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File No.: 17-0578

Agenda Date: 9/26/2017

Item No.: 6.1.

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## BOARD AGENDA MEMORANDUM

**SUBJECT:**

Fiscal Year 2016-2017 (FY17) Safe, Clean Water and Natural Flood Protection Program Annual Report - Year 4.

**RECOMMENDATION:**

- A. Approve the proposed text adjustments to the Safe, Clean Water and Natural Flood Protection (Safe, Clean Water) Program;
- B. Approve the FY17 Safe, Clean Water Program Annual Report - Year 4 with unaudited financials; and
- C. Authorize staff to finalize the FY17 Safe, Clean Water Program Annual Report - Year 4 Annual Report (with audited financials) and submit the final report to the Independent Monitoring Committee for its review.

**SUMMARY:**

**Safe, Clean Water Program Text Adjustments**

As per the Safe, Clean Water Program's Change Control Process, the proposed text adjustments are listed below and incorporated into the Year 4 annual report. Adjustments to project schedules and budgets are approved annually through the Capital Improvement Program Progress Report and Budget Adjustment and Adoption processes, respectively.

**C1 Anderson Dam Seismic Retrofit**

**Sections:** Description and Benefits

**Adjusted text:**

*Description*

Anderson Reservoir is currently limited to **about 6852%** of its capacity due to seismic concerns, costing Santa Clara County valuable drinking water resources. This project covers earthquake retrofitting of Anderson Dam to improve reliability and safety, and returns the reservoir to its original storage capacity.

Anderson Dam creates the county's largest surface water reservoir-Anderson Reservoir-which stores local rainfall runoff and imported water from the Central Valley Project. The

reservoir is an important water source for treatment plants and the recharge of the groundwater basin. Besides restoring drinking water supplies, the upgrade also supports compliance with environmental regulations. The District's regular reservoir releases ensure that downstream habitat has healthy flows and temperatures to sustain wildlife.

A breach of Anderson Dam at full capacity could have catastrophic consequences, including inundation of surrounding land more than 30 miles northwest to San Francisco Bay, and more than 40 miles southeast to Monterey Bay.

In December 2016, the Board was informed by the District that findings from the geotechnical and geologic investigations performed during the project's design phase led to the conclusion that a more extensive dam retrofit than had originally been envisioned would have to be performed. Further, the Board was informed that the more extensive retrofit work would double the previous project's estimated cost. The District presented the Board with a water supply cost-benefit analysis that showed the benefits of the more extensive retrofit project significantly outweighed the cost of not proceeding with the retrofit, which would require the District to purchase additional imported water every year to make up for the loss of long-term storage at Anderson Reservoir. Based upon this information and analysis, the Board directed the District to continue work on this critical infrastructure project.

#### *Benefits*

- Brings the dam into compliance with today's seismic standards
- Increases reliability and safety of our area's largest reservoir by protecting it from earthquakes
- Eliminates operational restrictions issued by the state **Department of Water Resources** Division of Safety of Dams (**DSOD**) which would restore Anderson Reservoir to its full capacity of approximately ~~30 billion gallons~~ **90,373 acre-feet**, regaining ~~3248%~~ or ~~9.3 billion gallons~~ **43,500 acre-feet** of water storage for our current and future water supply
- Ensures compliance with environmental laws requiring reservoir releases that maintain appropriate flows and temperatures to support downstream wildlife habitat
- Minimizes the risk of uncontrollable releases from the reservoir which could cause downstream flooding

#### **Justification:**

Adjustment of text to reflect Independent Monitoring Committee (IMC) recommendation in their FY16 report.

### **E3 Flood Risk Reduction Studies**

**Section:** Benefits

**Adjusted text:**

#### *Benefits*

- Provides more accurate mapping of areas at risk of flooding
- May **add or remove hundreds of** parcels from the FEMA regulatory floodplain, based on

updated mapping standards

- Information can be integrated into flood warning program to provide advance, real-time warnings of impending flood events
- Provides technical basis for developing future flood protection plans, and for potential funding partnerships

**Justification:**

Adjustment of text to reflect IMC recommendation in their FY16 report.

