

MAINTENANCE AND WATERSHED PROGRAMS PROJECT NO. 96-1



Restored Wetland Habitat – South Wetlands Opportunity Area, Napa, CA

Project Report for Fiscal Year 2011-2012

April 15, 2011

Prepared by:
*Napa County Flood Control and
Water Conservation District
Napa County, California*



TABLE OF CONTENTS



Introduction 1

Certifications 3

PROJECT REPORT

EXHIBIT A: Project Descriptions 4

EXHIBIT B: Project Map 10

EXHIBIT C: Estimate of Cost 11

EXHIBIT D: Assessment Roll 12

EXHIBIT E: Method of Apportionment 13

EXHIBIT F: Assessment Adjustment 17

INTRODUCTION

Background:

In August 1996, the Napa County Flood Control and Water Conservation District (District) Board of Directors approved the Maintenance and Watershed Management Programs Project No. 96-1 Project Report that allows the District Board to annually approve a budget for the maintenance and management of the Napa River watershed. In order to finance the budget, the District must annually levy assessments on the properties that directly benefit from the maintenance and management programs. Along with the Project Report, the District Board approved three separate Amendments to the Report:

1. Amendment to Project Report for Maintenance and Watershed Management Programs – Project No. 96-1 to delete Lovall Valley area from District-Wide and Napa River Watershed benefit zones;
2. Amendment to Project Report for Maintenance and Watershed Management Programs – Project No. 96-1 to adjust the assessment on vacant rural lands; and
3. Amendment to Project Report for Maintenance and Watershed Management Programs – Project No. 96-1 to delete the City of American Canyon from District-Wide and Napa River Watershed benefit zones.

In order to levy assessments for Fiscal Year (FY) 2011-2012, District staff has prepared this annual Project Report as required by Section 13.5 of the Napa County Flood Control and Water Conservation District Act (California Water Code Appendix Chapter 61).

Authority

The District was formed by the California legislature in 1951 for the general purposes of providing for the control of flood and storm water, including protection of life and property in the District from storm and flood water and protection of the watercourses and watersheds in the District, as well as conservation of water to prevent waste or diminution and thereby increase water supply in the District.

Since the District's formation, it has actively pursued and implemented a number of programs and projects, which have resulted in the supply of approximately half of the municipal water used within the County. This water supply comes from the State Water Project and represents a capital investment totaling over \$50 million raised from bonded indebtedness. From 1968 to 1987, the water source for this supply came from the Solano Project (Lake Berryessa), and from 1988 to the present comes from the Sacramento-San Joaquin River Delta approximately seven miles due east of Travis Air Force Base in Solano County.

The District also purchases water from the U.S. Bureau of Reclamation from Lake Berryessa and wholesales it to the water districts and individual users in the vicinity of the Lake. The District has historically and will continue to monitor groundwater elevations in wells throughout the County and is participating with the County in groundwater resource management evaluations for Napa County. In addition, the District, working in cooperation with other governmental agencies, has improved and assumed responsibility for ongoing maintenance for approximately 13 miles of drainage channels. The District has also coordinated and directed numerous studies relating to specific water supply and flood control projects throughout the County.

The District's operations were originally funded from the County's real property tax base. The District then had authority to levy a tax not to exceed 25 cents per \$100 of the assessed valuation on real property within the County. In the mid 1970's, the District, as local sponsor for the 1965 congressionally-authorized Napa flood protection project, collected and set aside approximately \$3 million for the local cost share for the project. For various reasons, the

project was not implemented at that time, and a decision was made to reduce the District's tax rate to zero and fund the future years' programs using prior years' carryover monies. In 1978, Proposition 13 was adopted, which froze the District's then tax rate of zero. After 1978, the District's policy had been to reduce its programs to the point where they were funded only by the interest earnings on the District's funds, which earnings were approximately \$100,000 per year.

In 1991, the District took a renewed interest in implementing a flood control project in the City of Napa. This interest culminated in developing a Community Coalition for the Napa River Flood Management Plan (Coalition). The Coalition solicited community-wide input to design a flood control project for the Napa River to provide the measures economically feasible to protect against the 100-year flood event. The Coalition includes members of the various interested public agencies, the Napa Valley Economic Development Corporation, Napa Chamber of Commerce, Napa Downtown Merchants, Friends of the Napa River, Sierra Club, Napa County Farm Bureau, California Conservation Corps, Napa Valley Conference and Visitors Bureau, and numerous other groups and volunteers. This effort, however, exhausted the District's funds. With no source of additional revenue, the District was forced to request legislation to consider other options, which included either to cease to exist, levy assessments, or implement a restructuring whereby it only retained its water supply responsibilities.

