

**The Elkhorn Slough**  
**Environmental Enhancement and Mitigation Plan**  
**Interim Report**  
**Annual Update, July 2010**

Prepared by the Elkhorn Slough Foundation

**Interim Report**  
**The Elkhorn Slough Environmental Enhancement and Mitigation Plan**  
July 19, 2010

Pursuant to the Memorandum of Agreement signed by the Regional Water Quality Control Board (Regional Board), the California Energy Commission (Commission) and the Elkhorn Slough Foundation (Foundation), we are submitting this annual report on the Elkhorn Slough Environmental Enhancement and Mitigation Plan (ESEEMP).

As we near the end of plan implementation, we are pleased to report on what we consider tremendous progress toward the goals outlined in the plan. In terms of acreage of land and water permanently protected, the goals were far exceeded. We are in the process of preparing a final proposal that will complete use of the allocated funds. This will be submitted in the next two months. In the meantime, this report updates our annual accomplishments.

**Land Acquisition in Support of the Plan**

The Mitigation Measure adopted by the Regional Board and the Commission called for the funding of projects “for permanent preservation and enhancement” of habitat within the Elkhorn Slough watershed to increase the health and biological productivity of the aquatic environment. To do this, criteria were developed to directly protect, enhance and restore wetlands and to acquire and manage upland areas that were damaging aquatic resources by contributing runoff, sediments and chemicals into the slough. The Board and Commission called for a 5-year time frame for the use of the funds. We requested an extension to take advantage of the leveraging power of these funds, which was granted by the RWQCB. The summary below attests to the success of this strategy.

To date we have acquired or assisted in the acquisition of 36 properties by leveraging mitigation funds, and directly funded acquisition of the Sea Mist, Renteria, Iniguez and GreenPoint properties with these funds.

The ESEEMP called for the allocation of five million dollars for acquisition and restoration and two million dollars to establish a permanent fund that would generate revenue for the long-term stewardship of the lands acquired.

The Elkhorn Slough Foundation, working with a diversity of strong partners, has mobilized over \$28M for acquisition, an additional \$2M in gifts of land and more than \$8M for restoration, stewardship and management of conservation lands in the Elkhorn watershed. The ESEEMP funds were critical to leverage this additional support.

Statistics to date:

- Over 2600 acres of key properties were added to the protected or publically owned lands of the Elkhorn watershed
- 500 acres of historically steep eroding slopes were retired, stabilized and restored

- 1500 acre feet of water (488 million gallons) per year are now banked in the aquifer through elimination of pumping on fallowed fields
- Prior to this work an average of 16,500 tons of soil and sediment, based on NRCS estimates, was eroded each year from the lands now protected. These soils are stabilized, no longer subject to erosion and rebuilding their vitality.
- Over 400 acres of land continue in active farm and ranch use, supporting a vital part of the local economy.
- All of the farm lands of the Elkhorn Slough Foundation that remain in cultivation have been converted to organic production.
- 313 Acres of land, valued at \$1.9M were donated by landowners to the ESF for conservation purposes.
- Researchers reported, in the peer-reviewed scientific literature, a statistically significant drop in the levels of nutrients coming into the upper Elkhorn Slough following the acquisition and restoration of hillside properties purchased by ESF during this effort.
- Acquired 244 acres of existing wetland and riparian habitats
- Begun the restoration of several hundred acres of modified, degraded or diked wetlands
- Documented the resurgence of rare and endangered amphibians on and in protected lands

### **Outline of Strategy for Staging Mitigation Funds and Leveraged Funds**

The adopted mitigation measures in the ESEEMP encouraged cost share and leveraging of the mitigation fund “to obtain additional benefits for the Elkhorn Slough watershed without additional expenditures from the dedicated account”.

In previous reports, we’ve discussed our success at leveraging the mitigation funds entrusted to the Foundation by the Commission and the Regional Board. The Foundation & partners have protected over 2600 acres since the inception of this plan (see table below). With the properties and lands previously protected by The Nature Conservancy and managed by ESF, and lands ESF acquired before the mitigation, the Foundation now owns or manages over 3,600 acres. The Foundation used our capacity to assist the Elkhorn Slough National Estuarine Research Reserve (Reserve) acquire 7 properties totaling 314 acres and Caltrans to acquire a 160 acre mitigation property.

Our goal was to maximize the mitigation and conservation benefit of all funds entrusted to us. We have done this by creating a pooled conservation fund from numerous sources. This fund has generated over \$30M in conservation real estate transactions( including \$2M in donated land). We have increased the value of the ESEEMP mitigation funding 6 times over by using it as match for other funders and to attract or leverage additional funding.

