Chapter 4: Legal Issues and Policy Options

We propose to evaluate the following issues:

1) The AES powerplant's intake system will be researched to determine if it is having any negative impacts on fish or other wildlife. We also hope to determine if there are any sources of thermal pollution. If either results, we will research the possibility of mitigation efforts that may be required – by Juana Quintana

2) Any past attempts to purchase land to restore the Los Cerritos Wetlands will be researched to gain knowledge about key players in any restoration efforts that have been attempted or will be in the future. – Spencer Wagner

3) We will look into possible mitigation funds that have been set aside by the ports of Long Beach and Los Angeles and any monetary compensation that may be set aside for wetlands in Southern California. – Ethan Kuhn

4) The Hellman Property and their attempts to build track housing on land adjacent to the wetlands will be researched as well as any rezoning that may have taken place. If this did occur, then we will determine if they were required to "trade" land in order to build. We will also look into any deed restrictions that may be on the property – Kristine Wulff

Juana Quintana
Esp400 Project
May 11, 2006

Los Alamitos AES Generating Station

Introduction:

There are many actors that together help in the degradation of Los Cerritos Wetlands. One of these actors is the Los Alamitos AES Generation Station. AES is one of 21 California's Phase II Coastal and Estuarine power plants (figure 1). This means that AES not only affects the sensitive estuarine environment (which in most cases contain wetlands habitats that are especially sensitive to any form of pollution, this is the case with Los Cerritos Wetlands (figure 2)) but it also affects the significantly important coastal environment. AES contributes to the degradation of the Los Cerritos Wetlands by means of thermal pollution, impingement, and entrainment of aquatic organisms. It is important to understand what effects thermal pollution has on the wetlands but more closely to understand how these effects affect the equilibrium of the wetland environment, organisms well being, and the habitat sensitive equilibrium. In addition, the process of impingement and entrainment have to be closely looked at and understood because these processes have a direct effect on the wetlands, estuarine, and coastal organism and plants. More over, when taking a closer look at the effects the AES power plant is having on the wetlands one needs not only to look at the scientific and economic process of a successful restoration effort. One also needs to look at the political mitigations needed for a successful restoration effort. By examining regulations, laws, and acting parties' one can have a greater influence on the restoration effort. This close examination and understanding of the mitigation process will insure a successful and beneficial restoration project.

Background:

Los Alamitos Generating Station is one of the 21 Southern California coastal and estuarine phase II power plants. Combine the 21 coastal power plants use nearly 17 billion gallons of seawater daily for once through cooling. The Los Alamitos AES plant is located on the Los Cerritos Channel in the city of Long Beach, California. Alamitos has six gas and oil units with a total generation capacity of 1,950 MW. There are three cooling water intake structures (CWISs) at Alamitos (figure 3). Unit one and two use one CWIS, unit three and four use a second and units five and six are mirror images of each other located at the end of separate intake canal. Wastes are discharged to the San Gabriel River Flood Control Channel. The Almitos CWISs withdraw water form the Los Cerritos Channel; about 1.5 miles upstream of where the channel discharges into Alamitos bay. The Los Alamitos AES plant cooling sources are: Alamitos Bay for units one through six; short intake canals from the Los Cerritos Channel for unit two, which in turn takes water from Alamitos Bay Marina, part of the Long Beach Marina, which in turn is within the Long Beach Outer Harbor.

Once-Through Cooling:

Power plants that are located adjacent to tidal waters, in this case Los Alamitos plant is located with in close proximity to Los Cerritos Wetlands which have some tidal influence, use one-through cooling system to cool the power generating units. Coastal power plants that utilize once-through cooling are a major source of aquatic mortality in our States waters. In once-through cooling, water is withdrawn from a source, pumped through a heat exchanger, and discharged at a higher temperature, usually to the same body of water from which it was withdrawn. This type of operation is favorable for old power plants like AES Alamitos because of its low capital and operating cost, and gives greater potential for higher power plant operating performance. Because once-through cooling systems withdraw and discharge large volumes of water, they have adverse effects on aquatic organisms. Once-through cooling may create impacts on aquatic resources through impingement, entrainment, and thermal discharger.

Cooling system Details at Los Alamitos AES:

Each cooling water system incorporates screen systems designed to remove trash, algae, marine life, and other material from the cooling water. The NPDES permit (Order NO. 00-082, NPDES Permit No. CA0001139) allows a maximum discharge of 1,282.8 MGD consisting of once-through cooling water from six steam electric power generating units, sanitary waste, and wastes from three retention basins. Peak flow through the channel occurs between November and April. Most of the flow entering the Alamitos CWISs is seawater.

Impingement:

Impingement occurs when organisms are trapped against the intake screens by the force of the water being drawn through the cooling water intake structures. Aquatic organisms impinged on intake screens are usually killed. The United State Environmental Protection Agency (EPA) estimates that the current number of fish and shellfish that are killed from impingement and entrainment from cooling water intake structures at large power plants like Lo Alamitos AES in the United States is over 3.4 billion annually (EPA 2004).

Entrainment:

Entrainment refers to the passage of small organisms such as fish eggs and larvae and other plankton, through the intake screens and into the power plant. Offshore intakes entrap fish when fish swim into the long intake pipe and not or cannot escape. Once entrapped the fish tire and become impinged on the intake screens, or are killed during heat treatments done to remove organisms form the intake system. Most scientists assume that entrained organisms are either killer or severely injured and later die after discharge. Over 300 species are known to be impinged and entrained at CWISs in California. Some entrainment studies for a particular plant were never done at the plant but, instead, were based on similar studies done at other similar plants.

Thermal Pollution:

The raising of the water temperature by artificial means in this case power plants is called thermal pollution. The number one cause of thermal pollution is waste water

discharged from power plants. The easiest and cheapest method for power plants is to withdraw water from a nearby water body and return the heated water to the same water body. Thermal impacts occur as a result of discharging water used to cool the power plant back into the natural environment. The discharge of heated waters may have adverse thermal effects on aquatic organisms that are sensitive to temperature changes. Thermal impacts are generally localized and species specific. It is estimated that almost half of all water withdrawn in the United States each year is used for cooling electric power plants. Temperature is sampled in the receiving water under the full range of operating and environmental conditions. The thermal plumes from many of the old power plants are generally incompletely described, and sampling for thermal impacts incompletely done and commonly done with inappropriate sampling design such that through detection of impacts is unlikely.

