

Attachment A

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Project Name: Carmel River Floodplain Restoration and Environmental Enhancement Project (CRFREE)

Project Location: South of Carmel, Monterey County

Applicant Name: Monterey County Resource Management Agency

Mailing Address: 1441 Schilling Place, 2nd Floor, Salinas, CA 93901

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Eligibility Questions:

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| 1. Does the project reduce flood risk? | Yes |
| 2. Does the Project enhance fish and wildlife habitat? | Yes |
| 3. Does the project include a construction or acquisition component? | Yes |
| 4. Is the project located in a California Coastal Watershed? | Yes |

Project Description: Scope of work, budget, and schedule

What is the project and where is it located? The multi-benefit CRFREE Project is a green infrastructure project that will recreate hydrological connectivity, restore habitat and riparian corridor natural communities, and significantly reduce flood hazards in the lower Carmel River Watershed. The project is situated in the California Coastal Zone fronting the southern side of the lower Carmel River in Monterey County, CA. The 135-acre project area is approximately 1 mile south of Carmel and flanks both sides of State Route 1 (SR-1) immediately upstream of the Carmel River Lagoon and river mouth at Stewart's Cove, south of Carmel Bay.

How does it reduce flood risk? CRFREE will reduce high-loss, repetitive flooding by notching levees on the south side of the Carmel River to direct high river flows to a restored floodplain, then to the river mouth under a new causeway on SR-1. The causeway will eliminate ponding and upstream backwater flooding that damages residential and commercial areas on the north side of the river channel.

How does it enhance fish and wildlife habitat? Many species of Central California coastal fish and wildlife will benefit from CRFREE, including the Federally threatened California Central Coast Distinct Population Segment Steelhead Trout and California Red-Legged Frog. The new causeway will create a wildlife corridor that connects State Park lands on the west side of SR-1 with Big Sur Land Trust property and the Monterey Peninsula Regional Park District Palo Corona Regional Park located east of SR-1.

What is the construction component? Will it be completed by the end of 2023? The CRFREE construction component includes building a 360-foot long causeway (overflow bridge) under SR-1, installing 5 levee notches along 1,470-feet of non-structural, earthen levee at depths that correlate with 5-year flood events, grading shallow distributary channels in the southern floodplain, installing a temporary road detour during causeway construction, and relocating major utilities including primary sewer pipelines. By December 2023 the road detour, utility relocation, elevation of State Historical structures, preparation for floodplain restoration, and project management will be completed.

Project Element	Total Project Cost	Total Proposal Cost	Funding Requested	Start Date	End Date
	\$40,299,618	\$9,357,341	\$5,147,149		
Task 1: Pre-construction¹	\$2,360,478	\$186,346	\$141,255	2020	2022
Task 2: Causeway Construction²	\$22,766,279	\$4,076,913	\$1,995,791	2021	2023
Task 3: Floodplain construction³	\$9,174,001	\$4,282,858	\$2,408,879	2021	2023
Task 4: Mitigation & Monitoring⁴	\$5,998,860	\$811,225	\$601,225	2021	2023

Budget:

Table 1: Summary of Project Budget and Funding Request for tasks to be completed before December 31, 2023.

Match Agency	Amount
Federal (FEMA Grant Funding)	\$4,165,101
Big Sur Land Trust Staff	\$45,091
TOTAL (45%):	\$4,210,192

¹ Project management funding requested.

² Includes utility relocation, detour road construction, and site prep, and grading for causeway.

³ Includes site prep, floodplain grading and preparation for floodplain restoration.

⁴ Includes elevation of State Historical structures and construction monitoring.

Table 2: Summary of Federal funds and staff time.

Other Considerations

CRFREE addresses long-standing problems of flood management and floodplain habitat loss in the lower Carmel River Watershed. The Project reduces flood risk, increases public safety, protects critical infrastructure, restores habitat, enhances coastal ecosystem resiliency to climate change, and connects conserved lands with public access and wildlife corridors.

CRFREE will significantly reduce State liabilities along the Caltrans State Route-1 transportation corridor south of Carmel-by-the-Sea. SR-1 is the sole access between Carmel and Big Sur, serving as a gateway between the urbanized cities of the Monterey Peninsula and the rural Big Sur coast and mountain regions, a tourist destination that draws millions of visitors each year. In March 1995, an El Niño storm event and associated flood waters destroyed the SR-1 Carmel River Bridge south of Carmel and cut off Big Sur and areas to the south for six months. The 1995 flood was only a 25- to 30-year storm event and would have been readily accommodated if the CRFREE causeway had been in-place at that time.

