By Melanie Schlotterbeck

In September, the Environmental Oversight Committee, T2020 Committee, and full Orange County Transportation Authority (OCTA) board approved six preliminary and three contingency projects to move forward with restoration funding from the environmental mitigation program provided for under Renewed Measure M. The restoration list consists of a variety of watersheds and a variety of habitat types and their implementation will ensure the mitigation requirements stipulated in some previous freeway projects throughout Orange County. To receive funding, projects must sponsor a Restoration Plan.

The primary projects include:

- $300,000 Palomares Park (Anahim)  
- $87,500 Big Bend (Laguna Beach)  
- $1,550 City Parcel (San Juan Capistrano)  
- $2,000 Fairview Park (Cypress)  
- $1,550 Irvine Ranch (Foothill and Aliso Chino)  
- $325,000 TEC Ecological Reserve (Irvine)  

The contingency projects include:

- $2,040 Chico Hills State Park (Yorba Linda)  
- $1,550 Irvine Ranch (Loma Ridge)  
- $350,000 Upper Back Gully (Newport Beach)  

* supported by the Measure M Environmental Coalition.
Early in my junior year of high school, I tentatively raised my hand to become part of a service learning program that was vaguely described to me as “essentially creating scavenger hunts in local parks” by representatives of an environmental education and service group, Inside the Outdoors. My former high school, Sage Hill School, had melded service learning into the school curriculum and had started a number of partnerships in parks ranging from cleaning up local beaches to providing educational experiences. Determined to find a project that I would be passionate about, I jumped at the chance to do something different. Four other students joined me and along with my faculty advisor we began our idea where our efforts would lead us to this project for the upcoming year. We focused on making a plan for a park with a parking lot and began researching the benefits of having a parking lot at Craig Regional Park.

Being involved in the development of this program from day one has been an incredibly gratifying experience and given me valuable knowledge of how the real world functions.

Craig Regional Park

In 2009, the U.S. Green Building Council (USGBC) installed a green irrigation system at Craig Regional Park in Orange County, Calif. The new system uses a wireless sensor to measure temperature and humidity, then sends that data to the irrigation clock. Watering time and amount is automatically adjusted according to the readings. According to the park’s irrigation manager, North Parks District Supervisor Steve Bonhall, the irrigation system has helped the park save a significant amount of water. “The average annual cost of water for the park is $20,000 compared to the park’s average water bills the previous three years,” North Parks District Supervisor Steve Bonhall said. Craig Regional Park was the first park in Orange County to install an irrigation system that uses state-of-the-art technology. The system measures water use and adjusts irrigation times and amounts accordingly. Craig Regional Park was also the first park in Orange County to install an irrigation system that uses state-of-the-art technology. The system measures water use and adjusts irrigation times and amounts accordingly. The system is designed to save water and improve the health of the park’s vegetation. Craig Regional Park is the focal point of the OC Parks Sustainability Practices program.

OC Parks Sustainability Practices

OC Parks’ already-green parks are becoming even more green. Parks staff are working on and implementing plans for sustainable park management and design. Things like drought-tolerant plants, recycled and re-used irrigation, and high-efficiency lighting are helping to ensure OC Parks long remain a beautiful and welcoming place for recreation and enduring value.

In an effort to decrease waste that ends up in landfills and increase recycling efforts and awareness with its 11 million annual park visitors, in 2010 OC Parks partnered with OC Waste & Recycling to develop a park recycling program. Through a grant, OC Waste & Recycling purchased 85 new recycling bins designed by OC Parks and made from 100% recycled materials. OC Parks more than doubled the number of recycling bins in its facilities from 79 to 164. The number of facilities with recycling bins increased from 22 to 77. OC Parks is also using cutting-edge technology to keep the park’s signature turf areas of its regional parks lush and green while remaining water-wise.

The Environmental Nature Center - A LEED Platinum Building

The Environmental Nature Center’s (ENC) 8,500 square foot learning center is Orange County’s first building to achieve LEED Platinum Certification by the U.S. Green Building Council. The ENC produces more energy than it uses, in part by using hybrid vehicles, when appropriate, for its fleet. And design projects are being developed and implemented that include using drought-tolerant plants, low-flow toilets and architectural features that reduce the need for electricity. The goal of LEED certifying a building or neighborhood development project is to realize measurable improvements in energy and water efficiency, reduced CO2 emissions, improved indoor environmental quality, and resource stewardship, over a non LEED certified project. The application process and certification establishes the framework for tracking and documenting the project’s lifecycle from design, construction, operations, and maintenance.

