



Mattole Watershed NEWS

WINTER/SPRING

2017



ISSUE # 8

“n-shong-shaa-nul-lah” A Wailaki student thanks the Mattole Field Institute

By Flora Brain, Mattole Restoration Council

Isn't it interesting how an expression of gratitude can often cause you to feel like you've been given a gift? This is the way I felt when a recent Mattole Field Institute student said thank you in the Wailaki language. It was like she had given me a gift, and I wanted to say it right back to her.

This exchange came after the Mattole Field Institute held its second field course in partnership with HSU's graduate program in Social Sciences this past August. For five days, students beginning their studies in Environment & Community camped in the Mattole and heard from various residents about wide-ranging issues affecting life in this rural valley.

With local guides, students visited ranches and nonprofits, hiked in Mill Creek's old growth forest, listened to a gathering of residents discuss challenges in our community, heard a lively campfire discussion about cannabis cultivation, toured a small cannabis farm, spent a day in the Mattole River headwaters, availed themselves of popsicles at a Whitethorn farm stand (along with a spontaneous tour of a garden of plants used for dying wool), visited a small private sawmill, hung out at the Petrolia General Store, and at the end of the week got a fabulous tour of a permaculture farm in nearby Salmon Creek.

It was a full five days, especially considering the students were tasked, in their down time, with thinking critically about how their experiences here relate to the academic literature they read in advance. These articles were mostly concerned with sense of place, social and community capital, and alternative rural economies. Their ultimate assignment for the class was to design a hypothetical masters-level social science research question based on what most interested them in the Mattole. Please see the sidebar on page 3 for their research questions.

With so much stimulation in such a short week, it was grounding to hear from one student, who at the end wrote in her or his evaluation, "The most valuable segment for me was experiencing the sights, sounds, and smells of the Mattole's natural spaces. Doing so allowed me to experience a small taste of the attachment residents



Students in the Mattole Field Institute's August 2016 course enjoy a break for strawberry popsicles near Whitethorn Junction. Photograph by Flora Brain.

have to the land." Another student commented, "I was surprised by how quickly I evolved my perspective by mingling with people in the Mattole and the cohort (of fellow grad students)."

As director of the slowly but steadily growing Mattole Field Institute, I am grateful to the following people for supporting this important program. Thanks to Dr. Erin Kelly, Professor of Forest Policy, Economics, and Administration, who accompanies these students on their stay in the Mattole, and to Dr. Alison O'Dowd, Professor of Environmental Science, for partnering in our spring field courses in Watershed Restoration. Thanks to the Grace US Foundation, generous funder and believer in the power of the experiences the Mattole Field Institute is providing. Thanks also to the many, many Mattole Valley and nearby residents who take time out of their busy lives to visit and share perspectives with these students. Each of you has made it possible for our students to see a richer, more complex picture of how we all get on in a place as remote, as complicated, and as ecologically blessed as the Mattole River watershed.

I was particularly touched by one expression of gratitude from a student in the August 2016 class. Kelda Britton told me, "I am

See "Mattole Field Institute" - continued on page 3

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MATTOLE RESTORATION COUNCIL MISSION

The mission of the Mattole Restoration Council is the restoration of natural systems in the Mattole River watershed and their maintenance at sustainable levels of health and productivity, especially in regards to forests, fisheries, soil, and other plant and animal communities.

MATTOLE RESTORATION COUNCIL VISION

"We look forward to a Mattole that has healthy, self-sustaining, productive forests, meadows, and streams, with abundant native fish and wildlife populations. We envision a community that draws its sustenance from and lives in harmony with the environment. We seek to understand processes of natural healing and enhance them using best land practices in harmony with the local environment. We seek to enhance the exchange of knowledge among all community members toward that goal. We look forward to a time in the Mattole watershed when "restoration" will no longer be needed."

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From the Executive Directors

By Cassie Pinnell and Sungnome Madrone



Dear readers,

As we look out onto the mighty Mattole, flowing high and strong after a rainy winter, we are reminded how a familiar landscape can change in unpredictable ways. With rains come changing riverbanks and slides on our roads. Trees are uprooted and carried downstream, deposited in new locations, trapping sediment and debris. Looking out after a storm we see a landscape reminiscent of the one we came to know, familiar yet full of change. Stepping out on this new landscape, shaking off the debris of a storm, we begin to anticipate the implications of our new surroundings. At both the local and national level, what we do with this change is up to us.

With change comes movement, a chance to bring forth new ideas. We believe that good ideas are ones that work for landowners, while also helping the fish, forests, and prairies. As watershed groups in the Mattole, we are working together to find these mutually beneficial approaches. Recently we have been working with landowners to remove trees encroaching on grasslands - simultaneously restoring rangeland for grazing, improving grassland habitat and biodiversity, and even using the removed trees for instream fish habitat. Similarly, we are working with groups of landowners on neighborhood fuels reduction projects, which not only reduce potential wildfire dangers, but also improve forest health.

By focusing on common concerns, we can use our different backgrounds and experiences to make us stronger. Where there is respect for those differences, we are able to reach further and accomplish more. For more than 30 years, we have been working to find answers that are built from local knowledge, agency collaboration, and science. We thank you, Mattole residents and friends, for your support, good stewardship, and dedication to solutions and cooperation. There are many examples where this has played out over the past decades to benefit the community, and we hope to continue to work with you for many years to come.

Send us your ideas, let us know your thoughts, and thank you for your support and participation.

