



Sanctuary Forest

Fall 2025

Stewardship in Action

Based on pilot project results and lessons learned, we continue to use a combination of restoration methods to improve watershed resilience in the Mattole River headwaters. This year was a busy implementation season: 2 streamflow augmentation ponds totaling 7 million gallons of water storage were completed, 3,000 feet of instream work enhanced habitat connectivity, and 60 acres of forest thinning improved forest health and wildfire resiliency. We also completed 2 new storage & forbearance projects and a new infiltration basin project. Our restoration methods range from in-depth projects requiring heavy machinery to lighter-touch adaptive measures that improve effectiveness—but in all cases, the best outcome for the river, forest, fish and people is foremost in our hearts and minds. In all of our work this year, we employed 19 local subcontractors!



Juvenile coho by Bodhi Howes



Terrace Infiltration Basin

By adding a subsurface clay restrictive barrier keyed into bedrock, we can increase groundwater storage and create a wetland in a terrace near South Fork Lost River. The 18-foot deep clay barrier, seen at bottom left, is capped with soil and the terrace is shaped to maximize rainwater infiltration.

The increase in groundwater storage is expected to improve summer flows for fish in South Fork Lost River. Over time, the basin will support native vegetation like sedges, rushes, and more, providing valuable habitat for wildlife that depend on seasonal wetland conditions.

▲ Top: an existing basin adjacent to South Fork Lost River. Bottom: contractors building a subsurface clay restrictive barrier in South Fork Lost River.



Log & Boulder Weirs

Weirs consist of a combination of logs and/or boulders buried across a streambed all the way down to bedrock. These structures reconnect floodplains by elevating the streambed, enhance pool persistence in the dry season, and slow the downstream movement of surface and subsurface streamflow. A plunge pool and a habitat structure are added on the downstream end to create valuable fish habitat. This process, similar to some of our other projects, “teaches running water to walk,” as permaculture practitioner Brock Dolman says.



▲ *Top: In McKee Creek, a trench is prepared for a weir.
Bottom: a completed weir in Anderson Creek.*



Habitat Structures & Wood Loading

Habitat structures consist of large wood carefully placed in the stream to achieve specific goals: providing salmon/steelhead with summer rearing habitat, cover, and refuge from high flows, and to scour pools and deposit spawning gravels.

Wood loading is a cost-effective method of adding wood to streams to accelerate natural and dynamic stream processes that create habitat complexity. Whole trees with rootwads are especially effective in the mainstem where flows are higher.



▲ *Pictured: McKee Creek wood loading & habitat structures during low & high flows.*

“We cannot choose IF we will impact ecosystems, IF we will impact peoples across the globe, IF we will impact the lives of future generations. We can only choose WHAT that impact will be.”

~Ethan Tapper, “How to Love a Forest”



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Fall 2025

Dear Friend,

At Sanctuary Forest, *restoring balance* means keeping the Mattole River flowing—the lifeblood that sustains our ecosystems, communities, and way of life. When water runs low, that balance is lost and people, fish, and wildlife are all affected. For the past 20 years, restoring flow in the headwaters of the Mattole has been at the heart of our work. Guided by nature—our greatest teacher—we’ve learned, adapted, and refined our methods in partnership with others who share our vision.

This fall, our work feels both urgent and hopeful. We recently celebrated a record return of coho salmon in the Mattole headwaters—the largest in 20 years! Thousands of young salmon filled the headwaters with some returning to places where we rarely see them. But as the dry months came, the question remained: *would the streams be able to support this abundant return through summer’s low flows?*

When pools began to shrink and disconnect, fish rescue teams from CA Fish & Wildlife, Mattole Salmon Group, Bureau of Land Management and Sanctuary Forest stood ready. Targeted water release from Sanctuary Forest’s streamflow augmentation ponds in Anderson Creek, Baker Creek, South Fork Lost River and North Fork Lost River during critical low-flow periods helped hundreds—perhaps thousands—of young coho survive the summer. Seeing them persist in these cool, connected pools maintained by these intentional releases, while other tributaries run dry is a clear reminder of what’s possible when we work together—with nature, and for nature.

Restoring healthy flows to the Mattole River also means caring for the forests that sustain the watershed. Thinning overcrowded young forests improves streamflows by reducing the number of thirsty trees. Forest health treatments enhance species diversity and reduce risk of catastrophic wildfire, helping protect our communities. These are not “one and done” projects—they are part of a long-term commitment to stewardship, carried forward through the careful use of prescribed and cultural fire in the future, helping forests regain their natural resilience.

