

Section 4: Capability Assessment

The Town of Fairfax can use a variety of different tools, assets, and authorities to effectively reduce or mitigate the impacts of floods in the community. These include voluntary and mandatory measures; individual and community efforts; private and public actions; and preventive as well as responsive approaches. Examples of mitigation activities include educating citizens, enforcing building and development codes, carrying out capital improvement projects, adopting plans setting forth goals, policies and actions, establishing incentive programs and, in some cases, improving emergency response and preparation.

The capabilities available to the Town of Fairfax fall into the following broad categories: Agencies and People, Plans, Codes and Regulations, Programs and Mitigation Activities, and Financial Resources. This capability assessment reviews how the Town uses each of the capabilities available to mitigate its flood risk.

4.1 Agencies and People

Programs and policies are only meaningful if they are supported, enacted and enforced by motivated people with the time and resources to make them work. The Town of Fairfax has a number of departments, commissions, and councils that focus on disaster related issues, and it also benefits from the work of various state, federal, and non-governmental agencies. The most important players in the Town’s mitigation activities are described below.

Town Departments, Boards and Commissions

The key Town Departments involved in flood mitigation and their role in managing disasters are presented in Table 4-1.

Table 4-1 Town Departments, Boards and Commissions

Department	Role in Disaster Mitigation and Management
Ross Valley Fire Department (JPA between Towns of Fairfax and San Anselmo)	<ul style="list-style-type: none"> • Provides fire protection and emergency medical services within Fairfax-San Anselmo areas. • Maintains Fairfax Creek Depth Monitoring Device & electronic data collection/dissemination • Maintains and tests the Warning Siren • Conducts community preparedness and education trainings such as CERT and Get Ready
Police Department (16 staff members)	<ul style="list-style-type: none"> • Leads the Town Emergency Management Function • Activates and coordinates actions for the Town

Department	Role in Disaster Mitigation and Management
	<p>Emergency Operations Center (EOC)</p> <ul style="list-style-type: none"> • Performs emergency response activities, including evacuation, and security. • Maintains dispatch center for all 9-1-1 and non-emergency call • Supports community preparedness outreach efforts
<p>Public Works Department (6 staff members)</p>	<ul style="list-style-type: none"> • Manages the capital improvement program • Manages Measure K-funded infrastructure improvements • Public street maintenance and repair • Storm drain and disaster related repairs • Emergency drain cleaning and fallen tree clearing • Storm water program management plans • Specifications for bidding procedures • Cleaning and maintaining all parks, public landscaping • Town facilities management
<p>Planning & Building Department (4 staff members)</p>	<ul style="list-style-type: none"> • Facilitates the comprehensive update of the General Plan • Processes planning and building permit applications • Conducts building inspections • Conducts resale inspections • Processes variances and Planning Commission items • Supports the Planning Commission and Design Review Board, • Assures project compliance with the environmental review process • Planning Director is the Floodplain Manager
Boards and Commissions	Role in Disaster Mitigation and Management
<p>Town Council (5 elected members)</p>	<ul style="list-style-type: none"> • Adopts Building and Fire Codes • Adopts Zoning Ordinances and other ordinances affecting residential and commercial development • Adopts Emergency Operations Plan • Adopts Hazard Mitigation Plans • Adopts General Plan and Required Elements
<p>Disaster Council (membership established in Town Code, Section 2.52)</p>	<ul style="list-style-type: none"> • Develops and recommends for adoption by the Town Council, emergency and mutual-aid plans and agreements and such ordinances and resolutions and rules and regulations as are necessary to implement such plans and agreements.
<p>Planning Commission (7 resident volunteers appointed by Town Council)</p>	<ul style="list-style-type: none"> • Carries out the provisions of the Planning and Zoning Law • Develops, adopts, and implements the Town's

Department	Role in Disaster Mitigation and Management
	General Plan <ul style="list-style-type: none"> • Administers the Town’s zoning and subdivision ordinances
Design Review Board (5 resident volunteers appointed by Town Council)	<ul style="list-style-type: none"> • Reviews and approves the design elements of development proposals in the residential and commercial areas
Volunteer Board	<ul style="list-style-type: none"> • Conducts twice a year Creek clearing

County Agencies

Marin County Sheriff Office of Emergency Services

The Sheriff’s Office of Emergency Services (OES) provides emergency management services for the County/Operational Area including its eleven cities/towns and 300+ special districts. OES coordinates emergency operations activities among all the various local jurisdictions and develops written guidelines for emergency prevention, preparedness, response, recovery and mitigation to natural, man-made, and technological disasters. The Sheriff’s OES serves as the liaison between the State and all the local government political subdivisions comprising the Marin County Operational Area, including the Town of Fairfax.

Marin County Flood Control and Water Conservation District (MCFCWCD)

Established in 1953, the District administers flood control projects and oversees revenue collection in each of the Flood Control Zones in Marin County. The Town of Fairfax rejoined Flood Control Zone 9 (Ross Valley) in 2006, in direct response to the December 31, 2005 flood and its desire to actively participate in future watershed flood mitigation efforts. The District administers flood control projects and oversees revenue collection in each of the active Flood Control Zones in Marin.

