



Newsletter

"...When we see land as a community to which we belong, we may begin to use it with love and respect". — Aldo Leopold (1886-1948), *American Forester*

Salmon Creek Watershed Council Hosts Energetic Meeting

by Ann Cassidy

On Sunday, November 17, the Salmon Creek Watershed Council (SCWC) hosted a large, entertaining, and informative gathering of watershed activists at the Pastoral Building in Freestone. Thanks largely to the organizational talents of Kurt Erickson, the meeting brought together citizens, local action groups, and professionals from as far away as San Francisco. They shared common interests and reported on their various watershed projects. Outside of Watershed Day it was the largest and most important meeting to date, of people interested in the Salmon Creek watershed.

Gail Seymour, watershed planner for CA Department of Fish and Game (DFG), announced that Salmon Creek has been designated for the Coho Recovery Plan, one of two streams in southern Sonoma County. She also mentioned that the habitat typing completed last summer covered Salmon Creek from its mouth to Finley Creek, and included the tributaries Finley, Coleman, Fay, and Tannery Creeks. Next summer DFG will complete Thurston, Nolan, and the remainder of Salmon Creek. Habitat typing measures various creeks, section by section, for factors such as shade, depth, water temperature and quality of streambed. Landowners along the creeks have been very cooperative, for which DFG is grateful. Gail, Lisa Prunuske and Kathleen Kraft

talked about possible grants; they are awaiting notification from DFG in regards to a grant proposal for an assessment and plan for the Salmon Creek Watershed. The proposal was jointly submitted by Gold Ridge Resource Conservation District and SCWC. Also, a letter of intent was recently sent by the SCWC to the Coastal Conservancy for an assessment and sediment source survey of the Salmon Creek Estuary.

Summer Morlock, Environmental Specialist for the Institute for Fisheries Resources, gave a very impressive presentation



A BLT hike reached a summit view on Robert Franceschi's land, portraying the expansiveness and beauty of Bodega's rolling hills. The view is looking north from Bodega, across some of the Salmon Creek watershed.

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Bodega Land Trust



and slide show of the Klamath Resource Information System (KRIS). It is a many-layered searchable database covering many of the coastal watersheds from San Francisco to northern Oregon. She requests historic photos and other Salmon Creek watershed data for the database. 415-759-6175. The website is www.krisweb.com.

Jennifer Melman of the SCWC is setting up a watershed-monitoring program for all the west county watersheds. She is also working with Salmon Creek School on a creekside viewing platform. 874-1658.

Laurel Anderson is coordinating the grants that Salmon Creek School received for education, water monitoring, and irrigation for habitat improvement. She would like input. 829-3404.

The Salmon Creek Highlanders monitor water quality every month, perform quarterly habitat typing, and test for macro invertebrates. They are also planning a groundwater meeting that will interest us all: Pete Dellavalle of Kleinfelder, Inc. will talk about his research on groundwa-

ter in the Joy Rd. area. Meeting scheduled for January; date, time and place to be announced. Call Darlene LaMont at 874-3958.

Heather Howitt of the SCWC is setting up a bird banding and census program for the West County. 695-3109.

Noel Bouck is recording and gathering rainfall data. She needs more data. 874-2767.

Abby Meyers of Learning Waters (environmental education) outlined her plans to educate children and interested people at Chanslor Ranch. 875-272.

Kathleen Kraft of the SCWC has two projects. One concentrates on restoration of the Freestone stretch of Salmon Creek. Interested residents please call. The other project is to form local Fire Safe Councils. Funding is available to make our forests healthier and fire resistant. 874-2014.

Paul Raia of the Catholic Youth Organization on Bohemian Highway explained their intention to place most of the 220-acre McGucken Camp in a conservation easement and to carefully renovate the buildings. Over 10,000 students pass through each year and 3,500 participate in environmental education programs during the winter. 874-0203.

If you are interested in any of these projects please call the contacts.

The next SCWC meeting is January 21 at 7 p.m. Check www.bodeganet.com for details. *

We are very grateful to Phelps vineyard for use of the buildings.



(Left) Landowner Robert Franceschi (in the checkered shirt) leads a Land Trust hike on his land. We thank Robert for his hospitality.

BLT Protects and Educates

2002 for Bodega Land Trust focused on the beginnings of new conservation easements and the completion of others. Tasks included monitoring, research, conducting baseline studies, and talking with owners and consultants.

BLT's educational work included the sponsoring of the following events that are featured in this newsletter:

An evening with Gloria Armstrong, Miwok poet and painter. Her poetry is reprinted on page 11.

An Estate Planning Workshop for ranchers. See article on next page.

A Walk overlooking Bodega. See photos on page 1 and above.

Watershed Day. The article on "Good Roads" on page 10 covers one of the many talks of the Day.

The annual Land Trust Dinner and Auction. See pages 4 and 5.

