Appendix B: Expected Environmental Results (Logic Models)

Appendix B includes a summary table that itemizes each SFBWQIF grant, followed by 29 individual Logic Model tables that describe environmental results for each project funded between 2008 to 2014.

ID	Recipient	Title
1	San Francisco Estuary Partnership	Estuary 2100, Phase 1: Resilient Watersheds for a Changing Climate – 16 projects
2	Bay Area Stormwater Management Agencies Association	Clean Watersheds for a Clean Bay
3	City and County of San Francisco	Cesar Chavez Street LID Pilot
4	San Francisco Estuary Partnership	Estuary 2100, Phase 2: Building Partnerships for Resilient Watersheds – 10 projects
5	California State Coastal Conservancy	South Bay Salt Pond A17 Tidal Marsh Restoration
6	City of San Jose	Coyote Creek Trash Reduction Project
7	Napa County	Napa River Sediment TMDL Implementation and Habitat Enhancement Plan
8	California State Coastal Conservancy	Dutch Slough, Emerson Parcel Tidal Marsh Restoration
9	Ducks Unlimited	Cullinan Ranch Tidal Marsh Restoration Project
10	San Francisco Estuary Partnership	San Pablo Avenue Stormwater Spine
11	San Francisco Estuary Partnership	Pesticide Reduction Campaign: Greener Pesticides for Cleaner Waterways
12	San Mateo Resource Conservation District	San Francisquito Creek Stabilization at Bonde Weir
13	Audubon California	San Pablo Bay Tidal Marsh Enhancement & Water Quality Improvement
14	Clean Water Fund	Rethink Disposable: Packaging Waste Source Reduction Pilot
15	Alameda County Resource Conservation District	Alameda Creek Healthy Watersheds
16	San Francisco Estuary Partnership	Rebuilding Habitat and Shoreline Resilience through Improved Flood Control Channel Design and Management
17	Golden Gate National Parks Conservancy	Quartermaster Reach Restoration
18	Napa County	Napa River Restoration: Rutherford Reach Completion and Oakville to Oak Knoll Reach, Group C Sites 11 – 14
19	Sonoma Land Trust	Sears Point Tidal Marsh Restoration: Phase I
20	California State Coastal Conservancy	South Bay Salt Pond Mercury Studies
21	San Francisco Estuary Partnership	Removing Mercury in the Guadalupe Watershed
22	East Bay Regional Park District	Breuner Marsh Restoration
23	Napa County	Napa River Restoration: Oakville to Oak Knoll Reach, Group A Sites 21-23
24	EBMUD	Reducing Nutrients in SF Bay through WWTP Sidestream Treatment
25	California State Coastal Conservancy	South Bay Salt Ponds Restoration Project: Revegetation and Phase 2 Planning
26	Sonoma Land Trust	Sears Point Restoration Project: Phase II
27	Napa County	Napa River Restoration: Oakville to Oak Knoll Reach, Group C Site 14
28	California State Coastal Conservancy	South Bay Salt Pond Restoration Project: Phase II Construction at Ravenswood
29	City of St. Helena	Upper York Creek Dam Removal, Fish Passage, and Ecosystem Restoration

Estuary 2100, Phase 1: Resilient Watersheds for a Changing Climate
Recipient: San Francisco Estuary Partnership
Funding: $4,922,000 (non-federal match = $5,796,701), FFY: 2008
Project Period: February 2009 – February 2016

OUTPUTS (Activity, effort, and/or work product during project period) **16 Discrete Projects** (Recipient, SFBWQIF Funding)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Control erosion and sediment transport from the 4.3-acre Senador Mine, an abandoned mercury mine in the Guadalupe River watershed, and dispose of calcines on-site to reduce mercury loads to local streams and San Francisco Bay (Santa Clara County Parks and Recreation, $492,500) Collect annual satellite and aerial imagery showing the extent of mudflats and vegetation communities in the South Bay Salt Ponds, update wetland restoration design tools and document mercury cycling in restored tidal marsh and Pond A8 (Resources Legacy Fund, $403,850) Examine the resilience of Corte Madera Baylands to sea level rise, and consider how their ecosystem benefits can be preserved (Bay Conservation and Development Commission, $591,000) Develop stream design curves for creeks in Marin and Sonoma counties to aid in stream restoration projects by analyzing the morphology of a statistically significant number of stable streams and plotting bankfull width, height, and sinuosity against drainage area. Establish the correlation between the various channel characteristics and the hydrology of the region (Waterways Resources Institute, $30,000). Propagate and plant over 12,000 native plants on 10.5 acres to establish upland transition zones adjacent to the existing Bahia tidal wetlands (Marin Audubon Society, $56,000) Plant 1500 native oak trees, 3500 native riparian trees, and remove fish barriers in the Stanley Reach of Alameda Creek (Urban Creeks Council, $393,998) Improve two road culverts that are fish barriers in Stonybrook Creek, a tributary of Alameda Creek (Alameda County Resource Conservation District, $147,750)	Remove approximately 291 pounds of mercury laden calcines from the Guadalupe watershed and bury them in the San Francisco Open Cut Develop passive and active frost control measures for vineyards and pilot two different techniques Remove invasive plant species (30% reduction) and revegetate with native wetland plants at Eden Landing and Martin Luther King Regional Shoreline Park (2.24 acres total) Restore 13.4 acres of riparian habitat and ~5200 linear feet of stream habitat for salmonids Open 0.7 stream-miles of upstream aquatic habitat Restore 2.24 acres of tidal marsh ecotone habitat Create wetland habitat attractive to the Endangered Ridgway's rail, salt marsh harvest mouse, and other fauna at Bahia	Ongoing restoration and management for each watershed draining to San Francisco Bay Reduce loadings of mercury to the Guadalupe River as per the Guadalupe River Mercury TMDL Widespread use of LID to treat polluted stormwater and enhance aquatic ecosystems Increased shoreline resilience to sea level rise Increased habitat resilience and spawning habitat in the Alameda Creek watershed designated as an important watershed for recovering regional steelhead populations More widespread use of water conserving frost control measures in vineyards in the Bay area Reduction of trash entering San Francisco Bay tributaries

