



Sponsored by University of California Cooperative Extension and University of Nevada Cooperative Extension

Inside this issue:

Tahoe Clarity Hits 10-Year High	2
Snapshot Day 2003	2
Environmental Improvement Program	3
Drinking Water	3
Fourth Annual Contractor Workshop	4
Parasol Community Collaboration Team	5
Local Volunteer Honored	5
Calendar of Events	6-7
K-16 Watershed Education Program	8
Dangerous Garden Runaways	9
The Fire Safe Council	9
About LTEEC	11

Charles Goldman Awarded DRI's 2003 Nevada Medal

by John Cobourn

The Desert Research Institute (DRI) has awarded its prestigious Nevada Medal for 2003 to pioneer Tahoe researcher, Charles Goldman, founder of the University of California Davis' Tahoe Research Group. Goldman has contributed immeasurably to the scientific knowledge about Tahoe and other lakes, but he is also an outstanding environmental educator, regaling audiences with tales of his 40 years of continuous research in our region and around the world.

Goldman received his Ph.D. from University of Michigan in 1958 in Limnology and Fisheries. When he tested Tahoe's water that year, it was "like rainwater—very mineral deficient," he said in his Nevada Medal Lecture at DRI in Reno on March 12. One reason for this extremely pure water is that of the 800-square-kilometer Tahoe Basin watershed, the lake occupies 500 square kilometers. Tahoe is naturally clear, or oligotrophic, because its watershed size to lake size ratio is 1.6 : 1. A ratio of 10 : 1 is more common for freshwater lakes. Since the lake is deep and contains so



much water (156 cubic kilometers), and since the watershed is well-vegetated, a relatively small amount of nutrients enter the lake to allow algae growth. Goldman has studied lakes on every continent, and in his opinion, Lake Tahoe is the most beautiful large sub-alpine lake in the world.

Goldman literally wrote the book on lakes. His textbook, *Limnology*, (coauthored by Berkeley's A. J. Horne) is widely used in graduate courses. It is a rich mixture of aquatic biology, hydrology, ecology, and geography. His special area of emphasis has been the eutrophication of lakes due to nutrient pollution. In plain English, he teaches about what causes clear lakes such as Tahoe to turn green.

No one knew that Tahoe's world-famous water clarity was declining before he began regu-

(Continued on page 10)

Visit the LTEEC Web site at
<http://www.lteec.org>

Contact Us:
Lake Tahoe Environmental Education Coalition
University of Nevada Cooperative Extension
PO Box 8208
865 Tahoe Blvd., Suite 110
Incline Village, NV 89452-8202

Phone: (775) 832-4138
Fax: (775) 832-4139
E-mail: segaleh@unce.unr.edu



COOPERATIVE EXTENSION
Bringing the University to You



The University of Nevada, Reno is an Equal Opportunity / Affirmative Action employer and does not discriminate on the basis of race, color, religion, sex, age, creed, national origin, veteran status, physical or mental disability, sexual orientation, in any program or activity it operates. The University of Nevada employs only United States citizens and aliens lawfully authorized to work in the United States.

Tahoe Clarity Hits 10-Year High

In 2002, Lake Tahoe was the clearest it had been in 10 years, UC Davis researchers announced in February. The UC Davis Tahoe Research Group, which has worked with Tahoe policy-makers for more than 40 years, said the new finding could mean that science-based recovery projects in the region are making a difference.

"These are encouraging results, and we hope they indicate the beginning of the lake's recovery," said Charles Goldman, director and founder of the Tahoe Research Group.

"However, 10 years is a short time and it is too early to say if the recent improvements will continue. "We must keep up our efforts to prevent water and air pollution, or we may still end up with a green lake."

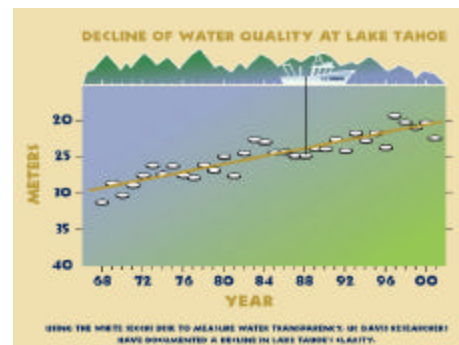
The new Secchi depth data show that in 2002 Lake Tahoe clarity reached an annual average of 78 feet. It has not been that clear since 1992, when it reached 78.3 feet. In 2001, lake advocates were heartened by the finding that the disk could be seen to an average depth of 73.6 feet. This remains a far cry from 1968, when Secchi measurements began.

At that time, the disk could be seen at an average depth of 102.4 feet.

The Tahoe Research Group's data are routinely used by the Tahoe Regional Planning Agency, which leads the program to restore the health of the Tahoe Basin ecosystem. The cornerstone of the agency's restoration activities is its Environmental Improvement Program (EIP), a large group of projects designed to achieve and maintain healthy natural resources. Goldman said those restoration activities, as well as others, may have contributed to the improvement seen in 2002. He also noted that 2001 and 2002 were drier than average, which reduced runoff and could have contributed to the clarity improvement.

"Whether or not runoff was reduced by low precipitation or by improvement projects, or both, the lake may be showing that it can recover," Goldman said.