Consequently, the Napa County Flood Control and Water Conservation Act ("Act") was amended in 1995, principally to provide the authority for the District to levy assessments for flood protection projects financed by the District and for the District to cooperate with the United States government (e.g., the Army Corps of Engineers) in the initial construction, completion or maintenance of any project to control flood waters or to protect life or property within the District. The District's assessment authority allows it to finance projects by levying an assessment on real property, which receives a special benefit from the construction of the project within the entirety of the District's jurisdictional area or within any specific project area determined to receive a special benefit from a District project. In the case of Project No. 96-1, the financing district is a single assessment district divided into three zones encompassing all lands within the District, except for the City of American Canyon and the Lovall Valley area. Assessments are proportioned to properties in relation to the relative benefit each particular parcel receives.

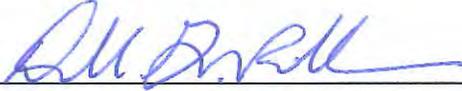
Pursuant to Sections 61-10 of the District Act, the District Engineer has created and filed this report containing the matters specified by said Section 61-10. Included are the items specified by Subsection 61-10(5) in conjunction with the levying of annual assessments under Section 61-13.5.

CERTIFICATIONS

The undersigned respectfully submits the enclosed Project Report as directed by the Board of Directors.

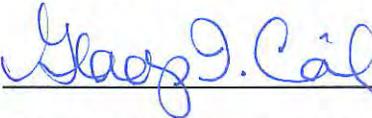
Dated: April 18, 2011

DONALD G. RIDENHOUR, P.E.
District Engineer



I HEREBY CERTIFY that the enclosed Project Report, together with Assessment, was filed with me on the 18 day of April, 2011.

GLADYS I. COIL, Secretary of the District Board
Napa County, California

By 

I HEREBY CERTIFY that the Assessment was approved and confirmed by the Board of Directors of the Napa County Flood Control and Water Conservation District, on the _____ day of _____, 2011.

GLADYS I. COIL, Secretary of the District Board
Napa County, California

By _____

EXHIBIT A: PROJECT DESCRIPTIONS

Project No. 96-1 is briefly described as follows:

The work to be performed consists of clearing and maintaining the 13 miles of channels within the Flood Control District; clearing problem areas within the Napa River and its tributaries; dredging the Napa River; repairing and stabilizing the River and stream banks; installing and operating a Countywide early warning system for flooding; replacing and installing major storm drain trunk lines; participating in Federal and State flood protection grant programs; managing and monitoring groundwater; overseeing adjudicated watersheds; maintaining the benefit assessment program; preparing special studies for flood protection and water management; developing standardized and integrated floodplain management regulations; and assisting the local community in complying with National Pollutant Discharge Elimination System (NPDES) requirements.

The projects and programs to be performed are explained in more detail below.

Napa River and Tributary Maintenance Program

1. Install and Operate a Countywide Early Warning System for Flooding

The District previously participated in a cooperative program with the U.S. Geological Survey to continuously monitor five stream gages and a number of rain gages. Of these original gages, all but two (Napa River at St. Helena and Napa River at Napa) were abandoned. The responsibility for these two was taken over by the State Department of Water Resources Flood Forecast Center. During FY 1996-1997 the District joint ventured with the City of Napa and the National Weather Service Flood Forecast Center to install 15 precipitation and stream monitoring stations, which are monitored by computers located in the District offices and in the City of Napa offices. In 2001, the District, the City of Napa and the City of St. Helena installed a new computer system, "STORMWATCH", now referred to as the ALERT system, which provides real-time data with graphic display of rainfall, stream flow, wind direction, rainfall intensity and other useful storm data, with pre-set alarms and paging for designated emergency responders/observers. In 2004, a joint plan was completed among the District, St. Helena, the USGS and the Department of Water Resources River Forecast Center to relocate and re-calibrate the St. Helena Napa River gage previously located at Zinfandel Lane, to improve the accuracy of river flood forecasting up-valley. The new gage was installed at the Pope Street Bridge. In 2006, the system was upgraded to include additional satellite data transmission capabilities, and a new public website: <http://napa.onerain.com> was launched to provide improved data accessibility and storage functions. During FY 2007-2008, additional gages were added to the system at Browns Valley Creek and Salvador Creek in the City of Napa and York Creek and Sulphur Creek in St. Helena. The gage on Redwood Creek at Mt. Veeder, west of Napa, was also upgraded. In FY 2008-2009, an additional gage was added to the Napa River at Dunaweal Lane, and in FY 2009-2010, a gage was added to Kimball reservoir at the request of the City of Calistoga. As part of the FY 2010-2011 budget, a gage was designed for Tulocay Creek at Shurtleff Avenue in the city of Napa and will be installed in summer 2011.

Using FY 2011-2012 assessment funds, the system will continue to be managed and upgraded to include verifying the calibration flow gages and rating of streams to provide reliable data for hydraulic models, as well as improving emergency planning and response.

