- CALFED regional studies

As stated in Section 1.4, some additional work will be required to complete the functional area documents and fill data gaps. These efforts are described further in Section 2, *Work Items*. Further, additional data needs and monitoring needs will be identified once the four functional area documents are integrated into the overall IRWMP for the Bay Area. The process for identifying such data gaps is described in Subtask 3.1.9 of the Work Items.

## **1.10 Data Management**

The data used in development of the plan will be disseminated to stakeholders, agencies and the public. All collected reports and references will be compiled into a data library to be made available for state-

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wide data integration efforts. Additional information relating to the data management efforts is included in Subtask 3.1.10 of the Work Items.

### **1.11 Stakeholder Involvement**

Stakeholder identification and involvement is an important part of developing the Bay Area IRWMP. As discussed in the LOMU, a preliminary list of project stakeholders includes environmental groups, regulatory agencies, and the California Bay-Delta Authority. A more comprehensive list of stakeholders will be identified as part of Section 1.3 of the Work Items. General outreach to targeted stakeholders will be ongoing throughout the development of the Bay Area IRWMP. Bay Area TCC and other meetings will be conducted in an open forum where interested parties can participate. In addition, specific workshops will be conducted at critical decision points during the development of the IRWMP to obtain input and feedback from key stakeholders (see Subtasks 3.1.3, 3.1.5, 3.1.7 and 3.2). The stakeholder involvement process will be documented as part of Subtask 3.1.14 of the Work Items. In addition, many of the plans referenced in Section 1.9 already have had extensive stakeholder involvement processes as they were developed and approved.

There are several potential forums that may be used for stakeholder involvement and other public outreach efforts. One is the Task Force/Bay Area Water Forum, an outgrowth of the ABAG-CALFED Task Force that includes representatives of Bay Area cities, counties, water agencies, environmental groups and other organizations.

### **1.12 Disadvantaged Communities**

Although some neighborhoods may rightly be classified as disadvantaged, there are no disadvantaged communities *per se* in the Bay Area that meet the criteria in the Guidelines. Accordingly, this proposal is not seeking any waiver or reduction in funding match for disadvantaged communities. That being said, those from disadvantaged areas will be encouraged to participate in the planning process to provide input on how to improve water supply and water quality. As pointed out below in Subtask 3.1.14, *Stakeholder Involvement*, funds will be set aside to address *environmental justice* issues and ensure inclusion of disadvantage persons of color, people speaking languages other than English, and others living in low-income areas during the early stages of the IRWMP planning process.

### **1.13 Relation to Local Planning**

As discussed in the LOMU, Bay Area water supply agencies periodically update their water supply plans to address changes in land-use or population projections within the areas they serve in order to develop refined water demand projections. When updating the water supply plans, the water agencies consult with local land-use agencies and rely on approved local land-use plans (e.g., general plans) within their jurisdiction. In addition, ABAG (a regional land-use planning entity) is a signatory to the LOMU and will be involved in the development of the IRWMP. The process for coordinating with local and regional land-use planning entities in developing the Bay Area IRWMP will be documented as part of Subtask 3.1.13 of the Work Items.

### **1.14 Agency Coordination**

As discussed in the LOMU, it is anticipated that project participants will include local agencies, regulatory agencies and state/federal agencies. Staff from regulatory agencies such as the San Francisco Bay Regional Water Quality Control Board (RWCQB), DHS, U.S. EPA and staff from the California

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Bay-Delta Authority (Authority) will be invited to participate in Bay Area TCC and various other meetings and project workshops throughout the development of the IRWMP to provide advice and direction as appropriate and to serve as a link between the Bay Area and other state and federal efforts. If representatives from these agencies are not able to participate, the Bay Area TCC will keep them advised of project progress and seek guidance as needed.

Coordination with local-land use decision-makers will also be incorporated in the development of the IRWMP. This will be facilitated in part by the participation of ABAG in the development of Bay Area IRWMP.

## 2 Work Items

The following work items, or scope of work, outline the process by which those involved in *Watershed Management and Habitat Protection and Restoration* and *Flood Protection and Stormwater Management* efforts will develop their functional area plans and then work with the Water Supply and Water Quality and Wastewater and Recycled Water functional areas to develop an IRWMP for the Bay Area.

After each subtask heading in parenthesis is a brief explanation to help the reader know if the work is similar in both work plans, mainly addressed in the Water and Wastewater Work Plan, or primarily focuses on this Watershed Management and Flood Protection Work Plan.

### Task 1 – Project Coordination

This subtask involves general communication and coordination with the entire project management team and other project participants regarding the direction, approach, status and preparation of the Bay Area IRWMP. As part of this subtask, a kickoff meeting will be held of the Bay Area TCC and other project stakeholders to discuss the scope, schedule, approach and cost of the Bay Area IRWMP effort. The Bay Area TCC and other project stakeholders will be kept apprised of the status of the project through regular monthly meetings. In addition, monthly status updates will be developed to outline progress completed to date and outstanding action items. These monthly updates will be combined into quarterly reports and distributed electronically.

**1.1 Project Management Team Communication and Coordination** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves project management and general communication and coordination with project participants regarding the direction, approach, work product completion, schedule and overall status of the Bay Area IRWMP.