Laws that Apply to Phase II Power Plants:

Under the Clean Water Act (CWA) section 316 (a) and (b) Phase II power plants are regulated for thermal pollution, entrainment, and impingement. Section 316 (a) regulates heated and chlorinated cooling water discharges while section 316 (b) regulates entrainment into intakes and impingement on to intake screens. CWA section 316 (b) requires the EPA to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to protect aquatic organisms from being killed or injured by impingement or entrainment. The new phase II regulations came out in 2004. Phase II regulations call for existing facilities to meet specific performance standards. If the standards are not meet then they have to reduce impingement mortality of all life stages of fish and shellfish by 80-95 percent compared to a baseline mortality of a plant with no controls to reduce impingement. Also if standards are not meet they have to also reduce entrainment of all life stages of fish and shellfish by 60-90 percent of the baseline mortality of a plant with no controls to reduce entrainment. Power plants have to comply with the new regulations when their existing NPDES permits are up for renewal. Under the new regulations there is a restoration option for meeting the performance standards. Problem with this is that practical restoration opportunities may not directly restore the species most vulnerable to the impact of the intakes. The NPDES are the national pollution discharge elimination system permits. These permits govern the thermal discharges at coastal power plants. The permits help in setting a limit on the temperature elevation allowed. Many current NPDES permits require monitoring, often yearly, that may include water quality profiles, and sampling. The problem here is that many power plants are using old or subsets of those used in the original thermal impact studies. More over, the impacts are asses by the California Environmental Quality Act (CEQA), this assessment are made into a report. These reports are then submitted to Los Angeles Regional Water Quality Control Board who issues NPDES permits for the power plants discharge. In addition, modifications of cooling systems reports done for the California Energy Commission and the California Coastal Commission under CEQA.

Assesment of Los Alamitos Power Plant:

A resent assessment done by the California Energy Commission reported that no marine species listed in the California Natural Diversity database are within one mile of

the generating station site. They also reported that there were no visible water vapor plumes from cooling operation. They added that once-through cooling is consider a type of plume abatement when compared to traditional evaporative wet cooling systems. Like many of the old phase II power plants the Los Alamitos AES generating station need to update current entrainment and impingement studies. Also with regards to the thermal pollution many power plants like AES are using old or subsets of samples and profiles of those used in the original thermal impact reports. Since the NPDES for Los Alamitos expired on May 10 of 2005 they are currently looking at new technology to meet the performance standards. They have not decided on one particular technology but are looking at al the options that seem manageable. They are also looking at the restoration option given by the CWA 316 (b) as a substitution to new technology to meet performance standards. Many are upset because they see this as a step back. They want power plants to be required and mandated to do both and not to substitute one for the other. The problem with restoration is that practicable restoration opportunities may not directly restore the species most vulnerable to the impact of the intakes. In conclusion, the Los Alamitos AES power plant has not complied with the new regulations under the CWA 316 (b) and their NPDES has expired.

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Appendix

Figure 1: map showing Coastal and Estuarine Power Plants.

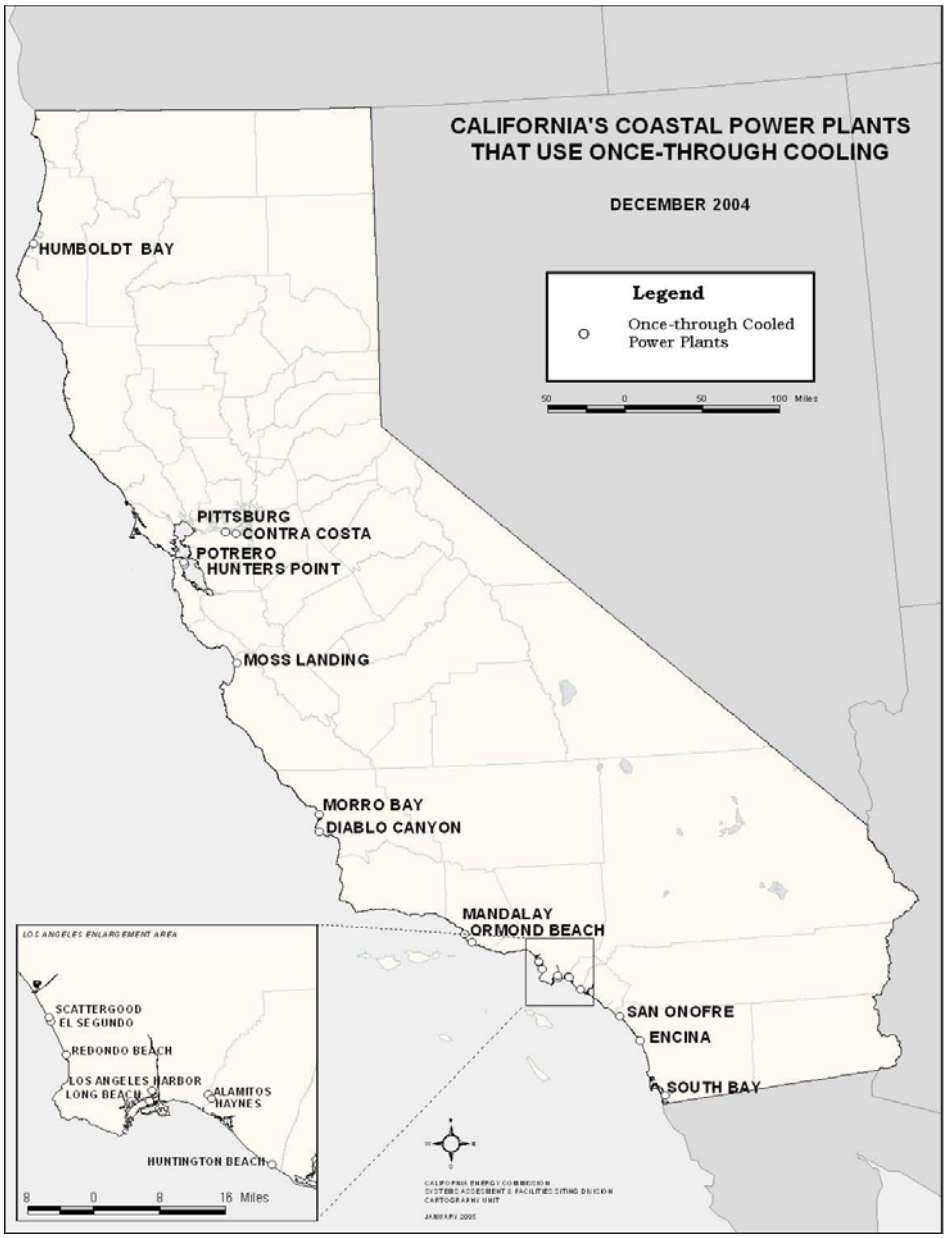
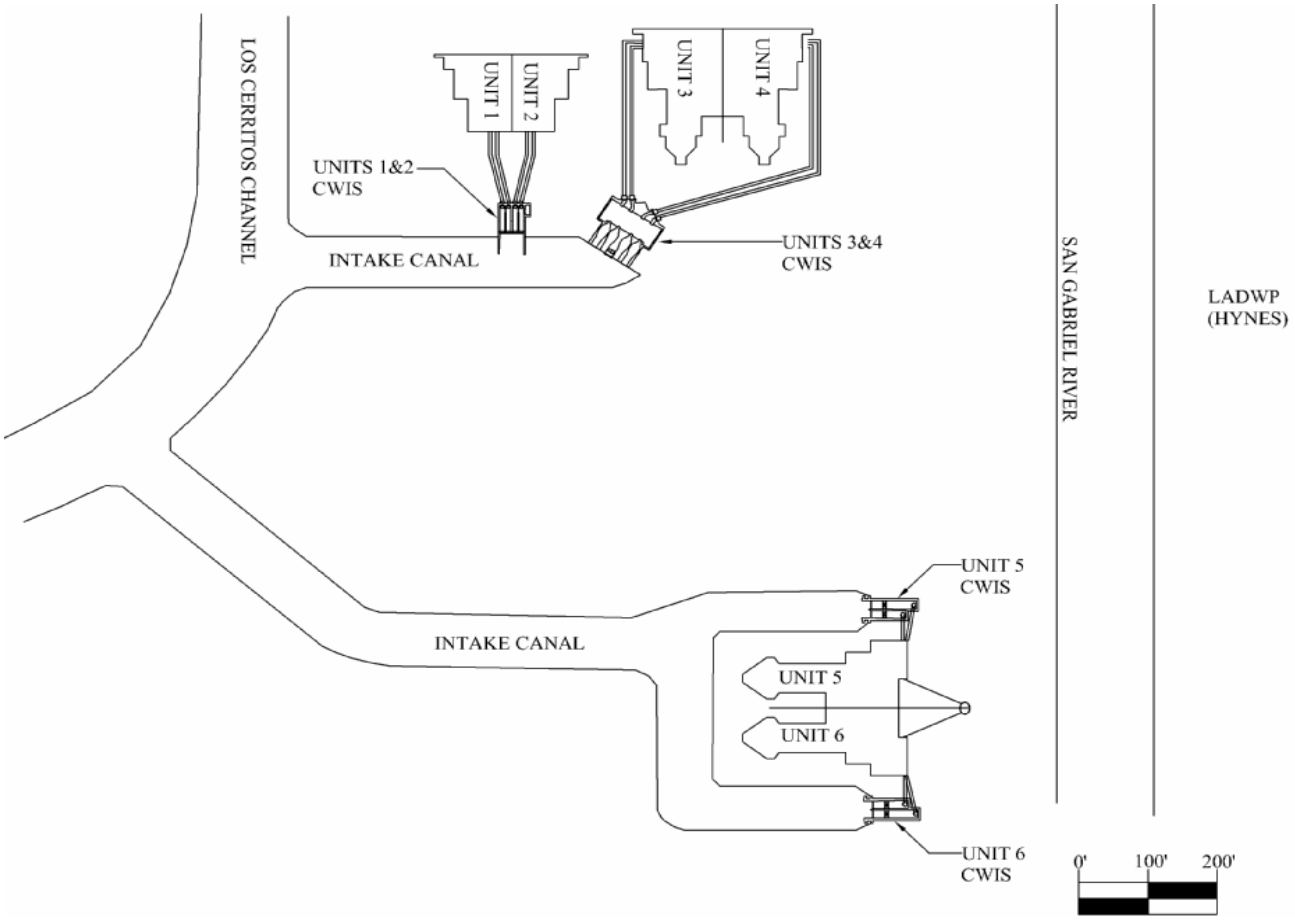


