

More Kids in the Woods
Final Report: Friends of the Van Duzen
#13-PA-11051000-018

Friends of the Van Duzen River in collaboration with the Trees Foundation, Eel River Recovery Project, the Six Rivers National Forest, the Humboldt Redwood Company, Grizzly Creek State Park, and Swimmers Delight County Park recently completed our More Kids in the Woods Project with seven schools in the Van Duzen/Eel River Watersheds. Fortuna Union High School Creeks Project, Academy of the Redwoods, Hydesville Elementary, Cuddeback Elementary, Bridgeville Elementary, Southern Trinity High School, and the Van Duzen Elementary all participated.

Working with over 500 students, teachers, parents, and administrators, the More Kids in the Woods project had a positive impact on the community. Environmental lessons were presented in the classroom and in the field based on experiential models developed from prior grants with Save the Redwoods League and the Humboldt Fish and Wildlife Commission.

Due to the California drought, the Van Duzen and Eel Rivers were clearer, less turbid, than in past years and students were able to directly observe and witness the salmon cycle during the 2013 Hydrologic Year.

After months of preparation preparing the Kids in the Woods grant, Friends of the Van Duzen met with collaborators, natural resource scientists, student interns, and artists to develop our plan for the project.



The collaboration with the Humboldt Redwood Company proved to be a very valuable firsthand experience for local high school women interested in pursuing careers in natural resources. Working with hydrologists Nicholas Simpson and Julie Donnell, we conducted aquatic trends monitoring in four Van Duzen tributaries: Hely Creek, Cummings Creek, Grizzly Creek, and Root Creek in August. Our Kids in the Woods staff also participated in these studies.

The level of participation from our three high school women and the quality of the mentorship from the Humboldt Redwoods staff was remarkable. Students' measurements included temperature monitoring, surface and bed sediment, pool characteristics, LWD counts, riparian/canopy assessment, and snorkel/bank surveys to assess fish and amphibian assemblages. One highlight was finding hundreds of young coho salmon in Root Creek.

In addition to the field experiences, Humboldt Redwood Company provided guided tours of their fish exhibit in Scotia as well as 500 fisheries identification cards for the students. The learning opportunities presented by the Humboldt Redwood Company were extensive.



Julie Donnell, hydrologist Humboldt Redwood Company with Jamie Goble, Academy of the Redwoods



Katherine Sanguinetti, Fortuna High School Creeks Project and Jamie Goble, Academy of the Redwoods

Also in the summer of 2013, Friends of the Van Duzen worked with members of the Youth Conservation Corps placing temperature probes on the main stem Van Duzen by the Southern Trinity Unified School District and at the confluence of the West Van Duzen and the Van Duzen River. Paul Trichilo, GIS analyst and cowriter of the Kids in the Woods grant, instructed the students about the temperature probes and guided them in placing two probes in the upper Van Duzen.



Youth Conservation Corps members placing temperature probe in West Van Duzen

At the end of August, Sal Steinberg and Diane Higgins met with all schools during their teacher conference days prior to the 2013-2014 school year. Teachers were excited about the learning possibilities, and we developed schedules for classroom instruction, field trips to the Scotia Aquarium, and field trips to various locations including: Grizzly Creek, Swimmers Delight, and the Main Stem Van Duzen River at Southern Trinity High School. Due to the California drought we were able to conduct field studies of the salmon migration through January 2014.

During the school year, the Kids in the Woods Project was very active within the classrooms and out in the field. As a former school teacher and director of the project, Sal Steinberg developed a time sequence classroom matrix for each classroom and field study. One classroom emphasis was teaching the salmon cycle with lectures, slide shows, posters, and fish dissections. Salmon magazines were purchased by all the schools for grades 4th-8th as a match. Connecting with our Ecology and the Arts theme, students made crayon and pen and colored pencils drawings of individual salmon led by our Artist in Residence Cat McAdams. Dan Levinson, California Poet in the Schools, gave classes for students to write "I Am" poetry. Sal Steinberg conducted classes at Bridgeville School and Southern Trinity High with students writing original journey compositions transforming from human to salmon to forest creatures to birds. In the younger grades, there was an emphasis on habitat. Using clay, puppets, musical instruments, and drawings, younger students explored their sense of place and the animals in which they share their habitat. Southern Trinity High School students also developed cartoons related to fish and the environment.

