

# Safe, Clean Water Program: Project Summary with KPIs and Costs

## APPENDIX E

Project	Project Description	Key Performance Indicator	Estimated Total Project Cost	Estimated Funding from Safe, Clean Water (First 15 years of Program)	Estimated Percent Funding from Safe, Clean Water	
<b>Priority A: Ensure a Safe, Reliable Water Supply</b>						
<b>A1</b>	Pacheco Reservoir Expansion	Increase the operational capacity of Pacheco Reservoir from 5,500 acre-feet to up to 140,000 acre-feet to reduce the frequency and severity of water shortages during droughts, protect our drinking water supply and infrastructure, and improve habitat for fish.	1. Provide a portion of funds, up to \$10 million, to help construct the Pacheco Reservoir Expansion Project.	\$1.3 B	\$10.0 M	<1%
<b>A2</b>	Water Conservation Rebates and Programs	Meet long-term water conservation and reliability goals by increasing water-use efficiency in the landscape, residential, schools and commercial sectors through water conservation rebates, technical assistance and public education.	1. Award up to \$1 million per year toward specified water conservation program activities, including rebates, technical assistance and public education for the first seven (7) years of the program.	\$51.3 M	\$7.9 M	15%
<b>A3</b>	Pipeline Reliability	Construct four (4) line valves on treated water distribution pipelines. The line valves will allow Valley Water to isolate sections of pipelines for maintenance and repairs following a catastrophic event such as a major earthquake, allowing Valley Water to maintain deliveries to customers, even if there is damage to individual segments.	1. Install 4 (four) new line valves on treated water distribution pipelines.	\$11.9 M	\$9.8 M	82%
<b>Priority B: Reduce Toxins, Hazards, and Contaminants in Our Waterways</b>						
<b>B1</b>	Impaired Water Bodies Improvement	Reduce pollutants in streams, reservoirs and groundwater of Santa Clara County by supporting surface water quality pollution prevention activities.	1. Investigate, develop and implement actions to reduce methylmercury in fish and other organisms in the Guadalupe River Watershed. 2. Prepare and update a plan for the prioritization of surface water quality improvement activities, such as addressing trash and other pollutants. 3. Implement at least two (2) priority surface water quality improvement activities identified in the plan per 5-year implementation period.	\$32.8 M	\$32.8 M	100%

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<b>B2</b>	Inter-Agency Urban Runoff Program	Maintain Valley Water compliance with regulatory requirements for stormwater quality and support green stormwater infrastructure.	<ol style="list-style-type: none"> <li>1. Address trash in creeks by maintaining trash capture devices or other litter control programs.</li> <li>2. Maintain Valley Water’s municipal stormwater compliance program and partner with cities to address surface water quality improvements, including participation in at least three (3) countywide, regional or statewide stormwater program committees to help guide regulatory development, compliance, and monitoring.</li> <li>3. Support at least one (1) stormwater quality improvement activity per 5-year implementation period in Santa Clara County, including providing up to \$1.5 million over 15 years to support implementation of green stormwater infrastructure consistent with Santa Clara Basin and South County Stormwater Resource Plans.</li> </ol>	\$45.2 M	\$19.8 M	44%
<b>B3</b>	Hazardous Materials Management and Response	Protect streams, groundwater and reservoirs from hazardous material releases.	<ol style="list-style-type: none"> <li>1. Respond to 100% of hazardous materials reports requiring urgent on-site inspection in two (2) hours or less.</li> </ol>	\$4.2 M	\$1.1 M	26%
<b>B4</b>	Support Volunteer Cleanup Efforts	Support volunteer cleanup activities and creekwise education.	<ol style="list-style-type: none"> <li>1. Fund Valley Water’s creek stewardship program to support volunteer cleanup activities such as annual National River Cleanup Day, California Coastal Cleanup Day, the Great American Litter Pick Up; and the Adopt-A-Creek Program.</li> </ol>	\$9.2 M	\$5.1 M	55%
<b>Priority C: Protect Our Water Supply and Dams from Earthquakes and Other Natural Disasters</b>						
<b>C1</b>	Anderson Dam Seismic Retrofit	Bring Anderson dam into compliance with today’s seismic standards to ensure public safety and to restore lost reservoir storage capacity resulting from seismic concerns.	<ol style="list-style-type: none"> <li>1. Provide portion of funds, up to \$54.1 million, to help restore full operating reservoir capacity of 90,373 acre-feet.</li> </ol>	\$576.3 M	\$54.1 M	9%
<b>Priority D: Restore Wildlife Habitat and Provide Open Space</b>						
<b>D1</b>	Management of Riparian Planting and Invasive Plant Removal	Manage at least 300 acres of existing riparian planting projects and 200 acres of invasive plant removal projects countywide. Maintain future similar projects anticipated due to upcoming environmental mitigation requirements and carry out targeted control of damaging non-native invasive plant species.	<ol style="list-style-type: none"> <li>1. Maintain a minimum of 300 acres of riparian planting projects annually to meet regulatory requirements and conditions.</li> <li>2. Maintain a minimum of 200 acres of invasive plant management projects annually to meet regulatory requirements and conditions.</li> <li>3. Remove 25 acres of Arundo donax throughout the county over a 15-year period.</li> </ol>	\$118.8 M	\$68.9 M	58%