2. Clear and Maintain 13 Miles of Channels within District Easements

This program maintains those channels for which the District has specific responsibility. These channels differ from the majority of streams and the Napa River in that the District has easement rights to enter the affected property. In many cases the channel was improved by another governmental agency, and the

District has entered into formal agreements which commit the District to maintain the facility in perpetuity. The actual maintenance includes controlling vegetation, bank stabilization and, in some cases, structural facilities, i.e., rip-rap, flap-gates and appropriate riparian enhancement. Significant maintenance projects have been completed in recent years on Sheehy Creek, Tulocay Creek, Conn Creek, Salvador Creek, Yountville Outfall, and Beard Ditch. Each year there are continued routine efforts to maintain or improve flow conveyance on all the District's easements through ongoing vegetation management. Bio-engineering projects will continue to be performed to help control erosion along the banks of Salvador and Tulocay Creeks as needed. There has been significant effort in recent years to re-vegetate the banks of the Salvador and Yountville Collector Channels and the Yountville Outfall Channel with native riparian trees and shrubs. As a result of the December 31, 2005 storm event, the District's easements on Salvador and Tulocay Creeks suffered increased erosion; and repairs were required. The Tulocay Creek repair work was performed in the fall of 2007. Salvador Creek repairs were completed in 2008. The majority of the costs of these repairs were offset by reimbursements from the Federal Emergency Management Agency (FEMA) and the State of California Office of Emergency Services (OES).

The FY 2010-2011 budget included funds to improve the District's maintenance capabilities and expand regulatory permit coverage through the development of a stream maintenance manual for Napa County. The manual development is ongoing and will be evaluated for environmental compliance following the California Environmental Quality Act (CEQA) and through submittal of permit applications to the appropriate regulatory agencies for review in the coming year. The manual will characterize the District's channels and easements and better define maintenance requirements and constraints based on the geomorphologic setting of each channel or easement to improve the cost- and technical effectiveness of maintenance activities.

3. Clear Problem Areas within the River and its Tributaries

This program is similar to the above except that it deals with stream channels for which the District's involvement is discretionary. The benefits derived can be substantial for alleviating localized flooding and reducing stream bank erosion. Included in this program is the evaluation and removal of downed trees, which may pose a hazard to downstream property, such as bridges, and can contribute to the formation of significant debris jams. The stream maintenance manual that is being developed will specifically address the issue of large woody debris preservation in local streams, which will meet an important implementation goal of the State Regional Water Quality Control Board (RWQCB)-adopted Sediment Total Maximum Daily Load (TMDL) for the Napa River. District staff conducts summer surveys of several flood-prone creeks to look for potential problems with debris, vegetation and erosion. The District also assists the Cities of Napa, St. Helena, Calistoga, and the Town of Yountville in the funding of maintenance of tributaries and channels within city limits (e.g., Town of Yountville's maintenance of Hopper Creek). In addition, the City of Napa has requested assistance with its winter sandbag program to help alleviate flooding for private properties in the City. For the next fiscal year the District proposes to continue to provide approximately the same budget allocation for this activity to allow District staff to provide assistance to private landowners during the dry season, particularly within urban stream channels.

4. Napa River Navigation Dredging

The District serves as the local sponsor for the periodic dredging of the Napa River from the Third Street Bridge downstream to the County boundary. While the U.S. Army Corps of Engineers (ACOE) funds the actual dredging, the District is responsible for providing the spoil sites. Two sites are currently maintained for this purpose. One site is at the Napa Sanitation District's (NSD) Imola property. The second and larger site is located at Edgerly Island. Due to environmental constraints, these sites are intended to be used in perpetuity, such that additional wetlands are not impacted. This requires the sites be emptied periodically

and made ready for the next dredging cycle (historically, this has been approximately every six to eight years). The ACOE last dredged the upper reach of the Napa River navigation channel in September 1997. The lower reach of the navigation channel was last dredged in September 1999; therefore, both reaches of the River are well beyond the normal timeframe between dredge cycles. The Edgerly Island Disposal Site reconstruction was completed in 2004, and the Imola NSD site was reconfigured as a part of the Napa River/Napa Creek Flood Protection Project in 2006. The District has been working with the ACOE to schedule another cycle of dredging since 2006; however, each year the appropriations bill that includes the Napa River maintenance dredging program has not received adequate funding by Congress. No additional allocations were provided to the ACOE for the Napa River dredging in Federal FY 2011; however, the ACOE has begun design and environmental review activities for a Napa River dredge cycle to have a project ready to bid once funding is allocated by Congress. The District continues to lobby the Federal government to program funds for this important maintenance effort as soon as possible. In addition, the District continues discussions with the State of California Department of Fish and Game (DFG) to be allowed a one-time disposal of dredged materials as part of the restoration project for the former Cargill Salt Ponds in southern Napa County. This effort would result in cost savings to the District and would be beneficial to the restoration project. The FY 2011-2012 budget will be used by the District to maintain the dredge disposal sites to ensure they are ready for use by the ACOE when funding is allocated to them for a dredging project.

