



# University of California Cooperative Extension Mendocino/Lake Counties



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# University of California Cooperative Extension Mission Statement

*The mission of the University of California Division of Agriculture and Natural Resources is to serve California through the creation, development and application of knowledge in agricultural, natural and human resources.*

*The goal of the University of California Cooperative Extension Offices for Lake and Mendocino Counties is to continue to provide educational and applied research programs that ensure:*

- T Preservation of natural resources through promotion of scientifically sound management practices.*
- T Agricultural and forestry practices are both economically and environmentally sustainable.*
- T Animal and plant agricultural products are creatively marketed so that the economic base is expanded.*
- T The Boards of Supervisors in both Counties receive timely information on resources and land use issues so they may make informed decisions.*
- T Local youth become informed future leaders by their participation in both traditional and non-traditional 4-H activities.*
- T The people of Mendocino and Lake Counties are provided unbiased information so they can make informed decisions and improve their quality of life.*

## **University Staff**

**John Harper**, County Director-  
Mendocino and Livestock/Natural  
Resources Advisor for  
Mendocino/Lake Counties.

**Rachel Elkins**, Acting County  
Director-Lake and Pomology  
Advisor for Lake/Mendocino  
Counties

**Gregory Giusti**, Forest and  
Wildlands Ecology Advisor for  
Mendocino/Lake Counties

**Glenn McGourty**, Viticulture and  
Plant Science Advisor for  
Mendocino/Lake Counties

**Peter Passof**, Forest Advisor,  
Emeritus

**Currently vacant**, 4-H Youth  
Development Advisor for  
Mendocino/Lake Counties

**Linda Edgington**, Inland Mendocino  
4-H Program Representative

**Arlene Fuller**, Mendocino Coast 4-H  
Program Representative

**Julie Frazell**, Lake County 4-H  
Program Representative

**Ron Jones**, Lake Food Stamp  
Nutrition Education Program  
Representative

**Lori Loupy**, Mendocino Food Stamp  
Nutrition Education Program  
Representative

## **Cross County**

### **University Assignments**

**Francine Bradley**, Extension  
Poultry Specialist

**David Lewis**, Area Watershed  
Management Advisor for  
Sonoma, Marin and Mendocino.

**Susan McBride**, Marine Advisor for  
Humboldt, Del Norte and  
Mendocino Counties

**Adina Merenlender**, Integrated  
Hardwood Management Program  
Specialist

**Lucia Varela**, North Coast  
Integrated Pest Management  
Advisor

## **Mendocino County Staff**

**Linda Blatchford**, Office Manager

**Jim Nosera**, Agriculture Technician

**Carol Gottfried**, Office Asst. II/  
4-H Secretary

**Francine Hines**, Office Assistant I/  
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## **Lake County Staff**

**Shirley Morse**, Office Manager

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Associate/Lab Assistant III

**Traci Anderson**, Office Assistant III,  
4-H Secretary

**Sarah Davis**, Lab Assistant I



## Program Description

The University of California Cooperative Extension in Mendocino and Lake Counties is part of a statewide system that makes UC research-based information available to local agencies, industries, and the public. Our mission is to sustain a vital agriculture, environment, and community in Mendocino and Lake Counties by providing University of California research-based information on management, nutrition, and youth development. In the counties we are also known as the Farm Advisors' Office.

Our programs operate through a unique partnership between county government, the UC system, support from the USDA, and other private funds. Backed by the resources of the UC campuses, our educational programs use practically-applied research to solve community problems. We consult with individuals and organizations, publish newsletters, produce information for mass media, and conduct seminars and workshops; we also conduct research on local problems.

## Pomology

The Pomology Program, coordinated by Rachel Elkins, continues to focus on three major areas: insect management, disease management, and updating horticultural practices (i.e. new rootstocks, training systems, varieties, tree nutrition, and irrigation efficiency). The Lake County Areawide Codling Moth Project now encompasses 1,500 acres with another 1,000 acres under puffers outside the project area. The puffer program has reduced organophosphate use 75% to 100%. A detailed cost and return study shows a \$9.00 per ton, or nearly \$200 per acre, cost savings to growers in the third to fifth year of use.

The Lake County Pear and Grape Pest Cast Network continues to expand with several new vineyards and wildland stations. This network is jointly managed by the UCCE Pomology Program, Lake County Department of Agriculture, and Lake County Air Quality Management District. It provides comprehensive real-time data for frost control, pest management, air quality, and general weather uses.