In the upcoming year BLT will continue its main objective of acquiring and maintaining conservation easements. Our educational programs will also continue: newsletters, the sponsoring of Watershed Day, various talks and walks, including walks on some BLT protected lands. An additional focus this year will be the search for new Board directors; BLT is very open to new energy and ideas. Please contact us if you are interested in joining the directorial force.

—Bodega Land Trust

BLT Hosts Estate Planning Workshop for Ranchers

by Sandy Sharp and Hazel Flett

Several years ago BLT worked with Stephanie Larson of the University of California Co-operative Extension on a series of ranch planning workshops. Last spring Ms. Larson and BLT followed up with a workshop on estate planning for ranchers. The purpose of the workshop was to help ranchers find ways to reduce the inheritance tax on their property so their ranches could be passed on intact, without the heirs having to sell part of the property to pay the taxes.

The speakers were Prof. Steve Black, Dept. of Agricultural Economics at U.C. Davis, Art LaFranchi, a Sonoma County farm tax lawyer of long standing, and Sandy Sharp of the Bodega Land Trust.

Prof. Black gave an overview of estate planning. He pointed out that ranchers have most of their assets in land and improvements rather than in more liquid assets ("we live poor and die rich," as he put it). Real estate is not just an asset but is also a source of income, so a successful estate plan must deal with the distribution of both the market value of the ranch and its value as a business. With several heirs this can get complicated.

Some basic tools in estate planning are: 1) your will, which should be reviewed and updated regularly; 2) trusts, which can be used to control the distribution of assets; 3) marital deductions; and 4) gifts. A successful estate plan depends on having clear, complete and current financial records of all aspects of your estate, being very clear as to the problems that can arise in distributing ag assets as well as to any potential personal problems that may arise. And don't forget to provide for your retirement—after all you're not dead yet! You should also choose an executor who is known to your heirs, and give someone durable power of attorney with an advanced health directive (forms available from your attorney or the American Medical Association) in case you become incompetent. Finally leave a Letter of Last Instruction covering everything your heirs will need to know—from your funeral wishes to your credit card accounts to the people who owe you money.

Mr. LaFranchi elaborated on some of Prof. Black's remarks. He'd noticed over the last 40 years that people are more likely to involve their families in the planning process and emphasized how important it is for them, especially the children, to understand their family's financial goals.

Changes in the inheritance tax law for 2002 make the first \$1M tax exempt. The exemption goes up to \$2M by 2006, and is eliminated altogether by 2010. However, if the "sunset" clause in the law isn't changed, the exemp-

tion reverts to \$1M in 2011. He then discussed a number of ways to reduce the inheritance tax on estates worth over \$1M:

Gifts. You can now give any number of gifts every year up to \$11,000 each without gift tax.

Marital deduction. You can give any amount to your spouse tax free. In California you can leave a community property agreement stating in effect that "everything we own is community property 50/50 except [a, b, c] for you and [x, y, z] for me." You can then dispose of your 50% and all of your exceptions.

Irrevocable life insurance trust. You can put as much as you like into life insurance and include enough of your own capital (see ["x, y, z"] above) to pay the premiums indefinitely. The value of the trust will then go to the beneficiary tax free. However, income earned by the trust and used to pay the premiums is taxable.

Living trusts. They provide many ways to control your assets after your death that aren't available through a simple will. They are usually revocable so you can change them to keep up with changing circumstances. One interesting possibility is using a type of living trust called a "qualified terminable interest property" (QTIP) trust in conjunction with the marital deduction. Supposing your property is worth \$2M and you want it all to go to your children eventually, but you want to take care of your spouse as well until s/he dies. You can give your children the exempt first \$1M and give the other to your spouse in the form of a QTIP trust specifying that it go to your children upon his/her death. In the meantime all the income from the trust can be used by your spouse but s/he can't leave the principal to anyone but your children. If you left the whole \$2M to your children they would have to pay at least \$400,000 inheritance tax on the second \$1M. If you didn't leave them enough cash they might have to sell part of the ranch.

A booklet making all these (and more!) options perfectly clear, called *Estate Planning for Farmers and Ranchers*, is available from the University of California, Division of Agriculture and Natural Resources. Call 510/642-2431 and ask for publication 21515. *Preserving Family Lands: Book III*, by S. J. Small, Landowner Planning Center, 2002, is also highly recommended.

Next Mr. Sharp spoke about the uses of agricultural and conservation easements to reduce the value of an estate.

In the example above it was noted that the heirs might have to sell a sizable portion of the real property in order to pay the estate tax. If you and your heirs are sure you want to keep the ranch intact you can do this by donating

or selling the development rights to a land trust or to an open space district, stipulating that the property never be divided. If you sell the rights you will raise money for the taxes but the proceeds themselves will be subject to tax. If you donate, the value of your property will be reduced by the value of the donation (as determined by a certified appraiser), which will reduce your property tax, your estate tax, and, since the donation is considered a charitable public benefit donation, your income tax as well.