Sincerely,

Cassie Pinnell and Sungnome Madrone

Mattole Salmon Group

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The Mattole Salmon Group works to restore salmon populations to self-sustaining levels in the Mattole watershed.

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The Mattole Field Institute

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a descendant of the Wailaki People and I have slowly been learning words in my language and trying to incorporate them into day to day practices." She explained that n-shong-shaa-nul-lah is similar to 'thank you' in the Wailaki language, and translates to "good for me you did."

The Mattole Field Institute delights in creating space for Mattole residents and students from near and far to better hear and understand one another, gaining deeper insights to the world we live in. May we all continue to do good for one another. To all who participate: n-shong-shaa-nul-lah.



Above: Students in the Mattole Field Institute's August 2016 course get a tour of a greenhouse on a permaculture farm, visit a ranch and learn about Mattole history, and form special bonds between individuals studying topics ranging from the Mattole restoration industry to the effects of colonialism. Photographs by Erin Kelly (top) and Flora Brain (center and bottom.)

Research questions inspired by field study in the Mattole:

How do rituals and/or ceremonies in the Mattole serve in the process of social bonding, influencing group/community identity? Do these events produce evidence of specific channels of knowledge distribution and knowledge-specific hierarchies?

How have high property prices, in combination with lack of available local workforce, promoted alternative non-monetary-based leasing agreements in the Mattole River area, and what roles do these agreements play in the formation and maintenance of the local community?

In what ways does masculine identity operate in the formation of different livelihood strategies in a rural economic context? How do social constructions of masculinity and femininity in dominant U.S. culture influence Mattole ranchers, restorationists, and people in the booming cannabis industry?

How is community capacity affected by individual relationships with the natural and social worlds?

What are some best practices that aid rural, vulnerable communities in times of disaster? What are some community-based preparedness examples from the Mattole that can benefit other communities?

What are the causes of the affordable housing crisis in the Mattole Valley? Who is being impacted? How does rural gentrification differ from urban gentrification? What are potential solutions?

How does the restoration economy function in the Mattole watershed? How does it contribute to local livelihoods and ability to persist? How do local residents hope it will change with legalization of marijuana?

What are the threats facing mountain lions (*Puma concolor*) in the Mattole River valley?

How were indigenous land management practices absorbed, transferred, ignored, and "rediscovered" by successive generations of white settlers in the Mattole watershed? Did these practices survive colonization? Where can we find evidence to support or challenge the assumption that natives to the Mattole had an insignificant impact on the environment?

How can Indigenous perspective(s) from surviving Mattole People empower them to reclaim agency in Fishery and Wildlife management decision-making?

What does gentrification look like in the Mattole? How does this differ from an urban setting/an environment where there are more common types of property ownership and transference? How might Mattole residents combat displacement and preserve affordability? Or is this even something Mattole residents are concerned with mitigating?

What is the cultural importance of coho salmon in the Mattole River, and can it be used as a charismatic species to recharge and restore the watershed?



Mattole Estuary Heliwood 2: Whole Trees

By Sungnome Madrone, Matole Salmon Group

The Heliwood 2: Whole Tree Placement project is an element of the BLM 5 Year Estuary Restoration Plan (2012-2017). The Plan contains analysis of natural processes affecting the lower river and estuary, and identifies aquatic habitat restoration objectives.

The objectives of the Heliwood 2 project are to work with natural geomorphic processes by adding large wood and whole trees to enhance the building and long-term persistence of bars and emerging islands. By also adding riparian plantings and deep trenched willow baffles along existing terrace margins, we expect to narrow channel branches, helping to create scour and to increase presence and depths of pools. This is intended to work in conjunction with increasing bank resistance via whole tree stream barbs and willow installations along existing terraces and islands.

Any wood placement in the lower river and estuary encourages channel structure and pool development. This improves cover and habitat for fish. Because there are no bridges, roads, houses, or infrastructure in the treatment area, there are limited liabilities, and so an adaptive approach fits the site. We design structure types and locations on the current channel configurations and generally repeating meander areas that exist the summer of placement. Adding long lasting large wood will build bars in some places and increase scour, pool development and high water refuge.

Most apex jams were designed to help build bars and increase riparian habitat. Whole trees placed along river banks or on bars were designed to be interwoven into existing vegetation. In this year's project, we crossed tree boles so that we could pin and anchor the two trees together where access for a crew and tools is possible. This doubles their drag and should increase their longevity in the system. Some trees with root wads were placed on the bank and some in the river. These trees were placed in areas where bank resistance is good so that the wood will increase scour, pool development, and cover. Smaller trees were bundled and placed where terrace margin treatments are occurring. After the helicopter delivered these trees, they were used to fill deep trenches with willow and whole trees. These "stream barbs" protect the stream bank from erosion.

The very large (estimated weight is 150 tons,) anchored complex wood structure ("Woodzilla 2") is designed to split the flow of the river towards the north and south banks where better fish habitat typically exists from overhanging riparian vegetation. These areas tend to have more off-channel habitat. Its placement in the river is at the narrowest location between Moore Hill and the south terrace. The deeply trenched willow baffles installed last year, and the stream barbs and more baffles installed this year, are designed to work in concert with Woodzilla 2 by providing significant bank erosion resistance.

Every tree that is paced in the river is PIT tagged, GPS located, identified as to height, DBH, and complexity, as well as located on a total station survey of the whole treatment area. With annual re-surveys of wood and PIT and GPS locations, we will begin to track movement that will tell us a lot about movement under certain flow conditions and stability of different anchoring approaches.

