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ARTICLE

THE SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT: THE UNFOLDING STORY

BY JOAN HARTMANN*

INTRODUCTION

Stories describe obstacles overcome and successes achieved or, sometimes, just lessons learned. In late August 1997, California's Governor Pete Wilson vetoed a spending bill with \$6.5 million for wetlands acquisition and restoration in Southern California—an initiative that *his* Administration had proposed. The funds were to launch a twenty-year, five-county, regional restoration program christened the Southern California Wetlands Clearinghouse and later renamed the Southern California Wetlands Recovery Project.¹ This was the first time that a portion of the state's general fund had ever been specifically designated for wetlands acquisition and restoration. This delighted many in Southern California, who believed that the region has consistently received the short end of the stick compared to Northern California in terms of environmental expenditures. Ironically, Wilson's Republican Administration had pronounced a more ambitious set of wetlands goals than those set by the Clinton Administration.

Environmental organizations based in Northern California fought Wilson's initiative and persuaded the state legislature to

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¹ For reasons that will become clear, the name "Clearinghouse" is loaded with some negative associations. Therefore, this article will refer to the Southern California Wetlands Recovery Project, or when unavoidable, place the name "Clearinghouse" in quotations.

incorporate the funding for the proposal in a separate bill that provoked the veto. Why? An often-heard explanation is that Southern California has already gone to the environmental devil, has destroyed its environment, and is beyond salvation. Additionally, that arid Southern California even has wetlands often comes as a surprise and that the remnant wetlands have many significant values raises skeptical eyebrows. Was the opposition to Wilson's initiative a regional conflict of interest, as some in the Wilson Administration tried to suggest, or did the Northern California environmental community have legitimate reasons to risk the \$6.75 million slated for wetlands in Southern California? How would a loss of expected funds affect the nascent organizational structure among fourteen state and federal agencies that had been quietly emerging over a number of years? This was the first glimmer of a regional approach to appear on the Southern California horizon where long distances, large differences, and sheer institutional complexity work against regional cooperation. How could the agencies pick the process up by its bootstraps, reframe the organizational goals to gain legislative support, and yet stay in the good graces of the Wilson Administration to achieve funding the next year? Finally, could a holdover, controversial Wilson Administration wetlands program ever win the support of the new Democratic Governor, Gray Davis?

The Southern California Wetlands Recovery Project is an unprecedented alliance for Southern California that currently includes sixteen state and federal agencies, local government, business leaders, and the environmental community working with an illustrious panel of scientific advisors and active task forces in each of the five coastal Southern California counties. It seeks to acquire, restore and expand wetlands in these counties. What follows describes the lessons, the tensions, the initial achievements, and the as yet unresolved issues in the unfolding story of the Recovery Project. Part I describes the unprecedented growth experienced in coastal Southern California and the effect this has had on the region's wetlands. Part I also identifies the outstanding values inhering in the remaining, remnant and recoverable wetlands. Part II traces the origins of the Recovery Project back to earlier efforts to identify and carry out wetland mitigation projects to offset the impact of port expansion on aquatic resources. Part III explores the forces giving rise to what was initially called the "Clearinghouse" and what is now the Wetlands Recovery Project. Part IV describes what has been accomplished

by the Recovery Project. Part V sets out a few of the major challenges ahead for the Recovery Project's leaders and supporters.

I. WETLANDS OF COASTAL SOUTHERN CALIFORNIA

Coastal Southern California extends lengthwise for 491 miles along the curved shoreline from Point Conception to the Mexican border (and the physiographic region, referred to as the Southern California Bight, continues for another 130 miles into the Baja Peninsula).² In Santa Barbara County, the coastal reach extends inland a mere one mile to the Santa Ynez Mountains, widening in the stretch southward to an almost eighty mile width at the San Bernardino Mountains.³ The area has 15,000 acres in forty-one key coastal wetland areas and hundreds of streams and rivers with thousands of miles of riverine wetlands.⁴ A subset of South-

² See generally MURRAY DAILEY, ET AL., *ECOLOGY OF THE SOUTHERN CALIFORNIA BIGHT, A SYNTHESIS AND INTERPRETATION* (1993).

³ See Wayne R. Ferren, Jr., *The State of Wetlands in Coastal Southern California and Why These Habitats Are Important* 1 (Sept. 16, 1997) (unpublished article written for California Environmental Dialog (CED)) (on file with the author) [hereinafter Ferren, *Wetlands in Coastal Southern California*].

⁴ See generally STATE COASTAL CONSERVANCY, ET AL., *THE SOUTHERN CALIFORNIA COASTAL WETLANDS INVENTORY* (1997) (last modified Aug. 13, 1998) <http://www.ceres.ca.gov/wetlands/geo_info/so_cal.htm> [hereinafter *Wetlands Inventory*, 1997]. See also Wayne R. Ferren, Jr., et al., *Wetlands of the Central and Southern California Coast and Coastal Watersheds: A Methodology for Their Classification and Description* (1996) (last modified Aug. 1, 1996) <<http://lily.mip.berkeley.edu/wetlands/>> [hereinafter Ferren, et al., *Wetlands of the Central and Southern California Coast*]. The non-technical definition of "wetlands" is simply waterlogged lands covered permanently or temporarily with shallow water which may have either water-adapted vegetation or soils distinct from the uplands. See WILLIAM J. MITSCH & JAMES G. GOSSELINK, *WETLANDS* 17-20 (1986). The U.S. Fish & Wildlife Service (USF&W), the organization that tracks wetlands losses and gains, considers an area a wetland if it has either water, wetland plants or wetland soils. See THOMAS E. DAHL & CRAIG E. JOHNSON, U.S. DEP'T OF THE INTERIOR, *WETLANDS STATUS AND TRENDS IN THE COTERMINOUS UNITED STATES, MID 1970S TO MID-1980S* 17 (1991). The U.S. Army Corps of Engineers, the agency that defines wetlands for regulatory purposes, has used and considered several different definitions with some requiring that not just one, but two or even three characteristics be present before federal protections would apply and requiring that water be present for a certain number of days during the growing season (a difficult criterion to meet consistently in a drought-prone area like Southern California). See generally U.S. ARMY CORPS OF ENGINEERS, *WETLANDS DELINEATION MANUAL* (1987). The Clinton Administration's wetland plan, *PROTECTING AMERICA'S WETLANDS: A FAIR, FLEXIBLE AND EFFECTIVE APPROACH* (Aug. 24, 1993) commits federal regulatory agencies to a method of delineating wetlands that resembles the method used by USF&W. Drawing a precise wetland boundary is a difficult matter. Because wetlands are often transitional areas between land and water (ocean, rivers, lakes) or ponds (isolated wetlands, springs, Prairie Potholes, vernal pools), wetland boundaries change seasonally and over time. Different federal agencies such as the Army Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, and the Natural Resources Conservation Service all have wetland delineation responsibilities, but even two individuals working for the same agency could differ on where they call

ern California's coastal wetlands have been nominated as "Wetlands of International Importance" in accordance with the Ramsar Convention, whose designations are based on criteria of uniqueness, biodiversity, and waterbird habitat.⁵ Coastal Southern California lies in one of the world's eighteen "hot spots" identified by biologist E. O. Wilson to denote threatened biodiversity.⁶ California has more threatened and endangered species than any other state and many are unique to California.⁷ Although a delight to most people, Southern California's Mediterranean climate, its rugged, sharply rising coastal mountains, and its irregular, intense storms create a demanding set of conditions for wetland-dependent species. The wide fluctuations in water levels, salinity, oxygen, and temperature can stress organisms and have led to some innovative adaptive features.⁸ The result is a great

the boundary depending on season, training, and predisposition. Water depth also creates conundrums. In every state, most notably Louisiana, relatively rare and precious shallow-water wetlands are being converted to deep-water wetlands. The federal regulatory program to protect wetlands limits the "fill" of wetlands but has difficulty reaching many excavation activities. *See generally* 40 C.F.R. §§ 230.1-230.80 (2000). This creates confusion in trying to determine wetlands trends and will require more sophisticated methods to assess the gains and losses in wetlands functions and values.

⁵ The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty providing a framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 116 contracting parties with 1005 wetlands sites of international importance. Once listed, Contracting Parties are expected to manage the sites to maintain the ecological characteristics for which they were nominated. The Southern California Coastal Wetlands Complex includes twenty wetlands from Mugu Lagoon to the Tijuana Estuary. *See generally* THE RAMSAR CONVENTION BUREAU, THE RAMSAR CONVENTION ON WETLANDS (last modified Apr. 28, 2000) <<http://www.ramsar.org/index.html>>.

⁶ *See* E.O. WILSON, THE DIVERSITY OF LIFE, 261-63 (1992). The California floristic province stretches from southern Oregon to Baja California and contains one-fourth of all plant species found in the United States and Canada combined. Half, or 2,140 species, are found nowhere else in the world. "Their environment is being rapidly constricted by urban and agricultural development, especially along the central and southern coasts of California." *Id.* at 261 (emphasis added; Wilson includes Santa Barbara County in the central coast). *See also* Myers, et al., *Biodiversity Hotspots for Conservation Priorities*, 403 NATURE 853, 853-58 (Feb. 24, 2000). This article describes 25 of the world's hotspots based on threat to biodiversity and shows coastal California to be the only U.S. hotspot. *See also* U.S. Found to Be a Leader in Its Diversity of Wildlife, N.Y. TIMES, Mar. 16, 2000, at A18. The Nature Conservancy completed a five year analysis of U.S. biodiversity, concluding that the U.S. ranks near the top of the world's nations. California has three of the five U.S. "hotspots" where high numbers of species found nowhere else are at risk. These three are Southern California, the San Francisco Bay, and the Death Valley region. The other two "hotspots" are the southern Appalachians and the Florida Panhandle.

⁷ *See* CALIFORNIA ENVIRONMENTAL DIALOG, LAND CONSERVATION IN CALIFORNIA: NEEDS FOR THE NEXT DECADE 8 (1999) [hereinafter CED., *Land Conservation*].

⁸ *See, e.g.*, JOY B. ZEDLER, TIDAL WETLAND RESTORATION: A SCIENTIFIC PERSPECTIVE AND SOUTHERN CALIFORNIA FOCUS (1996) (Calif. Sea Grant College System Rept. No. T-

richness in environmental parameters, habitat types, and species.⁹ Human activities, however, have exacerbated the environmental stresses and have led to precipitous declines in wetland acreages and wetland-dependent species.¹⁰

A. LOSSES AND THREATS

Southern California has changed as no other part of the world has changed. The transition is one, not of degree, but of kind. Theodore Van Dyke¹¹

Going back to California is not like going back to Vermont, or Chicago; Vermont and Chicago are relative constants against which one measures one's own change. All that is constant about the California of my childhood is the rate at which it disappears. Joan Didion¹²

While over the past 200 years, fifty-three percent of the original 221 million acres of wetlands have been lost in the lower forty-eight states, ninety-one percent has been lost in California.¹³

¹⁴ Of the five million acres of wetlands that existed in California during

038) [hereinafter Zedler, *Tidal Wetland Restoration*]. See also JOY B. ZEDLER, *THE ECOLOGY OF SOUTHERN CALIFORNIA COASTAL SALT MARSHES: A COMMUNITY PROFILE* (1982) (U.S. Fish and Wildlife Service Rept. No. FWS/OBS-81/54) [hereinafter Zedler, *Coastal Salt Marshes*].

⁹ See generally Ferren, *Wetlands in Coastal Southern California supra* note 3. See also Ferren, et al., *Wetlands of the Central and Southern California Coast supra* note 4

¹⁰ See Zedler, *Tidal Wetland Restoration supra* note 8, at 84-85.

¹¹ See CAREY MCWILLIAMS, *SOUTHERN CALIFORNIA: AN ISLAND ON THE LAND* 113 (1983).

¹² See CALIFORNIA STATE COASTAL CONSERVANCY, *THE COASTAL WETLANDS OF SAN DIEGO COUNTY* 32 (1989).

¹³ See generally T.E. DAHL, U.S. FISH & WILDLIFE SERVICE, *WETLANDS IN THE UNITED STATES 1780's to 1980's* (1990). From 1985 to 1995, wetlands continued to disappear at an average rate of 117,000 acres per year for a decade's loss of one percent of the remaining wetlands of the continental U.S. This loss occurred despite a "no net loss" policy and was most pronounced on agricultural lands and on forested wetlands of the Southeast. The rate of loss has slowed from three million acres from 1975-85 to 1.17 million acres from 1985-95. See, e.g., John H. Cushman, Jr. *One Million Acres of Wetlands Was Lost from 1985 to 1995, Despite New Protections*, N.Y. TIMES, Sept. 18, 1997, at A18.

¹⁴ See generally NONA B. DENNIS & MARY LAUREL MARCUS, CALIFORNIA ASSEMBLY RESOURCES SUBCOMMITTEE ON STATUS AND TRENDS, *STATUS AND TRENDS OF CALIFORNIA WETLANDS* (1984). A more recent report proclaimed that "California is the first state in the nation to quantitatively determine that it has achieved its goal of no overall net loss and, more importantly, a net gain in wetlands for the years 1996 and 1997." GOVERNOR PETE WILSON, ET AL., *THE STATE OF THE STATE'S WETLANDS* 1 (1998). This claim was

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the mid 1800s, only 450,000 acres remain; of the original five percent of land area covered by wetlands at that time, less than one-half of one percent is covered by wetlands today.¹⁵ The State has lost approximately eighty percent of the coastal salt marshes, ninety-five percent of the riparian wetlands, ninety percent of freshwater marshes, and ninety percent of the vernal pools.¹⁶

More specifically, Southern California's coastal wetlands have declined from approximately 53,000 acres to 13,000 acres.¹⁷ Salt marshes have declined by seventy-five to ninety percent;¹⁸ riparian wetlands by ninety to ninety-five percent;¹⁹ and vernal pools by ninety percent.²⁰ The remaining wetlands face changed hydrological conditions, fragmentation, and destruction of buffers and upland connections.²¹ Wetland loss and degradation have led to the decline of the state's biological resources, as shown by estimates that fifty-five percent of the animals and twenty-five per-

refuted in an unpublished paper by Paul Michel, explaining that the net gain showed enhancement not restoration or creation and that enhancement often represented conversion with a loss rather than gain in wetlands functions. PAUL MICHEL, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX, CALIFORNIA WETLANDS (May 1999) (on file with author). Michel also claims that the report relied on questionnaires without quality assurance to verify accuracy of reporting and that figures for loss were under-reported. *Id.*

¹⁵ See generally Dahl, *supra* note 13. See also T.E. DAHL & C.E. JOHNSON, U.S. FISH & WILDLIFE SERVICE, STATUS AND TRENDS OF WETLANDS IN THE CONTERMINOUS UNITED STATES, MID 1970S TO MID 1980S (1991).

¹⁶ See generally Ferren, *Wetlands in Coastal Southern California supra* note 3.

¹⁷ See *id.*

¹⁸ See generally Zedler, *Coastal Salt Marshes supra* note 8.

¹⁹ See generally P.A. FABER, ET AL., U.S. FISH & WILDLIFE SERVICE, THE ECOLOGY OF RIPARIAN HABITATS OF THE SOUTHERN CALIFORNIA COASTAL REGION: A COMMUNITY PROFILE (1989). San Diego County has lost 40% of its riparian wetlands during the last decade alone. See Zedler, *Coastal Salt Marshes supra* note 8.

²⁰ See P. H. Zedler & T. A. Ebert, *A Survey of Vernal Pools of Kearny Mesa, San Diego County*, in SAN DIEGO COUNTY VERNAL POOLS: A COLLECTION OF RESEARCH PAPERS, 1979-1987 (J. P. Rieger, ed., 1987). See also AL & MARY ANNE PENTIS, THE MAGIC OF VERNAL POOLS (1999) (available from maryanne@pentis.com). These are estimates; reliable data on wetlands losses, particularly relating to sub-habitat types—e.g., mudflats; upper and lower marsh areas; salt panne, salt flats, and salt ponds; brackish and freshwater marshes; transition areas—is unavailable. Wetlands delineation methods have differed over time; some USGS map quadrants were never mapped or have been lost. This makes it impossible to firmly establish the extent of historic wetlands or losses; it and also creates difficulties in determining the relative percentage of sub-habitats that restoration efforts should attempt to achieve. See, e.g., KEITH B. MACDONALD, CALIFORNIA COASTAL CONSERVANCY, REGIONAL RESTORATION PLANNING FOR SOUTHERN CALIFORNIA COASTAL WETLANDS, SCIENCE ADVISORY WORKSHOP (1997) [hereinafter MacDonald, *Regional Restoration*].

²¹ See Joy B. Zedler, *Coastal Mitigation in Southern California: The Need for a Regional Restoration Strategy*, 6 ECOLOGICAL APPLICATIONS 84, 84-93 (1996).

cent of the plants designated as threatened or endangered depend on wetland habitats for their survival.²²

California has experienced an extraordinary history of population growth matched by no other state. Today California has forty percent more people than the next most populous state, or twelve percent of the nation's populace.²³ By the year 2020, California's current population of thirty-four million is expected to increase by another eighteen million to over fifty-two million people: greater than a fifty-percent increase equal to five new Los-Angeles-sized cities.²⁴ The bulk of this growth has occurred in the five coastal counties in Southern California, which grew from five million people in 1950 to 15.6 million people in 1998 and is expected to rise to twenty-two million by 2020.²⁵ But this is only part of the story. Poor land-use planning contributes to land consumption. While the population of the metropolitan Los Angeles area grew by forty-five percent between 1970 and 1990, the urbanized area grew by 200 percent and land use consumption has grown by 300 percent.²⁶ This pattern of uncontrolled growth puts intense pressure on existing open space, especially wetlands, because people have preferred to settle near the coast.²⁷

²² See Ferren, *Wetlands in Coastal Southern California* *supra* note 3, at App. I (showing an annotated catalogue of the wetland-dependent species of special concern that inhabit the study region).

²³ See CED, *Land Conservation* *supra* note 7.

²⁴ See Hans P. Johnson, *How Many Californians?*, in A REVIEW OF POPULATION PROJECTIONS FOR THE STATE, CALIFORNIA COUNTS POPULATION TRENDS AND PROFILES 1 (1999).

²⁵ See PAUL R. CAMPBELL, U.S. BUREAU OF THE CENSUS, POPULATION DIVISION, POPULATION PROJECTIONS FOR STATES BY AGE, SEX, RACE, AND HISPANIC ORIGIN: 1995-2025 (1996) (last modified Oct. 17, 1996) <<http://www.census.gov/population/projections/state/stpjrace.txt>>.

²⁶ See GEORGE B. BREWSTER, LAND RECYCLING AND THE CREATION OF SUSTAINABLE COMMUNITIES: A STRATEGY FOR ENSURING PROSPERITY AND QUALITY OF LIFE FOR CALIFORNIANS IN THE 21ST CENTURY (1998). See also LAND USE IN AMERICA (Henry Diamond & Patrick Noonan, eds., 1996).

²⁷ See William Fulton, et al., A Landscape Portrait of Southern California's Structure of Government and Growth (unpublished manuscript 1999) (on file with author) (explaining that the Southern California five coastal counties have just 8.6% of state's land area, they are home to 49% of the state's population). Environmental advocates are increasingly working with government officials in California to address the underlying causes of urban sprawl. To protect the environment means making cities more attractive places to live. Cities with poor schools, bad transit systems, inequitable housing and job opportunities, and few amenities drive people to the suburbs—eating up open space, increasing energy demands, causing more air pollution and congestion. This has drawn environmentalists into issues of municipal finance, fiscal reform, housing, regional planning, public

Population pressure and poor planning for development have not only consumed wetlands directly but have also created conditions that pose significant threats to the remaining wetlands. While these threats are fairly common across the counties, their relative impacts may vary somewhat. In Santa Barbara County, impacts result from soil eroding into rivers and streams, flood control efforts such as channelization and vegetation removal to protect structures built in flood plains, contaminated runoff from agriculture and urban activities, and exotic plants and predators crowding out native species. The problems are similar in Ventura County, although degraded water quality from industrial activities and inappropriate public access have been added to the list. In Los Angeles, Orange, and San Diego Counties, encroachment by residential, commercial, and recreational development along with the associated infrastructure, especially transportation systems, is the greatest threat to wetlands, while inadequate flows of tidal and altered fresh water regimes have significantly affected wetlands.²⁸ In a number of Los Angeles and Orange County areas, wetlands continue to exist within or near oil fields which leave a legacy of contamination issues to be addressed both to acquire the wetlands (since no one wants to buy a clean-up liability) and to restore them.

B. VALUES

In a world where money talks, the environment needs value to give it a voice. Frances Cairncross.²⁹

Southern California's mild, dry climate seems to have fostered the impression that wetlands in the region are uncommon and

infrastructure investments. See e.g., STEPHEN LEVY, CENTER FOR CONTINUING STUDY OF THE CALIFORNIA ECONOMY, LAND USE AND THE CALIFORNIA ECONOMY: PRINCIPLES FOR PROSPERITY AND QUALITY OF LIFE 2 (1998). California's State Treasurer, Phil Angelides, is aggressively directing state investment toward "smart growth" to protect open space and create livable cities. See, e.g., *State Treasurer Angelides' Activist Approach: Getting Good Press & Making Good Sense*, 13 THE PLANNING REPORT 10-11 (Oct. 1999). See also Mitchell Benson, *State Report Pushes Funds for Cities*, WALL ST. J., June 23, 1999, at A1.

²⁸ See Wetlands Inventory, 1997 *supra* note 4 (describing threats to coastal wetlands). See also JOAN HARTMANN, STATE COASTAL CONSERVANCY, THE FIRST PHASE OF THE SOUTHERN CALIFORNIA WETLANDS CLEARINGHOUSE PUBLIC OUTREACH EFFORT 14 (1998). The general understanding of the current threats is consistent and widely shared.

²⁹ See U.S. FISH & WILDLIFE SERVICE, BANKING ON NATURE: THE ECONOMIC BENEFITS TO LOCAL COMMUNITIES OF NATIONAL WILDLIFE REFUGE VISITATION i (1997) [hereinafter Fish & Wildlife Service, *Banking on Nature*].

limited in type, extent, and importance.³⁰ The models for wetlands education, delineation, and assessment have been largely developed using the wetter Atlantic and Gulf Coast regions where wetlands occupy large portions of the broad coastal plains. This contrasts with the Mediterranean climate of Southern California where wetlands dot a relatively narrow band between the steeply sloping mountains and the coast. Comparatively little information exists specifically addressing the economic and ecological values of wetlands in Southern California, resulting in too little information reaching planners and politicians.³¹ For analytic purposes, the value of wetlands can be measured directly in terms of the commodities they produce, indirectly in terms of the values attributable to them as natural amenities. Wetlands can also be described conceptually in terms of existence values that do not readily reduce to money, but should not be ignored.