Flood Control Zones raise money through property taxes and assessment overrides, such as the property owners’ storm drainage user fee which was approved by a majority ballot in 2007. County Code requires that projects include the purchase of land to re-establish the floodplain, flood proofing of property by raising flood prone buildings and making them watertight, construction of berms and retaining walls, and floodplain zoning. Other flood control activities undertaken in flood zones include the construction of physical facilities such as engineered stream channels, pump stations, levees and bank stabilization works.

The MCFSWCD also administers the Marin County Stormwater Pollution and Prevention Program (MCSTOPPP) which is described later in this section.

State Agencies

The roles of key state agencies that could support the Town's flood mitigation activities are described below.

Governor's Office of Emergency Services (OES)

The OES serves as the lead state agency for emergency management in California. Among many other activities, it administers federal mitigation programs in the State, prepares the State Multihazard Mitigation Plan, and supports and oversees hazard mitigation planning activities of local governments.

Department of Water Resources (DWR)

The Department of Water Resources (DWR) is the state agency with primary responsibility for managing water in California, and for flood disaster preparedness and response. The DWR coordinates the National Flood Insurance Program (NFIP) in the State, as well as coordinating the Floodplain Management Task Force. Under contract with FEMA, DWR performs Community Assistance Visits (CAVs) every 5 years for each community participating in the NFIP to ensure that the community is implementing the minimum floodplain management criteria of the NFIP. The most recent CAV for the Town of Fairfax was completed in June 2007, and the Town was found to be in compliance with all NFIP requirements. DWR also delivers floodplain management workshops for local officials in subjects such as compliance with NFIP floodplain management criteria, preparation of elevation certificates, and flood-resistant construction.

Federal Agencies

The roles of key federal agencies involved in flood mitigation are described below.

Federal Emergency Management Agency (FEMA)

FEMA, part of the U.S. Department of Homeland Security, is the key federal agency with responsibility to help communities prepare for, prevent, respond to, and recover from disasters. The Mitigation Directorate manages the National Flood Insurance Program (NFIP) and a range of programs designed to reduce future losses to homes, businesses, schools, public buildings and critical facilities from floods, earthquakes, wildland fires and other natural disasters.

FEMA also provides mitigation funds to state and local governments through a variety of grant programs, including the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance Program (FMA) and the Pre-Disaster Mitigation Program (PDM).

The US Army Corps of Engineers (USACE)

The USACE, San Francisco District, has responsibility for civil works, flood control, flood fighting, environmental restoration, and Clean Water Act regulatory activities for a geographic area in the western United States that covers approximately 40,000 square miles, including the Town of Fairfax. Additionally, the USACE conducts or funds studies, including the San Pablo Bay Watershed Restoration Project. Since the 1960's, the USACE has been involved in flood control projects for Corte Madera Creek, which were designed to reduce flooding in communities downstream of Fairfax.

Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) addresses natural resource conservation on private lands. NRCS works closely with local resource conservation districts and resource conservation and development councils. In California, the NRCS provides outreach, management support, engineering, resource technology, technical soil services, and watershed planning services.

The NRCS provides three types of technical and financial assistance programs for watersheds: Emergency Watershed Protection Program and Floodplain Easement Component; Watershed Protection and Flood Prevention Program; and Watershed Rehabilitation. Flood issues addressed by these programs include: watershed protection; flood prevention; erosion and sediment control; water supply; water conservation; wetland and water storage capacity; upstream flood damages; and wetland creation and restoration. Additionally, the NRCS develops conservation-related surveys and plans, including watershed plans, river basin surveys and studies, flood hazard analyses, and floodplain management assistance.

Non-Governmental Organizations

There are numerous non-government groups that contribute to flood risk reduction in the Town of Fairfax. By working with these groups, the Town can extend its resources and personnel to more effectively reach its mitigation goals. Some of the most active groups are described below.

Fairfax Volunteers

Fairfax Volunteers is a Town-sponsored group whose mission is to foster good will in the Town of Fairfax through implementation of a Volunteer Program that meets Town and community needs. Guided by a seven member Advisory Board, the Volunteers have undertaken several projects that directly support flood mitigation, healthy streams, and other disaster management objectives, including: coordination of a Volunteer Flood Response Team after the Flood of 2005; annual creek cleanups; the Stream Life

Awareness Campaign; renovation of bridges throughout the Town and the Community Center; coordination of CERT training; and the Fairfax Trails Project, which included developing a map showing flood zones and emergency trails.

Sustainable Fairfax

Sustainable Fairfax is one of the first nonprofit educational organizations in Marin County to pioneer sustainability, with a legacy of educating the Town Council, supporting the community, providing services to the Town, and conducting educational events since 1999. The Sustainability Center which opened in 2007 has a permaculture demonstration in the backyard that features flood mitigation and water reclamation for the home user.

Sustainable Fairfax has held brainstorming sessions on sustainability for Fairfax's General Plan revision. Ideas presented to the General Plan Advisory Committee included: on-site water retention; reducing runoff to the creeks; erosion control; use of drought resistant plants; and eliminating pesticide use.

