

MARIN RESOURCE CONSERVATION DISTRICT NEWSLETTER

SUMMER 2026



ScottHessPhoto.com



PAGE 04 **THE MARIN BIOMASS STUDY**

Our New Report Explores Pathways To Reduce Waste,
Generate Renewable Energy, and Strengthen Marin's Economy

PAGE 02 **Green Gulch:**
Farming,
Flow, and
the Future

PAGE 06 **Point Reyes
Restoration:**
Supporting
the Seashore

PAGE 08 **Celebrating
the Lives of
Steve Doughty
& Hank Corda**



Greening Green Gulch

THE SOUND OF THE BIG BELL

can be heard across the valley as sunbeams peek through the lifting fog along the Marin coastline, as patch-robed monks walk quietly to the old barn-turned-meditation hall. This is the tranquil vibe of Green Gulch Farm, an oasis along Green Gulch Creek, a small tributary of Redwood Creek near the town of Muir Beach.

Green Gulch Farm is run by the San Francisco Zen Center and produces an abundance of vegetables that are sold at farmers' market, to local restaurants and grocery stores, as well as served by the Zen Center's kitchens. The site is used for retreats and is visited by thousands of people each year. There's also a Golden Gate National Recreation Area hiking trail

that goes right through the property.

Green Gulch Creek is the last tributary to Redwood Creek before it joins the Pacific Ocean, and it is vital as a high-flow refugia and juvenile rearing habitat for Coho salmon and steelhead trout that live and reproduce in the Redwood Creek watershed. In particular, the flow of cool, clean water in the early spring and summer is vital to the habitat of juvenile salmon in Green Gulch Creek.

For over a decade and a half, the Zen Center has been working on the Green Gulch Habitat Enhancement Project to restore the natural function of Green Gulch Creek. This is a multi-phase project to create spawning and year-round rearing habitat for coho salmon in lower Green Gulch Creek.



Website: www.marinrcd.org

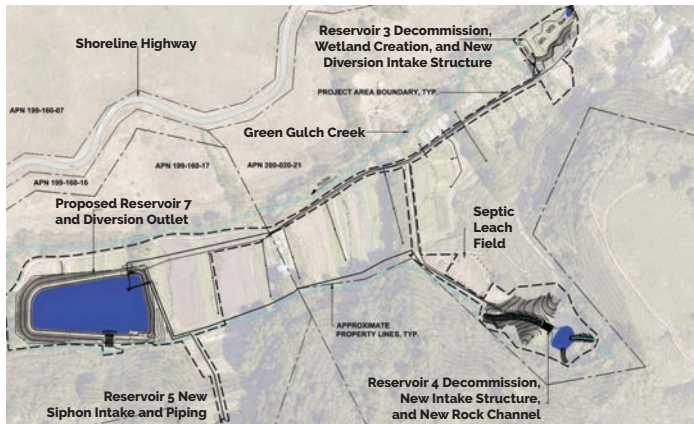
Email: marinrcd@marinrcd.org

Telephone: (415) 663-1170

Mailing Address: **P.O. Box 1146**
Point Reyes Station, CA 94956

Office Address: **80 Fourth St., Suite 202**
Point Reyes Station, CA 94956

The mission of the Marin Resource Conservation District is to conserve and enhance Marin County's natural resources, including its soil, water, vegetation and wildlife, through community-based conservation and restoration.



Phase 1 is a re-creation of a natural meandering channel at the downstream end, and was constructed in 2014.

Phase 2, reconnection of a tributary to restore sediment delivery and assist with summer streamflow, was completed in 2015. Completed work includes construction of 700 linear feet of new, meandering channel with inset floodplains; wood structures using redwood logs, root wads, and trees salvaged on site; installation of a vehicle bridge; and revegetation of 1.5 acres of riparian and wetland habitat.

Phase 3 is underway, and the farm is focused on shifting its water storage and irrigation systems to allow natural creek flows during the dry season.

This means moving on-channel storage to off-channel ponds and filling them during the wet season, when creek flow is high, and giving up riparian withdrawals during the spring and summer, when instream water is vital to fish survival.

The Zen Center has developed a plan for irrigation water storage with the consulting firm Prunuske Chatham Inc., a longtime partner of the Marin Resource Conservation District (Marin RCD). Prunuske Chatham Inc. has created designs that thoughtfully secure the water the farm needs to support its crops and enhance pond habitat at Green Gulch Farm, while also improving flows in Green Gulch Creek, which benefit fish.

