



# *Encinitas Union School District*

California Nominee to  
U. S. Department of Education Green Ribbon Schools  
District Sustainability Award



Prepared by  
California Department of Education  
School Facilities and Transportation Services Division  
<http://www.cde.ca.gov/lr/fa/sf/greenribbonprog.asp>  
January 2014



## 2013-2014 District Nominee Presentation Form

### **PART I - ELIGIBILITY CERTIFICATION**

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#### **District's Certifications**

The signatures of the district superintendent (or equivalent) on the next page certifies that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the superintendent's knowledge.

1. The district has been evaluated and selected from among districts within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The district is providing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review.
3. OCR has not issued a violation letter of findings to the school district concluding that the nominated school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
4. The U.S. Department of Justice does not have a pending suit alleging that the school district has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
5. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school district in question; or if there are such findings, the state or school district has corrected, or agreed to correct, the findings.
6. The district meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.



U.S. Department of Education Green Ribbon Schools 2014 – District Award

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Name of Superintendent\* Dr. Timothy B. Baird  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name\* Encinitas Union School District

Tel. (760) 944-4300, ext. 1111

(As it should appear on an award)

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Timothy B. Baird Date: January 16, 2014  
(Superintendent's Signature)

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## **PART II – SUMMARY OF ACHIEVEMENTS**

### **Instructions to District Superintendent**

Provide a concise and coherent "snapshot" that describes how your district is representative of your jurisdiction's highest achieving green school efforts in approximately 800 words. Summarize your strengths and accomplishments. Focus on what makes your district worthy of the U.S. Department of Education Green Ribbon School District Sustainability Award.

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## **PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE**

### **Instructions to Nominating Authority**

The Nominating Authority must document the district's high achievement in each of the three ED-GRS Pillars and nine Elements. Please attach documentation in each Pillar and Element. This may be the Authority's application based on the Framework and sample application or a committee's written evaluation of a school in each Pillar and Element.

### **Nominating Authority's Certifications**

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.



1. The district is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The district meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating  
Agency

California Department of Education

Name of Nominating  
Authority

Tom Torlakson, State Superintendent of Public Instruction

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the district meets the provisions above.

Tom Torlakson

Date January 30, 2014

(Nominating Authority's Signature)

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to [green.ribbon.schools@ed.gov](mailto:green.ribbon.schools@ed.gov) according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509  
Expiration Date: February 28, 2015

### **Public Burden Statement**

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email [ICDocketMgr@ed.gov](mailto:ICDocketMgr@ed.gov) and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

## **PART II – SUMMARY OF ACHIEVEMENTS**

### **Encinitas Union School District, CA**

*A regional model for sustainability and wellness*

**9 schools • 5,400 students • 1 National Wildlife Federation Eco-School (Bronze) • 4 National Wildlife Federation Certified Habitats • 2 Alliance for a Healthier Generation Schools (Bronze)**

The Encinitas Union School District (EUSD) is home to a strong district-wide Green Team and Wellness Committee. Both groups meet monthly and are attended by the Superintendent, school board members, department directors, teachers, parent volunteers, and representatives from local businesses and community organizations. The committees have worked together to bring about measurable improvements to the school district and the local community. From farming efforts, waste diversion, and daylighting to hand dryers, daily yoga, and solar panel installation, EUSD is becoming a model for sustainability and wellness in the region.

Although there are many, a few major efforts serve as examples of EUSD's commitment and success as a model Green School. Each of the nine elementary schools within EUSD has a robust educational garden, and many schools grow organic produce for school lunches, food pantries, and farmer's markets. Driven by the success of the garden and wellness programs at EUSD, two large-scale organic, sustainable farming efforts are blossoming within the District:

First, EUSD's ten-acre Agroecology Learning Center (ALC), opening in 2014, is poised to be the focal point of the District—and the community—for years to come. Leveraging public and private partnerships, EUSD will grow organic food for the Farm to Cafeteria program while also showcasing cutting-edge sustainable farming techniques and renewable energy technologies. The ALC is nestled among the San Diego Heritage Museum, a food justice sustainability farm, and the San Diego Botanic Gardens. Hands-on learning about hydroponic and aquaponic farming, renewable energy generation, and fuel cell storage will create a learning center like no other for students and community members.