CRFREE has also been identified as the preferred future scenario for flood control within Monterey County Service Area-50 ; it eliminates the need for approximately \$14 million in levee improvements for property owners in the vicinity to meet FEMA's 100-year flood protection standards and to protect properties on the north side of the river adjacent to the project site. Using FEMA methodology, the benefit-cost analysis (BCA) for CRFREE is 1.78. CRFREE is in a floodplain designated in FEMA FIRM (Flood Insurance Rate Map) Zone designations X; AE; VE. The total aggregate benefits of the project are over \$80 million, with environmental and social benefits included.

CRFREE will complete a major coordinated regional effort to restore cohesiveness and dynamic function to the entire lower Carmel River coastal system. The first restoration projects in this geography were completed by Caltrans in 1998 and California State Parks in 2004. Caltrans and the California State Parks cooperatively funded the 43-acre Carmel River Mitigation Bank, while State Parks' Lagoon Enhancement Project restored 100 acres and increased lagoon volume and surface area. CRFREE will build on these restoration investments by creating a critical hydrologic connection between south bank floodplain flows and the Lagoon that will enable periodic flushing flows and the removal of sediment that accumulates through tidal action and limits steelhead rearing habitat. CRFREE will also help protect historically important structures west of SR-1 that are owned by State Parks, including a barn and several outbuildings (the "Barn Complex").

CRFREE will reduce flood elevations in the main channel and translate to a significant reduction in flood risk to the Carmel Area Wastewater District (CAWD) treatment plant, a local utility located between the main channel of the Carmel River and the south flood plain immediately downstream from CRFREE. Enhanced flood protection of the sewer treatment facility also protects the surrounding habitat and species. The 100-year water surface elevation at the plant decreases by 1.6 feet as a result of CRFREE.

CRFREE is also located strategically at the northern terminus of a significant complex of over 19,400 acres of protected open space and recreational lands conserved by Big Sur Land Trust, California State Parks, and Monterey Peninsula Regional Park District. Millions of dollars in state, federal, local agency and private funding has been invested in the geographic area where CRFREE is located and the project will complete and connect a number of key habitat enhancement and long-term conservation efforts undertaken by these organizations.

Attachments:

