



## 2014-2015 District Nominee Presentation Form

### CERTIFICATIONS

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#### District's Certifications

The signatures of the district superintendent on the next page certify 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 schools 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 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 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 2014-2015 District Sustainability Award

Name of Superintendent: **Mary L. Willis, Ed.D.**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

District Name: **El Monte Union High School District**

(As it should appear on an award)

Address: **3537 Johnson Avenue, El Monte, CA 91731-3290**

Telephone: **626-444-9005 x4411**

Fax:

Web site/URL: <http://www.emuhsd.org/>

E-mail: [mary.willis@emuhsd.org](mailto:mary.willis@emuhsd.org)

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

*Mary L. Willis*

Date: **January 16, 2015**

(Superintendent's Signature)



**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: **State Superintendent of Public Instruction Tom Torlakson**  
(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 school meets the provisions above.

*Tom Torlakson*

Date: **January 27, 2015**

(Nominating Authority’s Signature)

**SUMMARY AND DOCUMENTATION OF NOMINEE’S ACHIEVEMENTS**

Provide a coherent "snapshot" that describes how your district is representative of your jurisdiction’s highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars and nine Elements. Then, include documentation and concrete examples for work in every Pillar and Element.

**SUBMISSION**

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.



# *El Monte Union High School District*

California Disadvantaged 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/ls/fa/sf/greenribbonprog.asp>  
January 2015

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

### **El Monte Union High School District, El Monte, Calif.**

#### *Outdoor learning is at the heart of student programming*

El Monte Union High School District (EMUHSD) partner relationships are enabling high-poverty students to explore career options related to the environment, turn passions and talents into successful “green” careers, broaden related academic skills, and prepare students for high school graduation, advanced education, and full participation in a sustainable society. Unusually broad-based relationships reduce environmental impacts and costs, improve high-poverty students’ health, and further STEM and sustainability education goals.

EMUHSD engages many government agencies, including: the Centers for Disease Control and Prevention, to coordinate health and wellness policy and activities; Caltrans, to introduce students to civil engineering careers related to wildlife conservation; the Los Angeles County Whittier Narrows Regional Park, for biking and nature study; the Upper San Gabriel Municipal Water District, for sponsorship of a solar boats project and lessons on water conservation; the U.S. Fish and Wildlife Service, for water quality testing; the City of El Monte, to coordinate and promote Safe Routes to School; the Office of Naval Research, for the SeaPerch program—underwater robotics for sustainable deep-sea engineering; USDA, implementing the “Rethink Your Drink” and “My Plate” campaigns; the Los Angeles County Office of Education, for a Harvest of the Month Club, nutrition, and cooking workshops for parents and staff; and the City of Rosemead and Gabrieleno Tongva Indians, to implement water-wise gardening.

EMUHSD also partners with corporations, including: Cenergistic, an energy conservation company helping EMUHSD change energy behaviors, generate cost savings re-allocated to other education priorities, and reduce the carbon footprint; Southern California Edison, on a student solar roofing project for school buildings; Vons Credit Union, Edison International, and GRID Alternatives, for sponsorship of a student/community project to install solar panels on low-income family homes; Hewlett Packard, on an alternative energy greenhouse; Pureology, winning the “Green Champion” prize for one school’s dedication to a greener future; BP, for sponsorship of student wind turbine designs; Lowes, for “Go Green” community murals and paint recycling; State Farm, on the “Quake Proof” program—relating World and U.S. History and Earth Science studies to earthquake preparedness in low-income communities; the Dairy Council of California, for nutrition education in 10<sup>th</sup> grade Health classes; and Wal-Mart, on improving high-poverty teens’ access to breakfast.

Community organizations have a strong presence in EMUHSD, where 90.2% of students are eligible for Free or Reduced-Price Meals. Community partners include: the American Association of School Administrators, coordinating health insurance enrollment and breakfast for “hard to reach” populations; Kaiser Permanente, on a culinary arts project providing healthy snacks to seniors in assisted living; Asian Pacific Health Care Ventures and the Children’s Defense Fund; coordinating health insurance enrollment; the San Gabriel Valley Conservation Corps, for Health Fair recycling; the El Monte/South Chambers of Commerce, publishing information of interest to motorists, parents, pedestrians, and bicyclists about safe school zones and improved traffic safety; Amigos de los Rios, for community tree planting; the U.S. Green Buildings Council and Eco-Tech, on permaculture gardening; Eco-Schools USA, for organic garden start-ups and campus greening; El Monte Sparkle, for city cleanup; and GRID, for community solar housing retrofits.

Post-secondary institutional partners include: Occidental College, on the District's Farm-to-School program; Cal Poly Pomona, providing STEM mentors for solar boat and wildlife crossing structures projects, as well as professional development for teachers; and Rio Hondo College, providing STEM mentors for a green zoo construction project and other green careers.

EMUHSD also participates in several green/wellness task forces, including: SHAPE, Day 1 Advocates, the Healthy El Monte Coordinating Council, and the Green Apple Day of Service.

The District makes a concerted effort to involve Board, parents, students, staff, and others in becoming more environmentally conscious. This includes a thoughtful six-part approach to sustainability thinking, "continuous improvement," that leads to changes in behavior, and school-community "real world" projects that further environmental stewardship and sustainable living.