Second, the Ocean Knoll Educational Farm is EUSD's one-acre farm pilot. In its first year of operation, students harvested several hundred pounds of produce for the lunch program, in-class tastings, and the local food pantry. The farm is home to the first educational food forest and a greenhouse made entirely of recycled plastic bottles.

In addition to leading the way in Farm to Cafeteria efforts, EUSD is also a regional leader in waste reduction. Partnering with community organizations, EUSD put a revolutionary waste diversion program in place at all schools. The SCRAP program requires all schools to institutionalize full stream recycling and food scrap composting. Customized lunchtime waste sorting units were created and placed at each school site, and every student, staff member, and custodian is trained to use the equipment. The Board of Trustees has accepted this new waste diversion protocol and EUSD has realized a reduction of lunchtime waste of 85%. In 2013, EUSD's SCRAP Program was recognized with a regional award from the California Resource Recovery Association for Best Waste Prevention Program.

Energy and water conservation are also a large part of EUSD's Green Plan. The District worked with the California Center for Sustainable Energy to develop an Energy Conservation Plan, including automated and upgraded HVAC and lighting settings, bulb retrofits to existing lights, and comprehensive installation of daylighting, solar panels, and cool roofs. Work is underway

for all schools to receive photovoltaic panels and daylighting Solatubes by 2016. In the first month following one school's completed Solatube installation, energy audits revealed a 15% reduction in energy demand.

Students at the school are working with professionals from San Diego Gas & Electric and The Energy Coalition to monitor the school's energy use and spearhead a best practices campaign for the District. A systematic installation of rain harvesting at each school is nearly complete, with each installation accompanied by an educational rollout for students and their families. Students are involved in all aspects of sustainability and implement the principles they have learned in community service projects. In 2012, the District received an award from the Carlsbad Chamber of Commerce for Outstanding Educational Program for Environment, for the ECO-LUTION program at El Camino Creek Elementary, which embraces project-based learning through student-driven waste diversion and garden programs.

EUSD works actively with the San Diego Association of Governments (SANDAG) to promote their iCommute program and Safe Routes to School. Fifty-seven percent of EUSD students walk or bike to school on a regular basis, and an additional 15 percent carpool. EUSD schools placed first and second in SANDAG's 2012 and 2013 county-wide Walk, Ride, and Roll to School Challenge. These winning schools received grants from SANDAG to purchase classroom supplies and instructional materials. SANDAG also recognized EUSD with their 2013 Diamond Award for the Best Walk to School Program in San Diego County (2011 and 2012).

## **PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE**

### **Pillar I: Reduce Environmental Impact and Costs**

#### ***Element IA: Energy***

- EUSD has an Energy Conservation Plan, developed in collaboration with the California Center for Sustainable Energy. The plan includes automated and upgraded HVAC and lighting settings, bulb retrofits to existing lights, and comprehensive installation of daylighting (Solatubes), solar panels, and cool roofs. Some installations are complete or currently in progress; full implementation of the plan is expected in 2016.
- EUSD is actively working on entering data into EPA's ENERGY STAR Portfolio Manager, and intends to seek certification.
- EUSD compared energy bills to document a reduction in non-transportation energy use of 16% from November 2009 to October 2012. Current district energy use is 714 kBTU/student/year or 8.0 kBTU/sf/year.
- The Energy Conservation Plan calls for solar panels at all nine elementary school sites. Three sites are in progress (scheduled completion August 2014). When all sites are online, photovoltaics are expected to generate 85% of district energy needs.
- 15.7% of energy is obtained from purchased renewable energy, including biomass, geothermal, wind, and small hydroelectric sources.
- For over 10 years, EUSD has been working to improve their energy efficiency. EUSD has worked closely with San Diego Gas & Electric (SDG&E) and participated in the following programs:
  - Energy Efficiency Business Rebates/Guaranteed Savings Programs – all schools were audited and lighting was upgraded, motion sensors were installed, some

sites were delamped, cool roofs were installed, HVAC tune-ups and temperature control were installed.