1. Commodity Values

Commercial fishing represents the primary "commodity" produced by Southern California wetlands. Commodity values are measured directly by economic markets where value is determined by supply and demand. In 1990, for example, commercial shell and fin fish landings generated gross revenues worth \$3.6 billion in the United States.³² The comparable gross revenue figure for California in 1990 was over \$159 million.³³ Of this, fifty-five million was generated in Southern California.³⁴ Over seventy-five percent of the national, commercial fish catch derives from species that depend on wetlands.³⁵ Most of Southern California's commercially important fish, however, do not live in wetlands but rely on wetlands species for some portion of their food

³⁰ See Ferren, *Wetlands in Coastal Southern California* supra note 3. See also Ferren, et al., *Wetlands of the Central and Southern California Coast* supra note 4.

³¹ See *id.*

³² See CALIFORNIA'S LIVING RESOURCES AND THEIR UTILIZATION 228-29 (William S. Leets, et al., eds., 1992) [hereinafter Leets, *California's Living Resources*].

³³ See *id.* The estimated retail value exceeded \$890 billion. See CAMPAIGN TO SAVE CALIFORNIA WETLANDS, THE VALUE OF CALIFORNIA WETLANDS: AN ANALYSIS OF THEIR ECONOMIC BENEFITS 10-11 (1992) (showing the commercial fishery contribution of wetlands ranging from \$38 to \$199 per acre) [hereinafter Campaign To Save California Wetlands].

³⁴ Email from Bob Hoffman, U.S. National Marine Fisheries Service, Long Beach Office to Joan Hartmann (Nov. 8, 1999).

³⁵ See DAWN MARTIN, ET AL., AMERICAN OCEANS CAMPAIGN, ESTUARIES ON THE EDGE: THE VITAL LINK BETWEEN LAND AND SEA 9-10 (1996).

supply.³⁶ While total U.S. landings doubled from 1970 to 1990, California's percentage dropped from fourteen to four percent, largely due to the relocation of tuna processing operations from Southern California to Puerto Rico and American Samoa.³⁷ Therefore, commercial fishing is less significant in Southern California than in Northern California and the commercial fishing industry has evolved into a heterogeneous mix of fisheries.³⁸

2. *Amenity Values*

The value of *commodities* is *measured directly* by market supply and demand. How much is the consumer willing to pay per pound of halibut before they will switch to shark, or peanut butter? The value of *amenities*, such as sport fishing, ecotourism, quality-of-life enhancement, and ecological services, is *derived* from various sources *indirectly* and thus raises difficult methodological questions. Calculating the value of goods purchased by visitors to enjoy the amenity as a surrogate for the value of the amenity itself is the most common means to assess the monetary worth of sport fishing and ecotourism. Measures of quality-of-life enhancement derive from the increased economic vitality and real estate values attributable to the amenity. The worth of ecological services performed by wetlands are computed based on the values of substitutes. Amenities have actual and potential value. As the following discussion reveals, for each amenity discussed, it appears that the demand is increasing. Unlike the commodity value of commercial fishing, the amenity values of wetlands are on the rise and can be captured and enhanced through marketing and greater investment in restoration.

a. *Recreational and Aesthetic Amenities*

Three indirect measures have been employed to derive the value of recreational and aesthetic amenities. First, is the amount spent on commodities required to enjoy the amenity. Because parks, trails, and other public places are not for sale, economists measure their worth indirectly by how much people spend on gas, hotel rooms, entrance fees, or items such as fishing

³⁶ *See id.*

³⁷ *See* Leets, California's Living Resources *supra* note 32, at 228.

³⁸ *See generally* MICHAEL L. WEBER, A BRIEFING BOOK FOR THE MARINE FISHERIES OF SOUTHERN CALIFORNIA: A FORUM (1991) [hereinafter Weber, A Forum].

rods and bait, cameras and film, binoculars and bird books.³⁹ Second, visitor surveys consistently show that people would be willing to pay more for their recreational experience than they spend on the incidental commodities alone. A bird watcher might report having spent \$150 to be at his or her destination, but be willing to spend another fifty dollars for the experience itself. This difference is called the “consumer surplus.” It does not reflect revenues generated, but helps to fill gaps created by the indirect form of measurement, creating a fuller understanding of the amenity’s worth.⁴⁰

Third, to help assess the value of natural amenities to the local communities where they are situated, economists engage in further analysis to calculate how much money brought from outside the community is captured by the community to generate additional benefits. A portion of the money a tourist spends to eat at a local restaurant, to rent a bike, or to have her film developed creates jobs and income in the community; a portion of that income is, in turn, re-captured by the local economy, and this process continues. As the money flows through the local economy, its impacts can be traced as it is spent and re-spent by residents. This is called the “multiplier effect” and relies on sophisticated computer models to show how an amenity affects local income and employment.⁴¹

In 1995, national refuges, for example, generated over \$400 million in direct expenditures, which further flowed, through local economies to account for \$163 million in benefits.⁴² This does not include the contribution to local economies due to wages and salaries for refuge operation and maintenance, payments in lieu of taxes that the federal government pays to local government, or increased values of land in proximity to refuges.⁴³ Additionally,

³⁹ The “travel cost” method sums travel-related expenditures to determine value. See, e.g., Campaign To Save California Wetlands *supra* note 33.

⁴⁰ See Fish & Wildlife Service, *Banking on Nature supra* note 29, at ii-iii.

⁴¹ Telephone interview with Jon Goldstein, Senior Economist, Office of the Secretary, U.S. Department of the Interior (Nov. 4, 1999).

⁴² See Fish & Wildlife Service, *Banking on Nature supra* note 29, at v. The National Wildlife Refuges in Southern California, which all include wetlands, are Tijuana, South San Diego Bay, Otay Mountain, Sweetwater, Seal Beach, and Hopper Mountain. Prospective Refuge areas are possibly El Toro, Santa Ana, Ormond Beach, and Gaviota Coast. Email from Jack Fancher, U.S. Fish & Wildlife Service, Carlsbad, California to Joan Hartmann (Nov. 1, 1999).

⁴³ See *id.*

visitors enjoyed a surplus value over what they actually paid of \$373 million.⁴⁴

(i) *Sport Fishing*

After swimming, fishing is Americans' second most popular outdoor sport, and has been the subject of the greatest attention by economists due to the level of activity and the availability of data.⁴⁵ How much will anglers spend on equipment, travel and accommodations, guides and boats, permits and fees? The sum of these expenditures, rather than the cost per pound of fish, indicate value. Rules pertaining to fisheries that tend to favor recreational over commercial fisheries suggest that sports fishers are the greater economic and political forces. Southern California's pleasant climate and diverse fishes have attracted more sport fishers than any other part of the country except Florida. Statewide, direct expenditures by sport fishers amounted to \$3.3 billion, an increase from \$1.7 billion in 1991.⁴⁶ Two-thirds of the state's marine sport fishing activity occurs in Southern California and accounts for over \$536 million in expenditures.⁴⁷ Only a small percentage of the sought-after marine species use coastal wetlands as nurseries, most notably California halibut, which are concentrated in Southern California waters.⁴⁸ The extent to which marine sports fisheries rely on wetland-spawned fish and vegetation for food is not known.⁴⁹ Although statewide, freshwa-

⁴⁴ See *id.*

⁴⁵ The National Survey of Fishing, Hunting, and Wildlife-Associated Recreation has been conducted since 1955 and represents an ongoing and comprehensive source of information about anglers, hunters, and wildlife watchers. See U.S. FISH & WILDLIFE SERVICE, 1996 NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION 115 (1997). See also VISHWANIE MAHARAJ & JANET CARPENTER, THE ECONOMIC IMPACTS OF FISHING, HUNTING AND WILDLIFE VIEWING ON NATIONAL FOREST LANDS (1999) (applying the 1996 Survey results to determine the values of these activities specifically on Forest Service lands).

⁴⁶ See CALIFORNIA DEPARTMENT OF FISH AND GAME, ECONOMIC IMPACT OF SPORT FISHING (last modified May, 2000) <<http://www.dfg.ca.gov/fishing/>>.

⁴⁷ See Leets, *California's Living Resources* *supra* note 32. The most commonly caught species are rockfish*, Pacific mackerel, sand bass, California barracuda*, Pacific bonito, California sheephead, white seabass*, California halibut*, yellowtail*, and striped marlin (species with an asterisk depend on coastal environments for all or part of their life cycle). See *e.g.*, Weber, *A Forum* *supra* note 38.

⁴⁸ See Leets, *California's Living Resources* *supra* note 32.

⁴⁹ See WILLIAM M. KIER ASSOCIATES, CAMPAIGN TO SAVE CALIFORNIA WETLANDS, WETLAND WEALTH, THE VALUE OF WETLANDS TO CALIFORNIA'S FISHERIES 7. See also

ter fishing generates seventy percent of the economic impacts of the sport fishing industry, the value of freshwater fishing to Southern California has not been separated out.⁵⁰

(ii) *Ecotourism*

Travel and tourism together are the country's third largest retail industry and are likely to become the leading industry.⁵¹ The California Trade and Commerce Agency's Division of Tourism estimates that tourism generates about \$55.2 billion annually in the state, comprising 6.5 percent of the gross state product.⁵² Almost \$10 billion is spent on coastal tourism.⁵³ Wildlife viewing generates more than \$3.6 billion.⁵⁴ Nationally, spending for wildlife watching rose by twenty-one percent from 1991 to 1996.⁵⁵ In California, "ecotourism," which is also referred to as

Weber, *A Forum supra* note 38. Commercial landings hit a peak of 4.7 million pounds in 1919 and have declined to 910,000 pounds. Recreational catch peaked at 143,000 fish in 1974, but has averaged 8,620 fish in through the early 1990s when it began to increase. Commercial fishing is limited to specific techniques, times of the year, and places. The food chain support offered by wetlands fish to marine mammals is similarly unknown. At 34 species, Southern California's marine mammals comprise one of the largest and most diverse marine mammal communities in the world. While most marine mammals have little if any commodity values due to regulations, the gross revenues from whale watching ships in California (excluding gas, lodging, souvenirs, film equipment, etc, in the mid 1980s) was \$2.6 million. Grey whales used to calve and winter in Southern California estuaries like Santa Monica Bay before these nursery areas became so developed that the grey whales all headed further south to Baja, California. *See id.*

⁵⁰ *See* Vishwanie Maharaj & Janet Carpenter, *The 1996 Economic Impact of Sport Fishing in California* (on file with the author) (describing direct salt and freshwater fishing expenditures in the state as \$3.3 billion and a total economic output value of \$7 billion).

⁵¹ *See* STEVE LERNER & WILLIAM POOLE, *THE ECONOMIC BENEFITS OF PARKS AND OPEN SPACE: HOW LAND CONSERVATION HELPS COMMUNITIES TO GROW SMART AND PROTECT THE BOTTOM LINE* 23 (1999).

⁵² *See* THE RESOURCES AGENCY OF CALIFORNIA, *CALIFORNIA'S OCEAN RESOURCES: AN AGENDA FOR THE FUTURE* (1997).

⁵³ *See id.*

⁵⁴ *See* U.S. FISH & WILDLIFE SERVICE, *NATIONAL AND STATE ECONOMIC IMPACTS OF WILDLIFE WATCHING* (1996).

⁵⁵ *See* Fish & Wildlife Service, *Banking on Nature supra* note 29, at v. Americans spent \$29.2 billion for activities related to wildlife watching with a "multiplier effect" on the economy of \$85.4 billion which would have ranked it 23rd if it were a Fortune 500 company. *See id.* While travel costs accounted for 32 % of the spending, expenditures for camping equipment, binoculars, cameras, bird food, organizational memberships, etc. accounted for 57% of the spending. *See id.*

green tourism, nature tourism, or adventure tourism, is the fastest growing segment of the tourism industry.⁵⁶

California's marketing program for tourism targets four types of vacationers: family, romance, recreation, and nature. Nature-based activities such as cultural learning, education, and wildlife viewing are important for all four, and environmental amenities are an increasingly significant criterion for selecting travel destinations.⁵⁷ Travel planners generally like to package a varied set of vacation activities. For example, they might plan a vacation around Disneyland, Venice Beach, Universal Studios, the San Diego Zoo, and kayaking in Upper Newport Bay. Notably, beach attendance outranks amusement park attendance by 2001.⁵⁸

California has long been a prime destination because of its scenic, natural wonders. Ecotourists have higher educational and income levels than typical travelers, so they are a sought-after market segment.⁵⁹ Since ecotourists are more likely to reside in California than any other state and because changes in family structure and work responsibilities have shortened vacations, within-state eco-travel will probably increase.⁶⁰ Communities that assertively market to nature-based tourists promote sustainable development that preserves the environment and can bring ongoing benefits to communities that protect and showcase their environmental amenities.

A case in point is the Central Coast Birding Rally that draws tourists to Santa Barbara County, competing to see which team can identify the most birds on the Central Coast Birding Trail. A

⁵⁶ Remarks Of John Poimiroo, Deputy Secretary For Tourism, California Trade And Commerce Agency, Beyond Whale Watching: The Future Of Coastal And Marine Ecotourism In California And The Pacific Rim (Mar. 2000). See also Coastal Zone Foundation & The Resources Agency Of California, California And The World Ocean '97 Book Of Abstracts (1997). See also California State Parks, Public Opinions And Attitudes On Outdoor Recreation In California In 1997 (1998) (describing the increasing number of people taking part in nature observation and study).

⁵⁷ See John Poimiroo, *The Promise of Ecotourism*, 13 CALIFORNIA COAST AND OCEAN 8 (Summer 1997).

⁵⁸ See California Coastal Coalition Fact Sheet, Beaches Are The Most Popular Tourist Attraction In The State (1997) (last modified Feb. 19, 2000) <<http://calcoast.org/>>.

⁵⁹ See generally John Poimiroo, *The Promise of Ecotourism*, 13 CALIFORNIA COAST AND OCEAN, 8 (Summer 1997). This article contains an excellent definition of "ecotourism."

⁶⁰ See *id.*

leading story in the *Santa Barbara News Press* noted that: “[b]irding is said to rank second only to gardening in the amount of money spent in pursuit of a pastime.”⁶¹ The Executive Director of the Santa Maria Chamber of Commerce was quoted to illustrate that local chambers of commerce are discovering ecotourism: “When we first learned the profile of a typical birder, we realized it’s not something to be taken lightly...these people are generally well educated, and perhaps have more disposable income. This really matches the type of visitor we’d like to attract.”⁶² Another article appearing in the *Santa Ynez Valley News* described the event, explaining that Santa Barbara County has a wealth of different habitats and specially preserved areas: “The climate, topography and culture support the premise that what we have here is worthy of a grand and popular event that can draw visitors from all over the West.”⁶³ The local Audubon chapter has joined with hotels and restaurants to create a Partnership for Green Tourism in the region.⁶⁴ Birders at Orange County’s San Joaquin Marsh have also won national contests for several years running by identifying the greatest number of species in twelve hours within a circumscribed area.⁶⁵

The National Park Service, the Forest Service, and the Fish & Wildlife Service have all published studies to demonstrate that the public lands they manage promote tourism, and contribute to the economic base of the communities where they are located.⁶⁶ The Forest Service and Fish and Wildlife Service found that consumptive uses such as logging, grazing, hunting or fishing are less remunerative than recreational activities such as hiking, biking, wildlife watching and, further, that the demand for the latter

⁶¹ Nora K. Wallace, *Bird-lovers Flock Here for Serious Watching*, SANTA BARBARA NEWS PRESS, Oct. 16, 1999, at B1.

⁶² *Id.*

⁶³ *Local Chapter of Audubon Society Hosts Central Coast Birding Rally*, SANTA YNEZ VALLEY NEWS, Oct. 12, 1999, at 6.

⁶⁴ *Id.* Details about the partnership can be found at <<http://homepages.go.coni/-birdlom/html>>.

⁶⁵ Interview with Trude Hurd, Project Director, San Joaquin Wildlife Sanctuary, Sea & Sage Audubon (Feb. 24, 2000).

⁶⁶ See e.g., NATIONAL PARK SERVICE, THE ECONOMIC BENEFITS OF VISITATION TO OUR NATIONAL PARKS (last modified May 1, 1997) <<http://www.nps.gov/pub/aff/issues/econbene.html>>; U.S. FOREST SERVICE, FY 1998 STATEMENT OF RECEIPTS, REP. 4 (1998); U.S. FISH & WILDLIFE SERVICE, BANKING ON NATURE: THE ECONOMIC BENEFITS TO LOCAL COMMUNITIES OF NATIONAL WILDLIFE REFUGE VISITATION (July 1997).

is increasing.⁶⁷ Conventional wisdom used to hold that public lands were a drain on local economies. It was thought that public land ownership did not fully exploit resources to generate taxes, employment, and returns to the local economy.⁶⁸ This has led to better economic analyses that address not only the easily tallied commodity values, but also amenity values contributed by tourism.⁶⁹ Unlike many activities on public lands that require significant public subsidies, the economic return on natural amenities offer greater returns than consumptive activities.⁷⁰ Natural amenities are also more lucrative than unplanned growth because local governments may overestimate the economic impacts of low density development which require more tax-supported infrastructure such as roads, sewers, police, fire services, and schools.⁷¹ High-density development and land conservation are often smarter fiscally than suburban style development.

b. *Quality of Life*

The belief that the “economic foundation and future of California lies in its natural resources” is gaining momentum.⁷² A

⁶⁷ Recreation fees were the second largest source of revenue from National Forest lands after logging—exceeding grazing, power generation and mining combined. *See e.g.*, U.S. FOREST SERVICE FY 1998 STATEMENT OF RECEIPTS, ASR-04 (1998). If the expenditures on travel, equipment, etc. are taken into account recreation may contribute up to 74% of the economic benefits associated with Forest Service lands. U.S. FOREST SERVICE, THE FOREST SERVICE PROJECT FOR FOREST AND RANGELAND RESOURCES—A LONG TERM STRATEGIC PLAN (Draft, 1995). Non-consumptive uses generated far more economic activity at National Wildlife Refuges than hunting and fishing. U.S. FISH & WILDLIFE SERVICE, BANKING ON NATURE, *supra* note 29, at v. Nonconsumptive users stay for shorter periods and spend less per person, but their far larger numbers explain their greater economic significance.

⁶⁸ This reasoning was reflected in the Sagebrush Rebellion which sought to privatize federal lands. The political difficulties with this strategy as well as the fact that private sector activities such as logging, grazing and mining often depend on federal subsidies for their profitability shifted the focus to establishing private “rights” to government assets. *See* Robert H. Nelson, *Private Rights to Government Actions: How Modern Property Rights Evolve*, 1996 UNI. OF ILL. L. REV. 361-386 (1986).

⁶⁹ *See, e.g.*, discussion *supra* Section I.B.

⁷⁰ *See, e.g.*, U.S. DEP’T OF THE INTERIOR, *supra* note 29. Examples where returns are greater are described in Lerner and Poole, *supra* note 51, at 26. The O & M expenses for the Northern Central Rail Trail near Baltimore were about \$192,000 while it returned \$304,000 in state and local taxes; store vacancy rates in Dunedin, Florida dropped from 35% to zero after the Pinellas Trail was built through the town; rail trails in Iowa, Florida, and California contributed between \$1.2 million to \$1.9 million to their home communities. *See id.*

⁷¹ *See* U.S. DEP’T OF THE INTERIOR, *supra* note 29, at 7-8.

⁷² CALIFORNIA ENVIRONMENTAL DIALOG, *supra* note 7, at 6.

leading advocate is the California Environmental Dialog (CED), whose corporate, environmental and public policy members maintain that “environmental protection and economic prosperity go hand in hand.” In 1998, CED published an influential “white paper” asserting the connection:

The interdependence of the economy and environment is at the foundation of California’s wealth and at the center of the California dream. CED’s dream embraces both economic prosperity and the preservation and restoration of natural systems—one compatible with the other.⁷³

Coming from business leaders such as the Bank of America, Chevron, Hewlett Packard, Southern California Edison, Pacific Gas and Electric, Waste Management, Lockheed Martin, and Northrup Grumman, this assertion carried some weight. In 1999, CED followed with a report that makes the case for spending \$12.3 billion by 2010 to preserve almost 5.5 million acres of land in California in light of the extraordinary growth pressures the state is facing and the importance of environmental amenities in attracting and keeping business and a high-level workforce to the state.⁷⁴

California’s community of foundations has also taken a major leadership role in pushing the issue of land protection onto the public agenda. The David and Lucille Packard Foundations joined some of CED’s major corporate members in funding the major data collection effort required to come up with the acreage and cost figures set out in the 1999 Study. Even more importantly, the foundation community itself has organized as Californians and the Land to help set the policy agenda on issues of sustainable land use and land conservation. The member foundations have sponsored new nonprofits to tackle critical issues, has

⁷³ CALIFORNIA ENVIRONMENTAL DIALOG, *HABITAT AND PROSPERITY: PROTECTING CALIFORNIA’S FUTURE* (1998) (last visited Nov. 25, 2000) <<http://www.cedlink.org/publications/pubs.htm>>.

⁷⁴ CALIFORNIA ENVIRONMENTAL DIALOG, *supra* note 7, at 8 and App. B citing John L. Crompton, et al., *An Empirical Study of the Role of Recreation, Parks and Open Space in Companies’ (Re)Location Decisions*, J. OF PARKS & REC. ADM., 37-58 (1997). See also CALIFORNIA SENATE OFFICE OF RESEARCH, *MYTHS OF JOBS VS. RESOURCES: ENVIRONMENTAL PROTECTIONS AND ECONOMIC GROWTH* (1996).

held conferences, and published influential reports.⁷⁵ One of these, *Land Use and the California Economy: Principles for Prosperity and Quality of Life*, identified the four factors associated with industry competitiveness: workforce education and training, infrastructure investment, business regulation, and quality of life. The report concluded “a high quality of life is not just an amenity for California residents. It is, increasingly, a key determinant in attracting workers for California’s leading industries.”⁷⁶ In making location decisions, boards and CEOs of companies are significantly influenced by the quality of life they can expect for themselves, their families, and their workers.⁷⁷ Today, educated workers are as interested in quality of life as in a paycheck and companies will locate where they can attract good people.⁷⁸

Recreational and outdoor opportunities are key to a high quality of life. A recent report by the Trust for Public Land makes the link.⁷⁹ For executives, such amenities rank just after the quality of education. Surveys of the general population showed that access to greenery and open space were as crucial to quality of life as low crime and safety. The report describes how, by establishing growth boundaries to protect open space, Portland, Oregon defied critics, and created a robust economy which has increased jobs by 57 percent. The report also details major industries citing greenways in Raleigh-Durham and Morgantown, North Carolina as decisive factors in their location decisions. In addition to

⁷⁵ Foundation members include the William and Flora Hewlett Foundation, The James Irvine Foundation, The David and Lucile Packard Foundation, and Environment Now. The most recent Plenary Meeting occurred on July 1, 1999 at the San Francisco World Trade Center where Governor Gray Davis made a surprise appearance. Some of the nonprofits engendered by Californians and the Land to address specific issues identified in previous Plenary Meetings are The Great Valley Center, California Center for Land Recycling, California Futures Network, Center for the Continuing Study of the California Economy.

