

*October 2001*

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### **Celebrating the Alliance**

The Yosemite Institute provided a new venue for our conference and celebration, as we move into our ninth year working to protect the Sierra Nevada. And what a time it was! Highlighting transportation problems, the Tioga road closed, causing some chaos in travel plans, while John Muir's ghost visited us on Saturday night around the campfire, entertaining us with tales of the wilderness.

In between, we tromped through Yosemite, looking at watershed restoration projects, prescribed fire and recovery, and the infamous Hetch Hetchy reservoir. The downside – everyone wanted to go on more than one field trip! And we were serious about how to think strategically about the future of the Sierra, hearing Martha Davis tell of the complexities of balancing conflict and collaboration, as learned through the famous Mono Lake victory. And we spent time hearing about growth in the Sierra, particularly as embodied in transportation issues, as Bob Johnston, our transportation studies guru from UC Davis, showed how we can take charge of our highway planning, and Greg Greenwood from the Resources Agency gave us a view of the future of population growth in the Sierra. These three presentations set our minds in motion, while the concluding panel on watershed restoration gave us concrete ways to solve watershed problems. And Jim Sayer filled us in on what the Sierra Business Council is doing, and much to the delight of us all, brought his three small daughters to remind us why we work so hard for the Sierra. All in all, a very satisfactory weekend!

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## **Saving Sierra Wetlands**

*Vicky Krikelas*

"We will always do the rational thing, but only after exhausting all other alternatives." John Maynard Keynes

Think our wetlands are safe from development, or if converted, easily replaced? Think again.

The Sierra Nevada Ecosystem Project (SNEP) noted that aquatic and riparian systems are the most altered and impaired habitats in the Sierra Nevada. Land management practices adjacent to wet areas, such as roads and residential development, play a major role in this deterioration. Vernal pools in particular are under attack as growth in the foothill communities continues to encroach on less and less suitable, but available, lands. Merced, Butte, Tulare and Placer counties are experiencing the highest rates of vernal pool losses in the Sierra—up to 3,000 acres in the past 15 years. Most of the remaining vernal pools in California are on private lands and are not protected from development.

Meanwhile, the population of the Sierra Nevada is projected to triple by 2040. According to the 2000 Census, Sierra counties are currently among the second, third and sixth fastest-growing counties in California (Placer, Madera and Mono counties, respectively)! (see Table at right) Such rapid population growth can have a negative impact on the region's natural resources, especially in the western foothills where approximately 70% of the total Sierra population resides. We can anticipate that the majority of losses to wetlands will largely occur at the hands of developers capitalizing on the increasing demands for housing, roadways and infrastructure.

While mitigation for wetland losses is required under the Clean Water Act (CWA), scientists and regulators continue to actively debate the effectiveness of the two common alternatives, onsite mitigation or offsite mitigation banks. A recent study prepared by the National Research Council (NRC), *Compensating for Wetland Losses under the Clean Water Act (2001)*, evaluates how well compensatory mitigation such as wetland banks meet the national wetlands policy of "no net loss." This nationwide survey of case studies reports abysmally low success rates for wetland mitigation projects, indicating that a substantial amount of required mitigation is either not implemented or does not offset the impacts to the functions of the converted wetlands.

A disturbing picture is painted by these critical statistics regarding vulnerability of wetlands, magnitude of anticipated growth/demand for development, and flawed wetland mitigation tools. Given the data, the increasing population growth in the Sierra and the subsequent rise in wetland conversion will likely far exceed the quality of available wetland mitigation. While innovative market-based tools like mitigation banks are becoming increasingly popular as a form of compensating for unavoidable wetland impacts, the use of the banks is questionable, without a guarantee for their success in restoring, enhancing or creating wetlands.

But banks can work in certain circumstances. Both onsite mitigation and offsite banks are designed to support the 'no net loss' wetland policy, (see Tools, page 5). The requirement for small-scale, onsite mitigation of wetlands is avoided under mitigation banking, because the generally larger, more centralized banks are designed to consolidate isolated impacts that would otherwise be scattered throughout the landscape. The use of banks also improves the regulatory

climate and streamlines the permitting process for wetland conversion, a definite plus for developers.