Friends of Corte Madera Creek Watershed

Friends of Corte Madera Creek Watershed, an all-volunteer, non-profit organization, was founded in 1995 to protect the remaining natural ecosystems of the area, especially those relating to urbanized creeks and wetlands, and where possible to increase the diversity of these ecosystems. Friends encourages residents and businesses to adopt creek-friendly practices, and works with local governments and public agencies to advocate for policies that benefit natural ecosystems. Hands-on activities are focused on creek clean-ups and habitat enhancement projects on public property. Since the December 31, 2005 flood, the Friends of Corte Madera Creek have been involved in several activities that have supported the Town's flood mitigation efforts, including participation in the Fairfax and San Anselmo Creek Surveys; establishing high water marks; supporting the 300 Olema road streambank stabilization project; and participating in the Ross Valley Watershed Project.

Ross Valley Mitigation League

Established following the December 31, 2005 floods, this volunteer group has participated in several efforts to support Ross Valley Watershed communities, including identifying and mapping the high water marks.

Marin Center for Volunteer and Nonprofit Leadership (MCVNL)

The Center promotes volunteerism, strengthens nonprofits, and enhances community leadership in Marin County. As one of the Volunteer Centers of the Bay Area, the Center works with local agencies coordinating emergency preparedness and mobilizing volunteer resources to help the community when disaster strikes. The main role in responding to disasters is to mobilize emergent volunteers who want to help and connect them with organizations that need assistance. Disaster-related volunteer work may include such tasks as damage assessment, food preparation, language interpretation, and message delivery. Other tasks run the gamut from cleaning up to entering data to transporting people to answering phones.

Marin Interagency Disaster Coalition

Volunteer and private agencies are part of the Marin Operational Area's mutual aid system. The Marin Interagency Disaster Coalition (composed of the American Red Cross, The Salvation Army, Marin Community Food Bank, Volunteer Center of Marin, Marin Interfaith Council and Marin Humane Society) is an essential element of Marin County's response to meet the care and shelter needs of disaster victims. These agencies are represented at the Marin County EOC when activated.

American Red Cross - Marin

American Red Cross - Marin, part of American Red Cross Bay Area, meets immediate emergency disaster-caused needs by providing shelter, food, clothing, and health and mental health services to address basic human needs. The Red Cross also feeds disaster victims and emergency workers, handles inquiries from concerned family members outside the disaster area, provides blood and blood products to disaster victims, and helps those affected by disaster to access other available resources. During non disaster times, the Red Cross supports the Town of Fairfax by conducting emergency preparedness training and public education materials and presentations.

Salvation Army

The Salvation Army provides numerous disaster relief services. The Salvation Army's disaster response is community based, varying from place to place based upon the community's situation and the magnitude of the disaster. In a disaster, The Salvation Army has the ability to provide both immediate emergency assistance and long-term recovery help. Emergency response services are activated on short notice according to an agreed-upon notification procedure, while long-term recovery is strategically planned in response to the situation, through working and partnering with many other community entities. The Salvation Army is also active in emergency preparedness and public education in the community.

4.2 Plans

The Town of Fairfax has several plans that address disaster management. These plans define important Town policies and support the ordinances and activities described elsewhere in this document. This section reviews Town plans and highlights the elements that are relevant to disaster mitigation and can support future implementation of flood mitigation actions identified in this plan.

The General Plan

All cities and counties in California are required to adopt a General Plan that lays out major policy goals. The General Plan includes elements, which are sections that address a variety of important topics. The element most closely related to this Flood Mitigation Plan is the Environmental Safety Element, which focuses on reducing geologic, flood and wildfire risks. Other elements also provide guidance relevant to mitigation, including the Land Use, Open Space, Housing, Circulation and Town Center Elements. The Fairfax General Plan is currently being updated, including the Environmental Safety Element.

Capital Improvement Program

The Capital Improvement Program for the Fiscal Year 2005-2006 included several projects that support flood mitigation, including:

- Fairfax Creek Restoration Project - Watershed stabilization and flood reduction project along Fairfax Creek in the vicinity of 300 Olema Road.
- Street and Storm Drain Rehabilitation - Pastori Pipe and Wood Lane Pipe, and Cascade Drive roadway stabilization project to protect road and creek bank from further erosion
- Scenic Road Retaining Wall - Construction of a new retaining wall on the downhill side of Scenic Road

Funding for the Capital Improvement Program includes General Fund, Local Measure F and Measure K Funds, State and Federal Funds, and Creek Restoration Funds.

Town of Fairfax Emergency Operations Plan (EOP)

The EOP establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the Town of Fairfax. It provides information on the Town's emergency management structure and how the emergency management team is activated.

Additionally, the plan includes threat assessments that provide a brief analysis of hazards and how those hazards could affect the Town. The document serves as the legal and conceptual framework for emergency management in Fairfax. Fairfax is part of the Marin County Operational Area which serves as the county-wide coordination point for all major emergencies and disasters, and is the link to the State Office of Emergency Services under the Standardized Emergency Management System (SEMS).

