

Marin County Flood Control and Water Conservation District

FLOOD CONTROL ZONE 4 ADVISORY BOARD MEETING

OCTOBER 21, 2015

STAFF REPORT

Item 1. Approval of Meeting Minutes: March 12, 2015

Recommended Action: Approve minutes.

Item 2. Open Time for Items Not on the Agenda

Comments will be heard for items not on the agenda (limited to three minutes per speaker).

Item 3. Marin Flood Preparedness Week Fair

The District is hosting a fair on October 24 in observance of California Flood Preparedness Week (October 19 – 24). The fair is free, open to the public (no registration required), and will gather together organizations and individuals with an interest or expertise in flood preparedness. Stop by the Marin Exhibition Hall Manzanita Room, 10 Avenue of the Flags, San Rafael, to connect with resources for protecting your home or business. See our recent press release here for more information: <http://www.marincounty.org/main/county-press-releases/press-releases/2015/dpw-flood-fair-100715>

Item 4. Zone Engineer's Report

a. El Niño and Wet Weather Preparedness

The National Weather Service anticipates that the strong El Niño which has developed will last through this winter. Staff will present the basics of El Niño, including how it is measured, how it can influence the weather, and what weather and climate experts are saying about how it might affect the amount of precipitation we receive this upcoming rainy season.

Regardless of predictions, the District prepares for every year as though it is an "El Niño year." Although two major flooding years in Marin's history occurred during years with El Niño episodes (1997/98 and 1982/83), it is not unusual to experience major flooding in the absence of El Niño, such as in 2005/06. Flooding can even occur during a drought year such as last year, when the County suffered some of its worst flooding damage since 2006.

It is for these reasons that the District follows an annual program of facility and creek maintenance which mitigates the risk of flooding. This includes conducting regular inspections of the creeks, floodwalls, and levees within the District's jurisdiction, and frequently testing pumps, motors, and generators. Creeks, drainage ditches, pipes, trash racks, and pump wet wells are cleared of vegetation, sediment, and trash in the fall and throughout the winter as needed. A facility-specific update regarding maintenance, storm preparedness and response is provided below.

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Pump Station Maintenance: All scheduled annual pump maintenance has been completed. This includes both major maintenance for select pumps and electric motors, as well as preventative maintenance for all pumps/motors. (Individual pumps and motors are scheduled for major maintenance on a six year interval.) Due for planned maintenance this year were pump #1 at Cove. The amount budgeted for completing this work was \$25,000 and all work was completed for \$14,608.

In addition to the regular maintenance activities, a secondary inlet grate at Cove Pump Station was replaced to help prevent trash and debris from entering the pump station. Also, the District has placed extra emphasis on addressing debris within the storm drain systems which flow to the pump stations by inspecting and vactoring pipes within its right of way and coordinating with the City and private property owners on pre-season inspection and cleaning. In addition, the District is sending a community newsletter to all residents which aims to increase awareness of the dangers of garbage and debris within the storm drain system and also presents best practices for refuse disposal. Residents and property owners should see it in their mailboxes sometime this month.

Vegetation Maintenance: The Conservation Corps North Bay performed annual vegetation maintenance along East and West Creeks and at the Karen Way Trash Rack. During maintenance, the District performed some isolated bank stabilization repairs and also removed deteriorated sandbags. The East Creek access road was also mowed this summer.

Sediment Removal: Earlier this year the need for sediment removal was assessed along West Creek near the Cecilia Way crossing and it was determined that sediment accumulation warranted some sediment removal. An individual permit was obtained from the San Francisco Regional Water Quality Control Board and a programmatic permit was previously secured for this work from California Fish & Wildlife as part of the Routine Maintenance Agreement (RMA). Work was scheduled to take place on Friday, October 16.

Storm Preparedness & Response: The Conservation Corps North Bay inspects and clears facilities as needed before, during, and after storms. They are also available for sandbagging and/or tarping levees and creek banks if requested. The District keeps sand and bags at the Crest Marin Pump Station in Zone 3 for authorized emergency use only. Additionally, County crews make rounds to all District pump stations to make sure they are in working order, and receive alarms from the pump stations to warn of emergency situations.

The District has a fleet of portable pumps which are maintained and tested prior to the winter season and some are pre-deployed to key locations. The nearest pumps that are not pre-deployed are stored at Shoreline Pump Station (in Zone 3) and Pamela Court Pump Station (in Zone 4).