Figure 2: map showing location of AES power plant in Los Cerritos Wetlands.

Figure3: plan view of the AES Alamitos cooling water intake structures.



Land Acquisitions and Attempts to Purchase – Spencer Wagner

Background:

To better understand the size and scope of any potential restoration to the area, one must first understand the dynamics, in terms of land ownership, of the area. The Los Cerritos Wetlands system consists of parcels of land owned by several different entities: Bryant Ranch (67 acres), Bixby Ranch (193 acres), Hellman Ranch (193 acres), the Los Alamitos Retention Basin (38 acres), several acres owned by Tom Dean and Associates that lie north of Steam Shovel Slough, as well as State owned Pa's Pumpkin Patch at the corner of Studebaker road and Pacific Coast Highway.[1] This adds up to just over 500 total acres that make up the original wetland habitat. The main portion of the Wetlands system is located on the land parcels owned by Bryant, Bixby and Hellman.

The Bryant Property is located in the City of Long Beach, south of Westminster Avenue and east of Studebaker Road. The San Gabriel River bisects the property leaving 36 acres west of the river and 23 acres east of the river. A few other acres are located within the actual water channel. The property has been an active oil field for several decades and currently contains twelve active oil wells and associated pipelines, roads, and buildings. Surrounding land uses include oil production in several locations, a power plant to the north, and a mix of commercial, residential and industrial uses to the south and east. The historic wetlands on the property have been filled and degraded, primarily due to the oil production activities. Approximately 3 acres of wetlands remain on the easterly parcel, and 9acres on the westerly parcel.[2]

The Bixby Ranch Co. began oil and gas production activities in as early as 1926, with operations continuing into present time. In order to create acceptable production areas, certain portions of the wetland habitat had to be filled. These filled areas are separated from the Los Cerritos Channel by a series of earthen berms. There are currently 50 producing oil wells in the oil field.[3] These wells, over the past couple of decades have been taking a substantial amount of crude out of the ground. The Coastal Commission has said the production has been at between 140 and 150 thousand barrels annually. With the price of oil where it is at, there is very little incentive for the Bixby Ranch Co. to sell their parcels of the wetland area.

The Hellman Ranch is located in the city of Seal Beach, adjacent to the San Gabriel River Channel approximately one mile inland of the coast. A power plant intake channel and the San Gabriel River channel lie to the west. A bluff topped by residential development creates the southern boundary. Seal Beach Boulevard lies to the east with the Seal Beach Naval Weapons station beyond. To the north is the counties flood control retention basin, a city yard and a business park. Historical uses of the property include farming and ranching until the 1930's when oil drilling began. The San Gabriel River was channelized in 1961-1962. The Haynes Intake channel was built through a corner in the marsh in 1962 as well. Much of the dredge material from the channel construction was deposited in the wetlands at this time. [4]

There have been some attempts, mostly by environmental organizations, to purchase the parcels of land which make up the Los Cerritos Wetland system. These attempts have been on going since the environmental movement really took hold in the 1970's. Most of these attempts to purchase, only involved single parcels. The method that has appeared more recently involves the purchase/acquisition of all of the parcels of

land. The reasoning behind this method is thinking on a grander scale, or as Moffatt and Nichol suggest, creating a "master plan".

Although attempts to purchase land have been made over the last few decades, these attempts were not only by environmental organizations. There have also been attempts by oil companies to secure subsurface mineral rights in order to excavate the large oil reserve that lies directly beneath the area as well as other reserves that may be slant drilled to that are adjacent to the wetlands. One must realize that aside from the remaining 45 acres of pristine salt marsh that remains, most of the area has been used as dump, fill, and oil drilling sites.[1] Because of the history of land use at these sites, the potential for purchase has deteriorated due to the extensive remediation efforts necessary prior to any restoration or development.

