



Coastal San Luis Resource Conservation District

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Concept Proposal for the MBNEP Community Projects Program

Project Title:	<i>Supporting Pollinator and Monarch Habitat awareness and implementation in the Morro Bay Watershed</i>		
Applicant organization:	Coastal San Luis Resource Conservation District		
Organization Type:	Special District		
Address:	1203 Main St, Morro Bay Ca, 93442		
Contact:	Hallie Richard	hrrichard@coastalrcd.org	(707) 972-3315
Amount requested:	\$10,000	Total project cost:	\$14,000

Project Description

Pollinator species, including birds, bees, and butterflies, are essential to stable and biodiverse ecosystems. Unfortunately, many of these species are in decline due to loss of habitat, impacts from climate changes and toxins in their food and shelter. The coastal forests surrounding Morro Bay are one of the few locations in the state where the keystone pollinator species Monarch butterflies (*Danaus plexippus*) overwinter, however populations have declined by more than 90% in the last two decades. Some of the factors leading to this dramatic decline have stemmed from habitat loss, climate change, parasites and disease, and the use of insecticides. Protecting and restoring coastal overwintering sites is seen as a crucial step in Monarch recovery due to their congregation and vulnerability during the overwintering months. For Monarchs and all pollinators to thrive in our coastal communities, pollinator habitat needs to be protected, restored and expanded, and public awareness increased. The Coastal San Luis Resource Conservation District (RCD) has a long and successful history of partnering with the Morro Bay National Estuary Program (MBNEP) and both public and private landowners in the Morro Bay watershed to accomplish effective and sustainable conservation and restoration efforts. In early 2020, the RCD began developing a Pollinator and Monarch program in response to landowners' requests for technical assistance, resources, and on-the-ground support. The program has support from Cal Poly faculty, the Xerces Society, and other local experts on Monarch and other pollinator species habitat.

The RCD proposes leveraging MBNEP Community Projects Program funds to expand their pollinator program by implementing pollinator habitat enhancements, and amplifying outreach and education efforts focused on those enhancement projects. The RCD has already begun engaging a network of partners interested in supporting pollinator and Monarch efforts and a number of options have been presented for project implementation and education. Specific

locations have not been finalized at this time, however tentative locations include Sweet Springs, Morro Dunes Preserve State Park, Sea Pines golf course, Morro Bay golf course, and a conservation easement held by the Land Conservancy of SLO County (LCSLO) and the Audubon Society. Locations for implementation and educational events will be determined by RCD staff in consultation with Xerces staff and other experts, and based on benefits to pollinators and potential for public access and education opportunities.

Habitat Enhancement Implementation

The RCD is currently collaborating to develop pollinator and Monarch habitat enhancement plans with a number of public and private partners eager to restore, create, and enhance pollinator habitat. Enhancement plans prescribe planting and practices that increase the availability of nectar and habitat plants throughout the year, and range in scale and complexity from a multiple acre historic Monarch overwintering site to a small backyard pollinator garden. Plans include a planting design layout based on soils, existing habitat and micro-climate, that prescribe a variety of plants beneficial to pollinators and that provide year-round nectar or habitat. Plans also include management practice recommendations such as irrigation, integrated pest management to reduce the use of pesticides, pruning for air circulation and sun exposure, removal of noxious plants harmful to pollinators, and protective fencing. Plans may also include quantification of additional benefits such as carbon sequestration and soil health, and recommendations for additional habitat enhancements.

The RCD plans to leverage MBNEP Community Projects Program funds to implement these habitat enhancements plans. Funds would be used to purchase plant materials (plants, seeds, soil amendments, mulch, fencing, irrigation) and for RCD staff time to coordinate implementation and provide technical assistance for management practices. Landowners will contribute either in-kind or match funds toward implementation, labor, or other site-specific requirements like biological surveys (for instance, biological surveys for the Morro shoulderband snail (MSBS)). Volunteers will be encouraged to participate in implementation as a way to increase community support and education for pollinators, as well as to minimize labor costs. As mentioned above, specific locations for implementation will be selected based on the relative return on investments and potential for public access and education opportunities. Outcomes will include implementation of Monarch or pollinator enhancement projects on a minimum of .5 acres.

Outreach and education

Outreach and education are paramount to effective, sustained, and equitable public awareness and support. An outreach campaign will be initiated that leverages social media and the networks of partners like MBNEP, One Cool Earth, and LCSLO to promote the importance of pollinators and Monarchs, share science based information clips, and invite the public to experience and learn about the pollinator and Monarch habitat enhancement projects implemented through this project, either through RCD-organized interactive field tours on private property or self-led tours on public lands. Outreach efforts will intentionally engage a broad and diverse demographic, particularly historically underrepresented groups in the community. Outreach messaging will reach a minimum of 200 individuals, either through email, social media, or in-person promotion, and will be promoted through a minimum of 3

platforms (i.e Facebook groups, newsletter, e-blasts, blog posts).

Connecting with land managers and local community members through educational tours and engaging activities will increase pollinator literacy and foster stewardship for protecting habitat and promoting pollinator health. Educational activities will integrate with the pollinator or Monarch habitat enhancements implemented through this project, and the content and composition of the activities will be driven by the location and scale of enhancements. Depending on whether habitat enhancements are implemented on private or public lands, educational activities will include one of the following options:

- Option 1: If enhancement projects are located on public lands, easily accessible to the public, educational activities will include the development and installation of permanent interpretive signage providing descriptive and geographically appropriate information about pollinators and their habitats. A minimum of two events will be organized where the public will be invited to listen to local experts and RCD staff discuss pollinators and their important role in our natural world.
- Option 2: If enhancement projects are located on private property, educational activities will include interactive field tours for local groups, such as species identification and tracking using web-based applications like iNaturalist. A minimum of two field tours will include local experts and RCD staff discussing pollinators and their important role in our natural world.