The Letter of Mutual Understandings (LOMU) establishes for each of the four functional areas a leadership entity called a technical coordinating committee (TCC). The LOMU further establishes the Bay Area Technical Coordinating Committee which is comprised of two or three representatives from each of these TCCs. The Bay Area TCC oversees and gives direction to the development of the overall Bay Area IRWMP.

Up to now the functional area TCCs and the Bay Area TCC have been operating rather informally. The Bay Area TCC will consider a more formal structure, such as outlined in the LOMU, in order to better facilitate the efforts outlined in the two work plans, ensure proper management of the grants, and meet

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project deadlines. Such formality would not be intended to limit participation in the IRWMP process. There would still be significant opportunity for any stakeholder or other interested party to give input to the functional area TCCs or Bay Area TCC through workshops, other meetings and various forms of communications.

A kickoff meeting of the Bay Area TCC Project Management Team and other project stakeholders will be held to discuss the scope, schedule and approach of the Bay Area IRWMP effort. The Bay Area TCC and other project stakeholders will be kept apprised of the status of the project through regular monthly meetings. In addition, monthly status updates will be developed to outline progress completed to date and outstanding action items. These monthly updates will be combined into quarterly reports and distributed electronically to anyone who desires to receive them.

**Subtask 1.1 Deliverables:**

1. Bay Area TCC Project Management Team Kickoff meeting
2. Monthly meetings (agendas, minutes)
3. Monthly Status Reports (progress, budget and schedule)
4. Quarterly Reports

**1.2 Project Controls** *(This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.)*

This subtask involves reviewing the specific work performed by other agencies and/or consultants and maintaining and updating the project budget and schedule to ensure the IRWMP is completed as planned, on time and within the budget. Updates on project status, budget and schedule will be included in the monthly status updates (see Subtask 1.1 Deliverables).

It is understood that even though representatives of each functional area and the Bay Area TCC will have responsibility for carrying out the plan and exercising controls as described above, the Department of Water Resources and State Water Resources Control Board will look to the agencies with whom they contract for grants to exercise appropriate controls to see that funds are expended appropriately per the terms of the agreement. In the case of the *Water and Wastewater* agencies' grant proposal, Zone 7 Water Agency is the applicant and will be the contracting agency. For the *Watershed Management and Flood Protection* entities' proposal the applicant and contracting agency will be the California State Coastal Conservancy.

**1.3 General Outreach** *(This subtask and its associated budget are included in the Water and Wastewater Work Plan, but efforts will be coordinated by the Bay Area TCC.)*

This subtask involves general outreach activities to involve the public and other stakeholders throughout the development of the Bay Area IRWMP under the direction of the Bay Area TCC. It includes integration of all four functional areas: (1) Water Supply and Water Quality, (2) Wastewater and Recycled Water, (3) Flood Protection and Stormwater Management, and (4) Watershed Management and Habitat Protection and Restoration. Additional stakeholder involvement is further described and budgeted throughout the Work Plan at key steps in the IRWMP development process (see Subtasks 3.1.3, 3.1.4, 3.1.7, and 3.2). The purpose of this general outreach task is to ensure involvement of all interested stakeholders, provide regular status updates on the IRWMP development process, and obtain stakeholder support of the final plan. These objectives will be undertaken by first developing a stakeholder

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involvement strategy in cooperation with the Watershed Management TCC and Flood Protection TCC. The strategy will be reviewed by the Bay Area TCC and then implemented by:

1. Developing a comprehensive list of stakeholders to be included in the IRWMP process.
2. Updating the contact list as necessary to reflect any new stakeholders identified during the development of the IRWMP.
3. Regularly informing stakeholders about the status of the IRWMP by maintaining a website, distributing regular newsletters and e-mail announcements, and holding periodic Bay Area TCC meetings as appropriate.

**Key Outcomes:**

- Fully informed Bay Area IRWMP stakeholders
- Stakeholder support for final Bay Area IRWMP

**Subtask 1.3 Deliverables:**

1. Stakeholder involvement strategy approved by the Bay Area TCC
2. Implementation of strategy to involve all means described above.

**Task 2 – Complete Functional Area Documents**

As previously stated, progress on development of each functional area document varies. This task involves updating and/or completing the documents so they can be integrated into the overall IRWMP.

**2.1 Update Water Supply and Water Quality (WS-WQ) Document** *(This subtask and its associated budget are included in the Water and Wastewater Work Plan.)*

**2.2 Complete Wastewater/Recycled Water (WW-RW) Document** *(This subtask and its associated budget are included in the Water and Wastewater Work Plan.)*

**2.3 Complete Flood Protection and Stormwater Management (FP-SM) Functional Area Document** *(This subtask and its associated budget are included only in this Watershed Management and Flood Protection Work Plan.)*

Bay Area flood protection and stormwater management agencies are working together to identify and address the major flood protection and stormwater management objectives and conflicts for the watersheds in the region. The work will include identifying opportunities and efficiencies possible by working collaboratively within the region towards multi-benefit, multi-beneficiary management of resources.

