

Pajaro Compass Case Studies

Case Study I – Gabilan Ranch Conservation Easement

Geography: Western headwater of the Pajaro River

Compass Themes: Biodiversity, Agriculture, Carbon and Soil Health, Community

Partners: Gabilan Cattle Company, The Nature Conservancy (TNC)

Funding: Wildlife Conservation Board, Central Coast Opportunity Fund, private funding

Project description: Gabilan Ranch is an 11,190-acre working cattle ranch nestled in the Gabilan Mountain range in Monterey and San Benito Counties actively grazed by several hundred head of cattle. Wishing to keep the ranch whole and protect its conservation values, the owners—who have held the ranch since 1929—entered into a conservation easement with TNC in 2006. Under the easement, the owners must comply with some restrictions and also allow TNC to monitor the site for compliance once a year, including attention to the grazing intensity using a measure of residual dry matter (RDM) that remains on pastures at the end of the grazing season (September–October timeframe). The rangeland monitoring that is being conducted on the ranch is informing broader rangeland strategies for TNC and its partners across the state.

The ranch is critically located in the northern part of the Gabilan range, which is relatively un-fragmented and serves as an important connectivity area for wildlife like bobcats, mountain lions, and California tiger salamander. The range as a whole is an important ecological link between the coastal Santa

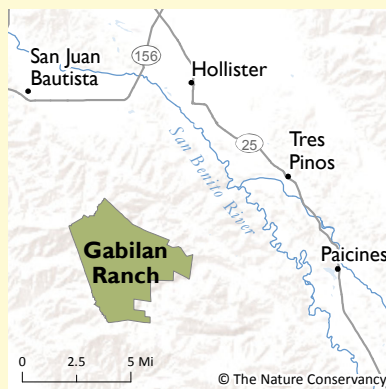


Lucia and Santa Cruz mountains and the more arid interior Diablo ranges.

Like the larger range, Gabilan Ranch is dominated by chaparral and coastal scrub but also supports several ecosystem types and rare species—including the Gabilan manzanita—as a result of its isolation and unique geology. Due to its topography, location, and habitats, the ranch is used by a large number of raptors including golden eagles and California condors. The area's natural beauty and rural character, combined with its proximity to Silicon Valley sprawl and suitability

for viticulture, have spurred a rapid increase in population and development. Consequently, the very qualities that draw people to the area are threatened as rural lands, including rangeland and prime agricultural lands, are converted to residential developments, vineyards, and other commercial uses. This puts a strain on natural resources and on residents' quality of life as demands for surface and groundwater supplies increase, transportation infrastructure becomes inadequate, and affordable housing becomes increasingly scarce.

Gabilan Ranch is an excellent example of how permanent conservation easements can preserve agricultural lands, conserve watersheds, and protect open space for the benefit of biodiversity and people and can help curb the undesired effects of the influences described above.



Before and after picture of pasture at Gabilan Ranch showing results of managed grazing.

Jeffrey Mundell

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Case Study 2 –

Gonzales Farm Restoration

Geography: Upper Pajaro River floodplain

Compass Themes: Water Resources, Biodiversity, Agriculture, Community

Partners: Students and Teachers Restoring A Watershed (STRAW), local school children, rancher, U.S. Fish and Wildlife Service (USFWS), The Nature Conservancy (TNC)

Funding:

- Acquisition funders: Pajaro River Watershed Flood Prevention Authority, Santa Clara Valley Water District, Living Landscape Initiative, private funding
- Restoration funders: USFWS Partners Program, Silicon Valley Community Foundation, Wildlife Conservation Society, private funding

Project description: The Upper Pajaro River floodplain, about 30 miles south of San Jose, is a region rich in biodiversity due to its proximity to a variety of habitats throughout three coastal mountain ranges: the Santa Cruz, Diablo, and Gabilan ranges. Migrating birds use this floodplain as a resting point along the Pacific flyway, and mammals use the riparian corridors to disperse to critical habitat in the mountains and foothills. This floodplain contains some of California's most productive agricultural lands, and protection upstream ensures flood protection for communities in the lower floodplain including Pajaro, Watsonville, and local surrounding farms. TNC and other partners identified Gonzales Farm, a 165-acre parcel in the upper floodplain, as critical land to protect for its value as a working farm that occupies a key location along the historic corridor of the Pajaro River. When TNC purchased the property in 2012, the river corridor was



