



# Conservation Quarterly



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Yolo County Resource Conservation District

## Muller & Sons Farms aim for efficiency

by Barbara Fleck

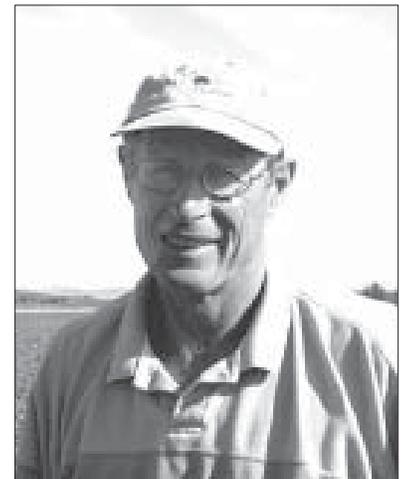
Long range planning is an essential tool of Muller & Sons Farms. Tom Muller, Yolo County Resource Conservation District board member for 20-plus years, believes change is required to survive in the dynamic business of farming.

“The question my partners and I ask each year is ‘how can we do this cheaper, better and continue to keep our yields where they are or increase them?’” Muller said. “Everyone has to have the vision to ask ‘what’s this really doing to my bottom line?’ We also need to be conservation minded and make our farming practices sustainable.”

One example of change is canal bank and ditch management.

“We used to disc and spray them and we still had weeds constantly. Now we plant grass and mow them twice a year with vineyard mowers,” Muller shared. “This produces a lot more habitat and we have less dust, use less fuel, it attracts beneficial insects, and looks more pleasing.”

Over time discoveries have become conventional practices. For example, instead of discing the ground twice, chiseling it and bedding it up before planting, Muller’s practice now is to plant a wheat crop right into the old residue of sunflowers or corn from the previous year’s crop, or lightly break up the ground by going over it once and then plant into the existing beds.



“Even though some farmers in Yolo County don’t think they’re practicing conservation tillage, in essence they are because they have changed their practices over the years,” Muller said. “Burning is no longer common and it seems a lot of farmers are practicing minimum tillage.”

One of the biggest obstacles to conservation practices is equipment. Muller said different ideas often require special equipment that hasn’t traditionally been found in this area.

Conservation efforts are always influenced by economics: supply and demand and conservation costs. Muller said he works with 55 different landlords, leasing 90 percent of the land he farms. The landlords want to make money which means they want profitable crops.

“We’re trying to make our rotations sustainable. We are blessed to have landlords that understand the value

### Inside this edition:

- ✦ Farewell to Stephen
- ✦ Hello to Barbara!
- ✦ Audubon California & CLBL Update
- ✦ Purple needlegrass named state grass
- ✦ Capay Valley Tributary group project funded
- ✦ Giant reed gets final spray
- ✦ Watershed Improvement Program wraps up
- ✦ Mobile Water Lab update



Continued on page 2

Muller & Sons Farms, continued from page 1

of healthy soil," Muller stated. "We understand they would like the most income per acre, and we are trying to do that for them and ourselves. In order to accomplish that we have to have good rotations, good soil health which in turn will make healthier crops and hopefully a better return on investment."

Vetch has assisted with this dilemma. For the past 20 years and particularly the last 10, Muller & Sons Farms has used vetch as a quick way to increase organic matter in the soil. In just one growing season vetch can be disc'd into the ground in the spring, making it ready to plant tomatoes.

"You can't do this every year because it's expensive. We are basically adding organic matter to the soil and not changing crop rotation."

Vetch is one of the many pleasant surprises farming has brought to the Muller family. Tom said there are more good surprises than downfalls, for which he's grateful.