**E5 San Francisquito Creek Flood Protection**

**Section:** Description and Benefits

**Adjusted text:**

*Description*

The project is sponsored by the San Francisquito Creek Joint Powers Authority (SFCJPA), of which the District is a member agency, in partnership with the U.S. Army Corps of Engineers (USACE). The project builds on the planning and design tasks initiated as part of the Clean, Safe Creeks plan.

Preferred project: A federal-state-local partnership

This project will complete construction of setback levees and floodwalls from San Francisco Bay to Highway 101 to provide **1% (or 100-year)** flood protection and ecosystem benefits. Upstream of Highway 101 the project will provide 1% flood protection, ecosystem protection, and recreational benefits.

The work upstream of Highway 101 will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street, and include; a combination of: modified bridges at University Avenue and Middlefield Road; upstream detention; under-ground bypass channels; and floodwalls. ~~The project is sponsored by the San Francisquito Creek Joint Powers Authority, of which the District is a member agency, in partnership with the U.S. Army Corps of Engineers (USACE). The project builds on the planning and design tasks initiated as part of the Clean, Safe Creeks plan, which are on track to be completed.~~

Local-state-funding-only project:

The local-state-funding-only project will be the same as the preferred project downstream of Highway 101; but upstream of Highway 101, the project will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street to allow the channel to contain flood waters equal to the channel's capacity of 7,000 cubic feet per second, approximately a 30-year event. Allowing this level of water to flow through the channel will protect approximately 3,000 parcels in Palo Alto from a flood event close to the February 1998 flood, the largest on record. Currently the channel can only convey a 15-year flood event.

If sufficient funding becomes available, a 1% flood protection project upstream of Highway 101, including some combination of: modifications to the University Avenue and Middlefield

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Road bridges; upstream detention; underground bypass channels; and floodwalls, could be built.

*Benefits*

- Provides 1% flood protection for approximately 3,000 homes and businesses in Palo Alto

**Justification:**

Adjustment of text to reflect IMC recommendation in their FY16 report.

**E7 San Francisco Bay Shoreline Study**

**Section:** Title and Benefits

**Adjusted text:**

*Title*

San Francisco Bay Shoreline Study **Protection**

Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

(Also updated project title in “Flooding History and Project Background” section.)

*Benefits*

- Protects more than 500 **1,000 residential** structures and 37 businesses **100 non-residential structures** (EIA 11)
- Provides planning and design to protect nearly 4,700 acres and more than 5,000 structures, including roads, highways, parks, airports, and sewage treatment plants **in all of Santa Clara County**
- Allows for the restoration of 2,240 **2,900** acres of tidal marsh and related habitats (EIA 11)
- Provides **educational**, recreational, and public access opportunities

**Justification:**

Adjustment of text to reflect IMC recommendation in their FY16 report and to update the description and benefits to reflect current restoration and protection numbers.

**CSC: Permanente Creek Flood Protection**

**Section:** Description

**Adjusted text:**

*Description*

~~This project will protect up to 2,700 parcels from a 1% flood. It is currently scheduled to begin construction in June 2015 and is on track to provide flood protection to 2,700 parcels by 2016. The District Board has certified the Environmental Impact Report (EIR) and approved the project in November 2012. The project has been in detailed design for the past 4 years. The District has completed design for the Permanente Creek channel widening, floodwalls/levees~~

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and the Rancho San Antonio flood detention basin. Also completed is 60% design for the Hale Creek channel widening and the McKelvey Park flood detention basin. Applications for resource agency permits were filed in October 2013. The project is entirely funded with local funds.

This project will provide flood protection for thousands of homes and businesses in Mountain View and Los Altos, create recreational opportunities and enhance the environment. The project spans 10.6 miles of Permanente Creek, from San Francisco Bay's southwest shoreline through Mountain View to Foothill Expressway in Los Altos. The project uses a natural flood protection approach to prevent potential flooding damages in excess of \$48 million (1999 value). The project includes multiple elements: channel improvements; flood detention area and recreational improvements at City of Mountain View's McKelvey Park; and flood detention areas, recreational improvements and enhanced habitat at County of Santa Clara's Rancho San Antonio Park.