Other documents supporting emergency preparedness and response include:

- Fairfax Police Department Uniform Evacuation Protocol: includes Incident Commander Checklist, evacuation protocols, and supporting documents and forms
- Disaster Preparedness Evacuation Planning Guide: provides information to the public on how Alerts, Warnings, and Evacuation Orders are issued and includes guidance on pre-evacuation steps to take before an emergency occurs.
- Ross Valley Flood Notification Protocol: prepared by the Marin County Office of Emergency Services for the Telephone Emergency Notification System (TENS).

4.3 Codes and Regulations

The Town of Fairfax Municipal Code of Ordinances includes codes and regulations to govern development, construction and land use activities, in addition to administrative and other functions. They include construction standards, site requirements, use limitations, study requirements and mitigation requirements which help directly or indirectly to minimize the exposure of people and property to loss or injury resulting from disasters. A brief summary description of each relevant Title and Chapter of the Code is described below, particularly as relates to the flood hazard, but also as relates to general building practices and other hazards such as fire and landslide.

Title 2: Administration and Personnel

Chapter 2.5.2 Emergency Services

Section 2.52.010 - The declared purposes of this chapter are to provide for the preparation and carrying out of plans for the protection of persons and property within the Town in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of the Town with all other public agencies, corporations, organizations and affected private persons.

Title 8: Health and Safety

Chapter 8.04 Uniform Fire Code

Adopts the 2001 California Fire Code which consists of the 2000 Edition of the Uniform Fire Code, and the Uniform Fire Code Standards published by the International Fire Code Institute, 2000 Edition.

Chapter 8.06 International Wildland-Urban Interface Code

In December 2007, the Town Council adopted the 2006 Edition of the International Wildland Urban Interface Code, regulating and governing the mitigation of hazard to life and property from the intrusion of fire from wildland exposures, from adjacent structures and prevention of structure fires from spreading to wildland fuels in the Town of Fairfax; and further providing for the issuance of permits and collection of fees.

Chapter 8.28 Watercourses

- Defines creek as San Anselmo Creek, all its tributaries, Fairfax Creek, or any other creek, channel or watercourse wherein, during the rainy season of the year or any other time, water runs in a defined channel
- Declares that any weeds, trees, debris, rubbish, rank growth or thing whatsoever in any creek which at any time interferes with the free and unobstructed flow of water in the creek constitutes a nuisance, and provides for summary abatement.
- Declares that it is unlawful for any person to throw, deposit or place any rubbish, debris, garbage or other personal property in any creek, or to in any way obstruct the free flow of water, in any creek at any time
- Requires that every owner of property in the Town shall, at all times, keep free and clear of weeds, trees, debris, rubbish or any other obstruction all creeks or portions thereof which flow upon, over or across the property of the owner, and the failure to do so shall constitute a misdemeanor
- Provides for removal of obstructions by the Public Works Director, and allows for entrance to private property for that purpose
- Authorizes the Public Works Director to widen, straighten and deepen the channel in any creek in the Town to such an extent as to provide a channel that will carry all water normally flowing in the creek during seasonal rains

Chapter 8.32 Urban Runoff Pollution Prevention

The intent of this chapter is to protect and enhance the water quality of the state's, and the nation's watercourses, water bodies and wetlands in a manner pursuant to and consistent with the Clean Water Act by:

- Minimizing discharges other than storm runoff to storm drains or watercourses;
- Controlling the discharge to storm drains or watercourses from spills, dumping or disposal of materials other than rain water; and
- Reducing pollutants in storm water discharges to the maximum extent practicable.
- Specifying discharge regulations and requirements
- Establishing criteria for inspections and enforcement

Chapter 8.48 Regulatory Fee for Clean Water Storm Water Activities

The purpose of this chapter is to ensure the future health, safety and general welfare of the citizens of the Town by establishing a funding source to provide:

- enforcement of the Town's Urban Runoff Pollution Prevention Ordinance
- maintenance and repair of the Town's stormwater drainage facilities,
- capital improvements to the Town's storm drainage system
- other clean stormwater activities

Title 15: Building and Construction

In December 2007, the Fairfax Town Council adopted the following codes:

- 2007 edition of the California Building Code (Title 24 Part 2) based upon the 2006 International Building Code (IBC) including Appendix Chapter I, Administration, Appendix Chapter A, Employee Qualifications, Appendix Chapter G, Flood-Resistant Construction, Appendix Chapter H, Signs, Appendix Chapter I, Patio Covers, and Appendix Chapter J, Grading.
- 2007 edition of the California Electrical Code (Title 24 Part 3) based upon the 2005 National Electrical Code (NEC) including Annex G, Administration.
- 2007 edition of the California Mechanical Code (Title 24 Part 4) based upon the 2006 Uniform Mechanical Code (UMC) including Appendix Chapter 1, Administration.
- 2007 edition of the California Plumbing Code (Title 24 Part 5) based upon the 2006 Uniform Plumbing Code (UPC) including Appendix Chapter 1 Administration.
- 2007 edition of the California Energy Code (Title 24 Part 6)
- 2007 edition of the California Existing Building Code (Title 24 Part 10) based upon the 2006 International Existing Building Code (IEBC) including Appendix Chapter A1.