Past Restoration Plans:

Throughout the last three decades environmental organizations have rallied behind the Los Cerritos Wetlands, putting forth different plans for the sites' eventual restoration. One of these environmental agencies is the State Coastal Conservancy, who provided a detailed restoration plan in September of 1982. This plan sought to present four different alternatives that were developed in conjunction with the Department of Fish And Game (DFG), the California Coastal Commission (CCC), the City of Long Beach, as well as other members of the Los Cerritos Advisory Committee like the Sierra Club, HOA's, Audubon Society, and others.

It was the belief of the California Coastal Commission that the Los Cerritos Wetlands Enhancement Plan was consistent with the Coastal Act. Therefore, the plans would have to be submitted for review by the CCC, DFG, and City of Long Beach for review and comment prior to the final report being submitted back to the CCC.

Four alternatives were developed after 16 meetings of the Los Cerritos Advisory Committee. The Committee went over 14 different variations of possible wetlands scenarios at the site.[5] Alternative W-1 suggested creating one large wetland located entirely on the Bixby property. The idea was to limit the "edge" effects created by close developments. Alternative W-2 sought to create a north and south clustering of wetland water bodies. The northern section would be located where the existing wetland area is and woud just increase the total area to 81 acres. The southern section would be located by the San Gabriel River and Los Alamitos Retention Basin and would consist of 26 acres. The center of the site would be developed into business parks. Alternative W-3 would seek to do the same as W-2, but would also provide for brackish ponds in the areas where the development would be taking place. Alternative W-4 was called a "corridor" configuration. The goal of this alternative is to "connect the water and wetland resources both on and adjacent to the site". This would in essence just create a corridor of mixed water environments from the Los Alamitos Retention Basin in the south to the Los Cerritos Channel in the north.

Beginning in June of 1998 the Port of Long Beach undertook preliminary studies to determine the feasibility of undertaking a large-scale wetlands restoration project on the Hellman property as mitigation for fill of coastal waters due to port expansion. The area under study included approximately 106 acres but did not include the State Lands Parcel or Gum Grove Park. The Port determined that a large-scale restoration project was technically feasible but the cost of such an undertaking was prohibitive.[6]

In 2004, the Los Cerritos Wetlands Study Group was formed. The group was a combination of 10 resident groups and associations. The goal of the group was to "…act

to ensure that the last approximately 2% of the Long Beach Wetland system will be preserved for posterity". The group stated four issues that are necessary in the planning process for the future of the Wetlands:

1. The Wetlands area is a mish-mash of zoning issues. Some of the land was incorporated into the City of Long Beach in the late 1990's. Some areas were certified by the California Coastal Commission and some were not. There needs to be a clarification and completion of the certification process along with a definitive explanation of where exactly the Wetlands boundaries are.
2. We have learned, during this process, that the study area has a long history as a waste dump for some very troubling and dangerous substances. Before any restoration of wetlands, or development around the wetlands there needs to be a definitive audit of where the bad stuff is, and what it is. Some of the chemicals that have been identified are reported to be cancer-causing pathogens. The City of Long Beach and others may face significant liability if any of these known dump sites are compromised by either a wetlands restoration effort or a development project.
3. The over-arching need is to clarify the possibilities for the whole study area. The LCWSG recommendation is that the SEADIP plan be revised and updated for the area of study. In order to accomplish this we recommend that the City Council direct the Planning Commission to establish an Ad Hoc Committee with all the support necessary to revise the South East Area Development and Improvement Plan.
4. The uniqueness of the study area adjacent lands has a number of commercial developers anxious to erect projects there. It is the recommendation of the LCWSG that a temporary moratorium be enacted immediately for any and all projects in the Study Area. We further request that the Ad Hoc Committee recommend that heavy industrial development be banned in the Study Area. It doesn't require too vivid an imagination to see that the life-style and real estate value of the region is inconsistent with "heavy industrial" development. The future of Southeast Long Beach as a successful well functioning community and the future of the Study Area depends on a well thought out, fully integrated, over-view plan that takes all the pieces of this complex puzzle into consideration. If we allow hasty development of the Study Area, just for profit and some sales tax possibilities, we will pay the price of "piece-meal" development for generations. The LCWSG strongly recommends that a thorough master plan be completed before anything can be done that may harm the future opportunities of restoring the Los Cerritos Wetlands.

Although the group didn't necessarily put forth any restoration plans, the group did however present their recommendations on the future of the area. The report was broken down into four subtopics: Wetlands, Environmental, Traffic, and Land Use. After doing the necessary research, the group put forth their recommendations on the four subtopics.

Moffatt and Nichol, a local consulting firm, also produced a report on the viability of a restoration project at the Los Cerritos Wetlands Complex. The report was produced in August of 2005 at the request of California Earth Corps, an environmental organization headed by Don May. The report suggested a three phase restoration plan. The first phase

would require restoration of the Bryant parcel along with the restoration of a portion of Hellman ranch that is deed restricted to tidal wetlands.[1] The end result would be around 170 acres of restored wetland habitat. The second phase would consist of restoration of the lower Bixby property (44 acres), the remaining 93 acres of Hellman Ranch property, for a total of 137 acres of restored tidal lands. The final phase would restore the upper Bixby site (139 acres) and the Los Alamitos Retention Basin (38 acres) for a total of 187 acres of restored wetlands.

Past Attempts to Purchase:

All of the land parcels that form the Los Cerritos Wetlands system, have been up for sale at some point in the past. There have been many deals worked out that eventually fell through due to interagency pitfalls, funding, environmental restrictions, and fluctuation of oil prices.

In 1997 Samedan Oil Company entered into a Surface Use Agreement with Bixby Ranch Company and Bixby Oil and Gas Ltd. for the necessary rights to carry out their proposed oil extraction project. The project that Samedan proposed involved starting a new extraction process to reach an oil reserve that is believed to be located beneath the campus of California State University of Long Beach. The proposed project called for the slant drilling of up to twelve different wells. Samedan would use all of the existing facilities, roads and pipelines to carry out the operation. The only new construction would be the removal of a small building, and the construction of a one foot high berm around the entire property.[3]

An application to complete the project had to be sent to the California Coastal Commission for approval. Long Beach's Local Coastal Program did not include the Los Cerritos Wetlands site because the Department of Fish and Game did not feel that the LCP adequately preserved the wetland habitat. Because of the exclusion of the wetlands from the LCP, and the inability of Samedan to provide proof of their ability to comply with sections 30231, 30240, and 30262 of the Coastal Act, the Commission denied the application for development.