highly degraded and lacked the vegetation needed to provide habitat for animals and birds. Furthermore, its infrastructure could not support a cattle operation or irrigated pasture. A local rancher who was leasing the property for cattle grazing provided design guidance, and then installed new water infrastructure and fencing that allow cattle to use the entire property, including the river corridor when conditions permit. These improvements help ensure that the property can function as an economically viable agricultural operation and also support an ongoing habitat restoration project

along the river corridor. Gonzales Farm will continue to be protected under a conservation easement that enables ranchers to provide forage for grazing cattle, while also keeping invasive plant species in check and maintaining the agricultural way of life in Santa Clara and San Benito Counties. Between 2014 and 2017, local students and community members led by STRAW will plant more than 1,200 new plants along the



river, including a dozen species of native trees, shrubs, and grasses. This work will create a corridor for wildlife to move between the Santa Cruz, Diablo, and Gabilan mountain ranges. Since 2014, this project has provided over 450 students with environmental education and hands-on habitat restoration opportunities in the Pajaro River watershed. Through their involvement, students and community volunteers learn from experience about how working landscapes and conservation can coexist, and how their individual contributions benefit the floodplain by making it more resilient to changing climate conditions.

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Case Study 3 – Hain Ranch Creek Stewardship

Geography: Tres Pinos Creek

Compass Themes: Water Resources, Biodiversity, Agriculture, Community

Partners: Wild Farm Alliance (WFA), Pinnacles National Park, Naturalists at Large, Hollister Boy Scout Troop 436, Hedgerows Unlimited, San Benito Working Landscapes Group

Funding:

Wildlife Conservation Board

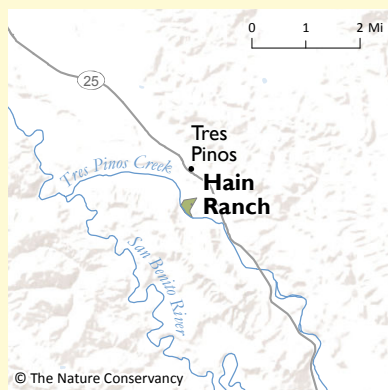
Project description: Stewardship of Tres Pinos Creek has been a decades-long pursuit for Paul and Leti Hain, third generation farmers in Hollister whose property runs adjacent to the creek. After the El Niño flood events of 1998 washed out four acres of their 30-acre organic walnut orchard, as well as the riparian species along the creek, they took it upon themselves to restore the waterway to protect their farm from future flooding. Using a bulldozer, Paul dragged the washed out vegetation—like cottonwoods and willows—back upstream and anchored them into the streambed to re-root. Within a year, all of the trees had sprouted and stabilized the creek bank. Recently, the Hains decided to take their efforts to the next level, realizing the benefits that riparian restoration provided to their farm. Not only does it improve wildlife habitat, but it prevents streambank erosion and enhances natural pest control in the adjacent orchard. Also, removing thirsty non-native plants (like Giant Cane, or *Arundo*) helps keep more water in the stream for fish habitat and irrigation, and makes more room for natives. Partnering with WFA,



Hedgerows Unlimited, and an army of volunteers from the Boy Scouts and the Naturalists at Large program, the Hains spearheaded riparian improvement projects on Tres Pinos Creek. WFA and Hedgerows Unlimited took great care in choosing over 450 drought-tolerant native plants for the project. Volunteers planted riparian species to prevent erosion along the creek bank, which will both protect the orchard and reduce sediment entering the creek during future flood events. They also planted trees and shrubs in gaps in the existing

hedgerows that line the property. Plants were chosen based on the ability to attract insects that provide benefits to the farm like pollination of cover crops or predation of common orchard pests. The Hains no longer use pesticides, and their codling moths and husk fly counts are at an all-time low. The farm has been lauded as a refuge for insect species by the Xerces Society, in an area where their habitat has been greatly diminished.

The Hain family's efforts to activate resources and work with government agencies and nonprofit organizations provides an excellent example of how local landowners can steward their land to balance the needs of agriculture as well as wildlife.



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Case Study 4 – Livestock and Land Program

Geography: San Benito County

Compass Themes: Water Resources, Biodiversity, Agriculture, Community

Partners: Ecology Action, San Benito County Resource Conservation District, Loma Prieta Resource Conservation District, Natural Resources Conservation Service, J3 Excavations, Inc.

