Corte Madera Creek Flood Control Project Outlives Energizer Bunny

by Carole d'Alessio
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Between 1914 and 1960 there were 12 damaging floods in the Ross Valley-about one every four years. Since 1960 floods have occurred less frequently although two of the largest floods on record occurred during this period, one in January 1982 and the other in March 1983. Reasons given for less frequent flooding include better maintenance, construction of the concrete channel in Kentfield, and the fact that 14 out of the 38 years were relatively dry.

As originally conceived in the early sixties, the Army Corps of Engineers' flood control project consisted of six "Units" and a concrete channel that would have extended about 6.5 miles from the Bay up into Fairfax. It was designed to carry 7,600 cubic feet per second (cfs), estimated to be a 250-year event. However, after the completion of Units 1, 2 and 4 in 1971, the cities of Fairfax and San Anselmo withdrew from the project. It was revised to extend only up to the Sir Francis Drake Boulevard bridge just before the Ross/San Anselmo line, a distance just over four miles. Construction of Unit 4 was to have begun in 1972 but was postponed due to strong public opposition, litigation and environmental concerns.

Lagunitas Road bridge, Ross

The project that was built consists of an earthen channel, constructed from the Bay to the College of Marin in Kentfield, and a rectangular concrete channel upstream to just below the Ross Post Office. Following the flood of January 1982 it was apparent that this concrete channel could only carry about half the flow for which it was designed.Sediment entering the concrete channel from upstream and barnacles growing on the walls increased the "roughness" of the channel and slowed the flow of the water. The Army Corps of Engineers proposed to fix the problem by modifying portions of the remaining natural creek in Ross, and increasing capacity of the already constructed concrete channel.

After a few more years of discussion and considering alternatives, the communities of Ross, Larkspur, and Kentfield and the Flood Zone Nine Advisory Board reached agreement to explore completion of the project.

On February 1, 1996, the Zone Nine Advisory Board passed a resolution recommending to the Board of Supervisors that they request the Army Corps to proceed with a 5,400 cfs project while adhering to certain specific design considerations. The Board of Supervisors adopted a resolution to complete the project on March 5, 1996.

Where Are We Now? The current proposal would:

- Raise channel walls in Kentfield 1-3 feet in height (depending on the location along the channel) while preserving the multi-use pathway.
- Replace the existing natural sediment basin at Lagunitas Bridge with an engineered basin. The use of concrete structures would be minimized.
- Widen and deepen the creek downstream from the sediment basin.
- Build a 475-foot concrete wall opposite Ross Post Office, upstream from the existing concrete channel to Lagunitas Road Bridge.
- Construct a two-foot-high wall along the top of the bank directly behind the Ross Post Office extending from the existing concrete channel to the Lagunitas Road Bridge.
- Spot stabilize banks upstream of the Lagunitas Bridge using environmentally sensitive techniques.

Friends' Opinion of the Design Concept. We believe that actions to reduce flooding and property damage must also protect creek resources. We are very concerned that the efforts being considered for completion of the project to accommodate 5,400 cfs may irreparably damage creek resources, particularly the remaining natural portion of the creek downstream of the Lagunitas Road Bridge.

Our organization does not believe that enough design information has been provided for us to endorse the Army Corps proposal. In the nine conditions that must be incorporated at the outset into project planning and design if we are to support the project.

1. The Army Corps of Engineers, at the urging of the County, should consult with the National Marine Fisheries Service to address ways in which the existing channel can be altered to facilitate fish passage into the freshwater creek. Although consultation is required at the end of Phase II as part of the project's environmental review process, we believe that an early consultation will result in a more environ- mentally sensitive project and perhaps even save the cost of redesigning the project.

2. It is imperative that there be a net increase of aquatic and riparian habitat in Unit 4, as specified in Board of Supervisors Resolution 96-26 d. which states, "Design the project in an environmentally sensitive manner to include native plants and improve riparian and fish spawning habitat while providing the required level of flood protection."
3. There should be a natural transition for fish passage between the concrete channel and sediment basin. Steelhead trout are a threatened species that spawn in Corte Madera Creek and its tributaries; every effort should be taken to insure that they reach their spawning grounds.
4. Eight properties upstream of the Lagunitas Bridge that have been identified as needing creek bank stabilization should be stabilized using either bio-engineering or bio-technical engineering methods.
5. Flood control district lands should be maintained as unbuilt lots (terraces or floodplains) vegetated with riparian trees and shrubs.
6. The banks of the sediment basin should be natural, or if not natural then biotechnically engineered. In the absence of either we propose that property be purchased at fair market value, graded and planted to a natural slope.
7. The sediment basin, sills, and bank toe re-enforcement should be of natural material.
8. Access for cleaning the sediment basin should be by crane, operated from the top of bank. There should be no equipment traffic beyond the sediment basin, either up or down the creek.

The project should focus on the watershed as a whole. Broaden and update project scope to analyze upstream sources of sediment, if it has not been done already, to account for present and future development in the watershed since the project was initiated 30 years ago.

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