In September of 1998 the California Coastal Commission approved a Coastal Development Permit (No. 5-97-367) which authorized the subdivision of the 196 acre Hellman Ranch site into 9 parcels, including further subdivision of one of the parcels into 70 single family residential lots. It also approved the construction on an 18-hole golf course, construction of 39.1 acres of wetlands, dedication Gum Gove Park and the reservation of 13.2 acres of existing mineral production area for future wetlands restoration.[6] In October of 2000, an amendment was made to Hellman Properties Permit. The Commission imposed 28 special conditions one of which required the reservation of 100 acres of the lowlands portion of the property for acquisition for wetlands restoration. This amendment also eliminated the 100 acre golf course and associated wetland impacts and wetland restoration associated with it. It also added a deed restriction reserving 57 acres of land presently used for mineral production to be made available for sale for wetlands restoration upon cessation of oil production. In return, they were able to expand the 70-lot residential subdivision from 14.9 acres to 18.4 acres.[7]

In June 1999, the Coastal Conservancy entered into an option to purchase 181 acres of the Bixby property. The option was contingent upon the seller's ability to obtain

permits consolidating oil operations; when that permit was denied the option expired. However in the past year there has been significant progress in the negotiations for acquisition of both the Hellman and Bryant properties.[11] In June 2001, the Conservancy approved Los Cerritos Wetlands Enhancement Plan and authorized the disbursement of up to $11,200,000 to the Trust for Public Land for the acquisition of property in the Los Cerritos Wetlands Complex. The Trust for Public Land has been negotiating with the Sellers, the Bryant Family, for acquisition of the property for several years. An appraisal of the property has been completed and approved by the property owner and the Conservancy. A wetland delineation has been completed. The parties have agreed to the acquisition terms as described, including the price for the 68 acres, disposition of the existing oil operations and associated environmental liability.[11]

There are several organizations that have participated or are actively participating in the acquisition of the land parcels that make up the Los Cerritos Wetlands system. The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, and Board Chairman Frank Colonna have had an active role in the acquisition of the necessary land parcels in order to preserve and restore the original wetland system. Another organization that has played an active role in the acquisition of land is the Southern California Wetlands Recovery Project. This is a group that "is chaired by the Resources Agency and supported by the State Coastal Conservancy, that has public agencies, non-profits, scientists, and local communities working cooperatively to acquire and restore rivers, streams, and wetlands in coastal southern California". [8]

Several organizations have been formed with the acquisition and restoration of the Los Cerritos Wetlands as their primary concern. Two of these organizations are the Los Cerritos Wetlands Task Force, and the Los Cerritos Wetlands Land Trust. The Los Cerritos Wetlands Task Force is headed by Don may, and their goal is to preserve and fully restore the Los Cerritos Wetlands system.[9] The Los Cerritos Wetlands Land Trust is a combined effort between the cities of Long Beach and Seal Beach. The Land Trust is committed to:

- Buying the acreage that is now for sale.
- Reconnecting and restoring the now separated estuary remnants.
- Providing a beautiful setting for generations of families to discover the wonders of this one-of-a-kind natural environment.
- Permanently protecting this precious resource before it is gone forever

All of these organizations have, through some avenue, attempted to purchase or raise funds to be able to purchase all or portions of the Los Cerritos Wetlands system. The primary problems with the majority of the attempts are funding issues and/or who would be responsible for holding the land. Because the lands are under different jurisdictions and have different designated land uses, the process can be become pretty messy.[10] The solution to this problem is believed to be the formation of a Joint Powers Authority.

Joint Powers Authority:

> *The JPA would include all of the necessary organizations as well as the involved cities, in order to form a group that would purchase and hold lands for the Public*

trust, in an effort to streamline the purchasing and restoration processes. The Joint Powers Authority would be known as the Los Cerritos Wetlands Authority, and is a group made up of representatives from the City of Long Beach, the City of Seal Beach, the Rivers and Mountains Conservancy, and the State Coastal Conservancy. According to Don May, the organization of the LCWA will allow for things to start happening fairly rapidly. The JPA set forth three reasons why they formed this agreement:

1. *The purpose of this Agreement is to provide for a comprehensive program of acquisition, protection, conservation, restoration, maintenance and operation and environmental enhancement of the Los Cerritos Wetlands area consistent with the goals of habitat protection and restoration, flood protection, and improved water supply, water quality, groundwater recharge, and water conservation.*
2. *As a further necessary and integral purpose of this Agreement, the acquisition of lands for watershed protection, conservation, natural open space, and recreational purposes is contemplated using existing resources and additional resources that may be available by virtue of the joint efforts of the Parties.*
3. *Acquisition may be by way of gift, devise, purchase, or exchange and shall extend to any interest in real or personal property necessary to carry out the purposes of this Agreement.*

I. Current Situation

In an interview conducted with the head of the Los Cerritos Task Force, Mr. Don May, a wealth of information was divulged in terms of the current situation at the Los Cerritos Wetlands Complex.

Bryant Ranch property:

According to Mr. May, two thirds of the Bryant Ranch property was purchased several weeks ago using the seven million dollars that the Coastal Conservancy secured. Had this money not been used by June 30th, the end of the current fiscal year, it would have been taken back. The land is currently in escrow with the newly formed Los Cerritos Authority (JPA). The third of the property that Bryant retained was a rectangle shaped parcel that ran along 2nd Street from Studebaker Road to the River. According to Mr. May, this rectangular parcel won't be able to be developed because it is Coastal Commission Original Permit jurisdiction and is planned to be returned to full tidal flow.

Hellman Ranch Property:

The first 100 acres of the Hellman Ranch Property was purchased some time ago by the city of Seal Beach, and the property title will soon be transferred to the Joint Powers Authority. The remaining acreage is deed restricted to tidal wetlands, and will be purchased as soon as the oil reserves are depleted or in 16 years, whichever comes first.

Bixby Ranch Property:

The only property that has been purchased from the Bixby Ranch Company was by a private firm known as Tom Dean and Associates. The land the firm purchased is located between the mobile home park and Studebaker Road. Other than these small parcels, the purchase of Bixby Ranch land has hit a road block. In a rough estimate, Mr. May stated that the cost of the Bixby Ranch Land would be in the ballpark of 13 to 15 million dollars. The only problem with this is the fact that it will take around 250 million dollars to clean the oil debris and dump sites that have degraded the area over the past sixty years.

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Mitigation Efforts

Port of Long Beach

Through agreements with the U.S. Fish and Wildlife Service and other resource agencies, the Port of Long Beach acquires and restores coastal wetlands in Southern California in exchange for the right to develop Port property. The Port's wetlands restoration program helps protect the future of a wide variety of species for future generations. The Port has participated in two wetlands restoration projects, one at Upper Newport Bay Ecological Preserve in Newport Beach, and one at the National Wildlife Refuge in Seal Beach. In addition, the Port contributed $39 million toward the 1997 acquisition of 267 acres of degraded Bolsa Chica Wetlands of Huntington Beach, operated by a consortium of agencies led by the California Coast Conservancy and the U.S. Fish and Wildlife Service. The resource agencies are developing a comprehensive plan to restore the wetlands by channeling ocean water to the area and by taking other measures.