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

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

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

- In 2012, EMUHSD developed an aggressive energy reduction master plan with energy conservation guidelines, with the help of Cenergistic. EnergyCAP software provides monthly analysis, charts expected energy costs against actual dollars, percent savings, cumulative energy savings, and greenhouse gas reduction equivalents. The company strategizes with EMUHSD's Energy Manager to lower consumption of natural resources, reduce pollution, and continuously analyze opportunities for improvement.
- The District Energy Manager meets quarterly with Cenergistic, an energy conservation company, to help the school community change energy behaviors, generate cost savings re-allocated to other education priorities, and reduce the carbon footprint. Every facility has site audits. Formal and informal meetings with the Energy Manager, Cenergistic, the Chief Business Official, District Maintenance Director, Bus Garage Coordinator, school building administrators, and custodians review conservation guidelines, analyze data using EnergyCAP software, spot trends, and benchmark.
- EMUHSD was named an ENERGY STAR Leader 2013 for Leadership in Reducing Greenhouse Gas Emissions, awarded for a 10% Improvement in Overall Energy Performance and Top Overall Energy Performance (portfolio ranks in the top 25% of energy efficient buildings compared to others in the same geographical region). Certifications for 2014 include: Arroyo (99); El Monte (89); Ledesma (97); Mountain View (94); Rosemead (96); and South El Monte (91).
- With Southern California Edison, EMUHSD belongs to the Alliance to Save Energy, which returns 50% of energy efficiency savings to the District and to individual schools.
- 100% of schools have "Power-Saver Clubs," involving students, teacher leaders, and maintenance staff.
- EMUHSD can demonstrate a 26.7% reduction in greenhouse gas emissions from February 2012 through August 2014 (36,588,378 KBTU saved). Cenergistic's automated EnergyCAP software generates Cumulative Cost Savings Reports, which provide the District Energy Manager with the monthly calculation of progress.

- EMUHSD used EnergyCAP software to document a reduction in total non-transportation energy use of 26.6% from February 2012 through August 2014. The current use is 4017.26 kBTU/student/year or 25.87 kBTU/square foot/year.
- EMUHSD participates in several school energy programs:
  - Proposition 39 (2012) provides funding to the District to improve energy efficiency.
  - Southern California Edison provides a base interruptible program, a Summer Saver Discount Plan, and an HVAC Optimization Program. All sites participate in Southern California Edison's incentive programs and On-Bill Financing.
- 100% of the District's outdoor parking has been retrofitted with LED lighting.
- 100% of District sites use lighting with occupancy sensors.
- Built in the past 3 years, the new District Office building and Bus Garage have state-of-the-art energy efficiency plans, including HVAC and lighting control, that conserve energy.
- To reduce energy consumption, as funding permits, two of the five comprehensive high schools have installed energy-reducing HVAC systems and new outdoor LED lighting throughout the campuses, removed turf, and installed more drought-tolerant plants
- 100% of schools have cool roofs, and all future new construction will include cool roofs.
- In addition to outdoor LED lighting retrofits, the District uses Venn Star thermostats; low flow toilets, toilets with Sloan valves; waterless urinals; and Cyber Rain irrigation controllers.
- In all gymnasiums, the District has gone from T8 to T4 bulbs and occupancy sensors.
- Everyone in the District—including students, staff, and Board members—is expected to become a mindful energy consumer and energy saver.

### *Element IB: Water and Grounds*

- EMUHSD's water use is 12,587 gallons/occupant/year, a reduction of 12.52% from February 2012 through February 2014. The District documented this reduction using EnergyCAP software, a technology tool based on industry standards to audit and document cost savings. The District's Energy Manager enters monthly data from utility bills and uses an online EPA tool to track energy and water consumption. The software produces reports that show reduced consumption and savings from behavioral changes. Reports form the basis for District-wide communications, including with School Board members, and create the basis for further improvements.
- 50% of the District's landscaping is considered water-efficient and/or regionally appropriate. The District is working with Eco-Tech to reduce turf at schools with the largest areas of grass. One school has xeriscape landscaping throughout the campus, and two others have primarily drought-resistant plants. EMUHSD's largest school garden is a permaculture garden; other school gardens use water-saving drip irrigation. One school's entryway features a community-service "water-wise" landscaping theme.
- One of the District's five comprehensive high schools is able to use reclaimed water for irrigation.
- The District is working with Frog Environmental to create a storm water management system that meets strict EPA standards, and has already substantially reduced storm water runoff at the Bus Garage. Frog Environmental provides professional storm water sampling and makes pollution prevention recommendations.

- Students are not permitted to hold car wash fundraisers.
- Municipal water from American Water, the City of El Monte, and SGV Water Co. meets all federal, state, and local quality standards. A storm water program is in place, including:
  - A “best practices” policy;
  - Monitoring (8 storm water/4 non-storm water observations annually) and water source testing at all sites to determine if pollutants exist; and
  - Certifying and annual testing of backflow devices to meet Public Health Department standards. All documentation is provided to local water districts.
- EMUHSD participates in a State program to sample water at school facilities to detect lead in drinking water. Lead pipes with PEX. Schools, including the District’s daycare facility, no longer have any lead-line water coolers. Through a risk management program, local water districts and environmental professionals routinely provide information to the District about ways to reduce levels of lead and copper in school drinking water.
- 20% of the district’s grounds are devoted to ecologically beneficial uses. EMUHSD schools are urban campuses in a densely populated area where space is extremely tight. El Monte’s population density is 11,995 people per square mile, among the highest densities for the San Gabriel Valley and among the highest densities in Los Angeles County. With Eco-Schools USA, a program of the National Wildlife Federation, EMUHSD is deliberately and steadily replacing water-intensive landscaping with xeriscaping, with a strong emphasis on pollinator plants that benefit school gardens.

