

## 2014-2015 School Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

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#### School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school 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.
3. Neither the nominated public school nor its public school district is refusing 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.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public 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.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. 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 public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school 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

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Charter  Title I  Magnet  Private  Independent

Name of Principal: **Ms. Marie Hatwan**

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

Official School Name: **Los Cerritos Elementary School**

(As it should appear on an award)

Official School Name Mailing Address: **515 West San Antonio Drive, Long Beach, CA 90807**

(If address is P.O. Box, also include street address.)

County: **Los Angeles**

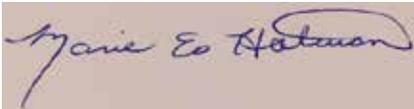
State School Code Number \*: **19-64725-6015465**

Telephone: **(562) 595-6337** Fax: **(562) 595-7994**

Web site/URL: <http://loscerritos-lbusd-ca.schoolloop.com/> E-mail: [mhatwan@lbschools.net](mailto:mhatwan@lbschools.net)

\*Private Schools: If the information requested is not applicable, write N/A in the space

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



(Principal's Signature)

Date: **January 12, 2015**



Name of Superintendent: **Mr. Christopher J. Steinhauser**

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

District Name: **Long Beach Unified School District**

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

A handwritten signature in blue ink that reads "Christopher J. Steinhauser".

Date: **January 14, 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 school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school 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.
3. The school 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.

A handwritten signature in blue ink that reads "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 school 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.



# *Los Cerritos Elementary School*

California Disadvantaged Nominee to  
U.S. Department of Education Green Ribbon Schools



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**

### **Los Cerritos Elementary School, Long Beach, Calif.**

#### *Afterschool programs build on roots sown in the school garden*

Los Cerritos School was established in 1924 in Long Beach, a city of approximately 465,000 residents and the most diverse large city in the United States according to USA Today. Located in this urban environment, the Long Beach Unified School District (LBUSD) has been making strides toward sustainability, saving \$3.6 million annually since 2002. Los Cerritos has been doing its part in assisting with this effort. Established before the turn of the 20<sup>th</sup> century, many Los Cerritos buildings date from the early part of the 1900s. Since that time, Los Cerritos teachers, students, and their families have continued to build strong relationships and work together for the betterment of the community.

With a long history of community involvement and tradition, Los Cerritos continues to be a foundation of the neighborhood, particularly with its well-known school garden, the Urban Farmyard. Established in 2000, the garden is a place of environmental stewardship and learning for every Los Cerritos student. The garden principles include connecting to the state standards, encouraging children to make healthy food choices by exposing them to fruits and vegetables that they grow themselves, encouraging character building and community involvement, and instilling in students a love of the Earth and a concern for the environment. The garden provides students with opportunities for authentic hands-on learning experiences and is an ideal curriculum integrator.

Gardening is also a doorway into career exploration in fields such as agriculture, forestry, ecology, soil science, horticulture, botany, cooking, pharmacology, and carpentry. It is a stage for discovery learning in all subjects, questioning, experimenting, and problem solving, all important parts of the Common Core State Standards. In addition, gardening experiences foster a sense of responsibility and respect for all living things and provide a spirit of cooperation among those involved that transfers to the classroom in a strong sense of community and appreciation for others. Gardening engages children in relationships with learning, with nature and the environment, with community resources, with adults, and with other students.

The garden provides opportunities to introduce our children to a wide variety of fresh foods, encourages them to make healthy food choices, and engages them in beneficial physical activity. The Urban Farmyard has received numerous awards and grants totaling over \$40,000 and has served as a school garden model locally and nationally. It is a designated Wildlife Habitat and a Monarch Butterfly Way Station.

A logical outgrowth of gardening activities is additional environmental awareness. From involvement in programs such as Cool the Earth, a sustainability afterschool club; Roots & Shoots, a comprehensive recycling program; and an active Green Team and PTA that continually inspire families, the Los Cerritos community "walks the walk" of environmental stewardship and sustainability. Reusable plates, silverware, and cups are all a part of the school mentality for garden cooking lessons, PTA teacher luncheons and potlucks, or student lunches—especially on Trashless Tuesdays.

The parent and student Green Team takes the lead in recycling lunchtime food waste as well as bottle and can drives; book and uniform swaps; valet parking to promote safe drop-offs and reduce vehicle idling; the Walking School Bus, including Walk-to-School Wednesdays and Bike-

Friendly Fridays; and a page on the Los Cerritos website devoted to healthy lifestyle choices and tips.

The school campus boasts native and regionally-appropriate plantings, permeable surfaces, and drip irrigation in the garden.