In addition to the storm preparedness and maintenance outlined above, the District has targeted specific actions for supporting the following goals related to the operation and maintenance of the Cove Stormwater Pump Station.

1. Remove debris in stormwater collection system
2. Reduce amount of debris entering stormwater collection system

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3. Provide supplemental pumping
4. Increase monitoring / reduce response time during storms
5. Collect information required for pump station evaluation

The 2015-16 action plan for supporting these goals is provided in Table 1, which is included as part of this staff report.

b. Cove Stormwater Pump Station Evaluation*

***Note: Due to pending litigation, staff is unable to discuss or comment on matters which may be related to flooding which occurred in the vicinity of the Cove Shopping Center on December 3, 2014.**

Construction of the Cove Stormwater Pump Station was completed in 1976 as a measure for reducing flood risk to the Cove Shopping Center, as well as nearby homes located in a low-lying area of Tiburon's Bel Aire neighborhood. The station receives stormwater from District, Town of Tiburon, and privately owned stormwater collection systems, and then pumps it into nearby East Creek. The station undergoes regular maintenance and has been upgraded several times since its construction. At nearly 40 years old, a thorough evaluation will verify if the station is still meeting its intended design parameters. This evaluation will also assess current operation and maintenance practices, and also provide recommendations for both short- and long-term improvements. Among the improvements considered are increasing the station's capacity to the level required to receive FEMA accreditation.

Upon the recommendation of the Flood Control Zone 4 Advisory Board, staff recently solicited a Request for Proposals to secure professional services for carrying out the evaluation. Three proposals were received and all three proposing consultants were interviewed by staff. After a thorough review and discussion of the proposals and interviews, staff recommended that the Board of Supervisors approve a professional services contract with Schaaf & Wheeler Consulting Civil Engineers to furnish services for the evaluation. The staff requested the Board of Supervisor's approval at their October 20, 2015 meeting. Schaaf & Wheeler is a small, local civil engineering consulting firm headquartered in Santa Clara, with additional offices in San Francisco, Santa Rosa, and Salinas. Their team, including sub-consultants, is comprised of experts in the fields of geotechnical engineering, geology, hydrology and hydraulic engineering, and has proven experience with and an understanding of stormwater pump station design and rehabilitation.

It is estimated that the evaluation will be completed by spring 2016, with results and products to be presented at publicly held meetings of the Advisory Board. The cost for these professional services is \$174,750, with all costs paid for from the existing FY 2015-2016 Flood Control Zone 4 Professional Services Budget.

Item 5. Watershed Program Update

a. Southern Marin Watershed Guide

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The Southern Marin Watershed Guide (WG) will describe existing conditions and summarize flooding conditions at the watershed scale in a user-friendly, graphics-rich format. The purpose of the Guide is to organize information and data for the sub-watersheds draining to Richardson Bay (Marin City, Coyote Creek, Arroyo Corte Madera del Presidio, Ryan Creek, Sutton Manor/Alto/Strawberry, and East and West Creeks) and to identify a list of project concepts to address both short term and long term flood and creek management needs. The goal of the WG is to effectively communicate information, findings and recommendations to partner agencies and the community in a concise manner to guide decision making and future commitments. Restoration Design Group and Leslie Stone and Associates are in contract to develop the Watershed Guide. A draft guide is expected by January 2016.

b. Community Meetings

Joint Advisory Board/Community meetings are being scheduled through 2016 to introduce the community to the Watershed Guide, Shoreline Study and project concepts to address short term and long term flooding. The first meeting was held in the Coyote Creek sub-watershed on April 29. The next meeting is November 18 in Marin City. Meetings in Mill Valley, Strawberry and Bel Aire will follow. Additional meeting dates will be posted online and sent to email lists. To sign up for email alerts, visit www.marinwatersheds.org and look for the sign up button on the right.

c. Draft Project List (Formerly Known as Project Summary Report)

A parallel and supporting effort to the Southern Marin Watershed Guide, District staff is assessing potential projects across all sub-watersheds based on a historical assessment of known flooding issues. The assessment will include a description of each flooding issue, an assessment of potential projects which, if constructed, could help address the issue. Also included will be a preliminary appraisal level cost estimate (if available) for each potential project. A draft list of potential projects will be presented at the upcoming community meetings in each sub-watershed and comments will be sought at that time.

d. Richardson Bay Shoreline Study: Sea Level Rise Impacts Assessment and Concept-Level Alternatives Evaluation

This technical study assess vulnerabilities to infrastructure and built areas within the Inner Richardson Bay shoreline (including Zones 3 and 4) to three scenarios of sea level rise (+12, +36 and +60 inches) based on inundation modeling using GIS mapping. The Richardson Bay Shoreline Study will be posted to the marinwatershed web site in October. Public meetings will be held this winter to share the findings of the study.