Juan Palma, former TRPA executive director added, "We were also pleased to see a significant decrease in algae growth last year. These positive numbers should motivate us to continue our strategy of investing in soil-erosion control, storm-water treatment and trans-



Lake Tahoe Secchi Depth Chart

portation alternatives."

The UC Davis Tahoe Research Group works on scientific problems in the basin in collaboration with local, state and federal agencies and the private sector. Research partners include the University of Nevada, Reno; Desert Research Institute; Tahoe Regional Planning Agency; Lahontan Regional Water Quality Control Board; California EPA; California Air Resources Board; Nevada Department of Environmental Protection; U.S. Environmental Protection Agency; USDA Forest Service; U.S. Geological Survey; and LTEEC's Clean Water Team, a citizen volunteer group.

Snapshot Day 2003

The Third Annual Snapshot Day, a one-day volunteer stream-monitoring event sponsored by the Tahoe-Truckee Clean



Citizens collect water quality data for TMDL Program

Water Team and the Lake Tahoe Environmental Education Coalition, was held on May 10. This event was designed to get community volunteers involved in monitoring the water moving through the Lake Tahoe and Truckee River watersheds. Each Snapshot Day has a focus. The focus for this year's Third Annual Snapshot Day was for Lake Tahoe volunteers to gather water samples from the mouths of all 63 tributaries of the Tahoe watershed. These samples will be analyzed by researcher Geoff Schladow for sediment

particle size and will contribute to the UC Davis Lake Tahoe Clarity Model. Volunteers are helping to provide this data needed for Lake Tahoe's Total Maximum Daily Load study that is being conducted by the Lahontan Regional Water Quality Control Board (LRWQCB). Snapshot Day is also intended to provide base line data that could be used in upcoming project identification, Environmental Improvement Program (EIP) project monitoring, and to create a large-scale collaborative effort to prevent further degradation of water quality.

Environmental Improvement Program (EIP) Corner

While implementing projects of the Environmental Improvement Program, there will be some inconveniences. You can expect recreational impacts such as increased vehicle traffic, trail crews, construction, and noise from chain saws, trucks and tree chippers. We thank you for your patience and cooperation. Remember, these projects are designed to benefit Lake Tahoe, the surrounding forests, streams, recreation and wildlife for the future.

EIP Project Highlight

The **Rosewood Creek Restoration and Realignment** project will reconnect Rosewood Creek to Third Creek in Incline Village near Aspen Grove. This location is considered one of the main contributors of sediment load. The project also includes overbank treatment in lower areas below Incline Way. There will be rockwork and earth moving in May, June and July; however, revegetation work is not expected to happen until September or October. These areas are sensitive and should not be disturbed.

Besides the many local projects underway, Nevada EIP projects include:

Nevada Division of Wildlife (NDOW)

- East Shore Furbearer Survey
- Riparian Wildlife Habitat Enhancement – taking place along North Canyon Creek corridor and Tunnel Creek corridor.
- Sugarpine Project above Sand Harbor
- North Canyon Old Growth Project
- Water Diversion Survey to Maintain Instream
- Upland Wildlife Habitat Enhancement Project

Nevada Division of Forestry (NDF)

- Forest restoration of about 7,000 acres of Nevada State Lands within the Tahoe Basin

Nevada State Parks

- Interpretive programs
- Hidden Beach Rehabilitation
- New trail system from Sand Harbor to Memorial Point Trail
- New trail for equestrians and hikers only “Marlette Lake Trail”

- Spooner Summit Trailhead for Tahoe Rim Trail Spooner North

The Private Property Owner Contribution: BMPs to Protect Water Quality

The large public EIP projects will not be successful without private property owner implementation of Best Management Practices or BMPs. Large-scale erosion control projects will fail without your help, as they are only designed to handle storm water runoff and snow melt runoff from roads and public property. Homeowners are responsible for infiltrating the water on their property.



House with BMPs — Includes retaining walls, rock trenches, slotted drains, paved driveway, and native plants

Where Does Your Drinking Water Come From?

*By Michelle Sweeney,
Nevada Tahoe Conservation District*

If you live in the Lake Tahoe Basin, the water that comes out of your tap has made a fascinating journey in order to arrive in your glass. Let's take one possible scenario. If you live on the Nevada side of the lake, chances are you are among those who get water from Lake Tahoe itself. On the way to your faucet the water travels through underground pipes after undergoing an ozonation process at a local facility. Ozonation zaps the unwanted materials in the water, “purifying” it, helping to make it safe to drink. In order to get to the

ozone facility, the water is drawn from deep in Lake Tahoe.

Where does Lake Tahoe water come from? It all comes from precipitation, in the form of rain or snow, that falls within the “bowl” of mountains surrounding the lake. Of course, rain and snow that gets to the lake first travels through our watersheds. This means that the water that comes out of your kitchen faucet may have traveled over your yard or down the streets you drive on each day. This is one reason why it is important to consider how we do things in the Basin. Controlling erosion on your property, applying a minimal



amount of fertilizer in your yard, picking up after your pets and ensuring gasoline doesn't overflow from your car's gas tank are all actions we can take to keep our drinking water clean. So next time you turn on the faucet, think about it: Where does your water come from and are you doing all that you can to ensure that it's the best it can be?

