

# The Role of Education and Partnerships in Vernal Pool Preservation

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**ABSTRACT.** Loss of vernal pool grasslands is escalating throughout California primarily due to population growth and urban expansion. Land use decisions are made at the local level, usually long before any federal permitting processes are initiated. Additionally, federal laws do not protect vernal pools and their endangered inhabitants; they only regulate their loss. To effectively conserve vernal pool grasslands, local decision makers and planners must be convinced that it is important to do so despite the need for economic growth which is fueled by development. Scientific information can help, but politicians are influenced by their constituents, the most powerful of which are usually the developers. This report describes several education and outreach strategies being used to inspire significant grass-roots participation in conservation advocacy and highlights some of the success stories in Sacramento County. While these efforts help, they are generally reactive and only have small scale successes. To really get ahead of the curve, landowners also need to be convinced that selling out to developers is not the only economically viable alternative. This report also discusses the need for new partnerships and unusual alliances to conserve vernal pool grasslands and highlights a recent initiative of the California Rangeland Conservation Coalition.

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## INTRODUCTION AND BACKGROUND

Loss of vernal pool grasslands has escalated in recent years due to extensive urban-suburban development and agricultural conversion to orchards, vineyards and paper pulp production. Current resource protection and land use planning laws do not prevent the destruction of vernal pools and their endemic species—they only regulate and account for losses. Additionally, these laws are continuously being subjected to political pressures that weaken their interpretation and enforcement.

The environmental community's historical reliance on laws, regulations and lawsuits is insufficient to make even a ripple in the tidal wave of developments and agricultural conversions being proposed and implemented throughout the Central Valley. There are just too many projects to track and even the most egregious are hard and expensive to litigate. A new paradigm is needed to protect our valuable vernal pool grassland resources. This overview article provides a brief background on losses, information about a couple of successful strategies for vernal pool preservation, and some ideas for the future.

## PAST LOSSES

Historic loss of vernal pool grasslands within the Central Valley of California has been estimated by many to be 75-90%. Holland and Hollander (2007) recently conducted predictive biogeographic analyses on vernal pool endemic species, the results of which have led to an estimate that only 13% of vernal pool grasslands remained as of 2000.

Prior to 1998, Yuba County lost 67% of vernal pool grasslands in 24 years or 2.8% per year (Holland, 1998). During similar periods, Sacramento County lost 1.8% per year; Fresno County lost 1.5% per year; Merced County lost 1.0% per year. These are areas of rapid urban expansion and the rates of loss have likely escalated since the original studies were done. Other areas experiencing rapid loss are Butte, Placer, and Solano Counties, primarily due to urbanization. Glenn and Tehama Counties have also experienced high rates of loss, primarily due to agricultural conversion.

## CURRENT LOSSES

As stated earlier, federal laws do not protect vernal pools and their endangered species. This is espe-

cially true when politics come into play in the final decision making. Additionally, most land-use decisions are made at the local government level long before the project has even applied for federal permits to destroy wetlands and take endangered species. Local government is primarily interested in the economic prosperity of their fiefdom and are heavily influenced by the most prosperous of their constituents—the developers. Deals are cut for new developments and damn the federal regulations—it's okay because they still have to get their permits. Enter the higher level politicians and the permits get issued despite the significant impacts. Aside from the occasional lawsuit—if the environmental community can scrape together the resources—that is the end of the story and the end of that piece of habitat.

In the next decade, Sacramento County is on the brink of losing another 10,000 acres, of which about half has already been permitted. Placer County is in even more dire straits with developers proposing to build on the vernal pool grasslands and mitigate that loss with rice fields. Merced County is home to the new University of California which proposes to consume 900 acres for its campus and another 2,000+ acres for the new community. Merced County is also losing thousands of acres of vernal pools each year from conversion to agriculture.

### EDUCATION INSPIRES ACTIVISM

Faced with ever-increasing threats to, and losses of, local vernal pool grasslands, the Sacramento Valley Chapter of the California Native Plant Society (CNPS) started a campaign to educate local citizens about vernal pools, their beauty and their value. Beginning in the early 1990s, several key members of the organization began a concerted effort to bring people out to see the vernal pools and enjoy their various wonders. This has grown over the years into a multi-faceted educational campaign that has resulted in substantial grassroots activism and the prevention of various ill-conceived projects that would have irreparably harmed the specific place that they chose to champion.

