



THE CENTRAL COAST BIOREGION: LAND USE ISSUES IN A SPECTACULAR LANDSCAPE

Much of California's Central Coast bioregion remains an undeveloped rural landscape, with a great wealth of native species and biological communities, important farming and ranching and spectacular scenery that is a major tourist attraction. It includes the coastline from Santa Barbara to Santa Cruz counties, the Coast Ranges stretching east to the edge of the San Joaquin Valley and the Transverse Ranges in Santa Barbara and Ventura Counties.

The mountain and valley topography, coupled with decreasing precipitation as you travel south or move inland, results in a wide array of plant communities, from redwood forests in the canyons of the Big Sur Coast to desert grasslands on the eastern slopes of the inner coast ranges. Also there are extensive pine forests, oak woodlands, various types of chaparral and coastal scrub. This landscape is home to a wide array of animals, including a reintroduced population of the California condor, and also home to many rare plant species.

There are extensive federal lands in the various mountain ranges - units of the Los Padres National Forest and Bureau of Land Management lands in the inland areas. In recent years, the state and various land trusts have been very active, protecting lands adjacent to the Pacific Ocean and especially along the Big Sur coastline.

The coastal plains of Santa Cruz and Monterey counties, the Salinas Valley and portions of San Benito and Santa Barbara counties possess high quality farmlands. Monterey is one of the state's top ranking agricultural counties.

In 2000 the population of the five Central Coast bioregion counties - Santa Cruz, Monterey, San

Benito, San Luis Obispo and Santa Barbara - was just over 1.36 million. The region's cities lie along or close to the Highway 101 corridor, while areas like the Big Sur coast and much of the inner coast ranges have very little development.

Rapid growth is occurring in some areas. The northern part of the bioregion has significant growth pressure from Silicon Valley, with small towns like Hollister becoming bedroom communities for long-distance commuters. To the south, the main growth area is the Highway 101 corridor from Atascadero in northern San Luis Obispo County to the Santa Maria region of northern Santa Barbara County

Growth Uncertainties

Local governments and citizens in each county are grappling with growth issues. General Plan updates are underway in several locations. A key basis for this land use planning is */continued on page 3*

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New IEH Website

www.instituteforecologicalhealth.org

News from IEH

New Web Site

IEH has a new Web site, www.instituteforecologicalhealth.org. It is a simple site, focused on providing important and useful information rather than eye-catching graphics.

The IEH Periodical page provides access to all the back issues of *Linkages*, downloadable as pdf files. The page includes information on the contents of each issue.

Our site has five topic web pages that cover the core concerns of IEH: *Smart Growth and Sprawl*, *Conservation Planning*, *Conserving Rural Landscapes*, *Floodplain Management* and *Regionalism*. Also we have a page for the *Sacramento Region*. There is a common architecture to each of the topic pages - basic information on the issue, links to relevant articles in *Linkages* as well as external web sites and on-line reports, and a bibliography of helpful books and articles. Various IEH reports are accessible through these topic pages.

In addition there is a page with information about the Institute for Ecological Health and a form for joining IEH. We depend on individual contributions for the expenses of our basic program, including the production of *Linkages*, and encourage readers to use this form.

We hope that *Linkages* readers will visit our new Web site. Please let us know of additional items within our topic areas, including issues, links to other sites, books and reports, that would be helpful additions to the site. As our resources and time allow we will improve this site, including posting some graphics materials such as maps, charts and photographs.

Guide to Regional Conservation Planning in California

Version 1.0 of this guide is now available. We will post it on our Web site in December. There is no charge for downloading the guide and it is not copyrighted, as our focus is on getting information out to individuals and organizations that need it. Many thanks to the many sponsors of this project, as well as the invaluable work of advisors and reviewers.

We can provide a CD version with several appendices (all in pdf format) for a \$4 donation to cover the cost of the CD, postage and packaging. If you need a hard copy, we can provide one for a \$15 donation to cover copying, binding, packaging and postage.

Many local governments in California are undertaking regional conservation planning at the county and sub-county scale. The plans offer a way to provide for the conservation of species and natural communities and to resolve conflicts with development. As California is a global hot spot of biodiversity and also experiences large scale urban-suburban development, the success of these plans is very important for a wide range of public and private interests.