Marin RCD is serving as the California Environmental Quality Act lead for this project and has offered lessons learned from the Pine Gulch Creek Instream Enhancement Project, in which Marin RCD and partners helped three farms relinquish their summer riparian water rights to coho salmon by building ponds to store winter storm flows. The next step will be to seek funding for the implementation of this very important natural resource and agricultural project.

A wide variety of pond and stream species will benefit from this project. The improved water storage will also improve Green Gulch's agricultural productivity. A win-win for the environment and agriculture in West Marin!

How do YOU prefer to read our newsletters?



If you enjoy receiving it in your mailbox and reading it in print, you don't need to do a thing!

However, if you prefer a different format, scan one of the QR codes, or email elise@marinrcd.org, to switch from print to email, or to opt out completely.

TO SWITCH FROM PRINT TO EMAIL



TO OPT OUT OF OUR NEWSLETTER





Digital Rendering of a Composting Facility • Composting turns biomass into carbon-rich soil amendment

The Marin Biomass Study

Roadmap for a Regenerative Biomass Economy

MARIN RESOURCE CONSERVATION

District released The Marin Biomass Study this spring, with funding from the Governor's Office of Land Use and Climate Innovation. The Study represents one of the most ambitious and collaborative climate resilience planning efforts ever undertaken in Marin County. It provides a detailed roadmap for turning organic discards and biomass from wildfire-related vegetation management into long-term environmental and economic benefits for Marin.

To reduce greenhouse gas emissions and reduce material going to landfill, the Study identifies ways for Marin to plan for and use the growing volume of biomass generated through wildfire prevention, agriculture, landscaping, food waste diversion, and wastewater treatment.

Today, much of that material is

landfilled or trucked long distances to biomass power plants in the Central Valley. While Marin's current system has some solid foundations, too much of it is costly, inefficient, and inconsistent with Marin's climate goals. Based on its plan to grow a better economy at the intersection of wildfire safety, zero waste planning, and climate smart agriculture, the Governor's Office selected Marin to be one of five statewide biomass utilization pilot projects.

To support the project, the District created a Steering Committee to guide the Study and engage with stakeholders to inform the Study and its implementation.

The resulting group, called the Marin Biomass Collaborative, has been bringing together a broad set of stakeholders. These include wildfire agencies, agricultural organizations,

utilities, parks agencies, waste haulers, biomass processors, local governments, and environmental nonprofits to evaluate opportunities for a more regenerative biomass economy.

Among the participants are the Marin Wildfire Prevention Authority, Marin Water, Zero Waste Marin, multiple sanitation districts, agricultural partners, and conservation organizations across the county.

The result is a 347-page technical assessment that examines Marin's current biomass flows, evaluates alternative processing technologies, measures greenhouse gas impacts, and analyzes financial feasibility. The Study identifies a set of utilization opportunities — which it calls "pathways" — that can put Marin's discarded biomass to better use, support the local economy, and help achieve Marin's climate goals.



Pyrolysis System Rendering
Pyrolysis converts biomass into carbon-sequestering biochar



Wet Anaerobic Digester Rendering
Anaerobic digesters process wet biomass, including food scraps, and manure



Biomass Gasification Plant Rendering
Transforms biomass into synthesis gas, which, when cleaned, fuels engines, and generators

These pathways include expanded composting, new biochar production, expanded renewable energy generation, and artisanal, small-scale milling for wood products.

The Study looks at biomass as a resource to utilize, not as waste to get rid of. Instead of going to the landfill, organic materials generated through wildfire prevention projects, defensible space clearing, landscaping, agriculture, and food waste could support local renewable energy, healthier soils, carbon sequestration, and green jobs. Implementing the recommended pathways would reduce Marin's waste-sector greenhouse gas emissions by nearly three-quarters while helping the county meet wildfire safety and greenhouse gas reduction goals.

The Study includes solutions that support the county's agricultural operations. Marin's dairies produce significant quantities of manure, and existing efforts such as the West Marin Compost facility demonstrate how co-composting manure with green materials can create a practical manure-management solution and a high-value soil amendment for local use. A pilot effort already blends roughly 1,800 wet tons per year of separated dairy manure solids with green and woody materials to produce compost for Marin's agriculture and horticulture.