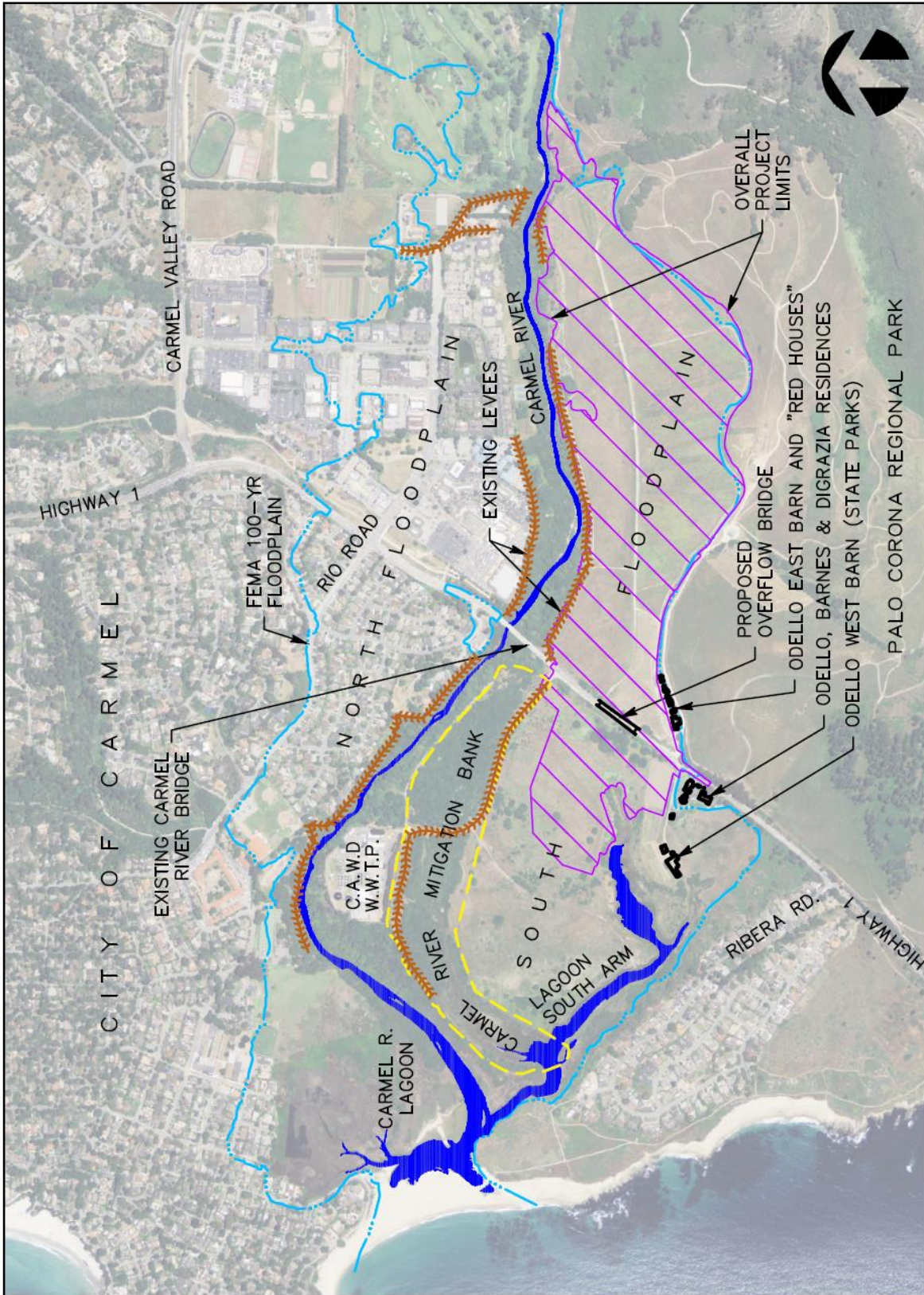


Figure 1: Overall CRFREE limits and major features within the project area.