Each participating agency has or will prepare a document summarizing its own local facilities, programs, issues, constraints, strategies and current projects. The *Agency Data Summary Template* is attached as **Att3\_PG\_Template\_4of9**. The agencies will then work together to find common issues and identify strategies that will provide multiple benefits on a regional scale. The agencies will prepare a document that will include a statement of purpose, objectives, and intended use of the *Flood Protection and Stormwater Management Functional Area Document* of the IRWMP. It also will discuss the particular importance of flood protection and stormwater management to the Bay Area. Again, a scope of work for this effort is attached as **Att3\_PG\_Workplan\_5of9**.

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Anticipated challenges to be discussed include the sometimes-conflicting objectives of flood protection programs, stormwater management programs, environment restoration projects, and water supply programs. The subtask also will address the challenges of integrating flood protection and stormwater management programs region wide and across jurisdictional boundaries. For example, common challenges occur when watershed boundaries do not coincide with jurisdictional boundaries, or when flood conveyance needs coincide with environmentally sensitive riparian or wetland areas.

This subtask also will provide background information on flood protection criteria, flood protection facilities and how those facilities are meeting goals, plans, objectives and projects of participating agencies and for the Bay Area as a whole.

**Subtask 2.3 Deliverables:**

1. Completed Agency Profiles for each participating agency
2. Draft Final FP-SM Functional Area Document
3. Final FP-SM Functional Area Document

**2.4 Complete Watershed Management and Habitat Protection and Restoration (WM-HPR) Functional Area Document** (*This subtask and its associated budget are included only in this Watershed Management and Flood Protection Work Plan.*)

This subtask involves completing the current Watershed Management and Habitat Protection and Restoration Functional Area Document to address some key data gaps relating to watershed management, habitat protection and restoration needs within the Bay Area. Again, the work plan and scope of work for this effort are attached as *Att3\_PG\_WorkPlan\_6of9* and *Att3\_PG\_WorkPlan\_7of9*, respectively. The WM-HPR Plan now under development is described in Background 1.4, *Status of Current IRWMP Efforts*. When completed, a written report will contain:

- A general characterization of existing watershed form and function for the region as a whole based on existing environmental data, regional conservation plans, and watershed planning documents.
- Identification of regional habitat and watershed restoration goals based on existing planning and resource documents and a consistency determination of these goals with Proposition 50, Chapter 8, IRWM Plan Standards and Guidelines.
- Identification of key information gaps that, when filled, will facilitate assessment of potential projects in a watershed context.

The work underway also includes development of a web-based information system to access data, reports, or their sources, as needed, to communicate among stakeholders and support a project assessment framework (proposed in the paragraph immediately below and in Subtask 3.1.9).

This subtask involves assembling additional key data to enable the further development and testing of a *Project Assessment Framework (Framework)*. The *Framework* is being developed based on key issues, assessment questions, and data that reflect regional variability. It will consist of a hierarchical set of fundamental questions to assess each project in the context of its watershed and its readiness for implementation. Specifically, the *Framework* will assess projects in the following regards:

- Compatibility with natural functions and processes operating in the watershed.
- Compatibility with regional and local conservation goals.

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- Opportunities for mutual benefits across multiple IRWMP Functional Areas.

The *Framework* will be developed in phases. Phase I is currently under development. Phase 2 will test the application of the *Framework* in one or more watersheds as described in Subtask 3.1.9. The *Framework* will be revised after Phase 2, and may continue to be revised during subsequent periods of implementation.

Funding will be needed to assemble additional key data to enable the development and testing of the *Framework* as described above for the WM-HRP Functional Area Document within one or more demonstration watersheds as an integration tool (see Subtask 3.1.9).

**Subtask 2.4 Deliverables:**

1. Approved scope of work for assembling priority data as recommended in the WM-HRP Functional Area Document under preparation.
2. Assembling data for application of the *Framework* in one or more watersheds
3. Draft WM-HRP Functional Area Document, including *Framework*
4. Final WM-HRP Functional Area Document, including *Framework*

**Task 3 – Integrate the Functional Area Documents into a Bay Area IRWMP**

This task involves integrating the four functional area documents completed as part of Task 2 into a comprehensive IRWMP for the Bay Area. Such integration will allow the region to identify potential synergies between functional areas across the Bay Area, will facilitate coordination between various water management strategies identified so that conflicts and duplication of efforts are minimized, develop a regional framework for evaluating multi-objective projects and water management strategies, and develop new water resource projects.

The following activities are part of this task:

**3.1 Develop Administrative Draft IRWMP** (*This subtask is essentially the same in both work plans*)

This subtask involves development of an administrative draft IRWMP for the Bay Area. The outline for the IRWMP has been modeled after the Plan Standards as shown in Appendix A of the Grant Program Guidelines and includes the sections described in the subtasks that follow in this Work Plan. It should be noted that some of these subtasks involve documentation of work completed as part of the functional area documents while others involve additional analysis.

Development of the administrative draft IRWMP necessarily requires at least near completion of the drafts of all four of the functional area documents. The Bay Area TCC, in its leadership role over the entire IRWMP process, will ensure that all four functional documents are completed on time so other subtasks may follow sequentially to meet the January 1, 2007, adoption deadline.