In Mendocino County during the past year Rachel conducted a trial in Potter Valley using a biological control agent to control codling moth in organic pear orchards. Another trial in Talmage is underway to determine if putting off the first one or two spring irrigations could save water and enhance pear tree root system health while maintaining yield and fruit size.

Along with pears, other crops served by the Pomology Program include walnuts, apples, olives, and other tree fruit and nut crops in Lake and Mendocino Counties.

Currently an olive variety trial is underway in Philo evaluating different olive cultivars grown under local conditions for suitability for olive oils.

Regular meetings are held to update growers on current research conducted by Rachel, along with the Area Integrated Pest Management Advisor Lucia Varela, University specialists and other experts as are relevant.



Lake County pear orchard.

## Integrated Pest Management

The University's Integrated Pest Management (IPM) Program works with growers to reduce the use of pesticides in agriculture. IPM has proved effective as an alternative pest control system leading to significant reductions in pesticide

application. Lucia Varela is the IPM Advisor for Lake, Mendocino, Napa and Sonoma Counties. She works closely in our area with the Pomology and Viticulture Advisors.

Key research objectives include the control of pests in pears (*codling moth, oblique-banded leafroller, box elder bug, pear psylla and spider mites*) and grapes (*grape leafhoppers, mites, scales, mealy bugs, whiteflies and sharpshooters*).

Lucia conducts IPM educational and outreach programs to empower orchard and vineyard workers to increase their IPM knowledge. Other programs included glassy-wing sharpshooter identification and monitoring, riparian vegetation management for preventing Pierce's disease in grapes, and pear research updates on the implementation of mating disruption in pear orchards to manage codling moth and other pests. Lucia also trained 200 Spanish-speaking farm workers in grape and pear IPM and riparian vegetation management.

## Forestry and Wildlands Ecology

The Forestry and Wildlands Ecology Program coordinated by Gregory Giusti continues to focus on multi-disciplinary natural resource issues that affect a variety of landowners. The program strives to address complex resource management concerns through an inclusive approach that allows for landowner input and direction. Additionally, the program has

conducted and participated in a number of educational workshops aimed at improving awareness among landowners, agency personnel and policy makers regarding conservation of natural resources and current resource issues. Topics have included oak woodland conservation, forest wildlife and fisheries habitat management, and water quality considerations in native forest systems plus workshops on Sudden Oak Death (SOD) syndrome.

In cooperation with representatives from timber, financial, and environmental and academic communities, Greg and Forestry Advisor Emeritus Pete Passof are working with an organization whose mission is to develop alternative financial strategies to promote privately- owned, community-based forest management. The aim of this effort is to secure the issuance of tax-exempt municipal bonds for the purpose of purchasing forestlands.

As Forestry Advisor, Greg continues to provide staff support to the Mendocino Board of Supervisors and the Mendocino Forest Council on forestry issues such as Sudden Oak Death Syndrome and proposed forestry-related legislation including the review of the Jackson Demonstration State Forest proposed Management Plan.

In Lake County, Greg continues to support and remain involved with the Lake County Resource Conservation Districts (RCDs) to initiate watershed-based Coordinated Resource Management Planning efforts in various Lake County watersheds. He also served as



Acorn woodpecker.

technical editor for a newly published pamphlet *Landowner's Guide to Watershed Management* developed by the RCD.

At the request of the Lake County Board of Supervisors Greg served on the ad hoc timber rules committee. He authored the County's rule package that ultimately was adopted by the California Board of Forestry. The rule package was incorporated into the State rulebook in January 2001.

## Research

Current research saw the completion of the ninth year of collecting data on Parson's Creek at the Hopland Research and Extension Center on avian use of the riparian zone of an intermittent stream. The goal of this ongoing project is to document resident and migratory bird use of the riparian zone of an intermittent stream in mixed oak woodlands. Between 1993 and 2001, a total of 1,779 bird observations were recorded. (See table on next page.)