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<b>D2</b>	Revitalize Riparian, Upland and Wetland Habitat	Improve habitat for rare, threatened or endangered species or vegetation, and create a more contiguous corridor for wildlife, including pollinators.	<ol style="list-style-type: none"> <li>1. Revitalize at least 21 acres over a 15-year period through native plant revegetation and/or removal of invasive exotic species.</li> <li>2. Develop an Early Detection and Rapid Response Program Manual.</li> <li>3. Identify and treat at least 100 occurrences of emergent invasive species over a 15-year period, as identified through the Early Detection and Rapid Response Program.</li> <li>4. Develop at least eight (8) information sheets for Early Detection of Invasive Plant Species.</li> </ol>	\$8.1 M	8.1 M	100%
<b>D3</b>	Sediment Reuse to Support Shoreline Restoration	Reuse local sediment from Valley Water's stream maintenance activities and capital projects to create and restore tidal marsh habitat.	<ol style="list-style-type: none"> <li>1. Maintain partnership agreements to reuse sediment to improve the success of salt pond and tidal marsh restoration projects and activities.</li> <li>2. Provide up to \$4 million per 15-year period to support activities necessary for sediment reuse.</li> </ol>	\$4.1 M	\$4.1 M	100%
<b>D4</b>	Fish Habitat and Passage Improvement	Restore and maintain healthy fish populations, especially steelhead, by improving fish passage and habitat.	<ol style="list-style-type: none"> <li>1. Complete planning and design for one (1) creek/lake separation.</li> <li>2. Construct one (1) creek/lake separation project in partnership with local agencies.</li> <li>3. Use \$8 million for fish passage improvements by June 30, 2028.</li> <li>4. Update study of all major steelhead streams in the county to identify priority locations for fish migration barrier removal and installation of large woody debris and gravel as appropriate.</li> <li>5. Complete five (5) habitat enhancement projects based on studies that identify high priority locations for large wood, boulders, gravel and/or other habitat enhancement features.</li> </ol>	\$51.1 M	\$44.1 M	86%
<b>D5</b>	Ecological Data Collection and Analysis	Track stream ecosystem conditions to help Valley Water and other county organizations make informed watershed, asset management and natural resource decisions.	<ol style="list-style-type: none"> <li>1. Reassess and track stream ecological conditions and habitats in each of the county's five (5) watersheds every 15 years.</li> <li>2. Provide up to \$500,000 per 15-year period toward the development and updates of five (5) watershed plans that include identifying priority habitat enhancement opportunities in Santa Clara County.</li> </ol>	\$11.0 M	\$7.5 M	68%