However, banks grease the wheels for more development and facilitate the destruction of wetlands by promising restoration of wetlands that may not be successful or restore less than actually needed, or if successful, restore functions that they were never intended to replace. Critics also fear that environmentally-superior alternatives to wetland mitigation will be avoided in favor of the cheaper, developer-friendly, banking alternative. In other words, the three-step mitigation process required under the CWA may be short-circuited in favor of banks simply because avoiding or minimizing impacts to wetlands may be more expensive.

Moreover, banks are set up in advance, in anticipation of the type and amount of wetland habitat to be destroyed or converted to residential lots...they are essentially a solution waiting for the problem. Environmentalists wonder what will happen if bank sponsors underestimate the 'problem' or don't provide appropriate credits for those wetlands that are actually converted. Such bank failures would represent a double loss of wetlands—one at the project site and the other at the bank site.

The NRC study provides irresistible evidence to justify the concerns of environmentalists. Major findings of the study include the following: " The goal of no net loss of wetlands is not being met for wetland functions by the mitigation program, despite progress in the last 20 years. " Performance expectations in Section 404 permits often have been unclear, and compliance often has not been assured or attained. " A watershed approach would improve permit decision-making.

#### County %Chg Rank

1990- in 2000 State

Placer 43.8 2

Madera 39.8 3

Mono 29.1 6

Calaveras 26.7 8

El Dor. 24.1 9

Lassen 22.6 10

Kern 21.7 12

Fresno 19.8 15

Mariposa 19.8 15

Merced 18.0 18

Tulare 18.0 18

Nevada 17.2 21

Amador 16.8 22

Tuolumne 12.5 30

Butte 11.6 33

Alpine 8.5 37

Sierra 7.1 42

Plumas 5.5 45

Inyo -1.8 49

St. Avg 13.6 —

Source: US Census Bureau, 2000

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### **Watershed Council Toolkit**

We did it! The Toolkit is on our website! Tell your friends, and remember, before downloading, it is 121 pages . . .

Thanks ~ Mark Russell, Amador Web Works, the ace website man, for his good work.

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### **Executive Director's Letter**

*Laurel W. Ames*

As I wind down my time as the Executive Director of this outstanding organization, I am reminded of our initial vision for the Alliance - as a regional group working to help the member groups, build community, and represent natural resource issues on a range-wide scale. We said that we would be an organization that would forge new alliances and develop new ways to address Sierra problems. Thus we now focus on watershed restoration, embracing an approach that weaves many resource issues into one. We are helping new watershed groups, lobbying for funds, and developing policy that furthers the work of the groups. We also brought the local land trusts together to speak with a unified voice for the needs of land conservation in the Sierra.

Forest issues, of course, are already very well represented in the Sierra, with many effective member groups, plus other local groups, at least three regional groups and three national groups focusing heavily on Sierra forests. Land use issues, which are exceedingly local, are covered

locally by many of our member groups, and supported by statewide land use groups such as the Planning and Conservation League. Some range-wide issues are covered by only one member group, such as the High Sierra Hikers and the Friends of Sierra Rock Art. And water is front and center for a number of groups, such as the Mono Lake Committee and Protect American River Canyons, and the local watershed groups such as Truckee River Habitat Restoration Group, Cherokee Watershed Group and the Mariposa County RCD.

The Alliance, in taking on watershed restoration, has claimed an issue that encompasses many of the Sierra resource issues, while building working groups that are predicted to outlast administrations, political shifts, and local uproars. The strength of the watershed movement is that it touches the hearts of local citizens and speaks to a community about working together. In these trying times, we believe that watershed restoration is one of the best places to commit time and energy for a positive and long-lasting result.

Thank you for your support of the Alliance and wish us equally significant successes for the next eight years!