⁷⁶ CENTER FOR CONTINUING STUDY OF THE CALIFORNIA ECONOMY AND CALIFORNIANS AND THE LAND, *LAND USE AND THE CALIFORNIA ECONOMY: PRINCIPLES FOR PROSPERITY AND QUALITY OF LIFE* 16-17 (2000) (last visited Nov. 25, 2000) <<http://calfutures.org/resource.lasso>>. These leading industries are motion pictures and television; multimedia, software, internet, and chip design; and biotechnology which are creativity and knowledge-based industries with a heavy focus on technological innovation.

⁷⁷ See *id.*, quoting Ben Haddad, President, San Diego Chamber of Commerce.

⁷⁸ See Timothy Egan, *Drawing a Hard Line Against Urban Sprawl*, N.Y. TIMES, Dec. 30, 1999, at A1 (quoting an Intel spokesman).

⁷⁹ See Lerner & Poole, *supra* note 51, at 15.

stimulating desirable economic growth, open space contributes to a strong real estate market. Over the next twenty-five years, real estate values, along with property tax revenues, will rise fastest in communities that adopt principles of smart growth.⁸⁰

Wetlands in urbanized Southern California offer experiences unmatched by other open space environments. The sights, smells, and feel of the spongy, wet areas—where one can observe plants growing untamed, fish schooling and jumping, and birds in greater variety and abundance than almost anywhere else in the world, to say nothing of the untold mysteries of the diminutive creatures in the mud and water—stand in marked contrast to the manicured parkways or paved urban centers in which they are located and provide an even more concentrated display of life's diversity than the most pristine mountain wilderness.

Moreover, with the ebb and flow of tidal influence or seasons, the scene is ever changing. Children flock to these areas by the busload.⁸¹ For tens of thousands of Southern California school children, particularly from families of low income, field trips to coastal wetlands and watersheds provide one of their earliest encounters with a naturalized environment. They go eagerly with binoculars, trowels, and strainers in hand to explore and discover.

More advanced study, too, occurs in these areas. Many colleges and universities use wetlands in their courses and research programs, most notably the University of California at Santa Barbara, Los Angeles, and Irvine as well as San Diego State University.⁸² Informal education and observation also occur. "Citizen science" is fostered by interpretive activities and materials prof-

⁸⁰ See *id.* at 10, 15, citing ERE YARMOUTH AND REAL ESTATE RESEARCH CORPORATION, *DEFINING NEW LIMITS: EMERGING TRENDS IN REAL ESTATE* (1998).

⁸¹ Unfortunately, no surveys have been done to estimate visitation at either coastal wetlands or watersheds throughout the region.

⁸² See, e.g., Brennan, *Wetland Will Be a Lab for Research*, ORANGE COUNTY REGISTER, Mar. 3, 2000, at 1 (describing some of the research projects occurring at this UC-Irvine Reserve including how plants affect the atmosphere which could shed light on the process of global warming. The University of California Natural Reserve System, which is designed to managed cross sections of the state's habitats, comprises 33 units including university-owned wetlands areas in three Southern California Counties: San Diego (Kendall Frost on Mission Bay); Orange (San Joaquin Marsh); and Santa Barbara (Carpinteria Salt Marsh)). UCLA researchers, however, have a formal agreement to do work at Pt. Mugu in Ventura County and have also been very active in conducting studies at Ballona Wetlands in Los Angeles County.

ferred by public agencies and non-profit organizations.⁸³ Many people of all ages and backgrounds, however, just meander in these areas to “get away” and absorb the atmosphere.⁸⁴

Sunset Magazine recently featured Huntington Beach as one of the West's best cities, illustrating the potential of wetland restoration to create a touchstone for community life.⁸⁵ Huntington Beach was one of eight featured cities, its headline recognizing that “It wasn't easy to save a wetland in Southern California. But it was worth it.” The accompanying picture shows a couple watching birds from the bridge with the caption “almost made a marina, Bolsa Chica is today a refuge for birds—and people.”⁸⁶ Similarly, along the Los Angeles River, long seen as little more than a storm sewer, “a park is being born,” according to a recent *Los Angeles Times* article: “[T]he sightseers talked about their hunger for open spaces to bike and walk. They talked about frogs and the moonlight on the bike trail, about the snowy egrets they had seen, and about the surf-like effects of the freeway.”⁸⁷ They found something magical in the “glistening water, thick stands of trees, blue herons and mallard ducks” amidst the intense urban setting. “You are in the middle of the city, and then you slip through this crack in the concrete facade and into a space that’s more human.”⁸⁸ Economic methods to determine the value of such amenities for attracting desirable industries and supporting real estate investments are only evolving.⁸⁹ Nonetheless, the

⁸³ For example, the majority of the 41 coastal wetlands and most watersheds in Southern California have sprouted site-specific nonprofits dedicated to protecting and teaching about these areas. See COASTAL CONSERVANCY, SOUTHERN CALIFORNIA COASTAL WETLANDS INVENTORY (last modified Aug. 19, 1998) <http://www.ceres.ca.gov/wetlands/geo_info/so_cal.html>.

⁸⁴ See, e.g., C.S. LEWIS, *THE FOUR LOVES* 17-19 (1960) (on the appreciation of nature for the “moods of times and season” and “spirit” of the place).

⁸⁵ See *Sunset's Special Report: The West's Best Cities*, *SUNSET* 82, 82-91 (Nov. 1999). The magazine asked urban planners, citizen groups, city officials and *Sunset* readers to identify communities under 600,000 that are “doing outstanding work at meeting the challenges offered by urban life at the start of the 21st century.”

⁸⁶ See *id.* at 86.

⁸⁷ See Jill Leavy, *Outpost of Nature Where a Freeway and a River Coexist*, *L.A. TIMES*, Nov. 6, 1999, at B1.

⁸⁸ See *id.*

⁸⁹ Hedonic pricing is the method employed to determine the impact of amenities on surrounding property values. Disentangling the share of the increased value attributable to wetlands is problematic, but statistical models for this purpose have been developed. See, e.g., LSA ASSOCIATES, *THE ECONOMIC BENEFITS OF WETLANDS: A REVIEW OF THE*

Sunset and *Los Angeles Times* articles illustrate the key quality-of-life role that wetlands restoration can play and shows why state and local government should place a high priority on wetlands recovery.

Based on the growing appreciation for the significance of environmental amenities to the health of California's economy, the California Environmental Dialog, Californians and the Land, The Nature Conservancy, and the Trust for Public Land, among others, were leaders in bringing environmental bond measures totaling over \$4 billion to California's March 2000 ballot, which were approved by state voters.⁹⁰ The \$2.1 billion Park Bond was hailed as the largest ever proposed. The major underlying rationale for this legislation was "quality of life." Proponents of the bonds contend that, to maintain its economic viability, California must invest in its "natural infrastructure." On March 7, both bonds passed with almost two-thirds of the vote, demonstrating that the voters support this premise.⁹¹

c. *Ecological Services*

Wetlands perform a variety of ecological services including slowing floodwaters and recharging and cleansing groundwater. The estimated the total annual value of such services provided by natural ecosystems on a global scale is 1.8 times the world's gross domestic product (\$33 trillion: \$18 trillion).⁹² Wetlands are the most valuable terrestrial ecosystem contributing \$4.9 trillion worth of services; estuaries are the most valuable coastal ecosys-

LITERATURE AND APPLICATION TO THE MISSION BAY PROJECT, SAN FRANCISCO, CA (Sept. 1989) (finding that a wetlands restoration project would increase the value of surrounding property by \$80 million).

⁹⁰ See SAFE NEIGHBORHOOD PARKS, CLEAN WATER, CLEAN AIR AND COASTAL PROTECTION BOND ACT OF 2000 (VILLARAIGOSA-KEELEY ACT), TEXT OF PROPOSITION 12 (last visited Nov. 25, 2000) <<http://primary2000.ss.ca.gov/VoterGuide/Propositions/12text.htm>>; Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act of 2000, Text of Proposition 13 (last visited Nov. 25, 2000) <<http://primary2000.ss.ca.gov/VoterGuide/Propositions/13text.htm>>.

⁹¹ See, e.g., Tony Perry, *Bond Measures Win—Except for Plan to Improve Crime Labs*, L.A. TIMES, Mar. 9, 2000, at A-19. The park bond, Proposition 12, won by 63.2%, and the water bond, Proposition 13, won by 64.9%. See CALIFORNIA SECRETARY OF STATE, STATE BALLOT MEASURES (last modified June 2, 2000) <<http://Primary2000.ss.ca.gov/returns/prop/00.htm>>.

⁹² See Robert Costanza, et. al., *The Value of the World's Ecosystem Services and Natural Capital*, NATURE (May 15, 1997). See generally NATURE'S SERVICES: SOCIETAL DEPENDENCE ON NATURAL ECOSYSTEMS (Gretchen C. Daily, ed., 1997).

tem contributing \$1.6 trillion.⁹³ Together these inland and coastal wetlands represent about twenty percent or one-fifth of all ecosystem services.⁹⁴ At least two inferences follow from these statistics. First, among the ecosystem types to be protected, wetlands should be a top priority. Second, it makes economic sense to protect these environments rather than try to create expensive substitutes for the relatively low-cost services they provide. These conclusions are supported by a California study that estimated the value of flood control, water supply, and water quality services provided by the state's wetlands to range from \$4.7 billion to \$16.1 billion.⁹⁵ From this perspective, wetlands are "natural assets" or "ecological capital" that should be preserved and expanded.

Regarding flood control, Southern California's coastal wetlands do not have the major role in buffering storms that the coastal wetlands along the East and Gulf coasts have because they were historically less expansive due to the narrower band between the ocean and the mountains and have declined by a greater percentage. The region's watersheds, however, have the capacity to capture stormwater and reduce the potential for flooding, thus reducing the need to build new flood control structures. This value is calculated by comparing the amount of flood damage avoided if wetlands are left intact to the amount required for building flood control structures.⁹⁶

Development has encroached along many stretches of rivers and streams which have been straightened, corseted in cement, and surrounded with levees in order to shunt water to the ocean as quickly as possible. Increasing development and "hardscape," require ever more off-stream structural measures, conveyance facilities, channelization, and levees. Many watershed organiza-

⁹³ Estuaries are deepwater and adjacent tidal wetlands that are semi-enclosed by land; they are connected to the ocean and receive freshwater runoff from the land. See Mitsch & Gosselink, *supra* note 4, at 460.

⁹⁴ See Robert Costanza, et. al. *The Value of the World's Ecosystem Services and Natural Capital*, NATURE (May 15, 1997).

⁹⁵ See Campaign to Save California Wetlands *supra* note 33, at iii. These figures were derived by adding the first three rows—flood control, water supply, and water quality—of the Summary Table.

⁹⁶ Studies assessing flood control values for an acre of wetlands range from \$260/acre to \$4650/acre in 1990 dollars. See *id.*

tions are eagerly trying to acquire open space adjacent to rivers to detain floodwaters while providing wetland habitat along with parks and athletic fields in the dry season. They are also trying to increase permeable surface throughout the watersheds to reduce the volume of storm flows.⁹⁷ In areas that are already highly developed, the potential costs of flooding loom large in comparison to the flood control benefits to be gained from the small amount of high-priced, undeveloped land remaining. Wetlands in these areas must serve multiple uses for the benefit-cost analysis to justify expenditures. In less highly developed riparian areas, particularly in Santa Barbara, Ventura and San Diego Counties, flood plains can still be protected, avoiding the huge expense of structural flood control measures and the risks to life and property associated with floods.

Wetlands enhance water supply by slowing and pooling water, allowing it to percolate into aquifers. Rather than being shunted to the ocean, which exacerbates the pressure to import water from other regions, it becomes available for drinking water.⁹⁸ The brackish water of the region's coastal wetlands is not good for this purpose, but freshwater wetlands serve as the primary means for recharging groundwater. The economic benefit of recharging groundwater aquifers is determined by taking the difference between the cost of pumping and treating recharged groundwater and the cost of the next most expensive alternative, for example, imported water supplied by the Metropolitan Water District (MWD).⁹⁹ This difference is \$246 per acre-foot.¹⁰⁰ Until existing

⁹⁷ See, e.g., TREEPEOPLE, SECOND NATURE: ADAPTING L.A.'S LANDSCAPE FOR SUSTAINABLE LIVING (1999) [hereinafter TREEPEOPLE].

⁹⁸ Capturing the average 15 inches of rain that fall on Los Angeles each year, could provide 52% of the City's water needs and consequently reduce the demand for water imports. See *id.* at 9. See also TRANS-AGENCY RESOURCES FOR ENVIRONMENTAL AND ECONOMIC SUSTAINABILITY (TREES), COST-BENEFIT ANALYSIS REPORT 8-1--8-15 (Aug. 1998) (for a technical analysis) [hereinafter TREES].

⁹⁹ MWD supplies water to member agencies in the greater Los Angeles area, Riverside and San Diego through 775 miles of pipeline, five filtration plants, eight reservoirs, numerous regulating structures, and 15 hydroelectric power recovery plants. See THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, ANNUAL REPORT 42 (1993).

¹⁰⁰ See TREES, *supra* note 98. In Los Angeles, the 1994 demand was 611,900 acre feet (an acre foot is 325,851 gallons) and the average rainfall is 370,000 acre feet spread over 468 square miles. Most rainfall is collected in storm drains and then in concrete river channels discharging to the ocean. MWD water costs \$426 per acre foot while pumping and treating groundwater costs \$180 per acre foot. Assuming no additional costs (e.g., the land itself), the savings is \$246 per acre foot.

and potential freshwater wetlands in the region are surveyed and studied for groundwater recharge rates, it is not possible to compute the potential the groundwater recharge value.¹⁰¹ Southern California visionaries are exploring innovative ways to capture and conserve water. One example is by recontouring yards and other green areas into bowls—"mini-wetlands"—to retain water from rain and irrigation rather than allowing it to escape as runoff to the sea.¹⁰²

Wetlands soils, plants, and animals are capable of purifying water by filtering and treating pollutants such as fertilizers, bacteria from human and animal waste, and even toxics such as heavy metals and pesticides. Scientists are still seeking to understand which species and combination of conditions work most effectively to reduce pollutants and to understand the carrying capacity of various wetland types.¹⁰³ The role of constructed wetlands as alternatives to expensive wastewater treatment plants is attracting a great deal of interest.¹⁰⁴ In the Northern California town of Arcata, a sewage treatment facility that relies on constructed wetlands has become a major tourist attraction.¹⁰⁵

¹⁰¹ The Wetlands Recovery Project is currently engaged in a preliminary survey of wetlands in the region's watersheds.

¹⁰² See TREE PEOPLE *supra* note 97. See also Lee Peterson, *School Saves Water, Fights Pollution*, DAILY BREEZE, Dec. 20, 1999, at A1. Connie Koenen, *The Green Team*, L.A. TIMES July 20, 1999, at E1. Robert Smaus, *TreePeople's L.S. Pilot Project Is Testing the Waters*, L.A. TIMES, Aug. 16, 1998. Bob Pool, *Rain Brainstorm*, L.A. TIMES, Aug. 14, 1998, at Metro.

¹⁰³ Researchers were surprised and excited to find that the Chevron wetland, planted as a beautification project near the mouth of San Pablo Bay, turned out to be a major pollution filter, pulling 89 % of the toxic chemical selenium from millions of gallons of wastewater flowing through Chevron's Richmond oil refinery before it entered the San Francisco Bay. See *Plants Strip Pollution from Wastewater*, ENVTL SCI. & TECH. (Feb. 2, 1998).

¹⁰⁴ See, e. g., RONALD C. PHILLIPS, U. S. ARMY CORPS OF ENGINEERS TECH. REPT. NO. WRP-CP-2, SUMMARY OF LITERATURE DESCRIBING THE FUNCTIONAL ABILITY OF WETLANDS TO ENHANCE WASTEWATER QUALITY (1993). See also U.S. ENVIRONMENTAL PROTECTION AGENCY, CONSTRUCTED WETLANDS FOR WASTEWATER TREATMENT AND WILDLIFE HABITAT: 17 CASE STUDIES, REPT. NO. EPA 832-R-93-005 (Sept. 1993). U.S. GENERAL ACCOUNTING OFFICE, WATER POLLUTION: INFORMATION ON THE USE OF ALTERNATIVE WASTEWATER TREATMENT SYSTEMS, REPT. TO THE CHAIRMAN OF THE HOUSE SUBCOMM. ON INVESTIGATIONS AND OVERSIGHT, COMM. ON PUBLIC WORKS AND TRANSPORTATION (Sept. 1994).

¹⁰⁵ Mary Curtis, *A Sewage Treatment Plant Tourists Love: Arcata's Low-Tech Treatment Facility Also a Wildlife Refuge*, S.F. CHRONICLE, Dec. 18, 1998.

No studies exist specifically on the effect of Southern California's coastal wetlands on water quality.¹⁰⁶ The region's much-diminished coastal wetlands may have mixed water quality benefits if their carrying capacity is being exceeded. Surfers and divers often attest to the cleaner water offshore from coastal wetlands, but birds are so heavily concentrated in these wetlands that offshore coastal waters may contain higher levels of bacteria from bird waste. The vegetation and soils may, however, absorb many toxics from urban runoff. The water quality of the coastal wetlands had not been assessed and the impact of the coastal wetlands on coastal water quality is a subject in desperate need of more study.¹⁰⁷

Exciting developments are beginning to unfold, however, in relation to the water quality benefits to be obtained from wetlands in coastal watersheds. While in some other areas, wetlands have been viewed as a cost-effective alternative or supplement to sewage treatment plants, in Southern California, stormwater runoff rather than sewage treatment is the driving force.¹⁰⁸ Wetlands in the coastal watersheds are increasingly being recognized as a key to protecting beach water quality from urban runoff. Runoff was the suspected cause of abnormally high bacteria levels off Huntington Beach, which had to close its beaches during much of the 1999 summer season.¹⁰⁹ Beach closures have prompted the recognition that the coast is a "powerful economic engine" and that water quality must be protected.¹¹⁰ Part of the solution is seen as diverting runoff to sewage treatment plants during the dry, summer months when beaches are crowded as

¹⁰⁶ *But see* CAMPAIGN TO SAVE CALIFORNIA WETLANDS: AN ANALYSIS OF THEIR ECONOMIC BENEFITS 8 (Aug. 1992) *citing* J.G. Gosslink, et al., CENTER FOR WETLAND RESOURCES, VALUE OF THE TIDAL MARSH, REPT. NO. LSU-SG-74-03 (1974) & F. R. Thibodeau & B.D. Ostro, *An Economic Analysis of Wetland Protection*, 12 J. OF ENVTL MGT 19-30 (1981). These studies demonstrate water quality benefits at tidal wetlands of \$6600/acre in Louisiana, and \$10,400/acre in Michigan along the Great Lakes in 1990 dollars.

¹⁰⁷ Telephone interview with Steven B. Weisberg, Ph.D., Executive Director, Southern California Coastal Water Research Project (May 7, 1999).

¹⁰⁸ Sewage plants treat wastewater from residential uses and "pre-treated" wastewater from industrial customers before discharging the water to rivers or the ocean. Runoff which contains many toxic substances, flows from streets and lawns into storm sewers and goes *untreated* into rivers, eventually flowing to the ocean.

¹⁰⁹ County health agencies only routinely test beaches for bacteria and not for toxic pollutants.

¹¹⁰ *See, e.g.,* David Reyes, *The Muck Stops Where?*, L.A. TIMES, Sept. 5, 1999, at B1.

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Los Angeles, Santa Monica and Laguna Beach are doing. This is only part of the solution, however, because building the infrastructure for diversions can be very expensive and sewage treatment plants are typically designed to handle sewage, not toxic materials such as pesticides and heavy metals that flow from streets and lawns, which can interfere with plant operations.¹¹¹ In addition, sewage treatment plants cannot handle diversions during the rainy season because of overflow due to increased volumes of water seeping into sewage systems.

Increasingly, the answer to coastal water quality is being sought in wetlands of the coastal watersheds. Much of the runoff that ends up at Huntington Beach, for example, comes from the 75-mile-long Santa Ana River which drains a 3,200 square mile area populated by the 4.4 million residents of Riverside, San Bernardino and Orange Counties. A portion of the River's flow is now diverted to a 500-acre wetland area behind Prado Dam in Riverside County and ambitious plans are evolving to convert the land of departing dairies to wetlands, largely for their water quality benefits.¹¹² The state Park Bond that went before the voters in March 2000 contained almost one-quarter billion dollars for acquisition and restoration activities in the watershed of the Santa Ana River.¹¹³

Businessmen in cities like Huntington Beach are also pressuring the city government to get aggressive and go after upstream cities that are causing pollution problems along the coast from their runoff.¹¹⁴ Getting the message, regional water boards are beginning to take action. On December 28, 1999 the San Diego Regional Water Board issued the first clean-up order in the state against a public agency for urban runoff pollution, citing the County of Orange, the Orange County Flood Control District, and the City of Laguna Niguel. They must stop storm drains from

¹¹¹ Industries are supposed to "pre-treat" their wastewater prior to discharging to a sewage treatment plant in order not to cause plant upsets. See Clean Water Act, 33 U.S.C § 1314(g) (1986).

¹¹² Interview with Michael D. Moore, Environmental Compliance and Monitoring Manger, Orange County Sanitation District, in Newport, Cal. (Dec. 1999).

¹¹³ See Safe Neighborhood Parks *supra* note 90.

¹¹⁴ At a conference presentation on coastal issues in Huntington Beach, the manager of the Hilton Hotel called on the City to "sue 'em" for Clean Water Act violations. CALCOAST Conference at the Huntington Beach Hilton (Oct. 23, 1999).

polluting Aliso Creek, which collects runoff from over 34 square miles of Orange County and discharges it into the Pacific Ocean.¹¹⁵ While the public agencies are preparing to send half of the summer runoff to a sewage treatment plant, half is being diverted to wetlands that can serve as a natural filter.¹¹⁶ A Malibu Creek watershed group is now planning for wetlands acquisition and restoration that would similarly be designed to address water quality.

Regional water quality control boards are currently engaged in comprehensive watershed assessments to determine the carrying capacity of the rivers and streams, “total maximum daily load” (TMDL) of pollution these streams can handle, and to allocate permits for discharging pollutants based on the carrying capacity of the water bodies. Water pollution permit limits are derived from technologies available to industries and sewage treatment plants, with new facilities being required to adopt more state-of-the-art controls. Permit limits are based on technology. Even with these in limits place, many water bodies do not meet their required water quality standards. Analyses show that runoff rather than “point sources” cause the greatest problem. Thus, the control of polluted runoff has become the center of attention. To control runoff, the regulatory agencies are analyzing stream segments to ascertain how much pollution they can handle, where the pollution comes from, and where control efforts can be most effectively deployed. Treating runoff at treatment facilities is fraught with complications, so as the TMDL assessments are completed, the focus on wetlands as a means to treat runoff and meet new, mandated water quality standards will become intense.