The expected results of this project include increased bar building, good terrace margin protection, and improved habitat conditions for fish from placement

of large wood, growth of riparian vegetation, channel dissection and pool deepening and densification.

The whole trees for this project were generated from a prairie reclamation project on local landowner Michael Evenson's Moore Hill property. The donation of these encroaching trees to the Heliwood 2 project provided the matching costs to secure funding for the helicopter, heavy equipment and ground crews. Equipment services were provided by local operator Patrick Queen, and Columbia Helicopters provided the big air ship. The Chinook helicopter (the biggest in the free world) was able to pick up 26,000 pounds per load and we were able to fly one whole tree through the air after another about every 4 minutes. Local laborers worked on the project and during fly days, Mattole Salmon Group Board members Lindsay Merryman and David Simpson grilled hamburgers and answered questions from the public at our viewing areas. Local school children came by and students from Humboldt State University were on hand the month prior to glimpse the tipping and preparation of trees before they flew.

All of the tree placement work happened on BLM lands and Sam Flanagan from BLM was a great help on the project, along with Aaron Martin from the Yurok Tribe. Funding for the project came from the State Coastal Conservancy, the Department of Fish and Wildlife, and the Department of Water Resources.

The trees flew September 19-21, 2016 and all final anchoring was completed in early November. With the placement of all of this large wood and all of the new willow and riparian plantings, we welcome back our salmon brothers and sisters and wish them happy spawning! 🐟

2016 Mattole Heliwood
Mattole Salmon Group
West Map V. 5





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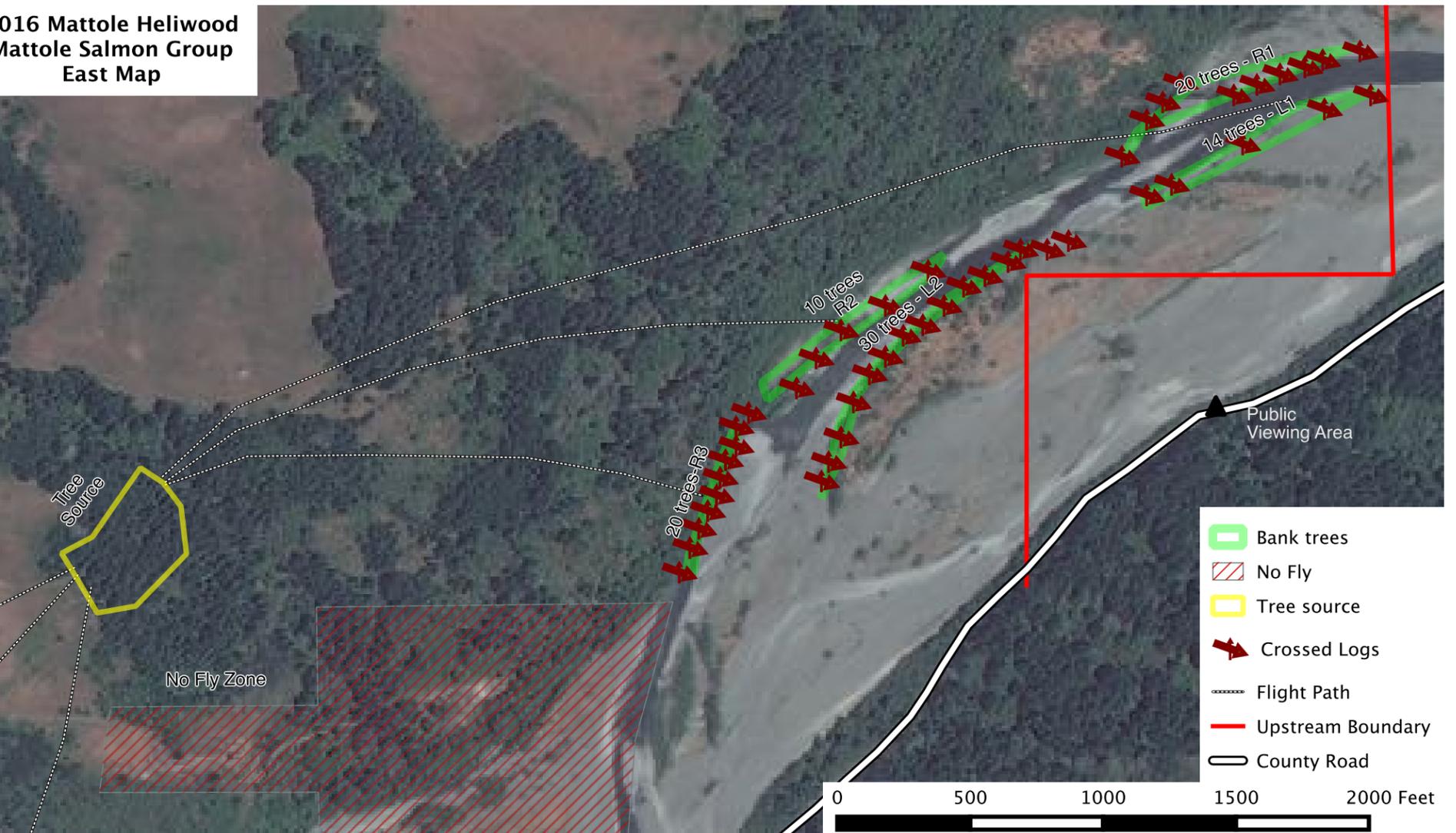
- Geology/Engineering reports, Landslides
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- Stormwater plans (SWPPP), Low impact drainage (LID)
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- R1/R2 reports, Water rights, Water monitoring, Water quality
- Whole Farm planning, Cultivation compliance
- NCRWQCB Water Board Approved 3rd Party Program

Center right: Whole tree large wood structures. These whole tree structures crossed with each other. Some have root wads in the river, and some have over whole trees that had been laid down in 2013. Many of the 2016 and 2017 river banks have now been anchored together using 1" diameter, 4-5 foot anchoring is intended to further stabilize these structures by "unitizing" them they will generate. All of these whole trees have been tagged and located to monitor their movement and to improve techniques for placement of large wood development, improves habitat complexity, provides cover and velocity refuge.