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<b>D6</b>	Restoration of Natural Creek Functions	Restore and improve natural functions and stability of stream channels, by designing and constructing projects based on local hydrologic and geomorphic data.			
		<ol style="list-style-type: none"> <li>1. Construct the Hale Creek Enhancement Pilot Project, which includes restoration and stabilization of a 650-foot section of concrete-lined channel on Hale Creek, between Marilyn Drive and North Sunshine Drive on the border of Mountain View and Los Altos.</li> <li>2. Construct the Bolsa Road Fish Passage Project along 1,700 linear feet of Uvas-Carnadero Creek in unincorporated Santa Clara County, which includes geomorphic design features that will restore stability and stream function.</li> <li>3. Identify, plan, design, and construct a third geomorphic designed project to restore stability and stream function by preventing incision and promoting sediment balance throughout the watershed.</li> </ol>	\$19.6 M	\$14.5 M	100%
<b>D7</b>	Partnerships for the Conservation of Habitat Lands	Acquire, restore and protect important habitat land to preserve local ecosystems through multi-agency agreements that pool mitigation or conservation dollars.			
		<ol style="list-style-type: none"> <li>1. Provide up to \$8 million per 15-year period for the acquisition or enhancement of property for the conservation of habitat lands.</li> </ol>	\$8.0 M	\$8.0 M	100%
<b>Priority E: Provide Flood Protection to Homes, Businesses, Schools, Streets, and Highways</b>					
<b>E1</b>	Coyote Creek Flood Protection	Plan, design and construct improvements along approximately nine (9) miles of Coyote Creek, between Montague Expressway and Tully Road, in San José, to provide protection from floods up to the level that occurred on February 21, 2017.			
		<ol style="list-style-type: none"> <li>1. Construct flood protection improvements along Coyote Creek between Montague Expressway and Tully Road to provide protection from floods up to the level that occurred on February 21, 2017, approximately a 5% (20-year) flood event.</li> </ol>	\$80.8 M	\$41.8 M	52%
<b>E2</b>	Sunnyvale East and Sunnyvale West Channels Flood Protection	Upgrade approximately 6.4 miles of the existing Sunnyvale East Channel to provide 1% flood protection for 1,618 parcels and approximately three (3) miles of the existing West Channel to provide 1% flood protection for 47 acres of highly valuable industrial land.			
		<ol style="list-style-type: none"> <li>1. Provide 1% (100-year) flood protection for 1,618 properties and 47 acres (11 parcels) of industrial land, while improving stream water quality and working with other agencies to incorporate recreational opportunities.</li> </ol>	\$70.4 M	\$33.0 M	47%
<b>E3</b>	Lower Berryessa Flood Protection, including Tularcitos and Upper Calera Creeks (Phase 3)	Provide 1% flood protection for approximately 1,100 parcels affected by Upper Calera Creek from the drop structure upstream of Arizona Avenue upstream to Jose Huger Adobe Park, and to an estimated 320 parcels along Tularcitos Creek between its confluence with Berryessa Creek and Interstate 680.			
		<ol style="list-style-type: none"> <li>1. With local funding only: Complete the design phase of the 1% (100-year) flood protection project to protect an estimated 1,420 parcels.</li> </ol>	\$71.2 M	\$8.2 M	100%

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<b>E4</b>	Upper Penitencia Creek Flood Protection	Plan, design and construct improvements along 4.2 miles of Upper Penitencia Creek from its confluence with Coyote Creek to Dorel Drive. This multi-objective project will also provide ecological restoration and recreation benefits while preserving water supply infrastructure.	1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% (100-year) flood protection to 8,000 parcels. 2. With local funding only: Construct a 1% (100-year) flood protection project from Coyote Creek confluence to Capital Avenue to provide 1% (100-year) flood protection to 1,250 parcels, including the new Berryessa BART station.	\$67.0 M	\$20.4 M	34%
<b>E5</b>	San Francisquito Creek Flood Protection	Construct improvements along San Francisquito Creek from San Francisco Bay to upstream of Highway 101 for flood protection, ecosystem protection and recreational benefits, in partnership with the San Francisquito Creek Joint Powers Authority and the U.S. Army Corps of Engineers.	1. Preferred project with federal, state and local funding: Protect more than 3,000 parcels by providing 1% (100-year) flood protection. 2. With state and local funding only: Protect approximately 3,000 parcels by providing 1% (100-year) flood protection downstream of Highway 101, and approximately 1.4% (70-year) flood protection upstream of Highway 101.	\$89.3 M	\$31.5 M	35%
<b>E6</b>	Upper Llagas Creek Flood Protection	Design and construct flood protection improvement along 13.9 miles of Upper Llagas Creek to provide flood protection and improve stream habitat benefiting areas of Morgan Hill, Gilroy and San Martin.	1. Preferred project with federal and local funding: Plan, design and construct flood protection improvements along 13.9 miles of Upper Llagas Creek from Buena Vista Avenue to Llagas Road to provide flood protection to 1,100 homes, 500 businesses, and 1,300 agricultural acres, while improving stream habitat. 2. With local funding only: Construct flood protection improvements along Llagas Creek from Buena Vista Avenue to Highway 101 in San Martin (Reaches 4 and 5 (portion)), Monterey Road to Watsonville Road in Morgan Hill (Reach 7a), approximately W. Dunne Avenue to W. Main Avenue (portion of Reach 8), and onsite compensatory mitigation at Lake Silveira.	\$285.0 M	\$46.3 M	16%
<b>E7</b>	San Francisco Bay Shoreline Protection	Provide tidal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities in partnership with the California State Coastal Conservancy, the U.S. Army Corps of Engineers and regional stakeholders.	1. Provide portion of the local share of funding for planning, design and construction phases for the Santa Clara County shoreline area, EIAs 1-4. 2. Provide portion of the local share of funding for planning and design phases for the Santa Clara County shoreline area, EIAs 5-9.	\$400.0 M	\$46.0 M	12%

