

Nomination for the  
2009 Larry L. Sautter Award for  
Innovation in Information Technology

## **Web Action Team**

Division of Agriculture and Natural Resources,  
Communication Services

for creation of the

# **Dynamic, Comprehensive Web Environment for ANR**



**Team Members:**

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## Summary

The Web Action Team has created a dynamic, comprehensive, and easy-to-use Web environment for the UC Division of Agriculture and Natural Resources (ANR). Tied together by the ANR Portal, this set of administrative tools, volunteer management systems, and tools for public outreach lets faculty, staff, trained volunteers, and other ANR affiliates streamline many aspects of their work, collaborate with colleagues at other UC locations, and easily present useful information to public audiences. A detailed staff directory integrated into the system ensures that each person who logs onto the password-protected Portal page has access only to those WAT-created online tools that match his or her responsibilities in ANR.

With their can-do attitude, professional skill level, flexibility, and good humor, the WAT team members have won it many admirers within ANR.



## Timeframe

The **ANR Web Environment** is a continuing project of the Web Action Team, and so has no anticipated overall completion date. Individual tools in the system are constantly being added, and existing tools are modified as problems arise or new capabilities are offered by the WAT or requested by clients, and the Team periodically scrutinizes each tool and works with clients to create a complete new version.

## Technology Used

Most of the **ANR Web Environment** system is written in ColdFusion, interfacing with data in a SQL Server environment. Clients interface with Web tools using secure Web pages accessible from all major browsers and OS platforms.

## Project Description

### History

In 2001 ANR Communication Services rolled out the first generation of **ANR SiteBuilder**, an online Web site management tool for UC Cooperative Extension county offices. Up until that time, UCCE county Web sites were widely varied in appearance and functionality, having been created independently either by county office staff or independent contractors. Not all county offices had a Web site, and differing levels of programming skill, design skill, commitment to follow-up support meant that the county offices' efforts, though commendable, gave an overall rag-tag representation of UC, Cooperative Extension, and its services. Offered as an opt-in service, **SiteBuilder** quickly became the dominant platform for CE county office Web sites.

The Web Action Team continues to build on the success of that first offering as it improves existing Web tools and develops new ones. All are built on the same basic platform (ColdFusion interacting with data in a SQL Server environment) so that modules and functionalities from one Web tool can be easily copied over and adapted for use in another. Team members meet with special projects, research groups, and administrative units within ANR and develop Web tools to do a wide variety of complex tasks for them.

### Impact

In one way or another, the Web Action Team's work has a positive impact on every person who works for UC ANR and on the many thousands of members of the public who interact with UC Cooperative Extension. Every employee or volunteer who logs into the ANR Portal page ([my.ucanr.org](http://my.ucanr.org)) has access from that page to a selection of web-based tools tailored to his or her role and responsibilities in ANR. Individualized Portal access keeps the most important tools for each person's job at his or her fingertips.

Through the following Web tools, the WAT contributes to the University's work by

- improving UC ANR's research environment by creating Web tools that simplify grant recipients' recording and reporting responsibilities so they can focus more of their efforts on the research itself
- enhancing public access to UC Cooperative Extension services by providing CE county offices with Web site hosting and site administration tools that are easy to use, consistent in appearance, and flexible enough to accommodate each county's special crops and programs
- improving the IT infrastructure of UC ANR by making a wide variety of new and pre-existing online administrative tools accessible through a secure, central ANR Portal page, and providing site hosting, security, and systematic backup services on Communication Services servers

## Web Tools

WAT-authored tools that have been developed or substantially updated since 2006 include

- **ANR Portal (<https://my.ucanr.org>)**
  - *for ANR employees, affiliates, and volunteers:* integrated access to a wide variety of specialized Web tools, services, and information
  - allows direct, unmediated access to Web tools by using the user's login to automatically determine which tools, groups, blogs, etc. will appear on that individual's Portal page
- **Merit and Promotion (accessible to authorized users via ANR Portal)**
  - *for faculty:* secure online submission of merit and promotion forms and all supporting documentation
  - *for administrators and review committees:* secure online storage, tracking, and review of submitted materials
  - constantly updated to keep abreast of new rules and process changes in the ANR merit and promotion system
- **Repository (<http://ucanr.org/repository>)**
  - *for all ANR employees:* storage, retrieval, and sharing of all types of digital assets, including word-processed documents, digital photographs and other images, PDF documents, and more
- **Simple Grant System (accessible to authorized users via ANR Portal)**
  - *for county advisors and specialists:* secure online submission of applications for grants offered within ANR
  - *for administrators:* a comprehensive system for administering in-house grant programs, including soliciting and processing grant applications, awarding grant funds, and tracking the use of those funds for later reporting

