

**Marin County Flood Control and Water Conservation District**

**FLOOD CONTROL ZONE 4 ADVISORY BOARD MEETING**  
**AUGUST 11, 2016**

**STAFF REPORT**

**Item 1. Brown Act & Advisory Board Review**

Staff will present a refresher on the basics of the Brown Act and the role of the Advisory Board. The Brown Act was authored by Ralph M. Brown, an assembly member from Turlock, and enacted in 1953 by the California State Legislature in an effort to safeguard the public's right to access and participate in government meetings within the State.

- Specifies advance notice for open public meetings.
- Dictates to County staff specific administrative requirements for meetings.
- Sets provisions on how board members can communicate information with one another.

**Item 2. Approval of Meeting Minutes: May 12, 2015**

**Recommended Action:** Approve minutes.

**Item 3. 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 4. Update on Zone 4 Expenditures**

At the May 12<sup>th</sup> Advisory Board meeting, staff was asked to research Zone 4 labor and legal expenditures and report back to the Advisory Board. For FY 2015-16, Zone 4 labor expenditures were \$238,266. These costs include responding to interrogatories and depositions. The following is a breakdown of staff labor expenditures for Fiscal Year 2015-2016:

<b>County Department/Division</b>	<b>Nature of Work</b>	<b>Total Amount Including Benefits and Overhead</b>
Water Resources	Project management; zone administration; advisory board meeting preparation; preparing outreach materials; inter-agency coordination; response to public inquiries; attending Cove pump station during major storms; preventative pump maintenance, vegetation and levee maintenance; sediment removal; response to interrogatories and depositions	\$164,917
Building Maintenance	Pump station operation & maintenance, response to interrogatories and depositions	\$35,059
Road Maintenance	Tide gate and general maintenance	\$867
Other	Special cost allocation includes County Counsel, Dept of Finance, Tech Support, Human Resources	\$37,423

## ***Marin County Flood Control and Water Conservation District***

### **Item 5. Update on FEMA Hazard Mitigation Funding Opportunity: Marin County Structure Elevation Program**

This FEMA grant program assists homeowners to elevate their homes above the 1% annual exceedance flood water surface elevation. Six homes from Zone 4A submitted the required paperwork to be considered for this program. On July 21 the California Office of Emergency Services called the County to say they are recommending that FEMA award \$3 million in matching funds for this program, for a total of \$4 million in project costs including the 25% local match (the maximum amount that can be awarded through this grant program). Because countywide about \$12 million in home elevation projects were submitted from 89 homeowners it is anticipated that only 25-30 homes across the county will receive funding during this round. However, this is an ongoing program and additional funding opportunities are likely to come up for those that do not receive funding from this year's grant. Staff will update the Advisory Board when FEMA provides the final results of which homes were selected.

### **Item 6. Near Term Cove Pump Station Improvements**

**Recommended Action: Recommend the Board of Supervisors approve the scope of work stated below for FY 2016-17.**

The recently completed Cove Stormwater Pump Station and Collection System Hydrology and Hydraulic Study (Study) included a public input phase that included two public presentations of the Study, a 60-day public comment period, and the issuance of a final report. The final report has been posted online at: [http://www.marinwatersheds.org/pubs\\_reports.html#Zone4](http://www.marinwatersheds.org/pubs_reports.html#Zone4)

The Study outlines several potential improvement projects for the Cove Pump Station. Staff has reviewed the Study, and recommends a near-term project of replacing two corrugated metal pipes that drain into the pump station wetwell. One of these pipes was identified as at risk of failing and could lead to a system failure. The other pipe is located adjacent to the at-risk pipe, and is nearing the end of its design life, and as such it would be cost effective to replace both at the same time. The following information is contained in the Study regarding these pipes:

*“Schaaf & Wheeler recommends the replacement of the three (3) CMPs that directly drain into the wetwell be replaced in the short term. Two (2) of the CMPs are owned by the District and one (1) of the CMPs is in a Caltrans easement or privately owned.*