Fourth Annual Contractor Workshop Smashes Record

After nearly 6 months of planning, coordination, and collaboration, the Partners in Conservation (PIC) Subgroup of LTEEC presented their BMP workshop on March 19th, 2003, to a record turnout of over 160 Building and Landscape professionals. Titled, "How to Install Best Management Practices (BMPs) on Developed Property in the Lake Tahoe Basin", this year's workshop covered more topics in depth by presenting three concurrent tracks of sessions. The first track was for architects, engineers and landscape designers. The second track was for builders and contractors who install BMP for their customers. The third track was for landscape maintenance staff who need to know how to manage landscape components such as lawns, native vegetation, and existing BMPs to insure effective prevention of water pollution.

More residents each year are learning that an essential component of the Lake Tahoe Environmental Improvement Program (EIP) is for homeowners and businesses to install effective BMPs as required in the Basin by law. But over 40,000 properties have not yet been retrofitted. The PIC coalition has been working together for 4 years to educate



Over 200 attended 2003 Contractor Workshop

property owners and help them install BMPs, so they can get their Certificate of BMP Completion from the Tahoe Regional Planning Agency (TRPA). Back in late 1999, coalition members realized that the free market was needed to accomplish the task. They inaugurated the annual Contractors' Workshops in 2000, with the goal of training more professionals to be able to provide effective BMP implementation.

Each year, the number of trained professionals has increased. Some are now advertising that they are trained in BMP implementation. Since the public is waking up to the necessity to install them, the professionals are beginning to find more work in BMPs. As more professionals seize upon this new business opportunity, market competition will improve the quality of implementation, and prices should come down, allowing more property owners to install their BMPs. Every professional that attends the workshop also participates in a half day outdoor workshop. After completing an exam, the professional is eligible to have his or her business placed on a list of BMP-trained professionals that is handed out to property owners that need implement BMPs.

A remarkable aspect of this program is the degree to which 5 totally independent agencies at Tahoe have partnered to help the public with their BMP Retrofit

responsibility. These agencies are the Nevada Tahoe Conservation District (in NV), the Tahoe Resource Conservation District (in CA), the USDA Natural Resources Conservation Service (NRCS), the TRPA, and the University of Nevada Cooperative Extension. These agencies have been chronically short of funding, and they are widely separated around the Lake. However, their staffs share the common vision of seeing BMPs implemented throughout the Basin, and they have made extraordinary efforts to coordinate their planning and to cooperate on joint educational events.

In addition to the annual workshops, PIC members engage in joint training of the new staff hired each summer and work together to present the on-site consultations that are the core of the free BMP Site Evaluations available to all property owners who request them. For each of the past two years, about 2000 property owners have received free reports describing BMPs recommended to bring their site into compliance with BMP standards.

The current members of the PIC deserve acknowledgement for successful collaboration, which takes considerable time, effort, flexibility and good will. These members are Paul Sweeny, Chuck Taylor, Jerry Owens, Jennifer Jespersen, Erik Larson, Karen Hansen, Jason Drew, Michelle Sweeny, Woody Loftis, Todd Gillihan, Birgit Widegren, Liz Harrison, Brendan Ferry, Matthew Graham, Heather Segale and John Cobourn.

Job Announcements

- The Lake Tahoe Basin Management Unit (LTBMU) is looking for two Botanists that will assist the Forest Botanist in the management of the Forest Sensitive Plant and Plant Community Program, Sensitive Species Restoration/Protection Program, and the Invasive Weed Program. Contact Gail Durham, USDA Forest Service, (530) 573-2745, gdurham@fs.fed.us
- California Regional Water Quality Control Board seeks to fill three Student Assistant Positions (Open until filled)

New Water Quality Program for Tahoe

Total Maximum Daily Load (TMDL) information is available at:
http://www.swrcb.ca.gov/rwqcb6/TMDL/Tahoe/Winter_2002-03_TMDL_Newsletter.pdf

Parasol Community Collaboration Environment Team

By Rachel Sigman

Thanks to the innovative ideas and diligent work of the Parasol Foundation, North Lake Tahoe's nonprofit community is growing bigger, stronger, and more effective with every passing day. The fountainhead of their work — the Donald W. Reynolds Community Non-Profit Center in Incline Village — provides office space for 12 “resident collaborator” organizations and enables over 80 “nonresident collaborator” organizations to use the center's resources and facilities. The Parasol Foundation's goal is that all member organizations will work cooperatively to improve existing services throughout Lake Tahoe communities, fill gaps in services currently offered, and increase the capacity for intergroup collaboration, thereby augmenting collaborator efficiency and effectiveness. To attain this goal, member organizations have formed the Parasol Community Collaboration (PCC). PCC members have formed teams to address community issues in the following four program areas: 1) Social Services, 2) Education, 3) The Regional Environment, and 4) Arts and Culture.

It should come as no surprise that shared environmental concerns unite a number of nonprofit groups around Lake Tahoe. The PCC Environment Team has brought together several of the key nonprofit groups from the larger

Lake Tahoe Environmental Education Coalition (LTEEC). Using the excellent Community Needs Assessment compiled for the Parasol Foundation in 2000, this team has focused on assessing environmental services currently offered in the North Shore community. It has formulated a set of objectives and identified ways to track progress on addressing community needs.