5. Bank Stabilization and Repair (Cost-Share Program)

This cost-share funding program is used to assist public and private property owners to restore stream banks on their property following damage due to failure from high flows, downed trees, and other causes. The benefits to the District are realized with the reduced transfer of associated sediment and protection and enhancement of the stream riparian corridor. This program also relies on the Napa County Resource Conservation District (NCRCD) and Natural Resources Conservation Service (NRCS) for site selection input and remedial measures. In 1999, "bio-engineered" lower cost techniques were allowed in this program where natural materials, such as trees, grasses and shrubs, may work in place of steel and concrete structures. Bio-engineered solutions reduce costs to landowners for stream bank repairs and help to preserve the natural character of local streams. In 2010, the District Board modified the program participation guidelines to incentivize the use of bio-engineered designs by increasing the District's cost-share toward construction of these types of projects. As of this writing, approximately 60 restoration projects have been funded through the District's program. In FY 2010-2011, the budget also included support funding for the City of Napa to help with two significant erosion repairs on Redwood Creek which threaten to undermine Redwood Road. As a result of permitting delays, these projects were not constructed as planned in summer 2010 but will be completed in summer 2011; and funds budgeted in the prior fiscal year will be rolled forward into FY 2011-2012.

Watershed Management Programs

1. Local Compliance with NPDES Requirements

State and Federal regulations required the County and municipal agencies within the County to obtain stormwater discharge permits (Phase II Municipal Stormwater NPDES permits). The County and the Phase II municipal agencies determined that a Countywide Stormwater Management Program (SWMP) would be the most efficient means to reach compliance with these new regulations. The resulting SWMP was submitted to the RWQCB and approved on May 21, 2004. The SWMP includes Countywide programs administered by the District under a Joint Powers Agreement (JPA) and local programs administered by each of the permittees. The Countywide Program activities include public education and participation, as well as coordinating and assisting the co-permittees with the development of their local programs. The District contributes funding annually to the Countywide Program JPA with the remaining costs paid by the co-

permittees based upon population and Benefit Assessment Unit (BAU). This year the District is proposing to contribute \$35,000 to the Countywide Program JPA. The District is also continuing its efforts to increase education outreach to creekside and riverside property owners on stormwater and maintenance issues and increasing volunteer efforts related to cleanup activities in the watershed. In the past few years this has included workshops for creekside property owners regarding appropriate maintenance practices. This District-wide program is also being used to fund water quality improvement activities for Lake Berryessa, such as supporting Solano County RCD with the annual lake cleanup and boater education regarding pollution prevention in the lake.

2. Federal and State Flood Protection Grant Program Participation/Matching Fund

This District-wide program enables the District to apply for and potentially secure additional funding that will assist the community in mitigating the impacts of floods, i.e., raising houses, flood proofing, invasive vegetation removals, etc. As part of this program, the District cooperates with the cities and other agencies in preparing grant applications and serving as the sponsor when appropriate. This program can also provide matching funds, which is a requirement of most grant programs. In the past year the District has been successful in securing approximately \$42,000 in additional grant funds for invasive species eradication activities, such as Arundo, Tamarisk and Tree of Heaven.

In addition to seeking funds under new grant programs, the District will continue its participation with other local governmental agencies to pursue new grant opportunities for watershed projects under voter-approved Proposition 84. This has included funding support for development of a process to identify and coordinate local watershed projects and an internet-based database to identify and elevate Napa County projects into Integrated Regional Water Management Plans (IRWMPs), which is being hosted on the Napa County Watershed Information Center and Conservancy (WICC) website beginning in 2011. Napa County is participating in two State-funding Regions: the Bay Area – North Bay Subregion (portions of Marin, Sonoma, Napa and Solano counties, which drain to the Bay) and the Sacramento Valley – Westside Subregion (portions of Lake, Yolo, Solano and Napa counties, which drain to the Sacramento River). This process helped the District cooperate on Proposition 84 Grant proposals in these larger State planning regions in FY 2010-2011.

During FY 2011-2012, the District will continue its participation in regional IRWMPs and support the Napa County WICC in its efforts to promote local watershed improvement projects and also continue to pursue watershed project grants as a grant recipient or partnering agency for projects that eradicate or manage non-native invasive species within or along waterways and restore native vegetation to enhance water quality and riparian habitat, reduce or prevent flooding problems, and protect watershed resources within the District.

3. Groundwater Management and Monitoring

The District has been monitoring static groundwater levels within the County since the late 1950's. This program is essential to a future groundwater management program. It allows the District to document and establish long-term trends in the major groundwater basins and to approximate annual safe extraction rates. Development of more formalized groundwater monitoring programs is a State requirement of local government entities due to recent legislation. The proposed budget for FY 2011-2012 is being increased from \$10,000 to \$40,000 in response to the greater focus on this area of watershed management and to assist the County in responding to increased monitoring, data management and reporting needs associated with State requirements.