"My main goal of being on the RCD board is to have Yolo County be on the cutting edge of what government is mandating," he said. "RCD is a great mediator. When the state comes in, we can say we have a solution to that particular problem. Instead of mandating, the government can work with us to figure out a common solution. Partnering with the NRCS makes the process even more successful." ☞

*Tom farms with his two brothers Frank and Louie, both graduates of UC Davis. He graduated from Cal Poly in 1982. Their dad brought the business from San Jose in 1969, moving to Yolo County because of urban sprawl. Muller & Sons and Yolo Vineyards are separate entities.*

**Lepidium latifolium:** Whether you call it **Pepperweed**, **TALL WHITETOP**, **Perennial peppergrass**, **Ironweed** or **Cardaria latifolia**, this agricultural weed has infested thousands of acres throughout California and displaced native plant communities. Learn to identify this invasive weed by acquiring a copy of the Perennial pepperweed brochure produced by UC Davis. To download a copy, visit us at [www.yolorcd.org/weeds](http://www.yolorcd.org/weeds).

### Free Irrigation & Water Quality Testing!

If you are a rural landowner, farmer, or irrigation district in Yolo or Colusa counties, you qualify for free testing. Call Kyle Wooldridge, the Yolo-Colusa Mobile Water Lab technician, at 530/662.2037 x120.

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### Program Administrator: new position, new face

A Woodlander for 16 years, Barbara Fleck has brought nearly six years of non-profit management experience and 10 years of journalism writing to the YCRC. Barbara began in the newly created position of Program Administrator on September 7.

"Jeanette and I needed help with grant writing and management, and as a team we need to expand our fundraising and public exposure," said YCRC Executive Director Paul Robins. "It's great to have a journalist on board."

Barbara's expertise comes from her five years as executive director of the Food Bank of Yolo County, her six months at the Yolo County YMCA as executive director and many years as a local journalist.

"I love to learn, explore and write," Barbara said. "Grant writing is a challenge I enjoy and it can be very rewarding."

Barbara will write grants, draft the quarterly newsletter and the annual report, explore new opportunities for fundraising and maintain the YCRC website. She'll assist with the logistics of workshops and public presentations. She can be reached at 662.2037, ext. 117 or [fleck@yolorcd.org](mailto:fleck@yolorcd.org). ☞



## VEGETATION MANAGEMENT EQUIPMENT FOR RENT OR HIRE

Want to plant or maintain a roadside or plot of native grass but lack the equipment? The YCRCD can assist you with specialized equipment for native planting and maintenance, including a harrow, seeder, and mower—all pullable by ATV.

Contact Jenny Drewitz at 530.662.2037, ext. 114 for more information on specifications and rates for rental or hire.



### First “tributary” project funded

The Capay Valley Watershed has received funding to develop a grassed waterway near County Road 45 in Guinda. Neighbors in the area have collaborated to meet the one-to-one match of the Fish and Wildlife Service grant, which should alleviate flooding and erosion in the area.

The \$21,000 grant will provide native plants and trees to be planted in a swale that has historically flooded lands adjacent to Cross Creek and Hamilton Creek.

“This should alleviate flooding, reduce erosion and retain water in ponds producing wildlife habitat and hosting native plants, creating a wildlife corridor,” said Paul Robins, YCRCD executive director.

The project will benefit a “tributary” of the Cache Creek Stakeholder Group that meets bi-monthly in Guinda. Tributary sub-watershed plans and projects are key implementation elements of the Capay Valley Watershed Stewardship Plan of 2003. YCRCD staff developed the Capay Valley Conservation and Restoration Manual to complement the plan. The manual is a step-by-step guide of conservation practices including weed management, streambank protection and wildlife habitat development. Copies of both publications are available at YCRCD or online. ☞

### Giant reed on upper Chickahominy Slough gets final spray for the year

It chokes riversides and stream channels, crowds out native plants, interferes with flood control, increases fire potential and reduces habitat for wildlife. *Arundo donax*, more commonly known as Giant reed, can form debris dams with its long, fibrous, interconnecting root mats and has become an environmental pest in Yolo County.

Efforts to eradicate Giant reed in upper Chickahominy Slough were started in 2003 when the first application of herbicide was applied. The second application was completed this summer to knock down any re-sprouts. Work was conducted upstream of County Road 91.