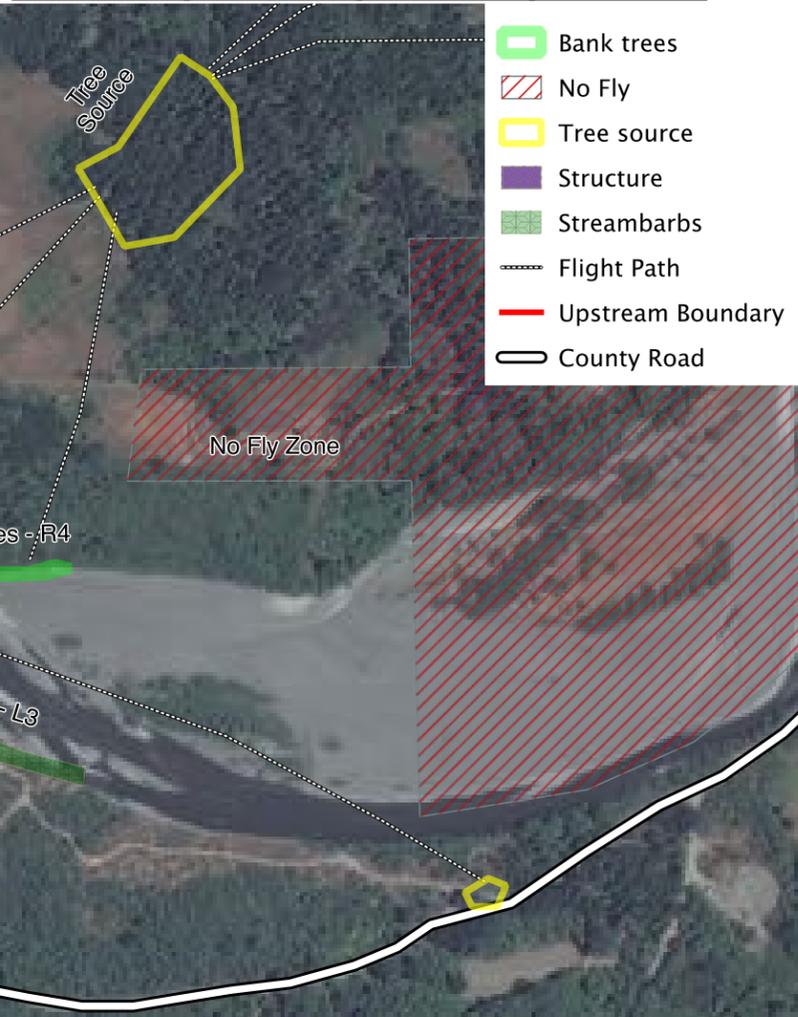
Bottom right: "Woodzilla 2" as completed. Please see next page for additional information.

Tree Placement, September 2016

2016 Mattole Heliwood
Mattole Salmon Group
East Map



0 500 1000 1500 2000 Feet



Structures are built with 2, 3, and 4 whole trees that are sometimes
with root wads on the bank. Some whole trees in 2016 were placed
in 2013 whole trees that were crossed in placement sites along the
long rebar, large metal plates (washers) and huge nuts. This
helps them. The longer they stay around, the more habitat benefits
are gained with GPS and a detailed survey. We resurvey all trees annually
to measure large wood for fish habitat. Large wood increases scour and pool
depth for adult and juvenile salmon and steelhead.

Additional photos and explanation. Photographs by Josh Madrone.

Estuary Helicopter Large Wood Placem



Above left: Stream barbs under construction. Stream barbs were built and deep trenched willows were planted along many sections of the north (right) with whole trees delivered to the sites by the helicopter during flight days in September. Willows were collected nearby from spouting willow clumps, and next excellent willow cuttings from a coppice process of re-sprouting. Along the south bank there is a high terrace that helps contain many lower flow potential, and jets between islands, bars, vegetation and wood obstructions. This terrace is subject to excessive bank erosion and retreat, and so as part of the project we have been working to increase bank resistance. Along the terrace bank, multiple 15-foot deep by 3-4 foot wide trenches were excavated into the terrace material. The material was filled with 15-20 foot long vigorous willow cuttings, large wood and whole trees. The root wads were put at the river's edge as large wood for pool creation. The logs, 15-20 feet long, are set at about a 30 degree upstream angle to the bank, and are about 50-60 feet apart. The barbs are intended to slow the velocity of the flow, slowing the flow, the water should drop sediment deposits rather than erode the bank. These living river banks should provide high quality salmon habitat.

ent: Fall 2016



Top left: Tree tipping on Moore Hill.