Comprising representatives from LTEEC, Tahoe Rim Trail Association, UNR Cooperative Extension, The League to Save Lake Tahoe, Tahoe-Baikal Institute, Tahoe Area Sierra Club, Waste Not (Incline Village General Improvement District), Adopt-a-Watershed, Nevada Conservation Corps, North Lake Tahoe Demonstration Garden, and the Southwood Research Institute; the PCC Environment Team's first task was to identify common themes in each group's mission. The team derived objectives based on common environmental concerns including: efforts to protect, preserve and restore nature; promotion of watershed stewardship; reduction of erosion and improvement of lake clarity, and provision of environmental education. Team objectives include:

1. Increase number and effectiveness of collaborative educational events, including outings and lectures.
2. Increase number of properties with properly installed Best Management

Practices (BMPs) to reduce runoff and erosion.

3. Provide and promote low-impact recreation, such as interpretive hikes.
4. Create and provide input for effective media campaign (public outreach).
5. Encourage collaborative fundraising for environmental programs.
6. Create and distribute an environmental “welcome packet” for visitors and new residents.

In addition to these six objectives, the PCC Environment Team recognizes the need to incorporate sound environmental education into our local public schools. We are also working with our newest member, The Southwood Research Institute, to develop an objective that addresses the impacts of environmental contamination on human health.

Like LTEEC itself, the PCC Environment Team is dedicated to advancing environmental work around the basin by providing a network of support and a means to improved communication to ensure that environmental groups continually seize opportunities for meaningful & productive collaboration. To find out more about the PCC Environment Team, feel free to contact any of the member organizations listed above or stop by the DWR Community Non-Profit Center in Incline Village.

Local Volunteer Wins 2003 Anthony Grassroots Prize for Outstanding Grassroots Environmental Stewardship

The Anthony Prize recognizes an outstanding example of grassroots environmental stewardship over the previous year. The winner of the 2003 Anthony Prize is Lake Tahoe activist **Bryan von Lossberg**. In 2001, von Lossberg resigned from his Silicon Valley job to volunteer in the Tahoe Basin in order to give something back to

the place where he had spent many summer vacations. He helped organize the Tahoe Truckee Earth Day Festival and serves as festival chair. He also serves on the board of the Tahoe-Baikal Institute (TBI), a summer student exchange program between Lake Baikal in Russia and Lake Tahoe. As the volunteer project director, he worked with the

exchange students to survey drainage patterns on approximately 2,000 land parcels in the area of South Lake Tahoe. He also volunteers for the Lake Tahoe Environmental Education Coalition, League to Save Lake Tahoe, California Tahoe Conservancy, UC Davis Tahoe Research Group, and Tahoe Rim Trail Association.

Environmental Education Calendar of Events

May 24 (9 a.m. - 1 p.m.):

Hope Valley Work Day

Meet at Picketts Junction (Intersection of Highway 88 and 89 in Hope Valley) where volunteers will plant native plants to restore stream stability, fence out illegal off-highway vehicle trails, pick up litter and have fun doing other conservation activities. Children and adults encouraged to come help restore this stunningly beautiful valley. Bring work gloves, clothes that can get muddy and shoes that can get wet. A free picnic for all volunteers will end the day in celebration! Organized by Friends of Hope Valley with assistance from the Sierra Nevada Alliance. Contact: Joan Clayburgh, (530) 542-4546, joan@sierranevadaalliance.org.

May 31 (10 a.m. - 1 p.m.):

Fredericks Cabin Workday

Tahoe-Baikal Institute and Forest Service staff are preparing for a day of work and fun to get the Fredericks Cabin ready for summer visitors. TBI and Forest Service staff will be on hand to help clean and fix up the cabin, provide volunteers with a BBQ lunch, and discuss possibilities for the future of the cabin. Contact: Paul Chetirkin, TBI, (530) 542-5599.

June 4 (9 a.m. - 1 p.m.):



Tahoe Tessie at the
2003 Tahoe-Truckee Earth Day

Stream Environment Zone (SEZ) Technical Advisory Group

Meet at the new TRPA offices to establish the SEZ Technical Advisory Group; identify participants' interests; discuss Threshold Update process for the Soil Conservation SEZ Program; identify and prioritize topics that need to be addressed; and set schedule for future meetings. Contact: John Stanley, (775) 588-4547, jstanley@trpa.org.

June 7: National Trails Day

Join the Tahoe Rim Trail Association for National Trails Day – Celebration and work projects on June 7. Contact: Shannon Raborn, (775) 298-0012, info@tahoerimtrail.org.

June 15 - June 24: High Sierra Resources Workshop

For the eleventh consecutive year, this unique workshop will take 15- to 18-year-old high school students from the forest-urban interface at the BLM's Silver Saddle Ranch in Carson City to the heart of the Carson-Iceberg Wilderness for eight days of hands-on, thought-provoking environmental education fun. Students will work directly with natural resource specialists to gain a better understanding and appreciation for the natural world around them and find out about possible career tracks in the natural resource fields. Contact: Steve Hale, USFS, (775) 884-8112, <http://nnrec.org/programs/hsrw/>.