For example, if your property is worth \$3.5M and your zoning allows it to be divided into four parcels, you could subdivide and build three \$500,000 houses on the three new parcels. Your investment would now be \$5M (\$3.5M + [3 x \$500,000]). Investigating the real estate market, you find that you could sell all four parcels for a total of \$6M at fair market value, giving you a profit of \$1M. This is the value of your development rights in this particular example. If you decide to donate your development rights via an agricultural easement you will reduce your property's value by \$1M to \$2.5M, which will reduce your property and estate taxes, and you have a \$1M charitable deduction from your taxable income.

In addition, a change in this year's tax law (IRS Section 2031 (c)) allows easement donors, but not sellers, to add an additional 40% of the fair market value of their land, excluding improvements, to the value of their easement under certain conditions. If your land with no improvements is valued at \$2M you may add 40% of \$2M, or \$800,000, to the value of your easement for a total easement value of \$1.8M. Your property's value is reduced by \$1.8M to \$1.7M, and you have a \$1.8M deduction from your taxable income. Following the procedure in example 4) your ranch can now be passed on intact and free of inheritance tax.

Agricultural and conservation easements are extremely flexible and easily adapted to a property owner's circumstances. For more information please call 876-3422. ✱

Dining in Good Company

Bodega Land Trust supporters were once again drawn together for the annual fundraising dinner and auction. On November 2 in Bodega's community center (the Fire Hall) a sumptuous display of entrees and desserts was laid out, complemented by appetizers and beverages served by dedicated young wait people.

Also displayed was a myriad of silent auction items donated by various businesses and individuals; these gifts make the auction a major moneymaker for the Land Trust. An added highlight this year was a live auction led by John Everett in his inimitably lively manner. Other entertainment was the Peruvian sounds of Cuyuy, Javier Salmon's five-piece acoustic group.

The Land Trust annual dinner is created through the combined efforts of many volunteers. Part of the enjoyment of this event is the working together towards its creation. If you would like to participate next year please let us know now, so that we can put your name on our Dinner List.

We hope you all were warmed by our food and company and by the knowledge that you are helping to preserve land and community. ✱

Recipes for a new cookbook: If you brought a potluck dish to the dinner, please send in your recipe; there were some great dishes there! Everyone else; we need good recipes—breads, soups, salads, hot dishes and desserts. We are starting a new cookbook, following on the success of BLT's *Potluck Cookbook*, which is now in its fourth printing and available at local stores. Recipes can be sent to P.O. Box 254, Bodega. Or check out BLT's website: www.bodeganet.com/landtrust.

Volunteer Opportunities

- ☐ Write articles for BLT's Newsletter
- ☐ Type articles / recipes
- ☐ Help with Fisherman's Festival
- ☐ Tend a BLT table at an event
- ☐ Help with Watershed Day
- ☐ Talk to neighbors about easements
- ☐ Monitor an easement

- ☐ Learn about the watershed
- ☐ Conduct a nature walk
- ☐ Office Work
- ☐ Help with the Dinner
- ☐ Help get auction donations
- ☐ Help with grant writing
- ☐ Other _____

Name _____

Phone # _____

Address _____

E-mail _____



BLT Dinner photos by Les Kamens

The Bodega Land Trust offers many thanks

to the following businesses and individuals that made our Dinner and Auction possible.

Actors' Theater * Alice's Restaurant * Rebecca Anderson * Artisana * Artisan's Coop * Auric Blends * Audubon Canyon Ranch * Belladonna * Kathy Biggs * Mary Biggs * Alistair Bleifuss * The Boat House * Bodega Bay Kayak * Bodega Bay Lodge * Bodega Goat Cheese * Bodega Pastures Sheep * Branscomb Gallery * Cathi Bruton * Davis Bynum Vineyard * Eli Bynum * California Academy of Sciences * Ann Cassidy * Tim Chang * Cinnabar Arts Corporation * Nancy Conkle * Copperfields Books * Alyssum Cowley * Cuyuy * Down Country Lanes * The Dressmaker * East West Café * John Everett * Kendra Fay * Joy Fibben * Fiesta Market * Hazel Flett * Frizelle Enos * Galleria * G & G Market * Gourmet au Bay * Ann Grant * Jim Grant * Anne Greenfield * Hand Goods * Happy Woman Jewelry * Hat in Hand * Harmony Farm Supply * Sue Head * Ward Hensill * Barbara Hoffmann Pottery * Gay Jacobsen * Joy Ridge Pottery * Just Living * Benedicta Justine * Les Kamens * Kendall-Jackson Winery * Steve Killey * King Hwa Chinese Restaurant * Mary Kursa * Laguna Farms * Landmark Gallery * Local Color Gallery * Martha's Old Mexico Restaurant * Mary's Apple Creek Café * Maureen Lomasney * Lucas Wharf * Madrone Chapter Audubon Society * Mom's Apple Pie * Gloria Molica * Moonstone Muse Shoppe * Mostly Natives Nursery * Betsy Mundell * Naturalmente Flooring * The Navigator * Northern Light Surf Shop * Occidental Arts & Ecology Center * Occidental Choir * Ocean Waves Styling Salon * Osmosis Enzyme Bath & Massage * Pacific Shores Gift Shop * Roberta Paskos * People's Music * Patagonia Clothing * Nick Peck * Barbara Peterson * Quicksilver Mine Company * Cody Reis * Roadhouse Coffee * Rose and Thorn Gift Shop * Rosemary's Garden * Sandpiper Dockside Café * San Francisco MOMA * Santa Rosa Symphony * Linda Sauter * Sea Cliff Designs * Sebastopol Hardware Center * Sharon's Garden * Sandy Sharp * Slice of Life * Jay Sliwa * Sally Smith * Sonoma County Repertory Theater * Sonoma Coast Villa * Gordon Stubbe * Laird Sutton * Taylor Maid Coffee * Taylor Maid Organic Farm * The Tides Wharf & Restaurant * Jim Tischler * Judith Volkert * Topolos Winery * Trader Joe's * Traditional Medicinals * Trinity Herbs * Valley Ford Hotel * Vintage Gardens * Lorene Warwick Photography * Wayward Gardens * Westpole Bakery * Whole Foods * Wild Flour Bread * Wild Things * Willowood Market Café * Will's Chimney Sweep Service * Windwalkers Designs * Maralee Wisewomyn * Wishing Well Nursery * Mike Zahradnik *