Top right: Helicopter with two whole trees in tow heads for placement site just upstream of the Mattole estuary.

Bottom right: “Woodzilla 2” as completed. Creating this complex wood structure consisted of anchoring large diameter (48-50” dbh) logs, root wads, and whole trees to each other and to eight 4-5 ton boulders. Two of the trees have 15-foot diameter root wads and are standing upright in the picture. These post-like structures will act to catch large wood moving down the river, thus increasing the complexity and mass of the structure. The root wads, trees and boulders were interwoven in a large pit dug to get the bulk of the mass down to potential grade. The intended goal for this structure is to help split the flow of the river, directing the water along the south and north banks, and into adjacent off-channel slough habitats. These areas typically have higher quality salmon habitat due to overhanging vegetation, slower flow velocities, shelter from predators, and more food. We expect that an island/bar will form downstream of the structure, further splitting the flow. We placed it where we did because this is the narrowest section of the active river channel area in the lower river, and because there is good resistance to erosion along both adjacent banks. The increased bank resistance is in part a result of the stream barb and deep trenched willow baffling that has been constructed in those areas.

Left: “Woodzilla 2” under construction. All photographs by Josh Madrone, except top right photograph by Abi Queen.



(t) and south (left) banks. These barbs were built and these cut willow stems will become the future’s of the river, thus increasing stream power, scour of the BLM Estuary Restoration Plan we have material and down into the water table. The trench development and cover. The trenches are 50-70 low when it comes up to and over the bank. By habitat. Photograph by Josh Madrone.



The 2016 Mattole Summer Steelhead Dives: 2

By Nick Tedesco, Mattole Salmon Group

July 15th and 16th marked the Mattole Salmon Group's 21st Annual Mattole Summer Steelhead Dives. Since 1996, volunteers and ichthyomaniacs (people with an abnormal obsession for fish) have been coming together in mid-July to count Mattole River Summer Steelhead. Not only are the summer steelhead dives about collecting data, but the dives are also a summer tradition of bringing friends both old and new together, working hard and having fun.

The purposes of the summer steelhead dives are to count the number of summer steelhead and steelhead half pounders throughout the watershed. Summer steelhead are adult steelhead over 16" long that enter the river before the river mouth closes in the summer and wait until the next rainy season to spawn. Half pounders are immature steelhead between 12" and 16" long that only spend a short time in the ocean before returning to the river to over-summer. Summer steelhead, once abundant, are now relatively rare in the Mattole River.

The Data

This year volunteers surveyed 59.7 miles of mainstream Mattole River and 5 miles of tributaries. There was a total of 12 adult summer steelhead observed and 33 half pounders observed. These numbers are considered below average. The average number of summer steelhead observed each year since 1996 is 23. The maximum number of summer steelhead observed was 56 in 2013, while the lowest number observed was 9 in 2003. The average number of half pounders observed since 1996 is 47. The maximum number of half pounders observed was 96 in 2000, while the lowest number observed was 19 in 1997. For unknown reasons, the numbers of adult and half pounder summer steelhead seem to vary widely year to year.

In addition to collecting data on steelhead, volunteers collected data on signal crayfish, western pond turtles, Pacific lamprey, and invasive green sunfish. Signal crayfish were spotted on both days of diving and were distributed throughout the river.



Data is collected on signal crayfish because they are not known to be native to river systems south of the Klamath. In places where they have been introduced, they have been linked to declines in amphibian and macroinvertebrate populations, because they can be very effective predators in the right circumstances.

Thirteen western pond turtles were observed altogether. Western pond turtles are a Species of Special Concern in California and there is a push to give them Endangered Species Act protection.

Pacific lamprey are native to the Mattole River but they are rare in live observations at this time of year, as it is the very tail end of their spawning season. This year, the river was full of lamprey redds: nests where lamprey spawn. Lamprey redds are identified by seeing a pot, a circular depression in river rocks, surrounded by a mound of carefully placed rocks. In one stretch of river near Whitethorn, 121 lamprey redds were spotted in a single survey. In the mainstem Mattole between Mattole Canyon Creek and Grindstone Creek, one group of volunteers saw a live lamprey on a redd.

Green sunfish, a non-native species, were identified in four of the eighteen survey reaches. Green sunfish have been observed semi-regularly over the last 10 years just downstream of Thorn Junction; this year, green sunfish were observed considerably further downstream, between Mattole Canyon and Grindstone Creeks just downstream of Ettersburg. The Mattole Salmon Group intends to keep a close eye on the distribution of green sunfish in the river, since they are a non-native, piscivorous fish that could potentially impact juvenile salmon. If you happen to have green sunfish in your pond or aquarium, we urge you to please ensure that they are not escaping into the Mattole River or tributaries.

The Good Times

The Mattole Summer Steelhead dives are incredibly exciting and fun because of the volunteers. Some volunteers have plenty of dive experience while some volunteers experienced their first dive this year. Volunteers work for a variety of agencies including AmeriCorps Watershed Stewards Program, Bureau of Land Management, State Parks, California Department of Fish and Wildlife, and many more. Some volunteers are locals who volunteered for the first time. One particular volunteer read about the Mattole Summer Steelhead dives on the Wildberries bulletin board in Arcata and signed up to volunteer for two days here in the Mattole!

The fun of the summer steelhead dives culminated in our Saturday afternoon barbecue on July 16th. Most of the food from the barbecue was prepared by Mattole Salmon Group board members and included local hamburgers, veggie burgers, salads, and deserts. It always seems that after a long day on the river, food tastes better. It was a great time to catch up with old friends, meet new energetic friends, or simply relax with a cold drink in hand and tell fish stories.