On August 22, 2005, the Long Beach Board of Harbor Commissioners voted unanimously to approve a supplemental agreement to help finance the remaining restoration of the Bolsa Chica Wetlands in exchange for additional mitigation credits. The Port's $11.4 million contribution to the planned project not only helps ensure the completion of the project but also long-term maintenance of the Wetlands, located in Huntington Beach. The final stages of the Bolsa Chica restoration project have been delayed for several years and the funds that the Port and others contributed are no longer adequate to complete the project and provide for the long-term maintenance of the area. The new funding plan, created by the state and federal agencies overseeing the work, will return funding for the project to an adequate level.[1]

At the Upper Newport Bay Ecological Reserve, operated by the California Department of Fish and Game, the Port contributed in excess of $1 million toward restoration of 29 acres of wetlands. Money provided by the Port and other local and state agencies was used to return the tidal influence to areas that had been filled in by sediment deposits. Today, the reserve includes two barren islands in a shallow-water embayment that serve as a protected nesting area for the California least tern, a bird on the federal endangered species list. The project, launched in 1984, made the Port a leader in habitat restoration because it was the first time a public agency or private company in Southern California participated in such a project at an off-site location, away from its own property.

At the Seal Beach National Wildlife Refuge, the Port developed, managed and funded an $8.8 wetlands restoration project under the direction of the U.S. Fish and Wildlife Service. Crews excavated four upland degraded wetlands areas and dredged channels and constructed culverts to restore tidal influence and direct water flow into the newly excavated areas. Excavated soil was used to create islands that serve as a nesting site for the light-footed clapper rail, a federally endangered bird species. The wetlands restoration was completed in 1990, playing a significant role in the environmental success of the National Wildlife Refuge.[2]

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[1] Wong, Art. August 2005. Port of Long Beach Public Information News Release. *Board Gives Nod to Wetlands Restoration.*

[2] The Port of Long Beach. 2006. *Wetlands Restoration.* <*http://www.polb.com/environment/wildlife/wetlands.asp*>

Port of LA

State and Federal laws require the Port of Los Angeles to provide mitigation of marine fish and wildlife habitat lost as a result of development projects in the Los Angeles Harbor District. Development of compensatory mitigation projects and maintaining biological mitigation banks, with credits to be used for Port development projects, is part of the Port's long-term planning process, which has been ongoing since the 1970s. The in-kind mitigation requirement for such impacts is restoration/enhancement of coastal marine tidally influenced habitat with value to fish and birds. Since the 1970s the Port has implemented a number of on-site and off-site wildlife mitigation projects including: translocation of giant kelp into the harbor; construction of the Cabrillo Salt Marsh; construction of the 190-acre Pier 300 Shallow Water Habitat; construction of the 300-acre Cabrillo Shallow Water Habitat; development of the Batiquitos Lagoon Enhancement Project and participation in the Bolsa Chica Restoration Project.[3]

Implementation of the Bolsa Chica interagency mitigation agreement and previous amendments (also approved by the Port of Long Beach, who shared costs and credits at a 50/50 ratio) has allowed for the acquisition and restoration of the Bolsa Chica Lowlands in exchange for habitat credits. Bolsa Chica mitigation credits have been used to mitigate for construction of Pier 400 and elements of the current Channel Deepening Project. The additional credits obtained under this third amendment will be used as biological mitigation for construction of land for approved Port development projects.

Acquisition of the Bolsa Chica Credits does not preclude the Port from participation in the development of wildlife mitigation credits from other locations in Los Angeles and the Port of Los Angeles Harbor District. The Port and wildlife agencies have placed a high priority on on-site opportunities and the restoration of portions of the historic Ballona Wetlands. Ballona Wetlands and Del Rey Lagoon, located near Playa Vista, have been identified in the Deep Draft Navigation Project (Pier 400) and Channel Deepening environmental documentation as a high priority for consideration as a Port mitigation site. Recent acquisition of much of the Ballona properties by the State now makes their restoration possible, a process being lead by the California Coastal Conservancy.[4]

Previous *Board of Harbor Commissioners actions* include approval on July 12, 1995, of an interagency mitigation agreement (LAHD Agreement No. 1858) to allow for the acquisition and restoration of the Bolsa Chica lowlands in exchange for habitat credits.

On December 13, 1995, the Board amended the agreement to contribute an additional $2,500,000 to support acquisition of the Bolsa Chica lowlands. This brought the Port's total contribution to $33,375,000 for 227 mitigation credits. The amendment also authorized staff to make certain modifications to the agreement without further Board approval.

On August 5, 1996, the agreement was modified to allow a larger portion of Port monies to be used for acquisition and to provide up to $50,000 of the approved monies to be used in support of concluding the land acquisition transaction.

On August 14, 1996, the Board of Harbor Commissioners approved Agreement 1905 which superseded Agreement 1858. On March 11, 1997, the agreement was again modified to

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[3] The Port of Los Angeles. 2006. *Habitat Preservation.* <http://www.portoflosangeles.org/environment_habitat.htm>

[4] The Port of Los Angeles. 2006. *Summary of the Port Master Plan.* <http://www.portoflosangeles.org/Publications/PMP%20summary.pdf>

increase the amount of the Port's contribution by an additional $6,000,000, with a corresponding increase of 40 mitigation credits.[5]

Environmental Mitigation Program- The Port of Los Angeles, in partnership with the Port Community Advisory Committee (PCAC), decided to augment its existing comprehensive environmental program with the creation of a specific mitigation program. General areas requiring immediate mitigation have been identified: aesthetics, air quality and diesel truck emissions reduction.

In 2003, the Port implemented an unprecedented environmental mitigation program and earmarked more than $50 million from Port revenues to address significant impacts of Port-related activities. The Port is now working with the PCAC to review various air quality and aesthetic mitigation proposals to make the best use of this funding: $23.5 million for community aesthetic mitigation projects; $20 million for the reduction of air quality impacts; $10 million to the Gateway Cities Program for use as incentives to replace, re-power or retrofit existing diesel-powered on-road trucks.

A Technical Advisory Committee (TAC), comprised of representatives of various agencies specializing in air quality and environmental management, reviews and evaluates air quality proposals requesting mitigation funding. The TAC is also charged with advising the PCAC on how to best utilize the air quality mitigation funds to maximize air emission reductions at the Port.[6]

Habitat Restoration for Bolsa Chica Wetlands- In July 1995, the Board of Harbor Commissioners approved an interagency agreement to provide funding for the restoration of Bolsa Chica Wetlands in Orange County in exchange for Port mitigation credits. The Port's $40 million in funding allowed for the purchase and restoration of the Bolsa Chica lowlands to prevent development and restore tidal flushing to a wetland degraded by past human activities.

In October 2005 Port of LA's staff recommended to the Board approval of a third amendment to the Bolsa Chica Interagency Wetland Restoration/Mitigation Agreement (1905) to bank an additional 38 biological mitigation credits for future Port development. The proposed third modification to the agreement would provide 38 additional biological mitigation credits to the Port for $11,400,000. In most cases, the cost of these credits would be eventually amortized through Port capital development projects. Staff also recommends approval of a Board Resolution towards development of wildlife mitigation projects in the Harbor District and at Ballona Wetlands, and appropriation of $31 Million towards acquisition and development of mitigation opportunities in the Harbor District and Ballona Wetlands.