To servers: Brian Bennett, Cody Harlan, Julayne Ringstrom, Dominique Kraatz and Mikayla Kraatz
And to all the great pot luck cooks!

Keeping Water on the Land and in the Water Table

by Hazel Flett

The Salmon Creek Highlanders' workshop on water drew over fifty people to Bodega Fire Hall on October 23, despite competition from the World Series and a meeting in Sebastopol concerning selling Gualala River water to Southern California.

Speakers Laurel Marcus and Brock Dolman informed their audience how humans affect water supply and inspired them to take action to preserve this precious resource. Laurel has worked with the Coastal Conservancy and as a consultant. About 17 years ago she worked with Gold Ridge Resource Conservation District, assessing soil erosion and wetlands. Brock is Permaculture Program Director at the Occidental Arts and Ecology Center. Since Brock's "Basins of Relations" essay was included in our spring 2002 newsletter, this article will mostly cover Laurel's talk. Some of Brock and Laurel's practical suggestions are summarized at the end and Brock's permaculture interests will be taken up in more detail in a later issue.

Watershed Processes

A watershed is all the land from which the water drains to a certain point. What united most of the people in the hall was that they lived in the same watershed, that of Salmon Creek. Many of us are familiar with the hydrological cycle, whereby water falls as rain or snow and makes its way to creeks that eventually reach the ocean; evaporation forms clouds, rain falls and the cycle begins again. Some of that water percolates into the ground and recharges the water table. California gets winter storms both from the Arctic and from the tropical Pacific. The Arctic storms bring snow to the Sierras; the Hawaiian storms carry much more water and often cause flooding locally.

When the rains begin, water first fills up the air spaces in the soil. Then minor depressions fill to form vernal pools; next rivulets join to form ephemeral streams, and eventually the year-round streams receive the runoff.

How well the water soaks, or infiltrates, into the soil is the key issue that determines the extent of ground water recharge—or the amount of runoff that can cause erosion and the consequent silting up of creeks. Vegetative cover promotes infiltration. In a coniferous forest with dense groundcover the canopy, the understory and the duff all absorb water. Chaparral provides good cover but with less surface area for absorption. Grasslands with native grasses are better at holding the soil than those with introduced

(usually annual) grasses. Bare soil is prone to compaction that inhibits infiltration. The increased runoff and lack of protective vegetative cover make bare soil susceptible to erosion.

Since raindrops fall from a great height they have considerable impact. It is easy to lose 1 ton of soil per acre per year; it is just the thickness of a piece of paper—but it has taken thousands of years to make. Whilst erosion is a natural process its extent depends on a number of factors:

- soil and rock type (our local Franciscan complex is highly erodible)
- steepness
- how much vegetative cover there is
- how much the ground is disturbed.

Fire, logging and development all reduce the cover and disturb the ground, increasing runoff. We shall return later to the subject of human derived problems.

Creeks

One way of categorizing creeks is “confined” (in a canyon or draw) and “unconfined” (on the valley floor). Confined creeks are usually found in higher slope areas. They can't meander much. At flood flow the water is deep and fast and powerful enough to move big rocks. Unconfined creeks are on relatively flat land. They have broad flood plains that spread the water and dissipate the energy of high flow. These creeks have gravel bars.

The important work of the stream is at bed level where sediment (and gravel) is moved downstream and replaced by sediment from upstream. High velocity downstream currents erode meanders in the creek, while sediment is deposited from the slower moving current on the inside of bends. In stable stream channels new deposits balance the sediment carried off. Where tributaries join, the main stream adapts to the extra flow by widening.

Streams change over time—but on a different time scale from ours. A hundred year flood has a 1% chance of happening any year. Two-year floods (with a 50% chance of happening any year) are common in the West County; they largely determine stream shape.