Next Summer

If you have never had the opportunity to participate in the Mattole Summer Steelhead Dives, I encourage you to volunteer next summer. It is always great to see residents of the Mattole River watershed volunteer for events like this. We all have a stake in the health and well-being of the river. Getting to see the beauty of the Mattole underwater for the first time or the hundredth time is always invigorating. Even if you don't know any other volunteers before the dives, it is easy to say that you will come away with many new friends. So mark your calendar for the next Mattole Summer Steelhead Dives! I hope to see you there next mid July. 🐟



Top center: Encouraging a redd.

Top right: Experience Steelhead Salmon.

Middle: Ettersburg Pacific depression stream.

Bottom: You may enjoy a day in the river.

Center: Photo of a lamprey.

Left: Signal crayfish. Photo by Nick Tedesco.

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21 Years of Collecting Data and Good Times



Center: a volunteer has a close encounter with a live lamprey guarding its eggs.
Photo by Flora Brain.

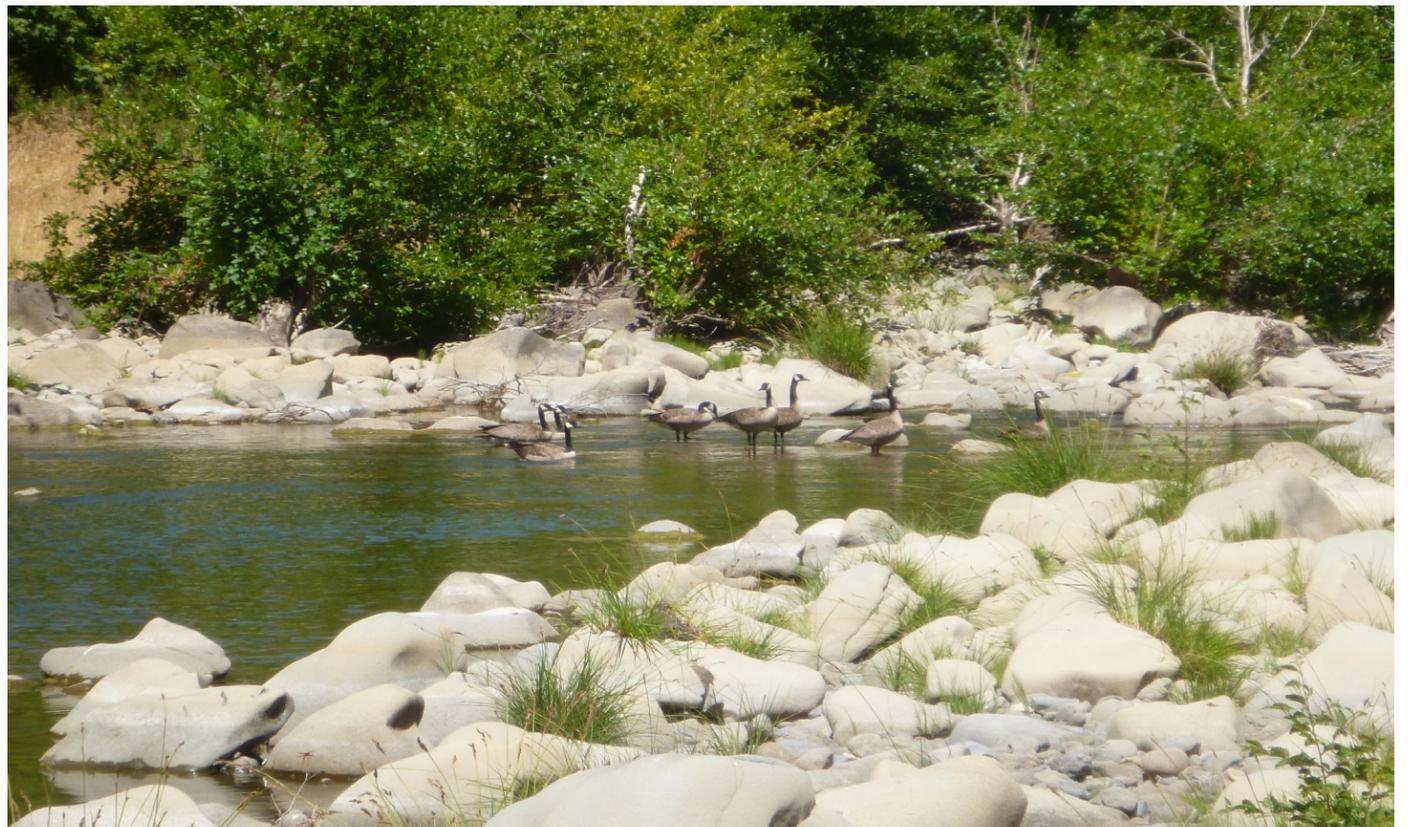
Right: Nick's Interns enjoying their time on the Mattole Summer Lead Dives. *Photo courtesy of Mattole Salmon Group.*

Bottom right: a riffle downstream of Mattole where a boulder field displays redds made by native lamprey. (Redds appear as the pale patches in the otherwise algae-covered bed.) *Photo by Flora Brain.*

Top right: You never know what wildlife you might encounter on a beautiful summer day on the Mattole. Some Canada geese on a boulder field. *Photo by Flora Brain.*

Bottom left: old friends bond over the grill. *Photo courtesy of Mattole Salmon Group.*

Center: Signal crayfish carcass in full glory. *Photo by Flora Brain.*



“Quite Satisfying:” Nick’s Interns

By Theresa Vallotton, Mattole Restoration Council

“Every day is a new adventure and experience in which we learn new things about the ecosystems in our home. During our three weeks of work we have done many tasks, such as working in the MRC native plant nursery, surveying BLM lands for invasive plants (tansy ragwort, Scotch broom, and European beach grass,) collecting native grass seed, protecting meadows by removing encroaching Douglas-fir trees, and snorkeling the Mattole River looking for adult summer steelhead. Each task has brought on new challenges as well as new rewards.”