The participants in preparation of a regional conservation plan include local governments, federal and state agencies and a variety of

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Providing information on California land issues, including conservation biology, planning and economics, development, urban design, and agriculture. We explore the needs of different interests and creative solutions. We welcome articles, story ideas, and letters.

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stakeholders. The agricultural and environmental communities, developers and rural landowners all have a vital interest in the nature and impacts of a regional conservation plan.

The planning process is lengthy and complex. The Institute for Ecological Health has prepared this guide, with its focus on issues that arise during the preparation of many plans, to help planning participants and other concerned citizens understand the issues, the legal and regulatory background, the process and the contents of a regional conservation plan.

Part I is a short introduction. Part II provides a very brief picture of California's biological wealth and outlines some scientific issues relevant to conservation of species and habitat. Part III explains the federal and state legal and regulatory requirements. Part IV examines the process of preparing a regional conservation plan. Part V explores topics that are common to the various regional conservation plans.

We plan to extend and update the Guide and produce version 2.0 within a couple of years. Regional conservation planning is an ever-changing process. Agencies, scientists, local jurisdictions and stakeholders learn from the experiences of the many planning efforts. The requirements and implications of the 2002 Natural Community Conservation Planning Act are now being understood as several regional conservation plans

develop under this new law. There will be new rulings from ongoing legal skirmishes that will affect regional conservation planning.

We expect continued progress on regional permitting under Section 404 of the federal Clean Water Act, linked to regional conservation plans. This is one of the topics that will receive expanded treatment. Version 2.0 will include a Part VI on implementation, with a strong focus on the lessons learned from approved plans.

Linkages

Apologies to our readers for not producing an issue of *Linkages* this spring and for the Fall issue being late. Urgent work on a variety of issues, especially regional conservation planning, left no time for production of *Linkages*. We hope the availability of our new web site and access to back issues of *Linkages*, makes up for the publication gap.

IEH Membership Support

Very many thanks to the generous support of IEH members. You make possible the production of *Linkages*, continuation of our Web site and much of our program. Support of our readers is essential - we hope you will use the membership coupon on page 12 to become a new member or to renew.

Central Coast Region, continued from page 1

population projection data. In 1998 the California Department of Finance published county projections for each decade up to 2040 that showed substantial population growth in each Central Coast county. For example, the projections showed San Luis Obispo County growing by almost 200,000 people between 2000 and 2020, and another 150,000 by 2040.

In 2004 the Department of Finance released new population projections for California's Counties, extending up to 2050. They give a very different picture than the 1998 projections, with drastic reductions in the levels of population growth. For example, the new data shows San Luis Obispo's 2020 population being 90,000 less (305,000 rather than 392,000) than that forecast in 1998 and the population leveling off after 2030. Santa Barbara and Santa Cruz Counties have little population growth after 2020 in the new projections.

Monterey and San Benito Counties have steady growth in each decade through 2050 (about 50,000 per decade for Monterey and about 10,000 for San Benito) in these new

projections but for Monterey in particular there is a sharp drop from the 1998 forecast. The Table on page 4 gives the 1998 and 2004 projections for county populations in 2040.

County and City General Plans and regional transportation plans will be very different if they are based on the new population projects. [See text box on page 5 for a brief consideration of the state's population projection system and some of the uncertainties]



Some Current Growth Issues

While there are growth problems in a number of areas, the bioregion as a whole retains the capability to conserve its agricultural, biological and scenic values and ensure a high quality of life for the human population. The future will depend on continuing efforts to conserve land, biota and the agricultural industry, on a shift from sprawl to smart growth in the region's cities and towns and on tackling potential problem of rural sprawl. Here are examples of some issues and debates under way in the five county region.

Monterey County

Monterey County has been preparing an update to its General Plan for several years. This plan addresses land use in unincorporated areas. The Board of Supervisors adopted twelve guiding objectives for the plan update. They included channeling new growth to areas already committed to an urban level of development, such as the cities and a very few densely developed unincorporated communities, termed "Community Areas", while preserving rural areas for resource-based industries natural resource protection, and open space recreation uses.