*The CMP that poses the most risk of failing, and could lead to a complete system failure, is PIPE\_390. This is a 36” CMP that flows directly into the pump station wetwell. This pipe has been in place since 1976 when the pump station was built.*

*The invert of the pipe has completely corroded and missing which poses a significant risk of collapse and therefore failure. This pipe is critical to the entire drainage system flowing into Cove Pump Station because it carries flow from the entire drainage system north of the Cove Pump Station. PIPE\_106 and PIPE\_389 are both 18” CMPs that are recommended to be replaced as 18” RCPs. PIPE\_390 is recommended to be upsized to a 48” RCP or equivalent.”*

The pipe that is in need of expedient replacement (PIPE\_390) is a District owned pipe, as is PIPE\_389. Staff recommends replacing these two District-owned pipes as recommended by Schaaf & Wheeler before the next rain season. PIPE\_106 is not a District owned pipe, and the District would need to coordinate with the responsible party to facilitate that pipe's replacement. Please see the figure on the following page for the location of these pipes. Additionally, staff recommends the following in conjunction with these pipe replacements:

## Marin County Flood Control and Water Conservation District

Minor repairs to existing trash rack (weld repair of gaps)  
Install back-up system for pump on/off (mechanical float valves)

Below please find cost estimates for the recommended work:

Replace two District owned CMPs with one 48" RCP and one 18" RCP	\$100,000
Minor Repairs to Trash Rack	\$5,000
Install Mechanical Float Valves	\$15,000



**Figure 5-4: Corrugated Metal Pipes Replacements**

**PIPE\_390** is an existing 36" diameter Corrugated Metal Pipe (CMP) that would be replaced with a 48" diameter Reinforced Concrete Pipe (RCP).

**PIPE\_389** is an existing 18" diameter CMP that would be replaced with an 18" RCP.

**Marin County Flood Control and Water Conservation District**

**Item 7. Additional Improvements to Cove Pump Station**

**Recommendation: Recommend improvement Alternative 3 that provides long-term upgrades, 100-year Inflow, and 25-year Pipe Project Capacity. Alternative 3 does not include implementation of 25-year level-of-service pipe replacements north of the Cove Shopping Center, yet increased capacity of the pump station allows for future pipe upgrades.**

Staff recommends that improvements to the Cove Pump Station be implemented that complement the Town of Tiburon’s Master Drainage Plan (MDP). Tiburon’s MDP projects an upgrade to 25-year level-of-service pipe capacity in the underground drainage facilities north of the Cove Shopping Center. Alternative 3 (on the next page) meets this 25-year level-of-service pipe upgrade. Alternative 3 provides a level of protection at only a 33% premium over Alternative 2, which is a much lower level of protection. Expenditures for the current fiscal year to implement Alternative 3 would include the design of the pump station, environmental review, and an updated cost estimate for consideration in next year’s budget. Funding for this upgrade can occur within the Zone 4 existing revenues. Staff will present a Zone 4 Cash Flow analysis that demonstrates the funding stream.

Below are the three alternatives presented in the Study for comparison purposes:

<b>Alternative 1: Short term Upgrades- Existing Capacity</b>
--

**Table 6-7: Pump Station Short Term Upgrades Cost Estimate**

Item No.	Description	Unit	Quantity	Unit Cost	Total
1	Replace PLC	LS	1	\$25,000	\$ 25,000
2	Install Backup Control System	LS	1	\$15,000	\$ 15,000
3	Integrate SCADA	LS	1	\$15,000	\$ 15,000
4	Install Arc Flash Labels	LS	1	\$2,000	\$ 2,000
5	Replace Meter/Main Breaker	LS	1	\$15,000	\$ 15,000
6	Replace MCC	LS	1	\$150,000	\$ 150,000
7	Remove Pump 4 and Piping	LS	1	\$4,000	\$ 4,000
8	Replace Corroded Trash Rack Bars	LS	1	\$5,000	\$ 5,000
9	Modify Wetwell	LS	1	\$20,000	\$ 20,000
10	Modify Pump Set Levels	LS	1	\$1,000	\$ 1,000
<b>Total w/o Contingency:</b>					<b>\$250,000</b>
<b>Total w/ Contingency and Soft Costs:</b>					<b>\$430,000</b>