The ENC is supported by the Measure M Environmental Coalition, which has established targets to reduce our vehicle miles travelled and therefore the smog and carbon dioxide (emissions) that we contribute to the atmosphere. Each region of the state was given two targets. The southern target is to reduce our vehicle miles travelled by 2010, while the northern target is to reduce our vehicle miles travelled by 2020. To meet these targets, the ENC is taking steps to reduce our carbon footprint by using hybrid vehicles, when appropriate, for its fleet. And design projects are being developed and implemented that include using drought-tolerant plants, low-flow toilets and architectural features that reduce the need for electricity.

By: Alex Koeberle

The U.S. Green Building Council (USGBC) is a 501(c)3 non-profit organization “committed to a prosperous and sustainable future for our nation... with a mission “to transform the way buildings and communities are designed, built and operated...” (USGBC website). The USGBC’s LEED (Leadership in Energy and Environmental Design) program is a voluntary certification system that verifies a building project or neighborhood development was designed using green principles and strategies. Participation by an organization in the LEED certification process is voluntary.

Project team members are credited through the Green Building Certification Institute (GBCI) as a qualifying requirement to apply for LEED certification for a building project. The process is detailed and rigorous, calling forth leadership in innovation and environmental stewardship. The very nature of the process facilitates integrating a whole-building approach with a sustainable building site approach.


The goal of LEED certifying a building or neighborhood development project is to realize measurable improvements in energy and water efficiency, reduced CO2 emissions, improved indoor environmental quality, and resource stewardship, over a non LEED certified project. The application process and certification establishes the framework for tracking and documenting the project’s lifecycle from design, construction, operations, and maintenance.

Building project certification occurs through a network of ISO-certified, international, certifying bodies via the GBCI. The rating systems can apply to all types of buildings – homes, schools, health care facilities, shopping centers, office buildings, industrial buildings, hospitality, and recreation facilities. A project can achieve LEED certification at the Silver, Gold, or Platinum level, improving and leading the way for the next projects.

LEED certification is a comprehensive program with many facets, worthy of better understanding. Information about the numerous LEED certified projects in Orange County with contacts can be found at www.usgbc-oc.org/LEED/.
By: Kim Stuart, Stuart Architecture

The U.S. Green Building Council (USGBC) is a 501(c)3 non-profit organization ‘committed to a prosperous and sustainable future for our nation,’ with a mission ‘to transform the way buildings and communities are designed, built, and operated.’ (USGBC website)

LEED is an internationally recognized, third-party certification system that verifies a building project or neighborhood development was designed using green principles and strategies. Participation by an organization in the LEED certification process is voluntary.

Project team members are credited through the Green Building Certification Institute (GBCI) as a qualifying requirement to apply for LEED certification for a building project. The process is detailed and rigorous, calling forth leadership in innovation and environmental stewardship. The very nature of the process facilitates a whole-building approach to a sustainable building site approach.

Key components of a sustainable project site that LEED measures include: Structural, glazing, and sealing systems, mechanical, electrical, and plumbing systems, among many others.

The goal of LEED certifying a building or neighborhood development project is to realize measurable improvements in energy and water efficiency, reduced CO2 emissions, improved indoor environmental quality, and resource stewardship. Over a non LEED certified project, the application process and certification establishes the framework for tracking and documenting the project’s lifecycle from design, through construction, operations, and maintenance.

Building and project certification occurs through a network of ISO-compliant, international, certifying bodies via the GBCI. The rating systems can apply to all types of buildings - existing, new, schools, health care facilities, shopping centers, office buildings, industrial buildings, hospitality, and recreation facilities. A project can achieve LEED certification at the Silver, Gold, or Platinum level, inspiring and leading the way for the next projects.

By: Mark Denny, OC Parks

OC Parks’ already-green parks are becoming even more green. Park staff are working on and implementing plans for sustainable park management and design. Things like drought-tolerant plants, increased recycling, and high-tech irrigation are helping to ensure OC Parks long remain a model of recreation and enduring value.

In an effort to decrease waste that ends up in landfills and increase recycling efforts and awareness with its 11 million annual park visitor, in 2010 OC Parks partnered with OC Waste & Recycling creating a recycling program. Through a grant, OC Waste & Recycling purchased 85 new recycling bins designed by OC Parks and made from 100% recycled materials.

OC Parks more than doubled its recycling output, increasing the amount of recycling bins in its facilities from 79 to 164. The number of facilities OC Parks has recycled tripled, from seven to 22 facilities. OC Parks is also using cutting-edge technology to keep the signature turf areas of its regional parks lush and green while remaining water-wise.

Craig Regional Park in 2009 installed a system called AquaPhyD, which increases the efficiency of water absorption, thus decreasing the amount of water used. It treats the wastewater it receives as it moves through the grass, changing its molecular structure. The treated water percolates into the soil and reduces salt accumulation in the soil, lessening soil compaction.

“The system produced an annual water bill savings of $14,000, and now we’re recycling water,” said landscaping assistant Steve Brown.