- **DANRIS (accessible to authorized users via ANR Portal)**
  - *for county advisors and specialists:* secure online reporting of work performed using USDA funding, with output of reports that meet USDA requirements
  - *for administrators:* tracking and review of grant-funded work
- **Grant Tracking System (accessible to authorized users via ANR Portal)**
  - *for principal investigators, collaborators, and reviewers:* allows a principal investigator to create a grant proposal online, track email questions and answers between the PI, collaborators, reviewers, and administrators, and is flexible and transparent in use
  - *for administrators:* tracking and review of work funded by outside grants
- **File Vault (<http://ucanr.org/filevault>)**
  - *for all ANR employees:* transfer of digital documents of all types that are too large to be sent as email attachments; includes an option that automatically converts the document to a PDF document
- **Survey (and Registration and Payment) Tool (accessible to authorized users via ANR Portal)**
  - *for all ANR employees:* do-it-yourself creation of online questionnaires, quizzes, and secure registration/ payment forms (with credit card and recharge options); online reports of results, exportable in Excel format
  - *for clients, registrants, students, and others in and out of ANR:* online 24/7 access to surveys, registrations forms, and quizzes for online courses
- **Credit Card Payment System (accessible via <http://ucanr.org/survey>)**
  - *for survey/registration form authors:* secure, automated handling of credit card payments for programs offered through ANR, with direct allocation of funds to appropriate accounts via UC Davis Accounting
  - *for customers and registrants:* secure online payment option for fee-based ANR programs, available 24/7
  - has handled more than \$70,000 per month in transactions in recent months
- **Collaborative Tools (<http://ucanr.org/collaborate>)**
  - *for all ANR employees:* do-it-yourself creation of online communities where colleagues can share information and documents, conduct virtual meetings, and otherwise collaborate on projects without the expense of travelling to face-to-face meetings
- **UCCE Master Gardener Volunteer Management System (VMS) (<http://ucanr.org/mg>)**
  - *for volunteers:* logging of volunteer hours and access to ANR online information resources for Master Gardeners
  - *for county advisors and staff:* scheduling, assignment, and tracking of volunteer hours; online collaboration with volunteers and other ANR faculty and staff
  - *client comment (Pamela Geisel, Statewide Master Gardener Coordinator):* "We have been able to demonstrate . . . over 303,284 volunteer hours [FY 2007–2008] . . . equal to 171 full time employees . . . valued at almost \$5.91 million annually."
  - *client comment (Donna Seaver, UCCE Master Gardener Program):* "Dave Kraus, when developing VMS<sup>2</sup>, really listened to the Master Gardener VMS Advisory committee. This committee had worked with the original version and provided a large improvement list. Dave did a great job of implementing everything he could. It was tested and completed quickly and Alex added fun graphics."

- **Mailing Lists (accessible to authorized users via ANR Portal)**
  - *for ANR employees, affiliates, and volunteers:* quick channel for emailing to standard pre-set mailing lists (e.g., by administrative level, administrative group, programmatic subject area) or creation of custom mailing lists
- **ANR Live Notes (accessible to authorized users via ANR Portal)**
  - *for ANR employees, affiliates, and volunteers:* Twitter-style quick text-message communication for special project or special event participants, accessible via ANR Portal or text-capable cell phone
- **UCANR FAQs (accessible to authorized users via ANR Portal)**
  - *for ANR employees, affiliates, and volunteers:* a user-driven knowledge base for all of ANR, with user-defined categories that can coordinate sets of FAQs with pertinent ANR Web sites
  - entries take the form of question-and-answer sets or how-to instructions
- **National Grape Registry (<http://ngr.ucdavis.edu>)**
  - *for participants nationwide and worldwide:* access to comprehensive, up-to-date information on individual grape species, varieties, and clones
  - *for site administrators:* ability to keep the database complete and up to date using a secure Web interface
  - *client comment (Deborah Golino and Bev Ferguson, Foundation Plant Services; Nancy Sweet, National Grape Registry):* "With Karl and the WAT support, our accomplishments in the website arena have exceeded our initial expectations. The websites . . . include a nationwide grant site that has become a model for online grant submission, review, and document archiving; and the National Grape Registry, which is a tremendously successful and innovative (not to mention beautiful to look at and use) tool for the grape industry."
- **ANR Blog (<http://ucanr.org/blogs>)**
  - *for ANR employees, affiliates, and volunteers:* a channel for offering online updates on research, projects, and other activities in ANR
- **lynda.com (accessible to authorized users via ANR Portal)**
  - *for ANR employees, affiliates, and volunteers:* licensed access to a commercial site offering online videos and practical training on a wide variety of software for business and media production, as well as the non-software skills, concepts, and principles that underlie its use

## Client Satisfaction

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### ***Kay Harrison Taber, ANR Assistant Vice President – Administrative Services:***

Over the past 18 months Karl Krist and his web action team have created a new on-line Grant Tracking System for use by ANR's geographically disbursed UC academics. . . . The tracking system reduces the financial cost incurred by shipping copies of the proposal around the system for review and approval. It reduces the administrative burden of hand-generated tracking logs and file space. The team's creative approach to mapping standard university forms and their response time in incorporating beta testers' input was simply outstanding.