Title 16: Subdivision

Chapter 16.04 General Provisions

The purpose is to:

- Adopt regulations to supplement and implement the Subdivision Map Act of the State of California (Cal. Gov't Code, Title 7, Division 2, commencing with § 66410) and may be cited as the "Subdivisions Ordinance of the Town of Fairfax"; (In instances where this chapter is in direct conflict with the Subdivision Map Act, the latter shall control.)
- Implement the Fairfax general plan, any planned development plan or specific plan and zoning ordinance; and
- Establish reasonable standards of design and reasonable procedures for subdivision and resubdivision in order to further the orderly layout and use of land and insure proper legal descriptions and monumenting of subdivided land.

Chapter 16.08 Tentative Maps

A tentative map shall be required for all requests for a major subdivision or a minor subdivision. Section 16.08.20 identifies all mapping requirements. Listed below are the criteria most relevant to flood risk reduction:

- A topographical contour map showing accurately the existing watercourses terrain within the subdivision, existing drainage channels, roads, culverts, overhead and underground utility lines which may affect the design of the subdivision, wells and springs, major structures, irrigation ditches, utility poles and other improvements in their correct location.

- Map(s) showing area(s) of property which is (are) affected by geologic conditions posing potential safety hazard(s) and areas subject to inundation or ponding;
- Location, approximate grade, direction of flow and type of existing and proposed storm drainage channels, storm drains and retention and detention areas;
- Location, alignment and tops and bottoms of all banks of all natural drainage ways;
- Statement or plan as to proposals for draining the areas subject to 100- and 250-year flooding or inundation by waters flowing into or from the subdivision;
- Preliminary grading plan

Title 17: Zoning

Section 17.040.010 General Provisions

Pursuant to the provisions of California Government Code § 65800, an official land use zoning ordinance for the Town of Fairfax was adopted and established to serve the public health, safety, comfort, convenience and general welfare, and to provide the economic and social advantages resulting from an orderly planned use of land resources, and to encourage, guide and provide for the future growth and development of the Town in accord with the Fairfax General Plan.

Section 17.040.040 Setbacks; Structures Adjacent to Fairfax and San Anselmo Creeks

- No building, accessory building, structure or swimming pool shall be constructed closer to the top of the stream bank of the Fairfax and San Anselmo creeks than 20 feet or two times the average depth of the bank, whichever is greater, without authorization by variance, except for retaining walls and bulkheads which replace failing structures and which do not increase the height, width, length or configuration of the original structure.
- All structures approved under this section must comply with the requirements in Chapter 8.24, Watercourses, of this code.

Chapter 17.068 Floodplains

Section 17.068.30 Statement of Purpose

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- protect human life and health;
- minimize expenditure of public money for costly flood control projects;
- minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- minimize prolonged business interruptions;

- minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in the areas of special flood hazard;
- help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- insure that potential buyers are notified that property is in an area of special flood hazard; and
- insure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Section 17.068.040 Methods of Reducing Flood Losses

In order to accomplish its purposes, this chapter includes methods and provisions for:

- Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve the uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel flood waters;
- Controlling filling, grading, dredging and other development which may increase flood damage; and
- Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

4.4 Programs and Mitigation Activities

Town of Fairfax Activities

Repair of Town Facilities Damaged in the December 31, 2005 Flood

The Town of Fairfax is committed to completing the repair of Town facilities in a way that both reduces the potential for damage from future floods and contributes to healthier creeks. The Town has been working in concert with the Federal Emergency Management Agency and the State Office of Emergency Services to expedite the design, review and construction of necessary projects.

Although the Town Hall has suffered flood damage in numerous flood events, and elevation or relocation of the structure is highly desirable, it was found that it was not cost effective to do so. Therefore, wet flood proofing and flood gates are being installed to provide protection in the future.

In respect to damaged bridges and drainage culverts, the Town commissioned a study by Fluvial Geomorphology Consulting (FGC) in July 2006. The main purpose of the study was to evaluate the potential of biotechnical bank stabilization and riparian and aquatic habitat protection and enhancement as part of necessary repair work at six project sites. The resulting report provided recommendations for approximately 200 flood management improvement projects along Fairfax and San Anselmo Creeks, most of which would suit the dual purpose of flood risk reduction and habitat restoration.

Flood Mitigation and Creek Restoration - 300 Olema Road

The area in the vicinity of 300 Olema Road has a history of repeated flooding. In 2006, the Town initiated a flood mitigation and creek restoration project in conjunction with the Department of Water Resources Urban Streams Restoration Program, the Friends of Corte Madera Creek Watershed, the Marin Conservation Corp, and the Ross Valley Sanitary District. The project is made up of several components including: replacing the undersized culvert with a single span bridge and removing one wall and the bottom of the concrete channel; widening the natural channel downstream of 300 Olema; providing erosion control through plantings and installation of a willow wall and mattress; and installation of a drip irrigation system. Unfortunately the project has not yet been completed due to difficulties encountered with a property owner who would be affected by the channel widening portion of the project.

Creek Clean-Ups

A creek-wide clearing and clean-up took place in September 2006, accomplished through the joint efforts of the Marin Conservation Corps, the Towns, and the County. Items which could cause major blockages in the coming winter rainy season such as debris, overgrown vegetation, and branches were removed from the creeks.

