

DATE: October 16, 2020
TO: Bolinas Lagoon Advisory Council
FROM: Veronica Pearson, Ecological Restoration Planner
SUBJECT: Bolinas Wye Wetlands Resiliency Project

DISCUSSION

Bolinas Lagoon Wye Wetlands Background

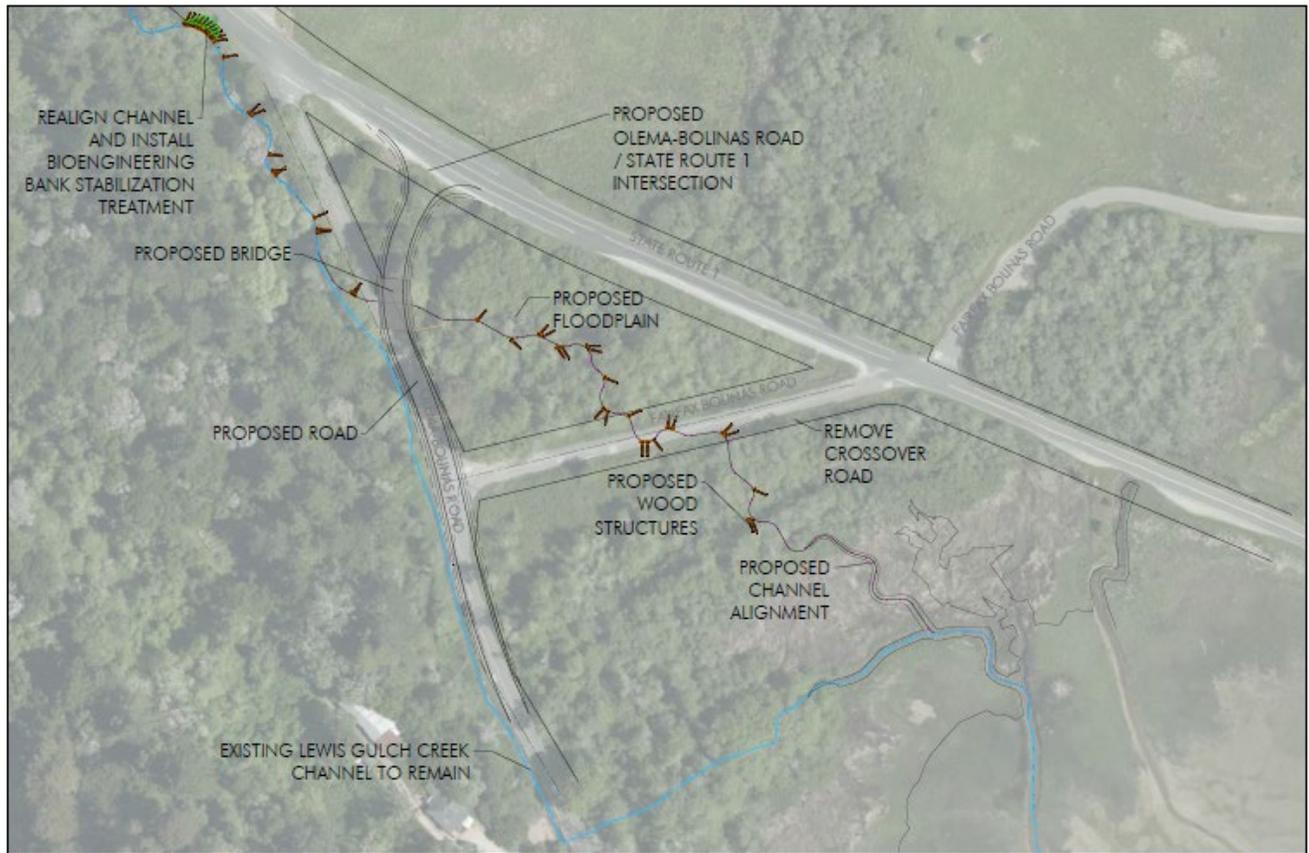
On September 29, 2017 staff presented to the BLAC the draft conceptual designs for the Bolinas Lagoon North End Project. Based on the concept designs and findings of the report, the BLAC recommended that the Board of Supervisors proceed with the Bolinas Lagoon Wye Wetlands Project (Project), which focuses actions on lands owned and managed by Marin County. It is also the first step and necessary for the implementation of any future sea level rise adaptation actions on National Park Service lands. On February 13, 2018, The Board of Supervisors approved Marin County Parks (MCP) proceeding with the Bolinas Lagoon Wye Wetlands Project.