Onward ~

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### **Threats to the Sierra -- Global Warming: More Rain, Less Snow, More Dams**

*Laurel W. Ames*

Global warming is a threat to all the ecosystems of the world, but its sweeping impact on the Sierra will come not only to the trees, animals, and fish. The most threatening consequence of all will come from the loss of our snowpack, relied upon by 65% of the rest of California for water. Warming will lead to more rain, less snow.

More rain in the Sierra means greater runoff in winter, a prediction of greater flooding events downstream, and little snow to store for California's long, hot summers. And in a state that pours millions of acre-feet of drinking water on its lawns, the Sierra's natural storage system (snow) and current dam storage will come up short. Since the current water for our current population is stretched in drought years to fill swimming pools, grow rice and cotton, produce fruits and vegetables, water lawns and have enough water for drinking, industry and commercial uses, a population increase of 35% will certainly stress the source areas such as the Sierra. Urban and agricultural areas will look to the Sierra for more storage, by increasing the size of existing dams, and building new ones.

And already changes are being recorded for the Sierra's climate. Spring blooms are coming five days to two weeks earlier in the 1990's than happened in the 1960's.

Fortunately many are working to increase conservation, groundwater storage, and water use efficiency throughout the state, in order to assure future water supply and reduce the need to dam more rivers. We need to work with those organizations and our member groups to protect the

Sierra from further exploitation by reducing future overall demand.

But Sierra water will be affected another way, and that is the likelihood of increased acidity of Sierra lakes. This would occur as a result of increased temperatures, which will increase the number of thunderstorms. Thunderstorms are implicated in acid deposition in the high mountain areas because the storms originate from the hot valleys, picking up pollutants from high levels of vehicle exhaust and industrial emissions and depositing the nitric acid through raindrops on the lakes and the watersheds. Global warming is also implicated in a second manner: the shift from predominantly snow to predominantly rain results in greater transport of pollutants from the valley to the Sierra, as rain transports much higher concentrations of pollutants than does snow.

In addition, the Sierra fire season will be extended and numbers of fires will increase. In the publication *Confronting Climate Change in California*, the authors suggest that fire will recur more often. Historic fire intervals in the Sequoia are 4 to 13 years, whereas in the long drought between 1100 and 1300, the time between fires in the Sequoia groves was a very short 3 to 5 years.

Sierra ecosystems will change dramatically. Grasslands will take over the foothills, shrubs will move into the forests, and forest trees will move uphill, displacing current forest types as they go. Some animals will move with the vegetation shifts, some cannot.

The Union of Concerned Scientists and the Ecological Society of America, the organizations which produced the *Confronting Climate Change* report upon which this article is based, have suggested that there are actions that you can take to stave off global warming, such as encouraging "novel energy, transportation, and land-use solutions". We can urge our leaders to pay attention to the obvious long-term serious impacts and act accordingly. We can reduce our own water use, vehicle emissions, and rely more on energy sources that are least damaging to the atmosphere, such as wind and solar.

For greater detail, see *Confronting Climate Change in California* at <http://www.ucsusa.org>.

#### High Sierra Lakes: Less Ice, More Algae

The following impacts are predicted for the high Sierra lakes:

- Reduction in the length of time the lakes are covered with ice, resulting in a longer time for warming the water, resulting in greater algae growth and a reduced clarity.
  - Increase in nitrate deposition from increased thunderstorms, resulting in greater algae growth.
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### Welcome *Five* New Member Groups

**The Eastern Sierra Conservancy** was formed to protect and enhance vital lands in Mono and Inyo counties for their scenic, recreational, agricultural, botanical, historical, and wildlife values. More than 20 initial projects have been identified, several of which involve conservation easements desired by land owners. The proposal by the Los Angeles Department of Water and Power to put conservation easements on their 300,000 acres, raised anxieties throughout the eastside of the Sierra, and failed to get local political support. However, the general concept has widespread support, and the Conservancy will be working with others to develop an implementable agreement. Although Inyo and Mono counties are mostly public land, there are lands adjacent to springs, creeks, and wetlands, in wildlife corridors and along Hwy 395 where development could seriously impact the eastside's' unique beauty and fragile ecosystems.