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Develop best management practices to reduce vineyard water use during critical periods of salmonid migration (California Land Stewardship Institute, $98,500) Remove invasive plants and revegetate with native plants at Eden Landing and MLK shoreline to further wetlands restoration (Save the Bay, $197,000) Provide hands-on training for local youth interns on plant propagation and wetlands restoration at Yosemite Slough (California Parks Foundation, $98,500) Survey and remove Littorina littorea, an invasive snail, at three locations around San Francisco Bay: Ashby Spit, Foster City, and Dumbarton Point (Center for Research on Aquatic Bioinvasions, $30,000) Treat and remove invasive Spartina from various locations around San Francisco Bay (California State Coastal Conservancy, $172,375) Develop best management practices and case studies for single-use bags and polystyrene. Work with Bay Area cities to implement plastic bag and Styrofoam bans (Save the Bay, $394,000). Map all impervious public parcels in Alameda County to assess low impact development/green stormwater treatment potential (Community Conservation International, $246,250) Replace 20,891 ft.^{2} of concrete with new landscaping, street trees, stormwater planters and permeable pavers to allow rainwater to permeate into the ground along one block of Newcomb Ave., San Francisco (City and County of San Francisco, $492,500) Conduct Baywide outreach on water quality, low impact development, integrated pest management and wetland restoration via forums and podcasts (SFEP, $109,900)	Remove populations of Littorina littorea – from Ashby Spit, Foster City, and Dumbarton Point Remove 90 acres of invasive Spartina Adopt plastic bag and/or polystyrene bans in over three Bay Area cities Treat 1.17 acres of impervious surface with LID Create 8 educational podcasts highlighting the projects' successes to reach the public	Management and control of invasive Spartina and Littorina littorea

Implementing SF Bay PCB TMDL
Recipient: Bay Area Stormwater Management Agencies Association (BASMAA)
Funding: $5,000,000 (Nonfederal match: $1,940,000), FFY 2009
Project Period: May 2010 – January 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Select five high priority subwatersheds that discharge urban runoff with PCBs and other pollutants to the Bay Identify PCB and mercury source areas within the project subwatersheds and refer these sites to regulatory agencies for cleanup and abatement Develop methods to enhance removal of sediment with PCBs and other pollutants during municipal sediment management activities Retrofit 8 to 10 urban sites with stormwater treatment facilities Facilitate development and implementation of a regional risk communication and exposure reduction program that focuses on educating the public about the health risks of consuming certain species of Bay fish that contain high levels of PCBs and mercury Create public education outreach materials, project web portal, guidance manual, and technical workshops	Reduce annual loading of PCBs to the Bay by approximately 0.3-1.5 kg./yr., reducing the current estimated stormwater runoff load of 20 kg./yr. by about 2-8% Treat ~2 square miles with stormwater retrofits to reduce potential hydrologic impacts on downstream receiving waters Consumers of Bay fish will have a greater awareness and understanding of fish contamination issues and options for reducing their exposure to pollutants	Identify most promising best management practices (BMPs) for fully meeting the PCB TMDL allocations (2 kg./yr.) in the future and thereby help address important impairments to the Bay's beneficial uses Enhance the desirability of commercial enterprise zones and residential neighborhoods in the project watersheds as a result of clean-up activities

Cesar Chavez Street LID Project
Recipient: City and County of San Francisco
Funding: $1,200,000 (Nonfederal match: $1,040,000), FFY: 2009
Project Period: June 2010 – December 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Identify locations for stormwater improvements, including where pavement can be removed and street trees planted Produce design specifications and model hydrologic benefits of project Develop policy to integrate LID into traditional grey sewer infrastructure projects Engage local community in greening efforts, through a partnership with the San Francisco-based nonprofit Friends of the Urban Forest Develop inter-agency coordination and mobilization around integration of LID in streetscape improvements Foster synergistic relationships between LID-related non-profit organizations and City agencies	Reduced stormwater volume as a result of LID elements Reduced peak-flow contribution as a result of LID elements Reduced pollutant load in stormwater from LID treatment along Cesar Chavez Street 7,300 ft.^{2} of vegetated sidewalk gardens installed by volunteers contributing 260 volunteer hours	Develop LID construction training modules, construction management protocols, and maintenance protocols for interagency projects incorporating LID Establish an initial LID monitoring program to help inform future design and performance assumptions for LID in San Francisco

Project Type: Greening Development

Estuary 2100, Phase 2: Building Partnerships for Resilient Watershed
Recipient: San Francisco Estuary Partnership
Funding: $3,613,704 (non-federal match = $1,204,568), FFY: 2009
Project Period: March 2010 – December 2016