3. *Existence Values*

Many people may never hear the “clapping” call of the endangered, light-footed clapper rail nor see it build a platform nest

¹¹⁵ Seema Mehta, *State Order for Creek Cleanup May Set Precedent*, L.A. TIMES, Jan. 5, 2000, at B1.

¹¹⁶ *See id.* A preliminary study explores the link between ocean water quality and coastal wetlands in Orange County where Huntington Beach was closed for a number of weeks during the height of the 1999 summer tourist season. *See* BRETT F. SANDERS, UNIVERSITY OF CALIFORNIA, IRVINE COASTAL RUNOFF IMPACT STUDY (CRIS), TIDAL TRANSPORT OF BACTERIA BETWEEN THE TALBERT WATERSHED AND THE OCEAN, INTERIM REPORT 1 (Jan 21, 2000).

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tethered to cordgrass in the lower salt marsh. The extraordinary adaptive capabilities of the Southern California steelhead trout will remain largely unknown.¹¹⁷ Most people will not concern themselves with the salt marsh water boatman, a scuba-diving beetle that employs an air bubble to descend to pond depths in search of food; few would care to hear about how the salt marsh bird's beak, a plant of the upper marsh, parasitizes other plants to survive the dry hot summer or how the kidneys of the Beldings savannah sparrow concentrate chlorides, enabling it to drink sea water. The majority would prefer not to encounter the many species of flies and mosquitoes that inhabit the marsh. Despite claims that innocuous plants and animals may one day supply cures for diabetes or childhood leukemia, the "argument from ignorance"—that all species and their habitats must be saved because we don't know now which may prove useful in the future—appears strained.¹¹⁸ Some people may think that plume moths are no good to them now, and never will be.

Even though people may never encounter certain places or species and lack the imagination to contrive some possible human purpose they might serve, many nonetheless derive satisfaction from knowing they exist or believe that the non-human world has innate value apart from human preferences and satisfactions. Economists, ironically, try to ferret out this "existence value" (a non-use or intrinsic value) by inquiring into people's "willingness to pay." Although the methodology is rife with problems, the U.S. Army Corps of Engineers has recently incorporated "existence values" into its benefit-cost analyses because it is better than ignoring such values altogether.¹¹⁹ One rigorously designed study

¹¹⁷ Southern steelhead, an anadromous rainbow trout, are on the verge of extinction from the Santa Ynez River in Santa Barbara County to Malibu Creek in Los Angeles County and were declared extinct from Malibu southward, although an ocean-born steelhead was found in San Mateo Creek in a north San Diego County creek. While most salmon must migrate at set intervals, the steelhead's life cycle is much more variable because it can be waylaid for years upstream in a freshwater creek due to drought and then survive torrential rains. See WILLIAM S. LEET, ET AL., CALIFORNIA'S LIVING MARINE RESOURCES AND THEIR UTILIZATION 68 (1992). See also *Steelhead May Be Defying Local Extinction Status*, ASSOCIATED PRESS, June 25, 1999.

¹¹⁸ But see Bruce A. Aylward, EEP DISCUSSION PAPER DP 93-05, THE ECONOMIC VALUE OF PHARMACEUTICAL PROSPECTING AND ITS ROLE IN BIODIVERSITY CONSERVATION (1993).

¹¹⁹ See, e.g., Sam Howe Verhovek, *Ideas & Trends: They Exist. Therefore They Are. But, Do You Care?*, N.Y. TIMES, Oct. 17, 1999 ("In the midst of a major study of whether or not to breach four huge hydroelectric dams on the Snake River in eastern Washington,

examined the value that both neighboring households, and households in other parts of the state, attributed to the San Joaquin Valley and its wetlands. Neighboring households were willing to pay \$174 annually to protect the area while households elsewhere were willing to pay only \$22 less, or \$152.¹²⁰ One conclusion for the small difference between those living in close proximity to the area and others was that the lion's share of the willingness to pay reflects non-use or existence values.¹²¹

While economic valuation dominates public discourse and is a prerequisite for demonstrating the significance of proposed policies, some philosophers have nevertheless argued that certain principles transcend market valuation. Is the value of racial justice, minority rights, or free speech to be measured in terms of people's willingness to pay? People of this school maintain that preservation is not a matter of summing up individuals' dollar preferences through "shadow pricing," but a matter of the principles society collectively seeks to promote: namely, the protection of habitats, species, water, and land which involves aesthetic and moral principles, not simply economic ones.¹²²

The principle at stake has best been captured in analogies comparing species extinction to book burning and the species pro-

economists with the Army Corps of Engineers are adding a factor known as 'existence value' to their lists of costs and benefits of the contentious proposal.") This is particularly relevant for the Southern California Wetlands Recovery Project which has two dam removals, Ringe Dam on Malibu Creek and Matilija Dam on the Ventura River, on their "A" list of projects. See e.g., Gary Polakovic, *Babbit Says Removing Dam Is A Top Priority*, L.A. TIMES, Oct. 9, 1999, at B17 (describing removal of the Matilija Dam as the way "to open a political breach that will make it easier to knock down some of the national's largest, most environmentally troublesome dams" because it is "the first of a kind for removal" given its size and the complexity of the technical issues involved).

¹²⁰ See John Loomis, et. al, *Willingness to Pay to Protect Wetlands and Reduce Wildlife Contamination from Agricultural Drainage in THE ECONOMICS AND MANAGEMENT OF WATER AND DRAINAGE IN AGRICULTURE* 411 (A. Dinar & D.Zilberman, eds., 1989).

¹²¹ See Paul F. Scodari, *MEASURING THE BENEFITS OF FEDERAL WETLAND PROGRAMS* 66-67 (1997).

¹²² See e.g., Mark Sagoff, *At the Shrine of Our Lady Fatima, or Why Political Question Are Not All Economic*, in *ETHICS AND THE ENVIRONMENT* 221-234 (Donald Scherer & Thomas Attig, eds., 1983). See also Mark Sagoff, *Environmental Theory and Environmental Law*, 79 MICH. L. REV., 1393 (1981).

tection as analogous to free speech.¹²³ The House Report on the Endangered Species Act of 1973 explained the need for the Act:

One might analogize the case to one in which one copy of all the books ever printed were gathered together in one huge building. The position in which we find ourselves today is that of custodians of this building, and our choice is between exercising our responsibilities and ignoring them. If these theoretical custodians were to permit a madman to enter, build a bonfire and throw in at random any volume he selected, one might suggest other custodians be found.¹²⁴

President Theodore Roosevelt probably said it most succinctly when he said, "When I hear of the destruction of a species, I feel as if all the works of some great writer had perished."¹²⁵ Theologian C.S. Lewis elaborated this, stating that what we "get from nature is an iconography, a language of images. Not simply visual images; it is the 'moods' or 'spirits' themselves—the powerful expositions of terror, gloom, jocundity, cruelty, lust, innocence,

¹²³ See, e.g., Joan Hartmann, *The Symbolic Value of Species Protection: The Case of Endangered Species Protection* (Claremont Graduate School, 1981) (on file with author).

¹²⁴ H.R. REPT. NO. 312 (1973). The literature is rife with this sentiment: "I—and trust most reasonable human beings—deeply resent censorship of information of all forms. Whether it be the censorship of a printed volume, a species or an ecosystem." Cantlon, *The Stability of Natural Populations and Their Sensitivity to Technology*, in *DIVERSITY AND STABILITY IN ECOLOGICAL SYSTEMS* (1969, Brookhaven Symposia in Biology No. 22). "[T]he opportunity to see geese is more important than television, and the chance to see a pasque flower is a right as inalienable as free speech." *Endangered Species Act Oversight: Hearings Before the Senate Subcomm. On Resource Protection of the Community of the Comm. of Environment and Public Works*, 95th Cong., 1st Sess. 614 (statement of Michael Zagata). "Water, rock, soil, plants—man and other animals—all are the work of centuries. To understand this work, to learn from it, to be inspired by it, we cannot afford to lose a single part. Like Thoreau, we 'wish to know an entire heaven and entire earth.' We are chagrined as he was, that we do not have the 'entire poem,' that our ancestors 'have torn out many of the finest leaves and grandest passages, and mutilated it in many places' and the process of mutilation is continuing." *Endangered Species: Hearings Before the House Subcomm. on Fisheries and Wildlife Conservation of the Comm. On Merchant Marine and Fisheries*, 91st Cong., 1st Sess. 73.

¹²⁵ Quoted in CALIFORNIA STATE COASTAL CONSERVANCY, *THE COASTAL WETLANDS OF SAN DIEGO COUNTY* 26 (1989).

purity—that are the images.”¹²⁶ As philosopher Mark Sagoff has explained:

[M]any people feel the same way about the destruction of a very great painting as they do about the destruction of a magnificent natural environment. In losing either, we lose the best example we have of a quality which we do not otherwise fully understand or on which we have no better grasp. The destruction of symbols is a step toward ignorance of the qualities those symbols express.¹²⁷

For some people, discussion of economic or even scientific values inhering in nature misses the main idea. Nonetheless, “existence value” appears to be the best tool available to point towards the principles these thinkers would like considered.

II. THE SEEDS OF CONFLICT

In the early 1970s, wetlands destruction continued unabated in Southern California. Although many new protective statutes came into effect in the 1970s, initially these statutes were neither interpreted by court decisions, implemented through regulation, nor integrated with one another until much later. Even today, wetlands law, regulation and policy remain ambiguous--requiring analyses and judgments that are open to interpretation. It was against this evolving and uncertain backdrop that agency personnel had to make decisions and take action. Proposed port and energy development projects in Southern California had enormous associated impacts on wetlands and aquatic resources. Projects with such far-reaching economic benefits and political support were not to be halted, but were the impacts simply to be tolerated or were they to be mitigated in some way?

This section describes how mitigation requirements for these projects took shape and how, in the process, the impetus for the Southern California Wetlands Recovery Project started. The very

¹²⁶ C.S. LEWIS, *THE FOUR LOVES* 18 (1960).

¹²⁷ Mark Sagoff, *On Preserving the Natural Environment*, 84 *YALE L. J.* 258, 258-59 (1974).

success of these mitigation efforts, however, led to the controversy that later swirled about the Recovery Project.

A. *The Legal Backdrop*

The Fish and Wildlife Coordination Act of 1934 obligated the U.S. Army Corps of Engineers (Corps) “to consult” with the U.S. Fish & Wildlife Service about how to avoid or mitigate impacts to habitat resulting from water resource development projects.¹²⁸ But the Act was of very limited effect because once consultation occurred, the Corps was free to pursue its preferred course of action, which, consistent with its primary organizational mission, usually involved project construction. The National Environmental Policy Act (NEPA) of 1969 sought to incorporate environmental concerns into the missions of all federal agencies by requiring agency decision makers to write statements describing the environmental impacts associated with major federal projects and to compare the proposed project with less damaging alternatives.¹²⁹ Like the Coordination Act, NEPA has been viewed as a procedural statute, requiring certain kinds of considerations, but ultimately giving the action agencies the authority to proceed with their projects.¹³⁰ NEPA regulations were not published until 1978.¹³¹ Many years elapsed before the courts determined what was required and for agencies to integrate NEPA’s procedural requirements with the substantive requirements of other statutes.¹³² California’s Environmental Quality Act (CEQA), which applies to private not just public projects, was not passed until

¹²⁸ See 16 U.S.C. § 662(a) (2000).

¹²⁹ See 42 U.S.C. §§ 4321-4335 (1995).

¹³⁰ See generally Symposium on NEPA at Twenty: The Past, Present and Future of the National Environmental Policy Act, 20 ENVNMTL LAW (1990) [hereinafter “NEPA at Twenty”].

¹³¹ The Council on Environmental Quality published regulations applicable to all federal agencies describing their NEPA obligations. Key among them is “mitigation” of project impacts: Avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operation during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments. See 40 C.F.R. § 1508.20 (2000).

¹³² See NEPA at Twenty *supra* note 130.

1979.¹³³ Although CEQA has sometimes been interpreted to impose substantive and not just procedural requirements, its interpretation has not been consistent.¹³⁴ The California Department of Fish and Game, while having no statutes or regulations that pertain directly to wetlands, is designated as a trustee under CEQA to review and comment on proposals made through other agencies.¹³⁵

The federal Clean Water Act was passed in 1972, but the wetlands program embodied in Section 404 of the Act evolved slowly.¹³⁶ At the state level, a statute with very similar provisions, the Porter Cologne Water Quality Control Act was passed in 1969 to protect water quality and beneficial uses, including wetlands. Both statutes are implemented through regional boards, four of which operate in coastal Southern California.¹³⁷

Section 404 of the Clean Water Act requires a permit from the Army Corps of Engineers to deposit material (“discharge dredged or fill material”) into a “navigable waters.”¹³⁸ In a very unusual relationship among federal agencies, the Environmental Protection Agency (EPA) is to establish the guidelines the Corps must follow in issuing permits and, in an unprecedented provision giving one federal agency preeminence over another, EPA has the authority to revoke Corps permits that do not comport with the EPA guidelines.¹³⁹ California’s Environmental Quality Act (CEQA), which applies to private not just public projects and which has sometimes been interpreted to impose substantive and not just procedural requirements, was not passed until 1979.¹⁴⁰ The wetlands permit program did not go into effect until 1975

¹³³ See CAL. PUB. RES. CODE §§ 21000-21177 (West 1996).

¹³⁴ Phone Interview with Jan Chatten Brown, Brown & Associates (Jan. 1998). Brown, a Los Angeles attorney specializing in CEQA law, contends that it is the economy more than consistency, that drives decisions about how stringently to apply CEQA.

¹³⁵ CAL. FISH & GAME CODE §§ 15386, 15381 (West 1998).

¹³⁶ See The Federal Water Pollution Control Act Amendments, 33 U.S.C. § 1344 (1972).

¹³⁷ See CAL. WATER CODE §§ 13000-14950 (West 1992). The coastal Southern California regional boards are San Diego, Santa Ana, Los Angeles, and Central Coast.

¹³⁸ To avoid having to issue individualized permits for every discharge, the Corps has developed a set of generalized permits by regulation. See 33 C.F.R. Pt. 330 (2000).

¹³⁹ See 33 U.S.C. § 1344 (b)(1). See generally NEPA at Twenty *supra* note 130.

¹⁴⁰ See CAL. PUB. RES. CODE §§ 2100-21177 (West 1996).

when the U.S. Army Corps of Engineers revised its regulations in response to *Zabel v. Tabb*, which held that the definition of “navigable waters” for which the Corps had permit authority encompassed wetlands.¹⁴¹ The deposit of fill into wetlands thus became a “discharge” analogous to other “pollutants” and could only be authorized under certain conditions. In 1975, to govern Corps permitting, EPA issued interim regulations called the 404(b)(1) Guidelines, which were not published in final form until 1980.¹⁴² Although these guidelines established that compensation for wetlands losses was to occur only after project impacts had been avoided and minimized, the Corps had its own much more flexible mitigation policy.¹⁴³ In 1990, the two agencies entered into a Memorandum of Agreement which “clarified” the sequencing requirement. Permit applicants must show that they have made every practicable effort to avoid and minimize wetland losses, by exploring alternatives and implementing design changes, before compensatory mitigation such as wetland restoration, creation or

¹⁴¹ See *Zabel v. Tabb*, 430 F.2d 199 (5th Cir. 1979). See also 40 Fed. Reg. 41,292 (Sept. 5, 1975). Section 404 regulations define wetlands as “those areas that are inundated or saturated by surface and groundwater at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” See 33 U.S.C. § 1344.

¹⁴² See 40 C.F.R. Pt. 230 (2000). The 404(b)(1) Guidelines allow permit issuance only for the least environmentally damaging practicable alternative in light of the overall project purpose. The Guidelines state that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences. Practicability is defined in terms of cost, logistics, and existing technology. The burden to demonstrate compliance with the 404(b)(1) Guidelines rest with the permit applicant. For non-water dependent discharges into special aquatic sites (e.g. wetlands), there is a presumption that less environmentally damaging practicable alternatives exist unless the permit applicant can show otherwise. The Guidelines prohibit the issuance of a permit if the proposed discharge would violate other statutes (e.g., the Endangered Species Act, state water quality standards) or contribute to “significant degradation of wetlands or other waters of the United States. If a permit is issued, the Corps must require practicable mitigation of impacts to the aquatic system. For those impacts that cannot be avoided, the Corps is to require practicable steps to minimize adverse impacts to the maximum extent practicable, and then, for the unavoidable impacts that remain, reasonable and practicable compensatory mitigation. These regulations made clear that mitigation entailed a clear sequence: avoidance, minimization, and then compensation. Cf. CEQ’s NEPA regulations at 40 C.F.R.

¹⁴³ U.S. Army Corps regulations state: “Mitigation is an important aspect of the review and balancing process on many Department of Army permit applications. Consideration of mitigation will occur throughout the permit application review process and includes avoiding, minimizing, rectifying, reducing or compensating for resources losses. Losses will be avoided to the extent practicable. Compensation may occur on-site or at an off-site location.” 40 C.F.R. 320.4(r) (2000).

enhancement can be considered.¹⁴⁴ The Fish & Wildlife Service, which must be consulted under the authority of the Fish & Wildlife Coordination Act, has its own mitigation policy.¹⁴⁵

The California Coastal Act was passed in 1976 but legal challenges to this extraordinary initiative prevented its implementation until 1978.¹⁴⁶ The Coastal Act created the California Coastal Commission, which is to regulate development in California's "coastal zone".¹⁴⁷ The regulatory scheme under the Coastal Act gives the Coastal Commission broad authority to regulate activities in the coastal zone.¹⁴⁸ The Coastal Act also created the State Coastal Conservancy to employ non-regulatory methods to protect coastal resources, including wetlands.¹⁴⁹

B. PORT AND SONGS MITIGATION PROJECTS

The projects with the greatest impacts on wetland and aquatic resources in Southern California, other than the cumulative impact of housing developments and flood control projects, have been expansions for one of the largest port facilities in the world, the Port of Los Angeles and the Port of Long Beach, and

¹⁴⁴ See MEMORANDUM OF AGREEMENT BETWEEN THE CORPS OF ENGINEERS AND EPA FOR DETERMINING MITIGATION UNDER THE CLEAN WATER ACT SECTION 404(B)(1) GUIDELINES (Feb. 1990).

¹⁴⁵ See 46 Fed. Reg. 7644 (Jan. 23, 1981). This policy creates four habitat types based on scarcity and value for "evaluation species" and stipulated different mitigation practices for each: for category 1 unique and irreplaceable habitats, replacement of habitat types lost must be on or adjacent to the project site (in-kind, on-site); for category 2 habitats of national or ecosystem scarcity, replacement at an alternative site (in-kind, off-site), for category 3 habitats that are relatively abundant, development of alternative habitat types at the project site (out-of-kind, on-site); and for category 4 habitat of lesser habitat value, development of alternative habitat types at other sites (out-of-kind, off-site). See, e.g., U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES & LONG BEACH HARBORS NAVIGATION IMPROVEMENT ENVIRONMENTAL IMPACT STUDY & REPORT, BIOLOGICAL MITIGATION PLAN (1992) (summarizing the understanding of the much-less-concise U.S. Fish and Wildlife Mitigation Policy).

¹⁴⁶ See CAL. PUB. RES. CODE §§ 30000-30333 (West 1996). See also THE RESOURCES AGENCY, CALIFORNIA'S OCEAN RESOURCES: AN AGENDA FOR THE FUTURE 3-2 (Mar. 1997) (discussing Coastal Act).

¹⁴⁷ The "coastal zone" starts at the boundary of state waters, three miles seaward, and extends from about 1000 yards to a maximum of five miles inland (except in San Francisco Bay where development is governed by the Conservation and Development Commission). See CAL. PUB. RES. CODE § 30103.

¹⁴⁸ See e.g., QUESTIONS AND ANSWERS ABOUT THE CALIFORNIA COASTAL ACT (last modified Jun. 17, 1999) <<http://www.ceres.ca.gov/coastalcomm/web/ccatc.html>>.

¹⁴⁹ See CAL. PUB. RES. CODE §§ 31000-31016 (West 1996).

the construction and operation of Southern California Edison's San Onofre Nuclear Generating Station (SONGS).¹⁵⁰ The ports and Southern California Edison (SCE) were project proponents with "deep pockets," but it has not always been clear that they would have to compensate for the environmental costs of their development activities. State and federal resources agencies, not the regulatory agencies, sorted through the morass of inchoate mitigation concepts, policies, and regulations to chart a course that would bring several hundred million dollars, with the potential for much more, to wetlands acquisition and restoration in Southern California and build a degree of confidence by the ports themselves in the approach.¹⁵¹

Employees of the three resource agencies, Jack Fancher of the U.S. Fish & Wildlife Service, Bob Hoffman of the National Marine Fisheries Service, and Dick Nitzos of the California Department of Fish & Game have each dedicated over twenty years of their careers to developing the port mitigation framework and undertaking the formidable tasks of implementing each restoration agreement on the ground.¹⁵² The continuity these agency personnel were able to offer, the expertise they developed, and the confidence that they eventually engendered, allowed them to pioneer mitigation policies and practices, over time threading together a pattern across a number of different statutes and regulations. This has arguably been the single greatest contribution to coastal wetlands restoration in Southern California. Moreover, as the proposed port mitigation projects grew in scope and complexity, they were able to bring in other state and federal agencies, becoming the nucleus of what would evolve into the Southern California Wetlands Recovery Project.

¹⁵⁰ Telephone Interview with Jack Fancher, Biologist, U.S. Fish and Wildlife Service, Carlsbad Field Office (Nov. 13, 1999).

¹⁵¹ Telephone Interviews with Ralph Appy, Port of Los Angeles & Geraldine Knatz, Port of Long Beach (Mar. 1998) (conducted as part of outreach effort of Southern California Wetlands Recovery Project).

¹⁵² The DFG negotiator, Dick Nitsos, retired in 1996; severe agency budget cuts and a reorganization delayed his replacement and diluted the contribution of DFG to the evolution of the port mitigation framework and the Wetlands Recovery Project.

1. In-Kind, In-Harbor Mitigation: Port of Los Angeles

When the U.S. Army Corps of Engineers set out to construct Pier 300 for the Port of Los Angeles in 1978, the project involved the fill of 180 acres of coastal wetlands, and no permit and no mitigation were required under state law, NEPA or the Clean Water Act. Congress itself had authorized a number of Southern California port projects with major impacts to aquatic resources and the congressional authorization served in lieu of a Section 404 permit for projects constructed by the Corps.¹⁵³ The Corps resisted using federal funds for mitigation, even for projects constructed by the Corps itself.