- Direct Install Program – three of EUSD’s older schools received additional lighting upgrades, and all of the HVAC filters were cleaned to maximize efficiency.
- Demand Response Program – EUSD participated on a district-wide basis.
- 41,000 square feet of new construction completed since 2003 was designed with integrated energy efficiency measures and ENERGY STAR appliances.
- 100% of schools (9 sites) have cool roofs to reduce the heat island effect.
- 100% of lights were retrofitted with T8 bulbs and LED lights in a checkboard design with separate controls. Solatubes are being installed district-wide for improved daylighting.
- ENERGY STAR HVAC systems are centrally controlled with efficiency set points; power is shut down during non-work hours.

### *Element IB: Water and Grounds*

- District water use is 4,680 gallons per occupant per year.
- 55% of landscaping is considered water-efficient and/or regionally appropriate. Drought resistant native plants on school sites and nature trails include kangaroo paw, fountain grasses, cordyline, California buckwheat, black sage, gum plants, succulents, and fruit bearing trees.
- Reclaimed water and harvested rainwater provide alternate water sources for irrigation.
- Vegetative swales and catch basins are strategically placed at each school to collect rainwater for district gardens and farms while reducing storm water runoff and impermeable surfaces. Green islands are incorporated in parking lots.
- District water comes from a municipal source (San Dieguito Water District) and is tested rigorously to ensure it meets and exceeds all USEPA and state drinking water standards. EUSD periodically tests the water to ensure it is lead-free.
- Over 60% of District grounds are dedicated to ecologically beneficial uses, including the ten-acre Agroecology Learning Center and one-acre Ocean Knoll Educational Farm. 100% of school sites host food gardens that provide vegetables for cafeteria salad bars as well as inspired outdoor classrooms. Other uses include certified native plant habitats, walking/hiking trails, butterfly gardens, hydroponic gardens, green houses, a chicken coop, composting areas, worm bins, and rain harvesting.

### *Element IC: Waste*

- EUSD’s calculated solid waste diversion rate (via recycling and composting) is 55%. Service is stopped during non-service times. The monthly waste generated per person is 0.06 cubic yards.
- 100% of the District’s total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free.
- Recycling and composting are standardized at each school site using District-designed and built custom mobile waste receptacles for the lunch area, called SCRAP carts. Implementation of SCRAP carts and the promotion of waste-free lunch days reduced lunch waste from 100 bags per day to only 18 bags per day District-wide. This innovation earned the EUSD a regional award from the California Recycling and Recovery Association for Best Waste Prevention Program.

- Receptacles are also provided for CR&R recycling, battery recycling, ink cartridge recycling, recyclable and compostable lunch trays, and a furniture and electronic asset surplus reuse program.
- Vermicomposting and/or heated compost are in place for food scraps at all nine sites.
- 100 high frequency hand dryers are installed in school restrooms to reduce paper towel waste.
- EUSD demonstrates its commitment to green cleaning by using Lotus Pro, a chemical-free cleaning system. Aqueous water replaces bleach and other chemicals. When cleaner is needed, the District uses Puregreen24, a Child Safe School cleaning product. 90% of all cleaning products is third-party-certified as green.
- Department heads from Facilities and Maintenance, Nutrition Services, and Procurement attend monthly Green Team and Wellness Committee meetings to discuss and recommend cleaning products, meal service products, and office/classroom supplies that are non-toxic and sustainable.
- EUSD follows an Integrated Pest Management (IPM) plan.

#### ***Element ID: Alternative Transportation***

- EUSD works actively with the San Diego Association of Governments (SANDAG) to promote their iCommute program and Safe Routes to School. Fifty-seven percent of EUSD students walk or bike to school on a regular basis, and an additional 15 percent carpool. Parent volunteers tabulate alternative transportation statistics for SANDAG competitions.
- EUSD schools placed first and second in SANDAG's 2013 county-wide Walk, Ride, and Roll to School Challenge. These winning schools received grants from SANDAG to purchase classroom supplies and instructional materials. SANDAG also recognized EUSD with their Diamond Award for the Best Walk to School Program in San Diego County for 2011 and 2012.
- District-wide efforts to promote walking school busses help to reduce vehicle emissions across the community. EUSD schools participate in major Walk/Bike to School events three times a year.
- The District works with SANDAG, San Diego County, the City of Encinitas, and the Encinitas Sheriff's Department to promote Safe Routes to School and participates in monthly meetings on safe routes, crossing guards, sidewalk audits, visits from the sheriff, the bicycle safety rodeo, reduced speed zones, teacher supervision during drop off, and walking school busses.
- District policy prohibits vehicle idling in school parking lots, and signage is provided.