*Element IC: Waste*

- EMUHSD’s waste management vendor completes post-pickup recycling, and the District receives a discounted rate. Service is stopped or reduced during summer and vacation times. When trash services come up for bid, usually every 3 years, trash services are audited for cost effectiveness and volume of materials discarded.
- All District sites generate 144 cubic yards/month per site or 1728 cubic yards/year =  $8640/1100 = 0.7855$  cubic yards per person per year.
- EMUHSD takes care to limit the storage and use of hazardous materials including gasoline, battery acid, and science department chemicals. District HVAC contractors recycle old mercury thermostats through the Thermostat Recycling Corporation.
- EMUHSD has taken care to remove asbestos containing materials from school buildings according to EPA and local guidelines. The District has completed 90% of an ongoing asbestos abatement project, and expects to achieve 100% completion by the end of the 2016-17 school year.
- EMUHSD’s plan has a clear and simple goal: eliminate wastes and toxics whenever possible, and use remaining wastes as resources. This contributes to economic, social, and environmental health. Avoiding wastes and use of toxic chemicals is the smartest, cheapest, healthiest approach to waste management. The District has shifted from a reactive approach, focusing on management/cleanup, to a proactive approach, emphasizing prevention of waste in the first place. For example, the District has installed water bottle filling stations at South El Monte High School and has budgeted for multiple bottle filling stations in all new construction.
- EMUHSD has a complete green standards-based cleaning maintenance program to promote school health, including:

- Environmentally preferable products (meeting Green Seal standards);
- Standards for use of products and cleaning equipment (e.g., auto-scrub machine that picks up excess chemicals);
- Thorough training;
- A quality assurance system; and
- A program for management of custodial chemicals/equipment/ inventory that reduces building contaminants and minimizes environmental impact.
- 90% of all cleaning products is third-party-certified as green. The District uses Buckeye, low pH, low VOC, water-based, non-corrosive cleaning products. All products use a water dilution dispensing system which provides the optimal solution for green cleaning processes. Cleaners are specific to surface types to protect from corrosion and promote disinfection.
- The District purchases paper from sustainable forests and green cleaning supplies.

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

- By Attendance Coordinator estimation, most teens walk to school or are dropped off by family members. High poverty precludes students having cars to drive. While EMUHSD is working with its 3 cities to develop bikes lanes, these are not yet available/safe enough to provide alternative routes to school; however, students have been working with the cities and Day 1 to ameliorate this. Public transportation does not adequately serve schools, and school buses serve only students with special needs. An estimated 70% of students walk to school; 26% carpool; and 2% bicycle.
- EMUHSD has designated carpool parking stalls and a well-publicized no-idling policy that applies to all vehicles (including school buses that are required to meet the California Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools Regulation. Vehicle loading/unloading areas are at least 25 feet from building intakes, doors, and windows.
- Electric vehicle charging stations have been installed to encourage the use of these vehicles. Secure bicycle storage is provided to encourage bicycling to school.
- The District participates in the Safe Routes to School program as part of an El Monte consortium including the high school district and two feeder elementary districts. To improve school route safety, the District has constructed/installed new sidewalks, raised crosswalks, high visibility crosswalks, flashing stop signs, bar stop signs, R1-6A signs, ADA pedestrian ramps, and driveways approaches. In addition, students have been working as “Day 1 advocates” to provide an additional impetus for safe routes to school. With the El Monte and South El Monte Chamber of Commerce, the District participates in regularly publishing information of interest to motorists, parents, pedestrians, and bicyclists about safe school zones and improved traffic safety.
- As funding permits, the District has added CNG buses to its fleet. Maintenance staff uses electric vehicles.

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

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

- EMUHSD has a written Integrated Pest Management (IPM) Plan. IPM “best practices” reduce pests, student/staff exposure to pesticides, and the District’s environmental footprint. Dewey Pest Control, who meets high IPM standards, schedules pest evaluations that include monthly “green” perimeter spraying of all campuses, internal

spraying as needed, building notifications, and regular feedback/reports. Campuses are less vulnerable through physical control (as-required spraying), exclusion (pest proofing), sanitation, habitat modification, and mechanical control (trap varieties).