**Subtask 3.1 Deliverable:**

1. *Administrative Draft IRWMP*

**3.1.1 Regional Group** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan, although some variations in scope exist in each work plan.*)

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This subtask involves the development of the draft *Regional Water Management Group* section of the IRWMP. As part of this subtask, the regional associations, water management groups, and individual agencies responsible for development and implementation of the IRWMP will be described along with each organization's role in management of Bay Area water or natural resources.

**Subtask 3.1.1 Deliverable:**

1. Draft *Regional Water Management Group* section

**3.1.2 Region Description** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is essentially the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Region Description* section of the IRWMP. This subtask feeds directly into the general watershed characterization called for in Subtask 2.4 above. As part of this subtask, the following information will be compiled and summarized in text and/or on maps and charts as appropriate for each watershed in the region:

- Jurisdictional boundaries (e.g. county lines, city lines, spheres of influence, legislative districts, special districts, service areas, etc.)
- Physiographic boundaries (e.g., watershed boundaries, storm drain systems, flood prone areas [as published by FEMA], natural drainage systems, groundwater basins, etc.)
- Major water-related infrastructure (e.g., reservoirs, canals, pipelines, sewers, etc.)
- Human demographics (e.g., population densities, languages, income levels, age structure, residence times, etc.)
- Regional growth projections
- Bathymetry and topography
- Wetlands and riparian habitats
- Climatic statistics (e.g., rainfall, evapotranspiration rates, temperature , etc.)
- Geology
- Land-use coverages as related to water management (e.g., open space, agriculture, residential, light industry, heavy industry, manufacturing, etc.)
- Water supply and demand information
- Water quality information
- Sediment sources, sediment storage places and their sedimentation rates, sediment yield
- Water sources, surface water storage places, discharge rates
- Special status species habitat distribution
- Archeological sites and other places of cultural importance and sensitivity
- Watershed management objectives, ecological goals, etc.
- Other characteristics as appropriate

**Subtask 3.1.2 Deliverables:**

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1. Draft *Region Description* section
  2. Web-accessible maps with interactive layers for viewing individual categories as described above

**3.1.3 Objectives** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Objectives* section of the IRWMP. As part of this subtask, the objectives presented in each functional area document will be reviewed, refined, and combined to develop a comprehensive list of objectives addressing all water related issues including, but not limited to, water supply, groundwater management, ecosystem restoration and water quality. The draft list of objectives will be reviewed by the Bay Area TCC and will be presented to stakeholders at a kickoff stakeholder workshop (Workshop #1). Other meetings and scoping sessions will be held as appropriate. The draft list will then be revised based on stakeholder input in order to be subsequently incorporated into the draft *Objectives* section.

**Subtask 3.1.3 Deliverables:**

1. Stakeholder Workshop # 1
2. Other interagency meetings and public scoping sessions
3. Draft *Objectives* section

**3.1.4 Water Management Strategies** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Water Management Strategies* section of the IRWMP in close collaboration with the *Water and Wastewater* agencies. As part of this subtask, the water management strategies identified in the functional area documents will be compiled into a comprehensive list addressing all water related issues. The draft list of water and resource management strategies and associated projects will be reviewed by the Bay Area TCC and subsequently incorporated into the draft *Water Management Strategies* section.

**Subtask 3.1.4 Deliverable:**

1. Draft *Water Management Strategies* section

**3.1.5 Integration** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and Wastewater agencies to ensure full integration of the IRWMP. The budget for this subtask has been divided between the two proposals.*)

This subtask involves integrating the sub-elements, objectives, and broad categories of projects and program ideas from each of the four functional area documents into a draft *Integration* section of the IRWMP. This subtask also involves examining the *Water Management Strategies* from Subtask 3.1.4 to identify those with the highest potential to meet multiple objectives and regional priority needs. The essence of this subtask is to (1) bring the four functional area documents together into a coherent plan, and (2) highlight projects and programs that can (or do) share resources, offer efficiencies and provide synergy and multiple benefits across functional areas and between agencies.

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One product of this subtask will be an identification of on-going or planned projects or programs that can accomplish multiple benefits. Another outcome will be to develop project “prototypes” that can serve as models for future integration ideas for all agencies and organizations. These can be captured in graphic and map form. The final product of this subtask will be an *Integration* section for the IRWMP.

One current example of how integration can achieve multiple benefits is the Clean Estuary Partnership involving BASMAA, BACWA, and the Regional Water Quality Control Board, addressing TMDLs in the Bay and Estuary. Another example where integration can offer multiple benefits is to identify floodplain storage opportunities that can address storm water and water quality needs, flood protection and enhanced riparian and wetland protection and restoration. Yet another example is where a conjunctive-use project may also serve habitat management and agricultural objectives (and possibly even recreational objectives), while offering water supply, recharge and storage benefits. It is important to note that these examples are not restricted simply to linking specific projects, but rather can highlight conceptual approaches that can help all stakeholders.

As part of this subtask, Workshop #2 will be held, as well as interagency meetings and briefings, to obtain input from stakeholders and the public regarding opportunities for integration of water management strategies, projects and programs. This will also serve as a coordination vehicle for agencies seeking partnerships and looking for collaboration opportunities.