The public has shown it wants future development confined to a small number of areas best suited to growth and to have the maximum protection of natural resources and farmland. Infill-focused development within the existing cities, the communities of Pajaro, Castroville, Boronda and portions of the former Fort Ord will allow the rest of the County to retain its undeveloped, rural character and to protect farmland, rangeland and habitat. In addition it will be necessary to address potential scattered rural ranchette development (see *Linkages* # 9) on over 5,000 existing lots and to prohibit parcels splits

Changing Growth Projections for Central Coast Counties

County	Actual 2000 population	State's 2040 Population Projections	
		(a) in 1998	(b) in 2004
Santa Cruz	256,602	497,319	294,253
Monterey	401,762	855,213	605,963
San Benito	53,234	114,922	94,994
San Luis Obispo	246,681	535,901	337,247
Santa Barbara	399,347	779,247	477,658
Total	1,356,626	2,782,602	1,810,115
California total	34 mill	58.7 mill	51.4 mill

Source. Demographic Research Unit, California Department of Finance

that result in further ranchette development.

A draft General Plan was available at the beginning of 2004. It tended to avoid making decisions about where development will occur, leaving this contentious issue to later project by project decisions. That approach is likely to be a recipe for failure. Strong General Plan language that limits future development to certain areas is essential.

The Board of Supervisors decided this year that the County will re-do its General Plan update, providing an opportunity to correct past shortcomings. LandWatch Monterey County provides excellent leadership on this issue (see resources at end of this article). It has included development of a "Community General Plan Update" that would accommodate 20 years of predicted growth (higher population numbers than the 2004 Department of Finance projections) with the loss of only 1,100 acres of prime farmland, as well as release of a *Room Enough* report examining the capacity of existing cities and the Community Areas.

The potential closing of the Fort Hunter Liggett Military Reservation on the inland side of the Santa Lucia Range could become a major issue. It will be very important to ensure the long-term conservation of this area, and avoid a sell-off for development.

San Benito County

This county also has experienced rapid growth because of its proximity to Silicon Valley. The City of Hollister, for

example, has grown rapidly in recent years. In 2002 citizens put forward a County growth control measure that would focus growth in compact urban areas and protect farmland, natural resources and open space. In April 2003 the County Board of Supervisors voted to adopt the "The San Benito County Growth Control Initiative," which requires a vote of the people to change.

Santa Cruz County

Santa Cruz County has had strong protection of agricultural land since 1978. In that year voters adopted measure J, which says commercially productive agricultural land generally can't be developed or divided. The remaining approach to development is through annexation of unincorporated land by a city, which requires approval by the Santa Cruz LAFCO (Local Agency Formation Commission, see articles in *Linkages* numbers 6 and 11). The Santa Cruz LAFCO has been strong in its protection of agricultural land. In addition land trusts and others have made purchases to protect coastal lands north of the City of Santa Cruz. Low density rural development is still a problem in some areas.

San Luis Obispo County

There has been extensive development by a string of cities along the Highway 101 corridor from the Cuyama River to Atascadero. Current development pressure includes the unincorporated lands of Nipomo Mesa, just north of the Santa Barbara County line. Scattered rural ranchette development is also a significant issue (see *Linkages* #9.)

In 2003 the San Luis Obispo Tribune published a series of articles on the problems of future growth, after commissioning a study by the Solimar Institute's Bill Fulton. This used a higher growth rate (100,000 new residents in 15 years) than the 2004 Department of Finance Forecasts (less than 50,000). The Tribune did a good job of highlighting the problems that will occur without wise and careful planning, including the possibility of extensive low density rural ranchette development.

San Luis Obispo's growth is driven by migration from other areas - people attracted to the small towns and rural ambience. Many new residents have little interest in compact urban development.

In addition, the county has many thousands of rural lots created long ago, and whose owners have the legal right to build. However, the influx of retirees will lead, over time, to growth of a population uninterested in keeping up a large lot and in many cases no longer able to drive. Planning for the future elderly community requires

Some Uncertainties of Population Growth Projections

The Demographic Research Unit at the California Department of Finance (DOF) provides long-term forecasts for each county. These give estimated populations for each decadal time point (e.g: 2020, 2030) and extend over forty years into the future. The actual amount of growth that occurs may be less or more than the projection.

The bases for projections are an assumption that current trends in each county will continue, together with past life expectancy, birth rate and migration data trends (with an assumption that the local levels of these factors will shift toward the state-wide norms over time). Local base-line data on gender, race / ethnicity and age also impact the forecast for a county.

Past predictions for 10 Sierra Nevada counties show the risky nature of population growth forecasting. In 1971, the DOF forecast a doubling of the population between 1970 and 2020. In reality, the population exceeded this 2020 forecast by 1990. (Duane TP (1999) *Shaping the Sierra: Nature, Culture and Conflict in the Changing West*. University of California Press.) In other cases, actual growth has been much less than forecast growth.