- EMUHSD uses Essentria, a green pest control agent, at a rate of 0.10/gallons/person/year. Each month, an environmental report (QA) informs the District on how to reduce conditions conducive to pest proliferation; recommendations are implemented by District staff.
- EMUHSD prohibits smoking on campus and in public school buses.
- EMUHSD uses fuel burning appliances and follows voluntary guidelines for the installation and maintenance of carbon monoxide detectors; EMUHSD does not have any fuel burning combustion appliances.
- The district has a chemical management program that includes: chemical purchasing policy (low- or no-volatile organic compounds (VOC) products), storage and labeling, training and handling, chemical inventory, hazard communication (clean-up and disposal), purchasing policy for less toxic products including less toxic art supplies, and selecting third-party-certified green cleaning products.
  - EMUHSD has removed mercury thermostats, and mercury is no longer used in science labs.
  - EMUHSD has identified any wood playground or other structures that contain chromate copper arsenate and has replaced them with plastic to eliminate exposure.
  - EMUHSD uses only paint products that satisfy CALGreen's requirement for low VOC-emitting materials.
  - EMUHSD uses green-certified cleaning products for 90%+ of District maintenance.
- EMUHSD participates with The Gas Co. in a pilot program for short- and long-term testing of school site radon levels, including concentration and permeability of radon in soil gas, in the structure and construction of school buildings, and in the HVAC system.
- EMUHSD maintains and semi-annually updates asbestos management plans. A copy at each school documents recommended asbestos response actions, location of the asbestos within the school, and actions taken to repair and remove the material.
- 100% of classrooms have good acoustics (less than 45 dBA).
- 100% of classrooms have good daylighting and high-quality electrical light when needed. Occupancy sensors for lighting retrofitting in 2013 make sure lighting is only on when needed. T-8 light bulb retrofit for classrooms in 2012 has confirmed a quality lighting system that has been recently updated.
- EMUHSD is committed to implementing daylighting in all new construction, including the placement of skylights, multiple windows, and smart lighting controls, to limit energy usage.
- 100% of classrooms have good relative humidity control (ASHRAE 30-60%). Third-party HVAC inspections ensure humidity standards are met.
- EMUHSD uses the Facility Inspection Tool (FIT) to identify indoor environmental issues that can be quickly taken care of.
- To prevent or minimize damage to public health and safety and the environment from a release or threatened release of hazardous materials, EMUHSD follows the L.A. Fire Department's California Environmental Reporting System guidelines. The District uses

these guidelines to provide information on removal, labeling, and storage of all chemicals. A written chemical hygiene plan includes: safe operating procedures; protective equipment; proper maintenance/labeling on hazardous substance, retention of all material safety data sheets from vendors, employee information/training, provision for needed medical attention, designated chemical hygiene officer to implement and maintain the plan. EMUHSD adheres to requirements for schools' hazardous waste collection, consolidation, and accumulation facilities, including chemicals from school labs, art, photography, and auto classes, and maintenance generated by the routine operation and maintenance of any high school.

- The District works within MERGE, a risk-management Joint Powers Authority (JPA), in a regularly scheduled testing program for lead. Lead-based paint and plumbing is no longer used for any purpose. Health considerations are paramount when any lead-based substance is removed during renovations. Strict policies and procedures are in place if excess lead in drinking water is found, with remediation done only by entities certified by the Department of Health.
- EMUHSD routinely monitors asthma triggers, including allergens (pollen, animal dander, dust mites, cockroaches, and molds), irritants (perfume, pesticides, strong odors such as paint fumes, weather changes), respiratory infections (cold or flu), and students engaged in physical exercise, especially in colder weather. The Student Asthma Management Plan includes a confidential list of students who have asthma, District policies and procedures for administering medications (including protocols for emergency response), specific actions for staff members to perform, a written action plan for every student with asthma, and education for staff and students about asthma. Scheduled maintenance ensures that all HEPA filters are changed regularly.
- EMUHSD follows all EPA guidelines for mold remediation in schools and works with an Environmental Management Specialist through the JPA. Outdoors, this includes fixing leaky plumbing and stopping condensation and leaks in the building envelope. To reduce indoor moisture levels, the District stops roof and plumbing leaks; increases ventilation and/or dehumidifies the air; performs regular maintenance on HVAC equipment; ventilates damp areas such as custodian's closets, lavatories, and showrooms, and kitchens to the outside; maintains low indoor relative humidity; and uses vacuums with multi-stage filtration and HEPA filters, which prevent very fine particles such as mold spores from returning to the vacuumed area, clean and let dry any wet areas or materials within 48 hours, provide drainage that slopes ground away from building foundations, keep new building materials and sites dry, monitor buildings for leaks and fix any problems quickly.
- Local exhaust systems for major airborne contaminant sources have been installed district-wide.
- EMUHSD buildings use demand-controlled ventilation in new buildings and in building retrofits. All mechanically-driven HVAC systems operate continuously during school and work hours. Inspections occur quarterly and any problems are corrected immediately. Filters are also cleaned and/or replaced regularly, and all inspection records are available.
- District schools and sites are testing at regularly scheduled intervals to ensure that airflow complies with State of California codes and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers ventilation standards.
- EMUHSD's Safety Committee meets quarterly to review the District's tracking system that monitors health and safety issues. The District also uses L.A. County's FIT program, an inspection tool, for schools to report any *Williams* case complaints. EMUHSD is

consulting ASHRAE's Standard 189.1 "total building sustainability package" to guide the design, building, and operation of green buildings. District walk-throughs that include nurses, maintenance staff, and other stakeholders are conducted to identify potential health and safety issues, and problems are immediately remediated.

- Routine maintenance uses green products. Maintenance tasks involving strong odors (painting) or toxins (pest management) are scheduled when school is not in session.
- EMUHSD participates in a pilot program with the Department of Homeland Security, who is consulting with the District on large-scale safety issues.