**Definitions of Acronyms:**

PLC - programmable logic controller  
MCC - motor control center  
SCADA - supervisory control and data acquisition

**Marin County Flood Control and Water Conservation District**

**Alternative 2: Long Term Upgrades – Existing Capacity**

**Table 6-8: Pump Station Long Term Upgrades Cost Estimate, Existing Storm Drain System, Existing Level of Service**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total</b>
1	Mob/Demob	LS	1	\$ 90,000	\$ 90,000
2	New MCC	LS	1	\$ 150,000	\$ 150,000
3	Backup Generator and ATS	LS	1	\$ 110,000	\$ 110,000
4	New Pumps, tubes, discharge	EA	3	\$ 70,000	\$ 210,000
5	New Electrical Service (if required)	LS	1	\$ 30,000	\$ 30,000
6	Misc. Electrical Imp.	LS	1	\$ 50,000	\$ 50,000
7	Modify Pump Bays	LS	1	\$ 40,000	\$ 40,000
8	Add Wetwell Access Hatches	EA	3	\$ 30,000	\$ 90,000
9	Automatic Trash Rack, Fence, Etc.	LS	1	\$ 260,000	\$ 260,000
10	Misc. Site Items	LS	1	\$ 30,000	\$ 30,000
<b>Total w/o Contingency:</b>					<b>\$1,060,000</b>
<b>Total w/ Contingency and Soft Costs:</b>					<b>\$1,800,000</b>

**Alternative 3: Long Term Upgrades – Increased Capacity**

**Table 6-9: Pump Station Long Term Upgrades, 100-Year Inflow, 25-Year Pipe Projects\*, and Modified Wetwell**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total</b>
1	Mob/Demob	LS	1	\$ 130,000	\$ 130,000
2	New MCC	LS	1	\$ 160,000	\$ 160,000
3	Backup Generator and ATS	LS	1	\$ 130,000	\$ 130,000
4	New Pumps, tubes, discharge	EA	3	\$ 80,000	\$ 240,000
5	New Electrical Service (if required)	LS	1	\$ 30,000	\$ 30,000
6	Misc. Electrical Imp.	LS	1	\$ 60,000	\$ 60,000
7	Modify Wetwell	LS	1	\$ 200,000	\$ 200,000
8	Add wetwell access hatches	EA	3	\$ 30,000	\$ 90,000
9	Automatic Trash Rack, Fence, Etc.	LS	1	\$ 280,000	\$ 280,000
10	Misc. Site Items	LS	1	\$ 50,000	\$ 50,000
<b>Total w/o Contingency:</b>					<b>\$1,400,000</b>
<b>Total w/ Contingency and Soft Costs:</b>					<b>\$2,400,000</b>

## ***Marin County Flood Control and Water Conservation District***

\* Does not include implementation of 25-year level-of-service pipe projects, but increased capacity of pump station allows for future pipe upgrades.

### **Additional Considerations**

- The most recently recommended Zone 4 budget projected a 2016-17 Fund Ending Balance of \$2,004,038. This assumed about \$300,000 worth of short-term upgrades and/or studies are completed between now and July 2017.
- The model of East Creek completed as part of the Cove study indicated a risk of overtopping of the creek near the pump station with a 100-year creek flow at mean higher high tide. This study did not evaluate potential for overtopping farther upstream so it is recommended that the zone complete further hydrologic and hydraulic analysis of East Creek before building related improvements such as floodwalls or levees.
- Predicted sea level rise in the project area would increase the frequency of creek overtopping if a floodwall or levee is not installed.

Additionally, staff would like to discuss with the Advisory Board the concept of increased staffing for the Pamela Court and Cove Pumps Stations this winter.

### **Item 8. Schedule Next Meeting**

Per the Zone 4 bylaws, the next annual meeting is scheduled for March 9, 2017. Advisory Board and staff will discuss preferred interim meeting times as needed.