“That was the last bit of funding we used up from the Weed Management Area project supported by SB1740 money,” said Jenny Drewitz, YCRCD weed warrior. “The next step will be to encourage landowners to do their own spraying because Giant reed will re-sprout by a lesser extent but could then take over entirely.”

YCRCD is pursuing funding to continue the control work along the entire creek. ☞

### Stephen Jaouen goes home to Colorado *His impact still felt in Yolo County*

A short four years ago Stephen Jaouen walked in to the rangeland management specialist position at the NRCS Woodland Field Office with strong recommendations and instant credibility. Last month when he told the staff and ranchers he was “going home” to Colorado, the feeling of loss was unanimous.

“Stephen was a dream-come-true for a supervisor,” said Phil Hogan, NRCS soil conservationist. “At his going away party at the Center for Land-Based Learning there were quite a few sincere and sad goodbye hugs.”

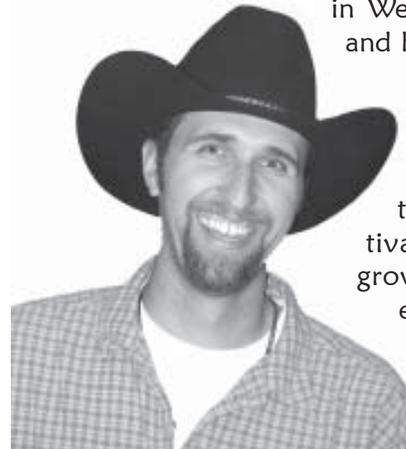
Stephen hit the ground running in 2000, quickly making a name for himself and building a legacy by targeting technical assistance toward livestock producers in the western part of Yolo County. He helped turn more attention to the fact that Yolo County’s natural resources on the valley floor can be protected only if the watershed above them is protected as well.

“He helped put Yolo County on the map as a center for innovative rangeland management,” Hogan said.

Stephen grew up on a hay and livestock operation in Weld County, Colorado,

and had a natural ability to work with clients and extend his technical aptitude. Not only was he the right person for the job, he he had motivation and aptitude to grow in his position and expand its usefulness.

During his last week of employment at the Yolo County NRCS office Rancher



Hank Stone of Yolo Land and Cattle came in and said “You’re coming with me!” An hour later, Stephen walked back into the office wearing a big, beautiful black cowboy hat and a beaming smile. An NRCS Rangeland Management Specialist can’t receive a bigger thank you and honor than that! ☞

# Audubon California Landowner Stewardship Program & The Center for Land-Based Learning

## Next phase targeted at Oakdale Ranch

A successful riparian project on the south fork of the Willow Slough has encouraged John and Meredith Stephens of Oakdale Ranch to continue into a second phase with Audubon California's Landowner Stewardship Program (LSP).

Last year's success consisted of a quarter mile of channel being benched back to allow better flood conveyance and creating a terrace for native grasses and trees. Part of the first phase also included construction of a tail pond. Both the channel construction and the pond were designed by a team from NRCS and Audubon.

"Before this project, the channel was narrow and weedy," said Vance Russell, director of the LSP. "The Stephens had maintenance issues such as erosion and flooding into fields, often requiring new laser leveling. The first phase went very well with the native bunchgrasses, trees and shrubs growing rapidly after planting."

## SLEWS gets Sac City kids' hands dirty

Diversity will take on new meaning when 120 Sacramento High (Sac High) students from the math and science academy embark on a curriculum of land-based learning at the Bobcat to Blue Oak Riparian Restoration Project near Winters.

"Sac High teachers, counselors, principals and administrators are committed to this program being a part of their curriculum," said Dan Leroy, director of the Student and Landowner Education and Watershed Stewardships (SLEWS) program out of the Center for Land-Based Learning program in Winters.