Students from all schools participated in outdoor environmental workshops. Every student at Southern Trinity elementary and High School conducted water quality monitoring and aquatic invertebrate studies along the Van Duzen by their school. Bridgeville, Hydesville, and Cuddeback Schools participated in several half day workshops at Grizzly Creek State Park. Stations included water quality testing, macro invertebrate study, fish study, poetry, and stream drawings. Bridgeville School also participated in an additional outdoor environmental education field experience on the Van Duzen Main Stem. This day was magnificent featuring stations on geology, riparian, macroinvertebrates, and water quality monitoring.

Pocket guides to salmon identification were made by Humboldt Redwood Company as a match and distributed to all students from third through eighth grades. During the salmon migration, we conducted tours of jumping salmon behind the River Lodge in Fortuna, observed spawning salmon and surveyed salmon redds and carcasses at Swimmers Delight County Park. It was a joy for students to experience in the field what we had been talking about in the classroom. This was a major goal of our Kids in the Woods Project: to merge the school cycle with the salmon cycle. Due to the unusual weather, Friends of the Van Duzen conducted field studies through January at Swimmers Delight where there was an active spawning grounds. Winter conditions resulted in below freezing water temperatures with the Van Duzen River icing in several locations.



Chinook at Swimmers' Delight



Hydesville students conducting carcass counts at Swimmers Delight County Park

Ecology and the Arts was a major aspect to the More Kids in the Woods Program. The Ecology and the Arts concept was developed by Barbara Domanchuk Media from her years of working with students in the Redwood Forest. Her workshops would begin with science lessons in the morning and art lessons in the afternoon. For our project, we connected students to nature via salmon drawings, poetry, prose, and video.



Van Duzen Elementary School Drawing

Salmon in the Van Duzen

When the rivers flow,
I think the salmon know,
That they are here to lay their eggs,
In hope their young will do the same.

While their fins are in the air,
This is just their nature.
They go through this for their eggs.
They know that they will be safe.

Connor Shaw, 7th grade, Cuddeback Elementary



Virginia Burnette, Southern Trinity High School

The River Ripples

The ancient redwood trees dream
to live longer, as the river flows
it wants to go further, the sand
seems like a trail to the forest,
the river's water leads to the
ocean and I see a tiny bit of
grass, as I walk down the river
I see a dandelion plant
and I feel the warmth of nature.

Haley Hill, 4th grade, Hydesville Elementary School



Southern Trinity High School

Stories of the Whitetail: A Journey

I was taking a walk on the Van Duzen River, and I heard birds chirping and ducks quacking. I look into the Little Larabee tributary. I see brook trout and a fish with a rainbow stripe. The rocks are boulders. A redwood log is in the creek. I jump into the water. Ice breaks when I jump off the rocks—SPLASH! The water is full of minerals. I turn into a salmon. I swim to the source of all the females, so I can fertilize the eggs in the Van Duzen.

The redwoods are swaying in the wind. Now I am a buck; my antlers are huge and soon deer season will come, so I must stay out of the open so I don't get shot. It is awesome being a deer. Every day I have to find does, so I can have fawns so I can keep my bloodline going. I like to rub my antlers on trees to get them sharp, and I like to eat veggies. I like to go to the river and take a swim, climb steep mountains, walk around in the redwoods, and drink from a spring. I will walk home and go to sleep on my way. There I fall asleep and sleep in the ferns and the owls said, "Good night buck."

And then now bam I was an owl and I was swept up and then I was flying through the redwood forest and dodging trees. Then I was chilling on a tan oak. Something was lurking. I saw a chipmunk so I swooped down and grabbed it like it was light gold. I snatched him or her up and then regurgitated. Then I went on with my night, found a redwood stump, slept in it, and had animal dreams. Dawson Geanoules, 7th grade, Bridgeville School



The River Dreams

Does the water flow which way it dreams or
Does it flow the path of others

Does it have a voice of its own or
Is it acting like what other people
Want it to be.

I think the river should be
What it wants to be
Not what others want it to
Become in life

Life is a river
That has dreams of its own

If you don't follow the river
Your dreams won't flow through
Life with you following them

Dream through life
Flow through triumphantly
The river will
Thank you.