This year, Mile Square Regional Park installed 25 Smart Irrigation control systems. The new system uses a wireless sensor to measure temperature and humidity, then sends that data to the irrigation clock. Watering time and amount is automatically adjusted according to the readings.

OC Parks is ordering hybrid vehicles, when appropriate, for its fleet. And design projects are being green building practices, like using drought-tolerant plants, low-flow toilets and architectural features that reduce the need for electricity.

We have much more to do in accomplishing our mission of stewardship going forward. We appreciate any feedback or ideas to sustainability programs. Please contact us at Mark.Denny@ocparks.com.

By: Melanie Schlotterbeck

USGBC’s Orange County Chapter Leadership in Energy and Environmental Design (LEED) ratingsystem has successfully taken the idea of building green from a concept to reality in Orange County.

Sustainable design is not just a new fashion statement, but a responsible approach to building. And it is growing in popularity, as evidenced by the following statistics.

• With a 42% lower carbon footprint, the EN Center lowers the EN Center’s average carbon footprint of 39%.
• The use of low-emitting materials ensure the release of the EN Center’s average carbon footprint of 39%.
• The use of low-emitting materials ensure the release of the EN Center’s average carbon footprint of 39%.
• The use of a white-colored roof and light-colored materials can achieve LEED certification at the Silver, Gold, or Platinum level, inspiring and leading the way for the next projects.

The primary projects include: Amigos de Bolsa Chica, Audubon, Sea & Sage Chapter, Caspers Wilderness Park, Orange County Great Park, and OC Parks, the Measure M Restoration Projects.

The EN Center in Orange County is a 501(c)3 nonprofit organization committed to a prosperous and sustainable future for our nation, with a mission to transform the way buildings and communities are designed, built, and operated. USGBC website

The EN Center’s goal is to achieve LEED certification at the Silver, Gold, or Platinum level, inspiring and leading the way for the next projects.

Visit us on the web at: www.ENCenter.org.
Engaging with groups like OC Parks, Orange County Health Agency, OC Libraries, Latino Health Access, Friends of Harbors, Beaches, and Parks, ... between these groups gave me great insight into bureaucracy and how non-profits and government agencies function.

http://www.getoutdoorsoc.com/nsi.php

By: Alex Koeberle

By: Kim Stuart, Stuart Architecture

Early in my junior year of high school, I tentatively raised my hand to become project lead for a service-learning project that was vaguely described to me as "essentially making OC Parks green." It was unclear at the time whether this meant I would be responsible for installing an irrigation clock controller, educating children about the environment, or anything in between. Regardless, I knew this project was going to get me excited about something I was passionate about: sustainability. The city was still working on creating a more sustainable public school curriculum and has students partake in projects ranging from cleaning up local beaches to avocado gleaning.

The Environmental Nature Center - A LEED Platinum Building

Through a grant, OC Waste & Recycling purchased 85 new recycling bins designed by OC Parks and made from denim blue jeans and 15% cotton fibers that are rapidly renewable resources.

The Environmental Nature Center (ENOC) foot learning center is Orange County’s first building to achieve LEED Platinum Certification by the U.S. Green Building Council. Visitors see examples of natural ventilation, renewable and green building materials, and practices like greywater usage. As one of OC Parks’ top educational facilities, ENOC is built to demonstrate how our government and community’s efforts can create a more sustainable future.

• With a 42 kilowatt solar panel array and wind turbine, ENOC generates around 70% of its electricity and is producing 14% more energy than what it uses, which leads to a one-time annual savings of $20,000 compared to the park’s average water bills the previous three years,” North Parks District Supervisor Steve Bonhall said.

OC Parks’ already-green parks are becoming even more sustainable park management and design. Things like irrigation clock controllers. The new system uses a wireless sensor to measure temperature and humidity, then sends that data to the irrigation clock. Watering time and amount is automatically adjusted according to the readings.

With a commitment to LEED certification, OC Parks has been very successful in creating new projects that are environmentally friendly. In 2009 installed a system called AquaPhyD, which uses water and sunlight to grow algae, which is then harvested and used to create fish food. This reduces the amount of fertilizer and the need for irrigation water.

As a student, I was happy to see the city making a commitment to sustainability. However, it was more interesting to see how much OC Parks was leading the way. As a city department that manages public parks and open space, OC Parks has taken many steps to become more environmentally friendly.

The U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system has successfully taken the idea of building green from a niche market toward a mainstream international movement. Most people now realize the benefits of green buildings—employees working in green offices produce more and are less sick, kids in green schools have higher test scores, green homes are better constructed and healthier for their inhabitants.