In addition it was recommended the Board 1) approve the attached Board Resolution towards the development of mitigation opportunities in the Harbor District and Ballona Wetlands area; 2) Appropriate $31,000,000 from the Unappropriated Balance with $30,000,000 for property acquisition and $1,000,000 for Fiscal Year Budget 2005/2006 for wildlife mitigation development; 3) Direct staff to immediately begin acquisition efforts at Ballona Wetlands and in and around the Harbor District, including but not limited to Del Rey Lagoon, and the Postal

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[5] The Port of Los Angeles. 2001. *Port of Los Angeles Annual Financial Statement Fiscal Year Ending June 30, 2001.* <*http://www.portoflosangeles.org/Publications/Financial_Statement_2001.pdf*>

[6] The Port of Los Angeles. 2006. *Environmental Mitigation Program.* <*http://www.portoflosangeles.org/environment_mit.htm*>

Parcel adjacent to Ballona Wetlands; 4) Approve the third amendment to the Bolsa Chica Agreement to obtain an additional 38 biological mitigation credits for the amount of $11,400,000.[7]

Other Habitat Restoration Efforts- The Port constructed the *Cabrillo Saltwater Marsh* near the Cabrillo Marine Aquarium in the harbor. The Aquarium maintains this thriving 3.25-acre wetland for its marine education programs. The restoration and operation of the Cabrillo Salt Marsh have provided valuable educational experience for both children and adults.

-On April 14, 1993, the Coastal Commission granted partial certification to Master Plan Amendment No. 12, relating to the development of Pier 400. *Certification included development of 395 acres of the Pier 400 landfill and biological mitigation. To complete the 582-acre Pier 400 landfill, the Port identified a 344-acre wetlands restoration effort at the Bolsa Chica Lowlands in Orange County, California, as a suitable biological mitigation project.*

Acquisition of the credits required a Master Plan amendment, whereby an agreement between the City of Los Angeles, the City of Long Beach, the California Department of Fish and Game, the California Coastal Conservancy, the California Resources Agency, the U.S. Army Corps of Engineers, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency would establish the Harbor Landfill Mitigation Credit Account. The Coastal Commission certified the amendment on October 8, 1996.

-The endangered *California least tern* shares a home with Pier 400. The Port maintains, monitors and protects 15 acres on Pier 400 for the nesting of these indigenous birds. Reproductive success is evident with the number of nesting pairs and fledglings increasing yearly. For the last few years, the Port has had the second largest colony in the state, with more than 1,000 nests.

-A harbor-wide *biological baseline study* conducted by the Port shows the area to be rich in fish and wildlife resources, with hundreds of species of fish identified. Another sign of the high water quality at the Port is the proliferation of eelgrass, which requires clear water to grow.

-A 190-acre *shallow water habitat* located in the Outer Los Angeles Harbor provides a replacement habitat and feeding area for fish and marine birds. The Outer Los Angeles Harbor area is a valuable marine resource, particularly for juvenile fish. Many of the 75 fish species found in the harbor are common along the West Coast, but they are more abundant within the harbor, which is an important nursery for several fish species.

-In an effort to enhance marine resources, the Port of Los Angeles hopes to build a *new artificial reef* outside its breakwater, using clean concrete construction and demolition materials. The reef was designed in collaboration with the California Department of Fish and Game, the National Marine Fisheries Service, U.S. Army Corps of Engineers, the Port of Long Beach, the Montrose Settlements Restoration Program, and local commercial sport fishing interests. The proposed reef would create new bottom topography to provide habitat for a multitude of reef-dwelling kelp, reef fish and other inhabitants. The reef is also designed to complement existing marine habitat and other artificial reefs previously established in Los Angeles Harbor.

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[7] The Port of Los Angeles. 2005. *Approval of Third Amendment to Bolsa Chica Interagency Agreement 1905 and Approval of a Resolution Towards Development of Mitigation Opportunities in the Harbor District and at the Ballona Wetlands.* <http://www.portoflosangeles.org/Board/Items/102505-item1.pdf>

-The Port restored *Batiquitos Lagoon* in North San Diego County from a choked and dying habitat to a thriving habitat with ocean access. This project, completed in 1996 at a cost of $57 million, increased the state's wetland inventory by at least one hundred acres and returned a natural treasure back to the people of California. Through the Port's mitigation efforts at the lagoon, marine fish — from California halibut to White Sea bass — have returned in great numbers. Several threatened and endangered bird species are nesting in record numbers and shorebirds are feeding on the newly created mud flats.[8]

-The Port created a five-year *Community Aesthetic Mitigation Program* in late spring 2003. The $23.5 million program mandates that these aesthetic mitigation funds be expended only for improvements that would reduce aesthetic impacts resulting from Port operations. Funding and requirements of the program were established through a settlement agreement between the City of Los Angeles and the Natural Resources Defense Council, which was approved in March 2003, and later amended in June 2004.

On March 10, 2006 the Port Community Advisory Committee recommended five aesthetic mitigation proposals for consideration under the Port's Community Aesthetic Mitigation Program. Of those five proposals staff continues to evaluate the East Wilmington Greenbelt Expansion, Plaza Park and Welcome Park projects, and has completed its evaluation of two, which are the Northwest San Pedro Beautification Project and Wilmington Youth Sailing Center. Staff is recommending these two proposals for implementation.

The Board of Harbor Commissioners recommended the Committee:

1. Designate $5,200,000 in community aesthetic mitigation funds for the Northwest San Pedro Beautification proposal and first-year maintenance costs; and direct staff to proceed with design and environmental analysis for the Port-owned portion of the Northwest San Pedro Beautification project area.
2. Designate $3,100,000 in community aesthetic mitigation funds for the Wilmington Youth Sailing Center proposal; direct staff to work with the Port Community Advisory Committee to identify the precise location within the Port's complex for the Wilmington Youth Sailing Center, and proceed with design and environmental analysis.

The Port released a solicitation for conceptual aesthetic mitigation proposals, which was developed in close collaboration with the Port Community Advisory Committee (PCAC), in November 2003. A total of 30 proposals were received: 17 benefiting San Pedro, 9 benefiting Wilmington, and 4 benefiting both communities.[9]

-On March 31, 2003 the Port released a press release stating it will spend $3.1 million in community aesthetic mitigation funds to design and build a Wilmington Youth Sailing Center, and an additional $5.2 million to create a greenbelt on North Gaffey Street in Northwest San Pedro. Funding for these projects comes from the Port's Community Aesthetic Mitigation Program.

The Wilmington Youth Sailing Center will be located within the Port's northern boundaries at the Consolidated Slip in Wilmington – the exact location is still to be determined. The facility will service low-income and at-risk youth throughout the region, exposing them to sailing, waterfront recreational activities and maritime educational programs. At a cost of $3.1

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[8] The Port of Los Angeles. 2006. *Habitat Preservation.* <http://www.portoflosangeles.org/environment_habitat.htm>

[9] The Port of Los Angeles. 2006. *Community Aesthetic Mitigation Funds.* <http://www.portoflosangeles.org/Board/Agendas/commission_agenda031606.htm>

million, the project components include a community center, parking lot, boat slips and open dock space at Berth 200 in Wilmington.