This was in addition to the annual Creek Clean-up which is coordinated by the Fairfax Volunteers each October. Each year volunteers gather debris and construct a temporary sculpture in the park to raise awareness of how much refuse finds its way into the watershed. The 2007 effort focused on Cascade and Fairfax Creeks.

Flood Gate Program for Commercial Properties

As an incentive to local businesses who suffered damage in the last flood, the Town Council approved the waiver of permit fees for the installation of floodgates for any structure in Town, a savings of approximately \$80 per installation. A further incentive was later provided by making matching funds available for the purchase and installation of the flood gates. The Town is allocating a portion of the ERAF excess funds to support this project.

Flood Warning and Notification

Creek Depth Monitoring Device:

A creek depth monitoring device was installed in the Fairfax Creek behind the Youth Center, adjacent to the Town Hall and Police Station. It is solar powered and is connected to a remote computer monitoring system that can send notices to staff computers and cell phones when the creek reaches a critical level. The Mayor, Town Manager, Police Chief, Fire Chief, and Public Works Director analyze the data and make a determination regarding activation of the siren and notification procedures. Real time data is also provided via the Town website and through the Ross Valley Fire Department website so that any resident or interested party can log on during a rain event to monitor the potential for flooding. The monitoring device will also be useful in the effort to collect better data for the Ross Valley Watershed hydrology effort.

Siren Warning System:

As part of a Disaster Awareness Program, the Town Council approved the installation of three emergency warning sirens to be installed throughout the Town. The first of the sirens was installed in the Fairfax Corporation Yard. The purchase and installation of the sirens was funded through a \$50,000 grant from Marin County Supervisor Hal Brown, Measure F, and PG&E, who donated and installed the utility pole. The siren is a Federal Signal Corporation Eclipse 8 siren, which sits atop a 70-foot pole. With 360 degree omni-directional coverage, it is expected to reach one mile in all directions, and will be very effective in notifying residents of imminent flood danger. Residents are advised to tune to local radio and television stations for information when they hear the siren (KCBS 740, KGO 810, or KTVU Channel 2).

Notification:

The Town of Fairfax has joined with other Ross Valley communities in using the Telephone Emergency Notification System (TENS) to provide local residents with hazard information in a timely and effective manner. The Marin County Office of Emergency Services coordinated the formation of the Ross Valley Flood Notification Area and will provide the notifications according to protocols established jointly by the participating jurisdictions.

Community Preparedness Activities Undertaken Since December 31, 2005

- Rejoined Flood Control District 9
- Reactivated the Town of Fairfax Citizen's Disaster Council
- Created a Disaster Preparedness web page on the Town web site
- Held 2 Disaster Preparedness Fairs in 2006
- Distributed Emergency Plan Brochure at Town Hall, Police Department and several local businesses that contributed funds to secure the brochures
- Continued providing sand and sandbags for residents and businesses
- Distributed flood and creek tips to targeted groups in advance of severe storms

Get Ready Ross Valley:

The Ross Valley Fire Department and the Ross Valley Firefighters Club, in conjunction with Marin County Get Ready has conducted numerous two-hour neighborhood disaster preparedness trainings to residents, Town employees, schools districts, and other interested parties. This community based program is designed to train resident trainers who can in turn provide the training in their neighborhood. The program emphasizes basic skills and preparation needed before, during and after a disaster to survive on your own for 72 hours and support community needs as well. It is estimated that more than 300 people have received the training in the Ross Valley.

Community Emergency Response Team (CERT) Training:

The Ross Valley Fire Department also conducts CERT Training in the community. The goal is to train individuals to be self-sufficient in the immediate hours and days following a major disaster. The training is provided over a period of 2-3 days, using hands on scenarios and problem solving. Community Emergency Response Teams are trained in basic emergency response procedures such as: conducting an initial size-up of the situation in their immediate area; reducing immediate dangers by turning off utilities, suppressing small fires, and evacuating hazardous areas; performing immediate medical triage and basic treatment of injuries; assessing structural integrity and performing light search and rescue; collecting and recording vital information to be relayed to professional responders on damage, victims, and actions taken or resources needed; and, providing leadership to untrained volunteers.

Other Local Agency Mitigation Programs

Marin County Stormwater Pollution Prevention Program (MCSTOPPP)

Formed in 1993, MCSTOPPP is a joint effort of Marin's cities, towns and unincorporated areas. Their goal is to: prevent stormwater pollution; protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways; and comply with State and Federal regulations.

Though the County and each of the eleven cities and towns carry out their own individual stormwater pollution prevention programs, MCSTOPPP provides for the coordination and consistency of approaches between the individual participants and documents their efforts in annual reports. These reports include information on illegal discharges, street cleaning efforts, creek maintenance, new development, and other issues of concern. MCSTOPPP provided a small grant to the Stream Life Awareness Campaign Committee to support the fabrication of steelhead crossing signs produced by Manor School students.