In May of 2018, MCP received a Coastal Conservancy Proposition 1 grant for \$285,000 for the preparation of design drawings for the Project. In summer of 2019 MCP requested proposals for the design of the Project and WRA, Inc. was selected. Marin County Parks (MCP) has hired WRA to develop the Bolinas Wye Wetlands Project design. A technical advisory team (TAC) has been formed that consist of regulatory agencies, and technical experts that will provide guidance on the design as it moves from a 10% conceptual through a 60% design. Currently the design team is working on the 30% design and has met twice with the TAC. CEQA review has begun summer and we anticipate having a 60% design completed by the end of the year. WRA is currently funded to develop drawings to 60% level and to conduct CEQA analysis and environmental permitting.

Draft 30% Design

The design to date draws from the concepts presented in the Bolinas Lagoon North End Conceptual Design Report with the project goal of re-establishing and rehabilitating hydrologic, geomorphic, and ecologic processes; improving habitat connectivity; increasing the resiliency of wetlands to SLR; and, improving habitat for special-status species. To meet the Project goals, MCP will remove the Crossover Road; reconfigure the intersection between Olema-Bolinas Road and Highway 1; and, improve the road crossing. This will be accomplished by installing a bridge south of the Olema-Bolinas Road/Highway 1 intersection and redirecting Lewis Gulch Creek (LGC) under the new crossing. A vegetated berm will be added directly south of this crossing to redirect the channel into the Wye and to prevent LGC from reoccupying its existing alignment along Olema-Bolinas Road. An additional culvert will be added as well to the south of the new crossing to allow for runoff from the hills to the west to continue to drain into the lagoon's delta. Portions of Olema-Bolinas Road will be elevated to meet the new crossing and elevate it out of the floodplain. The created channel will be sized to allow for the channel to self-form and to connect to its floodplain. Large woody debris will be recruited and placed along the channel and on the floodplain (Figure 1).

Figure 1: Bolinas Lagoon Wye Project Components



3 PLAN VIEW

The largest changes from the conceptual design that was presented in the Bolinas Lagoon North End Conceptual Design Report are the realignment of the intersection between Olema-Bolinas Road and State Route 1 (SR1) and the installation of a 60-foot full span bridge. This change relates to recommendations that were received at our first TAC meeting in relation to orienting the bridge to reduce the angle of the creek entering the crossing and reducing impediments to flow and the migration of Lewis Gulch Creek. The other change made at the suggestion of the TAC and based on the analysis was to have one primary channel that would be designed to allow the bank to overflow annually. This would encourage the channel to self-form and create distributary channels, connect with the floodplain to improve sediment deposition on the alluvial fan, and to allow overbank flows to charge groundwater. The placement of large woody debris on the floodplain would help encourage channel scour to create pools and habitat for salmonids. The amount of large woody debris shown in Figure 1 will be reduced, and majority of the wood used would come from trees that would need to be removed near the intersection of the new bridge and State Route 1, as well as recruitment of aging red alders that are within the project area. Also shown on Figure 1 is the installation of logs and soil lifts with willow plantings in the vicinity of the current SR1 intersection and Olema-Bolinas Road to stabilize the bank and shifting Lewis Gulch Creek toward to the west away from the highway. The existing culvert on Olema-Bolinas Road would remain to drain the western hillside, and a new drainage channel would be created along the portion of

Olema-Bolinas Road that would be elevated and reconstructed. For greater detail of the designed channel and bridge crossing see Attachment 1.

Next Steps

The design team will continue to refine the design. MCP has been engaged with several regulatory agencies on our TAC about future steps needed for federal and state regulatory compliance and initiating CEQA and NEPA review. MCP is the CEQA lead, and the United States Federal Wildlife Service (USFWS) is the NEPA lead. WRA, Inc is preparing an Initial Study, and will continue to refine the design. WRA, Inc is also working closely with our partner Golden Gate National Parks Conservancy (GGNPC) on the design and implementation plan for invasive species removal and revegetation plan. In addition, MCP and GGNPC is communicating with the Conservation Corps North Bay to identify how they can provide support during project implementation. These contributions will be reflected in the 60% design that will be completed this winter and to conduct additional public outreach and presentation of the design and CEQA/NEPA determination in early 2021. MCP is also seeking additional funds to complete the project design and for construction.

Attachment: DRAFT Bolinas Lagoon Wye Wetlands 30% Design