### *Element IIB: Nutrition and Fitness*

- EMUHSD is currently pursuing membership with the Alliance for a Healthier Generation.
- 100% of schools participate in a Farm to School program to use local, fresh food.
- Three comprehensive high schools (60%) have on-site organic food gardens, and two more are planned. These gardens are used by all students, including those with mild to moderate disabilities. Students receive "fitness for life" credits for outdoor gardening. School gardens supply food for students in the cafeteria, a cooking or garden class, or to their community at two schools (40%). A School Board member, formerly a Marine, met with prospective school garden funders to underscore the Board's commitment to health.
- Students spent at least 120 minutes per week in school-supervised physical education, and at least 50% of annual physical education takes place outdoors.
- Health measures are integrated into assessments.
- The District wellness policy addresses positive environmental and health impacts that have helped green schools. The District's wellness policies and practices extend into afterschool programs and activities. The District has an active wellness committee.
- The food packaging purchased by the District is certified as bio-degradable.
- The District provides staff, students, and families information on nutrition education and/or programs. Student and district representatives sit on the Healthy El Monte Coordinating Council, which addresses healthy lifestyles, physical activity, healthy food, public safety, and access to recreation.
- School community members recently participated in creating a 1-mile walking path. One school is beginning an after-school walking club for students, staff, and parents; one school has an after-school fitness club that includes walking, running, and outdoor exercise. Office staff is encouraged to walk outdoors during breaks.
- EMUHSD is participating in a nationwide pilot to improve teenagers' breakfast habits. This year, the District began offering free breakfast. To encourage teens, the District received a \$135,000 grant from Wal-Mart and AASA for alternative breakfast via campus vending machines. This has been so successful that a follow-on grant will continue the campaign, using Grab 'n Go carts to further increase breakfast participation.
- A student-led cafeteria redesign resulted in a "Smarter Lunchroom": a 50s theme that encourages healthy eating and after-lunch fitness via rock 'n roll dancing.
- To increase staff wellness in the areas of access to fresh fruits and vegetables and increased physical activity:
  - EMUHSD provided USDA's "Rethink Your Drink" and "My Plate" campaigns for cafeteria and other staff.
  - A District-wide campaign is reducing the number of unhealthy snacks brought to teacher/staff meetings. Brown bag luncheons help staff learn more about healthy

habits. Chefs recently led sessions on creating healthy salads and salad dressings.

- The LA County Office of Education (LACOE) provided nutrition education for 30 general education teachers, including “Super Tracker,” and “Healthy Recipes” workshops.
- The District hosted the CDE’s Ambassador Leadership conference and Healthier US School Challenge training.
- Staff uses school gyms and tracks to increase physical activity minutes. Yoga has been offered for Food Services staff.
- The District offers comprehensive health screenings for staff. District health insurance provider VEBA, through the Healthy Adventures Foundation, offers health coaching to individual staff to improve employees’ ability to prevent disease, attain a healthy weight, and increase physical activity.
- Other district-wide partnerships and efforts to improve nutrition and fitness include:
  - Wal-Mart/AASA: Improve teens’ access to and participation in breakfast
  - Occidental College: California Farm to School program for better food quality
  - Cal-Fresh: Access to fresh produce
  - LACOE: Harvest-of-the-Month program for nutrition education and fresh produce; Nutrition and Obesity Prevention program for healthy Mexican cooking, nutrition-for-life education for parents and staff
  - USDA literature dissemination (“Make Better Beverage Choices”) to students
  - USDA “Rethink Your Drink” workshops for parents and staff
  - Hosted Fresh Meals at School, Ambassador Leadership conference, and Chivas USA/L.A. Care soccer clinics and health information
- EMUHSD is expanding the District’s Coordinated School Health Approach to incorporate the new, more comprehensive Center for Disease Control’s “Whole School, Whole Child, Whole Community” model. This model emphasizes the psychosocial and physical environment, the growing roles that community agencies and families play, and the need to engage students as active participants in their learning and health. This “continuous improvement” initiative includes:
  - Ongoing revisions to Board and school policies (e.g., e-cigarettes);
  - More in-school and after-school fitness-for-life activities for students, parents, and employees;
  - Greater family and community engagement (health insurance enrollment, Health Fairs, parent nutrition education seminars);
  - Increased employee wellness (workshop for cafeteria workers on reducing salt intake);
  - Better nutrition (universal breakfast, access to Cal-Fresh; Farm-to-School produce); and
  - Improved physical environment (green cleaning products).
- District partners supporting student health and/or safety include:
  - The American Association for School Administrators (AASA) enabled EMUHSD to pilot the use of vending machines to increase teens’ participation in breakfast.
  - The Milk Board’s “Got Milk” incentives kicked off a universal breakfast program With Eco-Schools USA, where students are growing organic fruits, vegetables,

and grains. Teens bring their harvest into culinary classrooms, study nutrition, and prepare and share a seasonal, garden-fresh feasts.