Ross Valley Watershed Flood Protection and Creek Restoration Program

This program was initiated in January 2006, in response to the December 31, 2005 floods that impacted many Marin County communities, to create a comprehensive strategy for the entire Ross Valley Watershed. Led by the County of Marin Department of Public Works, the Program is a collaborative effort that includes the City of Larkspur and Towns of Fairfax, Ross and San Anselmo. The goal of the program is for the involved communities to agree on short-, mid-, and long-term flood protection measures for the Ross Valley, and to conserve and enhance the Ross Valley creek network. Objectives of the program include:

- Complete the Corte Madera Creek Flood Control Project
- Perform essential maintenance for flood conveyance
- Initiate flood protection for Kentfield, upper Ross, San Anselmo and Fairfax
- Institute state of the art flood early warning and emergency response systems
- Integrate fish passage and habitat restoration in flood protection measures.

Following hydrologic studies, and creek walks to identify points of constriction, the program identified eight priority solutions, one of which is to replace the Downtown Fairfax culvert, which is undersized and the main cause of flooding in the Town. It was also suggested that there may be potential sites for retention basins upstream to reduce the runoff flow to the culvert. Additional hydraulic modeling is planned for Fairfax Creek from Lansdale Station to 300 Olema Road to provide more detailed analysis of cost effective options for Fairfax.

Federal and State Programs

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a congressionally authorized program to reduce the costs and impact of flooding across the United States. Under this program, the Federal government makes affordable flood insurance available to homeowners, business owners, and renters in participating communities. In exchange, those communities must adopt and enforce minimum floodplain management regulations to reduce the risk of damage from future floods. Fairfax meets the requirements for NFIP compliance through Section 17.068 of the Town Code.

Flood insurance reduces the cost of Federal disaster assistance – according to FEMA, every three dollars paid in flood insurance reduces disaster assistance payments by one dollar. However, the NFIP achieves its greatest fiscal impact by encouraging communities to reduce flood risks. FEMA estimates that sound floodplain management practices reduce flood damage by \$1 billion annually; and that buildings constructed in compliance with NFIP requirements are likely to suffer 80 percent less damage annually than non-compliant buildings.

To encourage communities to increase the effectiveness of floodplain management programs, FEMA has implemented the Community Rating System. Under the Community Rating System, communities receive credit for implementing floodplain management measures that go beyond the minimum criteria of the NFIP. For example, when a community moves from a Level 10 (the basic level of participating) to Level 9, flood insurance policy holders receive a five percent discount on their insurance premiums. The CRS grants credits for eighteen different activities that fall under four categories: Public Information (six activities); Mapping and Regulations (five activities); Flood Damage Reduction (four activities); and Flood Preparedness (three activities). The maximum premium reduction a community can receive under the CRS is 45%. Currently, the Town of Fairfax is exploring participation in the CRS. As of October 2007, there were 170 NFIP policies in effect in the Town, at a total annual premium of \$134,229.

Small Watershed Program

The Small Watershed Program, authorized under Federal law in 1944 and 1954, is administered by NRCS. This funding program serves three general purposes: 1) to prevent damage from erosion, floodwater, and sediment; 2) to further the conservation development and disposal of water; and 3) to promote the conservation and proper utilization of land. The Small Watershed Program achieves these goals through watershed surveys and planning and watershed and flood prevention operations and construction. The Small Watershed Program, which is limited to watersheds of 250,000 acres or smaller, funded over \$100 million for flood control, agricultural management and watershed protection in the State of California.

4.5 Financial Resources

While some mitigation activities can be carried out without significant cost, others need a substantial expenditure. The financial resources listed below are potentially available to the Town to pursue the flood mitigation measures identified in this plan.

Federal and State Funding Sources

Hazard Mitigation Grant Program (HMGP)

This FEMA administered program provides grants to states and local governments following a presidential disaster declaration. The funds can be used to implement long-term hazard mitigation measures. According to the Disaster Mitigation Act of 2000, communities must have an approved Local Hazard Mitigation Plan (LHMP) to receive HMGP funds after May 1, 2005. Funds will be granted only to projects that conform to local and state mitigation plans. Federal grant funds can provide 75 percent of a project's total cost; other sources must provide 25 percent matching funds.

Pre-Disaster Mitigation Program (PDM)

The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event.

Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are awarded on a competitive basis. In fiscal year 2007, \$100 million was available for PDM competitive grants, technical assistance and program support. FEMA grants can fund 75 percent of a project; other non-federal sources must provide 25 percent matching funds.

Flood Mitigation Assistance Program (FMA)

FMA is a program under the National Flood Insurance Program (NFIP) that provides funding for states and communities to prepare Flood Mitigation Plans and conduct flood mitigation projects. Communities are encouraged to prioritize projects relating to repetitive loss properties. A community must have a Flood Mitigation Plan to receive a FMA grant, and only projects specified in that plan are eligible for grants. FEMA contributes 75 percent of a project's cost; other non-federal sources must provide 25 percent matching funds. Preparation of this Flood Mitigation Plan was supported by a FMA grant.

