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P.O. BOX ONE
YORKVILLE, CA 95494

TELEPHONE:
707 / 895 / 3150

FACSIMILE:
707 / 895 / 2138

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The Newsletter of The Anderson Valley Land Trust
Winter 1996

WHY DO A WATERSHED RESTORATION PLAN? *"What's in it for Me?"*

The Navarro Watershed Restoration Plan is a community-based project sponsored by the Anderson Valley Land Trust, in partnership with the Mendocino County Water Agency and the California State Coastal Conservancy. More than \$225,000 is going into this effort, and so far close to 50 people are participating as staff, advisors or data collection volunteers. *But why should anyone care?* What's the value of doing a restoration plan to the average Anderson Valley resident or landowner?

FISH STORIES: *Salmon We Have Known* **A Workshop and Discussion with Fisheries Biologist Tom Taylor**

Bring your own fish stories and join us **Wednesday evening, March 6, from 7 - 9 PM** at the **Grange Hall** in Philo to for a slide show and discussion with **Tom Taylor, Senior Aquatic Biologist with Trihey & Associates**, consultants to the Navarro River Watershed Restoration Plan. Tom will provide information and insights on the life cycle of coho salmon and steelhead, as well as factors that can limit their health and populations in coastal watersheds like the Navarro.

This is another of AVLT's *free* educational workshops and everyone is welcome. This is a great opportunity to share your own knowledge of salmon in the Navarro watershed -- and things we can all do to protect water quality and salmon habitat.

Dan Sicular, Project Coordinator for the **Navarro River Watershed Restoration Plan** will be on hand as well with an update.

Delicious refreshments will be served up with this stimulating discussion. Tax deductible donations to help cover the workshop expenses are welcome. The Grange Hall is located on the west side of Highway 128 between Boonville and Philo.

Through the Restoration Planning project we will be able to better understand and address water quality and fisheries issues in our day to day lives.

For instance, there is only so much water. Water flows through this watershed --bounded on most sides by steep ridges -- out to the ocean. Along the way the water passes across many properties. It picks up sediment, it drops gravel, it flows high and low, fast and slow. And, as there are more and more of us here, we are busily doing more things -- most of which require clean and abundant water nearby.

Fishing, farming, ranching, homesteading, tree farming, recreating – just about everything and everybody uses water. And through the flows of water we are all connected, whether we want to be or not. If your soil is in my water, we both lose. Likewise, if the water flowing from my land dumps gravel all over yours.

Through the Navarro Watershed Restoration Plan we will be better able to understand how and why:

- We lose soil from our hillsides, where it is useful . . .
- Soil can end up in our creeks, where it is not useful . . .
- Our roads unravel and cost so much to maintain . . .
- Gullies open up and swallow land . . .
- Gravel builds up in our creeks . . .
- Creeks jump around in their channels and tear away soil in the winter . . .
- While water disappears in the summer . . .
- And the once plentiful salmon dwindle away to almost none.

Information is being sought from all sources to gain a more comprehensive picture about the Navarro watershed and how it works. Scientists will be using aerial photos going back for decades to learn how the watershed has changed through time, responding to weather and land use. They will do extensive field work to understand the state of erosion and sedimentation originating from the hillsides and roads of the valley. Streams will be examined and mapped, to understand how sediment moves through the network of waterways that make up the watershed. The places where good fish habitat remains – and where it is lost – will be identified with the help of both scientists and community volunteers. Stream flows and stream temperatures are already being charted by volunteers working with Dan Sicular, the Project Coordinator, and Dennis Slota of the Mendocino Water Agency.

All this data will be compiled and analyzed, for extensive discussion by the community Advisory Group and the interested public. From this we want to learn how to better:

- Manage our water uses to ensure there is enough for people and fish.
- Go about our business and home lives in ways that minimize erosion and soil loss
- Reduce and repair road failures
- Protect ourselves from flooding and loss of productive land
- Re-establish natural stream channels
- Stabilize streambanks
- Restore fish habitat
- Build back lost soil
- Save money – while sustaining our natural resources

The Navarro Watershed Restoration Plan is the means to many ends. By having a plan which we, the local community, can utilize, we will be able to do more -- not less. The Plan will help us share and conserve the most valuable community resource we have: water. By using the tools and information that the Plan will provide, Valley residents will benefit by keeping soil where it belongs and keeping the streams flowing where they belong.