As a stream changes so does its vegetation. New vegetation moves into newly exposed ground. Willow, the great colonizer, produces lots of seed in spring that germinates fast; seedlings quickly put down a taproot to reach water before summer drought sets in. Though 99% of the

little plants die, those that make it can survive flood and burial by sediment; they stabilize the banks. In a confined channel the force of the water is so great that very few plants can colonize. Shade that cools water sufficiently for the salmon is often provided by the coniferous forest on the slopes above the creek.

One of the limiting factors on salmon's success is the amount of cold water available for juvenile fish during the dry season. Groundwater that has infiltrated during the winter rains is slowly released to recharge pools during the summer.

Human Derived Problems

Increased runoff

The land's natural capacity to infiltrate and store stormwater has been reduced by logging, clearing and the construction of homes and roads. Compaction of the soil by livestock and by recreational uses has also increased runoff. On the land more runoff often can result in gullies. In the creeks it means a sudden rise in the amount of water flowing in during and after a storm, and a greater likelihood of flooding. More rainwater rushing into the creek means less water soaking into the ground. When summer comes both creeks and wells can suffer from this lack of groundwater recharge.

Impervious surfaces

One of the biggest problems in rural residential areas, as well as in towns, is the extent of impervious surfaces. If over 15% of surface area is impervious it has a big effect on the creek. "Imperviousness presents the most insidious impact on watershed health," writes Brock; increased frequency and intensity of flooding, lack of recharge and hence water shortage, and water quality degradation from polluted runoff are directly correlated with the increased area of impervious surfaces in the watershed.

Development has permanent effects on stream channel and groundwater. Besides the increase in impervious surfaces, bare earth exposed while building and compaction caused by heavy equipment both increase runoff and erosion. It is important to winterize after your project and *before* winter. Building is one of the few activities that affects creeks and yet is allowed to continue into the winter.

Roads

Both Laurel and Brock identify roads, paved and unpaved, as another human derived problem for watersheds. "Toxic runoff, habitat fragmentation, road kill, fish passage issues and direct delivery of sediment to active channels" are among the impacts Brock lists. Fifty per cent of all sediment in the creeks comes from roads. Road cuts affect infiltration by directing water into creeks. Outslope roads (where the road surface slopes out away from the cutbank)

are one of the best things you can do to restore infiltration: rain soaks in close to where it falls in stead of being channeled through ditches and culverts until it forms a major flow. Resource Conservation Districts can help landowners change inslope to outslope roads. Maintaining and managing roads and culverts is often one of the things that most helps watersheds. This subject is considered in more detail in "Good Roads" on page 10 of this newsletter.

So What Can We Do? The handout provided by Laurel and Brock recommends:

Maintain Native Vegetation and plant natives.

Spread Stormwater Runoff. This helps prevent erosion and hillside destabilization

Construct French drains under your eaves or by drain spouts.

Create hillside rainwater storage swales.

Control road runoff from culverts, waterbars and dips by dissipating the energy of the water with large rocks. Then revegetate below the rocks to protect the slope. Unplug blocked culverts.

Revegetate bare soil by October 15 following grading or construction.

Maintain Your Dirt Driveway/Road

Use 3/4 to 1" gravel to cover steep roads semi-annually.

Use waterbars and culverts to control runoff and maintain them.

Provide drainage so that road runoff does not discharge into streams.

Clean ditches only when plugged. Vegetation is good.

Avoid grading during wet weather.

Re-design your road (see "Good Roads", page 10).✱

Fall Walk

The yellow fennel lay
like sunlight
against the bank
under a sky of fall
clouds.

A hawk's cry echoed
in the canyon.

Up the road in the marsh
aging cattails are losing their stuffing—
grey, cottony, loaded with seeds.

—Kate Fenton

Gardening Without Water

by Anne Greenfield

A man came to our land about 8 years ago wishing to lease a parcel of it for a market garden. He said his water needs would be approximately 900 gallons a day. At first I supported the idea, until someone reminded me of the ecological principle of harmonizing with the natural environment.

In the dry hills of Sonoma County where almost no rain falls during the 6-month growing season, where the water table is suspected to be lowering more every year and where drought conditions often require the hauling in of water by August—an agricultural operation using hundreds of gallons of water daily does not seem in harmony with our local conditions.

I began thinking of our winter rains and how we might utilize this natural abundance of water. I observed the surrounding pasturelands and the grasses that naturally sprouted with the first autumn rains, easily endured the frosts of winter, grew lush in spring and naturally dried out with seedheads by mid-summer—a perfect harvesting time.

I began growing grasses, wheat and rye, for my personal food consumption; I planted in fall and harvested in summer. Though I have encountered various problems (farming is always an experiment!), for the last four years half an acre has yielded grain enough to sustain me.

Last year I began listening to local stories of “dry farming”. It seems that Bodega used to be the “capital” for “Bodega Reds,” tons of these potatoes being produced without any irrigation. The legend runs something like: put them in as early as the ground can be worked, as deeply as possible, entrenching them in the accumulated spring waters of the soil.