OUTPUTS (Activity, effort, and/or work product during project period) **10 Discrete Projects** (Recipient, SFBWQIF Funding)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Pilot two alternative full sized tree well filter designs to both treat stormwater in an industrial area of Fremont and incorporate NPDES trash capture requirements (City of Fremont, $300,000) Evaluate the feasibility of diverting stormwater flows from the North Richmond pump station to the nearby wastewater treatment facility for treatment prior to discharge to SF Bay and, if feasible, construction of retrofits to divert flows from the North Richmond Pump station to the treatment facility (Contra Costa County Public Works, $683,032) Implement two projects to address the Richardson Bay Pathogen TMDL (Marin County, $614,655) 1. Re-contour creek and floodplain, remove invasive and plant native species to increase infiltration, and install fencing on a tributary of Warner Creek in Boyle Park, Mill Valley and engage the local Boyle Park community through outreach events and stencil 20 storm drains in the area with "Drains to Bay" 2. Conduct outreach on the importance of maintaining water quality to boaters living along Richardson Bay Implement sediment TMDL projects in the Napa River watershed (Napa County Resource Conservation District, $367,500) 1. Repair and upgrade over four miles of eroding rural roads at critical erosion sites in the Heath Canyon watershed 2. Develop LandSmart water quality template and resource binder and a series of corresponding workshops to facilitate compliance with a water quality regulatory program being developed in the Napa/Sonoma regions. 3. Assess ~400 acres of private property and develop 20 site specific management plans to reduce stormwater runoff Implement sediment TMDL projects in the Napa River watershed (California Land Stewardship Institute, $119,000) 1. Hold workshops for vineyards on sediment management control	Treat stormwater from over 14,000 ft.^{2} of impervious surface in an industrial area of Fremont Treat dry weather polluted stormwater prior to discharging to SF Bay Restore stream corridor within the Boyle Park reach of a tributary to Warner Creek, and reduce pathogens to Warner Creek and Richardson Bay Treat over four miles of highly erosive road in Napa County and prevent approximately 4000 yd.^{3} of sediment from reaching the Napa River Treat 10,500 acres of agricultural land with erosion controls measures and prevent up to 50,000 metric tons of fine sediment per year from entering the Napa River	Restore native oyster and eelgrass beds in San Francisco Bay Ongoing restoration and management for each watershed draining to San Francisco Bay Widespread use of LID to treat polluted stormwater and enhance aquatic ecosystems Increase capacity of Napa County heavy equipment operators to implement best practices when performing maintenance on rural roadways Address Napa River Watershed and Sonoma Creek Watershed Sediment TMDL goals by reducing sediment inputs in the two watersheds from stream bank erosion, rural road erosion, and erosion from peak flows Reduce pathogen loading into Richardson Bay from tributaries

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2. Provide one-on-one technical assistance to vineyard owners to develop a detailed farm conservation plan, including a comprehensive sediment source inventory, road assessment and creek assessment for sediment sources and canopy cover for water temperatures Implement sediment TMDL projects in the Sonoma Creek watershed (Sonoma Ecology Center, $363,800) 1.Conduct outreach and provide technical assistance to up to 40 property owners or land managers and provide up to 20 site assessments to reduce sediment and pathogen delivery to Sonoma Creek 2. Stabilize banks, slow runoff, and improve habitat at ~15 sites along Sonoma Creek 3. Monitor Sonoma Creek ambient water quality conditions Implement sediment TMDL projects in the southern Sonoma Creek watershed (Sonoma Resource Conservation District, $318,300) 1. Implement a bank stabilization and erosion control project on a seasonal tributary to Sonoma Creek 2. Conduct outreach on sediment management with landowners and assist them in preparing documents for the conditional grazing waiver Living Shorelines: subtidal habitat improvement and native oyster restoration (State Coastal Conservancy, $300,000) 1. Design and implement various subtidal restoration techniques 2. Monitor the effectiveness of each design in regard to habitat value and oyster restoration Shoreline Change Study and Bay Area Aquatic Resources Inventory (BAARI) Accessibility Project (San Francisco Estuary Institute, $370,000) 1. Study of short- and long-term erosion/accretion rates of the San Pablo Bay Shoreline 2. Integrate a publically accessible data function for BAARI that will be integrated into EcoAtlas	Install 3 stormwater detention structures, and remove 5 acres of riparian weeds and revegetate with 2600 native plants along Sonoma Creek Prevent approximately 5,620 ft.^{3} of sediment from eroding streambanks annually and prevent 21,600 gallons per year of peak runoff from reaching Sonoma Creek Reduce sediment loading from a seasonal tributary to Sonoma Creek and increased capacity among landowners to develop plans needed to obtain grazing waivers Create new, valuable subtidal habitat including native oyster and eelgrass beds. Develop maps and GIS layers depicting erosion/accretion rates of San Pablo Bay Develop a portal for groups to upload their habitat data into BAARI with SFEI reviewing data for quality control	

Pond A17 Tidal Marsh Restoration
Recipient: California State Coastal Conservancy
Funding: $750,000 (Nonfederal match: $625,000), FFY: 2010
Project Period: September 2011 – November 2013

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Construct a 400' berm to control water movement. Install inlet and outlet structure with fish screen Construct 16 islands at 15,000 ft.^{2} each for 240,000 ft.^{2} total Levee lowering and levee breaches to restore tidal action to 130 acres. Reconfigure trail alignment, and resurface 20,400 linear feet of public access trail Install two overlooks and four interpretative panels	Improved recreational use of site, including trail reconfiguration to protect endangered species habitat Improved signage to increase the public's knowledge of the environmental benefits of the project and natural history of site Site contouring and constructed islands provides high tide refugia for endangered salt marsh harvest mouse, Ridgway's Rail and other birds and mammals	Restore 130 acres of tidal marsh High quality roosting, feeding and nesting habitat for migratory and special status shorebirds and waterfowl Improve water quality in Artesian Slough above baseline Increase populations of migratory shorebirds, resident fish species, and mammals in the project area above baseline Increase primary productivity in mudflat areas of Coyote Slough as a result of Pond A17 marsh nutrient export Restore 9 acres of tidal channel to create fish habitat Restore tidal marsh provides flood protection benefits

Project Type: Wetland Restoration

Coyote Creek Trash Reduction Project: Clean Creeks, Healthy Communities
Recipient: City of San Jose
Funding: $680,000 (Nonfederal match: $262,867). FFY: 2010
Project Period: September 2011 – June 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Organize 48 environmental education, outreach events, and creek and neighborhood cleanup events Complete a minimum of 2 public art projects Perform a minimum of 8 large scale illegal encampment cleanups and creek cleanups with professional workers at hotspots Eliminate the four chronic dump sites within target area Install surveillance cameras at chronic dumpsites Create anti-dumping outreach webpage Permanently house 50 homeless individuals who live in targeted reach of Coyote Creek Perform 14,300 hours of peer to peer outreach to homeless people living in Coyote Creek and 39,000 hours of community services cleaning up litter and monitoring riparian area Pre, midpoint and post program surveys of resident's knowledge and attitudes towards Coyote Creek Conduct 8 urban rapid trash assessments (URTA) and document change in volume of trash and appearance of Coyote Creek with URTA rating	Remove 80 tons of trash and debris from Coyote Creek via encampment cleanups Remove 400 $yd.^3$ of trash and debris from Coyote Creek during cleanup events Program surveys indicate that: - 66% of residents are aware of Coyote Creek and its environmental significance; - 50% of residents report that the health of Coyote Creek is important to them; - 66% of residents are aware that their personal conduct can result in litter in Coyote Creek; - 33% of residents report participating in recreation that directly involves Coyote Creek riparian corridor; - 66% of residents understand that litter and illegal dumping is harmful to personal well-being; and - 66% of community residents report that they feel they could safely visit the Coyote Corridor	Achieve zero trash discharge to Coyote Creek by 2022