**Justification:**

Adjustment of text to reflect project description, removing reference to project schedule and Board action taken in 2012.

**The following list of flood protection projects have had the original Safe, Clean Water Program Flooding History and Project Background sections added back into the project writeups for Priority E in the Year 4 annual report. There were minor grammatical edits made to these sections to change the text from future tense to present tense:**

E3 Flood Risk Reduction Studies

E4 Upper Penitencia Creek Flood Protection

E5 San Francisquito Creek Flood Protection

E6 Upper Llagas Creek Flood Protection

E7 San Francisco Bay Shoreline Protection

E8 Upper Guadalupe River Flood Protection

**The Flood Emergency Management Agency (FEMA) references 1% flood protection, rather than 100-year flood protection, to convey that this level of flooding has a 1% chance of occurring any given year. There are, however, Safe, Clean Water Projects that include references to 50-year, 30-year, or 20- to 25-year events. To give context to these levels of flood protection, the report references 100-year protection. To ensure consistent reference throughout the Safe, Clean Water Annual Report and to align with FEMA communications, the following flood protection projects have had text adjustments to the Descriptions, Flooding History and Project Background, and/or Benefits sections where 100-year flood protection was referenced. With the exception of language included in Key Performance Indicators, the projects listed below now reference "1% (or 100-year) flood protection" for the first reference, followed by 1% flood protection in the remainder of the project text.**

E4 Upper Penitencia Creek Flood Protection

E5 San Francisquito Creek Flood Protection

E6 Upper Llagas Creek Flood Protection

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E8 Upper Guadalupe River Flood Protection  
Permanente Creek Flood Protection  
Sunnyvale East and Sunnyvale West Channels Flood Protection  
Berryessa Creek Flood Protection  
Calabazas Creek Flood Protection

**The following Priority descriptions have had minor grammatical edits made to change the text from future to present tense:**

Priority D    Restore Wildlife Habitat and Provide Open Space

#### **Fiscal Year 2016-2017 Safe, Clean Water Program Annual Report - Year 4**

FY17 marks the fourth of the 15-year Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water). This report (Year 4 annual report) presents a status update on the implementation of projects during FY17.

On November 6, 2012, voters approved the Safe, Clean Water program as a countywide special parcel tax for 15 years with a sunset date of June 30, 2028. This program replaced the Clean, Safe Creeks and Natural Flood Protection Program, which voters approved in November 2000. The Safe, Clean Water program addresses the following needs, values, and priorities as identified by Santa Clara County stakeholders:

**Priority A:** Ensure a safe, reliable water supply

**Priority B:** Reduce toxins, hazards and contaminants in our waterways

**Priority C:** Protect our water supply from earthquakes and natural disasters

**Priority D:** Restore wildlife habitat and provide open space

**Priority E:** Provide flood protection to homes, businesses, schools, and  
Highways

Each of these priorities has specific operational and capital projects, which have key performance indicators (KPIs) meant to keep them on track to meet the overall program priorities. Additionally, the program requires the District to prepare an annual report providing a progress update and fiscal year accomplishments for each project. To ensure transparency and accountability, the program requires that the annual report be reviewed by an independent committee of volunteers, known as the IMC, which were appointed by the District Board of Directors (Board).

The report provides the status of each project's progress towards accomplishing its KPIs and targets established in the 5-Year Implementation Plan. The project status is described by one of five categories listed on the following page:

**On Target:** Status indicates the project is on track to meet targets

**Adjusted:** Status indicates the potential that targets will not be met and implementation required a schedule adjustment (future year status' will be based upon the adjusted schedule)

**Not on Target:** Status indicates that the target has not been or will not be met

**Modified:** Status indicates the Board formally modified the project following a public hearing

(future year status' will be based upon the modified project targets)

**Scheduled to Start:** Status indicates that the project is scheduled to start in a future fiscal year

**Completed:** Status indicates that the project has been completed and the KPIs have been met

### Overall FY17 Program Performance

There are 38 projects under Safe, Clean Water. As of June 30, 2017, approximately 79% (30 projects) are on target; 13% (5 projects) required schedule adjustments; 2.6% (1 project) was modified; 2.6% (1 project) is not scheduled to start until FY 2019; and 2.6% (1 project) was completed. See Graph 1 on page 7 and Table 1 on page 8.