A Biological Opinion issued under the authority of the Endangered Species Act, however, determined that fill for Pier 300 would jeopardize the continued existence of the California least terns, which had been listed as endangered on a pre-Endangered Species Act list in 1970 that was adopted upon passage of the ESA in 1973.¹⁵⁴ This led the Port to join with the U.S. Fish & Wildlife Service in developing the Least Tern Nest Site Agreement, which still operates today.¹⁵⁵ Under the Agreement, the loss of nesting habitat must be mitigated in the harbor, and on-site rather than offsite. As a result, the Port of Los Angeles placed fill in several hundred acres to bring them up from a depth of 40 to 20 feet for a ratio of 1:1 lost to mitigated habitat.¹⁵⁶ Additionally, the Agreement gave the Port more flexibility and certainty for future planning because the Port was obligated to maintain and protect a specific, designated nest area, but if the terns nested elsewhere, the Port was obligated to protect the new site only until the nesting season was over. Reconfiguration and relocation of the designated site could then occur within certain

¹⁵³ See 33 U.S.C. § 1344(r) (1986). See also CORPS CIVIL WORKS PROJECTS, REGULATORY GUIDANCE LETTER NO. 88-9 (Jul. 21, 1988). The reasoning for the exemption is that, otherwise, the Corps would be in the odd position of issuing a permit to itself.

¹⁵⁴ See SOUTHERN CALIFORNIA FIELD STATION, U.S. FISH & WILDLIFE SERVICE, BIOLOGICAL OPINION ON LOS ANGELES HARBOR DEVELOPMENT PROJECT NO. 1-6-92-F-25 (Sept. 24, 1992). See also 16 U.S.C. §§ 1531-1544 (2000).

¹⁵⁵ See generally CALIFORNIA LEAST TERN NESTING SITE MEMORANDUM OF AGREEMENT AMONG THE CITY OF LOS ANGELES, THE CALIFORNIA DEPARTMENT OF FISH & GAME, THE U.S. FISH & WILDLIFE SERVICE, REGION 1, AND THE U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT (May 1984).

¹⁵⁶ See *id.*

agreed-upon parameters.¹⁵⁷ The Port viewed this Agreement as expensive, but signed because it provided a framework with some limits and predictability on the amount of land they had to reserve for terns.

In 1976, the State of California adopted Proposition 20, a voter initiative that led to creation of the California Coastal Act.¹⁵⁸ The construction of Pier 300 engendered debate about whether the new Act's mitigation requirements applied to ports when they expanded within designated port boundaries. The California Coastal Commission ultimately determined that mitigation was required, but because ports enjoy special status under the Coastal Act, the mitigation formula resulted in a cash payment of less than \$2500/acre.¹⁵⁹ This was a pittance, but an important precedent. It established that, under the Coastal Act, ports had some responsibility to mitigate for the adverse impact of their landfills.

2. *Cabrillo Basin: The First Port Mitigation Bank*

In 1982, the Port of Los Angeles proposed a marina project for the Cabrillo Basin that created several dozen new acres of open water from dry land. This raised the question of whether the Port could get credit for this wetland creation to offset later fills? The Los Angeles Inner-Harbor Mitigation established precedential rules for a mitigation bank.¹⁶⁰ It was a no net loss, in-kind protection of habitat value (temporal and spatial), acre-for-acre policy.¹⁶¹ This Agreement was negotiated with three resources agencies—the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish & Game. Because there were no endangered species impacts, the

¹⁵⁷ See *id.*

¹⁵⁸ See text *supra* notes 144-47.

¹⁵⁹ The amount was set as the value of an acre of Eel River bottomland valued at \$5000/acre times the number of acres of landfill, divided by 2. See *supra* note 150.

¹⁶⁰ See generally MEMORANDUM OF UNDERSTANDING AMONG THE HARBOR DEPARTMENT OF THE CITY OF LOS ANGELES, THE CALIFORNIA DEPARTMENT OF FISH & GAME, THE NATIONAL MARINE FISHERIES SERVICE, AND THE U.S. FISH & WILDLIFE SERVICE TO ESTABLISH A PROCEDURE FOR ADVANCE COMPENSATION OF MARINE HABITAT LOSSES INCURRED BY SELECTED PORT DEVELOPMENT PROJECTS WITHIN THE HARBOR DISTRICT OF THE CITY OF LOS ANGELES (Oct. 1984).

¹⁶¹ See *id.*

U.S. Fish & Wildlife Service participated under their Fish and Wildlife Coordination Act authority while NMFS and DFG each had a trustee role regarding fisheries impacts. They agreed that the Port could create a specific type of wetlands (mudflats) in one place *prior to* destroying that same type of wetland elsewhere. If they created twenty-five acres, then they could “debit” that “account” through a series of fills. Notably, the state and federal regulatory agencies, the California Coastal Commission and the U.S. Army Corps of Engineers, played no role in the negotiations, but acquiesced to the agreement worked out by the resource agencies and the Port.

3. *Upper Newport Bay: Money Changes Hands*

The neighboring Port of Long Beach observed these agreements in action and in the mid-1980s, when it decided to fill about sixty acres of wetlands to create Pier A for terminal expansion, the Port approached the three agencies which had negotiated the Inner Harbor Mitigation Agreement.¹⁶² The Port did this to determine how to mitigate for the impacts, and before applying for any state or federal permits. The Port had no good onsite mitigation sites so Pier A raised the question of where to go off-site. To answer this question, the agencies developed a set of three screening criteria to identify sites or “banks” from Point Conception to the Mexican border (the same geographic scope later adopted by the Wetland Recovery Project) where the ports could invest in offsite restoration: (1) proximity to the loss (closer is better); (2) technical feasibility (would the proposed restoration offset the losses in the harbor); and (3) willing landowner (would the owner of the land agree to participate).

The agencies applied the screening criteria to prospective sites, moving out from the Port.¹⁶³ In the case of Pier A, the agen-

¹⁶² See *supra* note 150.

¹⁶³ See generally MEMORANDUM OF UNDERSTANDING BETWEEN THE BOARD OF HARBOR COMMISSIONERS OF THE CITY OF LONG BEACH, THE CALIFORNIA DEPARTMENT OF FISH & GAME, THE NATIONAL MARINE FISHERIES SERVICE, AND THE FISH & WILDLIFE SERVICE TO ESTABLISH A PROCEDURE FOR ADVANCE COMPENSATION OF MARINE HABITAT LOSSES INCURRED BY PORT DEVELOPMENT LANDFILLS WITHIN THE HARBOR DISTRICT OF THE CITY OF LONG BEACH (Mar. 1984). See also U.S. FISH & WILDLIFE SERVICE PLANNING AID LETTER TO THE U.S. ARMY CORPS OF ENGINEERS ON LOS ANGELES/LONG BEACH HARBORS CHANNEL AND LANDFILL DEVELOPMENT FEASIBILITY STUDY (Oct. 1987) (explaining the approach for determining habitat mitigation and

cies landed on Newport Bay. The state and county were at work dredging in Upper Newport Bay to prevent upstream sediment from turning wetlands into dry land. Until this time, the agency approach to mitigation had been that the mitigating party had to do the work. At Upper Newport Bay, the Port of Long Beach paid \$1.1 million under a mitigation ratio of 1.5:1 that allowed it to fill sixty acres in turn for paying to dredge forty acres. They had no maintenance responsibilities.

4. Anaheim Bay: More Money and Port Undertakes Off-Site Mitigation

The Port of Long Beach then proceeded with a similar approach for a bigger landfill at Pier J. In that case, application of the screening criteria sited the mitigation at Anaheim Bay that is part of the Seal Beach National Wildlife Refuge. The Port ultimately paid \$7 million to complete its 110-acre landfill.¹⁶⁴ The project was implemented at a 1:32:1 fill-to-compensation tradeoff ratio.¹⁶⁵ The Refuge location raised questions at the Fish & Wildlife Service about whether allowing a project to mitigate on public lands was an improper gift of public lands, but the Fish & Wildlife Service recently adopted an official policy about when compensatory mitigation is to be allowed on National Wildlife Refuges that appears consistent with the approach adopted for the Anaheim Bay project at Seal Beach Refuge.¹⁶⁶

5. Baticuitos Lagoon: A \$55 Million Wetlands Mitigation Project

The next project negotiations occurred in 1987 and dealt with Phase 1 of Pier 400 at the Port of Los Angeles. The screening

describing the criteria for ranking potential mitigation sites from Point Conception to the Mexican border).

¹⁶⁴ See MEMORANDUM OF UNDERSTANDING AMONG THE BOARD OF HARBOR COMMISSIONERS OF THE CITY OF LONG BEACH, THE CALIFORNIA DEPARTMENT OF FISH & GAME, THE NATIONAL MARINE FISHERIES, CITY OF LONG BEACH, AND THE U.S. FISH & WILDLIFE SERVICE TO ESTABLISH A PROCEDURE FOR COMPENSATION OF MARINE HABITAT LOSSES INCURRED BY PORT DEVELOPMENT LANDFILLS WITHIN THE HARBOR DISTRICT OF THE CITY OF LONG BEACH, BY MARINE HABITAT CREATION AT ANAHEIM BAY (Feb. 1986).

¹⁶⁵ See *id.*

¹⁶⁶ See U.S. FISH & WILDLIFE SERVICE, FINAL POLICY ON THE NATIONAL WILDLIFE REFUGE SYSTEM AND COMPENSATORY MITIGATION UNDER THE SECTION 10/404 PROGRAM, 64 Fed. Reg. 49,229-49,234 (Sept. 10, 1999) (allowing compensatory mitigation "in limited and exception circumstances").

criteria, in this instance, pointed to Batiquitos Lagoon in San Diego County. In addition to the three trustee agencies and the Port, the State Lands Commission and the City of Carlsbad joined in the negotiations. The State Coastal Conservancy dropped out, said to have been uneasy about setting up mitigation banks. In exchange for credits to fill 385 acres in the Harbor, the Port agreed to implement a tidal restoration project on 350 acres. The State Lands Commission from the Hunt Brothers had already acquired the land when adjacent upland developments were approved. The mitigation ratio was 1.067:1 loss to compensatory habitat; monitoring and ongoing maintenance were also built into the plan with an endowment of \$8 million whose interest would pay for maintenance dredging of the inlet. Total costs to the Port amounted to \$55 million including the environmental studies and the endowment.¹⁶⁷

This mitigation project placed in sharp relief the issue of how to reconcile birds and fish in mitigation projects. The major adverse impacts from the Pier were to fish and yet the mitigation was to occur in an area with existing shorebird and waterfowl use. The negotiators adopted an approach that determined the level of existing bird use and considered only those mitigation alternatives for fish impacts that would maintain or improve that level of bird use. Critics brought a lawsuit under the Endangered Species Act alleging that the Western snowy plover would be harmed and plaintiffs eventually lost.¹⁶⁸ Third-year monitoring

¹⁶⁷ See AGREEMENT AMONG THE CITY OF LOS ANGELES, THE CITY OF CARLSBAD, THE CALIFORNIA DEPARTMENT OF FISH & GAME, THE CALIFORNIA STATE LANDS COMMISSION, THE NATIONAL MARINE FISHERIES SERVICE, AND THE UNITED STATES FISH & WILDLIFE SERVICE TO ESTABLISH A PROJECT FOR COMPENSATION OF MARINE HABITAT LOSSES INCURRED BY PORT DEVELOPMENT LANDFILLS WITHIN THE HARBOR DISTRICT OF THE CITY OF LOS ANGELES BY MARINE HABITAT ENHANCEMENT AT BATIQUITOS LAGOON (Nov. 1987).

¹⁶⁸ See *National Audubon Society v. Babbitt*, 79 F3d 1153 slip op. (9th Cir. 1996).

indicates that the bird use is at pre-project levels and fish use is good.¹⁶⁹

6. *San Dieguito Lagoon: The SONGS Mitigation Approach—Build, Study, Then Argue*

Another major mitigation project involved the Southern California Edison Company, principal owner and manager of the San Onofre Nuclear Generating Station (SONGS). In 1974, SCE fashioned an agreement with the California Coastal Commission, which granted SCE a permit to proceed with construction of the SONGS facility without even having to study the environmental impacts until *after* the facility was built and only *then* determining appropriate mitigation measures. This case stands in marked contrast to port mitigation efforts because the Coastal Commission had negotiated with very little involvement by the resource agencies or others.

Mitigation generally requires that the new environmental benefit be created before the harm occurs so that the resource does not suffer in the interim at the regional level, if not at the specific site of harm. The SONGS project has had enormous environmental impacts, destroying hundreds of millions of fish as well as other creatures such crustaceans, endangered sea turtles and marine mammals through massive water intake (1.6 million gallons of sea water per minute sucked in through a concrete inlet structure that extends 3200 feet offshore) and thermal pollution as the ocean water is used to cool the super-hot steam that powers the energy-generating turbines.¹⁷⁰ The deal between the Coastal Commission and SCE was a stunning departure from the generally accepted norms for mitigation. Contentious negotiations eventually resulted in a multi-part mitigation program that required kelp bed restoration and artificial reef construction; funding for a white sea bass hatchery and research effort; and coastal wetlands restoration.¹⁷¹ With regard to the latter, SCE hired consultants to conduct a survey of coastal wetlands and a

¹⁶⁹ See U.S. FISH & WILDLIFE SERVICE, CARLSBAD FIELD OFFICE, LONG-TERM MONITORING AND PILOT VEGETATION PROGRAM FOR THE BATIQUITOS LAGOON ENHANCEMENT PROJECT, ANNUAL REPORT (Jan.-Dec.1999).

¹⁷⁰ See Seema Mehta, *Whirlpools of Death*, L.A. TIMES, Jan. 9, 2000, at B1.

¹⁷¹ The agreement also required SCE to pay considerable sums to the Coastal Commission to offset the costs for staff to oversee and evaluate the mitigation program.

set of site selection criteria to identify prospective restoration sites. This costly effort largely repeated the work done by the ports and resources agencies in developing their screening criteria and site survey.¹⁷²

San Dieguito was the site selected for coastal wetlands restoration. SCE was obliged to restore 150 acres on its land and land owned by a Joint Powers Authority. It is not clear precisely how the 150 acres was determined or which impacts in the overall SONGS project the restoration is to mitigate. This ambiguity has dogged the always-difficult process of creating a restoration plan and has led to ongoing disputes between SCE and Coastal Commission. SCE, for instance, has successfully scaled back the restoration site from 150 to 115 acres by getting the Coastal Commission to give a thirty-five acre credit in turn for SCE keeping the lagoon mouth open for thirty years. It is not clear that this argument is legitimate. Without a more certain understanding of the specific fish impacts this site is being designed to compensate for and the anticipated benefits to fish likely to result from the opening, there is no way to judge. The ambiguity has engendered disputes that have delayed the process and prolonged the realization of environmental benefits. Environmental critics also maintain that SCE has an economic incentive to stall because it has been allowed to collect mitigation funds from rate payers prior to making full mitigation payments, enjoying the interest. The SONGS case is one of the leading case studies in what *not* to do in setting up a mitigation program. Restoration alternatives and impacts for the 115 acres are described in a draft Environmental Impact Statement/Report.¹⁷³

7. Bolsa Chica: A \$79 Million, Ten-Agency Port Mitigation Project

The case of Bolsa Chica is the most recent and most complex port mitigation. The Bolsa Chica lowlands consist of 1,300 acres of diverse, but degraded wetland habitat, 300 acres of which was acquired by the state in 1973 and partially restored. Much of the

¹⁷² See text *supra* note 161.

¹⁷³ See SAN DIEGUITO RIVER VALLEY JOINT POWERS AUTHORITY & U.S. FISH & WILDLIFE SERVICE, DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT FOR THE SAN DIEGUITO WETLAND RESTORATION PROJECT (Jan. 2000).

remaining acreage is devoted to active oil operations.¹⁷⁴ The Coastal Commission approved a Local Coastal Program (LCP) for Bolsa Chica which contemplated building 900 homes in the lowlands, along with 2,500 homes on the Bolsa Mesa. This approved LCP reduced development from the level approved by the County of Orange in a 1985 land use plan which envisioned construction of 5,700 homes, a 75-acre marina, a 600-foot wide navigable ocean channel and breakwater.

a. The Developer's Project

The developer proposed to mitigate the wetlands impacts of development on 185 acres in the lowlands, which contain about 50 acres of severely degraded wetlands, by dedicating 800 acres to the public at no taxpayer cost and spending \$48 million for restoration. The developer actually spent several million dollars in consultant fees developing restoration plans for the site, which explored methods for removing oil operations and constructing an inlet to restore tidal flushing lost by a dam created by the Bolsa Chica Gun Club in 1899.¹⁷⁵ To many, including the Secretary of the California Resources Agency, Doug Wheeler, this looked like a good deal. The number of homes had been reduced by over 40 percent and the huge marina impacts eliminated.

Moreover, the developer was to provide the land and assume the costs of planning for and restoring the wetlands; monitoring the restoration; and going back and re-doing work if the restoration did not meet performance criteria. The developer's contributions would have exceeded \$50 million in cash outlays plus the value of the 880 acres.¹⁷⁶ Proponents of this proposal—including Secretary Wheeler, the Coastal Commission, and the developer—saw the opportunity for a major infusion of private resources for wetlands restoration in Southern California.

¹⁷⁴ The state acquired 310 contiguous acres in a controversial title exchange and restored to muted tidal influence 135 acres which is known as the Inner Bolsa Chica portion of the Bolsa Chica Ecological Reserve.

¹⁷⁵ E-mail message from Lucy Dunn, Vice President, Hearthside Homes to Joan Hartmann (Nov. 10, 1999) (Hearthside Homes is a recently formed subsidiary of the Kohl Company, which was the owner and developer of the Bolsa Chica property).

¹⁷⁶ *See id.*

b. The Court Case

Problems developed because the Coastal Act enumerates the kinds of projects for which the Coastal Commission may grant permits to fill wetlands.¹⁷⁷ Residential development is not among them. What looked like a promising way to bring much needed funding to wetlands restoration to the Resources Secretary and the Coastal Commission, looked like a disastrous precedent to the environmental community. Coastal development had already gobbled up at least 90 percent of the region's coastal wetlands. To give developers the green light, allowing non-wetland dependent activities, such as housing construction in wetlands, would dash any hope of stemming wetlands decline to achieve no net loss, or ultimately, a net gain. Even conceding the sincerity of the project's proponents and the proposal's potential to achieve environmental benefits at little public cost, the longer-term price to the region's coastal wetlands was untenable to the environmental community. Given the overwhelming demand for coastal housing development, they foresaw a slippery slope where degraded, but historic and readily restorable wetlands would be sacrificed to speculative ventures of wetlands creation in uplands that held little real prospect of success.

Environmentalists filed suit focusing on the plain meaning of the Coastal Act, while the respondent, the California Coastal Commission, had to make a rather convoluted case.¹⁷⁸ The Coastal Act allows new or expanded boating facilities to be constructed in degraded wetlands, formally designated by the Department of Fish and Game, so long as the boating facility does not exceed twenty-five percent of the wetlands *if* "in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland."¹⁷⁹ The original 1985 development proposal centered on a marina and may have been designed to take advantage of this Coastal Act provision. With no boating facilities, the Coastal Commission had to stretch the plain meaning of the Act in efforts to justify residential development in wetlands. The environmental community prevailed at the trial court and the appeals

¹⁷⁷ See Coastal Act, CAL. PUB. RES. CODE § 30233(a)(3) (West 1996).

¹⁷⁸ See *Bolsa Chica Land Trust v. The Superior Court of San Diego*, 83 Cal. Rptr.2d 850, 860-862 (1999).

¹⁷⁹ See Coastal Act, CAL. PUB. RES. CODE § 30233(a)(3).

court affirmed: “[w]e find no error in the trial court’s finding that residential development of the lowland wetlands was not permitted.”¹⁸⁰

In the fall of 1998, just north of Bolsa Chica at Seal Beach, the Coastal Commission granted a developer permission to construct a golf course on wetlands at the mouth of the San Gabriel River. Golf courses are also not among the Coastal Act’s enumerated activities that can be permitted in wetlands so, again, environmentalists challenged the Commission’s action. In the wake of the Bolsa Chica ruling, the Seal Beach parties reached an agreement under which the Orange County Superior Court would remand consideration of the project—without the golf course—back to the Coastal Commission.¹⁸¹ Dissatisfaction with the Bolsa Chica decision led the development and building industry to join forces to amend the Coastal Act.¹⁸²

c. *The Port Mitigation Project*

The issue became moot when the seventy-nine million dollar Bolsa Chica Wetlands acquisition and restoration project became the most expensive and ambitious port mitigation project to date, involving both the Ports of Los Angeles and Long Beach and the eight state and federal agencies—which later became the core of the Wetlands Recovery Project.¹⁸³ In return for their money, the

¹⁸⁰ *Bolsa Chica Land Trust v. The Superior Court of San Diego*, 83 Cal. Rptr.2d at 862.

¹⁸¹ *League for Coastal Protection/Wetlands Action Network v. California Coastal Commission* (Orange County Superior Court Case Nos. 801830 and 807590, filed Nov. 9, 1998). Settlement Agreement filed Dec. 29, 1999.

¹⁸² San Diego Assembly Woman Denise Moreno Ducheny and Orange County Assembly Woman Patricia Bates held a meeting in San Diego County in November 1999 at which members of the development community expressed their displeasure with the court opinions and suggested changes to the Coastal Act. In March 2000, Assembly Members Ducheny, Bates, and Calderon introduced A.B. 2310 to the California Assembly to amend the Coastal Act by allowing recreational, residential and commercial development in degraded wetlands if substantial portion of the degraded wetland is restored. This bill has created a furor in the environmental community.

¹⁸³ The agencies include the original triad—the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish & Game—along with the State Lands Commission (which had joined the triad in the Batiquitos negotiations) and the State Coastal Conservancy (which had withdrawn from the Batiquitos negotiations) as well as the California Resources Agency, the U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency. The Coastal Commission did

Port of Long Beach got credits to bank and the Port of Los Angeles got credits for Pier 400, phase one, with some, but not enough, left over for Pier 400, phase two.¹⁸⁴ The developer sold 880 acres to the State for \$25 million.¹⁸⁵ The agencies agreed to oversee and implement the restoration with four million dollars dedicated for studies, forty-three million dollars for restoration work, and five million dollars in an interest-bearing account for ongoing monitoring and maintenance, the mitigation ratio was 1.32 acres filled for each one restored.¹⁸⁶ This represented the first case where the ports purchased land under a mitigation agreement. They were also allowed to simply pay rather than bear any responsibility for the restoration work and its success. Moreover, the adverse impacts from Pier 400 are now being experienced, long before the mitigation will occur at Bolsa Chica.¹⁸⁷ Thus, to make the deal at Bolsa Chica required the resource agencies to make some major concessions in their mitigation policies.

not sign the agreement but ratified it by approving a related Port Master Plan Amendments and a federal "consistency determination" on the restoration concept plan.