Project Type: Restoring Water Quality

San Pablo Avenue Green Stormwater Spine
Recipient: San Francisco Estuary Partnership
Funding: $307,646 (Nonfederal match: $397,964), FFY: 2011
Project Period: September 2011 – January 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Select Project Designer and/or Design/Build Contractor Develop planting plan Complete environmental review for CEQA for each of the seven projects Build the seven cities' projects in accordance with the plans and specifications Draft, circulate, and promote a draft Green Streets Model Ordinance for Bay Area cities to advance acceptance of low impact stormwater treatment installations Draft and circulate an RFP for construction management services for a qualified firm, preferably with low impact development construction experience, to provide on-site construction management to insure that the projects are built in accordance with approved design plans and specifications	Treat ~7 acres of impervious surface with LID	40-80% reduction in conventional stormwater pollutants, such as metals, PCBs, and PAHs and other heavy metals Adoption of a LID ordinance or policy by at least one municipality Increase in LID in each of the participating cities along San Pablo Ave.

Napa River Sediment TMDL Implementation and Habitat Enhancement
Recipient: County of Napa
Funding: $1,500,000 (Nonfederal match: $1,765,000), FFY: 2011
Project Period: June 2011 – December 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Repair approximately 1800 feet of eroding banks in Phase 3 of the Rutherford Reach project area Develop an online mapping tool to display, on a subwatershed area basis, an interactive map to track and report on TMDL implementation progress Work with livestock producers in the Napa River watershed to develop regional water quality control plans that assess pollutant sources and identify management practices to control sediment and pathogens coming from grazed properties Assess and prioritize unimproved public roads and stream crossings in the Napa River watershed Remove 5 acres of invasive Arundo and revegetate with native plants Develop construction designs for 59 acres of habitat and water quality improvement along 3.9 miles of the Oakville to Oak Knoll reach of the main stem of the Napa River	Reduce rates of sediment delivery (associated with incision and accelerated bank erosion) to channels by 50% by 2017 Ranchers control sediment and pathogens on 80% of grazing lands in the Napa River watershed (approximately 16,000 acres) One priority stream crossing repaired preventing an estimated 760 tons of sediment from entering Napa River and eliminating a documented fish passage barrier	Reduce human sources of sediment to the Napa River by 51% by 2029 (Goal: 185,000 metric tons/year)

Project Type: Watershed Restoration

Dutch Slough, Emerson Parcel Tidal Marsh Restoration
Recipient: California State Coastal Conservancy
Funding: $1,400,000 (Nonfederal match: $2,754,000), FFY: 2011
Project Period: September 2011 – September 2018

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Eliminate cattle grazing on 425 acres	Filter pollutants from terrestrial runoff and improve water quality	Restore tidal channels (>5 miles)
Conduct pre-project water quality monitoring	Create freshwater signal to attract native fishes to spawning/rearing habitats	Restore approximately 240 acres of freshwater intertidal marsh
Grade marsh plain and Marsh Creek channel	Contribute to primary productivity and enhance food supply for sensitive pelagic species potentially including Delta smelt and longfin smelt through export of nutrients	Restore 15 acres of riparian woodland and scrub-shrub
Construct water control structures	Increase habitat for sensitive native species (Chinook salmon, Sacramento splittail, California Black Rail, Swainson's Hawk, Loggerhead Shrike, Tricolored blackbird) and potentially spawning habitat for Delta smelt	Restore approximately 2 miles of shaded riverine aquatic habitat
Revegetate the marsh	Minimize production and export of methyl mercury	Preserve and enhance up to 100 acres of managed freshwater marsh
Pre-breach revegetation of 15 acres of riparian woodland and scrub		
Reestablish Marsh Creek Delta and hydrologic processes by routing Marsh Creek through the Emerson parcel. New delta will replace straightened, channelized stream bed (approximately 1.25 miles) with sinuous dendritic channels (approximately 2.5 miles).		
Breach levees to reintroduce tidal action and reestablish a supply of natural freshwater flows and fluvial sediments to approximately 240 acres		
Contribute to scientific understanding of ecological restoration by implementing the project under an adaptive management framework		
Design and construct the project with minimal high marsh habitat, because these areas, with frequent wetting and drying, can be sources for mercury methylation		

Cullinan Ranch Tidal Marsh Restoration Project
Recipient: Ducks Unlimited
Funding: $1,400,000 (Nonfederal match: $500,000), FFY: 2011
Project Period: September 2011 – September 2018

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Levee improvements for protection of Highway 37 and Pond 1, including graded intertidal bench in SW corner, earthen viewing pad (Precursor to levee breaches)	Reconnect 1,549 acres of estuarine subtidal and intertidal habitat to San Pablo Bay watershed	Improved habitat connectivity among wetland, transitional and upland habitat
Create and enhance upland transition habitat along setback levee and Pond 1 levee	Create approximately 30 acres of habitat suitable for Salt Marsh Harvest Mouse (SMHM) colonization	Increased SMHM population size
Build Public Access: fishing pier and kayak launch	Restore hydrologic connectivity between Cullinan Ranch and surrounding sloughs	Ridgway's rail utilization
Excavate channel for access from kayak launch facility to existing channel	Restore hydrologic connectivity with Pond 3	Improved water quality with restored tidal marsh
Beneficially reuse up to 405,000 $yd.^3$ of sediment (dredge material) prior to breaching levees to restore up to 50 acres of intertidal habitat	Increase waterbird utilization within 1 year and SMHM utilization within 5 years	Results will inform future restoration projects and used in adaptive management to ensure project is meeting objectives
Lower approximately 26,000 linear feet of levee	Use by target fish species	
Breach the Cullinan Ranch perimeter levees at five points and the Pond 3 perimeter levee at three points		
Conduct water quality monitoring and habitat monitoring data for methylmercury, waterbirds, vegetation, channel evolution, priority species, sedimentation		