June 19 (6:30 - 9 p.m.):

Tahoe Area Sierra Club Meeting

The Tahoe Area Sierra Club meetings are held on the third Thursday of every month at the Douglas County Fire Department (Elks Point Road). Contact: Michael Donahoe, (775) 588-5466, or visit <http://motherlode.sierraclub.org/tahoe/>.

Submit environmental
education events for inclusion
in the calendar of events.
Updates are available at
<http://www.lteec.org>.

July 7 - August 8: Humans and Their Environment

Interested in the Environmental Sciences? This 3-credit college course for high school juniors and seniors that satisfies the natural science core requirement at University of Nevada, Reno is being offered at Truckee Meadows Community College (TMCC). Get a head-start in college by earning 3 credits this summer! Plan more carefully for your college and career by exploring the many disciplines connected to the environmental sciences: biology, chemistry, geography, environmental engineering, geology, political science, park interpretation, ecology, writing, and environmental resource sciences. Humans and Their Environment (ENV 100) is a unique environmental science course surveying the issues and topics related to humans and their interaction with the environment. The five-week course develops critical thinking skills as it examines the connections between science, politics, economics, and cultural issues. For more information call Craig Rock, (775) 847-7088, afternoons. Sponsored in part by the Nevada Service Learning Partnership and the Nevada Natural Resources Education Council.

July 9 - 11: Watershed Processes and Water Quality in the Tahoe Basin (UC Davis ERS/HYD 047)

Join instructor Mark Gistner from

Environmental Education Calendar of Events, continued

(Continued from page 6)

UC Davis for three days of intensive instruction at Granlibakken near Tahoe City. This UC Davis 2-unit course will focus on watershed processes, runoff water quality management, and restoration in the Lake Tahoe Basin. Topics will also include soils, precipitation-runoff, revegetation and adaptive management related to erosion control, effective solutions and development of restoration strategies. Students develop and initiate field restoration. Course involves three days of instruction including morning lectures, afternoon laboratory/field exercises, and evening discussion and problem solving. Sign up for this course at <http://summer-sessions.ucdavis.edu> or contact Heather Segale, (775) 832-4138.

July 17 (6:30 p.m. - 9 p.m.):

Tahoe Area Sierra Club Meeting

The Tahoe Area Sierra Club meetings are held on the third Thursday of every month at the Douglas County Fire Department (Elks Point Road). Contact: Michael Donahoe, (775) 588-5466, or visit <http://motherlode.sierraclub.org/tahoe/>.

July 21 - June 25

Runoff, Erosion and Water Quality Management in the Tahoe Basin (UC Davis ERS/HYD 147)

Join instructor Mark Grismer from UC Davis for five days of intensive instruction at Granlibakken near Tahoe City. This UC Davis 3-unit course will focus on practical hydrology and runoff water quality management from Tahoe Basin slopes. The course will also cover hillslope and riparian restoration concepts, modeling and application from physical science perspective including precipitation-runoff relationships, erosion, sediment transport, and detention ponds. Instruction

includes morning lectures, discussion and problem-solving; afternoon laboratory/field exercises; and evening modeling exercises. Sign up for this course at <http://summer-sessions.ucdavis.edu> or contact Heather Segale, (775) 832-4138.

July 31 - Aug. 3: Tahoe Wilderness Institute Weekend Field Program

Lake Tahoe Community College presents this program which holds the state of Lake Tahoe in the center and approaches this subject from multiple angles. Students will participate in a variety of sessions that include interdisciplinary learning in traditional academic disciplines and sessions that focus on specific conservation issues and efforts tied to the Lake Tahoe Basin. All ages are welcome. Participants should be prepared for moderate day hikes. Contact: (530) 541-4660 Ext. 525, twi@ltcc.edu, or visit <http://www.ltcc.edu/programs/wildinst/>.

Aug. 9 - 17 : Tahoe Wilderness Institute Backcountry Program

This nine-day interdisciplinary learning adventure offered by Lake Tahoe Community College. With wilderness as both subject and classroom, participants study geology, literature, art, mountaineering, wilderness medicine, biology, and backcountry navigation. The Institute's hands-on, cooperative approach fosters a holistic understanding of our natural surroundings. Contact: (530) 541-4660 Ext. 525, twi@ltcc.edu, or <http://www.ltcc.edu/programs/wildinst/>

Aug. 16 - 17 : Sierra Nevada Alliance Tenth Annual Conference

In the last 10 years, Sierra Nevada Alliance and member groups throughout the region have focused on a wide variety of issues including timber, wilderness, sustainable communities,

open space, habitat protection, and water quality. This conference will celebrate 10 years of accomplishments, share ways to develop winning strategies, and discuss what hasn't happened and what needs to happen in the next 10 years to protect and restore all the qualities we love about the Range of Light. Join us for two days of workshops, field trips, inspirational speakers and fun at Ebbetts Pass Community Center in Arnold, California. Contact: Kathy, SNA, (530) 542-4546, or visit <http://www.sierranevadaalliance.org>.