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### ***Kimberly Rodrigues, Statewide RREA Director and UCCE Regional Director, North Coast and Mountain Region:***

Karl has developed and inspired an innovative and effective web-based communication system for the Division of Agriculture and Natural Resources, empowering collaboration and coordination throughout our statewide network of county and campus faculty and staff.

The collaborations that are supported and enhanced by the work of the Web Action Team are numerous and diverse including, but not limited to, the following examples:

- Webinars to outreach to rural communities regarding forest fuels treatments to reduce the risk(s) associated with catastrophic wildfires.
- Multimedia technical support for the Renewable Resources Extension Act (RREA) site in order to share local stories from California communities with the national partners and the rest of the world.
- Support for all academic merits and promotions and annual evaluations online.
- Support for programmatic summaries and reports documenting impacts by program area, project area, and/or priority issue area.
- Support for internal communication protocol.
- Providing centralized support for UC ANR's IT environment within our decentralized, complex, statewide network.

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### ***Bev Ferguson, Media Coordinator, Foundation Plant Services; Deborah Golino, Director, Foundation Plant Services and ANR Viticulture Grants Program; Nancy Sweet, Manager, National Grape Registry:***

Karl Krist is the person you hope picks up the phone when you call for IT support. Combining an innate sense of what is requested of him with his considerable technical knowledge, he performs what we consider to be "magic." Karl's co-workers on the team also exhibit that high quality standard by consistently delivering excellent service and unique, creative solutions.

. . . The websites that the team have developed for us include a nation-wide grant site that has become a model for online grant submission, review and document archiving; and the **National Grape Registry**, which is a tremendously successful and innovative (not to mention beautiful to look at and use) tool for the grape industry. . . . The NGR site incorporates an innovative and extremely useful data search function that allows site users to quickly locate information that previously was inaccessible. The two sites are

used by FPS and grape industry users all over the world; FPS has received numerous compliments on the websites' functionality and efficiency from the varied users.

Karl and his support team have consistently and quickly grasped what FPS is trying to achieve with our websites and have assisted us in translating the FPS mission into a user-friendly format for public consumption. We urge you to see that they be recognized for their excellent work.

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***Pamela Geisel, Statewide Master Gardener Coordinator:***

The Web Action Team has made it possible for the Statewide Master Gardener Program to demonstrate significant impacts of our volunteer program because of the innovative design and implementation of our **Volunteer Management System** (VMS 2.0), which was extensive rebuilt in late 2007. . . . The specific impacts we have been able to demonstrate through the report features of VMS are

- In FY 2007–2008, over 303,284 volunteer hours were reported (32% increase from the 206,547 of 2006–2007). 303,284 hours is equal to 171 full time employee for one year.
- Between 1980 and 2006, 1,948,149 total hours were reported using paper documentation, an average of only 50,671 hours per year.
- Valued at almost \$5.91 million annually to the UC ANR (at \$19.51 per hour).\*[http://www.independentsector.org/programs/research/volunteer\\_time.html](http://www.independentsector.org/programs/research/volunteer_time.html)
- Approximately 300,000 face-to-face contacts each year were reported.
- We have been able to save approximately \$40,000 a year in annual recertification costs statewide.

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***Donna Seaver, Program Representative, UCCE Master Gardener Program:***

Karl Krist and the Web Action Team are exemplary technology innovators. In my work with them they consistently listen to user needs and find creative solutions for making unique projects work well within UC's IT environment, while providing great design elements, meeting usability requirements, and seemingly having fun doing it. This has been especially evident with the implementation of the ANR portal, and the associated Collaborative Tools and Repository, which has allowed all of UC ANR to easily collaborate and communicate while increasing the efficiency of daily business from instant e-mail lists to the sharing of files in numerous formats.

There are big projects and the little things that they notice and approach creatively. . . .

**Surveys in SiteBuilder** – how could I do my job without **ANR Surveys**, especially since the data can be exported to an Excel file? Both of these "little" things I consider a community service and increased business/admin feature.

Their customer support is commendable. They are a creative group with a positive "how can we make this happen" attitude, and a joy to work with.