- LACOE's Nutrition Education Obesity Prevention Harvest of the Month Club provides additional fresh produce to campuses.
  - Occidental College's Farm-to-School program increases student awareness of fresh fruits and vegetables.
  - The Dairy Council of California is teaching nutrition education in 10<sup>th</sup> grade Health classes.
  - The Centers for Disease Control and Prevention's grant improves expansion/coordination of the District's Health and Wellness initiative
  - The Children's Defense Fund and AASA are funding a multi-year campaign to enroll "hard to reach" families in health insurance.
- EMUHSD employs three full-time nurses who rotate between five comprehensive high schools. There is one health technician at each school. Numerous primary health care facilities serve the community; a separate high school health center is considered duplicative of existing community resources. Community health care agencies regularly send mobile vans to visit each school site. School websites advertise convenient community locations for health services such as free flu shots.
  - Extensive District policies present a clear anti-bullying mandate. Bullying report forms [anonymously] appear on the front page of all school websites.
  - Students at every school celebrate Red Ribbon Week to educate themselves to be alcohol, tobacco, drug, and violence free.
  - As an alternative to expulsions, in cooperation with Loyola Marymount University, the Board is exploring implementation of a Restorative Justice program, designed to create resilience in urban youth and build a positive school climate.
  - Students observe the annual Day of Silence, during which students pledge to be silent for those individuals who are forced to be silent with homophobic behavior.
  - The Jason Foundation supervises a peer support group on a variety of critical mental health topics, including teen suicide awareness and prevention. LACOE's Suicide Prevention section has provided funding for crisis management counseling.

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

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

- EMUHSD has a written definition of environmental literacy, an environmental or sustainability literacy requirement, and integrates environmental and sustainability concepts across the curriculum in multiple disciplines. Written Definition Board policies contain an extended definition of environmental literacy, putting forth goals for bringing environmental awareness to students, parents, faculty, staff, and the community that will lead to changes in attitudes, skills, and stewardship behaviors. EMUHSD staff consciously determines which projects will catalyze more students to care about the environment and take action versus make an empty gesture that allows young people to pat themselves on the back and imagine thinking they've done something to save the planet and move on.
- EMUHSD offers an environmental or sustainability elective course, AP Environmental Science (1 school), and environmental or sustainability student clubs. Numerous,

coordinated District processes and practices, curricula, and after-school activities support improved sustainability. EMUHSD is steadily increasing its variety of upper-level environment-related coursework, including:

- Project Lead the Way engineering classes focused on animal habitat sustainability, with CalTrans, CalPoly Pomona, and Wildlife Way Station;
- Alt-Fuel Auto Tech program with a local community college;
- Auto Tech students who designed, built, and installed a 50,000 watt diesel co-generation unit, converted the co-generation to bio-diesel, and created bio-diesel fuel from recycled school cafeteria french-fry grease. The project acquainted students with an alternative energy form; ignited awareness of global warming and electrical production and consumption; engaged students in advanced chemistry and physics; provided “hands-on” engineering experience; enabled students to improve their school; and exposed students to careers in alternative energy.
- 100% of schools have environmental clubs which raise money for water bottle filling stations and do composting, recycling, and community e-waste recycling projects.
- Schools have recently become part of the Eco-Schools network, which combines effective "green" management of school grounds, facilities, and curriculum.
- Miller Dial, LLC gave scholarships based on student-created projects demonstrating innovation in the area of sustainability and environmental improvement.
- SeaPerch (robotics + undersea sustainability).
- With the U.S. Green Building Council, GRID Alternatives, Vons, and Edison International, students installed solar panels on the homes of 3 low-income El Monte families, creating 10kw of combined solar power.
- EMUHSD assesses environmental and sustainability learning and achievement. The District has undertaken an ongoing, formal, comprehensive audit of energy and water use involving all members of the school community. Food Services works with student recycling clubs and culinary arts classes to monitor food consumption and waste, and schools are working with Eco-Schools USA to assess campus “greening.”
- EMUHSD provides professional development in environmental and sustainability education for all teachers. The District’s Energy consultant provides teachers and staff with awareness of energy conservation and sustainability, including classroom behaviors, fossil fuel depletion, and recycling. AP Environmental Science, Biology, and all Project Lead the Way teachers have Next Generation Science Standards professional development, including modules about the environment. Teachers from all sites have spent summers studying environmental science topics in university coursework, and preparing for trips to Catalina Island.
- To produce more environmentally-savvy citizens, high-poverty students are integrating environmental study in cross-disciplinary real-world projects:
  - “Quake Proof,” a project relating U.S. History and Earth Science to earthquake preparedness, particularly in communities where the effects of cataclysmic geologic events fall disproportionately on the poor. In addition to learning to anticipate and fix home hazards, create family communication plans, and distribute printed information in 4 languages, on Global Youth Services Day, in partnership with State Farm, students compiled and distributed disaster kits to community residents least likely to be able to afford such supplies.

- Solar boat competitions
- “The Best of Thymes” garden allows teens to learn more about sustainability by connecting garden projects to other learning. Students from science and non-science classes are designing and sustaining a permaculture garden. One innovative cross-curricular salsa-making activity involves Chemistry students growing tomatoes, onions, and garlic, using pH meters to produce salsa with a targeted pH content for mild, medium, and hot salsa. Economics students study the challenges, costs, and logistics of food distribution. Culinary Arts students arrange condiment giveaways to low-income families. English students will use the garden to enhance study of literature (e.g., the Capulet garden in Romeo and Juliet, the Merchant’s Garden in The Canterbury Tales). In Math, special education students will calculate a garden maintenance budget. Calculus classes will study garden symmetry using symmetric functions. Art students will use the garden to study principles of scientific illustration and as inspiration for their own work. Restaurant Management Academy students use garden yield to learn to prepare nutritious meals and transform produce into meals for needy families. Physical education students receive “fitness for life” hours for gardening chores. Garden partners are: the U.S. Green Building Council, University of California Victory Garden Program, Eco-Tech, local nurseries, and the National Wildlife Federation.
- Rosemead High School is establishing the area’s first *hugelkultur* garden—combining wood, composting, and heavy feeding vegetables—involving Chemistry, Math, and Environmental AP students. This and other student-led “water-wise” improvement projects are occurring with the City of Rosemead, Rosemead Chamber of Commerce, Cal Am Water, and the Gabrieleno Tongva Indians.