### **Pillar II: Improve the Health and Wellness of Students and Staff**

#### ***Element IIA: Environmental Health***

- EUSD implements an IPM plan. When pesticide application is necessary, EUSD uses EcoExempt in compliance with the Healthy School Act; the main ingredients are rosemary and peppermint oils.
- EUSD uses natural barriers such as hardware cloth and netting for pest control in school gardens. Teachers are asked to not store food in classrooms, and pets are not allowed in classrooms.

- To minimize exposure to hazardous contaminants, EUSD prohibits the use of tobacco products on district-owned or leased property and district vehicles; adheres to the Asbestos Act and has an asbestos management plan in place, including inspection and abatement procedures that comply with the Asbestos Hazard Emergency Response Act (AHERA); and inspects playgrounds monthly to ensure compliance with American Society for Testing and Materials (ASTM) and Consumer Product Safety Commission (CPSC) standards.
- EUSD has a comprehensive chemical management program including a written purchasing policy, storage and labeling, training and handling, inventory, and hazard communication. EUSD's board policy governing the management of routine chemicals requires staff to receive training on proper container labeling and label reading to identify warning statements and hazardous substances. The District ensures accessibility to Material Safety Data Sheets in compliance with Cal/OSHA. Employees receive in-service training on chemical substances in their work area, as well as information about emergency procedures and the measures the District has taken to lessen the hazards
- The District has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L. Newer facilities were built with radon resistant construction features (i.e., sealed foundations) and tested to confirm levels below 4 pCi/L. District Board Policy Section # AR 3514 ensures potential radon gas exposure is addressed promptly and efficiently:
- 100% of classrooms have good acoustics (less than 45 dBA), good daylighting and high-quality electric light when needed, and good relative humidity control (ASHRAE 30-60%).
- EUSD includes lead abatement and management as part of its formal board policies (Section # AR 3514):
  - Lead-based paint, lead plumbing and solders, or other potential sources of lead contamination shall not be used in the construction of any new school facility or the modernization or renovation of any existing school facility.
  - Lead exposure hazards shall be evaluated before any renovation or remodeling is begun, and children shall not be allowed in or near buildings in which these activities may create lead dust. Contractors and workers shall comply with state and federal standards related to the handling and disposal of lead debris and the clean-up and containment of dust within the construction area.
  - Lead-based painted surfaces that are in good condition shall be kept intact. If lead-based paint is peeling, flaking, or chalking, contractors or workers shall follow state and federal standards for safe work practices to minimize contamination when removing the paint.
  - Soil with high lead content may be covered with grass, other plantings, concrete, or asphalt.
  - Whenever testing of drinking water finds concentrations of lead that exceed federal and state standards, water outlets shall be flushed thoroughly each day before use or made inoperable until a plan for remediation can be implemented. The Superintendent or designee may supply alternative sources of drinking water as appropriate. Any action to abate existing lead hazards, excluding containment or cleaning, shall be taken only by contractors, inspectors, and workers certified by the California Department of Public Health.
- EUSD periodically conducts an environmental assessment to identify and reduce the presence of common asthma triggers in the school environment, including, pesticides,

chemical pollutants, mold, and animal and dust mite allergens. EUSD is a tobacco-free environment, utilizes integrated pest management, and conducts regularly scheduled cleaning of its ventilation system. Local exhaust systems for major airborne contaminant sources have been installed district-wide.