In 1998, the Demographic Research Unit released decadal county population forecasts through 2040, and this year released new figures through 2050. The Table on page 4 gives a comparison of the 2040 projections from 1998 and 2004 data for the five Central Coast counties, which had a combined population of 1.36 million in 2000. It shows how the forecasts can change dramatically. In 1998, the projected 2040 population for these counties was 2.78 million. In 2004 the 2040 projection dropped to 1.81 million. This is a huge difference. The 2000-2040 growth forecast has dropped from a 104% increase (1998 data) to only a 32% increase (2004 data).

providing very attractive mixed use developments where a variety of amenities are available within short walking distances. It also requires land use planning that is compatible with public transit, which needs higher densities. With population growth predicted to level off after 2030, San Luis Obispo can plan for a very different future than one based on large scale rural ranchette development.

Santa Barbara County

This county has long had a north-south split, with South Coast residents focused on controlling growth and north county residents in Santa Maria and other cities interested in promoting growth. Meanwhile, the northern growth is shifting the balance of power to the Santa Maria region, where there is very rapid development and an apparent absence of Smart Growth. In January 2005 the County Board of Supervisors will have a majority of three northern votes and a more pro-growth philosophy.

This north-south split resulted in a petition drive, led by a Santa Maria developer, for a ballot measure proposing a split in the county, with the land north of Gaviota Pass becoming Mission County. The petition drive was successful and the measure will be on the 2006 ballot.



On the South Coast, many citizens are interested in protecting the coastal zone westwards from Goleta and have proposed a Gaviota Coast National Seashore. This is opposed by local landowners, who wish to maintain the option of having development of some of their lands. At the direction of Congress the National Park Service studied a potential 215,000 acre National Seashore stretching for 76 miles from the edge of UC Santa Barbara to Point Sal in Vandenberg Air Force Base.

The Park Service's report, finished in March of this year, included the findings that the area "is part of one of the rarest global biomes ... It is one of only five such locations in the world (and) is the only location in the nation that features an ecological transition zone between northern and southern Mediterranean plant communities."

The report also noted that this is Southern California's healthiest coastal ecosystem and the acreage is home to 1,400 plant species.

However, the report concluded that "the area is not a feasible addition to the national park system because sufficient land is not currently available to the NPS; strong opposition from study area landowners makes it unlikely that effective NPS management could occur; and the NPS is not able to undertake new management responsibilities of this cost and magnitude, given current national financial priorities."

Stewardship of the Land

There are a growing number of active stewardship projects in the Central Coast Bioregion. They include watershed projects led by local Resource Conservation Districts and efforts to devise more ecologically sensitive flood control projects. One of these projects has pioneered very important "one stop permitting" for conservation projects in riparian and other areas. In this article we take a brief look at two areas with active stewardship projects.

Elkhorn Slough

The 4,000 acre Elkhorn Slough in northern Monterey County is an extremely important tidal habitat with extensive mudflats and marshes, designated as a Globally Important Bird Area and a Western Hemisphere Shorebird Reserve. It is also a National Estuarine Research Reserve. The Elkhorn Slough watershed is the beneficiary of a precedent-setting project to facilitate conservation projects through permit streamlining, as well as other conservation projects.

The Slough is at the downstream end of a 44,000 acre watershed with areas of highly erodible soils and intensive farming of strawberries, broccoli and other crops. This situation, together with past clearing of riparian vegetation, have produced a significant non-point source pollution problem, leading to a great drop in the steelhead population and a range of other ecological impacts that extend into the ocean waters of the Monterey Bay National Marine Sanctuary.

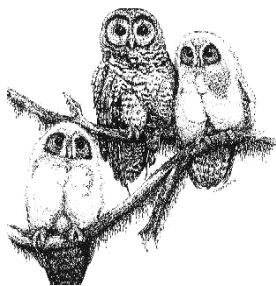
An array of conservation programs administered by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) provide funding and technical assistance for the types of conservation projects needed to reduce the non point source pollution (see *Linkages* # 12). However, a farmer's proposal for an individual project, such as restoration of riparian vegetation, will require permitting by five to eight separate agencies. It can take a year and extensive paperwork to obtain all these permits, a major deterrent to conservation action.