#### *Mather Field Vernal Pools*

Mather Field was commissioned as an Air Force Base in 1918. During Air Force operations, over half of its 5,845 acres remained in relatively undisturbed open space dominated by spectacular vernal pool grassland. Through benign neglect, this area continues to support numerous endangered, threat-

ened and rare vernal pool endemic species. And being just 11 miles from downtown Sacramento, it has always been known to the local botanical community as a rare treasure.

In 1993 the base was decommissioned by the Department of Defense and plans were made to turn these lands over to the County of Sacramento. Even before the decommission was completed, the county had already stated its plans for the site. Besides redevelopment of the base infrastructure, they had various grandiose ideas about how much money they could make by developing the 2,800 acres of vernal pool grassland. Thus began the *Mather Field Preservation Campaign* of the local CNPS chapter, an effort started by George Clark and Eva Butler. This campaign relies almost entirely on educating the local populace and depends upon them to stand up and speak out for what they have come to cherish.

During the intervening years, the county has proposed aggregate mining, a turfed regional park, urban development, industrial development, an urban forest on top of the vernal pools, water treatment facilities, sewage trunk lines, a university, and a water treatment facility on the vernal pool grasslands. The grassroots movement created by the CNPS educational campaign has stopped each and every one of these piecemeal projects from occurring. During the most recent fight, over 150 people showed up at the Board of Supervisors meeting with half of them signing up to testify. Finally getting the message, the Board instructed staff to find a new location for the water treatment facility *and* to convene a stakeholders group to reach consensus on the future of the Mather Field Vernal Pools.

In early 2006, the stakeholders group—consisting of all of the county agencies, federal and state wildlife agencies, and a broad range of environmental and community stakeholders—presented the Board of Supervisors with a conceptual map that created a hardline vernal pool grassland preserve of 1,050 acres that includes the best of the best. From there the county and various stakeholders have been moving forward on a management plan for the preserve and a development plan for the remaining area.

#### *Sacramento Splash*

In 1997 as a modest offshoot of the public education program, Eva Butler agreed to help a friend who was a fifth grade teacher with a vernal pool related project for Disney's annual Environmental Challenge.

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A dearth of age-appropriate materials about vernal pools meant that Eva and her friend had to piece together all of the lessons and activities from scratch. Even so, the kids were enchanted by the dozens of critters and flowers they met and were able to call by name. Their affection grew into a desire to advocate for the protection of the habitat at Mather Field.

The project won the Environmental Challenge Grand Prize in 1998 and the students were honored at Earth Day festivities at Disneyland in 1999! During that same year they testified before the Board of Supervisors on the value of vernal pools, used their Disney prize money to have aerial photographers flown over the site, and held a bake sale to raise funds to post signs to deter off-road vehicle users. The hot development pressure at that time was a proposal to mine gravel from Mather Field. The students came up with their own “mine the chocolate chips out of the cookie and then put it all back together” demonstration booth.

From those humble beginnings, the Sacramento Splash program grew and evolved into a highly recognized and respected curriculum now in its third version. Available at <[www.sacsplash.org](http://www.sacsplash.org)>, the program consists of 13 classroom lessons that meet California State Teaching Standards in earth science, reading, writing, oral presentation, math reasoning, algebra, statistics, and investigation and experimentation. The participating classrooms also get a guided half-day field trip to the Splash Education Center and the Mather Field Vernal Pools. For home-schoolers and teachers outside the service area, the entire curriculum, including the introductory video and interactive kids web, are also available on the website.

Sacramento Splash won the Governor's 2005 Environmental and Economic Achievement Award for excellence in environmental education. The program is currently funded by the Sacramento Regional County Sanitation District, the City of Sacramento Department of Utilities, and the Sacramento County Department of Water Resources and is available to teachers within Sacramento County. Over 12,000 fifth graders have participated in the Sacramento Splash Program.

### CONTINUING EFFORTS

Small—and even a couple of large—successes aside, the Sacramento Valley Chapter of CNPS envisions that our past fights to protect vernal pools are just

the tip of the iceberg. CNPS continues to expand its horizons for educating the public and especially the land use decision makers about the wonder and value of vernal pools. In 2005, they published the *Field Guide to the Vernal Pools of Mather Field, Sacramento County* (Witham, 2005). This is the first-ever California vernal pool field guide, and while specific to a small area of Sacramento County, it has become a resource to many outside the Sacramento region. Besides using this as a public outreach tool, CNPS advocates have made it a point to personally deliver this informative booklet to the local land use decision-makers in all of the local jurisdictions.