¹⁸⁴ See AGREEMENT TO ESTABLISH A PROJECT FOR WETLANDS ACQUISITION AND RESTORATION AT THE BOLSA CHICA LOWLANDS IN ORANGE COUNTY, CALIFORNIA, FOR THE PURPOSE, AMONG OTHERS, OF COMPENSATING FOR MARINE HABITAT LOSSES INCURRED BY PORT DEVELOPMENT LANDFILLS WITHIN THE HARBOR DISTRICTS OF THE CITIES OF LOS ANGELES AND LONG BEACH, CALIFORNIA (Mar. 1997).

¹⁸⁵ Some agency and many environmental representatives maintain that the \$25 million for the land, \$31,250 per acre, was too big a price. They argued that the Coastal Commission approval violated the Coastal Act and Section 404 of the Clean Water Act and the developer would never have been given permission to build in the wetlands; moreover, if they had received permits, the soggy land would have made development too expensive or impossible. Homes built on wetlands adjacent to the 880 acres have experienced seepage and the wetlands restoration at Bolsa Chica must be designed to protect those existing homes. On the other hand, at the time, it was not known how the court would rule on the Coastal Commission approval or what the Corps of Engineers, a district agency long seen as more supportive of development than environmental protection, would permit. Rather than prolonging the battle, the agencies agreed to pay the price to obtain certainty and to get on with actual restoration planning. For this reason, the environmental plaintiffs, League for Coastal Protection and American Oceans Campaign, settled their lawsuit against the California Coastal Commission, and worked actively for ratification of the agreement worked out by the ten agencies.

¹⁸⁶ See *Bolsa Chica Land Trust v. Superior Court of San Diego*, 83 Cal. Rptr.2d at 862 (1999).

¹⁸⁷ The completed environmental statement describing the mitigation alternatives was expected in August, 2000.

C. Lesson Learned

This history illustrates the evolution and application of mitigation policy in the Southern California coastal context and teaches a number of lessons regarding mitigation practice, but the most obvious one bearing on the history of the Wetlands Recovery Project is this: port mitigation funds have dwarfed all other sources of wetlands acquisition and restoration funds in Southern California.¹⁸⁸ Some federal grant money has been available, but with very little state money to meet the matching requirements. As the second largest port facility in the United States, port mitigation needs will continue.¹⁸⁹ Indeed, no other entity appears to have made land out of water on the scale of what has occurred in the Los Angeles and Long Beach Harbors and few entities could rival the ports' "deep pockets" and ongoing growth prospects.

III. THE BIRTH OF THE SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT¹⁹⁰

The potential of the ports to fund environmental restoration was not lost on Doug Wheeler, appointed by Governor Pete Wilson as California's Secretary of Resources. Although Wheeler came to office with impeccable environmental credentials, the environmental community soon became wary of his motives.¹⁹¹ Wetlands, high on the environmental agenda of the Wilson Administration, have often served as a red flag to the development community, which helped Wilson gain the governorship. Environmental advocates did not hold much stock in Administration claims that wetlands could be balanced against business interests

¹⁸⁸ E-mail message from Jack Fancher, biologist, Southern California Coastal Program, U.S. Fish & Wildlife Service to Joan Hartmann (Nov. 7, 1999).

¹⁸⁹ As noted, the Port of Los Angeles is even now actively seeking a mitigation opportunity to offset the impacts of Pier 400, phase two, a significant pot of money awaiting a home. The Port of Long Beach also wishes to augment its banked mitigation credits because of imminent proposals for large new landfills.

¹⁹⁰ The entity was first christened as the Southern California Wetlands Clearinghouse, but the name was changed in 1999. *See supra* note 1.

¹⁹¹ Wheeler had served as president of the Sierra Club, Executive Director of the World Wildlife Fund, and had helped to start the American Farmland Trust and was active in historic preservation. Wheeler had encountered California Senator, Pete Wilson, in Washington D.C. and after Wilson was elected Governor, he persuaded Wheeler to take the post as California Resources Secretary.

and still gain in quantity and quality. They were suspicious of the Natural Community Conservation Planning that the Administration was experimenting with as a means to protect endangered species in fast-growing San Diego County. Finally, they were against the developer's proposed plan, supported by Wheeler, to build housing in the Bolsa Chica Wetlands in return for an extraordinary mitigation commitment. The notion of "mitigation banking" that Wheeler promoted was anathema and a red flag to the environmental community as much as wetlands regulation was to the development community. Southern California wetlands and port mitigation funds took center stage in the unfolding quarrel between Wheeler and those who sought clear regulatory protections for wetlands.

A. FIRST PRINCIPLES: BALANCING WETLANDS WITH THE ECONOMY

The overarching theme of Wheeler's job, based on his marching orders from the Governor, was to balance economic and environmental interests.¹⁹² Wheeler accepted the job knowing he was to focus on a specific set of environmental priorities for the state determined by Wilson's transition team. These were coastal issues, wetlands, endangered species, and timber. Wheeler energetically set about to develop innovative approaches to each based on bringing parties together in a consensus framework. The question became whether wetlands policies which have historically polarized business and environmental interests could be addressed in a consensus process.

B. DEVELOPING A CALIFORNIA WETLANDS POLICY

Governor Wilson was able to delegate implementation authority to his Department heads because he came to office with a clear philosophy and a set of issues for each of his main policy areas. Wilson made his appointments quickly and told them to develop game plans for the issues identified during the transition,

¹⁹² Wheeler, a Republican, took the job on the condition that Mike Mantell, a Democrat, be appointed his chief deputy. Wheeler set the vision and Mantell made it happen. Mantell's party affiliation was suspect by some in the new Administration and is blamed in part for Wheeler's inability to cut through the advisors and get direct access to Wilson.

consistent with his philosophy.¹⁹³ They were to propose specific goals, timelines and measures of success that he approved. In 1992, Wheeler described the agenda for his agency in a report committing the Wilson Administration to develop a wetlands policy.¹⁹⁴ Wheeler then set a process in motion, convening business and environmental leaders to develop a consensus wetlands policy.¹⁹⁵ At the outset, the participants agreed that if they could not reach consensus, they would not issue a formal document.¹⁹⁶ Although they were able to find some agreement and narrow the range of issues on which they disagreed, they never issued a formal document.

In mid-1993, Wilson's "California Wetlands Conservation Policy" was issued,¹⁹⁷ accompanied by an Executive Order which sought to coordinate "all State government programs and policies that affect the wetlands of California" to accomplish the following:

To ensure no overall net loss and long-term gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.

To reduce procedural complexity in the administration of State and Federal wetlands conservation programs.

To encourage partnerships to make restoration, landowner incentive programs, and cooperative

¹⁹³ Telephone Interview with Craig Denisoff, Wetlands Coordinator, The Resources Agency (Nov. 10, 1999).

¹⁹⁴ See CALIFORNIA RESOURCES AGENCY, RESOURCEFUL CALIFORNIA (1992).

¹⁹⁵ U.S. Environmental Protection Agency supplied grants to support a Wetlands Coordinator at The Resources Agency, a position filled by Craig Denisoff, who was recruited from EPA.

¹⁹⁶ See text *supra* note 189.

¹⁹⁷ See generally GOVERNOR PETE WILSON, CALIFORNIA WETLANDS CONSERVATION POLICY (Aug. 23, 1993).

planning efforts the primary focus of wetlands conservation.¹⁹⁸

The Executive Order identified three regions—the San Francisco Bay Area, the Central Valley, and Southern California—as pilots “to test how wetlands programs can be implemented, refined, and combined in unique ways” to achieve the Policy’s goals.¹⁹⁹ Whereas the Policy set out five specific goals for the first two regions, it did not set regional goals for the third, acknowledging that “[t]here is no mechanism for coordinating regional wetland conservation activities in Southern California.”²⁰⁰ Instead the Policy envisioned initiating “better coordination and communication among diverse interests” by bringing together the “principle stakeholders” to consider long-term goals, priorities, and policies.²⁰¹

C. A JOINT VENTURE FOR SOUTHERN CALIFORNIA?

Southern California was a blank slate. The original idea was to create a Habitat Joint Venture similar to what existed in the Central Valley and to what has since been formed in the San Francisco Bay Area. Joint Ventures are the organizational form devised to implement the North American Waterfowl Plan, an agreement among the United States, Canada, and Mexico to restore waterfowl populations.²⁰² Using waterfowl as indicators for

¹⁹⁸ See generally State of California, Governor Pete Wilson, Exec. Order No. W-59-93 (1993).

¹⁹⁹ See *id.*

²⁰⁰ The U.S. EPA had conducted an advance identification of restoration opportunities in the San Francisco Bay Area while Ducks Unlimited and the rice growers had established a Habitat Joint Venture in the Central Valley which had produced a plan for enhancing wetlands. These documents set goals for the Bay Area and the Central Valley that were reflected in the Wetlands Policy.

²⁰¹ See *supra* note 197, at 12.

²⁰² At the international level, an 18-member Plan Committee (six representatives from each country) oversees development of the North American Waterfowl Management Plan. In the U.S., an Implementation Board consisting of 22 representatives of non-governmental organizations promotes Plan implementation by engaging in public and congressional outreach, advising the Plan Committee, and facilitating the formation of Habitat Joint Ventures. The U.S. Fish & Wildlife Service’s North American Waterfowl & Wetlands Office helps to coordinate Joint Venture activities by organizing conferences, offering advice, and collecting and disseminating information. Joint Ventures are organized regionally, by Management Boards comprising government, private sector, and non-profit organizations; sub-regionally by Steering Committees; and at the project level by Focus Area Teams. While they engage in wetlands acquisition, restoration and

healthy ecosystems, the Plan sets goals for duck, goose, and swan populations; for overall wetland protection through acquisition, restoration and enhancement; and for funding levels.²⁰³ It also targets regional areas of concern and the desired waterfowl population and habitat goals for each. Unfortunately Southern California is not among them. To date, fifteen Joint Ventures exist in the United States.²⁰⁴ In addition to the Central Valley, which is recognized as one of the most successful, and the San Francisco Bay Area, which are wholly in California, the Pacific Coast and Inter-mountain West Joint Ventures include parts of California.

The Joint Venture concept did not get a warm reception in Southern California. In the fall of 1994, Wheeler's wetlands deputy, Craig Denisoff, started to convene meetings in Southern California. He enlisted the help of the State Coastal Conservancy, the non-regulatory agency created under the California Coastal Act to work in partnership with local government agencies, non-profits, landowners and business organizations to acquire (but not manage), restore, and enhance coastal resources, including wetlands.²⁰⁵ Denisoff chose the Coastal Conservancy because it had better local contacts in Southern California than the Resources Agency or other state agencies with wetlands responsibilities. Reed Holderman, a senior Coastal Conservancy staffer with long-standing involvement in Southern California, good human relation skills, and impeccable environmental credentials joined Denisoff.

Denisoff and Holderman met first with public agency personnel and encountered a general reserve and specific mistrust of the Wilson Administration. Moreover, agencies with different man-

enhancement, they also promote beneficial practices and foster education. *See e.g.*, U.S. DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE AND ENVIRONMENT CANADA, CANADIAN WILDLIFE SERVICE, NORTH AMERICAN WATERFOWL MANAGEMENT PLAN (May 1986). Changes in rice irrigation practices have been key to the success of the Central Valley Joint Venture. *See e.g.*, CENTRAL VALLEY HABITAT JOINT VENTURE PLAN: A COMPONENT OF THE NORTH AMERICAN WATERFOWL MANAGEMENT PLAN (Feb. 1990).

²⁰³ *See* U.S. FISH & WILDLIFE SERVICE, NORTH AMERICAN WATERFOWL MANAGEMENT PLAN, IMPLEMENTATION PLAN GUIDELINES 88-05.1 (Jan. 5, 1994) (last visited Oct. 6, 2000) <<http://northamerican.fws.gov/nawmphp.html>>.

²⁰⁴ *See* U.S. FISH & WILDLIFE SERVICE, JOINT VENTURES (last visited Oct. 6, 2000) <<http://northamerican.fws.gov/nawmphp/jvdir.html>>.

²⁰⁵ *See generally* CAL. PUB. RES. CODE §§ 31000-31156 (West 1996).

dates, organizational cultures, and ways of doing business were not all that eager to work together. Some promoted fish, others birds. Some pursued resource management, others regulatory programs. Some focused on the coast, others on watersheds. Some primarily engaged in resource protection, others primarily on development projects. Along with their different agency perspectives, some of these agencies had a history of conflict over specific wetland fill permits. While they were none too sure about each other, some had unfortunate experiences with public participation and were suspicious of stakeholder processes involving the public in their work.

In the spring of 1995, Denisoff and Holderman met with the environmental community, which called for better enforcement of existing regulations and passage of more stringent laws and regulations, while at a subsequent meeting, the development community called for less regulation and more mitigation opportunities. A desire to focus on watersheds was the only interest shared by the environmental and development communities. However, focusing on a set of watersheds seemed to contravene the directive to develop a "regional" approach for Southern California. The Resources Agency approached the Audubon Society to determine if it would take on the task for setting up a Southern California Joint Venture. Audubon declined, preferring a watershed approach and hesitant to take on the daunting task of trying to find common ground in such a disparate region.

D. FACTORS SHAPING THE "CLEARINGHOUSE" CONCEPT

Four major factors converged to shape Secretary Wheeler's thinking about what kind of framework to institute in Southern California to implement the Wetlands Policy: the economic and political climate; innovations for setting aside habitat for endangered species; his relationship with Secretary of the Interior, Bruce Babbitt; and the spotlight that both discussions with developers and the successful history of port-funded wetland mitigation focused on the idea of "mitigation banking."

1. *Economic Downturn and Political Right Turn*

The failure of the Joint Venture idea to take hold put the ball back in the court of The Resources Agency and Doug Wheeler had to get personally involved. What could be accomplished in Southern California? He had to be mindful of his commitment to the Governor to reconcile business and environmental interests, and

he had to promote a wetlands policy which called for development of a regional approach to wetlands protection in Southern California.²⁰⁶ Several background factors also shaped his thinking. First, California was in the midst of a major recession. Second, in 1992, a new wave of conservative Republicans had moved into Congress. The Republicans also now controlled the California Assembly. Additional public moneys, he had to conclude, were not going to be available for wetlands any time soon.

2. *Natural Communities Conservation Planning under the ESA*

Wheeler had a keen sense for how vehemently many conservatives opposed environmental protection programs and how strapped these programs were at the time for resources. Even though he was an appointee of a Republican Governor with noted antipathy for the Clinton Administration, Wheeler worked closely with Clinton's Secretary of the Interior, Bruce Babbitt, to avert what Babbitt had begun referring to as a "train wreck" under the Endangered Species Act. With endangered species listings occurring after species were already approaching the brink of extinction and coming up against development proposals that had already generated optimistic economic expectations, there were bound to be big clashes. Cries of "takings" were rising in opposition to the ESA and many feared that the conservative 104th Congress would gut the Act, which had already been weakened by budget cuts during the Reagan and Bush Administrations.

Moreover, the species-by-species approach to protection adopted in the Endangered Species Act seemed more patchwork than ecological and more reactive than proactive. There had to be a better way to protect species and biodiversity and to engage landowners in the effort. Natural Communities Conservation Planning (NCCP) was heralded as the way to avert the "train-wreck." This concept was born and pioneered in California.

The NCCP extends the Endangered Species Act's Habitat Conservation Plan (HCP) program, which allows developers to incidentally "take" endangered species, if they set aside and maintain a portion of their land for the benefit of particular en-

²⁰⁶ See GOVERNOR PETE WILSON, CALIFORNIA WETLANDS CONSERVATION POLICY (Aug. 23, 1992). See text *supra* note 174.

dangered species.²⁰⁷ The NCCP is an HCP encompassing a whole region. Negotiating such plans involves numerous local, state and federal agencies, business and environmental organizations, and landowners. It is a massive and delicate undertaking, giving the federal and state governments an unprecedented role in what has heretofore been the jealously guarded local prerogative of land-use planning.

Despite the difficulties, NCCPs have generated a great deal of interest and support. Developers hope that an NCCP will offer some certainty; environmentalists hope that it will set out a landscape-level plan to provide for a wide array of species; government officials hope that it will bring private dollars to habitat protection. Many thorny issues remain to be resolved, but Wheeler's pioneering role and skill in helping to define processes in which vastly differing perspectives could be considered cannot be underestimated. Only wetlands can rival endangered species in terms of the yawning partisan divide that has existed.²⁰⁸ Together, Wheeler and Babbitt began to bridge that divide, at least with regard to endangered species. The question was could they do it for wetlands?

3. Washington Summit on Bolsa Chica Gives Birth to "Clearing-house" Concept and Name

Negotiations to purchase the lowlands at Bolsa Chica brought Wheeler and Babbitt together for a Washington meeting. As noted earlier, Wheeler is regarded as a "vision person," a "big picture" thinker and Babbitt has a similar reputation. Thus, the

²⁰⁷ The first HCP, the San Bruno Butterflies, was instituted in California under somewhat questionable legal authority prior to being adopted in Section 10 of the ESA. See 16 U.S.C. § 1539 (2000).

²⁰⁸ The California knatcatcher, served as the initial driving force behind the NCCP which focused on this endangered bird's coastal sage scrub habitat in the San Diego area. The NCCP has continued to emphasize coastal sage and, for better or worse, has not attempted to incorporate wetlands habitat into its framework. The regulatory program that applies to wetlands may not fit comfortably within the NCCP framework that allows for a wide range of trade-offs. Even though the Endangered Species Act is viewed as an uncompromising statute, agencies have some discretion in such areas as granting incidental take permits, designating "critical habitat, and implementing recovery plans. Despite the seeming discretion associated with many aspects of the wetlands regulatory program, it is very difficult to place non-water dependent development in delineated wetlands. Nonetheless, the NCCP bears watching to see if and how wetlands, which are very significant for many of the region's threatened, endangered and special status species, are treated.

conversation did not long remain limited to Bolsa Chica. They asked why they were beating their heads on single, contentious issues and whether the overall regional need for mitigation, particularly by entities such as the ports, could not be integrated with a regional planning process. They even christened the entity to be created and charged with doing this: Southern California Wetlands Clearinghouse.²⁰⁹ Wheeler returned to California and told his wetlands deputy, Craig Denisoff, to work with the state and federal agencies involved in wetlands activities in Southern California to establish a framework for developing a regional planning process.

4. *Mitigation Banking: The Clearinghouse Handicap*

Wetlands law is not for people with an aversion to ambiguity. It is a litigator's delight and an abject frustration to those who seek certainty. How to delineate "wetlands" has been the subject of intense controversy.²¹⁰ Once identified, the law does not prohibit the fill or conversion of wetlands outright; rather it contains many exemptions, exceptions and blanket permits to say nothing of fact-specific analyses that determine if a project is water dependent, is in the public interest, or has "practicable" alternatives.²¹¹ Moreover, wetlands regulation as "waters of the United States" under federal law or as a "public trust" resource under state law involves federal and state governments in the traditionally local area of land-use, bringing intense, ideological values into play. Agency applications of the rules and court interpretations of them vary and vacillate to reflect the political philosophy of relevant decision makers. Scholars will seek in vain to find consistency. The result is that wetlands loss continues despite goals of no net loss at the federal level and of net gains at the state level.

²⁰⁹ The name was never popular, bringing with it the shady connotations associated with a well-know magazine subscription contest—promising much and delivering only disappointment.

²¹⁰ See, e.g., THOMAS J. SCHOENBAUM & RONALD H. ROSENBERG, ENVIRONMENTAL POLICY AND LAW: PROBLEMS, CASES AND READINGS 409-12 (3rd ed. 1996) (for succinct discussion of the battle over wetlands delineation manuals).

²¹¹ See, e.g., text *supra* note 141.

a. Mitigation

In cases where losses are considered within the ambit of the permit system, they are to be mitigated. First, losses should be avoided and then minimized—another arena for polemic.²¹² Then the project developer is supposed to mitigate for the left-over losses—commonly referred to as “compensatory mitigation.”²¹³ But compensatory mitigation is a thorny matter and has not effectively stemmed the loss of wetlands. It includes enhancing existing wetlands, restoring what had been historic wetlands, or creating wetlands where none had existed before. As one moves from the first to the last, chances of success diminish. When projects cause small impacts, but nonetheless have large cumulative impacts, agencies frequently fail to require mitigation at all. The transaction costs in designing and carrying out the mitigation are too great given the marginal environmental benefits that might result. Moreover, even when mitigation is required, agencies are often not equipped to ensure that it has been carried out or to monitor its success over time.

In those cases where mitigation requirements are imposed, various policies have developed to promote the objective of “no net loss.” These, too, offer much room for dispute. The mitigation should occur onsite, rather than offsite, or if it must be off site, in close proximity to the loss rather than farther away *unless* the offsite or more distant locations would offer superior prospects for obtaining habitat values and ecosystem functioning. The mitigation should be “in-kind” so that one habitat type or species is not traded off for another *unless* the mitigated site was to benefit habitat and species in shorter supply than found at the site of loss. The mitigation should be at least one acre gained for every one lost *unless* the gain would make up in functions and values what was lost in acreage. Restoration is better than simple preservation of existing acreage which would otherwise lead to a net loss, *unless* the preservation site is itself threatened with loss and a high mitigation ratio is achieved. Restoration is better than creation, which has a higher risk of failure, *unless* there are no good restoration sites as one balances this factor against others like proximity to loss. Mitigation should occur before the loss, so

²¹² See 40 C.F.R. § 320.4(r) (2000). See also *supra* note 142.

²¹³ See 40 C.F.R. § 320.4(r).

there is no temporal loss of functions while the mitigation site becomes established *unless* the agency allows mitigation contemporaneous with the develop project's construction. Although it is becoming routine to require site monitoring and maintenance, success is subject to agency oversight capacity. The only hard and fast mitigation rule has been that there are to be no "in lieu" fees.²¹⁴

No one can determine, in the abstract, what particular wetlands are worth. Knowledgeable, experienced people need to conduct and review ecological studies to carefully assess the losses likely as a result of a specific, proposed project, the potential ecological gains at the substitute site, and the costs of trying to refurbish that site. Habitat evaluation methods have been developed and are being improved to assess habitat functions and values at particular sites, but the best professional judgment informs assessments on how reliably the refurbished site can achieve the predicted functions and values.²¹⁵ Economic costs are also hard to assess in the abstract. The cost of mitigating a 100-acre loss of mudflats, for instance, depends on the species (particularly the "special status" species) that use the area, the ecological services provided, the location and price of alternative sites that could provide similar habitat and ecological services, and restoration costs. If the mudflats are used by endangered species and serve as places for more common species to congregate, if they have surrounding vegetation that may filter pollutants, if the real estate market is hot and land values are high, if the demand for consulting services and the construction industry has driven up prices, the costs of mitigation will be greater than if other conditions prevail.

Thus, the success of mitigation is often uncertain and the cost of mitigation is highly contingent on a range of variables. This is why agencies and others frown on "in lieu" fees which allow the

²¹⁴ Although Paul Michel of U.S. EPA's Region 9 Office states that even this "hard and fast rule" is being violated. Telephone Interview of Paul Michel, U.S. EPA, Region 9 (Nov. 23, 1999).