The Northwest San Pedro Beautification project is located along the east side of North Gaffey Street, generally bounded by Westmont Avenue and Channel Street in San Pedro. At a cost of $5.2 million, the Beautification project will include landscaping, a pedestrian and bike path, sidewalks, curbs, gutters, soil remediation and fencing.
Included in the funding for this project are design, construction and the first year of maintenance to the improved area.

The Port Community Advisory Committee (PCAC) has the authority to review projects and recommend them to the Harbor Commission.

-In 2003 the Port created a five year, $20 million *Air Quality Mitigation Incentive Mitigation Program (AQMIP)* due to requirements from the China Shipping Settlement. This program's funds are for projects benefiting the communities of San Pedro and Wilmington. At the end of 2006 $14 million will have spent of original funding.
In 2006 the AQMIP provided mitigation funds of $184,623 for APM's Yard Tractor Replacement Project. The project was set to reduce particulate matter emissions by nearly 15 tons, and reduce NOX emissions by approximately 465 tons.[10]

-A *settlement agreement* between the City of Los Angeles and Natural Resources Defense Council established a throughput restriction at the China Shipping Terminal of 328,000 twenty-foot equivalent units (TEUs) per calendar year. If container throughput exceeds the agreed-upon capacity limit, the Port of Los Angeles is to make a payment to the mitigation fund of $30 per TEU in excess of the cap. Throughput at the China Shipping Terminal for calendar year 2005 exceeded the cap by 128,735 TEUs. Per the terms of the settlement agreement, the Port was required to make a deposit to the mitigation fund in the amount of $3,862.050.

The Board resolved that $3,862,050 be transferred from their Harbor Revenue Fund to the China Shipping Mitigation Fund, with a distribution of $772,410 to the Gateway Cities Program Account, $1,544,820 to the Air Quality Mitigation Account, and $1,544,820 to the Community Aesthetic Mitigation Account.[11]

Southern California Wetlands Recovery Project (WRP)
The Wetlands Recovery Project is a partnership of 17 state and federal agencies working in concert with local government, businesses, and the environmental community to implement a regional wetlands recovery strategy for coastal Southern California (stretching from Point Conception to the border with Mexico). The long-term vision of the WRP is to reestablish a mosaic of functioning wetland and riparian systems that supports a diversity of fish and wildlife species. The WRP Regional Strategy defines six overarching goals to guide the efforts of the Wetlands Recovery Project towards achieving this vision. The regional goals provide a framework for setting policies and priorities for planning, acquisition and restoration projects.

> *Each year the WRP adopts a list of candidate acquisition, restoration, and enhancement projects, which is referred to as the Work Plan. During the past few years, the Coastal Conservancy has been able to commit staff resources to all of the projects on the Work Plan. The Conservancy has also been able to provide some funding to many of the Tier 1*

[10] The Port of Los Angeles. 2006. *Air Quality Mitigation Incentive Mitigation Program.* <http://www.portoflosangeles.org/Board/Presentations/010506_APM_Mitigation.pdf>
[11] The Port of Los Angeles. 2006. *The Land-Based Environmental Initiatives.* <http://www.portoflosangeles.org/environment_land.htm>

projects. However, Conservancy funding is more limited and inclusion on the Work Plan does not mean the project has been awarded a grant. Both the Conservancy and the Wildlife Conservation Board will continue to use the Wetland Recovery Project Work Plan to identify potential projects for the available grant funds. The WRP will work to help identify other sources of project funding for Work Plan projects. [12]

Southern California Edison

In February 1974, the California Coastal Commission (CCC) approved Southern California Edison's San Onofre Nuclear Generating Station (SONGS) construction permits for Units 2 and 3, with the condition that SCE fund formation of an independent, three-member Marine Review Committee (MRC). The Commission directed the MRC to predict and monitor the effects of SONGS on the marine environment and recommend mitigation measures for any impacts. The MRC studies lasted from 1974 through 1989, at a cost to the SONGS owners and electric utility ratepayers of $48 million. In 1983, SONGS Unit 2 began commercial operation; Unit 3 followed in 1984. By this point, spending by the MRC had approached $30 million. In 1989, the MRC submitted its final report to the Commission. As a result, the CCC amended the SONGS permit to require *150 acres of wetlands restoration*, 300 acres of kelp reef construction, fish protection improvement studies, and the funding of staff and technical experts. Spending by the MRC continued as it supported CCC staff and began to wind down its operations, which ended in December 1993. In 1993 and 1997, the CCC additionally required SCE to provide $4.7 million and San Diego Gas & Electric to provide a site for the Hubbs Sea World White Sea bass hatchery in Carlsbad. In 1995, the SONGS' owners presented scientific findings indicating less impact than originally predicted by the MRC had occurred on the San Onofre kelp bed. To review and verify SCE's findings, CCC staff chose another independent panel of experts. In 1996 the panel verified the SCE findings and concurred that the impact of SONGS on kelp was "much less" than originally predicted by the MRC. Consequently, in 1997 the CCC reduced the kelp reef mitigation requirement from 300 acres to 150 acres. In addition, the CCC reconfirmed San Dieguito Lagoon as the preferred site for the 150-acre wetland restoration project. The CCC also required that SCE fund independent monitoring of the wetlands and kelp reef projects by the Commission staff. This monitoring currently costs SCE about $1.2 million annually. In 1997, the CCC approved SCE's preliminary plan for the wetlands restoration at San Dieguito Lagoon. Based on that plan, the San Dieguito River Valley Regional Open Space Park Joint Powers Authority (JPA) prepared an Environmental Impact Report (EIR) for the project. After months of public input and revision, the EIR was certified by the JPA on September 15, 2000. The U.S. Fish and Wildlife Service, working with the JPA as joint state/federal lead agencies, will similarly adopt the EIR. In September 1999, SCE completed construction of the 22.4-acre Experimental Kelp Reef offshore of San Clemente. The reef consists of 56 test modules using quarry rocks and recycled concrete.

[12] Wetlands Recovery Project. 2006. *Southern California Wetlands Recovery Project: Work Plan Update Request for Proposals.* <http://www.scwrp.org/documents/SubmitProposal/WRP_grant_appl2004.pdf#search='california%20wetlands%20recovery%20funds>

In 2003, SCE has prepared and submitted a final wetlands restoration plan for CCC approval. Following CCC approval, SCE will seek all required federal, state and local permits, including a CCC Coastal Development Permit, for the construction of the wetlands project. Construction is anticipated to in 2006. Monitoring will continue for the operational life of SONGS, currently expected to last 40 years. Total cost of the wetlands project is estimated at $86 million. In 2005, SCE built out the experimental reef to the full 150-acre required size. Total cost of the reef, including post-construction monitoring, will exceed $40 million.[13]

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13) Southern California Edison. 2006. *Power Generation: Marine Mitigation.* <http://www.sce.com/PowerandEnvironment/PowerGeneration/MarineMitigation/Background.htm>