This is how Nick’s Interns Katherine Fatseas, Raylani Reis, and Dominick Dodd collectively sum up the experience of their paid summer internships with MRC which focus on natural resource management. Katherine reflects, “Working at the nursery was a wildly beneficial experience because it’s difficult to understand what’s necessary to care for plants without doing the work yourself.”

A highlight for most interns is a fish dive survey with the Mattole Salmon Group. “Unfortunately we didn’t find any adult steelhead [in the stretch of river that we surveyed.]. However we saw one half-pounder and an abundance of juvenile steelhead. It’s beneficial to know the amount of steelhead in the watershed because they are a fantastic gauge for overall health of the Mattole River,” says Katherine.

As the MRC’s youth ecological education program director, C. Moss reports on the work that intern Isaac Young did with the Lost Coast Interpretive Association’s Summer Adventure Camp. He spent one week with campers aged 10-13 and the next with 4-6 year olds. Each had its own particular challenges. Isaac was a tremendous asset with his patient support and kindness. He encouraged kids with his sense of humor to join in activities they may not like, such as basket weaving with 13 year old boys. He did a lot of heavy lifting as he carried buckets and equipment. The campers went on beach hikes, walks looking for aquatic macroinvertebrates, and made nature notebooks and sun prints. This was another excellent way to employ a high school student: working to educate younger ones while learning supportive and leadership skills.

Interns really enjoy trail work. This year Aren Arceneaux, Karlee Humphrey, Jason Dowsland, Huston Reuter, Chad Springer, Erin Tice, Gardner Boyce, Gianna Moore, Dylan Oliva, Dusty Rodas, and Nadya Verick got a good taste of it. They laid gravel on BLM’s Hidden Valley trail, and brushed the Lightning Trail. At the Southern Humboldt Community Park near Garberville they cleared trails, maintaining access for many local folks who need not venture far to enjoy the natural world. While brushing BLM’s renowned Paradise Royale Mountain Bike Trail, they hiked all the way up to King Peak, the highest point in the King Range Wilderness, and worked their way down, removing logs along the way. One day interns were given bikes to ride; this was a well-deserved reward for all the hard work done on the trail. The trail from Waliki to Nadelos Campgrounds hadn’t been maintained, so they spent a day clearing it of brush.

Interns also made and posted directional signs for the Hidden Valley Interpretive Trail. They fixed and posted interpretive signs from Black Sands Beach to Nadelos Campground.

Interns also went on a 3-day camping trip to Bear Harbor where they worked with California State Parks in the Sinkyone Wilderness. They cleared campsites and brushed the trail from the campground to the beach. They also pulled Scotch broom at Jones Beach on the way to Bear Harbor. And



Above: Interns remove Douglas firs using handsaws in the King Range for coastal prairie enhancement.

Below: Interns working on a set of new steps leading down to Bridge Creek.

Photographs courtesy of Nick’s Interns Program, Mattole Restoration Council.

again this year, interns were trained in “Leave No Trace.” They then taught these important principles to youth at a summer camp in Redway.

The Baker Creek Groundwater Recharge and Coho Habitat Recovery project with Sanctuary Forest, Inc (SFI) had interns drilling wells to monitor groundwater levels. Stream flow monitoring is also a project they’ve done with SFI each year, and a great way to get in the river.

At BLM’s Whitethorn office, where Lost Coast Interpretive Association’s Education Center is located, interns worked on the construction of a stairway down to Bridge Creek. Groups of two or three were hauling rock while others mixed and poured cement. It was strenuous and challenging but the highly motivated interns enjoyed the work, knowing it would make the steep trail less vulnerable to erosion, as well as a safer access route for field trips and water quality control testing.

Last, interns enjoyed the cooler weather at Shelter Cove where they did beach cleanup. Here they encountered several folks who took interest in the variety of work they do. Interns were excited and gratified to know that others appreciate it. Nick’s Interns certainly earn a genuine source of pride in what they contribute as individuals and as a team in service to their community and environment. Getting feedback from the interns, hearing about the things they learned from this experience, has been “quite satisfying” to Damian Alatorre and Jacob York, our intern leaders this summer. And of course, it is also quite satisfying to all of us who work to make this great program come together each year. 🐟



Another great year for the California Coastal Cleanup: Keeping Our Beaches Free of Marine Debris

By Unity Minton, Mattole Restoration Council

The sun rose and the fog lifted from the golden hills of the lower Mattole valley, revealing a beautiful day for the 2016 Coastal Cleanup. For the past 3 years, the Mattole Restoration Council (MRC) has teamed up with Mattole and Honeydew Schools to participate in California's largest annual volunteer event. On Friday, September 16, nearly 60 volunteers consisting of students, school faculty, local residents and MRC staff, met at the beach and divided into teams to scour the beaches near McNutt Gulch in Petrolia, California.