Project Type: Wetland Restoration

Urban Pesticide Reduction Campaign
Recipient: San Francisco Estuary Partnership
Funding: $250,000 (Nonfederal match: $83,334), FFY: 2011
Project Period: September 2012 – October 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Engage 12 additional community group partners engaged Develop a mobile phone app. for less-toxic pesticide information Complete and distribute a tabling kit Summary of number of people reached through in-person interactions New ads and PSAs for Our Water Our World (OWOW) Establish a project Facebook page Report on social media interactions, click-throughs and web visits, media pitches, articles placed and coverage, events and attendees Collect less-toxic pesticide sales data	Improve water quality through decreasing sales of most-toxic pesticides and increasing desired behaviors of residential pesticide customers	Over ten years of increased campaign visibility, a 15% reduction in residents applying pesticides and 20% reductions in those who believe toxic pesticides are necessary is expected

San Francisquito Creek Stabilization at Bonde Weir
Recipient: San Mateo Resource Conservation District
Funding: $75,000 (Nonfederal match: $25,000), FFY: 2011
Project Period: August 2012 – October 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Finalize designs Obtain permits for fish barrier removal Remove in stream barrier for fish migration Re-profile streambed with engineered streambed material Cover and plant exposed bare ground adjacent to the Creek to prevent erosion Protect and enhance over 120 feet of streambed by adding new rock material designed to withstand Creek flows associated with a 100 year storm	Restore access to 40 miles of stream for anadromous fish rearing and spawning grounds below Searsville dam Functioning erosion control structures, healthy restored riparian vegetation covering the site	

Project Type: Wetland Restoration

San Pablo Bay Tidal Marsh Enhancement and Water Quality Improvement
Recipient: Audubon California
Funding: $235,884 (Nonfederal match: $60,607), FFY: 2011
Project Period: August 2012 – December 2014

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Excavate a large tidal channel through the center of the marsh and small lateral channels from the newly excavated large channel Expand the size of some existing small channels connecting to and within the relic berm area Construct several small high tide refugia within the marsh interior alongside and near the newly excavated channel, using sediments excavated from the new channel Construct wetland transition ramps along the upland edge of the marsh, using sediments excavated from the new channel Revegetate the refugia berms and wetland-transition ramp with appropriate native vegetation Conduct baseline and post construction monitoring of physical and biological conditions	Improve water quality by reducing the annual application of pesticides (pounds per acre of active ingredient) by 75% within two years and by improving the filtering capacity of the tidal marsh Tidal circulation and drainage will improve the ecological function of 300 acres of tidal marsh Acres of water impounded will be reduced by 75% within 2-3 years Mosquito populations will decline with improved tidal circulation within two years Benefits to estuarine-dependent wildlife. Abundance of SMHM, CLRA, California Black Rail, and San Pablo Song Sparrows within the impounded areas will remain stable or increase within the project area three to five years after construction.	Improve marsh vegetation health

Project Type: Wetland Restoration

Rethink Disposable: Packaging Waste Source Reduction Pilot
Recipient: Clean Water Fund
Funding: $257,293 (Nonfederal match: $85,764), FFY: 2011
Project Period: September 2012 – November 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Work with local governments and food establishments to develop cost-effective models to reduce takeout food disposable packaging Conduct 12 audits of food establishments to develop case studies on source reduction, a takeout food source reduction outreach plan and educational materials Develop first U.S. model policy encouraging Bring Your Own beverage containers which can achieve a 13% reduction in beverage container litter	Reduce trash from takeout food packaging by 36,000 pounds/100 businesses/year Help municipalities meet the Municipal Regional Stormwater Permit 40% waste reduction target Provide new approach to reducing trash in inland and coastal waters – moving from capture and control to source reduction Reduce cradle to grave/lifecycle impacts associated with disposable packaging BYO beverage containers policy available to enable a local jurisdiction to achieve up to a 13% reduction in beverage container litter	Help municipalities meet the Municipal Regional Stormwater Permit 100% waste reduction target by 2022

Alameda Creek Healthy Watersheds
Recipient: Alameda County Resource Conservation District
Funding: $181,823 (Nonfederal match: $60,607), FFY: 2011
Project Period: September 2012 – June 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Develop conservation plans for 2-3 landowners each year towards the 5 landowner program goal Assess ~10 miles of streams for current condition and recovery potential Treat ~6 miles of stream and 3,840 acres of grazing and agricultural land with nonpoint source pollutant reduction BMPs Develop a measuring protocol to evaluate and document the following physical improvements to riparian corridors quantified by assessment score increases: Total Physical Habitat Score (results will vary by site); Riparian Vegetative Zone Width (e.g. "marginal" to "optimal" over 3 years); Human Influence (e.g. "marginal" to "suboptimal" over 3 years); Canopy cover (e.g.10% increase in density over 3 years, 70% at 10 years); Riparian Vegetation (e.g. lower canopy 0 to 10-40% over 3 years; 40-75% at 10 years); Bank Stability (e.g. "eroding" to "vulnerable" or "stable") Hold 1 – 2 creek cleanups, invasive weed control, or riparian vegetation planning events per year to improve local understanding of the value of creeks and riparian areas for water quality and watershed education Provide watershed-focused technical assistance on BMP effectiveness and long-term watershed management to public and private landowners Build landowner data collection capacity through demonstration workshops/ field tours	Improve benthic community health; decrease in maximum stream temperatures, nutrient, pathogen and fine sediment loading for ~6 stream miles Improve ~3,840 acres of grazing and agricultural land as a result of site-specific planning and nonpoint source BMP implementation	Physical improvements to riparian corridors quantified by assessment score increases