## **Parson's Creek Riparian Corridor**

### 10 Most Commonly Observed Species

- , Oak Titmouse (125)
- , Acorn Woodpecker (103)
- , California Towhee (94)
- , Western Scrub-Jay (78)
- , European Starling (66)
- , Black Phoebe (62)
- , House Finch (59)
- , Brewer's Blackbird (54)
- , Nuttall's Woodpecker (52)
- , Anna's Hummingbird (46)

### 10 Most Commonly Observed Neo-Tropical Migratory Species

- , Bullock's Oriole (54)
- , Orange-crowed Warbler (49)
- , Violet-green Swallow (43)
- , Ash-throated Flycatcher (37)
- , Pacific-slope Flycatcher (33)
- , Western Tanager (27)
- , Lazuli Bunting (26)
- , Warbling Vireo (25)
- , Western Kingbird (24)
- , Black-headed Grosbeak (22)

Another study of Greg's is an attempt to gain some science-based information on the characteristics of an old-growth forest. Working in Montgomery Woods outside of Ukiah, Greg's aim is to quantify the structure of old-growth redwood forests: how many trees, how big the trees are per acre, how many redwoods versus non-redwoods, how much wood is on the ground, etc. Once the analysis of the forest is completed, the goal will be to develop strategies to advance the forests to mimic the older conditions while allowing for selective logging.

## **Viticulture and Plant Science**

During the past year Glenn McGourty, Viticulture and Plant Science Advisor for Mendocino and Lake Counties has helped organize or host several educational conferences including an International Symposium on Sauvignon Blanc cosponsored by the Lake County Winegrape Commission and the Fifth Annual Pinot Noir

Conference in Anderson Valley cosponsored by the Anderson Valley Winegrowers Association.

Glenn also assisted the Lake County Wine Grape Commission in conducting their first-ever Wine Writer Tour last September. The theme of the tour was "Terroir of Lake County," and featured vineyard visits growing on different soil types from Guenoc Valley to Lakeport.

A grant-funded cooperative

effort with the UC Extension office, the Mendocino Winegrowers Alliance and Mendocino College resulted in a six-week course, "A Watershed Approach to Vineyard Environmental Quality" to help growers comply with the Clean Water Act regulations addressing non-point source water pollution and the Total Maximum Daily Load (TMDL) process. In addition, research continues on cover cropping and other methods for preventing soil erosion and subsequent water pollution.

Glenn also sits on Lake County's Erosion Prevention Education Committee (EPEC). The EPEC reviews applications for conversions of farmland to wine grapes and has been successful in assisting growers in amending their practices to minimize erosion and also provide growers with additional environmental and viticultural cautions.

A Vineyard Field Day last August discussed strategies for reducing bird damage to grapes including a demonstration on bird netting.



Viticulture Advisor Glenn McGourty and Intern Ivana Picciau harvesting grapes last fall.

## *Mediterranean Winegrape Cultivars*

The following varieties are being evaluated for suitability in Mendocino and Lake Counties.

*Aleatico*  
*Alghianico*  
*Arneis*  
*Canaiolo*  
*Chardonnay*  
*Cinsaut*  
*Clairette*  
*Corvina*  
*Dolcetto*  
*Fiano Pinot Gris*  
*Forestera*  
*Freisa*  
*Furmint*  
*Greco*  
*Grenach*  
*Grillo*  
*Lambrusco*  
*Malvasia bianca*  
*Mammalo Toscano*  
*Marsanne*  
*Marzameno*  
*Montepulciano*  
*Morastel*  
*Mourvedre*  
*Muscat blanc*  
*Muscato di Pantarella*  
*Muscato di Ter4racina*  
*Nebbiolo lampia*  
*Nebbiolo*  
*Negroamaro*  
*Padegebit*  
*Pelaverga*  
*Peperella*  
*Picolit*  
*Pinot St. George*  
*Rousanne*  
*Sangiovese*  
*Souzao*  
*Suavis*  
*Syrah*  
*Tempranillo*  
*Teroldego*  
*Tocai*  
*Touriga*  
*Verdehlo*  
*Vernaccia*  
*Vioignier*

## **Research**

One of the biggest effort in viticulture research continues with the experimental vineyard at the UC Hopland Research and Extension Center (HREC) where Glenn is studying about 50 different Mediterranean cultivars for suitability to this wine-growing region.

Acreage of the Mediterranean varieties has grown from 23 in 1990 to over 905 acres in 2001 as a result of these research efforts. A grant from the American Vineyard Foundation is helping to fund this project along with support from the HREC and local wineries.

The American Vineyard Foundation also provided grant funds for the development of a Soft Powdery Mildew control program for sustainable and organic growers in the North Coast.