**Subtask 3.1.5 Deliverables:**

1. Draft *Integration* section, working collaboratively with the *Water and Wastewater* agencies
2. Example (or model) projects and programs where integration is occurring (or planned) to highlight ideas for all stakeholders. These will be included in the web-based database.
3. Stakeholder Workshop # 2, scoping sessions and interagency meetings and meeting summaries.

**3.1.6 Regional Priorities** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and Wastewater agencies to develop region-wide priorities. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Regional Priorities* section of the IRWMP. As part of this subtask, short-term and long-term regional priorities and associated project identified in the individual functional area documents and IRWMP planning process will be developed and refined to incorporate stakeholder feedback resulting from Workshops #1 and #2, and will be incorporated into a comprehensive list for review by the Bay Area TCC. The regional priorities will be presented in concept in open forums (e.g., Bay Area TCC meetings and other venues) for further comment by the Bay Area TCC, other project participants and the public. A draft *Regional Priorities* section will then be prepared to document the regional priorities, the process by which they were established and the process by which they will be refined as needed to respond to regional changes.

**Subtask 3.1.6 Deliverable:**

1. Draft *Regional Priorities* section working collaboratively with the *Water and Wastewater* agencies.

**3.1.7 Implementation** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and*

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*Wastewater agencies to develop implementation strategies for the overall IRWMP. The budget for this subtask has been divided between the two proposals.)*

This subtask involves the development of the draft *Implementation* section of the IRWMP. It also includes presentation of the draft Implementation Plan for review by the Bay Area TCC and a stakeholder workshop. As part of this subtask, a draft plan will be developed that includes recommended projects and water management strategies that meet multiple-plan objectives and does the following:

- Documents the process used for identifying priority projects for the region.
- Identifies linkages and interdependence between projects, water management strategies, and programs.
- Describes economic and technical feasibility of each project on a programmatic level.
- Identifies the current status of each project and management strategy.
- Includes timelines for implementation that extend beyond the adoption of the IRWMP.
- Identifies preferred institutional structure(s) to guide plan implementation, and existing and potential funding sources for implementation.

**Subtask 3.1.7 Deliverables:**

1. Stakeholder Workshop # 3, scoping sessions and interagency meetings
2. Draft *Implementation* section working collaboratively with *Water and Wastewater* agencies

**3.1.8 *Impacts and Benefits*** *(This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.)*

This subtask involves the development of the draft *Impacts and Benefits* section of the IRWMP. As part of this subtask, potential impacts and benefits associated with implementation of the projects and programs included in the *Implementation* section will be documented based on information included in the functional area documents completed as part of Task 2. Potential impacts and benefits will be presented at open forums for feedback and comment by the Bay Area TCC and other interested project stakeholders. CEQA compliance is a requirement for all implementation projects. Some projects may have already completed CEQA certification. The IRWMP is not intended to be a CEQA compliance document. Entities responsible for implementing projects have the responsibility of ensuring that all appropriate environmental approvals have been met. Nevertheless, feedback from the Bay Area TCC and other stakeholders as to potential impacts and benefits will be documented in the draft *Impacts and Benefits* section.

**Subtask 3.1.8 Deliverable:**

1. Draft *Impact and Benefits* section

**3.1.9 *Technical Analysis and Plan Performance*** *(This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working*

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*collaboratively with the Water and Wastewater Work agencies to coordinate and document plan performance activities. The budget for this subtask has been divided between the two proposals.)*

This subtask involves the development of the draft *Technical Analysis and Plan Performance* section of the IRWMP. It contains two distinct elements.

The first element of this subtask involves testing the *Project Assessment Framework (Framework)*, described in Subtask 2.4, by applying it in one or more test watersheds. Selected watersheds will be reviewed and approved by the Bay Area TCC based on criteria including size, sediment supply and runoff characteristics, natural and sociological diversity, degree of native and imported water uses, and historical drainage patterns. The test will examine how potential projects can be implemented to be consistent with the governing natural physical, biological, and hydrological processes. Potential projects will also be evaluated for agreement with regulatory and management objectives as well as contribution to the cumulative benefits of the other important water management actions.

The second element will be consistent with Subtask 3.1.9 of the Bay Area's complementary *Water and Wastewater Work Plan*. In this element, existing performance measures from all functional area documents will be compiled and analyzed to identify those features that are most relevant to the IRWMP. The selected performance measures will be entered into a matrix to be compared with the full range of Proposition 50, Chapter 8, Plan Objectives. The matrix will be used to assess how a given project will benefit multiple functional areas.

As a hypothetical example to illustrate this process of integration in the demonstration watershed, one could consider a watershed with multiple planning/management needs and objectives. Stormwater management objectives might call for more localized source control of runoff, more storage of runoff through opportunities within the stream system, and if needed, additional storage facilities might also need to be identified. Parallel with these needs, perhaps there are habitat objectives which call for increased riparian habitats and active/functioning floodplains that are inundated on occasion. The "integration" of the IRWMP begins to occur when such projects are identified that can bring coordinated solutions to such multiple objectives as stormwater management, habitat enhancement, increased groundwater recharge, and improved water quality (through suspended sediment reduction).

The Bay Area TCC believes such integration, as demonstrated through Subtask 3.1.9, is well within reach. Demonstrating how to integrate such approaches reflects the basic premise of the Proposition 50, Chapter 8, Plan Standards that water resources are best managed when considered as an integrated unit within natural drainage basins and watersheds.