Local rancher Buck Piazza says they used to grow everything without watering: kale, cabbage, carrots, beets, tomatoes. They would plant 2 to 3 acres of corn for the cattle, planting in June or July, and it would grow 5 to 7 feet high. No irrigation, just the cooler semi-coastal climate and the fog.

Of more recent experiments, Buck mentioned the delicious tomatoes grown without irrigation, which he bought from a man in Petaluma. Gary Watts of Bodega, has dry farmed several acres of pumpkins and potatoes for several years.

Using these ideas and some of my own I began an experiment last fall with exciting results. On a 12' x 250' swath, without irrigation I grew summer crops of potatoes,

peas, beans, pumpkins, squash, cabbage, cauliflower, broccoli, sunflowers, amaranth, and millet.

My technique focused on serious soil preparation in the fall. While the soil was still dry I fertilized with animal manure, disking it in. I then covered the whole swath with heavy mulch of various kinds: layers of burlap, cardboard or newspaper, weighted down by inches of wood shavings or straw. I covered one long strip with permeable black landscape cloth. My purpose was to stifle all weed growth while holding in soil moisture as far into summer as possible.



Come spring, the soil under the mulch was fairly friable (loose) and weed-free; I did not need to cultivate it. By not turning the soil, thus not aerating it, maximum moisture was maintained.

Around April 15, I began planting sugar snap peas, simply by pulling the mulch away, hoeing a shallow trough for the seed, then pulling the mulch back up to the row. I did a series of pea plantings through April, then planted a 75' x 12' patch of millet (May 10); pinto beans and black-eyed peas went in at the end of May.

In June, soil under the mulch was still wet: to plant potatoes I removed the mulch, loosened a row of soil with a fork, and piled on top of it cultivated soil from between the rows. I mulched the sides of the mounded rows and planted potatoes 8" deep.

By the end of June I was planting acorn and Kabocha squash seedlings, Brassica seedlings, and pumpkin seeds. Amaranth and sunflower seed went in during July, though I was doubtful that such tiny seed would germinate in a soil becoming increasingly dry.

Only the black-eyed peas did not produce fruit. The Kabocha squash were very small. Everything else produced especially well! 315 pounds of potatoes (from 12' x 60'); pounds and pounds of delicious peas; more pintos per plant than I get in my ‘watered’ garden; beautiful pumpkins and sweet nutty acorn squash. Broccoli and cabbage heads were medium-large and the best I’ve tasted. Even the sunflowers and amaranth flourished and the millet has provided abundant feed for my chickens.

Sonoma County, even Bodega, contains a myriad of microclimates. The climate of my experimental acre is full sun, summer daytime temperatures usually in the high 60’s and 70’s, but with a late frost date of May 30. Being just 5 miles from the coast my plot also entertains a lot of

morning fog and afternoon wind. The soil is sandy loam, not particularly humus rich and thus it drains quite rapidly, though my summer crop area does lie at the bottom of a sloping field. This year no rain fell from May 21 till November 7 but winter rains amounted to about 54 inches.

All of these specific factors affected my experiment; there was also very little gopher activity this year, a fact which could change drastically in the future. But whatever your particular situation, micro-climate, or soil conditions, I suggest creating a small experimental plot this year to see what can be grown without irrigation. I plan to try some crops this year without the mulching, in imitation of the old Bodega rancher style. I certainly plan to try some carrots and tomatoes. Perhaps we have all fooled ourselves into thinking how much water we need for gardening. ✱

Nature Essay

Please send us your essays, poems, or drawings.

Epic Autumn Adventure

by Eric Andersen

I sit perched like an eagle 210 feet above the forest floor. With my keen eyes, I peer out upon an expanse of untouched treetops. I look down, far, far down to the second story treetops of Douglas firs, below them the bays, the oaks, then the madrones, and below them the shrubs, vines, ferns, clover and all the way down to the ground, the mosses and the leaf litter, and beneath that the infinite maze of fungi and down, deep down, to where the redwood roots lie, sipping water from the mineral rich soil.

"ERIC!" I snap back into the action. There's a questioning tone in the voice that crackles over the radio waves in my ear. "Eric, you still there Man?"

"I'm here and reading you clear. What's the good word down there?" I speak confidently into the radio's mike attached to my left ear.

The dragline has touched down. I've rigged the gear for the haul and Kevin has just left earth; he's about 20 feet and counting. How's the view?"

"Exquisite!"

We planned this climb, the first ascent of the Leaning Giant, over 3 weeks ago. It's taken that long to scout out the route, pack in all the gear, set the lines, and render the final innovations to climb this Ancient among Redwoods. I first spotted this magnificent tree from the top of a huge Douglas fir, three and a half miles away. From ground level this tree is enormous, with bark two feet thick and fire scars from blazes past. This tree has endured for a

thousand years, through raging fires and blowing storms, through lightning strikes and earthquakes. This great redwood has endured for hundreds of generations of forests. It knows the passing of time in every season, in every year, in every generation and it still grows on, perhaps forever.