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

- Environmental concerns motivate STEM studies. A Hewlett Packard grant enabled one school to do an “Alt-Energy Ghetto Greenhouse,” a greenhouse, solar roofing, and fresh foods distribution project. This experience provided 1,964 students with math and science learning in the context of practical skills, turned students into biologists and energy engineers, and increased students’ sense they could succeed in “hard” science.
- A second goal, producing hothouse vegetables, supplements the often meager diets of low-income students’ families and shows students they can contribute to community well-being. In EMUHSD, “B” and “C” math students, many Latino students, and girls often say, “STEM is not for me—too boring/frustrating/anxiety-provoking/hard.” To convince them otherwise, the District repurposed an old-style physics project designed for cars, trucks, and buses to become a new assignment: building a bridge for wildlife. This work:
  - Capitalizes on students’ love for animals;
  - Appeals to young people’s interest in “doing something good”;
  - Creates a natural segue from Biology to “hard” science;
  - Merges subjects students believe they can master (e.g., animal behavior or landscape design) to raise confidence in tackling abstract STEM studies.
- Many students watch too much television, eat too much while watching, and get too little exercise. With “Human-Powered T-Vehicles,” students engineer stationary bikes to power TV sets, generate clean energy, raise science scores, and lose pounds. The project:

- Provides a motivating way to reduce obesity;
- Increases knowledge of math, physics, and human physiology and the connections between disciplines;
- Creates better understanding of how technology solves practical problems and serves human needs; and
- Heightens environmental stewardship, solving multiple energy problems by increasing output of caloric energy to slim down, increasing effort to raise science scores, and providing power to the school grid.
- Each year, EMUHSD students participate in the nation’s largest solar boat competition: the Metropolitan Water District of Southern California’s Solar Boat Race. Students learn ways to protect Southern California’s dwindling water reserves, increase exposure to math and science, and gain experience with engineering and problem-solving skills. One year, students created a companion video to promote conservation of fresh water, giving students insight into combining knowledge of the environment with documentary filmmaking and journalism careers.
- In a two-year project, engineering students at Mountain View HS are learning about careers as “green” architects, zoological architects, wildlife biologists, and civil engineers by designing and building an outdoor habitat for a zoo animal. After exploring world biodiversity through research on various ecosystems and the plants and animals that live there, students will go on guided “habitat” tours at local zoos. As a capstone project, student teams will develop a keen understanding of a selected animal’s habitat in the wild along with its sense of territoriality, foraging habits, and physical capabilities. Working with Cal Poly mentors, they will design and construct an appropriate green habitat.
- Soil chemistry *hugelkultur* studies will increase students’ interest in green careers— sustainable agriculture, soil science, chemistry, green technology, land use planning, and botany. In Rosemead students’ homes, a significant number of parents are migrant workers or gardeners. So unsurprisingly, in many students’ minds, the idea of a green career in “agriculture” is connected with words such as *poor*, *dirty*, *manual work*, and *backward*. In contrast, students associate the term “environmental engineering” with concepts like *high tech*, *trendy*, *smart*, and *sophisticated*. By introducing students to *hugelkultur* experiments via an “engineering” focus, the District will change students’ perceptions and interest in green careers.

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

- Students' civic/community engagement projects integrating environment and sustainability concepts include:
  - Organic gardening, incorporating produce from the organic gardens in holiday food basket giveaways to community residents.
  - FHA Hero Club, teaching leadership skills in the context of community service. Recent environmental projects include a clean-up of Eaton Canyon.
  - South El Monte High School parents and students hold a weekly “swap meet” designed to recycle and re-use community belongings and contribute to school fundraising.
  - Quake Proof, a project integrating disaster planning with environmental awareness and student-led community education.
  - E-waste recycling and composting.
  - Student-led assessments of campus greening.