--- Rori Arndt, 6th Grade

Following the salmon migration, Friends of the Van Duzen concentrated on sharing the project with the schools and the community. A three day workshop was held at the Carlotta Grange Hall in February. Local schools matched funding for the event for one day, and the Carlotta Grange also donated one day to share Kids in the Woods with the community. The Grange Hall featured science exhibits with Six Rivers National Forest, the Native Fish Society, Diane Higgins and macro invertebrates, Pat Higgins with fisheries, a plant identification table, Dave Heaton with geology, Julie Donnell and the Humboldt Redwood Company, Paul Trichilo shared maps that he made with GIS software of the key rivers and schools with Trees Foundation donating the cost of the maps. Also in the hall, Dan Levinson of the California Poet in the Schools project presented the "Van Duzen Voice: Poems and Stories by Students in the Van Duzen Watershed. Art work by students taught by Cat McAdams was on display. Special presentations took place during the morning exhibits and in the evening community program. Barbara Domanchuk showed the videos she made with students from Fortuna High School. Outside the Grange Hall, Americorps demonstrated a watershed model.

Students from Cuddeback, Hydesville, Bridgeville, and Southern Trinity High school attended the workshops. Students from the Fortuna High Creeks Project presented videos and assisted with helping younger children.



Bridgeville Poet shares her writing with Dan Levinson and the group



Barbara Domanchuk and Claire Stockwell share a video.



Paul Trichilo shares a watershed map.



Americorps shares a watershed model

The Spring Trillium walks were next on the Kids in the Woods Work Plan. Clara Cross gave guided tours of the plant kingdom, Dave Heaton presented the geology of Pamplin Grove, and Isaac Mikus assisted. Trillium were out and about, and younger students really enjoyed the day.



Dave Heaton, Geologist, with Bridgeville School at Pamplin Grove for the Spring Trillium Walk

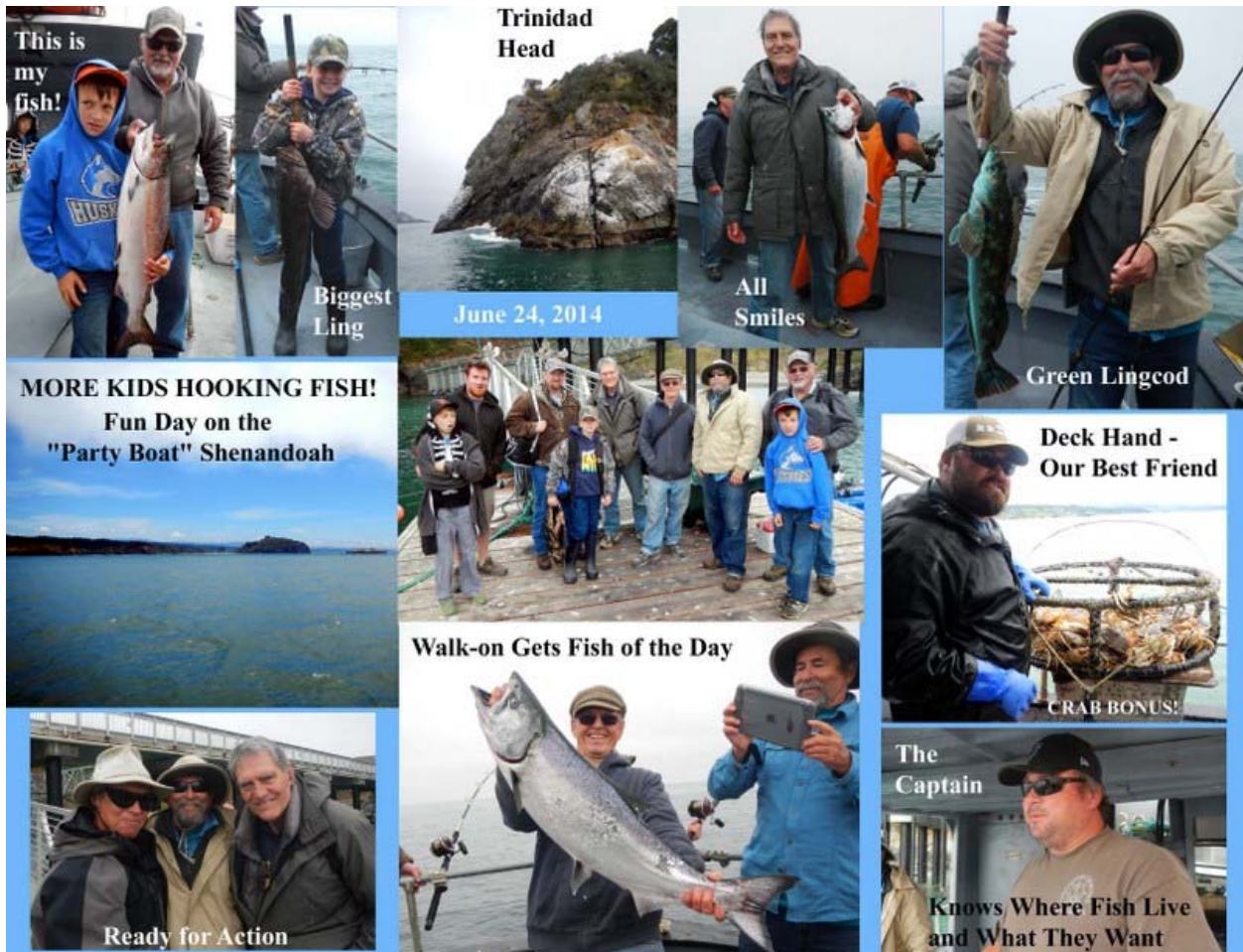
On April 13th we shared the More Kids in the Woods Project with the Southern Humboldt community at the Mateel Community Center as part of Water Day. We had an interactive booth upstairs and gave a power point demonstration during the program. Our panel of Dan Levinson, Paul Trichilo, Diane Higgins, Cat McAdams, and Barbara Domanchuk presented their roles in the project. Art work developed by students was prominently displayed throughout the Mateel Community Center, poems were recited from the Van Duzen Voice, and videos done by students at the Fortuna Creeks project were shown. One of our goals in sharing information was the hope that other schools and programs could replicate the project. May featured our Grizzly Creek Days. Led by Barbara Domanchuk, students studied science in the morning and engaged in artistic activities in the afternoon. Hydesville, Cuddeback, Bridgeville, and Casterlin Schools attended the workshops. For the larger schools, we separated the groups into K-3 and 4th-5th, and 6th-8th. Stations included macro invertebrates, water quality, animal bones, plants, fisheries, salmon cycle, and more.