For more info:

Eastern Sierra Conservancy, 125 Mountain View Dr., Swall Meadows, CA 93514 760.387.2901 or P ALIGN=LEFT>**The Feather River Land Trust** in Quincy helps to conserve, celebrate, and restore lands of natural, cultural, recreational, and scenic value within the Feather River watershed for the benefit of current and future generations, and to foster a sense of place and high quality of life among residents and visitors to the watershed. After incorporating in February of 2000, the FRLT has begun negotiations with four landowners to conserve their land. The Feather River Watershed is beginning to experience intense development pressure as other mountain real estate markets in California are becoming saturated. Even though risk to open spaces is mounting, many of the Feather River's landscapes are still largely intact and land prices are still relatively inexpensive, creating ample opportunities for meaningful, large-scale conservation.

For more info:

Feather River Land Trust, PO Box 1826, Quincy, CA 95971 530.283.5758 or P ALIGN=LEFT>**The Mountain Meadows Conservancy** in Lassen County was formed to protect and restore lands in the Mountain Meadows watershed, a unique high mountain meadow, riparian and wetland ecosystem. Preserving these lands and water resources for ecological purposes will also protect local Mountain Maidu cultural and burial sites. Mountain Meadows is located at the 5,000 ft. elevation at the headwaters of the Hamilton Branch of the North Fork of the Feather River, near Westwood, California. The meadows are cradled between the Sierra Nevada and the Cascade ranges. The area adjacent to these wetlands has been recently targeted for a large-scale ski area and real estate development.

For more info:

Mountain Meadows Conservancy, PO Box 40, Westwood CA 96137 530.256.2352 or P ALIGN=LEFT>**Save Our Historic Canals** is a community group that connects people to place and was formed to preserve the environmental, cultural and historic values provided by Nevada County's 400 miles of century-old free-flowing canals. The specific goal for the most scenic and most utilized canal, Lower Cascade Canal, is to stave off the irrigation district's plan to put all the water in a pipe, and to work to maintain adequate flows in the Canal that will support fish and other aquatic life, thereby maintaining the aesthetic qualities that make it an important and

cherished resource for the community. Trails along these canals are heavily used by walkers, birders, neighbors, dog-walkers, and high school cross-country teams, providing a strong constituency for this new group.

For more info:

Save Our Historic Canals, 15281 Kimberly Ct., Nevada City, CA 95959 530.265.9334 or P  
ALIGN=LEFT>**Snowlands Network** is a newly formed organization whose mission is to educate the general public and public agencies about issues related to the preservation and protection of winter wildlands, and to provide for high quality human-powered winter recreation on public lands. The Network is monitoring SnoParks, snowmobile issues, cross-country ski access, and protection of wilderness areas and commenting on projects. The Network is spearheading a coordinated effort to publicize the issues and to unite the human-powered community in a focused effort to make changes in the way our public lands are administered. The use of snowmobiles on public lands is Snowlands' number one issue and guides them in working with the Forest Service and state agencies regarding the need for preservation and protection of wildlands in the winter.

For more info:

Snowlands Network, 1391 Moselle Ct., Livermore, CA 94550 925.455.5816 or BR>

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### **Wetland Mitigation Tools**

Under Section 404 of the Clean Water Act, developers whose projects adversely impact wetland are required to undergo a three-step, sequential choice of mitigation process: " avoid the wetlands altogether, or " minimize any adverse impacts, or " compensate for unavoidable wetland losses.

**On Site:** Traditionally this involves small-scale restoration, enhancement or creation projects on the site of conversion. Such on-site mitigation can be expensive to the developer, as he bears the financial burden of individual restoration or enhancement projects. Monitoring of these mitigation projects occurs on the order of a few years.