### NEW PARTNERSHIPS

In 2002, a summit of environmental organizations interested in species and habitat issues was organized by Barbara Vlamis of Butte Environmental Council and held in Sacramento. Over 100 people participated in this exchange of ideas about how to further the environmental community's goals. From that meeting was born the California Endangered Species and Habitat Alliance (CESHA). The group consists of a loose coalition of federal, state and local groups interested in environmental issues that focus on species and habitat protection. The group grew out of the need to share resources and information with each other. It has resulted in more issues being covered and more comment letters written on these issues through the simple effort of sharing the workload and keeping each other informed. For the past five years, this group has met monthly via teleconference to keep each other up-to-date on issues and deadlines.

### *Dissatisfaction With Status Quo*

A year or two into CESHA's collaborative effort to work together, it became evident that we needed to collectively meet with decision makers in the various regulatory agencies. Eventually, Steve Thompson, manager of the U. S. Fish and Wildlife Service (USFWS), California-Nevada Operations, agreed to meet with the group and include his senior staff. Many of the early meetings addressed our complaints concerning USFWS not doing enough to enforce the Endangered Species Act, and their counter-complaints that we sue them too much. That all changed in the summer of 2004 when Thompson challenged CESHA to come up with one conservation issue that we could work on *together*.

What ensued was several months of discussion by phone and email to reach consensus on which “one conservation issue” CESHSA should select. We collectively decided to focus on the value of Central Valley grasslands for endangered species, and the severe threat posed by explosive urbanization of the valley and adjacent foothills, nearly all of which is in private ownership. Ed Pandolfino of the Sierra Foothills Chapter of the Audubon Society formulated our white paper on the value of preserving Central Valley grasslands, which was presented to Thompson.

### *An Unusual Coalition*

Thompson asked to share our white paper with the California Cattlemen’s Association because he believed that there might be some common ground between the environmental coalition and the cattle ranchers. This led to more teleconferences and email discussions that resulted in the two groups meeting in August 2005. While we came away from the summit knowing that we would never see eye-to-eye on many issues, we were able to identify several important areas of mutual concern. Both environmentalists and cattle ranchers want to protect Central Valley grasslands and foothill blue oak woodlands from encroaching urbanization. Both groups also want to see private cattle ranching continue to be economically viable so that these areas remain rangeland.

Many conservationists may feel that grazing is destructive and incompatible with native plant conservation—and in many ecosystems, it is. However, recent scientific studies conducted in the Central Valley have shown that appropriate grazing is not only compatible with native species diversity, but in some habitats, such as vernal pools, it is essential (Marty, 2005). Following the August summit, the newly formed coalition of conservationists—both the traditional environmental organizations and the landowners who cherish their land and their way of life—have been working together to set common goals and objectives. The first step in reaching that common ground was the development of the California Rangeland Resolution (available at <[www.cnps.org](http://www.cnps.org)>). This resolution stresses the value and need to conserve Central Valley rangelands for species and habitat preservation and for maintaining the economic viability of the private ranching industry—the true land stewards of this unique ecosystem and its species. This new group, called the Califor-

nia Rangeland Conservation Coalition, has been lobbying Congress for a bigger share of the Farm Bill for rangeland preservation, helping to drive the priorities of California’s Wildlife Conservation Board, and educating the public on the benefits of conserving the state’s Central Valley rangelands.

### LOOKING INTO THE FUTURE

While education and partnerships are long-term and long-range projects that require a substantial amount of up-front time and effort, they have the potential of providing lasting benefits. Our children, our neighbors and their children need to have a sense of place in the natural world in order to appreciate it and advocate for its conservation. This is especially true in this age of plugged-in children. At the same time, we need to finally recognize some of the most important stewards of the vernal pool grasslands—the family cattle ranchers—and continue to make their way of life economically viable. Otherwise they might be tempted to succumb to outrageous offers from housing developers.

In the short-term, the environmental community interested in saving vernal pool grasslands—and other ecosystems—will have to continue to rely on reactive advocacy. But it is important to remember that the time and effort we put into education and partnerships will create a more lasting benefit, to the environment and to the human condition, in the long haul.

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