Our presenters and helpers included the following staff:



During the school year, our partner organization, the Eel River Recovery Project, conducted a series of snorkeling dives on the Eel River from Fernbridge to the confluence of the Van Duzen and the Eel. Led by fisheries biologist Pat Higgins, teams of volunteers from the Humboldt State Diving Club and other organizations worked as a team to count the number of fish for the 2013 Hydrologic Year. As an adjunct to the Kids in the Woods Project, Friends of the Van Duzen River publicized the events with posters at our school sites and conducted a contest to see who could come closest to the final fish count. Winners from Hydesville School (Emma Foley), Cuddeback School (Alex Duey), and Bridgeville School (Konner Good) came the closest to the actual figure of 12,052 fish counted and won a spot on the Shenendoah Charter Boat out of Trinidad Bay. Other staff members from the Kids in the Woods Project attended the event and all three students, staff members including myself were successful in catching ocean fish.



In July 2014, working with the Youth Conservation Corps for a second summer, the Kids in the Woods Project held a workshop at Grizzly Creek State Park teaching about the importance of water temperature to the survival of salmon and other aquatic species in the Van Duzen. The workshop was also attended by Claire Stockwell, Fortuna High School Creeks Project. Paul Trichilo instructed the students about using temperature probes called hobotemps which once installed in the river take continual temperature readings every hour for months. For the past three years we have been installing the probes in the Van Duzen and took the opportunity to teach the Youth Conservation Corps how to attach them to river rocks with proper twine and then demonstrated how to insert them into the rivers by modeling an installation on Grizzly Creek. With the group, Claire Stockwell installed a hobotemp probe at Rainbow Bridge on the Main Stem Van Duzen. The Youth Conservation Corps took five probes to install at Little Larabee, Butte Creek, Little Van Duzen, Van Duzen at Southern Trinity High School, and the West Van Duzen at its confluence with the main stem.