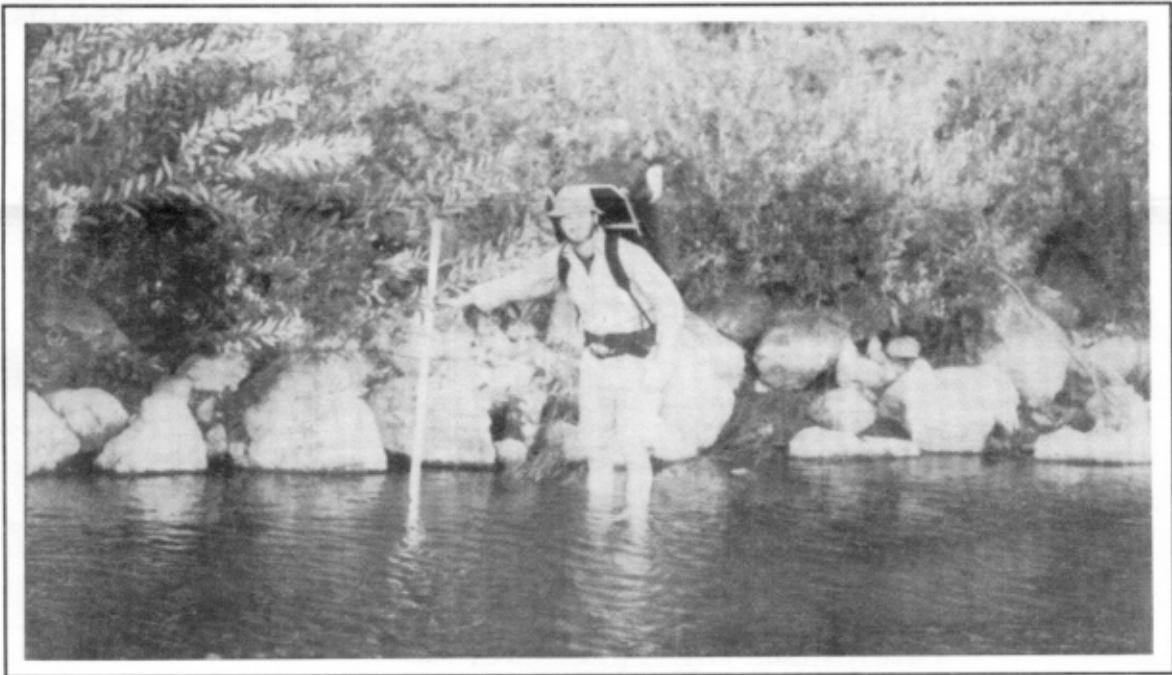
Work plans, budgets and other project information is available on request.

You can help! Advisory Group meetings are always open to the public. There are many other opportunities for folks to be part of this process. To find out more about how, call Dan Sicular at 895-3150 or 510-649-7624.

Volunteers Take the Measure of the Navarro

This past summer and fall, you may have noticed one of your neighbors lightly trodding down a path to a stream, wearing rubber boots or zorries and holding a length of plastic pipe in one hand and a notebook in the other. If so, you probably spotted one of the more than 15 members of the community who volunteered their time and effort to collect data that will be used in preparing the Navarro Watershed Restoration Plan. These volunteers were measuring the flow of the Navarro River and several of its tributaries. The volunteers have been working under the direction of Mendocino County Water Agency Director Dennis Slota and Navarro Watershed project coordinator Dan Sicular.

Until this year, the only stream flow data available for the Navarro was from the USGS gaging station at Floodgate, which has been in operation since the 1950's. This year's data will begin to fill in the missing details on which tributaries contribute water to the main channel throughout the summer, and which go dry or flow only intermittently. This information will be essential for understanding how to achieve the Restoration Plan's objectives of improving water quality and restoring coho salmon and steelhead trout habitat.



Dan Sicular checks out stream flow on the Navarro River

Until recently, salmon and steelhead entered the Navarro from the sea and migrated upstream in great numbers in the fall and winter to spawn in the clean, coarse gravels beneath the cold, clear water of the Navarro's many tributaries. Juveniles emerged from the gravel after about 30 days, and spent one or two summers in or near their natal streams before migrating to the sea. Now, few fish return to spawn. In drought years, their passage is made difficult by a lack of water. Those that manage to reach the streams where they hatched may find that the clean gravels that nurtured them are silted or cemented with sediment. Juveniles are harmed or killed when water temperatures rise above about 70 degrees Fahrenheit. All of these problems are made worse when there is not enough water flowing in the streams.

How much water is "enough"? is a question that the planning project hopes to help answer. One thing is certain: periodic drought, combined with the water we all take from wells and streams for our homes, gardens, crops, livestock, and recreation have diminished the flow of the Navarro and its tributaries. At times, particularly during the middle and late summer, and for more extended periods during drought years, water flow is not sufficient to provide adequate habitat for our native salmonid fish. But just as we are all a part of the problem, we can all be a part of the solution: voluntary water conservation efforts and cooperative use between neighbors can help lighten our collective burden on this precious resource, and restore the Navarro's flow.