**Banks:** Mitigation banks are an alternate, more flexible form of compensatory mitigation, in that the developer purchases credits at a bank, or centralized offsite restoration project. Monitoring under banking is required in perpetuity and is generally more cost-effective because banks benefit from economies of scale.

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### **Streams in Motion**

If you are interested in a very useful (and free) workshop on streams, erosion, citizen monitoring and more, this workshop is for you! Although the title A Citizens' Workshop on Channel Dynamics, Sedimentation and Erosion might turn you off, this workshop promises much more.

To quote the flyer, "Creeks and streams are rich with information that can be used to assess and improve the health of our watersheds. This information is revealed by many seemingly simple things like the form of the channel, the slope of the banks, and the appearance of the water in the

stream." And, there is a field trip. Bring lunch.

The workshops are sponsored by a grant from the EPA and Regional Water Quality Control Bd.

Citizen Workshop Dates

November 10 in Chico 9am to 3pm

December 8 in Sacramento 9am to 3pm

To register and get full information: Kate Kirsh at 916.782.1011 or BR>

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### **Annual Awards 2001**

#### **The Frank Wells Annual Last Best Place Award**

*Each of us carries a last, best place in our hearts — that part of the landscape that forms a bond with nature, that nurtures our growth and restores our spirits. We know these places when our passions are engaged to protect them and secure them for future generations.*

Presented to **The Jumping Frog Research Institute** and the **Center for Sierra Nevada Conservation**. Awarded for protecting 4.1 million acres of critical habitat for the red-legged frog. The Institute and the Center joined with others to secure a federal court order directing the U.S. Fish and Wildlife Service to designate nearly 60,000 of acres in the Sierra for the frog. "That's one small hop for Frog, one giant leap for Frog-kind!" Bob Stack, JFRI

Presented to **High Sierra Hikers Association**. Awarded for protecting the Ansel Adams and John Muir Wilderness areas from ongoing damage that the U.S. Forest Service failed to document and for which they failed to examine the cumulative impacts when they issued commercial horse and mule packer permits. The High Sierra Hikers Association was joined by Wilderness Watch and Forest Service Employees for Environmental Ethics in their successful appeal to the federal court.

**The Dean Malley Annual Sun Tzu Award** "To win without fighting is best." - Sun Tzu, *The Art of War*.

Given in memory of Dean Malley, a founding member of the Alliance and a master strategist, to a person or organization that developed a winning strategy.

Presented to **Clavey River Ecosystem Project**. Awarded for reassembling the Clavey River Wild and Scenic study group into a new process designed to go well beyond the Forest Service's standard review of the immediate 1/4 mile wide river corridor for its outstanding and remarkable wild and scenic values. Instead, this new group has undertaken a comprehensive watershed assessment and analysis of the entire Clavey watershed, a task substantially greater in both complexity and potential.

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### **Mono County Faces Up To Wetland Protection**

Mono County, the third-fastest growing Sierra county, may soon be thrust into an ongoing debate as the county toes the line between allowing growth and protecting its wetlands from development. The Sierra Nevada Alliance is working with the county's Collaborative Planning Team to develop a watershed management plan. A long-term vision and large-scale view of their watersheds will be crucial for prioritizing their wetlands and ultimately, in developing a sound mitigation plan. This thoughtful approach is consistent with the National Research Council's (NRC) recommendations of a holistic, watershed-based strategy to preserve existing wetlands and restore converted wetlands. The county's ongoing awareness of the alternatives buys adequate time to take advantage of more studies analyzing the purported success of wetland banks.

Mono County's example offers an action plan for addressing wetland protection and mitigation. Loss of wetlands due to incremental decision-making can result in a substantial reduction in total wetlands in your county.

Check with your county planning department to see how many Section 404 permits have been issued to restore wetlands lost to development. If population growth and development in your county could threaten vernal pools or other wetlands, encourage your county to start working on a wetland protection or mitigation plan and read up on the findings of the NRC study, available free online at <http://www.nap.edu>.