In addition, RCD staff will speak at a minimum of two local events, such as the MBNEP Science Explorations series, SLO Botanical Garden Monthly Luncheon Series, Central Coast Biological Society, or MB Winter Bird festival, and write a minimum of one article highlighting the work being done locally to increase awareness, preserve and enhance pollinator and monarch habitat. Particular effort will be made to ensure educational opportunities reach all demographics in the community and are provided in thoughtful formats that are inclusive to the population broadly. Outcomes from educational activities include an increase in the community's understanding of the essential role that pollinators play in our lives, and the complex and threatened existence to the Monarch butterfly, as well as actions the community can take to support the health and conservation of these species.

Contingencies

RCD staff fully intend to take on and complete these tasks as described, however the current public health crisis may limit our ability to do so, either within the allotted time frame or as described. If awarded, RCD staff will maintain close communication with MBNEP staff to develop adaptive methods of achieving the project's objectives if the public health crisis impedes our originally proposed activities.

If only a portion of the requested budget for the proposed activities is available, the scope of work can be proportionately scaled down. The minimum acreage of habitat enhancement implementation, amount of outreach activities, and resources for staff time would be decreased to reflect the restricted budget.

Project Tasks

Task 1: Habitat Enhancement Implementation

1.1 Evaluate and select potential locations for habitat enhancement implementation based on benefits to pollinators, public accessibility, cost, and sustainability

1.1.1. Complete planning activities as needed

1.1.2. Identify any permits, reviews or approvals (i.e. MSBS surveys)

1.1.3 Develop landowner Operation and Maintenance plans

1.2 Based on completed Habitat Enhancement Plan, develop an action plan to guide implementation

1.2.1 Develop materials lists that includes costs, sources, and availability

1.2.2 Identify required permits, approvals, or biological surveys

1.2.3 Create timeline detailing all steps and participants roles

1.2.4 Contract labor/services as needed

1.2.5 Engage volunteer community

1.2.6 Review plan with landowners and other partners to confirm roles and responsibilities

1.3 Implement selected habitat enhancements

1.4.1 Secure plant materials

1.4.2 Coordinate volunteer communities

1.4.3 Conduct biological surveys as needed (i.e. MSBS survey)

1.4.4 Implement habitat enhancements as planned on selected properties

1.4 Post implementation as needed.

1.5.1 Take before and after photos

1.5.2 Ensure landowner follows Operation and Maintenance plans

1.5.3 Conduct 6-month post implementation site visit

1.5.4 Hold internal RCD lessons learned de-briefing

1.5.5 Submit reports to MBNEP staff as requested

Task 2: Outreach and Education

2.1 Initiate outreach campaign promoting the importance pollinators and Monarchs and inviting the public to participate in RCD-led educational activities

2.1.1 Leverage partners existing outreach networks to develop a robust outreach list

2.1.2. Create and send out messaging content that is science based, relevant, and audience appropriate, including newsletter articles, social media posts, and blog posts

2.1.3 Respond to communications generated through outreach

2.2 Develop engaging and interactive educational activities to increase pollinator literacy and foster stewardship for protecting habitat and promoting pollinator health

2.2.1 Develop one of the educational activity options listed below based on location and accessibility of completed habitat enhancement project

- Option 1: Develop and install permanent interpretive signage at habitat

enhancement sites that are easily accessed by the public. Coordinate two field tours led by local experts and RCD staff

- Option 2: Coordinate two interactive field tours of habitat enhancement sites on private property led by local experts and RCD staff.

2.2.2 Coordinate with landowners and local experts

2.2.3 Engage and invite the public to participate in educational activities (see 2.1.2)

2.2.4 Lead educational activities in coordination with landowners and experts

2.2.5 Identify opportunities to speak at local events and publish articles about the importance pollinators and Monarchs and the outcomes and benefits of this project

Schedule

Task	J	F	M	A	M	J	J	A	S	O	N	D
1. Implementation												
1.1 Evaluate and select locations												
1.2 Create action plans												
1.3 Implementation												
1.4 Monitoring and reporting												
2. Outreach + Education												
2.1 Outreach campaign												
2.2 Education activities												

Budget

	Expense	Match
1.1 Evaluate and select locations		
Staff	\$615	
1.2 Create action plans		
Staff	\$615	
1.3 Implementation		
Staff	\$1,845	
Plant Materials	\$3,000	
Landowner Match	-	\$2,000
2.4 Monitoring + Reporting		
RCD Match	-	\$1,000
Task 1 Subtotal:	\$6,075	\$3,000
1.1 Outreach Campaign		
Subscriptions/Ads	\$425	
RCD Match	-	\$1,000
1.2 Educational Activities		
Staff	\$1,500	
Design + Production Expenses	\$2,000	
Task 2 Subtotal:	\$3,925	\$1,000
Total Project Costs	\$10,000	\$4,000
Plant materials	\$3,000	
Education/Outreach expenses	\$2,425	
Staff time	\$4,575	
Match		\$4,000
Match Sources: Landowner. in-kind contribution, RCD Technical assistance		
TOTAL	\$10,000	\$4,000