In the Elkhorn Slough watershed, a number of groups came together as "Partners in Restoration" and developed a set of 10 best management conservation practices that received programmatic permits from multiple agencies. The partners are the Resource Conservation District (RCD) of Monterey County, the NRCS, the Monterey Bay National Marine Sanctuary and the non-profit organization Sustainable Conservation. The NRCS and the RCD are the permit holders and can approve projects by individual farmer and landowners that utilize the approved conservation practices.

This Partners in Restoration approach is spreading to additional watersheds in California, including the Morro

Bay and Salinas River watersheds, and watersheds in Santa Cruz County.

The Elkhorn Slough watershed has additional biological and land use issues, including the presence of a rare maritime chaparral and the spread of low density development. In 2002 the non-profit Elkhorn Slough Foundation, together with The Nature Conservancy prepared a conservation plan for the watershed. This was the basis for *Elkhorn Slough at the Crossroads*, a report outlining the natural resources of the watershed and proposing conservation strategies. The Foundation's vision for the watershed includes enhanced freshwater wetlands, restoration of a riparian forest in a stream's floodplain, the conservation of unfragmented upland ridges with maritime chaparral, 100 meter buffers around sensitive habitats and a reduction in new development.



Morro Bay

A 2,300 acre estuary in San Luis Obispo County, Morro Bay is a very important fish nursery, winter bird habitat and stop-over spot for Pacific Flyway migratory birds. The 48,000 acre watershed includes significant habitat for steelhead and red-legged frog as well as a several other rare species.

The Bay has been impacted by a variety of human activities within its watershed which encompasses the communities of Los Osos Creek and Morro Bay and stretches toward the City of San Luis Obispo. For example, the biologically productive eelgrass beds are sensitive to multiple stresses, including pollution and increased turbidity.

Increased sedimentation has been a major issue, leading to the Bay losing over a quarter of its volume. Nutrient runoff from poorly functioning septic systems, farmlands, roads and lawns has resulted in excessive growth of algae, which in turn lowers the levels of dissolved oxygen in the waters of the Bay. Surface water diversions and depletion of underground aquifers have changed the amount and timing of freshwater flows into the estuary. There are high levels of toxic heavy metals in Chorro Creek, probably from abandoned mines in the hills.

Two interconnected projects are helping to address these problems and conserve the ecological health of the Bay.

One is the Morro Bay National Estuary Program, which has been in existence for nine years. The program's goals include slowing sedimentation, re-establishing healthy steelhead populations in the creeks, protecting the health of eelgrass beds, shellfish and fish populations, and maintaining the functional integrity of the watershed.

The second project is a one-stop permitting system for conservation practices, similar to that developed for the Elkhorn Slough. Again the NRCS, the local Resource Conservation District (Coastal San Luis RCD) and Sustainable Conservation are key partners, along with a variety of other agencies.

Looking to the Future

There is a strong possibility that the residents of the Central Coast Bioregion can craft a long term sustainable future for this spectacular landscape. Smart Growth and control of both suburban and rural sprawl, conservation of sensitive habitats, nurturing of the varied agricultural industry and wise stewardship of the land are essential actions. The existence of effective local citizens organizations, precedent-setting agricultural conservation programs, and wise actions by some of the local governments are encouraging. In other localities, however, the struggles over the nature of growth continue. The threats of unnecessary sprawl that is detrimental to agriculture, the health of human communities and to wildlife remain a problem in portions of several counties.

Resources

Daniels T (1999) *When City and Country Collide: Managing Growth in the Metropolitan Fringe*. Island Press.

Demographic Research Unit, California Department of Finance
www.dof.ca.gov/html/Demograp/druhpar.htm

Elkhorn Slough Foundation/ Elkhorn Slough National Estuarine Research Preserve
www.elkhornslough.org

LandWatch Monterey County
www.landwatch.org

Morro Bay National Estuary Program
www.mbnep.org

Sustainable Conservation's Partners in Restoration Project
www.suscon.org/pir/index.asp

PLANNING FOR QUALITY OF LIFE

Zoning Codes for Smart Growth

Zoning codes and ordinances usually seem an obscure topic to citizens concerned about how their cities are growing. However they are a primary mechanism of land use planning and play very important roles in determining the nature and pattern of development.