This year's freshmen will have the opportunity to witness the creation of riparian corridors and ponds teeming with life over the next four years. While sophomores and juniors will be getting their hands dirty, freshmen will be exposed to the program and continue the work when they go into the tenth grade. Although this year's seniors don't have a program specifically for their age group, next year's seniors will be trained as mentors and take on a greater leadership role.

"We do everything we can to help students move into this field of work," said Alex Palmerlee, SLEWS program coordinator. "We help them find internships and develop community action projects that assist them in being accepted into college."

The restoration project at the site is funded by the Wildlife Conservation Board with a 3-year grant to Audubon.

Nearly 500 acres of rangeland will be restored with more than 8,000 trees, bushes and native grasses, as well as bird

Originally, the Stephens built a pond adjacent to fields then asked Audubon to assist them with the remainder of the project. The first phase included creating a floodplain and planting a quarter mile section of the slough. The second phase will extend the channel restoration another 700 feet and plant out the wildlife pond. Students from Grant High School in Sacramento will provide the labor while learning about riparian enhancement on sloughs through the SLEWS program. Students from Esparto High School worked on the first phase in 2003.

"The Stephens aim to restore the entire channel which runs a mile long through the Oakdale Ranch," Russell said. "Already the efforts have brought wildlife back to the ranch and the plantings are helping to reduce erosion."



boxes and irrigation systems. Students will attend five field days over the course of the year. SLEWS also relies on

mentors from the community to create a strong bond between mentor and students, improve quality control of the work and build trust within each student group.

The first field day will introduce students to the basics: native seed gathering. "The students will gather seeds as close to the restoration site as possible," Leroy said. "The seeds will be propagated at the Farm and Nature Center. By the time this year's freshmen are seniors, the seeds they have gathered will be plants providing food and shelter for animals."

Teachers will delve into nature along with the students. Mary Kimball, Director of the Center for Land-Based Learning, said a two-day teacher training and retreat at the Dye Creek Preserve will provide materials and resources to develop class lessons related to the hands-on project.

"Dan Leroy has created a SLEWS Workbook, (available online), so teachers have activities for the students to do on their own or as a group," Kimball explained. "The potential for this project is tremendous."

## Mobile Water Lab identifies options for efficient irrigation and it's FREE

The first summer season of the Mobile Water Lab took staff to twenty-one farms in Yolo, Colusa and Sacramento counties. Evaluations of the irrigation systems calculated the distribution uniformity and quantity of water applied at each farm.

Some irrigation systems were functioning perfectly while some growers discovered irrigation problems were the cause of plant damage.

"It's about finding solutions," said Max Stevenson, RCD hydrologist and Mobile Water Lab manager. "The ultimate goal is to give landowners information so they can use water more efficiently and improve runoff quality in their fields in an economically effective way."

Water quality testing is available also because monitoring nitrogen inputs from well water can save money and the Ag Waiver has triggered increased interest in runoff water quality. Stevenson said growers can measure the nitrogen in their well water before they irrigate, which may enable them to reduce the amount of fertilizer they need to apply to the field.

Testing is free to farmers, thanks to funding from the Bureau of Reclamation, NRCS and Unilever Corporation. "This would cost farmers \$800 to \$1,000 normally," Stevenson said.

For free testing, call Kyle Wooldridge at 662.2037, ext. 120. ☞

## Watershed improvement program wraps up

Three years of sampling, data collection, monitoring and implementation are coming to a close resulting in a model conservation planning tool especially useful to Yolo County landowners and adaptable to other counties.

Work completed through the Lower Union School Slough Watershed Improvement Program (LUSSWIP) will go to publication within the next 18 months. The project was funded by the CALFED Bay-Delta Ecosystem Restoration Program.

The LUSSWIP has three primary components: 1) field work consisting of water and wildlife monitoring, implementation of hedgerows and sediment traps and research on conservation tillage; 2) the Yolo Online Agriculture Conservation Planner (Yolo OAC Planner); and 3) public outreach, including conservation field meetings, special presentations and development of educational materials.