Item 6. Schedule Next Meetings

The Cove Stormwater Pump Station Evaluation will be ongoing over the next several months, and preliminary alternatives will be presented to the AB for review and comment in the late-winter or early-spring. Staff can update the AB as progress is made with the evaluation to identify a mutually preferred meeting date.

Table 1. 2015-16 Action Plan for Cove Stormwater Pump Station

Goal	This Year's Action(s)	Previous Action(s) Taken
1. Remove debris in stormwater collection system	a. Clean portion of stormwater collection system within District's flood control easement, including trash rack, wet well, and the portion of the 42" pipe within the District's right-of-way, which extends approximately 325 ft. upstream of pump station.	Debris was removed from the storm drainage system at the trash rack and wet well (i.e., forebay). The collection system on public property was surveyed by the county. Following the December storms, the county extended the survey to include private property (including shopping center) and mapped existing drainage system.
	b. Contacted Town of Tiburon and discussed cleaning of stormwater collection system within their jurisdiction.	Not formally requested in prior years; but the Town of Tiburon does have an existing cleaning program.
	c. Contacted shopping center owner and discussed need to clean stormwater collection system within their jurisdiction.	Information on proper care of storm drains and creeks, and waste disposal has been made available on county website at: http://www.marincounty.org/depts/pw/divisions/mcstoppp/general-public/informational-brochures
	d. Proceed with evaluation for possible design and installation of automatic, self-cleaning trash rack.	Trash rack cleaned manually prior to, during, and following storm events.
2. Reduce amount of debris entering stormwater collection system	a. Mail community outreach flyer to outline homeowner responsibilities for trash and debris disposal.	Information on proper care of storm drains and creeks, and waste disposal has been made available on county website at: http://www.marincounty.org/depts/pw/divisions/mcstoppp/general-public/informational-brochures
	b. Discuss improvement of refuse management, including collection, containment, and pickup, at shopping center.	
	c. Investigated and repaired grate at secondary inlet structure immediately adjacent to pump station.	
3. Provide supplemental pumping capacity	a. Place portable pump at pump station prior to beginning of rainy season.	Portable pump placed at pump station following December 3, 2014 flooding. Portable pump was stored at nearby Pamela Court Pump Station.
4. Increase monitoring / reduce response time during storms	a. Have dedicated staff stationed at pump station during inclement weather to ensure quick response for addressing possible system failures.	Staff is automatically notified of pump station emergencies and are on call to respond. Limited staff and the possibility of multiple and competing emergencies makes it difficult to have a dedicated person for a particular pump station. Instead, staff makes rounds from one pump station to the next during storms unless there is an emergency reported.
5. Collect information required for pump station evaluation	a. Summarize pumps' on/off sequencing and compare to original design.	Modifications to the pumps' current mode of operation and current controls have occurred since the pump station's original construction forty years ago.
	b. Cleaned, inspected, and confirmed condition and construction of wet well.	Cleaned regularly.

Marin Flood Preparedness Week Fair

Saturday, October 24th, 2015

**10am to 2pm in the
Manzanita Room at the Marin Exhibition Hall,
10 Avenue of the Flags, San Rafael**

Are you prepared?



The Marin County Flood Control & Water Conservation District invites you to its first flood preparedness fair in observance of CA Flood Preparedness

Learn what El Nino could mean for Marin • Get tips for protecting your property from flooding • Find out how to receive emergency alerts • Learn about your community's level of flood preparedness • See what resources are available to you • Share ideas with other residents
And much more!

Visit these websites to stay informed!

marinwatersheds.org

marinsheriff.org/about.aspx?gi_id=46

marin.onerain.com/home.php

All public meetings and events sponsored or conducted by the County of Marin are held in accessible sites. Requests for accommodations may be made by calling (415) 473-4381 (Voice), (415) 473-3232 (TDD/TTY) or by e-mail at disabilityaccess@marincounty.org at least five business days in advance of the event. Copies of documents are available in alternative formats, upon request.