²¹⁵ General policy requires that if mitigation is to compensate for a loss in a regulatory context, the mitigator is responsible for ensuring that the new site meets the performance criteria set out in the mitigation agreement but this depends on having ongoing monitoring with review and follow-up by agency personnel. If mitigation is done simply to create more habitat, compensating for historic losses, as is done by the Wetlands Recovery Project, it is not clear what performance criteria should apply.

party benefiting from a construction project to “pay and walk” when the effort may not succeed or may cost more than anticipated.

b. Mitigation Banking and General Fund Moneys

Mitigation banking is not the same as mitigation and, in fact, evolved to address some of the problems associated with mitigation. Mitigation banking serves as a way to gather up the impacts of a number of smaller projects on a larger site, ameliorating difficulties associated with habitat fragmentation and with high transaction costs. Mitigation banking also serves as a way to direct compensatory action for large projects with perceived, far-reaching public benefits (ports, highways, flood control) which are almost always assured of going forward despite their impacts to wetlands and aquatic resources. Mitigation banks can help ensure “no temporal loss” by requiring restoration in advance of the impacts; can allow for better monitoring and corrective work, if necessary; and can serve as a “takings safety valve,” shielding regulators from takings claims by imparting value to wetlands so property owners cannot claim that permit denials deprive them of all economic use of their land. “Mitigation banking” is a system of compensatory mitigation in which the creation, enhancement, restoration, or in exceptional circumstances preservation of wetlands is recognized by a regulatory agency as generating credits usable as advanced compensation for unavoidable wetlands losses on other sites.

The early drafts of the Working Agreement, the charter document for the Southern California Wetlands Recovery Project which described the goals, roles and structure for agency cooperation, gave mitigation banking a status equal to that of restoration.²¹⁶ Bolsa Chica and the other port mitigation projects represented mitigation banks so why not formalize this process through the Working Agreement? Mitigation banking seemed to satisfy Governor Wilson’s and Secretary Wheeler’s objective of balancing environmental interests with the economy and also

²¹⁶ See THE COASTAL CONSERVANCY, A REVISED REPORT ON THE PROPOSED SOUTHERN CALIFORNIA WETLANDS CLEARINGHOUSE 1 (May 20, 1997) (on file with author) [hereinafter “Revised Report”].

addressed the wetland policy's goal of "reducing procedural complexity."²¹⁷

In addition, Wheeler believed that, with the stated goal of mitigation banking, he could for the first time ever get state general funds to pay for wetlands acquisition and restoration work, and launch his "Southern California Wetlands Clearinghouse." The Governor's FY 1997-98 budget proposed \$6.75 million for this purpose. These moneys were to provide much-needed matching funds required to obtain federal grants. Until this time, state funds for wetlands restoration work came from licensing fees, special accounts, and bond acts. Although influential legislators occasionally succeeded in adding funds for a favored acquisition project in their districts, the proposed \$6.75 million was for the State Coastal Conservancy to spend on Southern California projects as prioritized by the signatories to the Clearinghouse Working Agreement.²¹⁸

Mitigation banking, however, was the way Wheeler wanted to sell this to the Governor and the State Department of Finance, which Wheeler maintained, required cross-sector benefits. The Department would not support spending the general fund for "special interests," such as environmental protection, and the Working Agreement, therefore, had to give business interests something they wanted too. Reducing the complexity of permits was too onerous a task to take on, so mitigation banking was it.

E. STATE BUDGETARY POLITICS

When Doug Wheeler returned from the Washington Summit to create the Clearinghouse, the agencies involved with the ports had grown from the original three to nine.²¹⁹ This group was for-

²¹⁷ Wheeler had entertained the idea of streamlined permitting, which the business community wanted even more than mitigation banking and found it such a daunting task that they turned their attention instead to attempting to simplify mitigation banking requirements. Telephone Interview with Craig Denisoff, Vice President, Wildlands, Inc. (Nov. 10, 1999).

²¹⁸ See generally Southern California Wetlands Clearinghouse Working Agreement (Sept. 1997) (on file with author) [hereinafter "Working Agreement"].

²¹⁹ The founding three were the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish & Game. The Bolsa Chica negotiations added the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, the State Lands Commission, the State Coastal Conservancy, the Resources Agency, and the California Coastal Commission. The Coastal Commission did not actually

mally referred to as the Biomitigation Team. Based on the earlier outreach to the agencies conducted by Craig Denisoff and Reed Holderman, four regional water boards were included along with the California Environmental Protection Agency.²²⁰

The obstacles to cooperation identified at their earlier meetings—differing missions, organizational culture, and *modus operandi*—had not disappeared. Many of these agencies were not familiar with consensus-based processes of decision-making that the Resources Agency was suggesting. Although the U.S. EPA was a national leader, other federal agencies, like the National Marine Fisheries Service and state agencies like the State Lands Commission had some difficulty conceiving of this process. Worse yet, the two federal agencies that had invested the most in evolving the mitigation program with the ports—the Fish and Wildlife Service and the National Marine Fisheries Service—were highly suspicious. It seemed that this process was merely a front for a money-strapped Resources Secretary to lay claim to the large port mitigation moneys and direct them according to his or the Governor's political discretion, rather than according to what the agency personnel viewed as careful, case-by-case calibrations designed to compensate for specific lost wetlands functions and values.

Further, rumors began to circulate that Wheeler had proposed having SONGS mitigation moneys paid directly to his Agency and that he had a similar intent for port mitigation moneys. The implication was that Wheeler didn't want a mitigation bank, but wanted "in lieu" fees, which violated agency policies and deeply felt principles. Based on his desire to reconcile environmental and business interests, Wheeler was pushing the concept of mitigation banking not just for the SCE and the ports, but for land developers too.

The agencies refused to embrace mitigation banking as a joint goal and the very proposal made the environmental community livid. The environmentalists believed that the creation of mitigation banks might offer an excuse for even greater enforcement

sign onto any agreements but did ratify the framework set out in the Bolsa Chica agreement through related approvals—participating separately.

²²⁰ The regional boards are San Diego, Santa Ana, Los Angeles, and the Central Coast.

latitude and laxness. If banks were in existence, then regulators might be more readily coaxed into allowing mitigation instead of holding the line by refusing to permit non-water dependent activities and insisting on avoidance and minimization in cases of water-dependent activities.

The Coastal Conservancy found itself squarely in the middle of a squall. Although it has an independent board, its annual budget is proposed by the Resources Agency and the Conservancy's Executive Officer reports to the Resources Secretary.²²¹ While cautious about mitigation banks and how they would appear to the Conservancy's local constituents, the Conservancy's Executive Officer, Michael Fisher, saw the potential of Wheeler's proposal as a magnet for funds. Fisher assigned two of his most experienced staff to help him navigate these troubled waters. Reed Holderman had to get an agreement among the agencies and launch the new organization.²²² Neal Fishman, the Conservancy's legislative affairs specialist was charged with getting funds approved by the legislature.²²³

Holderman artfully mediated a compromise between the Resources Agency and the other agencies, particularly the federal agencies, that had more independence from the Resources Agency. He ultimately crafted a compromise by drafting a report acknowledging that the resource managers—the in-the-trenches people who formed the biomitigation team and the additional agency representatives brought into the fold as a result of earlier agency outreach (collectively to be called the "Managers Group" under the Working Agreement) —agreed that the emphasis

should be the acquisition, restoration and enhancement of Southern California's coastal wetlands and watersheds. Mitigation banking is now a secondary objective, a possible means toward the principal objective. It may be a tool

²²¹ See CAL. PUB. RES. CODE §§ 31100-31118 (West 1996).

²²² Holderman has since taken the helm at the regional Trust for Public Land office

²²³ Fishman later moved to Senator Tom Hayden's staff to assert a major influence on the Park Bond before returning to the Conservancy to work on Matilija Dam and a number of Southern California projects in addition to San Francisco Bay.

that can be used at specific sites when deemed appropriate by the Governing Board.²²⁴

Mitigation banking was not abandoned but transformed from an end in itself to a means of achieving an objective shared by all the agencies. It could only be employed when the Managers Group and their bosses, the Governing Board, all agreed. Because the Governing Board was to operate by consensus, any agency had veto power. In effect, any of the managers could veto a mitigation bank proposal since the Governing Board members would rely heavily on their managers.

On the other hand, the Secretary of the Resources Agency would chair the Governing Board, and even in a consensus process, a chair can exercise a great deal of influence. Moreover, the Coastal Conservancy was to staff the effort, and as noted above, the Coastal Conservancy is at pains not to subvert the wishes of the Resources Agency. Holderman's report held a place for mitigation banking: "Because it is unlikely that public money alone will be sufficient to restore the wetlands, and because permit-by-permit wetland mitigation projects are often ineffective and are fraught with difficulty for the development community, mitigation [sic] may be an important tool to reach that primary objective."²²⁵ But then Holderman put up some sideboards, avoiding the term "mitigation banking" altogether saying that:

if new habitat is used to compensate for other wetland losses, it will conform to agreed upon conditions...the most obvious are that mitigation credits will only be used for offsetting losses from small fills and public infrastructure projects within the same hydrological unit (to the extent feasible) and for the same habitat type being lost. These projects will also be consistent with federal mitigation guidance and part of a larger restoration and enhancement effort in order to assure a net gain in wetland area.²²⁶

²²⁴ See Revised Report *supra* note 216, at 1.

²²⁵ See *id.*

²²⁶ See *id.*

The language addressing mitigation banking and the proposed organizational framework, combined with Holderman's deft personal style and the prospect of \$6.75 million, convinced the managers to acquiesce and advise their principals to support the Working Agreement. These discussions occurred in the spring and early summer of 1997. The Working Agreement continued to undergo minor revisions, clarifications, and agency review until it was executed in January 1998.²²⁷

During the summer months, the California legislature was in the heat of budget discussions. The Working Agreement was not final and the Sacramento-based, budget-focused environmental community was dubious. There were no assurances that the unexecuted Agreement they saw would go into effect, and they sought additional conditions besides. Neal Fishman of the Conservancy and John McCaull, state lobbyist for the Audubon Society, held a meeting in Southern California where the majority of attendees had flown down from Northern California. The purpose was to work out an approach acceptable to those negotiating on behalf of the environmental community. While Fishman and McCaull debated the intricacies of checks on mitigation banking, the few Southern California environmentalists in attendance (including the author) observed in some confusion: so near to coveted funds, but so far from Sacramento politics.

McCaull, a highly effective lobbyist, succeeded in having a legislative budget committee strike the \$6.5 million. This gave him leverage to negotiate conditions on any mitigation banking to be performed by the new Southern California entity through another bill, drafted by Assemblyman Ted Lempert, which was already wending its way through the budget process.²²⁸ Had the \$6.75 million remained in the budget bill, the Governor could have red-lined any conditions; if those conditions were contained in a separate bill, that bill would have to pass the legislature by a two-thirds majority, but the Governor could not take his pencil to objectionable portions.

²²⁷ See generally Working Agreement *supra* note 218.

²²⁸ See Wetlands Mitigation Banking and Restoration, Article 2 of the Southern California Coastal Wetlands Protection, A.B. 241 (1998). The bill was defeated.

In a delicate dance, Fishman and McCaull negotiated. Fishman had to get clearance from the Conservancy and the Resources Agency, which in turn needed approval from the Governor's Office. McCaull had to reconcile the interests of the key legislative staff, the Northern California environmental community, which had broader mitigation banking concerns than just those that would apply under the Working Agreement, and the Southern California environmental community, which was less attuned to any of these issues, but whose members McCaull did not want to alienate by losing this precedent-setting money in the budget. A tactic to try to split the Northern and Southern Californian environmental interests was bandied about but did not get far. Although Southern Californians wanted the funds, they trusted the advice of their Sacramento and San Francisco counterparts. Each side, having gotten the go-ahead from each of their relevant parties, agreed to a deal. The agreement placed some restrictions on how the \$6.5 million could be spent. Wheeler then gave Lempert the go-ahead to move the bill forward. When the bill got to the Governor's desk—to the disappointment, surprise, outrage, and humiliation of various parties—he vetoed.

There are several explanations. The Lempert bill contained another mitigation banking provision that applied to the San Francisco Bay. It would have provided funds to implement a mitigation bank to gather up impacts from very small projects that members of the Bay Planning Commission, a consortium of shippers, industry, business and developers—known as “Pave the Bay” among some environmentalists—heretofore had not had to mitigate due to high transaction costs and fragmented environmental benefits. They were not shy in registering their objections with the Governor. Additionally, the bill was an all-or-nothing proposition; therefore the Governor could not delete any part. As if this were not enough, developers from Southern California also registered their objections. They were concerned that the bill would set a precedent, restricting funds for other mitigation banks. Finally, and this was key, the Governor decided to use the budget surplus to pay off a debt owed to the Public Employees Retirement System in one bold stroke during the 1997-98 fiscal year, rather than over time.

IV. PROGRESS DESPITE POLITICS

What would this budget defeat do to the “Clearinghouse,” a tenuous set of agency people, with no signed agreement and less confidence than ever in the Resources Secretary? Sometimes hard times bring out the best in people. Rather than pull apart, they decided to pull together. Wheeler stuck his neck out, saying that the next year’s budget would have funding and convening the Governing Board to make that clear and set things in motion. Reed Holderman mustered his energy to propel the process by engaging the Managers Group (the Biomitigation Team plus the Regional Water Boards) which served as staff to the Governing Board and was charged with developing a list of initial projects for the next budget cycle, hiring a group of consultants that would become the Scientific Advisory Panel, and bringing an outreach person, based in Southern California, on board to serve as ambassador for the process. The Coastal Conservancy’s budget contained \$250,000 for planning in order to keep the effort alive.

A. PREPARING FOR FY 1998-1999 STATE BUDGET

In August 1997, after Wheeler announced that funding “was lost during budget discussions,” the Governing Board commenced work by putting some finishing touches on its Working Agreement and by launching Holderman’s work program.²²⁹ The Board also got its first peek at the Southern California Coastal Inventory. With a grant from the U.S. Environmental Protection Agency and with assistance from the U.S. Fish and Wildlife Service and the California Coastal Commission, the Coastal Conservancy had been working for many months to put together a data base, drawn from all available, credible studies, dealing with 41 of the wetlands along the coast from Point Conception to the Mexican border. Originally, the initial geographic scope for this regional planning effort was to be the 41 coastal watersheds, but at its August meeting, the Governing Board added two new sections to the Working Agreement, one of which was entitled “Watershed Vision” and stated that:

²²⁹ See Southern California Wetland Clearinghouse Governing Board Meeting Minutes, Sacramento, California (Aug. 15, 1999) (on file with author).

the health of coastal wetlands will eventually require the Clearinghouse [since renamed Wetlands Recovery Project] to extend its boundaries into coastal watersheds. The long-term health of coastal wetlands cannot be assured without a commitment to upstream watershed management and restoration.²³⁰

For each of the forty-one coastal wetlands, the Inventory provided historic and current maps; a table of information describing features such as size, sub-habitats, ownership, hydrology, species, threats, and restoration history; and a bibliography with the actual documents housed at the State Coastal Conservancy offices in Oakland and the University of California, Irvine.²³¹ The Inventory was designed to make information available to the public and to provide a scientific basis for the Managers Group to establish priorities among potential projects.

B. PROJECT SELECTION FOR YEAR 1 BUDGET

The scientists and the Managers Group met in October 1997. The scientists had been asked for advice on how the Inventory could be used for planning, about scientific criteria for selecting projects, and about their recommendations for developing a regional acquisition and restoration plan. A facilitator was hired to help the process reach some conclusions and the results were issued in a report.²³² The scientists noted that while all types of wetlands are important, a regional strategy should attempt to establish large expanses of unfragmented habitat with buffers and good marine and upland connections which could then serve as ecosystem models and provide seed stock for other areas. The prime areas identified for this were the Tijuana Estuary, the

²³⁰ COASTAL CONSERVANCY, A FINAL REPORT ON THE SOUTHERN CALIFORNIA WETLANDS CLEARINGHOUSE (Sept. 8, 1997) (on file with author) [hereinafter "Wetlands Final Report"]. The Working Agreement incorporates by reference this report.

²³¹ It can be viewed on the State Coastal Conservancy's web site. See COASTAL CONSERVANCY, THE SOUTHERN CALIFORNIA WETLANDS INVENTORY (last modified Aug. 13, 1998) <http://www.ceres.ca.gov/wetlands/geo_info/so_cal.html> [hereinafter "Wetlands Inventory"].

²³² See generally KEITH B. MACDONALD, CH2M CONSULTING, SCIENCE ADVISORY WORKSHOP, REGIONAL RESTORATION PLANNING FOR SOUTHERN CALIFORNIA COASTAL WETLANDS (Nov. 12, 1997) (last visited Oct. 9, 2000) <<http://www.coastalconservancy.ca.gov/scwrp/index.html>>.

North Orange County/South Los Angeles County with Bolsa Chica, the Santa Ana River/West Newport Oil area, Seal Beach National Wildlife Refuge, and Los Cerritos Wetlands, and the Oxnard Plain.²³³

The scientists also expressed the view that the regional strategy should strive to achieve “the historic geographic balance of wetlands” with an “emphasis on restoration of locations and habitat types that have suffered the greatest losses.”²³⁴ Given the ninety-three percent or greater loss of wetlands in Los Angeles County, Ballona Wetlands, situated between Santa Monica and Marina del Rey on a site previously owned by Howard Hughes, ranked high on the scientific criteria should a willing seller become available.²³⁵

The source of fresh and salt water to Ballona Wetlands has been largely cut off so the extent of wetlands that meet the criteria for regulatory protection is a matter of some dispute, but the scientists viewed much of the 1,087-acre site as historic, restorable wetlands. A major development project is planned, which would build 3,200 residences and a business campus at the site and phase one construction has begun, although the Environmental Impact Statement/Report is under legal challenge and the draft EIS/EIR for the second phase has not yet been made available to the public.²³⁶ The proposed development project would also have major air and traffic impacts. Like Bolsa Chica, the current plan for Ballona by the Playa Vista Development Corporation replaces a more intensive development plan that included a marina. The current plan would commit the developer to setting aside, restoring, and maintaining 249 acres of wetlands on-site at a cost of \$13.5 million.²³⁷ Especially since the area is seriously water-deprived, some environmentalists are eager to see this restoration proposal implemented quickly. Others are using

²³³ *See id.*

²³⁴ *See id.* at iii.

²³⁵ This estimated loss figure was derived by Coastal Conservancy staff based on Southern California Coastal Wetlands Inventory. *See generally* Wetlands Inventory *supra* note 231.

²³⁶ *See, e.g.,* Jim Newton & Monte Morin, *Playa Vista's Road to Reality Is Full of Twists and Turns*, L.A. TIMES, October 3, 1999, at A-1.

²³⁷ *See id.*

litigation and the media to stop the developer, hoping that all of the land could be purchased and restored to wetlands. The Park Bond provides \$25 million for purchase of a site whose description could only be Ballona. If the land were for sale, acquisition costs alone would likely exceed \$150 million. Dreamworks, the most visible partner, had planned to build a studio there but has pulled out. Meanwhile the developer is moving forward.

The Ballona controversy, mirroring what had occurred earlier at Bolsa Chica, pits the “environmental moderates” who, in different times had negotiated a deal with the developer and were invested in it, against the “environmental radicals,” who with their efforts to obtain the “whole loaf” threatened the security of even a “partial loaf.” The radicals employ tactics that the moderates deplore. The moderates are viewed as “sell-outs.” The fight gets personal and spills into the media, intensifying feelings. As the “Clearinghouse” was beginning to take shape, both sides sought support for their position, but the tenuousness of its reputation during formation, however, resulted in a tacit agreement not to have it get embroiled in the controversy surrounding Ballona Wetlands. The focus was to be on willing sellers and none were available for Ballona Wetlands, so the site was not considered for the initial list of projects.

Following the meeting with the scientific advisors, the Managers Group set to work. Based on their own knowledge and that of colleagues they surveyed, the Managers Group assembled a list of potential projects. They developed a set of ecological, feasibility and policy criteria that framed the discussions of the projects. Finally, in a series of long and earnest meetings, they put together a list of 13 initial projects.²³⁸

During this time, both Michael Fisher and Reed Holderman left the State Coastal Conservancy.²³⁹ Steve Horn, the Conser-

²³⁸ The FY 1998-99 Project List included activities at Tijuana River Estuary (2), South San Diego Bay, San Elijo Lagoon, Upper Newport Bay, Huntington Beach Wetlands, Bolsa Chica, Los Cerritos, Malibu Lagoon, Ormond Beach (2), Ventura River Estuary and Goleta Slough (available from the State Coastal Conservancy). *See generally* SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT, COMPLETED AND FUNDED PROJECTS (last visited Oct. 9, 2000) <<http://www.coastalconservancy.ca.gov/scwrp/index.html>>.

²³⁹ Fisher went to head the Hewlitt Foundation and Holderman became the Western Regional Director for Trust for Public Land.

vancy's Deputy Director stepped in to fill the void. Experienced in state budget matters, he pushed the Managers Group to produce a list of specific projects in time for committee budget deliberations in order to pique legislators' interest and to make the program's objectives more concrete. There was still much mitigation banking baggage to be shed. Horn also pushed for a single criterion to rank above all others in selecting the first-year projects: how quickly could the money be allocated and used to achieve on-the-ground benefits.

He persuaded the Managers Group that the next year's funding would hinge on whether or not the first-year moneys had yielded tangible results. Some people worried that Fisher's and Holderman's departure would cripple the effort, but along with Horn, Paul Michel of the U.S. Environmental Protection Agency stepped up to the plate. Michel was chosen as the Chair of the Managers Group, a post he holds to this date. He skillfully manages the process of project selection and has helped create esprit de corps among the members. Superb staff work by a woman hired by Holderman just before his departure, Trish Chapman, has also kept the process moving.

1. *Public Participation*

At the August 1997 meeting when the Governing Board added a new section on watersheds to its Working Agreement, it also added a new section addressing public participation, stating that "the public participation process is aimed at creating visibility, interest and support for wetland conservation in Southern California."²⁴⁰ The structure for public participation was still inchoate. The Working Agreement called for the Governing Board to create a Public Advisory Committee "to help promote its mission and projects" and "to serve as a focal point for community interests and concerns" particularly as they relate to establishing project priorities.²⁴¹

The author was hired to serve as an outreach consultant and to propose a strategy for engaging the public. She began by creating a set of written materials that later were also used to create a

²⁴⁰ Wetlands Final Report *supra* note 230.

²⁴¹ *Id.* at 3.