This summer's volunteers took measurements of stream depth in pre-marked locations on a daily basis. To take a reading, a plastic pipe, marked in feet and tenths of feet, is slipped over a thinner piece of metal pipe that has been driven vertically into the creek bed, and which protrudes above the water surface. In this way, the reading is taken at exactly the same spot each day. Volunteers then read the height of the water against the plastic pipe, and record the date, depth reading, and time in their log book.

In order to convert from stream depth to stream flow, which is measured in cubic feet per second (cfs), it is necessary to develop a curve that shows a correlation between depth and flow. To do this, flow measurements are taken using an instrument to measure the velocity of flowing water, and a cross section of the stream channel is plotted at the point the flow measurements are taken. Dennis Slota performed this task at 13 locations, about once a month throughout the summer and fall, often working late into the night to complete his rounds. Helping in the effort were staff from the State Water Resources Control Board's Division of Water Rights, who are investigating allegations of over-appropriation of the Navarro's waters. Once the curve is established, each depth reading taken by a volunteer can be plotted on the curve to find the corollary flow, so that the tedious flow measurements need not be taken each time. Unless the stream channel cross sections change this winter, the curves should be usable next year as well.

Thanks to the work of the volunteers, we will have day-to-day measurements of stream flow for most of the major tributaries of the Navarro for this summer of 1996, too.

We want to express our gratitude to the following excellent 1995 volunteers:

Bob Altaras (Upper Rancheria Creek);
Steve Hall (Lower Anderson Creek)
Don Gowan (Navarro River at Greenwood Bridge)
Eva Johnson (Upper Anderson Creek)
Larry Mailliard (Camp Creek)
Vicki Brock and her Fourth-Grade class, Barbara Goodell (Con Creek)
Dave Atkinson (Flynn Creek, Mill Creek, and North Fork)
Kathy Kinzie (Navarro River at Hendy Woods)
Vicki Walhstrom and Al White (Navarro River at Husch Vineyards)
Joel Clark (Upper Rancheria Creek)
Chaya Mandelbaum (Robinson Creek)
Briana Burns, Emily Gowan, and Mitch Mendoza (Soda Creek)
David Graves (survey of lower Rancheria Creek)

Join the Anderson Valley Land Trust

Work with your friends and neighbors to help preserve the abundant natural resources of this valley for the benefit of generations to come.

We can't do it without you!

Trihey & Associates Hired as Scientific Consultants to Watershed Project

Trihey & Associates has been contracted with by the partners in the Navarro Watershed Restoration Plan to design and conduct field work, and to develop recommendations for site-specific and basin-wide treatments to improve water quality, reduce erosion, and restore habitat for coho salmon and steelhead trout. Trihey & Associates is a small engineering and environmental consulting firm based in Concord, CA, that specializes in water resources management, with particular expertise in hydrology, hydraulic engineering, fisheries biology, geomorphology, and watershed planning. Joining Trihey and Associates in the Navarro project are Circuit Rider Productions, a non-profit enterprise in Windsor specializing in habitat restoration work; Dr. Andre Lehre, a professor of geology and geomorphology at Humboldt State University; and Pacific Watershed Associates of Arcata, a small firm specializing in restoration of forested watersheds. This consulting team will be spending the next year gathering data on conditions in the Navarro basin, including investigation of stream conditions, fish populations, erosion of hill slopes and stream banks, and movement of sediment through the river system. This effort will result in a scientific basis for preparing a plan for improving water quality and anadromous (migratory) fish habitat. *All field work will take place with the permission of the landowners involved.*



The Navarro Needs Your Help

We are seeking volunteers to help in gathering data this winter, next spring and summer for the Navarro Watershed Restoration Plan. Right now, project coordinator Dan Sicular is looking for people who want to gather information on high-flow stream conditions, or who are interested in conducting research on the history of the Navarro's fisheries. There will be opportunities to collect samples and analyze the turbidity, or sediment load, of water from the Navarro and its tributaries; to document landslides and road failures; and to count migrating and spawning steelhead and coho salmon. We are also looking for people to conduct documentary and oral history research on the past conditions of the River and the once-abundant runs of salmon and steelhead. Next spring and summer we will again be looking for volunteers to take stream flow readings, and to assist Trihey and Associates with their field surveys of stream and slope conditions in the Navarro basin. If you are interested in helping out, please contact Dan Sicular at 895-3150 or 510-649-7624.

Please mail this form and your tax-deductible contribution to:
The Anderson Valley Land Trust, Inc., P.O. Box One, Yorkville CA 95494

Thank you!

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"Dedicated to the Voluntary Preservation of the Land and its Abundant Natural Resources for the Benefit of Generations to Come"
 Yes! I want to contribute to the preservation of the natural heritage of our valley by supporting the Anderson Valley Land Trust.
 I want to learn more about the Anderson Valley Land Trust and private land conservation. Please send me additional information.
 I want to volunteer my time to work with the Anderson Valley Land Trust.

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