4. Development of Standardized and Integrated Floodplain Management Regulations

The four cities, the town and the County administer existing floodplain regulations and standards within their local jurisdictions. Each agency must comply with Federal guidelines to take advantage of the federally subsidized National Flood Insurance Program. The District supports local jurisdictions to improve ongoing communication and coordination of floodplain management as a continuation of that element of the community coalition process. The funds budgeted for this program allow District staff to work with local agencies, property owners and State and Federal floodplain officials on particular issues related to development in the floodplain.

5. Watershed Adjudication, i.e., Putah Creek

The State Water Resources Control Board has jurisdiction over the use of surface waters and issues water rights permits to those property owners and diverters who use surface water. The Putah Creek basin has gone through a process which adjudicated the use of all surface waters within its boundaries. The District's role in this process is to participate in the ongoing advisory committee which oversees the court-appointed Watermaster.

6. Benefit Assessment Program Maintenance

This line item provides funding for the District to maintain and prepare the annual assessment roll for incorporation onto property owners' tax bills. The District staff has assumed the ongoing responsibility for this work, formerly performed by an outside consulting engineer. However, periodic maintenance and improvements are performed by a consultant to maintain the assessment software and to streamline the process of calculating annual assessments.

7. Major Trunkline Replacement/Installation

This cost share funding program is used to assist Yountville, St. Helena, Calistoga and unincorporated areas in upgrading major storm drain systems. In the past, many of the older sections of the developed areas were developed with small drainage systems. This program will provide assistance and incentive to remedy these problem areas. During 2002 through 2004, the District assisted the Napa River Reclamation District in replacing inoperable pumps, improving the holding pond and increasing the cross culvert capacity at Milton Road, which are critical to flood protection for approximately 125 homes on Edgerly Island and is the only means of discharging stormwater from this area to the Napa River during high tides and high river flows. The District also purchased a 2,000 gpm portable diesel pump that is being stored at Edgerly Island to be used if necessary throughout Napa County. During FY 2009-2010, the District provided support funds for repairs to an 1,800-foot County ditch in the Napa area that parallels Sandra Drive, south of Redwood Road and west of Solano Avenue. The City of Calistoga has requested support funding in FY 2011-2012 for the repair of a storm drain outfall to the Napa River.

8. Special Studies for Flood Protection/Water Management

Historically, the District has provided initial planning studies for requested flood control/water management projects. Studies relating to water supplies for municipal users would not be funded from this source; they would be funded through the water supply contracts.

In 2004, the District contracted with the NCRCD to perform a water conveyance study in the area of Coombsville Road and Third Avenue. The study concluded that the three major causes of flooding along Third Avenue are undersized culverts, insufficient culvert slope, and excess vegetation in the North Branch. Modeling work to evaluate flooding concerns on Salvador Creek that has been ongoing for the last few years was completed in early 2008, and the City of Napa used the study to submit to FEMA for a needed change to the FEMA flood insurance rate map. In FY 2009-2010, a stormwater detention study was funded for the Salvador Watershed and a flood study was completed for Redwood Creek. In FY 2010-2011, engineering analyses were funded to study potential flood reduction alternatives in the Salvador Watershed. The District has annually budgeted funds to contract with the NCRCD to do stream flow monitoring of Salvador, Milliken, Dry and Napa Creeks. These studies are ongoing and will continue into future fiscal years.

The proposed budget for FY 2011-2012 includes funds for considering new flood studies that may be warranted in the coming year.

EXHIBIT B: PROJECT MAP

A Project Map is attached which shows the three benefit zones: Napa River Watershed, City of Napa, and District-Wide.