The U.S. Green Building Council (USGBC) has 450 members, over 4,000 affiliates. Members are actively shaping a more sustainable Orange County. In 2011, we will “green” a public school, mentor OC residents seeking green job skills, and educate commercial building owners and tenants about environmental mandates and the bottom-line benefits of leasing ‘green’.
Green City Initiative Begins in Aliso Viejo

The City of Aliso Viejo has begun work on its Green City Initiative, which will provide the City with a policy and implementation framework to reduce greenhouse gas emissions (GHG) in all development sectors within the City. The Initiative will contain calculations, reduction targets, goals, policies, and implementation measures related to GHG reductions, strategies for adapting to climate change, and a monitoring program to document progress toward achieving target reductions. Residents and business owners in the Aliso Viejo community will be involved during the entire Initiative. The Initiative’s first public workshop is Thursday, December 9 at 7:00 PM at the Aliso Viejo Conference Center.

Creating a Zero Waste World

Most of us recycle our bottles and cans - yet our landfills are filling up, oceans are drowning in plastics, and our resources are running out. The challenge is to get beyond recycling to the wonderful "3R" - Retain, Repair, Reuse. Return, Restore, and Re-Earth (composting). Buying recycled, closes the loop by creating demand of the recycled materials. A zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the zero waste economy and society is where no waste goes to landfill, incinerator or the.

Reducing Your Carbon Footprint

Resources are bountiful - now it's easier than ever to find green finish materials, products, and services for residential projects of all kinds. Builders and individual homeowners are benefitting from the incentives programs offered from a variety of sources that make pay backs on your green investment easier to swallow. Whether your project is a new ground-up custom home, a small remodel, or just new energy efficient appliances -- there are plenty of ways to reduce energy consumption and save money. In fact, local governments are embracing new energy laws, updating ordinances and lists of approvable materials and methods to make your green home easier to achieve while leaving a smaller footprint.

Glumac - The Office of the Future

Southern California Edison has bestowed the Office of the Future" recognition on the Glumac Orange County Office because of the office’s innovative MEP (Mechanical, Electrical, and Plumbing) design. The Office of the Future program allows public utilities to experiment with and study new technologies, create energy efficient office spaces, and promote these technologies to others. The new Glumac office has been recognized as the program’s first such space in the country, gaining the recognition because of the lighting, along with the temperature control, and monitoring capabilities. Glumac hopes to promote these technologies to its clients and landlord friends to improve energy efficiency in other spaces locally and nationally.

Greening Transportation

From transit operations to administrative services, OCTA's going green initiatives follow the three basic principles of sustainability - reduce, reuse, and recycle. OCTA has reduced energy and water usage including reducing the number of times buses are washed per week, installing solar panels at bus stops, replacing landscaping with water wise materials, and using energy efficient lighting fixtures throughout the agency. OCTA has converted 99% of their bus fleet to compressed natural gas (CNG) and liquefied natural gas (LNG), which help reduce air emissions and the need for higher polluting fuels. OCTA is one of the nation’s largest transit agencies with a clean air fleet.

Fountain Valley’s First Solar Home

Installed in 2001, the Pachecos installed a solar array and chose to live in the grid. The sizing of the array was off since power usage is based on a 1-year period and excess power is donated to the power company. To size the array they tracked their power usage from past bills. They eliminated items not needed (such as a freezer) and replaced appliances, light bulb, and electronics with more energy efficient products. They also keep lights off, and control lighting and temperature with energy efficient windows, skylights, and solar tubes. With these changes their 1950 watt solar array yearly electrical bill average just ~$80. The Pachecos was the first solar permit issued by the City of Fountain Valley.

Turning Construction Green

Construction and demolition (C&D) materials account for a large part of the waste ending up in landfills. Materials, such as drywall, carpet, metal, glass, and lumber, can usually be recycled. California laws along with local jurisdictions are achieving reductions and greater diversions of construction waste going to our landfills. City and County ordinances, policies, guidelines and the like, along with the Construction Specifications Institute (CSI) are available and offer information and resources. Information regarding the handling and installation of materials as well as diversion of the project area can be found there too. Maybe your project qualifies for some funding programs.

Fullerton’s Sustainable General Plan

The Fullerton General Plan is currently in the process of being updated and is organized into four parts (Built Environment, Economy, Natural Environment, and Community), which include 21 chapters and a Climate Action Plan. To achieve sustainable economic, environmental, and community outcomes within the context of the built environment, all policies and actions were prepared to address regional, citywide, neighborhood, and project levels and must affirmatively answer the following question: “Is the policy or action supportive of or neutral to realizing a sustainable built environment, natural environment, community, and economy?” Plan adoption is anticipated by mid-2011.

Visit: www.CityOfAlisoViejo.com

Visit: www.EarthResource.org

Visit: www.NewBuildings.org

Visit: www.Glumac.com


Visit: www.CalRecycle.ca.gov

Visit: www.fullertonca.us