When you give to Sanctuary Forest, you’re doing more than funding conservation—you’re supporting the restoration of the health of the river, the vitality of the forest, and the survival of salmon.

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Our supporters often share what motivates them to give: a deep respect for nature, a desire to protect what remains, and a commitment to passing on a healthy, thriving landscape to future generations. Many describe Sanctuary Forest as a trusted steward of the Mattole River and its forests—an organization that takes thoughtful, science-based action and follows through over the long term.

“We donate because we NEED organizations like yours to protect what's left!!” ~Charlie Brock

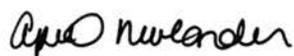
“Because protecting the entire Mattole watershed is crucial to maintain the natural balance of all life.”
~Meave O'Connor

Donors also appreciate the strong sense of place and community collaboration that Sanctuary Forest embodies. Our organization was founded by local people who cared deeply about the Mattole, and that commitment continues to guide everything we do. Others give to honor family members, memories, or personal experiences tied to this landscape. Within each of these gifts is a common spirit: *gratitude for the living systems that sustain us, and a shared responsibility to care for them.*

With your support, we can restore balance to the Mattole—replenishing its waters, reviving its forests, and strengthening the connection between people and place.

Give today to ensure the Mattole thrives for generations to come.

With Appreciation,



April Newlander
Executive Director
Sanctuary Forest

P.S. Your gift today directly supports water restoration, forest health, and salmon survival in the Mattole River watershed. Every contribution strengthens the long-term stewardship that keeps this ecosystem resilient and vibrant.

Your Guide to Giving

Your contribution nurtures forests, streams and future generations

Choose one or more methods below to help advance our work!

- Send in your donation in the enclosed envelope
- Donate online
- Become a monthly donor
- Check out our Planned Giving & Ways to Donate pages on our website for alternative giving methods including gifts of land, stock, bequests, IRA Required Minimum Distributions and more!

Visit sanctuaryforest.org/donate for more information!

Find us on Facebook & Instagram!



Strategic Floodplain Reconnection

We're using grading for good! We use heavy machinery to reverse channel incision and raise the streambed elevation to hold groundwater and slow, sink, and spread winter runoff. Connected floodplains provide slow-water resting places for salmonids during high flows, especially important for juvenile coho salmon survival. Large wood is placed on the floodplains to further slow water velocities and add complexity. This method is used to create low-gradient, threaded streams that lead to wetland conditions.



*Top: McKee Creek before strategic floodplain reconnection.
Bottom: South Fork Lost River after floodplain reconnection.*



Beaver Dam Analog Structures

Beaver Dam Analogs are man-made structures that mimic the way beavers build dams by weaving willow around posts and filling holes with huckleberry, straw or other vegetative matter. They slow down the water, spread it out across the landscape to reconnect floodplains, and create wetlands. These structures are effective in recharging groundwater, but require constant maintenance by humans: true experts, beavers themselves, do it better. Beaver dam analogs are designed to slowly break down over time, leaving lasting effects in the stream.



Pictured: man-made beaver dam analog structures before and after winter rains, in South Fork Lost River.



Groundwater Recharge Ponds

Groundwater recharge ponds are designed to capture and store winter water for slow release throughout the year. By lining them with a mixture of clay and soil, sometimes assisted by a subsurface clay wall, water from winter rains fills the ponds and recharges groundwater. These ponds create beautiful habitat for wildlife including tree frogs, elk, bear and more, and help supplement streamflow for fish and other aquatic organisms. This summer, we also experimented with directly augmenting streamflow with these ponds, like our streamflow augmentation ponds, below.



Top: a trench is prepared to be filled with clay & soil, creating a subsurface wall. Bottom: a completed groundwater recharge pond in Baker Creek.