Rebuilding Habitat and Shoreline Resilience through Improved Flood Control Channel Design and Management
Recipient: San Francisco Estuary Partnership
Funding: $1,552,059 (Nonfederal match: $1,570,000), FFY: 2012
Project Period: September 2012 – December 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Conduct historical analysis of how streams connected to tidal regions and estimate watersheds' coarse sediment supply Develop regional classification scheme and conceptual models for channel redesign and sediment reuse Convene a regional advisory committee made up of local experts for ongoing technical input and hold a workshop with national experts for review of conceptual models Conduct economic analysis of realigning channels vs. sediment removal and disposal Analyze policies and regulations and draft recommendations for future flood control restoration projects Develop regional implementation toolbox documents, website, and sediment "match-up" online database San Francisquito Creek Implementation Project: conduct final project design and permitting; construction; transfer of lessons learned; public outreach Novato Creek Implementation Project: conduct historical ecology study, site evaluation and conceptual design; final project design and permitting; pre-project monitoring; public outreach Walnut Creek Implementation Project: develop initial conceptual models and refine conceptual models Regional Public Outreach and Education: develop museum exhibit; develop podcasts, signage, and other outreach at each pilot project site	San Francisquito Creek: improve hydrogeomorphic conditions along 2800 feet of the San Francisquito flood control channel. Novato Creek: a flood control project designed and permitted to achieve the long term environmental results stated Walnut Creek: a flood control project that has hydrogeomorphic information necessary to be designed to achieve the long term environmental results stated Reduction of millions of dollars of flood control channel maintenance costs and redeployment of these funds to restoration	San Francisquito Creek: improve ecological functions of 4.1 acres tidal marsh and 2800 feet of channel bank Novato Creek: beneficial reuse of 70,000 yd.^{3} of sediment, over 2 miles of improved stream channel, potentially 800 - 1200 acres of restored tidal marsh to improve water quality and habitat for steelhead, black rail and Ridgway's rail. Walnut Creek: improve conditions along over 2 miles of Walnut Creek and restoration of over 25 acres of tidal marsh Reclassify millions of cubic yards of "waste sediment" as a resource available for reuse (up to 800,000 yd.^{3} in Walnut Creek alone) Improve resilience to sea level rise due to improved habitat and shoreline stability resulting from increases of sediment reaching the Bay margin

Project Type: Wetland Restoration

Quartermaster Reach Restoration Project
Recipient: Golden Gate National Parks Conservancy
Funding: $1,000,000 (Nonfederal match: $1,000,000), FFY: 2012
Project Period: September 2012 – August 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Install two 32' wide, 5' high box culverts and associated headwalls at Mason Street to provide sufficient floodwater and tide-water exchange between the Crissy Field Marsh and the project area to improve passage and habitat conditions for fish and wildlife Demolish and remove approximately 310,000 ft.^{2} of asphalt, concrete and compacted earth Remove approximately 61,500 yd.^{3} of artificial fill material to expose native soils and the underlying shallow, unconfined water table Remove a 9,000 ft.^{2} building, building pad, and site-wide utilities to accommodate wetland restoration Grow and plant a diverse palette of native plant species, including more than 33,000 individual plants and remove ~30 non-native trees Engage community members in restoration efforts through the Presidio Park Stewards program Build a portion of the Tennessee Hollow Trail/boardwalk to provide for public access and interpretation of the site, while maintaining ecological function and habitat connectivity. Expand and promote the community outreach programs utilizing the watershed, including volunteerism, self-guided walking tours, the "Watershed Quest" program for youth ages 8-12, and the "Watersheds Inspiring Student Education (WISE)" program for high school students	Daylight an approximately 1,050' length of stream channel. Increase and enhance tidal exchange between Crissy Field Marsh and the upstream creek system Provide a contiguous wildlife habitat corridor between the restored Thompson Reach and Crissy Field Marsh/San Francisco Bay Improve water quality entering Crissy Field Marsh by redirecting flows currently contained in a storm drain into a newly created wetland. Achieve high volunteer participation in the project, with an annual target of 3,500 hours/year for the first 5 years and 1,000 hours/year for the following 5 years.	Create approximately 8 new acres of native habitat at the edge of Crissy Field Marsh/San Francisco Bay including 4.7 acres of new wetlands (salt marsh, brackish marsh, dune slack, and other wetland habitats) and 3.3 acres of coastal scrub upland

Project Type: Wetland Restoration

Napa River Restoration: Rutherford Reach & Oakville to Oak Knoll, Group C Sites 11 – 14
Recipient: Napa County
Funding: $1,500,000 (Nonfederal match: $1,500,000), FFY: 2012
Project Period: August 2012 – December 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Rutherford Reach (Reaches 5, 6, 7 and 9): Construct 3 – 8 floodplain benches, install up to 58 in-stream habitat structures along approximately 5900 feet of channel Oakville – Oak Knoll (OVOK) Reach (Group C Sites): Begin restoration activities on 0.7 miles including: constructing up to three floodplain benches complexes, and installing up to 27 in-stream habitat structures along 1400 feet of channel	Rutherford Reach: ~3,500 feet of eroding stream banks along 1.1 miles of river channel stabilized and up to 10 acres of riparian habitat created Fine sediment delivery reduced by ~111,000 yd.^{3} (Rutherford and OVOK combined) Acheive 2017 TMDL target of 51% sediment source reduction (19,000 tons/year) from channel incision and bank erosion sources on the mainstem Napa River	Oakville – Oak Knoll Reach: Stabilize 1,000 feet of eroding stream banks along 0.7 miles of river channel and create up to 2.4 acres of riparian habitat Reduce human induced sources of sediment to the Napa River by 51% by 2029 (Goal: 185,000 metric tons/year)