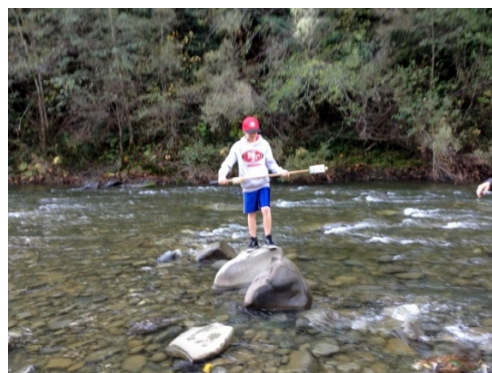
Claire Stockwell and Sal Steinberg on Main Stem Van Duzen



Youth Conservation Corps and Fortuna Creeks Project on Main Stem Van Duzen
Claire Stockwell, Brea Smith YCC Leader, Misty Calvo, Sal Steinberg, Anthony Pirtle,
Dallen Toerpe, and Curtis Cross Six Rivers National Forest

Temperature probes for this project were secured from a \$12,200 matching Water Quality Control Board grant. Additional supplies to be used with local schools included microscopes, binoculars, iPads, GoPro cameras and accessories, ph meters, ph strips, dissolved oxygen meters, calibration kits, write in the rain books, macroinvertebrate net, magnifiers, viewing trays, and pipettes.

The summer project completed our work plan and funding for the Kids in the Woods Project. By keeping the project open, Friends of the Van Duzen was able to secure \$5000 in funding from the McLean Foundation to continue the spirit of the Kids in the Woods Project. Hydesville, Cuddeback, and Bridgeville matched these funds for an additional \$6500. The project, "Our Healthy Streams: Studies in the Van Duzen and Eel River Watersheds" included five elementary schools within our local region: Bridgeville, Cuddeback, Hydesville, Scotia, and Redway Elementary schools. Using the new equipment funded through the CA Water Quality Control Board, students learned how to monitor water quality in their local streams. Five study sites were selected to observe, measure, and collect samples for turbidity, dissolved oxygen, ph, and temperature. Data was collected and quantified. Students sampled for macro invertebrates, which are good indicators of stream health. Data from these experiments were shared within each school contributing to a comparative study for the Van Duzen/Eel River Watersheds. Information will be placed on our web site at www.fovvd.org. Maps will be developed by Paul Trichilo, GIS analyst, of the study area and posters will be produced by Trees with maps, data, and pictures of students from each school. In addition, the Bridgeville Elementary kindergarten students visited and interacted with the otters at the new Watershed exhibit at the Sequoia Zoo. The Hydesville and Cuddeback kindergarten classes will also take this field trip over the next two months. With the matching grant from the schools, Paul Trichilo and I will continue teaching classes over the first quarter of 2015. Students will engage in discussions of becoming better planetary citizens as we look at the impact of humans on the earth. Paul will be working with Hydesville students teaching graphing skills for their science projects. We will culminate the project with a Watershed Day at Bridgeville Elementary School.



In conclusion, I would like to thank all the students, parents, teachers, bus drivers, administrators, and staff for their enthusiastic participation in the More Kids in the Woods Project learning about the environment in the classroom and in the field. We were able to combine science with the arts in a way that made the experience deeper and more meaningful to the students. I believe that the More Kids in the Woods project made a real difference in the lives of the students and the community and has the potential to positively impact the future of the Van Duzen/Eel River Watersheds. In a few weeks, one of our graduates of the Kids in the Woods program will be attending Humboldt State University in the Natural Resources Department. Thanks to the Humboldt Redwood Company for their active participation in this process. Developing the spirit of stewardship was one of the primary goals of the project.

Special thanks to Curtis Cross for initiating the grant writing process, Lynn Wright for her continual guidance, and Paul Trichilo for his insight and partnership. My entire staff was superb and dedicated to the project, and each one brought unique skills to share with the students. Our collaboration with Pat Higgins, Eel River Recovery Project, and with Nicholas Simpson and Julie Donnell of the Humboldt Redwood Company proved invaluable. Rangers Pat Boyle, Humboldt County Parks, and Emily Petersen, Grizzly Creek State Park provided beautiful natural space in which to explore.

In closing, the More Kids in the Woods project was able to merge the school cycle with the salmon cycle. Below is a January 2014 picture of Bridgeville students viewing the Van Duzen in 38 degree winter temperatures while listening to Pat Higgins before witnessing late chinook salmon spawning at Swimmers Delight.

Thanks to my wife Naomi Steinberg for her loving support and for her quote below the picture which summarizes the intent of the More Kids in the Woods Project.

Sal Steinberg, Director Kids in the Woods Project

Final Report, January 25, 2015



“By going to active salmon spawning sites, taking part in scientific field study, deepening powers of observation and reflection through field notes, artwork, and creative writing, children form a life-long bond of understanding with the forest ecosystem. The complexity and beauty of the woods will stay with them and nurture their appreciation of the environment.

Once the kids have been in the woods, the woods are in the kids!”