Mendocino County leads the nation in the percentage of vineyards that use sustainable and organic winegrowing techniques. This county is unique in that even though vineyard acreage has been increasing, total pesticide use has been declining, the only viticultural region in the state with that trend. Nearly 90% of pesticide application in Mendocino County to wine grapes is sulfur dust.

Within the last several years, many new compounds have been released or are under development that are considered as potentially acceptable to growers following organic certification programs. Some of these compounds were

extensively tested under North Coast conditions. Materials are examined for efficacy, effect on flavor of the wine and cost effectiveness of treatment.

Glenn's ongoing research also includes wine grape varietal trials in Lake County. As considerable acreage is coming out of pears, these trials address the best choices for wine grape cultivars more suitable to Lake County soils and growing conditions.

Another grant, funded by the California Department of Food and Agriculture, Fertilizer Research and Education Program, allowed Glenn to research and write a handbook for grape growers to assist them in developing environmentally safe and effective fertigation programs for their vineyards. The primary focus of the book, currently in the editing and production process, is on utilizing drip irrigation systems to deliver fertilizers to the vines.

## **Livestock & Natural Resources**

The Livestock & Natural Resources Program continues to train clientele in water quality issues, natural resource management, and livestock production.

To encourage ranchers and other landowners to take a pro-active position and become leaders in addressing voluntary compliance with the Clean Water Act, John continues to present the Ranch Water Quality Short Course for both counties. These classes



Advisor John Harper and UC Specialist Ken Tate, Garcia Watershed Research

have been grant-funded through the USDA-Natural Resources Conservation Service (NRCS) and assist landowners in creating a Water Quality/Natural Resource Management Plan for their property focusing on the 10-Mile and Eel River watersheds this year.

Also funded through the USDA-NRCS was a Low Maintenance Roads Workshop designed to give owners and managers of wildland roads the tools to develop and maintain roads for minimal impact on watersheds. In addition, Area Watershed Advisor David Lewis presented a Rangeland Water Quality Workshop for North Coast regulators.

## Research

Research has been implemented to answer specific questions with regard to livestock grazing and water quality issues. Several published papers report new findings on temperature influences on streams important for fish habitat including the Garcia.

A cattle grazing behavior study using the Global Positioning System (GPS) to monitor cattle movement was started last spring and will help cattle ranchers develop improved grazing management practices that will protect critical riparian habitat.

John Harper and David Lewis also are part of a research team that was awarded a three-year, \$570,000 grant through the USDA for continued research on the paired watershed projects at the Sierra Foothills and Hopland Research & Extension Centers. Other grants totaling more than \$75,000 have been generated by John to conduct applied research on the paired watershed studies, sediment inventory, and stream temperature studies. In addition, two projects surveying both domestic livestock and wildlife for water-borne pathogens that can affect human health are in progress. A sediment inventory method and practical worksheet for use by landowners became a statewide University publication. Using the inventory method in a research project summarized and published in **California**

**Agriculture**, John and David determined that the current 10 cubic yard volume threshold could be increased to 100 cubic yards and still account for 99% of human caused sediment.

## 4-H Youth Development and Consumer Science

### Hunger Task Force

Hunger Studies for both Mendocino and Lake Counties have been published and shared with the communities. In addition, the press and local state legislators have been made aware of these studies. Representatives of the local legislators have attended the Hunger Task Force meetings along with representatives from county agencies, non-profit organizations, the business community, and private citizens working together to look into the issues of regulatory impediments to Food Stamp access, identify food sources and distribution including community gardens and food banks plus promotional and educational outreach.

### Food Stamp Nutrition Education Program

The major goal of the Food Stamp Nutrition Education Program (FSNEP) is to improve the nutrition-related skills of food stamp recipients, specifically those skills related to selecting, purchasing and preparing a low-cost nutritional diet for themselves and their families.



Food cooked on camp “buddy burners” usually tastes better!

### Lake County

During the first year of the Food Stamp Nutrition Education Program (FSNEP) in Lake County, program representative Ron Jones joined forces with the Office of Education and the Lake County Health Department. The following examples highlight some of the successful cooperative program ventures in the County. East Lake School in Clearlake Oaks offers “*Early Connection*,” a preschool program of the Lake County Office of Education Child Development Program. Mrs. Laura Van Ness, the Child Development Center Site Supervisor and her husband heard one of Ron’s presentations at the Kelseyville Farmers Market and asked if he would give a series of “*Eating Right is Basic (ERIB)*” curriculum to the parents of the children.