The \$5M from ESEEMP mitigation funds was used to leverage:

- \$5.4M from the David & Lucile Packard Foundation,
- \$6.9M from the California Wildlife Conservation Board,
- \$4.5M from the California Coastal Conservancy,
- \$4.5 from Caltrans,
- \$2.4M from the National Oceanic and Atmospheric Administration,

- \$1.4M from other federal grants (CELCP & LWCF),
- \$2M donated, and
- \$0.5M from miscellaneous sources.

The major sources of funding required that their funds provide no more than a third of the total conservation costs. The mitigation fund allowed us to balance that equation. These other funding sources are restricted to land acquisition. The mitigation funds are the most flexible, allowing both acquisition and restoration. Given our goal of acquiring and restoring key lands in the watershed to increase aquatic health and production, and given the restriction on the other funding, we have preserved the mitigation fund for the potential to restore lands once they are acquired. We identified properties that needed to be acquired by the mitigation fund, but what made the most strategic sense was to retain the flexible funding as long as possible and use the more restricted funds first. This is the strategy we have pursued and it has clearly resulted in maximizing mitigation and conservation value.

The lands acquired to date all meet the criteria outlined in the ESEEM plan and are now the focus of intensive efforts to reduce damaging inputs to the slough and to improve and restore key habitats. Again, this progress represents the power of a sound and comprehensive plan and of pooling resources to implement the goal of improving aquatic health and productivity in Elkhorn Slough.

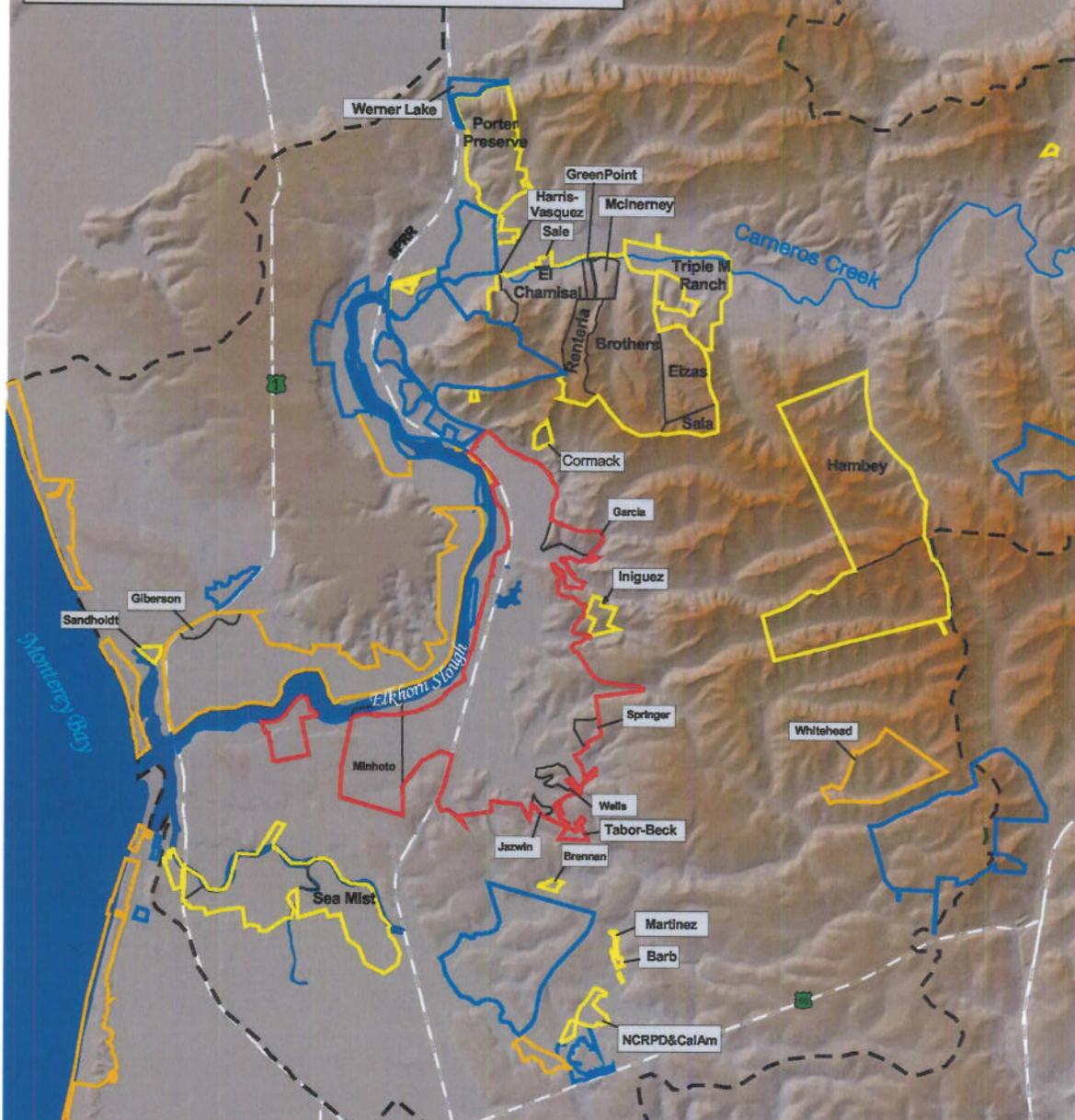
We are including an updated list of land acquired to support the mitigation that shows how we have staged funding. It is critical to understand that the mitigation fund has been an active component of the strategy and was necessary to get the commitment of the additional \$28M in funds and land. The fact that mitigation funds are the last funds to be spent means we have been able to preserve the flexibility that they provide and increase their value six-fold.