The project database and web communication tool described above will be used to communicate and share results of the demonstration watershed for the benefit of Bay Area participants and, for that matter, other IRWM planning regions in California.

### **Key Outcomes**

- Develop criteria by which one or more demonstration watersheds can be selected for integrating functional areas. Criteria may include watershed size, sediment supply and runoff characteristics, natural and sociological diversity, degree of native and imported water uses, and historical drainage patterns.
- Select one or more demonstration watersheds through the Bay Area TCC with representation of all functional areas and stakeholder groups.

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- Develop a matrix that combines the project performance measures from all four functional areas. The matrix will be used to assess the full range of objectives for projects that are nominated for implementation and to evaluate how such projects can be integrated consistent with the IRWM Plan Standards of Proposition 50, Chapter 8, to obtain multiple benefits.

**Subtask 3.1.9 Deliverables:**

1. Summary report describing results of Assessment Framework applied in sample watershed. Report will describe suitability of projects for the watershed, describe how integrated strategies (consistent with Proposition 50, Chapter 8 Plan Guidelines) are met and measured for performance, and provide recommendations for similar approaches in other Bay Area watersheds.
2. Draft *Technical Analysis and Plan Performance* section

**3.1.10 Data Management, Project Inventory and Decision Support Tools** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and Wastewater Work agencies to coordinate and document Data Management, Project Inventory and Decision Support Tools. The budget for this subtask has been divided between the two proposals.*)

The objective of this subtask is to develop a web-based database application that facilitates regional IRWMP planning across all functional areas. This web-based database application will:

- Provide a common platform for Bay Area IRWMP project participants to view, review, upload, and share information regarding specific projects.
- Demonstrate the Bay Area's further commitment to developing the IRWMP by providing an open and shared project web service available to all stakeholders.
- Support planning grant and implementation funding activities for the state review process.
- Focus and align the data library and inventory efforts of the existing Bay Area IRWMP functional areas' scope of work to the type of specific projects that already exist in the planning horizon.
- Assist the evaluation and analysis of IRWM planning by providing web-based data management and decision support tools. These may include a search interface with built-in xml-based data "interpreters" that help planners identify and obtain relevant data that may exist on other systems, an online data warehouse for IRWMP specific data that does not already exist elsewhere, and a set of pre-defined and customizable web-based database queries that reflect the regionally specific IRWMP Project Assessment Framework discussed in Subtask 3.1.9. These queries can be updated and created on the fly to reflect changes to the *Framework* and inform "what if" scenario analysis. The output from these queries will be reports, tables, graphs, and maps designed to assist in the ongoing evaluation of the *Framework*, support planning, and inform decision-making.

A draft project inventory will be prepared for inclusion and use in the web database. Project participants and their consultants will collect and assemble project specific information for posting to the project web database. Relevant information to be included in this project database includes the following:

- Project location (coordinates, extent)
- Watershed, Stream system

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- Type of project according to IRWMP guidelines
  - Project status
  - Environmental compliance status

Layout and user interaction of the project inventory for the web database shall be reviewed with participating functional area participants and constructed such that changes in project type, location, definition, or extent can be readily updated for future uses.

The purpose for a Bay Area project inventory system, similar to the North Coast IRWMP web-based project inventory system that may be found at [www.northcoastirwmp.net](http://www.northcoastirwmp.net), is to encourage IRWMP project collaboration and information sharing. It also is to help “level the playing field” for all stakeholders interested in proposing projects, decrease the costs of developing a regional integrated project plan, and enhance the quality and regional value of proposed projects. Expertise obtained in development of the North Coast web application will be fully leveraged to adapt it to meet the unique stakeholder outreach and collaboration issues of the Bay Area region. Most importantly, this work will add significant new value to IRWMP regional planning statewide through the development of a set of open-source, web-based decision support and data management tools that help decision-makers and staff evaluate and analyze projects according to regional priorities and statewide guidelines.

Moreover, the Bay Area IRWMP project database will provide a common framework for all entities interested in submitting project proposals as part of the integrated planning process. This will help ensure that all potential projects are identified, evaluated, and supported, and thereby encourage participation and stakeholder involvement. In addition, the development of a set of queries, reports, search and spatial interfaces for managing and evaluating projects and related data will guide regional collaboration, support regional planning, and inform regional decision-making.

To ensure that this data management system supports statewide data needs, the following strategies and tactics will guide the development of the web infrastructure, database, and tools:

- Facilitation of data portability through the use of an open standard xml-based metadata schema for data import and export.
- Development of a blueprint and demonstration of how interoperability based on shared and open file formats and protocols between local, regional, and statewide databases and networks can greatly improve the utility and efficiency of public sector information systems.
- Participation in the emerging California Environmental Data Exchange Network and how it can serve as the Bay Area data node for this network.
- Full leverage of the lower cost, higher security, and ongoing sustainability benefits of an open source solution by building on an open source platform and using open source tools whenever possible.
- Production of complete documentation and providing recommendations for the ongoing support and maintenance of the system to ensure its evolution and sustainability.