Sears Point Tidal Marsh Restoration: Phase I
Recipient: Sonoma Land Trust
Funding: $941,941 (Nonfederal match: $941,941), FFY: 2012
Project Period: September 2012 – November 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Remediate 12,000 $yd.^3$ of contaminated soil Complete new 2.5-mile Bay Trail segment Excavate ~6 miles of channels Construct 2.5-mile habitat/flood control levee Construct up to 500 marsh mounds and sidecast mounds Establish vegetation within new tidal basin in advance of breach Excavate two 285' breaches in existing levee Lower ~7,000 linear ft. of existing levee to mean high high water Construct 2,100' connector channel from Breach 1 to Petaluma River Navigation Channel Conduct post-project monitoring	Create up to 30 acres of transitional habitat on the levee Minimized erosion, maximized accretion within tidal basin Highway 37, railroad, neighbors protected from stormwater flooding Increase public access to wildlife observation opportunitiess	Restore 960 acres of tidal marsh providing habitat for Ridgway's rail, salt marsh harvest mouse, and rearing salmonids Tidal marsh will provide buffer against storm surges Filter stormwater from agricultural lands and highway Provide carbon sequestration

Assess Impacts of Tidal Wetland Restoration on Methylmercury & Bioaccumulation
Recipient: California State Coastal Conservancy
Funding: $500,000 (Nonfederal match: $500,000), FFY: 2012
Project Period: September 2012 – January 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Determine the amount of erosion in Alviso Slough and the release of mercury as a result of restoration of Pond A8 to muted tidal flows in 2011 Determine the amount of mud suspended in Alviso Slough, and the fate and transport of the mud – whether mud ends up in Pond A8, Pond A6 or the open bay Investigate seasonal changes in the amount of mercury in the mud, as well as the first big storm event of the year, to assess seasonal variation Determine the amount of mercury in fish in the 3 sloughs (Alviso, Mallard, and Guadalupe Slough) and bird eggs in the ponds after restoration in Pond A8 Provide biosentinel species results to agencies and scientists to inform other wetlands restoration projects in the Bay-Delta region	Further scientific understanding of mercury cycling in tidal wetlands and salt ponds to adaptively manage future restoration activities planned over the next 10 years Depending on results of studies, confirm that opening additional gates in the Pond A8 notch is prudent in order to eventually support full tidal restoration of 1,400 acres Depending on results of studies, implement Shoreline Study tidal wetland restoration projects (2,045 acres in Ponds A9-A15 and 856 acres in Pond A18) with shortest duration possible between phases Depending on results of studies, design measures to minimize mercury impacts in future tidal restoration phases	Restore 2,901 acres of tidal wetlands (Ponds A8-15, Pond A18) to reduce mercury inputs to the food web

Removing Mercury in the Guadalupe River Watershed
Recipient: San Francisco Estuary Partnership
Funding: $800,000 (Nonfederal match: $800,000), FFY: 2013
Project Period: October 2013 – December 2015

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Remove all calcine-paved (roasted mercury ore) roads, approximately 3 miles, within the Almaden Quicksilver County Park with heavy equipment and permanently dispose of it in the San Francisco Open Cut within the park boundaries Develop 25% design plans for remediating the Upper Jacques Gulch calcine features	Remediate all calcine-paved roads features, sequestering an estimated 25-263 kg. of mercury within the San Francisco Open Cut	Address Guadalupe River Watershed and San Francisco Bay Mercury TMDL goals by reducing mercury inputs in the Guadalupe River Watershed from mine waste and mercury-laden sediments

Breuner Marsh Restoration
Recipient: East Bay Regional Park District
Funding: $1,500,000 (Nonfederal match: $1,500,000), FFY: 2013
Project Period: January 2014 – February 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Remove non-native vegetation and replace with native plants, irrigate as needed to establish plants and install fencing Construct Main Trail (Bay Trail segment) and Spit Trail Construct a broad transitional zone, gently sloping upland habitat and self-sustaining wetland areas that will transgress with sea level rise Lower the elevation of the existing upland to create tidal wetlands Grade shallow depressions in existing upland areas to enhance low quality seasonal wetlands Improve public access: Construct bridge, boardwalks, trails, picnic area, scenic overlook, and install interpretive signs	Create 24.9 acres of pickleweed habitat adjacent to enhanced transitional areas planted with native shoreline vegetation to contribute to nesting, foraging and refugia habitat for the Salt Marsh Harvest Mouse and Ridgway's Rail	Create, restore and enhance 164 acres of wetlands and habitat at Breuner Marsh along the Point Pinole Regional Shoreline in Richmond

Project Type: Wetland Restoration

Napa River Restoration: Oakville to Oak Knoll Reach, Group A Sites 21 – 23
Recipient: Napa County
Funding: $1,271,350 (Nonfederal match: $1,271,350), FFY: 2013
Project Period: January 2014 – May 2017

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Construct 2 floodplain benches and 0.9 acres of alcove features Install up to 38 in-stream habitat structures along 2,000' of channel As built drawings of construction per 100% Design & Specifications for restoration on 1-2 properties Pending construction bids, available funding may also support: Construction of .3 acres of floodplain benches and installation of up to 2 in-stream habitat structures along 3,000 feet of channel Complete protocols and data management systems for Bank Erosion and Rural Road Condition rapid assessment methodology (RAM) tools, including detailed user manuals, web based data management platforms and training modules to facilitate implementation	~1,395 feet of eroding stream banks stabilized and up to 5.2 acres of riparian habitat created Fine sediment delivery reduced by 34,900 $yd.^3$ or 2871 metric tons/year ~1 mile of the Napa River restored ~350' of eroding stream banks stabilized; fine sediment delivery reduced by ~22,500 $yd.^3$; and up to 5.3 acres of riparian and wetland habitat created (pending construction bids)	Increase stream habitat complexity, connectivity, and function of 5.2-10.5 acres along the Napa River Restore 9 miles of the Napa River Oakville – Oak Knoll Reach Reduce human induced sources of sediment to the Napa River by 51% by 2029 (Goal: 185,000 metric tons / year)