Graph 1

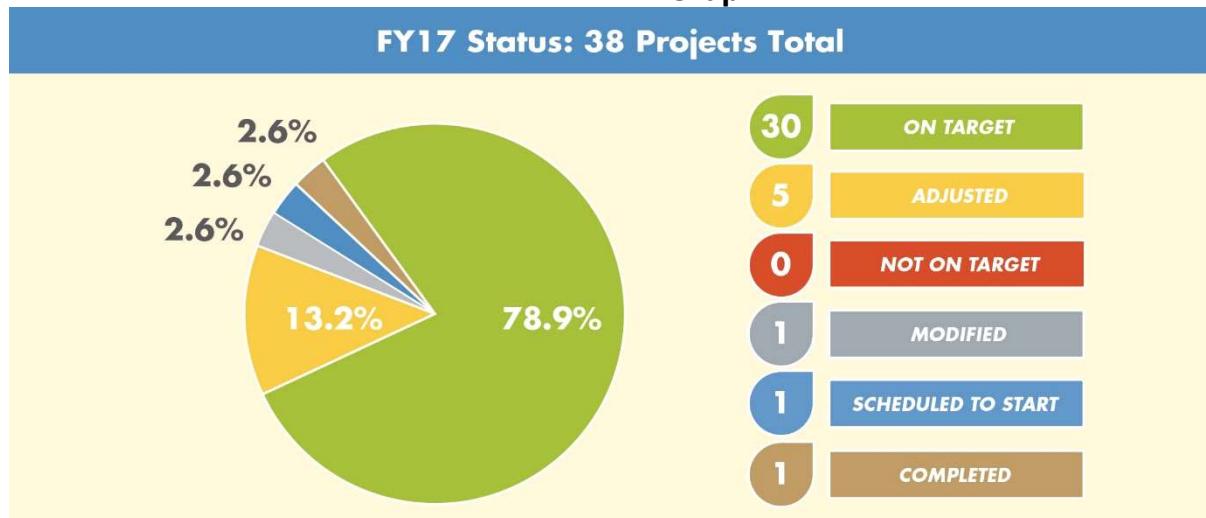


Table 1: Program Status as of June 30, 2017

Project	Project Description	Status
Priority A: Ensure a Safe, Reliable Water Supply		
A1	Main and Madrone Avenue Pipelines Restoration	ON TARGET
A2	Safe, Clean Water Partnerships and Grants	ON TARGET
A3	Pipeline Reliability Project	SCHEDULED TO START
Priority B: Reduce Toxins, Hazards, and Contaminants in our Waterways		
B1	Impaired Water Bodies Improvement	ON TARGET
B2	Interagency Urban Runoff Program	ON TARGET
B3	Pollution Prevention Partnerships and Grants	ON TARGET
B4	Good Neighbor Program: Encampment Cleanup	ON TARGET
B5	Hazardous Materials Management and Response	ON TARGET
B6	Good Neighbor Program: Remove Graffiti and Litter	ON TARGET
B7	Support Volunteer Cleanup Efforts and Education	ON TARGET
Priority C: Protect our Water Supply from Earthquakes and Natural Disasters		
C1	Anderson Dam Seismic Retrofit	ADJUSTED
C2	Emergency Response Upgrades	ON TARGET
Priority D: Restore Wildlife Habitat and Provide Open Space		
D1	Management of Revegetation Projects	ON TARGET
D2	Revitalize Stream, Upland and Wetland Habitat	ON TARGET
D3	Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	ON TARGET
D4	Fish Habitat and Passage Improvement	ADJUSTED
D5	Ecological Data Collection and Analysis	ON TARGET
D6	Creek Restoration and Stabilization	ON TARGET
D7	Partnerships for the Conservation of Habitat Lands	ON TARGET
D8	South Bay Salt Ponds Restoration Partnership	ADJUSTED
Priority E: Provide Flood Protection to Homes, Businesses, Schools, and Highways		
E1.1	Vegetation Control for Capacity	ON TARGET
E1.2	Sediment Removal for Capacity	ON TARGET
E1.3	Maintenance of Newly Improved Creeks	ON TARGET
E1.4	Vegetation Management for Access	ON TARGET
E2.1	Coordination with Local Municipalities on Flood Communication	ON TARGET
E2.2	Flood-Fighting Action Plans	ON TARGET
E3	Flood Risk Reduction Studies	ON TARGET
E4	Upper Penitencia Creek Flood Protection	ON TARGET
E5	San Francisquito Creek Flood Protection	ON TARGET
E6	Upper Llagas Creek Flood Protection	ADJUSTED
E7	San Francisco Bay Shoreline Protection	ADJUSTED
E8	Upper Guadalupe River Flood Protection	ON TARGET
Other Flood Protection Projects and Clean, Safe Creeks Grants Projects		
	Permanente Creek Flood Protection	ON TARGET
	Sunnyvale East and Sunnyvale West Flood Protection	ON TARGET
	Berryessa Creek Flood Protection	ON TARGET
	Coyote Creek Flood Protection	MODIFIED
	Calabazas Creek Flood Protection	COMPLETED
	Clean Safe Creeks Grants Projects	ON TARGET