The final focus will be creating the Yolo OAC Planner. This internet-based tool will allow growers to confidentially estimate possible soil, nutrient and chemical movement off their fields based on their soils and cropping system. It will also offer guidance on how to alter management practices through conservation to minimize that movement. The OAC Planner will be ready for use in spring 2005 and is being designed for adaptability so that other regions with different soils, agricultural practices and rotations can modify it and develop their own OAC Planner tools.

The Yolo OAC Planner is being developed at Oregon State University by scientists and researchers with the USDA Agricultural Research Service, in cooperation with the NRCS.

"Data results will be published in a variety of journals and other industry publications," said Jeanette Wrynski, YCRCD program manager. "YCRCD staff will focus intensely on water quality data analysis. We will attempt to characterize the flow regimes and function of some of our local, natural and semi-natural waterways in terms of sediment movement, nutrient content and transport. This will allow us to assist adjacent landowners in improving water quality and becoming responsible stewards of the land."

Yolo RCD will conduct a series of workshops this winter to discuss the program and present the findings. Anyone interested in the workshops should contact the office or check us out on the web at [www.yolorcd.org](http://www.yolorcd.org). ☞

### 3,000 samples document sediment movement in streams

Using 12 measuring sites to collect flow and quality samples over the past three years the LUSSWIP has collected data that may give Yolo County growers critical information for dealing with the Central Valley Regional Water Quality Control Board's Ag Waiver.

The Ag Waiver, or Conditional Waiver for a Waste Discharge Permit for Irrigated Agricultural Lands, is a long-term effort to address water quality issues related to agricultural runoff. Growers are required to implement best management practices, conduct monitoring of rivers and creeks and work cooperatively toward improving water quality.

"We understand better the levels of certain constituents that are carried in the water, allowing us to develop methods of monitoring that are applicable to other sub-watersheds," said Jeanette Wrynski, RCD program manager. "We also looked at what happens as water moves from a tail water pond into the ground water by sampling wells placed near the pond. This information will be a real support to local and regional landowners dealing with the Ag Waiver."

The results of this study will be incorporated into the Yolo Planner (see main article).

"Closely examining how various practices affect water runoff is one of many ways we can provide farmers with tools to respond to the growing regulatory pressures to improve runoff water quality," Wrynski said. ☞

## Yolo County RCD Publications

The Yolo County RCD offers various resource material for sale. To place an order, send your request to Yolo County RCD - Orders, 221 W. Court Street, Suite 1, Woodland, CA 95695; call 530.662.2037, ext. 119; or send an e-mail to [mccloud@yolorcd.org](mailto:mccloud@yolorcd.org). Please add tax and shipping and handling costs to publication prices below:

Know Your Natives; A Pictorial Guide to California Native Grasses (includes supplement) .....	\$30
Bring Farm Edges Back to Life! .....	\$15
California Native Grass (poster) .....	\$17
Monitoring on Your Farm .....	\$15
Working Habitat for Working Farms (video) .....	\$10
Yolo County Soil Survey (CD-ROM) .....	\$13.92
Capay Valley Conservation & Restoration Manual .....	\$15
(free to Capay Valley residents)	

Please add 7.75% sales tax to above prices

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1 item:	\$3.00
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more than 10 items:	\$15.00



## Purple needlegrass named state grass

With the governor's signature on SB1226, *Nassella pulchra* (Purple needlegrass) became the official state grass of California on August 23.

Purple needlegrass is recognized as the most extensive and widespread native perennial grass in the state, with a range extending from just over the Oregon border down to northern Baja California. Individual plants can live 100 or more years. It is an important food source for wildlife and was an essential food source for Native American communities. As a state grass, Purple needlegrass will be used as a teaching tool and symbol of the natural environment of early California. ☞



Find project progress reports, events, links, and updated conservation articles on the RCD website at [www.yolorcd.org](http://www.yolorcd.org)

If you would like to receive this newsletter electronically instead of by mail, please notify Susan McCloud at [mccloud@yolorcd.org](mailto:mccloud@yolorcd.org).

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