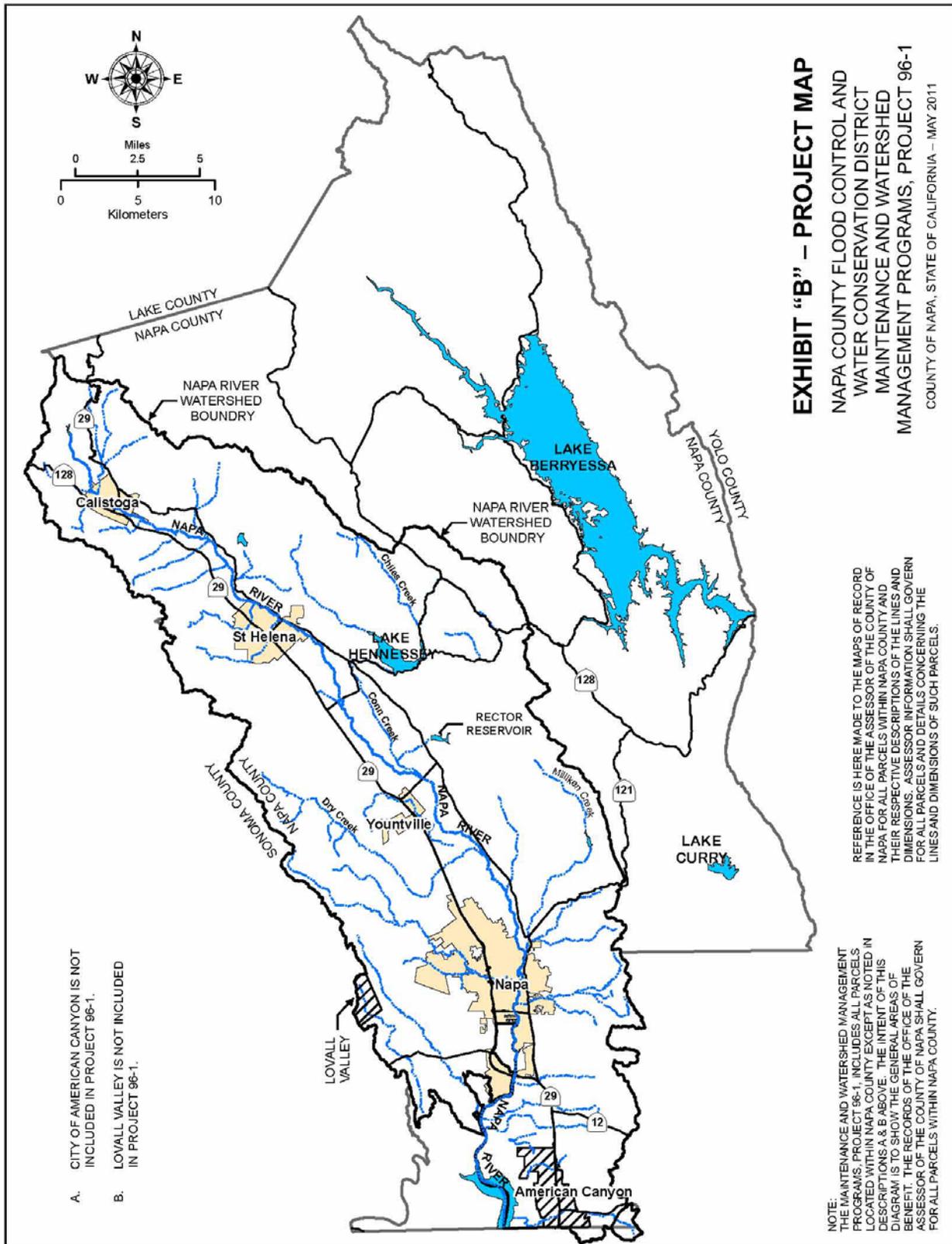


EXHIBIT C: ESTIMATE OF COST

The following is the proposed District expenditure plan for the estimated assessment revenues to be collected during FY 2011-2012. This expenditure plan, in addition to unspent funds from prior fiscal years that will be carried forward, provides funding for the proposed flood and storm water programs, projects, and services as set forth in this Report. The District intends to leverage its funds through long-term relationships with the California Conservation Corps and similar organizations for many of its maintenance programs. It will also work in close cooperation with various resource agencies to develop cost effective and environmentally sensitive maintenance practices.

NAPA RIVER AND TRIBUTARY MAINTENANCE		ESTIMATE
1. Install and operate Countywide early warning system for flooding		\$60,000
2. Clear and maintain channels within District easements (13 miles)		\$205,000
3. Clear problem areas within the River and its tributaries		\$185,000
4. Napa River navigation dredge site maintenance		\$10,000
5. Bank stabilization and repair		\$140,000
	Subtotal	\$600,000
WATERSHED MANAGEMENT PROGRAMS		ESTIMATE
1. Local compliance with NPDES requirements		\$80,000
2. Federal and State flood protection grant program participation/matching fund		\$70,000
3. Groundwater management and monitoring		\$40,000
4. Development of standardized/integrated floodplain management regulations		\$15,000
5. Watershed adjudication, i.e., Putah Creek		\$10,000
6. Benefit Assessment Program Maintenance		\$20,000
7. Major trunkline replacement/installation		\$55,000
8. Special Studies for flood protection/water management		\$115,000
	Subtotal	\$405,000
	TOTAL	\$1,005,000

Every year the Board of Directors will review the proposed expenditure plan as part of the process of levying assessments.

EXHIBIT D: ASSESSMENT ROLL

The proposed assessment and the amount of the assessment for FY 2011-2012 apportioned to each lot or parcel, as shown on the latest roll at the Assessor's Office, is on file with the Secretary of the District Board.

The description of each lot or parcel is part of the records of the Assessor of the County of Napa; and these records are, by reference, made part of this Report.