For FY17, the adjusted budget for the Program totaled \$191 million. Actual funds expended and encumbered as of June 30, 2017 were \$72.6 million, approximately 38% of the Safe, Clean Water Program's adjusted budget. Underspending was primarily due to delays in construction and real estate acquisition for the following capital flood protection projects: Upper Llagas (E6), Upper Guadalupe (E8), and Sunnyvale East & West (CSC). Project construction delays occurred primarily as a result of: addressing redesign or analyses requested by regulatory agencies, delays in acquisition of regulatory permits, and delays in land acquisition. To address delays in obtaining permits, the District permit strategy team continues to work on short-and long-term strategies to secure timely permits.

To ensure transparency and accountability, the District's Board of Directors established the IMC to monitor the Program's progress and to ensure the outcomes are achieved in a cost-efficient manner. Each year, the Board authorizes finalization of the prior fiscal year's annual report and submittal to the IMC for its review. In addition, the Safe, Clean Water Program requires 3 independent audits, the first of which was conducted in FY17. The audit focused on compliance and performance, and while the Safe, Clean Water Program was found to be operating in full compliance, the auditors did make some recommendations regarding performance. The audit findings can be found on [www.valleywater.org/SafeCleanWater.aspx](http://www.valleywater.org/SafeCleanWater.aspx) <http://www.valleywater.org/SafeCleanWater.aspx>.

To address recommendations made by the IMC, the District utilizes a confidence level rating system for capital projects that include confidence levels for schedule, funding, permits, and jurisdictional complexity (the level to which a project's deliverables can be impacted by other entities or jurisdictions). By applying a confidence level to each of these topics, the IMC and community will be able to identify the areas of concern for each project that could impact the probability for the project to remain On Target. The confidence levels are addressed under the Opportunities and Challenges section for each of the capital projects. Listed below are the 3 confidence levels and their definitions:

**High** - Applies to projects that have achieved the following: received full funding, received regulatory permits, met schedule milestones (and will continue to move forward on schedule), and, if applicable, jurisdictional complexity issues have been resolved.

**Moderate** - Applies to projects that are in the process of the following: receiving funding from other sources, receiving permits, requesting the Board approve a schedule adjustment, and, if applicable, resolving jurisdictional complexity issues.

**Low** - Applies to projects that have a high probability of experiencing or already have been: denied funding, denied permits, delayed in schedule, and, if applicable, jurisdictional complexity issues that are impacting completion of the project.