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<b>E8</b>	Upper Guadalupe Flood Protection	Plan, design, and construct improvements along 5.5 miles of Guadalupe River extending from I-280 to Blossom Hill Road in San José to provide 1% flood protection to 6,610 homes, businesses and schools and institutions.	\$494.0 M	\$35.8 M	7%
<b>Priority F: Support Public Health and Public Safety for Our Community</b>					
<b>F1</b>	Vegetation Control and Sediment Removal for Capacity	Reduce flood risk by maintaining the design conveyance capacity of flood protection projects by controlling in-stream vegetation and removing stream sediment.	\$213.1 M	\$114.1 M	54%
<b>F2</b>	Emergency Response Planning and Preparedness	Coordinate and collaborate with local municipalities on flood disaster planning, mitigation, response and communication. Utilize systems developed under Project F7, Emergency Response Upgrades.	\$7.2 M	\$7.2 M	100%
<b>F3</b>	Flood Risk Assessment Studies	Create and update custom software models of local creeks for an accurate understanding of flood risks in priority flood-prone areas. Develop options for managing the flood risks.	\$21.9 M	\$21.9 M	100%
<b>F4</b>	Vegetation Management for Access and Fire Safety	Reduce fire risk and ensure access for creek maintenance by managing vegetation.	\$80.0 M	\$12.0 M	15%

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<b>F5</b>	Good Neighbor Program: Encampment Cleanup	Coordinate with local organizations to clean up encampments near waterways to improve water quality, safety and aesthetics, including funding for park ranger and police patrols along waterways. Cooperate with local social services and nonprofit groups to help provide alternatives to homelessness.	1. Perform 300 annual cleanups to reduce the amount of trash and pollutants entering the streams. 2. Provide up to \$500,000 per year in cost-share with other agencies for services related to encampment cleanups, including services supporting staff safety, discouraging re-encampments along waterways or addressing the homelessness crisis with the goal of reducing the need for encampment cleanups.	\$38.7 M	\$38.7 M	100%
<b>F6</b>	Good Neighbor Program: Graffiti and Litter Removal and Public Art	Maintain the aesthetic condition of Valley Water assets by removing trash from creeks, repairing/installing fencing and removing graffiti. Fund installation and maintenance of public art projects, such as murals, to beautify Valley Water property and infrastructure, to help deter graffiti and litter.	1. Cleanup identified trash and graffiti hotspots at approximately 80 sites four (4) times per year. 2. Respond to requests on litter or graffiti cleanup within five (5) working days. 3. Provide up to \$1.5 million over 15 years to implement public art projects on Valley Water property and infrastructure.	\$26.4 M	\$13.1 M	50%
<b>F7</b>	Emergency Response Upgrades	Support ongoing development and maintenance of a robust flood forecasting system, including efficient dissemination of information to emergency responders and the public.	1. Maintain existing capabilities for flood forecasting and warning. 2. Improve flood forecast accuracy and emergency response time working with the National Weather Service and through research and development.	\$13.2 M	\$13.2 M	100%
<b>F8</b>	Sustainable Creek Infrastructure for Continued Public Safety	Ensure that existing flood protection infrastructure continues to function sustainably and provide the level of service originally intended, as climate and other conditions evolve.	1. Provide up to \$7.5 million in the first 15-year period to plan, design and construct projects identified through Watersheds asset management plans.	\$15.0 M	\$7.5 M	50%

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F9	Grants and Partnerships for Safe, Clean Water, Flood Protection and Environmental Stewardship	Provide grants and partnerships for agencies, organizations and individuals for water conservation, pollution prevention, creek cleanups, education, wildlife habitat restoration and access to trails and open space.	<ol style="list-style-type: none"> <li>1. Provide a grant and partnership cycle each year for projects related to safe, clean drinking water, flood protection and environmental stewardship.</li> <li>2. Provide annual funding for bottle filling stations to increase drinking water accessibility, with priority for installations in economically disadvantaged communities and locations that serve school-age children and students.</li> <li>3. Provide annual mini-grant funding opportunity for projects related to safe, clean drinking water, flood protection and environmental stewardship.</li> <li>4. Provide up to \$3 million per 15-year period for partnerships with small municipalities (defined as under 50,000 people in the most recent census available) or special districts with boundaries substantially within the footprint of small cities, for projects aligned with the District Act and related to safe, clean drinking water, flood protection and environmental stewardship.</li> </ol>	\$53.1 M	\$53.1 M	100%