Here I am, near the top of this wise old redwood, with branches shaped by the rage of wind-driven storms and bark chiseled by the passing of time. I look out from the giant limbs, out upon my town, my home, my playground and I feel as though a force has brought me here other than my own, as if the natural mystic has lead me all along to this tree, to climb up into the sturdy branches and to see all that I may perceive. Standing here I realize I have come to climb this tree, not as a man, but as a being, to share the same breath, to delight in the same sunlight, listen, learn, and to respect this earth and those who dwell upon it. For within that respect I feel the sudden urge to help save and protect the last of the wise and noble, to be a steward of the ancient redwoods.

"Eric, haul it up!" Keith's voice commands from far below, on the ground. I throw a monkey tail over a branch the size of my head, attach a locking carabiner to a traxion, loop the dragline through that and into a pulley and down to where I sit balanced like a squirrel on a branch. This is where I haul 150 pounds of climbing gear, sleeping gear, and breakfast, 210 feet up this tree. Luckily, mechanical advantage is working with me.

Ten minutes later six duffel bags and a head attached to Kevin pops into view.

"What's up Kevin?" I ask with a tinge of excitement. "You're up, I'm up, and this tree is way, way, high up!" His face is beaming with exhilaration. I beam back. "Welcome to the vertical playground, sit back and take it all in for a moment."

Kevin juggled up 200 feet on the lead line on two mechanical ascenders in under 10 minutes. That's a work out! He switches to a prussic, climbs up to a big sturdy limb and sits back to take in the view. 360 degrees of treetops, as far as the eye can see, and then golden grassy hills sloping down to the Pacific Ocean, six and half miles away as the raven flies.

I haul the last of the duffels up and attach them all to a gear plate.

"Gear's up, Kevin's up, come on up and join us Keith." Keith and I have been technical tree climbing for just under seven years. I bought my first harness and length of rope when I was ten, and have been adding to the arsenal ever since. Now I have more gear than I can fit in four large duffel bags, and that includes two 300' foot coils of rope.

continued on page 11.

Drawing by Darren Jekel.

Good Roads, Clean Streams

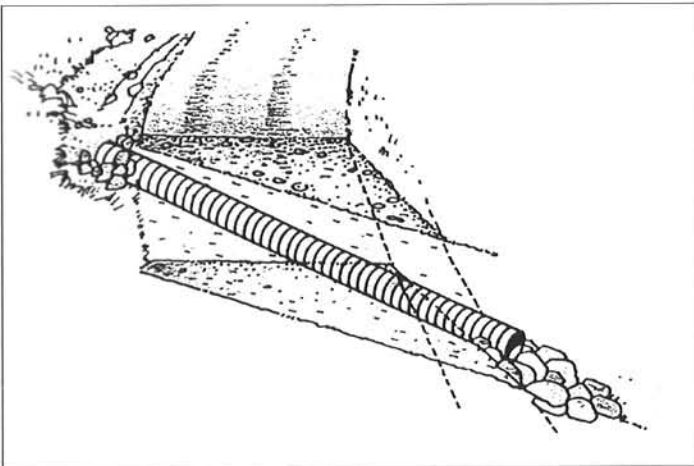
by Kurt Erickson

Salmon Creek's estuary has been filled with sediment to such a degree that the water depth under the Highway 1 bridge, once 20 feet, is now only 7 to 10 feet. A ranch near the estuary has rebuilt fencing a few times as the sediment deposited during winter flooding has buried the old fence lines. Sediment is a prime impediment to the spawning of Coho salmon and steelhead trout. The fine particles of silt and sand cover and cement together the cobble and gravel that the fish need for their nests, or redds.

Most watersheds are adversely affected by excessive sediment and rural roads are a major source. The proper design of roads and, when needed, methods of retiring roads, are important factors in the health of our hydrologic systems. Danny Hagans, of Pacific Watershed Associates, gave a great talk about rural roads last May at our local Watershed Day at Salmon Creek School.



Surface runoff problems caused by winter use of a bermed unsurfaced road. Running surface is rutted and this acts to collect runoff and cause additional erosion. Lack of waterbars or rolling dips, together with the graded berm along the outside edge of the road, now act to keep surface runoff on the road bed. Annual grading can produce an outside berm of soil and rock that should be pulled (graded) back onto the road surface before winter rains.



Like stream crossing culverts, ditch relief culverts should be installed at the base of the road fill, with armoring at the inlet and some type of energy dissipation at the outfall. If the culvert is placed higher in the fill, a downspout should be used to carry flow from the outlet downslope past the base of the fill.

A road crossing along the contour of a hillside diverts the overland water flow from its natural dispersed downslope flow and often concentrates the water at a higher quantity and velocity into ditches and culverts. Culverts, with the increased water forces, can be a major source of erosion and sediment problems if poorly designed or if the outfall is not armored with rocks.

This doesn't need to happen. Properly designed roads will allow the winter run-off water to flow along the terrain's natural contour, recharge groundwater, and not increase sediment in the streams.