Aug. 18 - 22 : Environmental Education Institute at Lake Tahoe Community College (BIO 131AD1)

This workshop is a field-based course for science and environmental educators, focusing on the geology and ecology of Lake Tahoe. Learn to assess stream water quality, forest health, vegetation community structure and composition, use of macroinvertebrates as bioindicators of stream health and procedures for Audubon certification. Contact LTCC Science Department, (530) 541-4660.

Aug. 15:

LTEEC Annual Meeting

LTEEC will host an evening event with special guest speakers including Dr. Charles Goldman.

Aug. 21 (6:30 p.m. - 9 p.m.):

Tahoe Area Sierra Club Meeting

The Tahoe Area Sierra Club meetings are held on the third Thursday of every month at the Douglas County Fire Department (Elks Point Road). Contact: Michael Donahoe, (775) 588-5466, or visit <http://motherlode.sierraclub.org/tahoe/>.

(Continued on page 10)

Tahoe Truckee K-16 Watershed Education Program

The Tahoe Truckee K-16 Watershed Education Program is coming into form. Thirty-five formal and nonformal educators met in January 2003 to help set the vision for a K-16 watershed education for the Tahoe Truckee area.

Mission: The “Tahoe Truckee Watershed region” work/s collaboratively to implement and evaluate sustainable place-based learning and restoration programs that instill a lifelong commitment to watershed stewardship.

Vision: As leaders in education, we agree to collaborate in order to create sustainable and place-based, lifelong learning opportunities that promote watershed stewardship and natural resource conservation. We seek to support these programs so that they may become integrated into the sociopolitical infrastructure in the Lake Tahoe and Truckee River region.

Our K-16 program already has two community coordinators working in the Tahoe-Truckee Unified School District (TTUSD). Our next goal is to fund community coordinators in South Lake Tahoe. We also hope to secure funding for the Nevada side of the Lake and continue supporting our community coordinators in North Tahoe/Truckee.

By the fall of this year, we hope to have educational teams operating in North Lake Tahoe and South Lake Tahoe. We

also plan to implement a professional development series that will benefit the entire region, a curriculum plan that will help standardize what is offered to the schools, and a networking structure that will help us share information and resources most effectively.

Sometime around Spring 2005, we will have coordinators operating in the different communities in South Lake Tahoe, North Lake Tahoe and the Nevada side. Once these coordinators are hired, we can implement a standardized curriculum plan that seeks to create programs which build awareness within the

Place-Based Learning

Do you feel like there is a growing disconnect with our sense of community? Do today's students understand real issues that the community faces? Place-based Learning (PBL) to give students an opportunity to relate to issues in their community, which helps gives relevance and meaning to those issues. In the long-term this may help agencies with their need to protect our watersheds with increased buy-in from the community. A big part of PBL is high quality service learning, in which students participate in service projects that meet a real need in the community. Students look at real community issues and solve real community needs in PBL.



elementary grades. We will work at the middle school level to offer programs that allow students to practice skills in monitoring, restoration and communication. Finally, at the high school and college level, we will work with students and teachers to design programs that allow students to apply these skills during participation in internships and school-to-work programs. It is our goal that every student who lives in the Tahoe Truckee region receives a minimum of three experiences that relate to their community. The core of these programs will be place-based education and service-learning.

For more information on the results of the K-16 visioning session, please logon www.edgateway.net and look for the Tahoe Truckee working group discussion list serve. You will find notes from that meeting, as well as discussions, information and other meetings notes to review. If you would like to be informed of what's happening on a more regular basis, please e-mail Jill Sarick at jill@adopt-a-watershed.org.

Students Provide Information to the General Public

KOLO-TV staff was recently at the Lahontan Regional Water Quality Control Board office (right) to film the tabletop watershed model as demonstrated by about 15 elementary school children and to interview two Regional Board staff about nonpoint source pollution in the Lake Tahoe Basin. This presentation was included in one seg-

ment of “The Lake Tahoe Report” on KOLO-TV which airs on News Channel 8 each Tuesday evening.

Toni Rockwell's third-grade class at Rideout Elementary School also participated in presenting information to the public for a “Lake Tahoe Report” news

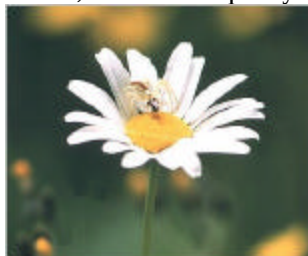
(Continued on page 10)



Tahoe Homeowners: Watch Out for These Dangerous Garden Runaways

By Ellen Swensen, Lake Tahoe Basin Weed Coordinating Group

The Lake Tahoe basin is being invaded by non-native, invasive weeds. These weeds are prolific, highly competitive, and hard to control. They displace native plants and decrease wildlife habitat. One of their biggest threats to Tahoe is their tendency to increase soil erosion and stream sedimentation, which can damage the lake's famed, clear water quality.



