

**SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP) /
REGIONAL WATER QUALITY IMPROVEMENT PROJECT (/RWQIP) PROPOSAL**

Project Title: Cosumnes Floodplain Mitigation Bank (Bank)

Geographic Area of Interest: Portions of Placer, Sacramento, San Joaquin, Sutter & Yolo Co.

Responsible Entity & Contact Information:

Westervelt Ecological Services (property owner and Bank operations manager)
600 North Market Boulevard, Suite #3
Sacramento, CA 95834
Ph (916) 646-3544
Fx (916) 646-3675
Attn: Travis Hemmen
E-mail: themmen@westervelt.com

A brief overview of Westervelt and staff backgrounds can be viewed on our web site located at www.wesmitigation.com.

Estimated Costs:

There are four credit types that are available at the Bank. The credit types and associated costs (in 2010 dollars) are shown below. Credits may be purchased in hundredth of a unit, so compensation may be scaled to the level of the impact.

Floodplain Mosaic Wetlands (\$125,000 per credit); These include vegetated zones of riparian forest, riparian woodland, riparian scrub, scrub-shrub wetland, semi-permanent wetland, perennial emergent marsh, seasonal wetland, seasonal swales and tidal freshwater marsh, all of which will meet the three parameters method for US Army Corps of Engineer regulated wetlands.

Floodplain Riparian Habitat (\$145,000 per credit); These included vegetated zones of riparian forest, riparian woodland and riparian scrub, all of which would be regulated as “Other Waters of the United States” (i.e., non-wetlands).

Shaded Riverine Aquatic (SRA) Habitat (\$95 per linear foot); These are the vegetated zones along the created channels and include riparian forest and riparian shrub zones.

Enhancement Riparian Habitat (\$45,000 per credit); These are existing vegetated riparian zones that will be improved through additional planting and non-native vegetation management.

Brief Project Description:

Re-establish a mosaic of wetlands types (e.g., emergent and seasonal scrub-shrub wetlands) and riparian scrub-forest on a 493-acre property by breaching a farm berm along the Cosumnes River to allow smaller flood events and summer tidal cycles to provide a more natural hydrology to the site (Figure 1 - habitat concept plan).

Water Body, Beneficial Use and/or Pollutant to be Addressed by the Project:

The Bank is located at the confluence of two major rivers, the Cosumnes and Mokelumne Rivers, respectively, and is located within the secondary zone of the legal delta boundary (Figure 2 - project location map). As the hydrology on the Bank is subject to both seasonal flooding associated with drainage of the Cosumnes River watershed and daily tidal influence from the Sacramento-San Joaquin Delta, the service area includes both the 8-digit hydrological unit code (HUC) watershed and the adjacent 10-digit HUCs that are tidally influenced (Figure 3 - service area map).

The habitat restoration activities at the Bank will restore a mosaic of wetland types and associated floodplain riparian functions and services. The floodplain, when inundated, and the created channels will additionally serve as aquatic habitat for native fish species. The restored features will include riparian habitat features, floodplain wetlands, and channels that provide SRA habitat. The opening of the farm berm to allow natural inundation events will facilitate the re-establishment of additional native riparian vegetation on the Bank via natural recruitment or as assisted by planned, direct planting. While reference wetlands, north of the site on the Cosumnes Preserve, will be used as a guide, the individual riparian ecotones within the restored Bank will be expected to naturally sort themselves out based on landscape / ecological preferences.

The anticipated benefits to water quality are threefold. First, the entire re-established floodplain will trap fine sediments that cross the land, and the new riparian vegetation will increase the floodplain roughness that will increase floodwater retention. Second, the newly-planted riparian vegetation will sequester nutrients as the plants grow, and will further slow flood waters, by adding over 470 acres to the floodplain, to reduce scouring and entrainment of more sediment in the storm water runoff in the mainstem of the river. Third, removal of agricultural operations (i.e., vineyard and row crops) from the site will reduce pollutants (e.g., fertilizers, herbicides and pesticides, air-borne dust from annual plowing) from the agriculture activity going directly into the Cosumnes River, the Delta and adjacent landscapes, and a reduction in degradation on the water quality from exposed soils when a non-controlled breach would occur (in the past, this has happened during a 5-year flood event). Cosumnes River and its receiving waters in the Mokelumne River are considered to be important aquatic resources in the Delta, and are also known to be partially-impaired with nutrients and sediments; thus, this project focuses on a documented conservation need.

Project Schedule & Key Milestone Dates:

2008

- Westervelt purchased the property and implemented technical studies to create a privately held mitigation bank, approved under the 2008 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. These technical studies included: Section 106 compliant cultural study, including on-site sampling excavation; environmental phase I study; both a regional and design level hydrological analysis; sediment and erosion studies; soils and geo-technical investigations; property line record of survey; endangered species assessment; arborist survey; topographical and bathymetric surveys; wetlands

**SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP) /
REGIONAL WATER QUALITY IMPROVEMENT PROJECT (/RWQIP) PROPOSAL**

delineation; air quality analysis; fisheries study; mineral rights review, and; California Environmental Quality Act (CEQA) documentation.