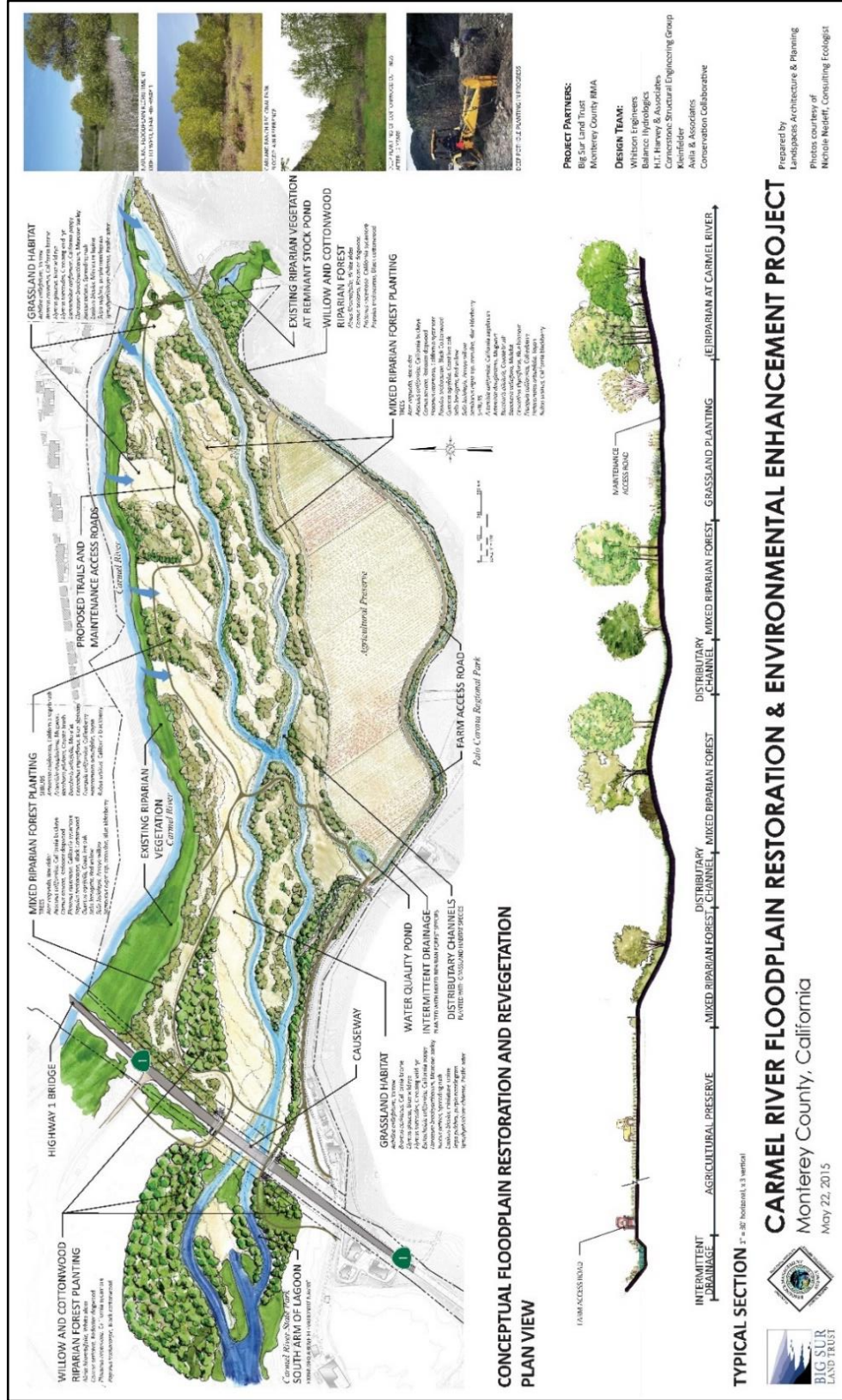


Figure 2: Conceptual CRFREE restoration design.



Figure 3: Flooding inundates the Crossroads Commercial District north of Carmel River channel during 1995 flood event.



Figure 4: State Route 1 bridge over the Carmel River collapsed during March 1995 flood event.

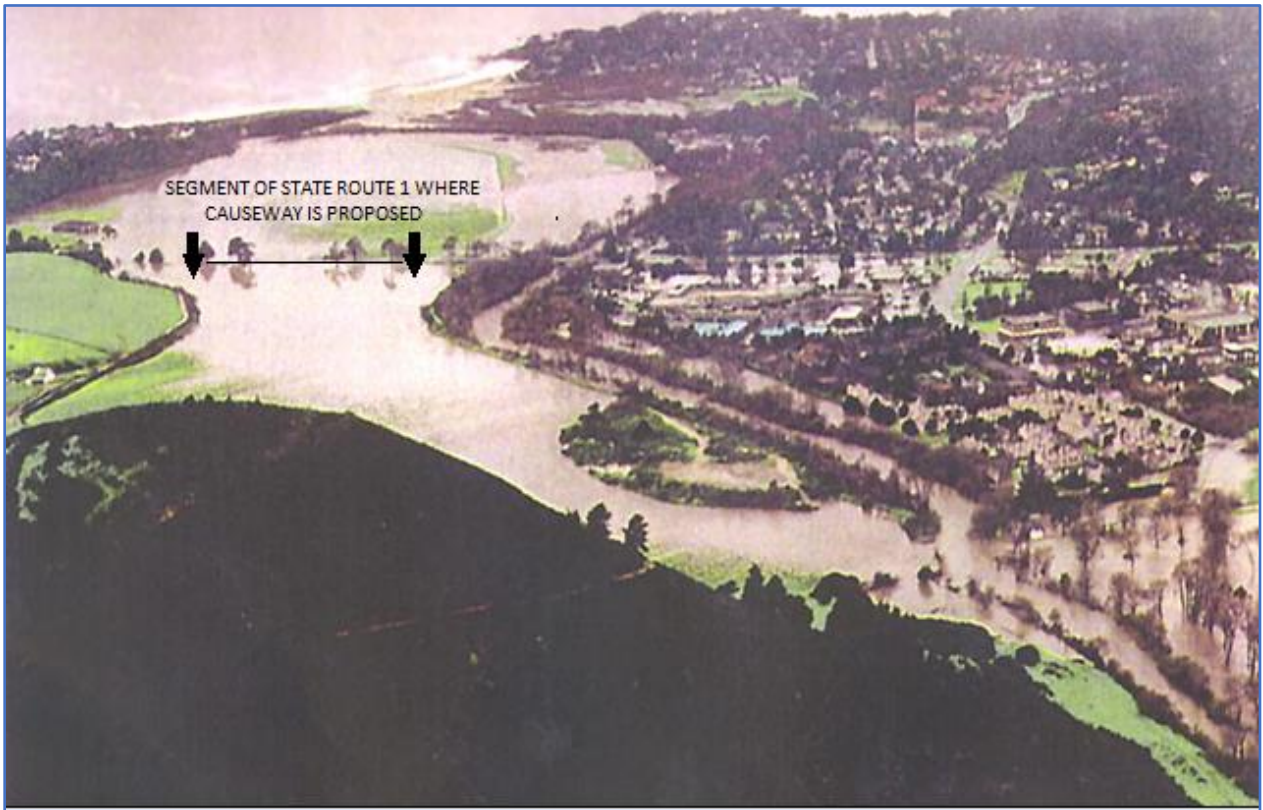


Figure 5: Flooding throughout the CRFREE project vicinity, February 1998. Floodwaters spilled over levees on the south side of the river channel and over-topped State Route 1 before flowing through the Carmel River Lagoon and into Carmel Bay at Stewart's Cove.

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