In general, the approach will build on existing best practices for eGovernment interoperability and follow the objectives, policies, and specifications already developed by leading international efforts such as the **e-GIF** or UK eGovernment Interoperability Framework. (Please see <http://en.wikipedia.org/wiki/E-GIF> for a succinct overview of this framework.)

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**Subtask 3.1.10 Deliverables:**

1. Draft *Data Management, Project Inventory and Decision Support Tools* section
2. Web-based IRWMP Data Management, Project Inventory and Decision Support System

**3.1.11 Financing** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Financing* section of the IRWMP. As part of this subtask, the financial arrangements for implementation of the IRWMP will be reviewed, including a discussion of ongoing support and financing for the operation and maintenance of projects and programs.

**Subtask 3.1.11 Deliverable:**

1. Draft *Financing* section

**3.1.12 Statewide Priorities** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves the development of the draft *Statewide Priorities* section of the IRWMP. As part of this subtask, statewide or state agency priorities (e.g. CALFED objectives, Recycled Water Task Force, Desalination Task Force, California Water Plan, Watershed Management Initiative, Regional Board TMDL standards per stormwater permits, etc.) met by implementation of the IRWMP will be identified and documented in the draft *Statewide Priorities* section.

For example, many of the Bay Area water agencies and stakeholder organizations are active in implementation of the CALFED Bay Delta Program, particularly those agencies that rely on water sources in the delta or tributaries to the Delta system. The IRWMP will identify projects and activities in the San Francisco Bay Area region that can lead to improvements in three of the four resource categories in which CALFED is focused – ecosystem quality, water quality, and water supply reliability.

**Subtask 3.1.12 Deliverable:**

1. Draft *Statewide Priorities* section

**3.1.13 Relationship to Local and Regional Planning and Development of Tools and Analysis to Assist Planning Agencies** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and Wastewater agencies to coordinate development of this Relationship to Local and Regional Planning section. The budget for this subtask has been divided between the two proposals.*)

Planning, decision-making and implementation of land use is vested locally with cities and counties. Water decisions and implementation are vested with water purveyors (which are sometimes cities or counties). However, it is clear that land-use decisions affect water resources significantly and vice versa. Therefore, it is valuable to address the connections between regional and local water management planning and strategies and local and regional land-use plans, programs and activities. This section in the IRWMP responds to this challenge by (a) assessing the relationships of local plans, policies and programs

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to the IRWMP, and (b) providing practical tools, models and analytical information to assist local governments, planning agencies, utilities and special districts, stakeholders and others as they plan and develop projects and programs.

Specific subtasks include:

- **Data Collection.** This subtask includes review of planning documents and programs, and a survey of how land-use planning agencies are addressing water issues. Local land-use agencies and LAFCOs would be surveyed to determine what type of water supply/demand analysis, water quality plans and policies, watershed management, and stormwater management planning is currently integrated within general and specific plans (including LCPs), LAFCO service reviews and related approved planning documents. Included would be a review of the plans, procedures and practices that local land-use agencies use to link water supply/demand and urban growth, such as SB 221 and SB 610 reviews. This survey would involve a web-based questionnaire, as well as follow-up phone interviews with key planning staff, and also analysis and evaluation of documents. Some of the document assessment has already been undertaken in previous work.
- **Assessment.** Assess the plans and results of the survey to see how land-use agencies can help meet regional water management objectives and strategies, such as those in the IRWMP.
- **Information Sharing.** Develop text, graphic and map information that can highlight successful examples, models and opportunities for meeting water resource objectives. These would be provided on the web-based database for all stakeholders.
- **Conduct workshops and interagency meetings** to incorporate stakeholder input into this section.

#### **Subtask 3.1.13 Deliverables:**

1. Workshops, scoping sessions and interagency meetings and meeting summaries
2. Draft and Final sections *Relationship to Local and Regional Planning*, including a summary of the findings, analysis and recommended opportunities for integration in the IRWMP.
3. Data and information from local jurisdictions to share on the web-based database.

**3.1.14 Stakeholder Involvement** *(This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope herein is specific to the Watershed Management and Flood Protection Work Plan but includes working collaboratively with the Water and Wastewater agencies to coordinate development of this Stakeholder Involvement section. The budget for this subtask has been divided between the two proposals.)*

A significant amount of stakeholder involvement and public outreach and participation already has taken place as individual water agencies and other organizations developed various projects and plans that will be included in the IRWMP. In most cases those projects and plans were subject to the California Environmental Quality Act (CEQA) and even the National Environmental Policy Act (NEPA), both of which have public outreach requirements. And for public agencies, there was public notice and the opportunity for public involvement for projects and plans that were considered by their legislative bodies.

In addition, stakeholder involvement will have been conducted throughout the development of the IRWMP process, consistent with the stakeholder involvement strategy (developed under Subtask 1.3). Specifically, stakeholders will have provided input on the project objectives, the integration of water

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management strategies, projects and program (Subtask 3.1.5), the implementation plan (Subtask 3.1.7), and the draft plan (Subtask 3.2).

This subtask involves documenting the stakeholder process undertaken in the development of the IRWMP and preparing a summary of the process and results for inclusion in a draft and final IRWMP document. Specifically it will involve preparing write-ups of workshops for the Bay Area TCC, Bay Area Water Forum, and project management team review and approval, posting final write-ups on the project website, and in up to three newsletters.