2009

- The Bank Enabling Instrument (BEI) was approved by the Interagency Review Team (IRT), composed of the US Environmental Protection Agency, the US Army Corps of Engineers (USACOE) and California Department of Fish and Game (CDFG). The BEI document included site justification for mitigation, baseline site conditions, design review, property assessment and warranty, habitat management and monitoring plan, operation plan, interim habitat establishment and monitoring securities, credit methodology analysis and ledger, service area mapping and description, long-term management endowment fund evaluation, and conservation easement documents. The endowment fund and the conservation easement are held by a third-party, non-profit organization, the Wildlife Heritage Foundation.
- The project received a CEQA mitigated negative declaration from Sacramento County.
- A Biological Opinion was issued by National Oceanic and Atmospheric Administration (NOAA) Fisheries (#2009/02994).
- Permits were issued from CDFG (LSAA #1600-2009-0040-R2) and the Central Valley Regional Water Quality Control Board 401 Water Quality Certification (Water Board, WDID#5A34CR00449).

2010

- A Biological Opinion was issued by the FWS (#81420-2010-I-0743-1).
- The project received a grading permit from Sacramento County (Permit #2954) and a Stormwater Pollution Prevention Plan tracking number from the Water Board (WDID#5S34C357916).
- Construction began on the grading work inside the farm berm to expand the expected wetland flood bench and to create backwater channels.
- Erosion control seeding will be installed in the fall.
- Westervelt joined the Delta Mercury Non-Point Source Workgroup as both a participant and stakeholder, and is providing matching funds for the planning of the phase I control studies to identify potential means to reduce methyl mercury in the Delta. Westervelt will be using the Bank site as part of the control study.

2011

- Container and cutting planting will be implemented in the dormant season (winter).
- The breach of the farm berm on the Cosumnes River will be done in mid-summer at the low-low water tidal cycle (anticipated to occur in either July or August).

2012

- Westervelt will begin a five-year monitoring program to evaluate the progress of the habitat establishment. The monitoring focuses on functions that are normally associated with floodplain wetlands, and includes evaluating the dynamic surface water storage, retention of particulates, organic carbon export, nutrient cycling, fish utilization and

**SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP) /
REGIONAL WATER QUALITY IMPROVEMENT PROJECT (/RWQIP) PROPOSAL**

maintenance of plant communities (i.e., plant survival and natural recruitment). Photo points will also be established as part of the documentation.

- Westervelt will begin the establishment maintenance and long-term management of the Bank as part of the site stewardship. Activities include weed management, herbivory control, fence & signage maintenance, trash collection, fire hazard reduction, along with the plant establishment activities.

End Product Items:

The following items have or will be produced as part of the Bank implementation:

- Bank Enabling Instrument
- Design Plans and SWPPP
- Permit Documents
- Special Studies and Reports
- Future Monitoring Studies
- Approximately 470 acres of re-established floodplain habitat on the Cosumnes River

Project Evaluation Assessment:

If so required, Westervelt will hire an independent contractor to evaluate each SEP sales record to verify that monies received were debited against the credit ledger. This will ensure that no monies were collected if there were no credits available and that the ledger would show each SEP sale as an independent line item and include the ACL tracking number.

Disclaimers:

As an important note that Westervelt is not a party to any Administrative Civil Liability (ACL) action, nor are they involved in the litigation under any ACL. This project is not independently required of any discharger or proposed mitigation to offset impacts of a discharger's project. In addition, the SEP funds will not be used for political lobbying, litigation activities, or general administrative overhead.

In addition, this proposed SEP / RWQIP shall not benefit the State Water Board or Regional Water Board functions or Water Board staff.

This project is being independently funded as a private, for-profit, mitigation bank. The project includes purchase of the land, entitlement to create a banking instrument document, permitting, design & construction of the habitat features, monitoring to meet performance standards, placement of a conservation easement and funding a non-wasting endowment tied to the property, all to create mitigation credits that will be sold on the open market. Credits from this Bank have been sold to public and private entities.

Nexus Criteria:

Anticipated violations that would be appropriate to purchase credits as a SEP would likely be projects associated with turbidity and fisheries impairment issues within the designated service area.

**SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP) /
REGIONAL WATER QUALITY IMPROVEMENT PROJECT (/RWQIP) PROPOSAL**

It would be up to the Water Board staff to verify the validity of credit purchases as a SEP proposal and subsequently require the approval by the Water Board. Once all the credits from the Bank have been sold, the site would no longer be able to be used for mitigation and would be removed from the SEP/RWQIP list.

The SEP would fall under EPA's 2008 amendment to 40 CFR Part 230, Compensatory Mitigation for Losses of Aquatic Resources; Final Rule.

“Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee programs may be used to compensate for impacts to aquatic resources authorized by general permits and individual permits, including after-the-fact permits, in accordance with the preference hierarchy in paragraph (b) of this section. Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an enforcement action, such as supplemental environmental projects.” (40 CFR Chapter I Section 230.93(g), Federal Register / Vol. 73, No.70 / Thursday, April 10, 2008 / Rules and Regulations, pg. 19693).