- School buildings are regularly inspected for water damage, spills, leaks in plumbing and roofs, poor drainage, and improper ventilation so as to preclude the buildup of mold and mildew. Wet building materials and furnishings are dried within 48 hours to prevent mold growth. When leaks are found they are repaired immediately.
- EUSD ensures that mechanically-driven heating, ventilation, and air conditioning systems operate continuously during working hours. The systems are inspected at least annually and problems corrected immediately. Where the air supply is filtered, the filters are replaced or cleaned regularly to prevent significant reductions in airflow. Documentation of inspections, tests of ventilation rates, and maintenance records are retained for at least five years.
- All EUSD schools are tested regularly to ensure their airflow rate is in compliance with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) ventilation standard and indoor air quality standard of 15cfm per person.
- In addition to using EPA's Indoor Air Quality (IAQ) Tools for Schools, EUSD conducts routine site inspections with custodial staff, nurses, and school board members to identify potential safety or health issues. Identified issues are immediately remediated. Routine housekeeping and maintenance practices are designed to reduce dust, dirt, and debris. Plain water, soap and water, or vinegar and water are used whenever possible. Aerosols, including air fresheners and other products containing ozone, are avoided. Painting of school facilities is limited to those times when school is not in session and the facility can be properly ventilated. Paints, adhesives, and solvents are stored in well-ventilated areas and purchased in small quantities to avoid storage exposure; all paint is low-VOC. EUSD policy is to prohibit pets in the classroom. EUSD is guided by Senate Bill 198, which requires every employer to develop and implement a written injury and illness prevention plan. As part of this plan EUSD inspects each site four times a year with a committee comprised of parents, teachers, and classified staff. The committee walks the site with a checklist and submits any safety concerns to our work order system for immediate attention.

### *Element IIB: Nutrition and Fitness*

- 2 schools (22%) have been recognized by the Alliance for a Healthier Generation (Bronze Level, 2013), and two more are "working toward bronze" in an ongoing partnership.
- 9 schools (100%) participate in a Farm to School program to use local, fresh food.
- 9 schools (100%) have on-site food gardens that supply food for students in the cafeteria, a cooking or garden class, or to the community.
- The food purchased by the District is certified as environmentally preferable; 100% of lettuce served daily in school salad bars is certified organic and locally sourced from Go Green Agriculture. Organic tomatoes are harvested from the Ocean Knoll Educational Farm and other school gardens and used to make the tomato sauce for "homemade" pizza lunches.
- EUSD's Wellness Committee stewards many partnerships, including:

- San Diego County's "Live Well, San Diego!" program, a long-term strategy to help all County residents become healthy, safe and to thrive, to promote the District's wellness efforts.
- Alliance for a Healthier Generation, to enhance best practices, track progress, and enhance professional development opportunities.
- Go Green Agriculture, to source certified organic lettuce for school cafeterias.
- YMCA, to provide supervised sports during lunchtime.
- Healthy Day Partners, to develop facilities and curriculum for EUSD's Farm to Cafeteria program.
- Sonima Foundation, to provide 100% of schools with fitness instructors and yoga classes twice per week.
- City of Encinitas, to celebrate Wellness Week, including a showcase of the District's yoga program and Farm to Cafeteria efforts during a community kick-off event at the City library.
- University of San Diego, to collect research to measure the effects of the District's yoga program and to document the student's ability to self-regulate. The data is collected in 3<sup>rd</sup> and 5<sup>th</sup> grade through student surveys, student resting heart rates, and student observations.
- All EUSD students spent at least 120 minutes per week over the past year in school-supervised physical education. At least 50% of our students' annual physical education takes place outdoors.
- Students attend yoga twice weekly and have access to before/after school programs including karate, running, golf, flag football, strength building, jumping rope, lacrosse, and cheerleading. Supervised sports are offered during lunch.
- Every school has a garden or outdoor classroom(s). Garden teachers use specialized curriculums such as Life Lab. School nature trails are used for hiking and native habitat education. EUSD has two educational farms where students get dirty growing organic produce for their own school lunches.
- EUSD staff members are invited to join the District Wellness Committee and are encouraged to form a staff wellness committee at each school. In conjunction with EUSD's yoga program, staff yoga classes are held before and after school hours or during lunchtime. Teachers are encouraged to engage in 15 minutes of walking with their students at least one day per week. Staff members are charged a reduced rate at school salad bars and notified when student-grown produce is being served.
- Students are treated to a new salad bar item that represents a color of the rainbow every day during Eat-a-Rainbow Week. Lettuce comes from District farms or Go Green Agriculture, a certified organic source.
- EUSD employs two full-time school nurses who rotate between schools sites and a full-time health technician at each site.
- Each school site celebrates Red-Ribbon Week and/or Abilities Awareness Month where bullying issues are discussed and students are encouraged to sign anti-bullying petitions. Many schools implement the Sharing Our Acceptance and Respect (SOAR) program, in which students volunteer to make peers in the special education program feel accepted.