### ***Environmental Justice***

The broad-based citizen involvement envisioned in this subtask allows those often overlooked to directly and meaningfully participate in environmental decision-making processes. People of color and people speaking languages other than English, and people living in low-income areas, need to be involved early in the IRWMP planning process. The feedback mechanisms of this stakeholder involvement process will ensure that their comments are considered and appropriately included in decisions.

San Francisco Bay Area environmental justice organizations will be included in the IRWMP planning process and a small stipend will be provided for their participation. Minority stakeholders will be included in the planning process and their concerns will be considered within the final IRWMP.

#### **Subtask 3.1.14 Deliverables:**

1. Draft *Stakeholder Involvement* section
2. Document stakeholder involvement and public outreach

***3.1.15 Coordination with State and Federal Agencies*** (This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.)

This subtask involves the development of the *Agency Coordination* section of the IRWMP. As part of this subtask, state or federal agency involvement in the development of the IRWMP and specific projects identified will be documented. A discussion of how these agencies can provide assistance to ensure timely completion of the IRWMP will also be provided.

Key state agencies to be included in this section include the Regional Water Quality Control Board, State Water Resources Control Board, Department of Fish and Game, California Bay-Delta Authority, Department of Water Resources, California State Coastal Commission, and California State Coastal Conservancy. Key federal agencies include the Environmental Protection Agency, Army Corps of Engineers, NOAA Fisheries, Fish and Wildlife Service, and Bureau of Reclamation.

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**Subtask 3.1.15 Deliverables:**

1. Draft *Agency Coordination* section
2. Final *Agency Coordination* section

**3.2 Prepare Public Draft IRWMP** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves incorporating comments from the Bay Area TCC on the Administrative Draft IRWMP into a Public Draft IRWMP. This draft document will be made available to stakeholders for review. In addition, a workshop (Stakeholder Workshop # 4) will be held to update stakeholders on the IRWMP progress and present findings.

**Key Outcomes:**

- Complete Public Draft IRWMP
- Obtain stakeholder feedback on the Draft IRWMP to ensure support of final plan.

**Subtask 3.2 Deliverables:**

1. *Public Draft IRWMP*
2. Stakeholder Workshop #4

**3.3 Prepare Final IRWMP** (*This subtask is included in both the Water and Wastewater Work Plan and the Watershed Management and Flood Protection Work Plan. The scope is the same for both work plans and the efforts will be coordinated by the Bay Area TCC. The budget for this subtask has been divided between the two proposals.*)

This subtask involves continuing to work closely with the representatives of the *Water and Wastewater Work Plan* directly and also through the Bay Area TCC to prepare the *Final IRWMP*. Incorporated will be stakeholder comments from Workshop #4 and comments from all other participating agencies, RWQB, DWR, SWRCB, stakeholders, and other interested parties and individuals. The *Final IRWMP* will be completed and adopted prior to the January 1, 2007, deadline.

***IRWMP Adoption***

This subtask also will include Bay Area TCC review of existing state and other guidelines and consultation with appropriate state agencies to determine by whom and how the *Final IRWMP* is to be adopted before January 1, 2007, so it may be used for all of its intended purposes, to include the seeking of grant funds for implementation projects.

**Subtask 3.3 Deliverables:**

1. *Final IRWMP*
2. Adoption criteria

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### 3 Budget

The estimated budget for this *Watershed Management and Flood Protection Work Plan* effort is \$806,230. The Planning Grant funding request is \$451,230. To date \$355,000 has been contributed in agency funding match. This represents 44% of the total Work Plan cost, almost double the 25% requirement outlined in the *Grant Program Guidelines*. The budget is attached as *Att3\_PG\_WorkPlan\_8of9*.

Of the matching funds \$300,000 has been contributed by the California State Coastal Conservancy for the preparation of the *Watershed Management and Habitat Protection and Restoration Functional Area Document*. Those funds have been committed already in two contracts for assistance in that work. One contract is with Jones & Stokes and its subconsultants and the other is with the Association of Bay Area Governments. Flood protection and stormwater management agencies have entered into a \$55,000 cost-sharing agreement to contract with Morrison & Associates, Inc., to prepare the *Flood Protection and Stormwater Management Functional Area Document*. The contributing agencies so far are Alameda County Public Works Agency, Contra Costa Public Works Department, Santa Clara Valley Water District, San Mateo County Flood Control District, Sonoma County Water Agency, Zone 7 Water Agency. More funds will be contributed for this functional area work as more agencies participate. It also is anticipated that the Coastal Conservancy will, if necessary, contribute additional funds so efforts outlined in this Work Plan can keep pace with those in the Water and Wastewater Work Plan until grant funding is received and further work can be completed.

### 4 Work Schedule

Work on the Bay Area IRWMP started several years ago and continues as described above in discussions about the four functional areas of the project. The attached proposed schedule, however, *Att3\_PG\_WorkPlan\_9of9*, reflects work to be completed with grants funds and, therefore, shows an estimated time of 12 months starting in January 2006 and finishing in December 2006. Completion of the Final IRWMP is scheduled for mid-November 2006 in time for final adoption by the appropriate participating agencies in December before the January 1, 2007, adoption deadline.