Appendix D is a new addition to the annual report and was created to delve into the confidence levels for each capital project, as well as demonstrate the jurisdictional complexity. For further project and contact information, visit: [www.valleywater.org/SafeCleanWater.aspx](http://www.valleywater.org/SafeCleanWater.aspx)

## Key Accomplishments

Some highlights of the Program in the fourth year are:

- **Coyote Creek Flood Protection Project:** Board held a formal public hearing and approved modifications to the project in order to: extend the project reach approximately 2.9 miles upstream to Tully Road; change the target protection from 1% (or 100-year) level flood event, to protection from a flood event equivalent to the February 21, 2017 flood (which is approximately a 20 to 25 year event); and identify short-term flood relief solutions and begin implementation prior to the 2017-2018 winter season.
- **Permanente Creek Flood Protection Project:** District began construction of the Rancho San Antonio detention site in December 2016 and of the McKelvey Park detention site in January 2017. The Channel Improvement Construction Contract was awarded in May 2017.
- **San Francisquito Creek Flood Protection Project:** District continued year 2 of the 3-year construction project. Some major elements include construction of the concrete block retaining wall, 20-foot high fence and pedestrian ramp adjacent to the International School of the Peninsula, and approximately 900 feet of floodwall on the Palo Alto side of the creek from E. Bayshore Road toward the San Francisco Bay.
- **Sediment Removal:** District completed 17 sediment removal projects, removing nearly 84,000 cubic yards of sediment to maintain design capacity, with 14% of this work funded through the Safe, Clean Water Program.
- **Vegetation Control:** District completed 391 acres of in-stream vegetation management to reduce flood risk on 116 miles of streams throughout the county using an integrated combination of mechanical, hand labor and herbicide methods.
- **Safe, Clean Water Cleanup Activities:** District removed approximately 1,037 tons (14,324 cubic yards) of trash and debris from our waterways through pollution prevention and reduction activities, trash capture devices, encampment cleanups, trash and debris removal, and volunteer cleanup programs and events (projects B1, B2, B4, B6, and B7 respectively).
- **Safe, Clean Water Report Appendices:** Board approved the IMC's recommendations, which included the addition of new appendices to the Year 4 annual report. The new appendices are Appendix D - Capital Project Confidence Levels and Appendix E - Cumulative Trash Removal Data for Projects B1, B2, B3, B4, B6 and B7. Additional information was also added to Appendix A - Financial Information and Appendix C - Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3.

## 5-Year Implementation Plan

On May 14, 2013, the Board approved a 5-Year Implementation Plan that describes how the District will effectively and efficiently implement the program over the first five years of the 15-year Safe Clean Water Program. The annual report provides stakeholders the opportunity to compare the program's four-year performance with the targeted accomplishments in the 5-Year Implementation Plan.

## Next Steps

Once approved by the Board and finalized, the report will be sent to the IMC and made available to

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the public on the District's website at [www.valleywater.org/SafeCleanWater.aspx](http://www.valleywater.org/SafeCleanWater.aspx) <http://www.valleywater.org/SafeCleanWater.aspx>.

The IMC is scheduled to receive the final report by November 17, 2017, after which time the committee will reconvene in the first week of December to discuss and establish the review process and schedule for the FY17 annual report. Also during that meeting, the committee will receive presentations on the following subjects:

- Santa Clara Valley Open Space Authority and the opportunities resulting from the passage of Measure Q;
- SCW Independent Audit Results, staff response and Board direction; and
- U.S. Army Corps of Engineers (USACE) project updates provided to the Board on April 11, 2017.

The FY17 annual report and independent audit is available to the public at [www.valleywater.org/SafeCleanWater.aspx](http://www.valleywater.org/SafeCleanWater.aspx) <http://www.valleywater.org/SafeCleanWater.aspx>. Also available is the Safe, Clean Water 5-Year Implementation Plan, which is updated annually to reflect any adjustments or modifications.

#### **FINANCIAL IMPACT:**

The annual report is produced and printed internally and budgeted to the Safe, Clean Water Implementation Project (26061012).

#### **CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

#### **ATTACHMENTS:**

Attachment 1: FY17 Safe, Clean Water Annual Report

Attachment 2: PowerPoint

#### **UNCLASSIFIED MANAGER:**

Ngoc Nguyen, 408-630-2632