- “El Monte Sparkle,” a community-wide project to clean up parks and plant trees.
  - Healthy El Monte walking path creation.
  - Water quality testing and reports to US Fish and Game (grades 9-11)
  - “Water-wise” demonstration garden at the entrance way of one school, visible to anyone entering or driving past the school.
  - Alt-Energy greenhouse (grades 10-12); Alt-Fuels Auto Tech (now in the planning stages for grades 10-12); Human-Powered T-Vehicle (grades 11-12).
  - Green zoo construction integrating pre-engineering coursework with biology and sustainability learning in a multi-year project to create zoo animal habitats (grades 10-12).
  - Solar roofing and building a crossing structure for wildlife (grades 11 and 12 only).
  - Conversion of cafeteria French fry oil to bio-diesel (grades 11-12).
  - Culinary arts healthy cooking and healthy food distribution to seniors (grades 10-12)
  - Day 1 Youth Advocates, a youth action research project, where they created momentum for bike lanes, more secure bikes parking, a complete streets policy a bicycle master plan, and a campaign encouraging more students to bike to school (grades 11-12).
- EMUHSD makes a concerted effort to involve teens who rarely leave their inner-city neighborhoods to participate in outdoor activities in nature. 10<sup>th</sup> grade Biology students attend Catalina Island Science Camp. 9<sup>th</sup> - 11<sup>th</sup> grade students go to the San Gabriel River where they do water-based science. 12<sup>th</sup> grade Environmental Science AP students have won a City of El Monte recycling award for composting ideas and related “field” work.
  - At El Monte High School's Outdoor Club, headed by teacher who is an army reserve Captain, students in grades 9-12 go to Yosemite to camp in the wild and fish for food—especially meaningful for high-poverty students who rarely leave their neighborhood.
  - Students participate in outdoor disaster planning alerts and practice, most commonly an earthquake disaster scenario (e.g., a stadium collapse or other cataclysmic event). In this school-wide cross curricular project, drama students supply gore makeup, Health and Medical ROP students serve as triage volunteers, and every student connects the event with school-and community-wide safety practices and disaster planning.
  - Art students use the school garden as a springboard to learn about scientific illustration. They practice rendering detailed botanical and zoological illustrations using a variety of media, and develop a comprehensive set of nature illustration skills using carbon dust, color pencil, stipple pen and ink, watercolor and gouache. Art study reinforces scientific principles studied in high school biology, physiology, physics, and environmental science related to forms, biomechanics, and structural diversity found in the plant and animal kingdoms.
  - 80% of EMUHSD high schools participate in SeaPerch, an innovative underwater robotics program. Students build an underwater Remotely Operated Vehicle (ROV) in an in-school or outdoors setting and learn about marine and ocean engineering principles. Students go to college campuses to test their vehicles at outdoor pool events.
  - “Stewards of the Environment” enables students to conduct water science investigations by literally wading right in. Biology students learn about complex sustainability issues—how alterations of habitat affect biodiversity, how to analyze ecosystem changes, and

how young people can make a contribution to “real” science—by engaging in water testing activities in the San Gabriel River. Students measure pH, dissolved oxygen, and other levels in water samples, and spend a day sampling and quantitatively analyzing benthic invertebrates.

- With the U.S. Forest Service and California Department of Fish and Wildlife (CDFW), students study stream flow, identify aquatic insects, and assess trout populations. In the classroom, students study trout development, raise trout eggs, and release them into the river. Students then present data to CDFW, Fly Fishers Associations, and the Adopt-A-Stream Foundation that are used to leverage political change and environmental protection.
- For students with cognitive and other disabilities, an organic garden provides a direct link between growing fruits and vegetables without chemicals, eating organically grown produce, cooking in a way that preserves food nutrients, and environmental stewardship. The Taste-full Garden creates smarter high school students and protects the health of teens who are medically vulnerable. For students studying independent living, students create an edible organic garden. Students increase science, math, and nutrition knowledge by planting climate-friendly seeds, spreading mulch, cultivating with hoes, using water-wise irrigation, composting weeds and kitchen cooking waste, and saving seeds. Often, teens with disabilities find it difficult to eat in healthy ways, due to unfamiliarity with new foods’ tastes or textures, and limited knowledge of how to cook. Here, students learn to wash and cook the food safely in a microwave. Students then snack on the food item, and bring additional produce home to families.
- EMUHSD’s special needs campus was a top-ten finalist in Global Green USA’s Green School Makeover Competition, sponsored by Pureology. “Green Champion” Prize money was awarded to students in the high school transition center, who are more susceptible to many disease agents that find their way into school. The award was used to swap out old carpeting—a magnet for dirt, dust, and mold—for “green” eco-carpeting certified by the Carpet and Rug Testing Institute (sustainable carpets made from natural fibers with little or no chemical treatment and natural-fiber backing attached with less-toxic adhesives). Funds were given for the school’s dedication to a “greener future.”
- EMUHSD students were awarded a \$5,000 grant from home improvement giant, Lowe’s, for a project combining Career and Technical Education in house painting with a student-created “Go Green” mural for the District Office. Students acquired lifelong knowledge in the project, including how to responsibly dispose of leftover house paint.
- Partner relationships are enabling high-poverty students to explore career options, turn passions and talents into successful careers, broaden academic skills, and prepare students for high school graduation, advanced education, and full participation in a sustainable society. Unusually broad-based partnerships are reducing environmental impacts and costs, improving high-poverty students’ health, and furthering STEM and sustainability education goals. (See Part II)
- EMUHSD is developing a more systematic approach to creating environmental awareness and sustainability. For students, staff, and other community stakeholders, the District encourages a multi-level thinking process that includes greater understanding of the environment as:
  - Nature, to be appreciated, respected, and preserved;
  - A resource to be mindfully managed to sustain and improve the quality of life;
  - A biophysical entity that supports life, but that is threatened with problems that need to be solved;

- A place to live, learn about and develop technology and other systems and behaviors that care for the earth;
- A biosphere in which we live interdependently now and in the future; and
- A community project, in which all school community members get involved to create a healthier, greener environment.
- “Go green” is embedded in District culture. Twice yearly “go green” reports are given to all school staff and members of the School Board.



Clockwise from bottom: Teens prepare for EMUHSD’s new breakfast program, including nutritional breakfasts from a vending machine; “Go Green” projects are on every high school campus; Students with special needs created a community mural—sustainability is everyone’s concern.



Clockwise from bottom: EMUHSD offers free breakfast to all students to encourage healthy habits; Parents attend workshops on nutrition; Permaculture gardening is integrated into chemistry and other subjects; Xeriscape landscaping is a water-wise decision.