Web Site.²⁴² She next interviewed twenty-five to thirty-five people in each of the five counties by phone and followed up by sending materials. They included local government, business, and environmental representatives as well as state and federal government officials. She described the objectives and structure of the organization and elicited respondents' views about wetlands protection, issues peculiar to their counties and sectors, potential controversies regarding wetlands in their areas, mitigation banking, public participation processes, prospective PAC nominees. She also tried to enlist support for development of a regional wetlands restoration strategy. The results were described in a 129 page report, although not widely read, has been invaluable in formulating a plan for public participation.²⁴³ In addition, relevant mailing lists were consolidated and a mailing to over 2500 Southern Californians went out to describe the effort and to elicit a response form with contact information and areas of interest. An e-mail list was put together and has served as the primary means to share information. People can now subscribe to the list-serv through the Web Site.

2. *The First-Year Budget*

The Governor's budget proposed \$6.75 million for the "Clearinghouse" for FY 1998-99. Members of the budget committees received letters in support, but mitigation banking continued to cast a long shadow. Senator Tom Hayden, chair of the Senate Budget Committee did not support funding. It took the valiant work of both the Coastal Conservancy and John McCaull of the Audubon Society to garner the needed legislative votes. The \$6.75 million was pared to \$5.75 million when \$1 million was carved out for dredging at Newport Bay. The remaining money was unencumbered by either mitigation language or earmarks. Horn had persuaded the Governing Board that to ensure successful allocation of the funds, the Managers Group needed flexibility. Of the set of thirteen projects, it was impossible to know which would really be ready to move dirt. Thus, the Governing Board delegated authority to the Managers Group to select among the

²⁴² See SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT (last visited Oct. 9, 2000) <<http://www.coastalconservancy.ca.gov/scwrp/>>.

²⁴³ See generally JOAN HARTMANN, STATE COASTAL CONSERVANCY, THE FIRST PHASE OF THE SOUTHERN CALIFORNIA WETLANDS CLEARINGHOUSE PUBLIC OUTREACH EFFORT (June 1998) (on file with author).

thirteen projects.²⁴⁴ The legislature did nothing to derail this approach. The Governor signed the bill and the "Clearinghouse" was, at long last, officially in the wetland restoration business.

B. PREPARING FOR FY 1999-00 STATE BUDGET DELIBERATIONS

As hoped, the state-funded, scientifically based, region-wide, consensus approach to wetlands planning in Southern California helped to attract other financial resources and the public eye. The first-year state moneys of \$5.5 million brought in over \$2 million in state, federal and local funds. Actually spending the money and achieving quick on-the-ground results proved harder. Of the thirteen projects, selected largely on the basis of timeliness, only one went forward right away and, as it turned out, Clearinghouse money was not required.

1. *Implementing First-Year Projects*

Despite the huge investment of time researching and evaluating projects, the Managers Group was unable to foresee the many problems that would arise in trying to get the project underway. A Model Marsh project at Tijuana Estuary was bogged down when excavation material could not be used for beach replenishment and city permits were required to dispose of the material in a nearby quarry. The Goat Canyon project at Tijuana Estuary was delayed due to complications arising from the proposed relocation of the new border fence. San Elijo Lagoon idled as the lawyers fine-tuned the provisions of an endowment to keep the Lagoon mouth open. An Upper Newport Bay project was halted when agencies with responsibilities there asked for postponement until they had completed a broader planning process, something similar that occurred at Malibu Lagoon. Acquisition at Hunting Beach Wetlands was curbed when a tax default sale was sidetracked into bankruptcy court. The acquisition of the Fieldstone property at Bolsa Chica was disrupted by the discovery of contaminants. Although an option was obtained to purchase a site at Los Cerritos, one of the conditions of the agreement did not come to pass, extending the negotiation period. Negotiations to acquire two properties at Ormond Beach took longer than hoped. An acquisition at the mouth of the Ventura River has stalled due

²⁴⁴ Technically the funds must be channeled through the State Coastal Conservancy process which also requires approval of specific expenditures by the Conservancy's Board.

to the owner's indecision. And, restoration work at Goleta Slough has ground to a halt until a study can be completed that addresses the Federal Aviation Administration's bird strike hazard concerns.

The one of thirteen projects that did succeed early on was a major acquisition at South San Diego Bay. The Port of San Diego sought to expand an airport onto some land where the U.S. Naval Training Center had been before it closed. A colony of endangered least terns occupied about 20 acres of the site. To mitigate impacts to the terns, the U.S. Fish & Wildlife Service brokered a deal under which the Port bought 800 acres of an area known as the Saltworks, in turn making another 600 acres of state-owned land available for restoration. The entire 1400-acre site is to become part of the South San Diego Bay National Wildlife Refuge. Since "Clearinghouse" money was not needed, can it claim this as one of its successes? This area is on the Inventory and was on the list of thirteen initial projects and is a likely target for future restoration funds when the two-year planning process has concluded. Moreover, one of the partner agencies brokered the deal. The acquisition would have occurred even if the "Clearinghouse" had not existed. Policies on precisely how to tally credit remain to be determined.

2. The Public Advisory Committee

Although the Working Agreement grants the Governing Board the right to appoint the Public Advisory Committee, neither the Board nor the Managers Group was eager to take on this task. Craig Denisoff's early forays into Southern California to explore whether a Habitat Joint Venture might be created had revealed just how ideologically split and geographically dispersed interests were. In addition, the intensity of the furor over mitigation banking had caught the Resources Agency off guard. Maybe they weren't fully attuned with public sentiment. Further, the November elections were approaching, a time for agency people to lie low. A number of individuals on the Managers Group felt they had been burned in other dealings with the public. Some people feared that the rift in the environmental community over tactics pertaining to Ballona could spill over into the PAC and paralyze the "Clearinghouse" just when it needed to establish broad support and credibility. The outreach consultant had recommended a list of PAC members based on interviews conducted in each of the five coastal counties, but both Wheeler and the Managers

Group were reluctant to act. The October 1998 Governing Board meeting was approaching and if they postponed, the Board would not meet again until February 1999 under the new administration.

After going back and forth over the course of several meetings, Paul Michel, the Chair of the Managers Group finally took a firm stand, arguing for going forward with an "interim" PAC. The others acquiesced. The PAC shaped up quickly. Mary Nichols, who had returned to Southern California after serving as the Clinton Administration's chief air official at the Environmental Protection Agency and was working as the Executive Director of a Los Angeles-based Foundation, Environment Now, agreed to chair the PAC. With a figure of this stature at the helm, with money to spend, with the Inventory and a set of projects underway, and the top officials from fourteen state and federal agencies involved, it was easy to recruit prominent local elected officials, business leaders, and energetic environmental representatives. The Ballona protagonists were consulted, but told that, for the time being, the PAC needed to steer clear of such a divisive issue. At its October 1998 meeting, the Governing Board approved the proposed list of interim PAC members, without any discussion about specific individuals. It also approved a work plan and general set of duties for the Interim PAC, chief among them to secure funds and broaden support. This quick action may have been critical to the survival of the overall effort.

3. Project Selection for the Second-Year Budget

As the first-year projects were being pursued, the process of identifying projects for the next year got underway. With more lead time and a public outreach structure taking form, the Managers Group could cast the net more broadly. In addition to wide agency consultation, requests for project proposals were put out to the public through the PAC, e-mail, and organizational meetings. Since the Working Agreement stipulates that the Governing Board was to develop a five-year plan and to eventually expand the geographic scope to include coastal watersheds, the request was for wetlands projects throughout the Southern California region, with the proviso that preference would be given to projects closer to the coast, moving further up the watershed over time. Considering watershed projects so soon in the evolution of the effort made sense in light of the slow pace of work on the

coastal wetlands and the limited opportunities that might be available on the coast over the long run. Consolidating all of the project proposals seemed like a simple way to begin addressing the need to develop a five-year plan. The result was an "A" list of twenty-three projects which had a strong likelihood of moving forward within the year and a "B" list of all the other projects that seemed less likely to go forward or for which there was too little known to make a determination.²⁴⁵

Most first-year projects rolled over into the "A" list, although projects such as the Shellmaker Island at Upper Newport Bay, which did not seem feasible to accomplish within the next year, dropped from the "A" to the "B" list. It was understood that if projects on the "B" list became feasible, they would be bumped up to the "A" list.²⁴⁶ The list is to remain open for new projects to be proposed, although the year's project list is formally approved by the Governing Board at its spring meeting, so that the list can be shared with legislators in time for budget deliberations. Moving a new project onto the "A" list requires review by the Managers Group and approval by the Governing Board. Once on the "A" list, projects are funded on a first-ready, first-funded basis. In selecting "A" projects the emphasis is on acquisitions and on-the-ground restoration work. However, some studies are necessary to get projects ready. The Managers Group developed an informal policy, allocating at least \$5 million for acquisition and restoration and no more than the remaining \$750,000 for planning and support work—the planning for final design and permitting—just prior to and a prerequisite for commencing restoration work. No one wants to go the legislature for funds pointing to a ream of conceptual and alternative studies, rather than on-the-ground accomplishments.

²⁴⁵ See generally SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT, BOARD OF GOVERNOR'S MEETING NOTES (May 11, 1999) (last visited Oct. 9, 2000) <<http://www.coastalconservancy.ca.gov/scwrp/>>. An update was sent to the Board of Governors in October 1999.

²⁴⁶ A project involving a feasibility study for removal of Ringe Dam on Malibu Creek moved from the "B" list to the "A" list when it became clear that local sponsors were coming to match federal funds from the U.S. Army Corps of Engineers. Also, a project involving "taking the first bite" out of the Matilija Dam moved onto the "A" list when it had not been on the "B" list at all.

4. *The Second-Year Budget*

After Gray Davis was elected Governor, it was not clear that he would endorse a little-known, and somewhat suspect holdover program from the Wilson Administration. He put together a FY 1999-2000 budget based on very conservative assumptions. There was no money for the "Clearinghouse." However, in a fortunate turn of events, he appointed the Interim PAC chair, Mary Nichols as Secretary for Resources to replace Doug Wheeler. While this did not guarantee money, it provided a sympathetic ear. If the Managers Group and Governing Board had not acted decisively to appoint the PAC prior to the November election, the "Clearinghouse" may not have survived. Individual PAC members and many others who had been interviewed or attended informational meetings started writing to the Resources Secretary, to the Governor, and--after a budget change proposal included \$5.5 million--to budget committee chairs and legislators representing the writers' districts. During the process, Kevin Sweeney from Patagonia took over the PAC chairmanship and guided the PAC through the process of selecting a new name and articulating a vision which he captured in an eloquent vision statement that was adopted by the Governing Board.²⁴⁷ The partnership was re-christened the "Southern California Wetlands Recovery Project." The FY 1999-2000 budget included a second \$5.75 million in state general funds for its wetlands work.

C. PREPARING FOR THE FUTURE

The outlook is good for the second funding year of the Wetlands Recovery Project. Projected costs of \$26.5 million for the "A" list projects exceed the budget allocation for the Recovery Project, even with other funds contributed by the Coastal Conservancy. However, other state, federal, local and private moneys may amount to \$12 million, which means that the magnet funds are doing their work. This will set the stage to pursue even more money for future years.

²⁴⁷ See SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT, VISION STATEMENT (last visited Oct. 9, 2000) <<http://www.coastalconservancy.ca.gov/scwrp/>>.

1. *Project Implementation—Some Notable Successes*

By the Fall of 1999, the projects started to take off.²⁴⁸ After a dozen year gestation, in October, the Model Marsh broke ground. It is only a twenty acre restoration, but what is learned there about how different channel configurations influence revegetation will guide efforts to restore a 500 acre portion of the Tijuana Estuary in the most cost effective and ecologically productive way. At San Elijo Lagoon, the terms of the endowment have been worked out; it will pay for regular dredging at the Lagoon mouth, allowing tidal flushing to restore 415 acres of degraded salt marsh. In December of 1999, the construction phase of work at the San Joaquin Marsh was completed, restoring fifty acres of freshwater Marsh habitat just upstream from Upper Newport Bay. The picture is even rosier for acquisitions. The Recovery Project successfully joined with the Trust for Public Land in acquiring a 100-acre, riparian parcel for inclusion in the Otay Valley Regional Park in San Diego County. Acquisitions beyond what was initially hoped for have been realized at Ormond Beach in the Oxnard Plain with another seventeen-acre acquisition at Huntington Beach Wetlands. Others in Orange and Los Angeles Counties are also moving closer to consummation.

2. *The PAC and the County Task Forces*

Members of the Public Advisory Committee, though leaders from local government, business, the environmental and, now, marine education communities, felt like a head without a body. They wanted a better structure linking them to local communities. Thus, the PAC has begun to establish Task Forces in each of the five coastal counties.²⁴⁹ A county supervisor is working with the environmental leader in each of the counties to launch the task forces. The task forces have two primary goals: to provide local-level wetland information that can be used for regional planning purposes and to generate political support from the grassroots local level up.

²⁴⁸ See, e.g., Frank Klimko, *Boost for Environment*, THE SAN DIEGO TRIBUNE, Dec. 9, 1998, at B1 (describing the Model Marsh project). See also Pat Brennan, *Wetland Will Be Lab for Research*, ORANGE COUNTY REGISTER, Mar. 2, 2000 (describing San Joaquin Marsh) and Gary Polakovic, *State to Pay \$17 Million for Coastal Wetlands*, L.A. TIMES, Feb. 17, 2000 (describing Ormond Beach purchase).

²⁴⁹ San Diego, Orange, Los Angeles, Ventura, and Santa Barbara Counties all have active task forces.

As the Wetlands Recovery Project moves into coastal watersheds, the enormity of its work multiplies. Whereas it started with an inventory of forty-one coastal wetlands and a great deal of Managers Group experience, watersheds are relatively unmapped territory. No one knows how many riparian wetlands exist in coastal Southern California, where or how big they are, and how threatened they may be. These wetlands do not receive the same level of regulatory protection as coastal wetlands and much of the new growth in Southern California is expected in the San Fernando Valley and San Gabriel and Riverside Counties.²⁵⁰ Although the Wetlands Recovery Project has commissioned a pilot watershed study, it focuses on only four river segments. It will take many years before the results are employed to give a region-wide picture of watersheds.²⁵¹ Various watershed-planning organizations have compiled huge amounts of information, but reports sit on the shelf and the information is not being integrated in a usable format. The hope is that, with small grants from the Coastal Conservancy, the county task forces can work with the county agencies and start pulling this information together. It would be useful not only for county planning but also for Recovery Project planning and would allow county task forces to better justify projects they propose for Wetlands Recovery Project funds.

Describing a project in light of its broader watershed and regional context gives it far greater significance.²⁵² As the Task Forces seek to discern the bigger picture, they are also tracking

²⁵⁰ The California Coastal Act's protections extend, at most, five miles inland.

²⁵¹ The Southern California Coastal Watershed Inventory focuses on the Los Penasquitos lagoon watershed, the middle reach of the Santa Ana River from Prado Dam to the San Bernardino County line, and on several Santa Clara River tributaries. See generally Wetlands Inventory *supra* note 231.

²⁵² When The Nature Conservancy released a 5-year study that finally produced "a portrait of the status of wild America" from sources that had never before been consolidated, it simultaneously announced a one-billion dollar campaign, the largest ever devoted to a conservation campaign by a private organization. TNC's Executive Director, John Sawhill, explained that having this overall understanding on which to base its acquisition strategy makes the task more urgent and compelling. See William K. Stevens, *U.S. Found to Be a Leader in Its Diversity of Wildlife*, N.Y. TIMES, Mar. 16, 2000, at A18.

potential projects, helping to integrate interests, and identifying ways to get projects implemented.²⁵³

The second major role for the county Task Forces, in addition to compiling information, is to work on behalf of wetlands funding. It will be important to maintain the support of state legislators in order to take advantage of the bond funds and the projected state budget surplus.²⁵⁴ It will be even more of a challenge to get the attention of federal legislators. The PAC is seeking federal acquisition funds for a specific set of wetlands with willing sellers that are of great ecological importance and under threat of development. The key will be to enlist the support of the Members of Congress, most of whom are conservative Republicans. This will require a concerted campaign managed by the Task Forces at the local level. They must convince the Representatives that wetlands projects enjoy broad, cross-sector, bipartisan support and will bring worthwhile local benefits to their districts.

The Public Advisory Committee itself is now operating under the leadership of its third chair, having lost Mary Nichols to her post as Resources Secretary and Chair of the Wetlands Recovery Project as a whole. The PAC has also lost Kevin Sweeney due to his relocation to the Bay area. Terry Tamminen, who replaced Mary Nichols as Executive Director of Environment Now has taken the helm at the PAC. He has a history of success in working towards creation of broad regional structures. Formerly the Santa Monica BayKeeper, he has established a network of Coastkeepers from Santa Barbara County to San Diego County. He is providing critical leadership in helping get the task forces underway and, generously, Environment Now is providing some much-needed funds to develop educational materials.²⁵⁵ Recovery

²⁵³ The Managers Group has conducted three regional meetings with Task Forces to discuss project proposals for FY 2000-01. This has fostered far greater communication about potential projects than occurred in the first two years, and has engendered a greater sense of responsibility and possibility about the region's wetlands among the Task Forces.

²⁵⁴ The PAC and the Task Forces joined forces with another organization, CalCoast, whose mission is beach restoration, to sponsor a breakfast for state legislators in March 2000. For the FY 2000-01 budget process, the Recovery Project supporters will be meeting with legislators personally and not just writing letters.

²⁵⁵ In addition, Willamette Industries in Ventura contributed funds for a brochure and SeaWorld California has agreed to fund production of a five to seven minute video that will explain the economic benefits associated with wetlands restoration.

Project moneys are to be invested in on-the-ground activities, so this funding is crucial to organizing and cultivating a sense of possibility about the future of wetlands in coastal Southern California.

V. CHALLENGES AHEAD FOR THE RECOVERY PROJECT

Many challenges lay ahead but the most immediate is to continue to build and manage the coalition of interests that is forming around wetlands in Southern California. Of great potential are the county Task Forces, which offer the most promising means for knitting Southern Californians together so that the region can ultimately exert political influence to secure funding commensurate with its environmental needs. The Task Forces will require some inspirational leadership, clear tasks, careful nurturing, and measurable successes that they can take pride in. The same is true for the Public Advisory Committee.

As great an undertaking will be to maintain and augment the commitment of the Governing Board. The Board members should not be content merely approving an annual project list to be funded and implemented by the State Coastal Conservancy. They should be encouraged to use their considerable abilities to move projects forward both as a collectivity and with the powers and resources of their individual agencies. The Governing Board should begin to think innovatively about what can be accomplished through this forum. The current Governing Board members joined a process that they did not create. They have not yet been adequately initiated into the Recovery Project's purposes, processes, and potential. They have not yet moved from thinking of their role as advisory to thinking of this process as one in which they must engage by putting their projects and resources on the table and making decisions collectively. Reconciling habitat with recreational, flood control, and water quality interests will be a difficult process, but only through such a process can a more comprehensive, rational, and defensible approach to California's wetlands and other resources emerge.²⁵⁶

²⁵⁶ Reconciling habitat with recreational needs is going to be a major task as both compete for the remaining open space in the midst of growing population pressure. At Bolsa Chica, for example, an outlet connecting the wetlands to the ocean would traverse a popular beach and surfing area. On the Los Angeles River, a 45-acre wetlands area in

Making the most out of this forum will require leadership by the Resources Secretary. Whereas Secretary Wheeler viewed the "Clearinghouse" as among his top priorities and invested much of his personal energy in getting it off the ground, Secretary Nichols has a different agenda. She has admirably focused on getting the "\$2 billion for 2000," her phrase for the initial, ambitious goal she set for herself on assuming office. Adding the \$ 2.1 billion Park Bond to the \$1.9 billion Water Bond doubles her original benchmark and already constitutes a remarkable legacy. Whether that money will be allocated to encourage the development of long-lasting structures for regional planning and cooperation capable of transforming the landscape, or whether it will be allocated in a more piecemeal fashion, will be the next great test. If the funds are not tied to incentives for envisioning and creating more comprehensive strategies, environmental causes may compete for funds like localities scrambling for K-Mart's and auto malls—the result an incomprehensible hodgepodge. The difficult job of developing the philosophy and science needed to undergird a major public lands acquisition program could be eased by putting regional, consensus-based processes into place to guide the expenditure of funds. As the history of the Recovery Project shows, the prospect of funding can bring reluctant parties together and inspire them to find common ground.

More substantively, expanding the focus to include watersheds brings with it a host of new issues. The Managers Group itself mostly comprises people whose expertise deals with coastal habitat issues. Just gathering the information about the riparian and other watershed wetlands will be a monumental task, as will be assimilating these potential projects and their proponents into the project selection and implementation process. Moreover, the scope of issues broadens substantively not just geographically. That the Recovery Project is involved in dam removal projects to restore fish habitat and improve sediment transport to the beaches is a little difficult to explain in the context of wetlands alone. Either rivers and streams must be considered wetlands or the Recovery Project's mission may have to include the restoration of aquatic resources in coastal watersheds. Once involved in watersheds, issues of water quality, flood control and water sup-

Burbank is being sought for a soccer field. These kinds of conflicts are going to become much more intense and the key will be to identify principles to guide and explain decisions.

ply, become more unavoidably intertwined with issues of habitat protection. Still, over the longer run, wetlands creation within coastal watersheds is likely to be seen as a cost-effective strategy to be considered in treating polluted runoff and should be a very exciting area.

Evaluation of projects and of the program as a whole will be the biggest longer-term challenge of the Recovery Project. Evaluation at the project level is difficult because the Recovery Project wants to use its money to produce environmental benefits, rather than investing in expensive, long term monitoring, research and evaluation. Moreover, it is not clear what projects should be compared to in determining their success. Historic conditions, even where known, are radically different and replication would not be desirable. Pristine areas are not often available and might not offer a realistic restoration goal. Few other restorations exist to provide standards and the process of developing a set of model restoration criteria is very expensive and time-consuming. To make matters even more difficult, some kinds of monitoring, of fish for example, can be detrimental to small populations, undermining the restoration objectives. Should the Recovery Project measure only the projects it has funded, or should it try to take the temperature of the region's wetlands as a whole? What can the acquired and restored areas be measured against given that the total amount of remaining watershed wetlands is unknown? Moreover, the methodological problems of measuring the improvement in wetlands functions and values on a regional scale that arise from restoration have not been solved at a national level. The Wetlands Recovery Project should not get diverted from its main objectives and spend its limited resources tackling all of these issues.²⁵⁷ However, if it cannot make a convincing case that its projects are a success and that these projects are adding up to a much-improved situation in Southern California, money will be harder to get.

The Wetlands Recovery Project has been a learn-as-it goes model. These bigger questions are acknowledged, but the actions have been incremental. Much has been put into place. The key

²⁵⁷ It may be possible to engage college and university researchers in a more systematic way to help. They are eager to be involved in useful research and increasingly grants with community support gain them extra points in the competition for research funds. This would bring moneys from other pots to the recovery effort.

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question is can it now be activated to bring in some significant money to take on the many projects that have now been identified. If that happens, then the Recovery Project will be fortunate indeed to get to the place where it can and must resolve some of these larger questions.