Repetitive Flood Claims (RFC) Grant Program

The Repetitive Flood Claims Grant Program provides funding to reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP that have had one or more claims payments for flood damages. RFC funds may only mitigate structures that are located within a State or community that cannot meet the requirements of the Flood Mitigation Assistance (FMA) Program (described above), for either cost share or capacity to manage the activities. The long-term goal of the RFC is to reduce or eliminate claims under the NFIP through mitigation activities that are in the best interest of the NFIP. The RFC Program was launched by FEMA in 2006, at a funding level of \$10 million nationwide. Only mitigation projects for acquisition of insured properties that have one or more claim payments for flood damages, and either demolition or relocation of structures, with conversion of property to deed restricted open space uses, are eligible. All RFC grants are eligible for up to 100 percent Federal assistance.

Increased Cost of Compliance (ICC)

Increased Cost of Compliance provides NFIP-insured property owners with substantial flood damage with up to \$30,000 to bring a home or business into compliance with the local floodplain ordinance through elevation, floodproofing, relocation, or demolition. Eligible properties must have sustained “repetitive damage”, or damage by flooding twice in the past 10 years, where the cost of repairing the flood damage, on average, equaled or exceeded 25 percent of the property market value at the time of each flood. Also, there must have been flood insurance claim payments for each of the two flood losses and the community’s floodplain management ordinance must have a repetitive loss provision. Through a separate claim process, owners of flood damaged property may apply for up to \$30,000 to help pay for flood mitigation projects carried out in compliance with local floodplain ordinance requirements, including: floodproofing, relocation, elevation, or demolition.

Property owners may file ICC claims if: 1) the local community determines the home or business meets the substantial damage criteria (outlined in the county flood damage protection ordinance); or, 2) the community must have a repetitive loss provision in its floodplain management ordinance, and must determine that the home or business meets the eligibility criteria listed above. Because of increasing property market values, more properties may qualify under the substantial damage criteria than the repetitive loss criteria.

Community Development Block Grants (CDBG)

Block grants are administered by the Department of Housing and Urban Development to fund housing, economic development, public works, community facilities and public service activities serving lower income people. These funds can be used for mitigation works. CDBG funds are considered local funds once they are received, and thereby are eligible to provide the 25 percent local match required for receipt of the federal mitigation grant funds.

Emergency Watershed Program Assistance

The Natural Resources Conservation Service (NRCS) implements the Emergency Watershed Protection Program, in response to emergencies caused by natural disasters. The program offers emergency assistance to jurisdictions and special districts after a disaster causes impairments in a watershed. The program works on a 75 percent Federal and 25 percent local match cost-sharing basis. Eligible activities include bank reinforcement, levee and structural repair, reseeding of damaged areas, and debris removal from stream channels, road culverts and bridge abutments.

Local Funding Sources

The Town of Fairfax General Fund support the ongoing mitigation activities of the Town, such as enforcing disaster resistant building codes and other regulations described earlier in this section. These funds are raised through property taxes, fees, and special assessments. Some of the proposed mitigation strategies outlined in this plan can be implemented through existing staff resources and with special funds as described below. However, it is recognized that external funding sources, such as federal or state grants will be required to support local funding sources.

Measure K Bond Assessment for Capital Projects

Measure K was placed on the November 1999 election ballot to gain voter approval to issue bonds to supplement the Fairfax General Fund revenues in order to maintain safe neighborhoods, streets and community facilities; repair and resurface neighborhood streets and major corridors; replace 60 year old stormdrains; repair leaky roofs and make seismic upgrades to community facilities; and make sidewalks more accessible to the disabled. The ballot measure passed with the require two-thirds majority vote and bonds in the amount not to exceed \$6.83 million were authorized. These funds support both on going maintenance activities such as street resurfacing, as well as mitigation activities.

Storm Runoff Fee

In 1995, the Town established a funding source to provide enforcement of the Town's Urban Runoff Pollution Prevention Ordinance, to provide maintenance and repair of the Town's stormwater drainage facilities, to provide capital improvements to the Town's storm drainage system and to provide other clean stormwater activities. The charge is per "run-off unit" as set forth in the Municipal Code and is \$15 per run-off unit which is collected with the property tax roll.

Flood Control District 9 Drainage User Fee

Marin County Flood Zone 9, which includes Fairfax, held an election in 2007 which added an assessment not to exceed \$180 for a single-family home to provide for flood protection and watershed improvements. The assessment gained a simple majority approval, however, the election outcome is currently being challenged in the courts, resulting in a delay in spending the fees that are being collected with property taxes. This fee is designed to assist with the implementation of many of the recommendations developed by the Ross Valley Watershed Flood Protection and Creel Restoration Program.

Excess Educational Revenue Augmentation Fund (ERAF)

ERAF is a mechanism enacted in 1992 by the State, to shift local tax revenues from cities, counties, and special districts to a state ERAF fund. The State uses this fund to help school and community college districts meet minimum funding requirements. The “Excess ERAF” refund to the County is the result of the local tax base increasing at a rate faster than the increase in the State funding limits for schools and community colleges. The “excess” is proportional to each city’s contribution as set forth by state statute. ERAF funds received in 2007 are being used to support the commercial business flood gate incentive program, and to fund a one-year part-time position to assist the Town in working with FEMA to complete damage repairs resulting from the December 31, 2005 flood, as well as seeking an improved rating in the NFIP Community Rating System and exploring other grant fund opportunities.

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