Lands acquired with funding and gifts leveraged from the mitigation plan are showed below followed by a map showing their location. Note that the lands that were donated to ESF or easements that came to ESF from the Coastal Commission have a zero in the acquisition cost column. These lands have been appraised at approximately \$2M, which when added to the cost of real estate acquired, brings us close to \$30M. It should also be noted that the total appraised value of the lands we purchased exceeded the purchase price by over \$3M, reflecting the fact that we were able to negotiate a series of below-market deals to protect these properties and to further increase the power of the mitigation funds.

**Summary of acquisitions in concert with Elkhorn Slough  
Enhancement and Mitigation Plan. ESF and Partners 2001 - 2010**

<u>Property</u>	<u>Acreage</u>	<u>Purchase price</u>
<b><u>ELKHORN HIGHLANDS</u></b>		
• ALBA (3M) Easement	194	\$1,189,274
• Elzas	134	\$400,000
• Porter Preserve	225	\$0
• El Chamisal	201	\$1,150,000
• Brothers	356	\$2,000,000
• Sale	6	\$0
• Hambey	540	\$3,140,000
• Iniguez	24	\$1,250,000
• Sala	39	\$1,200,000
• Kvitek	3	395,000
• Garcia	42	\$1,070,000
• GreenPoint	10	\$530,000
• Cormack	11	\$125,000
• Renteria	100	\$775,000
• Harris & Vasquez	33	\$350,000
• McInerney	35	\$432,400
<b><u>MORO COJO</u></b>		
• Seamist	183	\$886,925
• Sandholdt	9	\$0
• Weeks easement	2	\$0
• North County Parks & Rec. easement	8	\$0
• Cal American Water Co. easement	22	\$0
• Brennan easement	5	\$0
• Hamlin easement	0	\$0
<b><u>ESNERR</u></b>		
• Wells	22	\$700,000
• Howell	4	\$65,000
• Jazwin	6	\$630,000
• Springer	19	\$1,500,000
• Martinez easement	3	\$0
• Tabor-Beck	11	\$465,000
• Giberson	24	\$135,000
• Barb easement	2	\$0
• Minhoto	209	\$4,725,000
• Howell II	<u>2</u>	<u>\$200,000</u>
<b><u>OUTER WATERSHED</u></b>		
• Whitehead	160	\$4,392,000
• <u>Barrington easement</u>	<u>3</u>	<u>\$0</u>
<b>Total</b>	<b>2,647</b>	<b>\$27,705,599</b>

# Elkhorn Slough Watershed Protected Lands--March 2009



## MAP LEGEND

- ▭ ESF Property
- ▭ ESNERR Property
- ▭ State property, including: State Parks, the Department of Fish & Game and Caltrans
- ▭ Property owned by other conservation organizations, including: TNC, County Parks, & the Ag Land Trust
- Individual property boundaries
- Watershed boundary



0 0.5 1 1.5 2 Miles



## **Restoration and Source Reduction Activities on Slough Properties**

As part of the strategy outlined in the ESEEMP, we are continuing restoration of properties in the Elkhorn Highlands and a series of wetland properties. As we've described previously, these ranch and agricultural lands were responsible for some of the most damaging runoff and sedimentation into the upper slough. Collectively they encompass now 2,000+ acres of land. We have completed the first phases of restoration of these lands, including clean-up and the stabilization of gullies and abandoned fields, and elimination of exotic invasive species. Where required we re-graded and planted cover crops on steep hillsides. The fourth phase, entailing restoration planting, stewardship and monitoring, is now underway on nearly all of our properties. The fifth and final phase is the on-going work of monitoring and adaptive management, which we have begun with baselines on the properties acquired and on-going monitoring of vegetation.