City zoning codes that developed over the 20th century resulted in many of the land use problems we face. Separation of uses, with the resulting dependence on cars, is a key example. Development was shunted into separate housing subdivisions, shopping malls and business parks. Even apartments above shops became an illegal use. This land-hungry, congestion-producing growth style helped to develop industrial specialization. Large building companies have specialized and only construct homes, or business parks or shopping centers.

Separation of uses has become more extensive over the years - often a community will have 20 or more different types of zones. These may include a set of zones with the same use, but at different densities, such as low, medium and high density residential. And under California law use variances are not permitted.

There is growing interest in revising zoning codes to allow for Smart Growth or livable communities. One popular approach is Traditional Neighborhood

Development, which provides for compact, pedestrian friendly mixed-use neighborhoods. Another very helpful approach is the creation of mixed-use zones that allow arrangements such as homes above retail stores. Codes vary greatly from community-to-community and often address an array of design features.

Transit oriented development is increasingly popular in many California communities. This involves allowing higher densities and a mix of uses around existing or future transit stops. For example there are new four and five story apartment buildings and mixed use buildings around a number of BART stations in suburban residential areas. These increase transit ridership as well as making more efficient use of space. Often the areas are created by adoption of some type of transit station zone that allows these higher densities and various uses.

It is important for interest groups and concerned citizens to pay more attention to their community's zoning codes, participate in any project to overhaul the code, and promote change to allow for Smart Growth.

The Local Government Commission has prepared a very helpful *Smart Growth Zoning Codes Resource Guide*. This explains a wide variety of issues and options and provides many examples from around the nation. See www.lgc.com.

RECENT EVENTS MAY SPUR FLOOD CONTROL REFORMS

In December 2002 the state released its Floodplain Management Task Force Report. This document included a variety of forward-looking recommendations that would improve flood control, conserve agricultural lands and wildlife habitat in floodplains and bring other benefits to society (see article in *Linkages* #14.) The Institute for Ecological Health was a participant on the Task Force and looked forward to implementation activities.

Unfortunately, release of the report coincided with the blossoming of the state budget crisis and no immediate actions or legislative initiatives occurred. A couple of

recent events, however, have made flood control a significant issue and we hope will lead to opportunities for floodplain management reform.

In November 2003, a California appeals court ruling on *Paterno v. State of California* found the state liable for damages in the Yuba County community of Linda that were the result of a 1986 levee failure. The levee is part of the Sacramento River Flood Control Project, which was transferred from the federal government to the state in 1953. This levee is now maintained by a local reclamation district, but the court said that state still has responsibility for its reliability.

Like many Central Valley levees, the structure was built long ago, in this case after an authorization by Yuba County in 1904. Levees in many agricultural areas are not strong structures, being built with dredged sand or earth and sometimes in locations subject to seepage under the levee. Narrowing of the rivers by the levees also increases the pressures of high flows on the levees. Conversion of agricultural areas into rural residential communities or suburban sprawl is an invitation to future flooding disasters.

The Paterno decision has focused the state's attention. Damages payments by the state because of this decision will likely be many hundreds of millions of dollars. Future levee failures could be far more expensive.

The second event was the failure of a local district's levee on the Jones Tract in the Delta the summer, resulting in the flooding of 12,000 acres of agricultural land and months of pumping to remove the water. Because of oxidation of peaty soils, the Delta Islands have sunk well below sea level since the initial draining of marsh lands and their conversion to agriculture.

Funding for upgrading of the Delta levees, which are maintained by local reclamation districts, is inadequate. There is a threat of multiple levee failures caused by an earthquake. The rise in sea-level because of global warming will increase the pressure on the levees. All these stressors put the future of Delta islands in serious jeopardy. The Jones Tract levee failure has focused attention on the need to solve the Delta islands problem.

Resources

California Floodplain Management Task Force: Final Recommendations Report (2002). Department of Water Resources. www.fpm.water.ca.gov

Floodplain Management for the 21st Century (2003) Linkages 14:13-15
www.instituteforecologicalhealth.org

Mount JF (1997) *Changing Flood Management to Prevent Future Disasters*. Linkages 4:1-5
www.instituteforecologicalhealth.org

Mount JF (1995) *California Rivers and Streams: the Conflict Between Fluvial Process and Land Use*. University of California Press.

Meanwhile the Department of Water Resources is preparing a policy paper on flood management issues that it will present to the Legislature in January 2005. We hope that this will be a forward-looking document that goes beyond immediate issues of paying for levee improvements and addresses broader floodplain management issues. The policy paper should incorporate the recommendations of the 2002 Floodplain Management Task Force. The legislature should develop and move bills to enact key provisions. The Institute for Ecological Health looks forward to continuing its work on these important issues.