Streamflow Augmentation Ponds

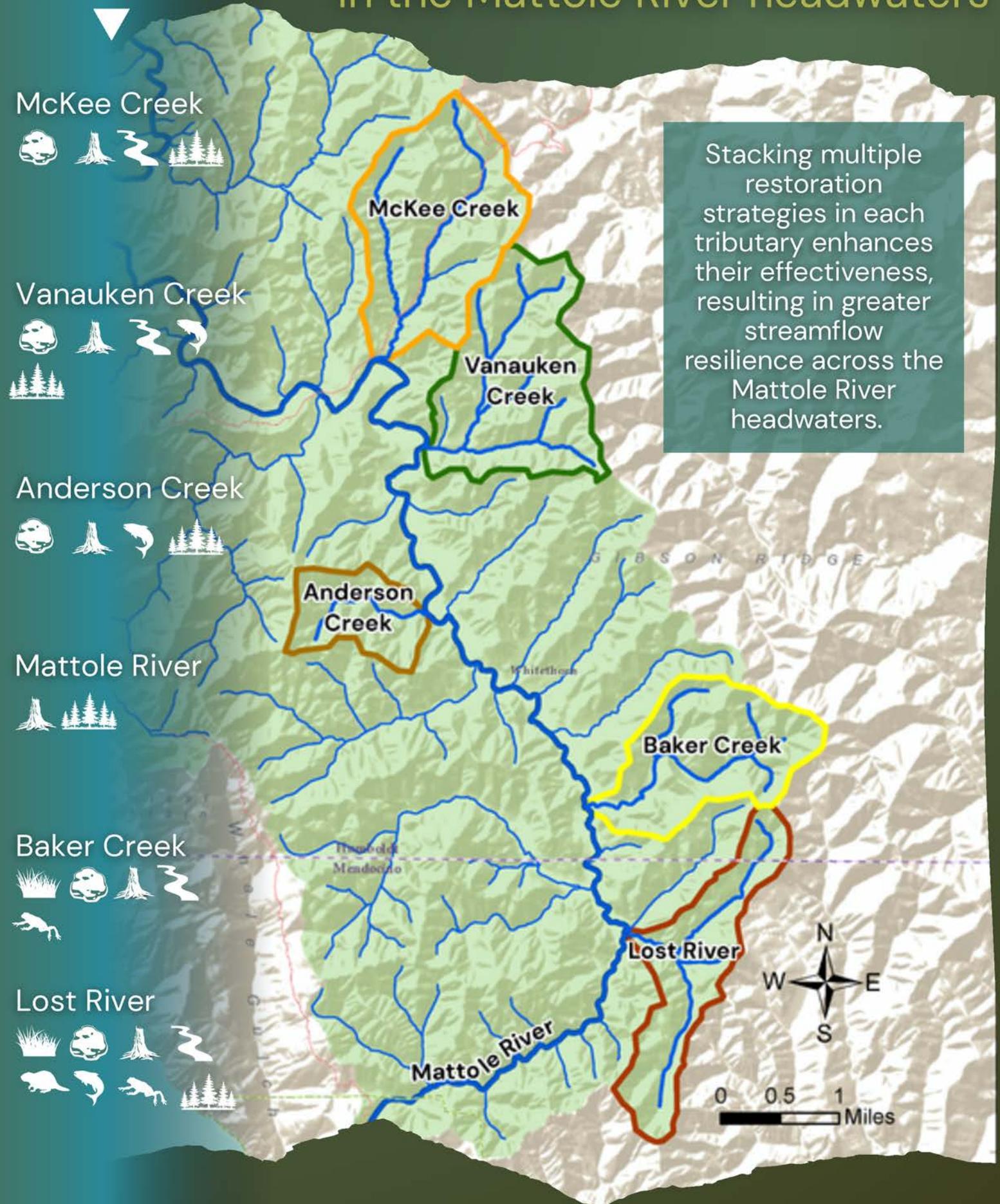
Like our groundwater recharge ponds, these ponds store water from the wet season for release later in the year. Our streamflow augmentation ponds use a polypropylene liner, a siphon, and infiltration gallery to provide streamflow augmentation in the driest part of the year when the fish need it most. The liner is topped with a thick layer of gravel, which is estimated to help the liner last for over 100 years. This summer, these ponds helped save thousands of fish from drying stream reaches in the Mattole headwaters tributaries.



Top: contractors prepare to install gravel on top of the liner in one of 2 new ponds in Vanauken Creek. Bottom: a completed lined pond in South Fork Lost River.

Each symbol represents a completed or planned restoration technique used in that watershed

Stewardship Projects in the Mattole River headwaters





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Chicken of the woods on a fallen tree.



Forest Thinning: Riparian & Upslope

Thinning trees in overgrown riparian areas can improve water availability and forest health. When fewer trees are competing for water, more water can make its way into nearby streams, increasing streamflow and supporting salmonids and other aquatic life.

Upslope forest thinning along ridgetops creates a fuel break, reducing wildfire risk for nearby communities.

Trees removed during thinning are placed into streams as part of habitat structures/wood loading.



Top: riparian thinning in McKee Creek. Bottom: upslope thinning on the ridge between McKee Creek and Vanauken Creek.