The estimated total assessment amount to be collected for FY 2011-2012 is \$1,005,000.

	Napa River Watershed	City of Napa	District-Wide
BAUs of Assessment	56,596	27,208	60,637

EXHIBIT E: METHOD OF APPORTIONMENT

Background

Proactive flood control measures by the District will benefit all properties within the District by reducing problems created by stormwater runoff, which is generated by each parcel of real property within the District. Stormwater runoff contributes to and causes flooding and decreases the water quality of waterways by increasing sedimentation and chemical contamination. In addition, stormwater runoff that does not flow into a water supply reservoir reduces the amount of water available for domestic water supply and groundwater recharge.

Project No. 96-1 benefits all property in the County by incrementally taking steps to reduce the risk of flooding in the District and thereby reducing the various and numerous direct and indirect costs to property owners associated therewith and allowing the District to continue its efforts to increase the amount of stormwater available for domestic use. Additionally, flood control measures, such as bank or levee stabilization, will increase water quality throughout the District by reducing the amount of erosion and sedimentation that currently occurs. As described earlier, the funds raised from the assessment district will be used, among other activities, to stabilize banks and levees, including constructing rip-rap and flap gates and installing vegetation, clear drainage ways to provide more free flowing water and remove debris that may cause downstream damage, install and maintain stream gages on upstream tributaries to the Napa River in order to monitor stormwater flows to predict and warn against downstream flooding, and develop coordinated floodplain management policies and practices with the individual cities and the County.

District Zones

For the purpose of this annual assessment program, the District is divided into three zones of benefit as follows:

1. Napa River Watershed, generally consisting of the land situated within the County of Napa whose stormwater flows by various courses or conveyances into the Napa River. The Napa River Watershed zone includes all parcels within the Napa River Watershed, including the City of Napa. Its projects and programs are designed to benefit only the parcels within the watershed;
2. City of Napa, generally consisting of the land situated within the corporate boundary of the City of Napa. City of Napa zone parcels, which are all the parcels within the City limits, benefit from the Napa River Watershed projects and programs; but, since the City's Storm Drain Assessment Fee program pays for the City to maintain and replace major storm drain trunk lines in the City, the City parcels do not receive benefit from the District-Wide major trunkline replacement and installation program; and
3. District-Wide, generally consisting of the land within Napa County, excluding the land within the corporate boundary of the City of American Canyon and Lovall Valley area. The District-Wide zone includes all parcels within the District, the Napa River Watershed, the City of Napa parcels, plus the parcels outside the Napa River Watershed. Its projects and programs benefit all parcels within the District.

The programs and projects the District will undertake are designed to benefit the unique nature of these three zones.

Land Use Categories

All parcels in the District were categorized into one of the following 12 land use categories:

1. Single Family: Includes all parcels that have at least one detached single family residential unit.

2. Multi-Family: Includes all parcels that have more than one attached residential unit, i.e., duplex, triplex, quadplex, condominiums, townhomes, and apartments.
3. Mobile Homes: Includes all mobile home park residential parcels.
4. Commercial: Includes all parcels with commercial, retail, office, medical, motel/bed and breakfast, and automobile related uses.
5. Industrial: Includes all parcels with industrial, light industrial, heavy industrial, and warehouse related uses.
6. Winery: Includes all parcels with a winery.
7. Vineyards: Includes all parcels with planted vineyard.
8. Vacant Residential: Includes all parcels that the Napa County Assessor deems as a vacant residential.
9. Vacant Commercial: Includes all parcels that the Napa County Assessor deems as vacant commercial.
10. Vacant Industrial: Includes all parcels that the Napa County Assessor deems as vacant industrial.
11. Vacant Rural: Includes all parcels that the Napa County Assessor deems as a vacant rural.
12. Non-Taxable: Includes all parcels classified as exempt from assessment by the County Assessor, i.e., government owned parcels.

These land use categories were obtained from the County Assessor's records.

Benefit Assessment Methodology

The methodology to determine a property's assessment for Project No. 96-1 is based upon two principal factors: 1) the property's proportionate share of stormwater runoff and 2) the amount of sediment that erodes off a property. Levying assessments based upon a property's proportionate share of stormwater runoff recognizes that land, both improved and unimproved, creates stormwater runoff that increases downstream flood hazards and produces water that the District could use for domestic use. Improved land generates stormwater runoff to a greater extent than unimproved land because the impervious surfaces of improved land restrict the property's natural ability to absorb precipitation. Stormwater flows off of a single family dwelling, shopping center or industrial site with roofs and parking areas will be greater than stormwater runoff from a vineyard or vacant land of equivalent size because of their increased amounts of impervious surfaces.

Sediment comes from the portions of property not covered by a hard or impervious surface, e.g., roofs, driveways and parking and other areas. Sediment flows off of the property and contributes to the amount of dredge material the County has to dispose of from the Napa River and clear from its tributaries. In addition, sediment restricts the flow of stormwater and causes the water surface of the Napa River and its tributaries to flow at a higher elevation than they would otherwise flow if the River and tributaries were free of sediment.