Oxeye Daisy

Many of these weeds have accidentally been brought to this country from

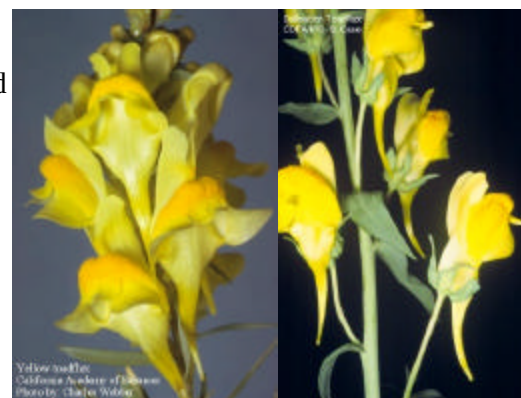


Scotch Broom

other parts of the world. They have spread into the Tahoe basin via many sources including cars, erosion-control straw bales, and domestic stock animals. However, many invasive weeds in Tahoe actually started out harmlessly as ornamental plants in home gardens! These "escaped ornamentals" have invaded neighboring gardens and vacant lots, and have moved into surrounding native areas, where they continue to thrive and spread.

There are several escaped ornamentals that currently threaten native areas at Tahoe. These include Dalmation toadflax, yellow toadflax, oxeye daisy, and Scotch broom.

Work closely with your local plant nursery or landscaper to select ornamentals that are safe to plant at Tahoe. Avoid using seed mixes and plants from catalogs not local to the Sierra. Try to select native plants whenever possible. In addition to the many environmental benefits of natives, they are usually not invasive. Work with your nursery on safe alternatives.



Yellow Toadflax (above left) and Dalmation Toadflax (above right)

The Fire Safe Council

The Fire Safe Council, a coalition of public and private sector organizations, was developed with the mission to preserve our natural and manmade resources by enlisting all community members to make their homes, neighborhoods and communities fire safe. The Council works to meet this goal by combining the expertise, resources and distribution channels of its members.

Many wildland ecosystems are fire dependent; they need fire to survive. Fire thins the vegetation, giving plants room to grow. It cracks seed casings and replenishes the soil, allowing new life to thrive. Learning to live with fire means protecting our community assets from potential wildfire damage.

A Fire Safe Council can:

- ⇒ **Mobilize** people in the community who stand to lose something of value in a fire.
- ⇒ **Create** a powerful group initiative.
- ⇒ **Save** lives, property and money from the effects of wildfire.

Local councils have made their communities safer places to live by:

- Developing an emergency preparedness plan for the community before a wildfire occurs. This proactive measure minimizes loss of life, property, homes businesses, natural and historic areas, and other valuable assets at risk of being destroyed by wildfire.
- Providing an opportunity for community residents and organizations to voice concerns about public safety

issues and protecting economic interests in the community.

- Increasing the chances that homes in the community will continue to be insured. Insurance companies assess the potential liability of a community's ability to survive a wildfire *before* writing insurance policies. In some areas, Fire Safe Councils have involved insurers in increasing community safety, which has resulted in continued commitments by insurance companies to keep their business in town.

For more information contact:

- www.firewise.org (FireWise)
- www.cafirealliance.org (California Fire Alliance)
- www.firesafecouncil.org (National Fire Safe Council)

Charles Goldman (continued)

(Continued from page 1)

lar weekly measurements of clarity in 1968. Now, after nearly 35 years of Goldman's continuous, high quality monitoring, no one doubts it. In 1968, the average depth at which observers could see a white disk in the lake (the Secchi depth) was 105 feet. By 2000, the average Secchi depth was only 67 feet. In his Nevada Medal lecture, he explained that approximately 55 percent of the loss in water transparency is due to single-celled suspended algae, and 45 percent is due to suspended fine sediments (tiny clay and silt-sized particles of eroded soil). He states plainly that "watershed and air quality-based restoration is the only way to halt the decline in Tahoe's clarity."

If current water quality trends continue, Goldman believes the lake will be of "ordinary" clarity by the year 2030. He is not content to just let that happen. He has been unrelenting in his efforts to educate the public, the scientific community, and the federal government about the threat to Tahoe's future. In the late 1960s, during the post Olympics boom, Goldman fought for the exportation of all treated sewage effluent from the basin. That goal was accomplished in 1968. Goldman also praises innovative erosion control projects such as bioengineering (the planting of willows

and other native plants to stop erosion on bare slopes). He supports the erosion control projects of the Environmental Improvement Program (EIP) as well, stating, "if we can control sediment, we can control algae."



Charles Goldman

Goldman continues to work with other key researchers at the Tahoe Research Group's lab in Tahoe City—people like Bob Richards, Allen Heyvaert, and John Reuter. He quips that they do "first-class research in a third-world facility". He and others at UC Davis have raised money and are studying a proposal to build a new research lab near the old fish hatchery that has served as their lab for decades. One interesting component of this plan is the intention to refurbish the old fish hatchery (where John Steinbeck wrote his first novel, "Cup of Gold") into a community environmental education center.

Don't miss your chance to hear Goldman speak on the environmental problems and solutions at Lake Tahoe. He will be presenting a 45-minute slide presentation and lecture at the LTEEC Annual Meeting on the evening of Friday, August 15.

Kids Provide Information to the Public (continued)

(Continued from page 8)

segment on Earth Day. Students learned about local environmental issues to gear up for the Earth Day event and were filmed making presentations on the insights they gained. Students demonstrate what they have learned by reporting to their peers, parents and other community members.