LESSONS FROM THE SAN DIEGO FIRES

The huge 2003 wildfires in San Diego county, which cost many lives destroyed a large number of homes and burned about 390,000 acres, were a terrible tragedy. The effects on people's lives and on wildlife habitat will remain for a long time.

As with the major Yellowstone fires that occurred 15 years ago, it is important for society to understand the dynamics behind the fires and to learn the right lessons about public safety and land management. During and after the San Diego fires there were some attempts to blame habitat conservation programs and past fire suppression, analogous to efforts blaming the National Park Service for the Yellowstone fires.

In reality, fires of this magnitude occur every 90 years or so in western San Diego. The right mix of drought and the hot, dry San Ana winds result in fires that cannot be controlled and which burn through all types of vegetation.

Land use planning decisions need to address this inevitability. Necessary actions include avoiding sprawl into wildland areas, minimizing the length of the urban-wildlands edge, consolidating development into defensible areas and buffering the development with fire resistant land uses. These fire management needs mesh well with the biological conservation needs for the species rich natural communities such as coastal sage scrub.

The San Diego wildfires also resulted in a host of ecological management problems, as illustrated by the following three examples. The spread of invasive, weedy species will be a big issue and management activities will be necessary to maintain natural ecosystems. Some endemic species with very localized occurrences are in jeopardy and one or two butterfly species could become extinct. Populations of more widely distributed species
/ continued on page 11

SUSTAINING AGRICULTURE

Musings of a Rancher and the Public Access Issue

By Dave Forrest

When I worked in the hospital as a Registered Respiratory Therapist, I worked long hours, knowing I was getting paid overtime. Since I have become a rancher, during some years I have worked all year for free because the market was not good enough to meet the expenses of the ranch.

The hours I work vary with the season. Spring is the end of calving season, the beginning of irrigation, branding and vaccinating time, and the beginning of breeding season. As the daylight hours lengthen, the hours I work increase also. Fall is weaning and shipping time. Fall is also when I check to see that all the cows are pregnant, cull the cows that are not bred, pick out the heifers I will keep as replacements for the culled cows, and start feeding when the pasture gives out. Mid-winter and mid-summer are times when things settle down a little.

I love being a cattle rancher. The work environment is dirty, difficult, and sometimes dangerous, but it is good for my soul. Irrigating on a day when it is over 100 degrees or through the night in a cold wind, checking the calving pasture at 2 AM in 30 degree weather, feeding in the rain, watching the market drop just before I planned to sell, ---these are parts of my job. But then so is watching 20 calves running for the joy of it on a warm spring afternoon, seeing a covey of quail with several broods of chicks, watching the beaver play in the pond at dusk, and seeing grass growing in areas I have been trying to improve.

My life is physically challenging at times. Sometimes it means I am on horseback all day. I may be using a 4-wheeler to irrigate. I may have to deliver cattle to a customer, pulling a load of cattle over Highway 88, sometimes in the snow.

Some of my frustrations come from the county fishing access next to one of my pastures on the river. The public that uses the fishing access does not respect the No Trespassing signs. They frequently cut my fence to fish along the river or in the ponds. At first I did not care, but after they cut my fences a few times I started confronting them. They know that the Sheriff is too busy to respond to my call.

I know that a 3-day weekend in the spring or summer will definitely be trouble. My neighbor takes a gun and has fired it on a couple of occasions. One time I gathered cattle from the pasture next to the access to brand the calves. When we got to the corral, I realized I was short 10 calves. They had strayed onto the public land because someone had cut the fence. My direct cost was about \$200 in wages for my crew because it took two extra hours to get these calves into the corral.

A problem that is only going to get worse is the public's lack of respect for private property. I have been at conferences in other states where they were talking about recreational use becoming the primary use of public lands. Their complaint was that the biggest problems happen on weekends and holidays when the agency people are not around to police the range. This leads to a lot of destruction of public land and the rancher's property.

In California we have lots of private land that could have public value. The owners of such land or their neighbors do not look forward to giving access to the public for any reason because they realize it will create a lot of headaches. My first reaction to anyone considering such a deal would be Don't! If they still wanted to, I would tell them to make certain that they had adequate enforcement by the new owner as part of the deal.