## **Pillar III: Provide Effective Environmental and Sustainability Education**

### ***Element IIIA: Interdisciplinary Learning***

- EUSD has an environmental and sustainability literacy requirement that integrates environmental and sustainability concepts throughout the curriculum and district assessments. Students evidence high levels of proficiency in these assessments; 87% of students scored advanced/proficient in Science on the 2012 STAR Tests.
- Students draw interdisciplinary lessons from their surroundings, including:
  - School gardens or farm space at 100% of schools
  - 100% school composting and significant use of rain harvesting
  - Mandatory recycling
  - Earth Weeks celebration extending Earth Day concepts
  - Educational programs related to physical improvements on the topics of daylighting, air pollution, and storm water
  - A week-long outdoor camp for 100% of 6<sup>th</sup> graders
  - Educational field trips to local lagoons to learn about wetlands, and Legoland for solar vehicle building
  - On-site programs and curriculum enhancements such as visits from the Green Machine, Splash Lab, and mobile Water Shed Demonstration Tables from local pollution prevention nonprofits
- Professional development in environmental and sustainability education is provided to all teachers, and teachers are offered stipends to attend training courses.
- EUSD implements The Energy Coalition's PEAK Program, an energy conservation curriculum, for 3<sup>rd</sup> through 6<sup>th</sup> grade science. The District also uses Life Lab science, and trains every student to recycle and compost. Every student enjoys opportunities for project-based learning via garden and farm visits.
- Intense storm water education pilot program is offered to 5-6<sup>th</sup> grades, funded by water districts. At two elementary schools, upper-grade students are creating a storm water pollution prevention plan. Students meet weekly with an industry professional and assume responsibilities that include sample collection and testing and then work together to create best practices for their school that will be submitted to the San Diego County of Education for consideration into their plan for the school district.
- SDG&E daylighting education pilot and student campaign. One school recently completed the installation of Solatubes throughout the campus. In conjunction with the PEAK program, 4<sup>th</sup> graders at the school learn about daylighting, measure energy savings, and help create a campaign at the school to encourage teachers, staff and fellow students to keep the lights off and conserve energy.

### ***Element IIIB: STEM Content, Knowledge, and Skills***

- The District provides 1:1 iPads for 100% of its students for use in all areas of study, including general science and sustainability lessons. Students are assigned technology tasks such as making environmental public service films or researching storm water run-off issues.
- EUSD students participate in Garden Science programs from Life Lab.

- School gardens provide classrooms where students learn about hydroponics, photosynthesis, weather, and climate. All schools have active compost and vericompost bins areas where decomposition lessons take place.
- Pollination and plant reproduction plays out in real life as students enjoy butterfly gardens at seven schools (78%).
- Four schools (44%) have certified natural wildlife habitats.
- Three schools (33%) offer hiking trails through native plantings.
- EUSD is designing its own sustainability curriculum for the emerging Agroecology Learning Center.
- EUSD collaborates with the business community to bring students unique environmental learning experiences and a window to potential careers in the green industry:
  - Working with Dean and Associates, 5<sup>th</sup> and 6<sup>th</sup> grade students at two schools are participating in an extensive storm water runoff program where they collect samples and then visit a working lab and test for pollutants. Students are then tasked to create best management practices and a Storm Water Pollution Prevention Plan that will be submitted to the San Diego County of Education. Students meet with scientists, municipal water employees and lawyers to gain the needed knowledge to form their plan.
  - Working with The Energy Coalition's PEAK Program (funded by San Diego Gas & Electric), 4<sup>th</sup> grade students at one elementary school where daylighting was already installed learn about classroom design and the placement of daylighting tubes to reduce energy use. Students work with a Leadership in Energy & Environmental Design (LEED) architect/engineer to measure the lighting requirements of their school. In addition to exploring career possibilities, students develop best practices for using the newly installed Solatubes on their campus.

### *Element III C: Civic Knowledge and Skills*

- EUSD students of all ages engage in community projects that promote environmental stewardship:
  - The District hosts beach cleanup days for students and their families; students learn about the harm of storm water runoff to the coastline and inhabiting marine wildlife, and put these lessons into practice at home.
  - Many schools have a dedicated garden space where students grow organic produce. When harvests are plentiful, the Ocean Knoll Educational Farm delivers food to a local pantry (bank). On Walk to School Days, surplus refreshments are given to the food pantry.
  - Fifth grade students at one school collected recycled plastic bottles and used them to build a greenhouse on their campus. They also helped raise the funds needed to supply materials to create an entire schoolhouse in Guatemala also made from recycled plastic bottles. After the project was completed, students from Ocean Knoll Elementary used Skype to talk with their Guatemalan counterparts in Spanish.
  - At the Ocean Knoll Farm, all students play a part in helping to care for the area's first food forest where neighbors in this low-income area can share seasonal organic fruit with the school.
  - Schools celebrate Earth Week and use this time to promote walking to school, planting trees, and normalizing waste-free lunches.