Marin can make a big difference by taking a different approach to the

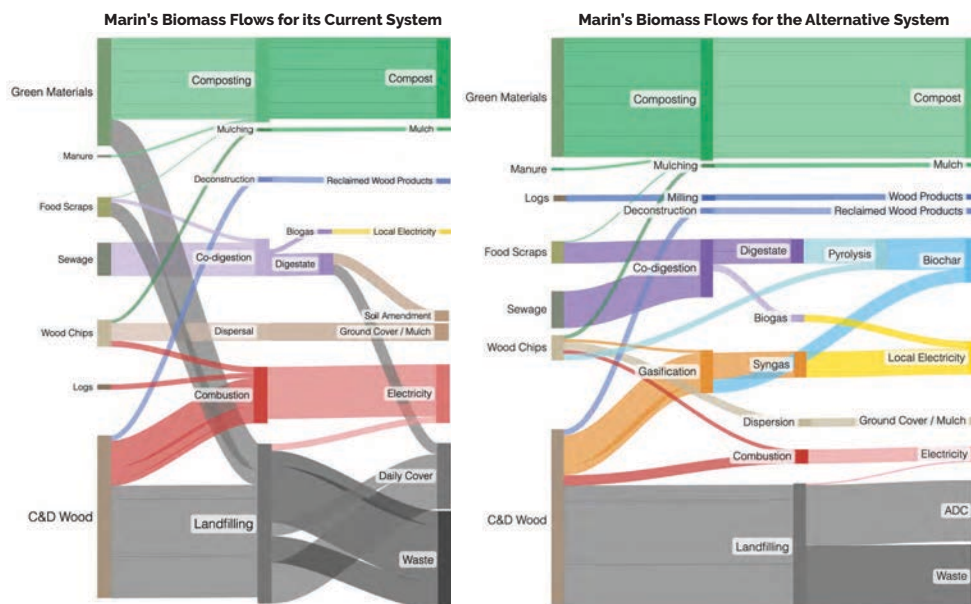
organic materials it is generating. For example, the Study estimates that, if Marin expands its composting for green materials, manure, and food scraps, applying that compost to land can reduce greenhouse gas emissions by a meaningful 48,600 metric tons of carbon dioxide equivalents per year. And that estimate may be conservative.

For Marin RCD, this Study reflects years of effort at the intersection of working lands stewardship, climate resilience, and community collaboration. The District's leadership helped ensure the project is based not only in science and engineering, but also in practical realities facing Marin land managers and communities.

The Study's final message is one of optimism. With strategic investments, institutional cooperation, and continued public engagement, Marin has the opportunity to become a statewide model for climate-smart biomass management — demonstrating how wildfire mitigation, greenhouse gas reduction, renewable energy, and ecological stewardship can work together in a truly regenerative local biomass economy.



For the full study please scan the QR code.



Special thanks to the Steering Committee and its partner organizations for their leadership, expertise, and commitment to this project.

From Ponds to Pastures

Technical Support for Point Reyes National Seashore Restoration

SOMETIMES FOGGY, SUN-DRENCHED, windswept, calm, these beautiful landscapes and ocean vistas make Point Reyes National Seashore is perhaps the single most important natural feature in Marin County.

Visited by more than two million visitors a year, the Seashore was until recently a highly important part of Marin County's agricultural economy. Originally home to many dairies, some dairies gradually converted to range cattle operations or were converted to recreational areas.

Last year, The Nature Conservancy, acting to help settle a long running lawsuit over Seashore operations,

offered a voluntary buy-out of many of the dairy and cattle ranchers leases. Two range cattle operations remain. The rest of what was formerly known as the "pastoral zone" will be operated differently in an attempt by the National Park Service, the Federated Indians of the Graton Rancheria, and The Nature Conservancy to manage the area as a "scenic zone".

Of the ranch operations that are able to relocate in Marin County, the Marin Resource Conservation District (Marin RCD) remains committed to offering technical and financial assistance to address their conservation needs.

MANURE POND RESTORATION AND STABILIZATION

The Marin RCD is also committed to the restoration effort in the Seashore. One way we are helping is to modify eight or nine ponds that were formerly used for manure management at the far western part of the Seashore. These ponds were managed by the dairies on the A, B and C ranches, and captured manure to prevent it from washing into Drake's Bay.

The San Francisco Bay Regional Water Quality Control Board (Regional Board) had been concerned about





A manure storage pond from a vacated dairy operation on the Seashore, recently emptied as the site transitions to a new chapter

the unmanaged ponds affecting the good water quality in Drake's Bay. Now that the dairies have discontinued operations and have emptied manure from the ponds, the threat of nutrient and bacterial contamination is diminished.

However, without active management, the ponds will fill and spill in an unplanned way, eroding the berm of the ponds entirely. This could cause excessive sediment to be deposited into Drake's Bay, and the ponds would lose any ecological values they retain.