**ANTICIPATED 5-YEAR ZONE 4 CASH FLOW**

**FY 2014-2015 Fund Ending Balance: \$ 2,729,009**

Proposed budget, subject to change

<b>Expected Expenditure Description</b>	<b>FY 2015-16 Actuals</b>	<b>FY 2016-17 Budget</b>	<b>FY 2017-18 Estimate</b>	<b>FY 2018-19 Estimate</b>	<b>FY 2019-20 Estimate</b>
<i>Staffing Costs</i>					
Building Maintenance Crew (pump maintenance)	\$ 35,059	\$ 36,000	\$ 37,080	\$ 38,192	\$ 39,338
Road Maintenance Crew (tide gate, sediment, mowing)	\$ 867	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,855
Real Estate Division Staff (project right of way support)	\$ -	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464
Engineering Division Staff (project construction support)	\$ -	\$ 5,000	\$ 5,150	\$ 50,000	\$ 5,628
Flood Control District Staff (Proj Mgmt. and Zone Admin)	\$ 164,917	\$ 325,661	\$ 335,431	\$ 295,494	\$ 366,534
County Special Cost Allocation	\$ 37,423	\$ 38,546	\$ 39,702	\$ 40,893	\$ 42,120
<b>Salaries, Benefits, and Overhead</b>	<b>\$ 238,266</b>	<b>\$ 430,207</b>	<b>\$ 443,113</b>	<b>\$ 451,102</b>	<b>\$ 480,938</b>
Utilities	\$ 3,207	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Rent (Storage and Space)	\$ 1,083	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500
Association Dues and Memberships	\$ 2,000	\$ 4,200	\$ 4,200	\$ 4,200	\$ 4,200
<i>Maintenance &amp; Repair Services - Equipment</i>					
Cove Pump Station Pump #1	\$ 20,150				
Cove Pump Station Pump #2			\$ 25,750		
Cove Pump Station Natural Gas Pump				\$ 26,523	
Pamela Court Pump Station Pump #1		\$ 25,000			
Pamela Court Pump Station Pump #2					\$ 27,318
Pamela Court Pump Natural Gas Pump			\$ 25,750		
Precipitation & Stream Gauge and Alert System	\$ 5,500	\$ 8,000	\$ 8,240	\$ 8,487	\$ 8,742
SCADA	\$ -	\$ 1,420	\$ 1,463	\$ 1,506	\$ 1,552
Other (Includes CCTV/Cleaning)	\$ 9,631	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391
<i>Maintenance &amp; Repair Services - Land</i>					
Creek Vegetation Maintenance	\$ 48,600	\$ 48,600	\$ 50,058	\$ 51,560	\$ 53,107
Other (Includes Tree/Fence Repair)	\$ 8,445	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,855
<i>Professional Services</i>					
Cove Pump Station Evaluation	\$ 174,750				
Cove Pump Station Design and Environmental Review		\$ 200,000			
<i>Construction</i>					
Replace District owned CMPs		\$ 100,000			
Minor Repairs to Trash Rack		\$ 5,000			
Install Mechanical Float Valves		\$ 15,000			
Cove Pump Station Upgrades				\$ 2,200,000	
<i>Miscellaneous</i>					
Services and Supplies	\$ 11,193	\$ 32,000	\$ 32,960	\$ 33,949	\$ 34,967
Other		\$ 225,000			
<b>Service and Supplies</b>	<b>\$ 284,560</b>	<b>\$ 705,720</b>	<b>\$ 190,971</b>	<b>\$ 2,369,856</b>	<b>\$ 174,631</b>
<b>Total Expenditures</b>	<b>\$ 522,826</b>	<b>\$ 1,135,927</b>	<b>\$ 634,084</b>	<b>\$ 2,820,958</b>	<b>\$ 655,569</b>
<b>Revenues (increase approx. 0.5% annually)</b>	\$698,629	\$702,122	\$705,633	\$709,161	\$712,707
<b>Projected Fund Ending Balance</b>	<b>\$ 2,904,812</b>	<b>\$ 2,471,007</b>	<b>\$ 2,542,556</b>	<b>\$ 430,758</b>	<b>\$ 487,896</b>