- EUSD students enjoy meaningful outdoor learning experiences each year:
  - Kindergarten: Butterfly gardens demonstrate the butterfly life cycle in real time.
  - 1<sup>st</sup> Grade: Students track the day-to-day changes in the weather. Students monitor wind socks and water gauges and try their hand at forecasting.
  - 2<sup>nd</sup> Grade: Students examine rocks and soil. Every school has a worm compost bin to visit where nutrient-rich soil is created by their wriggly friends who help break down food scraps.
  - 3<sup>rd</sup> Grade: Students learn that energy comes from the sun and make solar ovens to demonstrate how the sun's energy can be harvested and utilized.
  - 4<sup>th</sup> Grade: Students learn about electricity and energy, with perfect timing to teach a renewable energy lesson with solar panels.
  - 5<sup>th</sup> Grade: Students learn about Native Americans and how they survived. Planting a Three Sisters Garden of corn, squash, and beans allows students to realize what foods sustained them.
  - 6<sup>th</sup> Grade: Growing wheat illustrates how ancient communities developed around agriculture.
- Teachers and volunteers regularly use outdoors space to teach history by planting the same crops that sustained early pioneers or Native Americans, or represented ancient farming practices. Math and measuring skills are taught and enforced when students determine the distance between seeds, how much compost is needed to amend the soil in a garden bed, and more.
- EUSD's one-of-a-kind Global Seed Saving Project teaches students about geography and food scarcity. At the Ocean Knoll Farm, students from each school grow and then preserve near-extinct seeds from all over the world. This unique experience teaches students about global issues while exposing them to rare, exotic sights and tastes. Students will add the seeds to a library and help to preserve them for future generations, all the while learning why seed saving is critical to food diversity and why that diversity is important to the health of the world.
- EUSD's ten-acre Agroecology Learning Center (ALC), opening in 2014, is poised to be the focal point of the District—and the community—for years to come. Leveraging public and private partnerships, EUSD will grow organic food for the Farm to Cafeteria program while also showcasing cutting-edge sustainable farming techniques and renewable energy technologies.
  - San Diego Gas & Electric is partnering with the District to provide a national-scale model for community-based, interactive, hands-on ecological education.
  - Other current partners include: The Eat Well Group, the Leichtag Foundation, San Diego Botanic Gardens, the Heritage Museum, Healthy Day Partners, Jewish Food Justice Foundation, and local farmers.
  - All EUSD students will have the opportunity to take part in a specialized curriculum designed specifically for the ALC through a collaboration of Healthy Day Partners, EUSD's Jewish Food Justice Fellow, and EUSD staff.
  - The ALC will be able to expand its reach to other school districts in San Diego County and beyond.
  - Community co-benefits include a 160-bed community garden, electric vehicle chargers, an emergency evacuation center, and a composting center.
- The Encinitas Union School District is emerging as a green leader in the region.

- The award-winning waste reduction program (SCRAP Cart) is a model for best practices. The District Green Team works with other school districts in San Diego County to provide guidance on lunchtime waste reduction.
- EUSD works closely with the San Diego County Health and Human Service Agency (HHS) on their Live Well San Diego campaign. EUSD was the first north county school district to officially join the program by passing a school board resolution to adopt their Building Better Health and Living Strategies. EUSD is currently working with HHS to build the visibility of the campaign throughout the region.
- EUSD is involved with many local green and wellness efforts. District representatives take part in the following task force collaborations: Let's Move Encinitas, Social Innovation and Sustainability in San Diego, and K-12 Schools Sustainability Strategy Collaborative.



(Above) EUSD's award-winning SCRAP cart;  
 (Below) Carrots harvested from the Ocean Knoll Farm



(Above) Student yoga practice; (Below) A student enjoys purple cauliflower from the Ocean Knoll Farm