As seen in the photo below, a well built road becomes part of the existing natural system. With no inboard ditch and a rolling dip, runoff is allowed to periodically cross the road before it has a chance to become concentrated. The energy and volume of water remains dispersed. Driving, or especially riding a bike, on these roads with rolling and critical dips is a hoot! It feels right. Your home road becomes a very pleasant roller coaster that helps downhill habitat, streams and fish.

Even properly designed rural roads need overseeing and maintenance. At times maintenance requires tractors and



Well-built outslopped road displaying minimum cut, smooth free draining surface, no outside berm and rolling dips to help disperse surface runoff.

gravel. But hey, what's more fun than walking down your road in a heavy rain, in a yellow slicker with a shovel in hand, maintaining your road for the sake of the watershed.

Our roads need to be reviewed to avoid future erosion problems that seriously impact our watershed and streams. Look to the absolute, very best book about rural roads and erosion, *Handbook For Forest and Ranch Roads*, by Danny Hagans and William Weaver, Pacific Watershed Associates: 707/839-5130. Photos and some content of this article are courtesy of Mr. Hagans and this handbook. ❀

Nature Essay continued from page 9.

Someone once asked me, "Why climb trees?" and I said, "Why not!" Ever since I was a kid I loved to scamper out to the orchard and climb my favorite apple tree. Over the years I've climbed higher and higher into the woods. Now when I walk into a forest, I don't just walk beneath the trees, I walk across the treetops. Up there, I can see forever. To climb a tree is to believe in yourself, to put your life into your own hands—and to know it. When you climb to the top and finally see the big picture, that's when it all comes together and life makes sense. The chapter of humankind is but a sliver in the chronicles of existence. It is what we do with the time that was given to us, that is our greatest gift.

I set to the task of hauling each individual duffel to the eagle's nest 30 feet above me. The top of this tree was blown off in a mighty windstorm. Over the years the branches below it have grown outwards and upwards creating a hollow crown. Each branch up here is bigger around than a bowling ball and stronger than one too. I call it the eagle's nest for it looks like a great big nest from down below on the ground. The crown of this tree will be my eagle's nest for the next three nights. Sleeping in a tree is one thing, but sleeping 240 feet above the forest floor in an old growth redwood, now that is something else. I can't even explain the feeling, the bliss, of sleeping way up here. It's an experience I will never forget.

"I'm up!" Sure enough, I look down to where Keith and Kevin are sitting, jabbering like two excited chipmunks up a tree.

"Welcome to the elevated culture my friends. Accommodations for the night include three hammocks, three down sleeping bags, and a canopy kitchen."

Kevin and Keith climb up the last 30 feet to freedom. I haul up the line. We are no longer earth dwellers, but tree people, explorers in this high frontier. We suspend the hammocks between many sturdy branches. My head is facing north. The sun will rise tomorrow bringing warmth to my face.

Everything is set up and good for three. I climb around the eagle's nest to double-check all the anchors and rig a webbing leash to each sturdy branch. One should always be aware of the risks at hand: to overlook a vital knot could mean life or death. Safety comes first when you're doing anything up a tree.

Our eagle's nest is complete. I brew up some mint tea and break out dinner, three slices of cheese pizza. We lie back in bliss and let the shades of sunset paint the sky. Day slips into dusk far below and twilight unfolds her veils of stars all around us. Yesterday was my past, tomorrow is the future, and now, right now, live each moment, every breath, and eternal dream. ❀

Eric Andersen is a local young naturalist currently doing independent study with the Wilderness Awareness School. His primary focus of study is canopy ecology.

Brown Earth Birds

Little brown earth birds gentle and kind.
Your little eyes of life seeking food
in the roots of the tower of jewels plants,
to give you strength and beauty in your
delicate wings and body.

Your essence of love and grace
heals wild bird flower's heart.

Your spirit of light and pureness
I hear, see and feel as you are
living your song.
Friends of cheer, companions of compassion.
Little brown earth birds flying in life,
carrying the heart seeds always
In a sacred manner.

—Gloria Armstrong
Graton Rancheria

BLT Walk: Sunday, January 12, at 10 a.m. you are invited to meet baby lambs and their mothers at Bodega Pastures, 600 Salmon Creek Road, Bodega. There will also be a chance to see environmental projects supported by a grant from the USDA Environmental Quality Improvement Program. If it is pouring rain, the walk will be postponed to January 19. Phone 876-9499.



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BLT Membership Appeal

Please regard this newsletter as a review of our work in 2002 and as our annual membership appeal letter. If you have not renewed your membership in 2002, please send in your dues. If you are not already a member, please consider joining.

I would like to join or continue my membership at ☐ \$10 ☐ \$20 ☐ \$50 ☐ \$100 ☐ Other _____

Please make checks payable to: **Bodega Land Trust**, and mail to: P.O. Box 254, Bodega, CA 94922

All donations are tax-deductible

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A project I would like to see the Bodega Land Trust consider is: _____