Reducing Nutrients to San Francisco Bay through Additional Wastewater Sidestream Treatment
Recipient: East Bay Municipal Utility District
Funding: $517,650 (Nonfederal match: $517,650), FFY: 2013
Project Period: January 2014 – January 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Conduct a comprehensive literature review of viable sidestream nutrient removal technologies Conduct bench and pilot tests of best-available sidestream nitrogen removal technologies at multiple wastewater treatment plants and evaluate feasible nutrient reductions to the SF Bay. EBMUD, SFPUC, and OLSD will test Anammox, and Delta Diablo will pilot test CANDO. Estimate high-level cost & benefit of sidestream treatment Conduct hydrodynamic and water quality modeling using SFEI's nutrient model (under development) to simulate potential water quality improvements to SF Bay assuming full-scale implementation of sidestream treatment by publicly-owned wastewater treatment works (POTWs) in SF Bay Evaluate the role of sidestream treatment in developing a science and cost effectiveness based regional approach to nutrient management in SF Bay Host 8 workshops with collaborators	Identify cost-effective nutrient removal technologies for sidestream treatment Quantify potential nutrient load reductions to SF Bay and estimate the cost & benefit of sidestream treatment Simulate water quality improvements to SF Bay assuming full-scale implementation of sidestream treatment by POTWs in SF Bay	Project results will help determine level of treatment for POTWs discharging to San Francisco Bay under the recent SF Bay-wide POTW permit.

South Bay Salt Ponds Tidal Restoration Phase II Planning
Recipient: California State Coastal Conservancy
Funding: $866,021 (Nonfederal match: $866,021), FFY: 2013
Project Period: January 2014 – December 2016

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Complete geotechnical studies to support tidal marsh restoration and new levee construction Complete permit applications for Phase 2 South Bay Salt Pond restoration projects on US Fish and Wildlife Service property and 30% design for 4 distinct Phase II restoration projects	Plan and design for restoration of 1,005 acres of restored tidal baylands (710 acres in Alviso and 295 acres in Ravenswood) Hydrologic enhancement of an additional 325 acres of previously restored tidal baylands (Charleston Slough and Pond A19 in Alviso), and 60 acres of enhanced managed pond habitat (Ponds R5 and S5 in Ravenswood)	Restore 15,000 acres of tidal marsh

Sears Point Tidal Marsh Restoration: Phase II
Recipient: Sonoma Land Trust
Funding: $1,500,000 (Nonfederal match: $1,500,000), FFY: 2014
Project Period: December 2014 – November 2018

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Construct two 285' breaches in existing levees Dredge 2,100' connector channel Lower 6,850' of existing levee Grade 22,400' of existing levee Seed up to 50 acres of levee Open site for public access Monitor water quality (DO, temp, pH, turbidity) and marsh development	Restore hydrology to 960 acres Improve sedimentation pathway and hydrologic connectivity Create "instant marsh" on crest and sides of lowered levee	Restore tidal action to 960 acres

Napa River Restoration: Oakville to Oak Knoll Reach, Group C Site 14
Recipient: Napa County
Funding: $894,324 (Nonfederal match: $894,324), FFY: 2014
Project Period: January 2015 – December 2019

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Construct a 750-linear foot high-flows swale to enhance backwater habitats Apply biotechnical bank stabilization along 1500 linear feet of river bank Widen the river channel by 65 – 90 feet by removing 103,000 yd.^{3} of sediment from eroding banks As built drawings of construction per 100 percent Design & Specifications for restoration on two properties	1500' of eroding stream banks stabilized and 5 acres of riparian habitat enhanced Fine sediment delivery reduced by 2476 metric tons/year	Increase habitat complexity, connectivity, and function of 5 acres along the Napa River Restore 9 miles of the Napa River OVOK Reach Reduce human induced sources of sediment to the Napa River by 51% by 2029 (Goal: 185,000 metric tons/year)

South Bay Salt Pond Restoration Project: Phase II Construction at Ravenswood
Recipient: California State Coastal Conservancy
Funding: $1,000,000 (Nonfederal match: $1,000,000), FFY: 2014
Project Period: **December 2014 – June 2018**

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Reinforce over 5,000 linear feet of existing levee and create approximately 7,000 linear feet of upland transition zone Installation of one water inlet/outlet structure Construct one levee breach Install a new high flow diversion from Bayfront Canal into R5/S5 Earthwork and construction of a new nesting island Comprehensive Monitoring and Adaptive Management Plan	Adjacent areas protected from tidal waters, fringing wetland on the upland transition zone. Sufficient bay water exchange between the tidal restoration at R4 and the reconfigured 30 acre Pond R5 Discharges of water meet permit criteria for water quality (DO, salinity, pH) Full tidal inundation of 295 acres Reduction of annual flooding along Bayfront Canal Increased above baseline numbers of migratory shorebirds roosting and nesting in project area	Restore 280 acres of tidal wetlands Enhance 60 acres of non-vegetated tidal wetlands Improve tidal circulation through a 10 acre remnant tidal slough Create 15 acres of upland refugia

Project Type: Restoring Wetlands

Upper York Creek Dam Removal, Fish Passage, and Ecosystem Restoration
Recipient: City of St. Helena
Funding: $987,876 (Nonfederal match: $987,876), FFY: 2014
Project Period: December 2014 – March 2019

OUTPUTS (Activity, effort, and/or work product during project period)	**OUTCOMES** (Environmental Results)	
	SHORT-TERM (1-5YRS)	LONG-TERM (5-20+YRS)
Remove invasive riparian vegetation and revegetate with native plants Reconstruct channel to consist of 475' long cascade reach and 710' of adjacent floodplain	Restore 2 acres of riparian forest Restore unimpaired fish access to 1.5 miles of high quality gravel and cobble dominated stream habitat Restore fish access to 63% of the watershed's sediment source area, primarily course bedload, which is better for fish habitat	Restore the 0.23 miles of in-stream habitat for salmonids Sequester 276 metric tons CO2 equivalent

Restoration of South Bay Salt Pond A 17 near completion. Photo: McMillen Ltd.

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Pacific Southwest/Region 9
EPA-909-R-14-003
http://www2.epa.gov/sfbay-delta/sf-bay-water-quality-improvement-fund