The Travails of a Creekside Homeowner

by Alec Shuldiner 2022

To purchase a home in Marin is to acquire a problem. Deferred maintenance, code violations, unaddressed risk of landslide, fire, or flood. Most of these have known solutions: you hire a more-or-less specialized contractor and work with your local planning department to fix whatever you can afford to. A home on a creek, however, may come with a problem that does not have an obvious solution, namely the erosion caused by the creek itself.

We purchased a creek-side home in Fairfax with particularly pressing erosion challenges. Previous efforts to protect the property had failed, leaving the creek littered with concrete pillars. Unprotected, a sizeable piece of a 20-foot-tall cliff had collapsed, and further erosion at the base of that cliff posed an imminent threat to a barn standing at the downstream edge of the property. The full extent of the problem was hidden by a thick blanket of invasive ivy draped over the cliff, and by a tree trunk lying at its base. This gargantuan log was swept away by a winter storm in 2014; that event and the undercut cliff it exposed, convinced us we had to act.

Work in the creek requires engaging with several permitting agencies operating at the County, State, and Federal levels. Those agencies evaluate such projects via the so-called JARPA, a single application



The foot of a bluff has been protected by embedded tree trunks, rock work, and native plantings. Photo Charles Kennard

describing the project. JARPA simplifies the permit process somewhat, and Marin County convenes a monthly project coordination meeting to provide pre-permit application advice to people planning a project. However, individual homeowners are still left to develop their own custom solutions, choosing, without any experience, between radically different approaches to erosion control, any of which will cost tens if not hundreds of thousands of dollars to implement.

We developed our proposal with the aid of a host of advisors. Erik Stromberg, a fluvial geomorphologist and near neighbor, designed a solution that used natural materials to build a shelf protecting the bottom of the cliff, along with a graded

and planted section of the bank upstream designed to slow the water impacting the concrete retaining wall that stands between the creek and the house. Building this all required getting heavy machinery into the creek, possible only because cooperative neighbors across the way had a driveway leading to a sloped creek bank. (It is always desirable to maintain good relations with your neighbors, but if you live on a creek, it is imperative!) A temporary bridge over the low summer flow was the last piece of infrastructure needed to give the digger access to the cliff. Once built, the shelf and upstream areas were to be planted with a variety of native trees and bushes.

Prior to design and construction, executing this plan required a property survey, a variety of biological assessments, and other specialist reports. We had to tear down and rebuild fences, coordinate the movement of equipment and materials via multiple access points, source native plants, and attend to many other details. Gary Roth, a local landscape designer and a project manager with deep experience in riparian

restoration, was indispensable in making the project happen, both as coordinator and as guarantor to all parties that the complexity it entailed was manageable.

Since completing the project, we have suffered both drought and high water—the one following the other is a worst-case scenario for erosion—with all components of the solution performing as expected. As important, we have observed an increase in wildlife, and bird populations in particular, as the many trees were planted to provide shade and midstory habitat. The creek, we believe, is at least somewhat restored by the work we did. But restoration of our creek *systems* will never be achieved by this private and piecemeal approach. Homeowners are unlikely to engage in creek work unless facing a clear threat of flooding or erosion, and even with agency oversight in place you will find new riprap walls being created. Riprap does address erosion and is less destructive than sheer walls, but does nothing to restore the natural bank, to provide shade, or to otherwise restore the creek's ecological functions.

Returning our badly damaged waterways to a natural state in which these vital parts of our local ecosystems can support biological diversity and reduce the impact of increasingly severe storms is a communal goal that can be met only through communal action. I suggest these specific actions:

- When a house is to be sold, local authorities may demand that certain existing issues be addressed by the seller; erosion, failing retaining structures, and other creek problems should be included in the list of such issues.
- Local creeks should be surveyed by the townships or other interested parties. Those surveys should be leveraged to identify specific areas where remediation is needed, and the owners of properties so identified should be offered support to get that work done. This support should include proactive advice on the type of solution that would be most ecologically beneficial, assistance with the permit process, and access to a fund to support creation of a design. This would get homeowners past the initial hurdles and give them a solid proposal around which to build a project plan for getting work done.
- Those surveys should also be leveraged to identify areas where erosion threatens structures, and those homeowners should be notified of those issues. With that notification on the public record, those homeowners would no longer be eligible to use the emergency permit process, an exception process that has been taken advantage of to produce riprap and other non-remediating erosion control solutions.
- No grants exist that will provide substantial financial assistance to individual homeowners engaged in creek restoration. However, multi-million-dollar grants can be found that could be used to do restoration work along large stretches of a creek. Co-ops representing these stretches should be formed to identify and apply for these monies.

Our project is complete and we would not benefit from any of the above suggestions. Our creeks, however, would. Without action of this sort, we will continue to live with a degraded watershed.

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