Funding:

State Water Resources Control Board from Propositions 40/50 awarded to Ecology Action and sub-granted to the Resource Conservation District

Project description: The Pajaro River watershed is home to many small livestock and equestrian facilities, which are an important part of the region's agricultural heritage and recreational offerings. Improperly managed livestock and equestrian facilities have the potential to cause significant damage to local waterways. Run-off from these facilities including nutrients, sediment, and pathogens, can greatly affect water quality; and grazing practices can also negatively impact upland areas and riparian habitat. The Livestock and Land Program was created in 2011 to address these issues and improve surface and ground water through implementation of Best Management Practices (BMPs) on equestrian and livestock facilities. The program focuses on public outreach and technical training and support for local partners to demonstrate BMPs on the ground. The voluntary program was designed to reach a broader audience and find a common ground for conservation considerations and facilities improvement, which would also benefit livestock health.



In San Juan Bautista a 1,000-acre horse, goat, and cattle facility enrolled as a Livestock and Land demonstration site. Challenges on the property included a lack of drainage on their barn structures and in their yard, causing water to flow through heavy-use areas and washing sediment and manure into the adjacent creek on their property (a tributary to the San Benito River). Through the Livestock and Land Program, the family installed roof gutters connected to subsurface drainage systems in order to divert runoff to two leach fields

created to dissipate captured water. The existing paddocks and yard areas were regraded and covered with gravel in order to divert surface flows away from buildings. The runoff was directed through an area seeded with drought tolerant grasses that filter the water before it enters the creek. This grassy area has been fenced off to prevent over-grazing by cattle in the riparian area, thereby improving habitat and water quality. In

addition to successfully implementing these BMPs as a result of their involvement in the program, the family is also championing these concepts to their peers, posting a "Watershed Steward Demonstration Site" sign outside their property and offer public tours of the operation. By making these practical updates to their facility, the family is able to maintain and improve their livestock operations while also stewarding the Pajaro River watershed.



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Case Study 5 – Pajaro River Bench Excavation

Geography: Lower Pajaro River Watershed

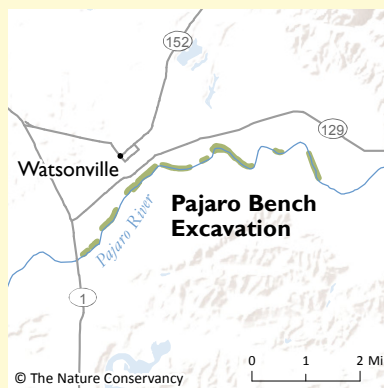
Compass Themes: Water Resources, Biodiversity, Agriculture, Community

Project sponsors: Santa Cruz County, Monterey County, Monterey County Water Resources Agency, Santa Cruz County Flood Control and Water Conservation District Zone 7

Partners: City of Watsonville, Army Corps of Engineers, Elkhorn Slough Foundation

Funding: Propositions 50 and 84 funding from California Department of Water Resources

Project description: Levees are designed to protect people, homes, and livelihoods from the effects of flooding. Stakeholders in the Pajaro River watershed have been working with the Army Corps for decades to develop a flood risk reduction project to improve upon the current levee system which is inadequate to withstand a major flood event. This was demonstrated in 1995, when the levee broke during a catastrophic flood event, leaving many people homeless and jobless. While delayed at the federal level, partners in the region mobilized to deliver a project in the interim to reduce the harmful effects that another flood could have in the Pajaro River floodplain. The Pajaro River Bench Excavation Project is designed to relieve the magnitude and severity of potential future flooding of the Pajaro River. The excavation removes excess sediment from the riverbed and creates benches to improve the flood carrying capacity of the



levee system, and provide critical, low-flow habitat for fish, particularly steelhead trout. Bench excavation will eventually become self-maintaining and will help the river regain its natural ability to move sediment through the river channel system by natural geomorphic processes, as it did originally.



The project has had positive benefits outside of the immediate project area as well. Over 300,000 cubic yards of sediment was removed in the excavation

process, which The Elkhorn Slough Foundation used to raise the elevation of over 100-acres of tidal marshland in Elkhorn Slough. This restored the slough to its original, shallow and properly-functioning depth to benefit the many animals that rely on this habitat, such as sea otters. Santa Cruz County Flood Control and Water Conservation District Zone 7 also used some of the sediment to improve a levee along Salsipuedes Creek.

The project provides many benefits to the Pajaro River watershed—the floodplain area in particular—including a lowered risk of flood inundation of agricultural fields and residential areas, improved habitat within the existing levee system, as well as improved habitat as a result of sediment relocation offsite.