The Marin RCDs Gerhard Epke, a hydrologist who runs the Conserving our Watersheds program, oversees this project. The Marin RCD has contracted with the Regional Board, using funds from the U.S. Environmental Protection Agency, to safely decommission the ponds, by notching a spillway into the berms. In managing the inflows and outflows of these ponds, they can be preserved as aquatic or ephemeral pond habitat.

While this sounds like a relatively easy project, extensive environmental review had to be done on the ground to make sure no sensitive plant or animal species would be adversely

affected by the proposed work.

Those studies have been completed, and Gerhard is hoping that the actual work can be conducted later this year.

This project is being done in full cooperation with the National Park Service, which will maintain the sites after the project is complete.

PASTORAL ZONE RESTORATION

Regarding the overall former pastoral zone, The Nature Conservancy has received \$2.75 million from the California Wildlife Conservation Board to plan for the restoration of the former pastoral zone. Another \$7.25 million is available to implement the plans.



The Nature Conservancy has done extensive outreach to agricultural, environmental, and other organizations to discuss possible ways to manage this area, which is nearly 17,000 acres. Without cattle grazing, the invasive grasses which cover most of the area are growing very tall, and threaten to dominate native plants, some of which are rare or endangered.

To counter this threat, The Nature Conservancy released an open and competitive bidding process for a seasonal grazing contract in late-2025. They have contracted with Dave Evans, who continues to operate a cattle ranch at the Seashore, to have cows reduce grasses in some critical areas.

The Marin RCD is developing a cooperative agreement with The Nature Conservancy and the National Park Service to advise on best practices to restore and preserve the former pastoral zone. While no decisions have been made yet, work could include the restoration of creeks, wetlands, and coastal grasslands.

This is a very long-term project, which could require a ten year restoration period. The Marin RCD looks forward to offering biological, engineering, and rangeland management advice to The Nature Conservancy and the National Park Service.



80 FOURTH STREET, SUITE 202
POINT REYES STATION, CA 94956



www.marinrcd.org

Keep up to date about our
stewardship projects that protect
water quality, improve soil health,
sequester atmospheric carbon,
and enhance wildlife habitat.

REMEMBRANCE OF STEVE DOUGHTY & HANK CORDA

By Sally Gale, past Marin RCD Director

STEVE DOUGHTY served on the Marin Resource Conservation District Board from 2001 to 2017. I remember those years as a time of harmony and good fellowship. The Board included Hank Corda, Steve Doughty, Richard Plant, Bob Giacomini, and myself. We took our work seriously, but there was always room for laughter, and we looked forward to our meetings.

Steve had a gift for bringing levity to the room. You could see the humor coming from the twinkle in his eye. His teasing was always good-natured and light, even as we handled the business at hand.

He was also prepared and punctual, arriving right at 9 a.m. with two notably large

mugs of coffee. We always teased that there must be more than coffee there.

Steve was generous with his time and energy. If something needed to be done—especially if it required a truck or a strong back—he was the one we called. He was dependable, steady, and always willing to help.

For many years, Steve and Sharon hosted our annual Fish Frys at their home. Those events were warm, welcoming, and a reflection of their hospitality.

Steve cared deeply about the District and the people in it. His humor, generosity, and team spirit made a lasting impression. He helped make those years not only productive, but joyful.

HANK CORDA served on the Marin RCD Board from 1990 to 2016—more than 25 years—and he and I were on the Board together for about 10 of those years. He was the Chair and I was the Vice Chair. He made a great Chairperson for a number of reasons, but mostly because he encouraged everyone to participate. He was a quiet leader and would let the board come to a decision and only if there was a tie would he vote. We were a tight board, thanks to his skillful leadership.

Hank was known to have a terrific memory. He knew everyone in the ranching community, partly due to his job as an insurance salesman and partly because he was a multi-generation fellow, having been a high school football star locally. He was trusted in the community.

It always amazed me to see Hank take the stage and welcome

all of the County officials to our Annual Fish Fry. In all the years I witnessed his speeches, Hank never tripped up. Besides knowing every Department head by name, he had stories about each one of them. He never embarrassed anyone, but you could tell he knew a lot about everyone.

Hanging around Hank at events was always fun because he was a great story teller. Elk hunting trips, family sausage making adventures, neighborhood kerfuffles, deer hunting disputes all were made more entertaining with Hank's telling. He could out talk anyone and his funny tales got taller and taller with the telling.

Hank clearly was a gentle soul with a tender heart. He believed in doing right by the community. I feel privileged to have known him and worked alongside him for so many good years.



MARIN RCD BOARD & STAFF, 2010 • Steve Doughty, Bob Giacomini, Sally Gale, Nancy Scolari, Richard Plant, Hank Corda • Photo by Art Rogers