Rockwell, with help from community members, such as Christine McMorrow, Sierra Watershed Education Partnerships (SWEP), got the children involved in various fun projects to teach about Lake Tahoe's environment. Rockwell is one of a growing number of teachers who have been implementing "place-based learning" in the school curriculum. This method supplements textbook study with experiences and projects where the kids live. By learning about the Tahoe environment, students get the sense that school is relevant to their daily lives. Furthermore, studies show that using the environment as an "integrating context" can improve student performance on the standards-based tests now administered in our schools.

Calendar of Events: Mark Your Calendars for Future 2003 Events

(Continued from page 7)

Sept. 15 - 21: National Pollution Prevention Week 2003 (NP2W 03)

The theme for NP2W 03 is "It's Time." The Department of Toxic Substances Control's (DTSC's) Office of Pollution Prevention and Technology Development (OPPTD) provides additional information to help your organization participate in this national event. Contact Robert Ludwig, (916) 324-2659, or visit <http://www.dtsc.ca.gov/PollutionPrevention/index.html>.

September 20: Tahoe Forest

Stewardship Day 2003

Once again this volunteer event will be held in partnership with the League to Save Lake Tahoe and the California Tahoe Conservancy at the site of the 2002 Gondola Fire at Heavenly in South Lake Tahoe. Mark the date and come out to help clean up the forest, make some new friends, and learn about forest health, water quality and more. Contact: Dan Sussman, League to Save Lake Tahoe, (530) 541-5388.

September 20 2003

National Public Lands Day, 2003

The overall theme for the event will be to protect and restore native habitats. The 2003 goal is to exceed 80,000 volunteers donating some 400,000 hours (200 full-time work years) of hard work. The goal is to work on 500 public land locations spread across all 50 states. Visit <http://www.npld.com>.

About the Lake Tahoe Environmental Education Coalition (LTEEC)

LTEEC is sponsored by University of Nevada Cooperative Extension and University of California Cooperative Extension.

Our mission is to provide support and leadership to improve the overall effectiveness of environmental education at Lake Tahoe by facilitating groups working together to educate and motivate the public about how to protect the Lake Tahoe environment.



COOPERATIVE EXTENSION
Bringing the University to You

Participating Partners

- Adopt-a-Watershed
- California Conservation Corps
- California Native Plant Society
- California State Parks
- California State Water Resources Control Board
- California Tahoe Conservancy
- Desert Research Institute
- Lahontan Regional Water Quality Control Board
- League to Save Lake Tahoe
- Nevada Conservation Corps
- Nevada Division of Environmental Protection
- Nevada Division of State Lands
- Nevada State Parks
- Nevada Tahoe Conservation District
- Parasol Foundation
- Sierra Nevada College
- Sierra Watershed Education Partnerships
- Tahoe Americorps Group
- Tahoe Area Sierra Club
- Tahoe-Baikal Institute
- Tahoe Regional Planning Agency
- Tahoe Resource Conservation District
- Tahoe Rim Trail Association
- U.S. Fish and Wildlife Service
- USDA Forest Service
- USDA Natural Resources Conservation Service
- University of California, Davis, Tahoe Research Group
- University of Nevada, Reno
- Waste Not, Incline Village General Improvement District

LTEEC is comprised of various working groups or sub-groups. Each group is led by one or two individuals with a passion for the group's mission, as summarized below. Please call us if you would like to join our efforts!

Partners in Conservation

Assist homeowners in implementing Best Management Practices (BMPs) to control erosion and runoff from landscapes.

Environmental Improvement Program (EIP) Outreach

Educate residents about Lake Tahoe's Environmental Improvement Program (EIP).

Citizens' Restoration

Educate and involve citizens in actual environmental restoration projects.

K-16 Watershed Education Program

Help teachers and schools integrate environmental education into the classroom.

Higher Education and Research

Work with scientists to disseminate information about the research projects conducted within the Lake Tahoe Region.

Business and Tourism

Educate visitors and engage businesses in solutions to Lake Tahoe's unique environmental problems.

Citizens' Monitoring: The Clean Water Team

Engage citizens in watershed stewardship and monitoring of environmental indicators.

Forest Health and Fire Prevention

Work with fire prevention agencies to ensure dissemination of consistent defensible space messages in the community.

Tahoe Basin Weed Coordinating Group

Prevent and control invasive weed species in the Basin by sharing resources and information and standardizing methods of treatment and data collection.

Produced quarterly by the Lake Tahoe Environmental Education Coalition (LTEEC). Send event listings, letters or comments to:

Heather Segale
Lake Tahoe Environmental Education Coalition
University of Nevada Cooperative Extension
PO Box 8208
865 Tahoe Blvd., Suite 110
Incline Village, NV 89452-8202
Phone: (775) 832-4138
Fax: (775) 832-4139
E-mail: segaleh@unce.unr.edu
Web site: www.lteec.org

Lake Tahoe Environmental Education Coalition
University of Nevada Cooperative Extension
Incline Village Office
PO Box 8208
Incline Village, NV 89452-8208



The Lake Tahoe Environmental Education Coalition (LTEEC) Newsletter is funded by Nevada Division of State Lands through the Lake Tahoe License Plate program.

Under the Lake Tahoe license plate program, the Department of Motor Vehicles is authorized to issue a special license plate. The proceeds from the sale of those plates will be used solely for the support of programs for the preservation and restoration of the natural environment of the Lake Tahoe Basin.