This time we collected just over 176 lbs of trash, including some particularly interesting items such as a crab trap, 3 sheets of metal roofing and some large pieces of plastic with Japanese writing on them. In 2015, 65,353 volunteers collected over 1,140,000 pounds of trash throughout the state of California, and in Humboldt County alone, over 400 volunteers collected 13,435 pounds of debris from our local beaches. We are still awaiting the statewide results from 2016.

The annual Coastal Cleanup is an important event in so many ways. Each year participants help to support clean water and healthy marine life, as well as raise awareness about the importance of stewardship and protecting the environment for all living organisms and for a brighter future. Coastal Cleanup is so much more than just picking up trash from our beaches; it inspires our youth and unites friends, families, neighbors and even strangers through a shared respect for the natural world in which we live. 🐟



Top right: The Mattole contingent in the 2016 Coastal Cleanup.

Above: Stella Minton (age 8, grade 3), Lilikoi Minton (age 10, grade 5) and Miya Kotaka (age 9, grade 4) showing off the trash that they collected.

Bottom right: Danny Rathbun and Stella Minton carrying a crab trap off the beach.

Photographs by Unity Minton

What We Found:

176 pounds of trash!

a crab trap!

metal roofing!

plastic from Japan!



Vegetation Growth in the Mattole Happens! and the MRC can help you manage it for increased fire safety

By Ali Freedlund, Mattole Restoration Council

Because of our abundant precipitation, most everyone in the watershed needs to reduce vegetative fuels around their homes and driveways on a regular basis to protect their property and their lives in the event of wildfire. For some folks, help may be on the way via two grant-funded opportunities through the Mattole Restoration Council.

The first grant award is aimed at reducing dangerous fuels around homes for senior or low income residents in the greater Petrolia and Honeydew areas. The grant comes through CAL FIRE with funds from State Responsibility Area (SRA) fees we pay each year. Over the next 18 months, MRC will provide a fuels reduction crew for up to 3 hours to help a total of 15 residents in need become more safe from the threat of wildfire. Each selected residence will receive a home risk assessment and some fuels reduction that could include the use of our chipper. Chips can either be removed or spread at the residence.

The second grant award is with the popular cost-share program entitled Fire-Adapted Landscapes and Safe Homes or FLASH. This program is administered with USDA funds through the California Fire Safe Council and the County of Humboldt. FLASH projects are the responsibility of the resident or landowner and need pre-approval from a FLASH technician. Grant funds are allocated upon completion of project based on a per acre treatment of low, medium or high fuel load. Some people elect to do the treatments themselves and others hire fuels reduction crews. Residents in the mid to lower watershed (Ettersburg to Petrolia) can contact the MRC to better understand what it takes to enroll a project but residents in the Southern Humboldt or Whitethorn area



*MRC's chipper team at work in the Mattole Valley Community Center yard.
Photograph by Ali Freedlund*

should contact Bill Eastwood of the Southern Humboldt Fire Safe Council at 707-923-9109 or via email at bille@asis.com

For either MRC project, call John Summers at the MRC office at 707-629-3514. 🐟

Funding provided by the Cooperative Fire Program of the U.S. Forest Service, Department of Agriculture, Pacific Southwest Region, through the California Fire Safe Council. In accordance with federal law and USDA policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age or disability.

New Interns and Staff at the Mattole Restoration Council

We're delighted to announce that **Veronica Yates** took the position of Nursery Manager in December. Veronica has a B.S. in Chemistry with a concentration in Environmental Chemistry from the University of California - Santa Cruz. She spent the last year working with the MRC as an AmeriCorps WSP member and has recently been working on the Willits Bypass Mitigation Project helping to install hundreds of thousands of native plants. Veronica now manages our beautiful new native plant nursery and seed farms, and works on other ongoing Native Ecosystem Restoration (NER) projects.

We're happy to welcome our newest interns! **Eva Roos** and **Joe Sanders** joined the MRC in October as our Americorps Watershed Stewards Program interns, and **Michael Camilleri** has been with us since September as NER Program intern.

Eva grew up in Ann Arbor, MI, and graduated from the University of Michigan last spring with a degree in art and design, minoring in environmental studies and music. Now working with the MRC, she is very excited to better understand the ecology around the Mattole and get to know each plant as hands-on as possible. She looks forward to learning how to care for native plants at the nursery, and the best way to yank out invasive species in the field. She hopes to one day pursue a career in sustainable landscape design. Tomatoes have forever been, and will always be, her favorite food.

Joe Sanders is from upstate NY, where he graduated from Hobart College with a BS in Biology. He has studied migratory warblers for the past couple of years, and is currently finishing up a paper with the intent of getting published. Joe has worked as a tennis pro for the past seven years, and has been a ski bum his whole life. In the skiing off season, Joe spends most of his time mountain biking, fly fishing, tying flies, and reading.

Michael Camilleri is from Milwaukee, where he attends University of Wisconsin-Milwaukee and majors in Environmental Science. In the past he has worked at Lost Coast Camp and was a WOOFer at John and Josie's 7B Ranch. He enjoys running, biking and kayaking in his spare time.

We'd also like to thank our recent NER interns Mae Maclean, Taylor Cain, and Alyssa Smalley, whose internships wrapped up in August. 🐟



MRC's interns (L to R) Joe Sanders, Eva Roos, and Michael Camilleri. Photograph by Cassie Pinnell