If I have an opportunity to buy or lease next to public access in the future, I will have to count the cost and frustration of operating as higher. I love the idea of protecting the land from development, but I don't want to deal with the problems that come with any public access.

Cattle rancher Dave Forrest is a member of the Institute for Ecological Health's Board of Directors



such as the California gnatcatcher may be impacted for a long time, because the large scale fires did not leave refugia.

Finally, the San Diego fires provide lessons for other areas. Major natural disasters do happen and it is essential to plan for them. As well as public safety preparedness, it is necessary to be ready to counter myths about the causes of a disaster. Wise land use planning is essential to avoiding future tragedies. For example, there should not be development of rural areas where deep floods will occur eventually. And networks of biological reserves must be

sufficiently extensive and redundant to offset impacts of large scale fire or flood impacts.

Some of this material taken from a presentation by Dr. Wayne Spencer at the Second Annual Habitat Conservation Planning from Tahoe to the Bay workshop, November 2004.

Resources

San Diego Fire Recovery Network website
www.sdfirerecovery.net/

Pyne S.J. (2004) *Tending Fire: Coping with America's Wildland Fires*. Shearwater Press

BRIEF UPDATES AND ANNOUNCEMENTS

Draft Vernal Pool Ecosystems Recovery Plan

In November the U.S. Fish and Wildlife Service released its draft Recovery Plan for vernal pool ecosystems. It encompasses 33 species that occur in California and Southern Oregon. There are 20 federally listed species and 13 species of concern.

The plan provides an ecosystem-level approach to recovery and conservation. It details the objectives, strategies and criteria necessary to achieve the goals of protecting self-sustaining populations of each species in perpetuity, delisting the listed species and ensuring the long-term conservation of the species of concern. Interim goals include avoiding further declines of the species and carrying out necessary research.

The draft Recovery Plan provides information on all the actions needed to meet the goals. It includes consideration of data gaps and the need for adaptive management.

The document is available at two web sites:
<http://pacific.fws.gov/ecoservices/endangered/recovery/plans.html> and
<http://endangered.fws.gov/recovery/index.html#plans>

Public comments are due by March 18th 2005.



Linking Funding for Transportation and Habitat

On November 2nd San Diego voters approved Transnet, a ½ cent sales tax measure for transportation funding by a very slim margin. This controversial measure includes substantial funding for habitat conservation.

A number of California counties have sales tax measures to fund transportation projects, including transit. These are approved by the voters for a finite term. As the measures come up for renewal they now have to receive at least a 2/3 vote. This is a high bar. For example, this November transportation tax measures failed in Ventura and Solano.

The San Diego measure will provide \$14 billion over a 40 year period, mainly for a variety of road and transit projects. There is \$850 million for environmental mitigation, primarily for habitat conservation and management. Some of this money will provide an income stream that will be invaluable to the county's NCCP program. It is possible that the inclusion of dollars for habitat protection made the difference in the voting.

Transnet was controversial. Many citizens saw the road projects facilitating continued sprawl-style development, and saw shortcomings to the habitat conservation funding. On the other hand traffic congestion is a huge issue to many voters who seek more roads.

The relationship between sprawl and transportation will be important in future county sales tax measures. The Solano measure lost again this November, in part because of the lack of growth control measures to accompany the sales tax.

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Many thanks for your support! (L16)

Information Resources

Riparian Areas: Functions and Strategies for Management.

(2002) National Academy Press. www.nap.edu

This very useful volume is the product of the National Academy of Science's Committee on Riparian Zone

Functioning and Strategies for Management. Riparian, or streamside, areas are of great biological importance, especially in the arid West. This work explains the nature, structure and ecological functioning of riparian areas, including interactions with stream channels and with the adjacent upland areas.

The book examines the impacts of human activity and has a lengthy discussion of management strategies. There is also a chapter on legal protection of riparian areas.

New IEH Web Site

The Institute for Ecological Health has a new web site, www.instituteforecologicalhealth.org. You will find information about the site on page 2.

Back issues of *Linkages*

These are available at our Web site as pdf files. If you need a hard copy of an issue, we can provide it for a \$2 donation to cover our costs of copying and mailing.

Regional Conservation Planning in California: A Guide

See page 2 for information about this new guide. It will be available on the conservation planning page of our web site in December. We can send you a hard copy for a donation of \$15 to cover the costs of copying, binding, packaging and postage.

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