The proportional difference in runoff, combined with the relative size of individual parcels and the amount of impervious surface, provides the basis for computing the benefit assessment per parcel.

To determine the proportionate share of stormwater runoff and sediment runoff from any one parcel of land in relation to all parcels of land in the District, it is necessary to establish a baseline standard parcel of land from which to measure all other parcels. This baseline standard shall be referred to as the Benefit Assessment Unit (BAU), and the baseline standard BAU shall be a detached, single family dwelling, which is the most common land use type within the District. The BAUs of all other land use types within the District shall be based upon their relative comparison to the baseline BAU and adjusted according to that parcel's size and relative imperviousness. Accordingly, detached, single family dwellings are counted as one BAU with all other land use types either equivalent to or a fraction or multiple thereof. The table below shows the BAU factors for each land use type.

Land Use Category	Unit of Measure	BAU Factor
Single Family	Dwelling Unit	1.00
Multi-Family	Dwelling Unit	0.50
Mobile Homes	Dwelling Unit	0.33
Commercial	1,500 Square Foot Building	1.00
Industrial	1,500 Square Foot Building	1.00
Winery	1,500 Square Foot Building	1.00
Vineyard	Planted Acre	0.25
Vacant Residential	Acre	0.30
Vacant Commercial	Acre	0.30
Vacant Industrial	Acre	0.30
Vacant Rural	Parcel	0.75

Some parcels have multiple land uses, e.g., one parcel may have a single family unit, planted vineyard acres and a winery. The assessments for these parcels are calculated based on each land use type and added together for a total parcel assessment.

In order to prevent a financial hardship to any one parcel, all single use parcel BAUs are capped at no more than 20 BAUs. That is, for every parcel that has one land use, it will receive a maximum of 20 BAUs. For all parcels that have multiple land uses, each land use type will receive no more than 20 BAUs. Vacant rural land parcels, without development of structures or permanent land disturbance, are carrying out their intended watershed purposes under the Napa County General Plan and Zoning Law, thereby minimizing the stormwater runoff, which occurs from such properties. Therefore, such parcels receive a maximum of 0.75 BAU per parcel.

Benefit Assessment Calculation

In May 2010, the District Board approved the Project Report for FY 2010-2011, which laid out the assessment rates per BAU for each benefit zone as follows:

FISCAL YEAR 2010-2011

BUDGET CATEGORY	BENEFIT ZONE		
	Napa River Watershed	City of Napa	District-Wide
Napa River & Tributary Maintenance \$/BAU	\$10.13	\$10.13	\$0.00
Watershed Management Programs \$/BAU	\$ 7.68	\$ 5.00	\$7.68
TOTAL \$/BAU	\$17.81	\$15.13	\$7.68

By approving the annual Project Report, the District Board also approves any annual increase in the assessment rate based on the *Engineering News Record's* "Construction Cost Index (CCI) for the San Francisco Bay Area." The CCI percentage change from March 2010 to March 2011 was an increase of 4.35%, which represents the maximum allowable increase in assessment rate for FY 2011-2012. Under the provisions of the approved benefit assessment calculation, the assessment rate was held constant (no increase) in FY 2010-2011 from the prior fiscal year because the CCI showed a decrease of 0.3% between those years. Therefore, it is recommended to the Board that the total assessment rate increase for FY 2010-2011 be limited to 4.05% to account for the prior year's decline in CCI. The proposed assessment rates for FY 2011-2012 are:

FISCAL YEAR 2011-2012

BUDGET CATEGORY	BENEFIT ZONE		
	Napa River Watershed	City of Napa	District-Wide
Napa River & Tributary Maintenance \$/BAU	\$10.54	\$10.54	\$0.00
Watershed Management Programs \$/BAU	\$ 7.99	\$ 5.20	\$7.99
TOTAL \$/BAU	\$18.53	\$15.74	\$7.99

EXHIBIT F: ASSESSMENT ADJUSTMENT

It is presently anticipated the District will continue with the annual levy of assessments for Project No. 96-1, in accordance with the procedure provided by the Act. It is recommended and anticipated that the amount of individual assessments for each future year will be increased over the amount of such individual assessment for the prior year by a percentage equal to the increase reported in *Engineering News Record's* "CCI for the San Francisco Bay Area," expressed as a percentage. In the event there is no increase in the reported CCI, the assessment rates may not be increased. In the event that said index ceases to be established and published, the Board will utilize the most nearly comparable index as determined by the District Engineer at his or her sole discretion. In approving this Project Report, the Board will be approving and authorizing this annual percentage increase in the amount of individual assessments without the necessity of mailed notice to property owners as expressly provided by Section 54954.6 of the California Government Code.