Ron also worked with the “Healthy Start” programs around the county, the Lake Health Department, the Latino Coalition, and offered programs at local Farmers Markets.

The most promising new endeavor comes from the Department of Social Services Food Stamp Division. They

have obtained permission for Ron to set up a table in their lobby on certain days to recruit food stamp recipients on the spot. Ron also has permission to hold FSNEP classes at the NET building in Lower Lake not far from the Social Services Building.

### Mendocino County

The FSNEP program reached over 100 Food Stamp families in Mendocino County this year through the efforts of program representative Lori Loupy teaching them about food safety, stretching food dollars and basic nutrition. Lori works with agencies including Social Services; the Women, Infant, and Children (WIC) program in Fort Bragg and Ukiah; the Ford Street Project; Willits Community Center and Food Bank; Plowshares; Nuestra Casa; the County’s Alcohol and Other Drugs Program; and the Job Alliance Welfare to Work programs.

A major focus this year was on the grant-funded “*Five A Day*” nutrition education program focusing on eating more fruits and vegetables. Currently the program’s primary target areas are Ukiah, Willits, and Fort

Bragg. Plans for the coming year include outreach to some of Mendocino’s more remote locations.

## 4-H and Youth Development

### Mendocino County

The 4-H Program has grown to serving 718 youth and over 288 volunteer leaders throughout the County with offices in Ukiah and Fort Bragg and responsibilities shared by program representatives Linda Edgington (inland) and Arlene Fuller (coast). In addition to the traditional 4-H program, more county youth are enrolled in 4-H sponsored After School Programs such as the Mini Society that introduces youth to an entrepreneurial program, and food safety and nutrition programs.

Approximately 150 campers from both Lake and Mendocino County attended the four-day 4-H Summer Camp in July, and 25 teens trained as camp counselors.

Food safety and nutrition is a focus of the 4-H program, and food safety trainings were provided to 4-H leaders and members plus staff at North Coast Opportunities. Youth also are taking part in a grant-funded “*Five A Day*” nutrition program focusing on eating fruits and vegetables. Collaborative efforts with the American Cancer Society are underway with local schools and community gardens to teach how to grow fruits and vegetables, share food safety education, and to teach where



4-H Campers make adobe with their feet.

food comes from through the Farm Bureau's "Ag in the Classroom" activities and a Junior Master Garden Program.

#### Lake County

Julie Frazell is the Lake County 4-H program representative. Under her direction, Lake 4-H had two 4-H All Stars this past year. Jamie Buckner produced nine educational videos covering

animal showmanship etiquette and appearance in the show ring. These videos will be used throughout the County by 4-H and FFA members to sharpen their showmanship skills. Anna Sabalone designed and created a mural, which is painted on the side of the Donley Horse Barn at the fairgrounds. The mural is a moving depiction of Lake County from sunrise to sunset. Lake County has a five-member

team that has been chosen to help the University of California develop a new robotics curriculum. The team is helping develop activities using the Lego Mindstorm Robotics Command System. They will be attending the Science and Robotics Conference in Merced at Castile Air Force Base to present their portion of the robotics curriculum. Another three-member team is working with the University to develop guidelines for the California 4-H All-Terrain Vehicle (ATV) Safety Program. This team attended the National 4-H ATV Safety training in Spokane Washington in May.

There also were seven California Focus delegates representing Lake County in Sacramento this summer. This program is designed to provide an opportunity for youth to increase their understanding of the functions of government and identify individual citizenship rights and responsibilities.

## Cooperative Extension Objectives

- T *Develop a coordinated, science-based UCCE Specialist, Advisor and landowner/watershed group applied research and monitoring program to systematically address the critical issues and knowledge gaps in stream temperature dynamics and sediment delivery on rangeland and coastal streams.*
- T *Increase the use of electronic media to deliver information and educational programs to more remote areas of the counties.*
- T *Continue to identify new crops and marketing opportunities for growers that are both economically sound and environmentally sensitive.*
- T *Expand the number of youth and volunteers involved in both traditional and non-traditional 4-H programs.*
- T *Increase the educational materials available to low income families and youth to improve their quality of life.*