To date we have reduced the acreage of eroding fields on these properties by 62%. We have reconfigured the "farm footprint" to be suitable for stewardship in the sand hills around the slough. In addition, we have made a substantial investment implementing practices recommended by the US Department of Agriculture to control and reduce erosion and runoff. This includes installation of contour cultivation, planting vegetated buffers and constructing sediment basins. These basins have been built to specifications from USDA with engineering from the Resource Conservation District.

We have constructed and are maintaining sediment and runoff retention basins on the upper slough properties to reduce damaging inputs of sediment and chemicals into slough waterways. We previously submitted information that enumerated the sites and capacities of these structures.

ESF maintains over 400 acres of land dedicated to some agricultural use, including grazing and cultivation. All of ESF land available for cultivation is now certified organic. In addition to these cultivated lands, we are continuing leasing out 250 acres of grazing land to a 'holistic range management' program that, by its cattle grazing practices, is maintaining one of the healthiest and most diverse stands of coastal prairie on the central coast.

## **Financial Management and Account Status**

We carefully tracked the \$2M Stewardship Endowment portion of the ESEEMP funding, per the approved guidelines. The fund has recovered a substantial portion of its value from the peak after the drop in the market. The fund continues to be ahead of the benchmark and is well positioned to grow as the economy grows. As of the end of June, 2010, the market value of the fund stands at \$2,162,073. In addition, the ESF board has established a separate endowment for sustaining conservation work in the slough that has a market value at the end of June of \$311,303, bringing total conservation focused endowments to \$2,473,376.

The \$5M acquisition fund has a balance of \$1.4M and is being mobilized for a series of restoration projects.

## **Wetlands**

We have made substantial progress in acquiring and restoring key wetlands in the Elkhorn watershed. The largest single wetland acquisition has been the Sea Mist Farms property. This former marshland was diked and cultivated for decades. It was fallowed by the farmers, but pumped dry and tilled each year for weed control. We were able to acquire the 183 acres and turn off the pumps. Since our report last year, regular monitoring of birds has increased the list of species to over 150. The work we reported on last year, with Dr. Gage Dayton from Moss Landing Marine Labs, is complete. Two large ponds were created that retain water into the dry fall season. Dr. Dayton filed his report with Regional Board staff, and demonstrated significant drops in nitrate as water flows from farm tail-water ditches across the restored wetland.

In the upper slough, we are near completion restoring the Azevedo Pond marshes. Damaged culverts had compromised the habitat value of these marshes. The tidal control structures are in place and functioning well. This project led to a net gain of over 5 acres of tidal wetlands.

The Department of Fish and Game, continues to manage the Salt Ponds of the Moss Landing Wildlife area, protecting 200+ acres of aquatic habitat and allowing management for endangered snowy plovers.

On the 3M Ranch, owned by the Agricultural Land Based Training Association, ESF holds an easement. Additional acres of cultivated flood plain was removed from farming and wetlands allowed to return. In addition to this increase in wetland cover, ALBA continues work on the stream restoration program and has eliminated invasive plant species from a one-mile stretch of Carneros Creek and stabilized stream banks. We were successful in securing funding from EPA to continue this restoration work, which is underway.

ESF worked with the Elkhorn Slough National Estuarine Research Reserve to secure \$1.4 M in funding to plan for the control of marsh loss along the slough channel and in peripheral wetlands. The funding came from the David & Lucile Packard Foundation, the Resources Legacy Fund and the Environmental Protection Agency. This work has now produced a series of reports with great insight into the processes affecting marsh sustainability in the slough.

The Reserve and Foundation were successful in competing for funding through the Federal Economic Stimulus program through NOAA's restoration center. We secured now a total of \$4.5M to implement the Parson's slough restoration plan identified through the Ecosystem based Management project funded by the Packard Foundation. The engineering for the Parson's Slough structure is complete and we anticipate construction to begin in October.

ESF is monitoring the 8 acre easement on North County Recreation & Parks District property and a 22 acre easement on California American Water Company property in upper Moro Cojo. These easements permanently protect wetland habitat thought to be important for the federally endangered Long-toed Salamander. We have accepted a total now of 9 conservation easements from the Coastal Commission. The Commission had required the "Offer to Dedicate" these easements as conditions of permitting for development. These

offers were set to expire in 21 years. All of the easements ESF has accepted were expiring and would have been lost to the public trust if we had not taken them. We are now preparing to assume a permanent conservation easement on 10 acres of land bordering Moro Cojo Slough in Moss Landing.

### **Completion of ESEEMP**

We are pleased with the work completed on the Elkhorn Slough Environmental Enhancement and Mitigation Plan. The original investment directed by the RWQCB and the California Energy Commission has been magnified many times over and has led to improvements in water quality and habitats that were outlined as key goals in the plan.

For additional information on the conservation activities on these lands and images of the work, please visit the web site: [www.elkhornslough.org](http://www.elkhornslough.org)