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

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

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

- LBUSD has established and closely managed energy conservation guidelines and policies for all of its 84 school sites and conducts energy audits on a regular basis.
- LBUSD used EnergyCAP software to document an 11.1% reduction in greenhouse gas emissions from 9/2002 (0.112 MTeCO<sub>2</sub>/person) to 12/2014 (0.103 MTeCO<sub>2</sub>/person).
- Los Cerritos achieved ENERGY STAR certification in 2011 with a score of 96. The school reduced non-transportation energy use by 11.6% from 9/2002 to 12/2014 (25.5 kBTU/square foot/year).
- A solar panel powers the water fountain in the school garden (1% of energy use). Southern California Edison delivers 21.1% of its energy from renewable sources.
- Los Cerritos participates in Demand Response Summer Discount Program through Southern California Edison.
- The total pavement size has been reduced by planting 22 shade trees as well as by the 48,000 square foot school garden, helping to reduce the heat island effect.
- In 2012, all T12 and magnetic ballast lighting was changed to 28 watt T8 electronic ballasts and in 2014, all auditorium lights were changed from incandescent to LED, saving 280W per fixture and reducing heat by 70%.

#### ***Element IB: Water and Grounds***

- Los Cerritos used EnergyCAP software to document a 15.5% reduction in total water use (domestic and irrigation) from 9/2009 (5,142 gallons/occupant/year) to 12/2014 (4,335 gallons/occupant/year).
- 100% of the school's landscaping is considered regionally appropriate. Around the perimeter and throughout the interior of the school are the following regionally appropriate water efficient plants: Pittosporum tobira, Lingstrum-Privet, Hibiscus, Nandina domestica, Buxus-boxwood, Juniperus, various Salvias, Fescue, Lavender, Lantana, Daylily, California poppy, Agapanthus, succulents, Manzanita, Ceonothus, Matilla poppy, and Cercis. The school garden is planted with vegetables, fruits, herbs and flowers that attract beneficial insects and provide habitat for wildlife.
- 100% of irrigation is controlled by weather-based Evapotranspiration controllers, ensuring that grounds are irrigated only as needed. The garden is watered using drip irrigation and has paths of permeable decomposed granite. During drought, grass areas may not be irrigated and allowed to "brown." LBUSD is receiving technical assistance from the Drought Response Outreach Program for Schools (DROPS). DROPS is a State Water Resources Control Board Program addressing storm-water pollution while

providing multiple benefits including water conservation, energy savings, and increased awareness of water resource sustainability at schools.

- Potable water is 38% ground water, 42% imported, and 6% treated reclaimed; all three sources treat using multi-stage processes, including doses of chlorine and chloramine.
- Lead-containing fixtures have been removed from all school sites in LBUSD and backflow-check valves have been installed. The City of Long Beach Water Department does monthly water quality testing.
- Much of the 5.94 acres of landscape is used for outdoor classrooms and ecologically beneficial uses. The vegetable garden includes vegetables, fruits, herbs, flowers and native plants providing wildlife habitat that attract beneficial insects used by each class weekly. The native garden displays signs describing the need for waterwise gardening.
- Families engage in tree planting with Tree People and an Adopt-a-Tree program.

### *Element IC: Waste*

- 35% of solid waste is diverted from landfilling or incinerating due to reduction, recycling, and/or composting.
- 100% of the school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed, and/or chlorine-free.
- All hazardous waste tracked and disposed of according to district policy. Los Cerritos follows the Asbestos Hazard Emergency Response Act (AHERA) and an Environmental Health and Safety Program is in place. LBUSD appropriately disposes of any compact fluorescent light bulbs (CFLs), cathode ray tubes (CRTs), and central processing units (CPUs), e-waste, and batteries used on-site.
- Recycling of mixed materials in City of Long Beach bins, cardboard bin from the City of Long Beach, Styrofoam trays recycled by LBUSD, lunchtime recycling of drink pouches through TerraCycle, food share tables for unwanted food, lunch scraps fed to garden chickens, school and PTA bulletins sent electronically, can and bottle recycling through the Green Team, uniform and book swaps, teachers use projectors instead of paper, sales of reusable water bottles, ink cartridge and battery recycling.
- 15-20% of all cleaning products is third-party-certified as green (Green Seal Certified and U.S. EPA Environmental). LBUSD searches for and includes green products in requests for proposals and quotes if the products are available.
- Jane Goodall's Roots & Shoots service club activities include beach cleanups and other sustainability activities such as making cloth napkins, selling reusable bags and water bottles, and supplying recycling cans and composting buckets.
- Los Cerritos participates in numerous TerraCycle Brigades, recycling chip bags, writing instruments, and tape dispensers.

### *Element ID: Alternative Transportation*

- 16.2% of students walk to school; 2.8% bicycle, scooter, or skateboard; 39% carpool; 2% ride the school bus; 0.3% use other public transportation. These statistics were taken and calculated from surveys administered to students by their teachers in the classroom. This survey will be administered multiple times per year to track progress to be shared with students and families. Percentages may exceed the total 100% due to the fact that students may use multiple methods of transportation in one week.

- Los Cerritos has a well-publicized no-idling policy that applies to all vehicles; vehicle loading/unloading areas at least 25 feet from building intakes, doors, and windows; and secure bicycle storage.
- Los Cerritos has installed electric vehicle charging stations to encourage the use of these vehicles.
- Los Cerritos participates in the Safe Routes to School program, which covers bike safety, pedestrian safety, traffic skills, vehicle codes and laws, safe routes to school maps, and the environmental and physical fitness benefits of walking and/or biking to school. It begins each year with a parent assembly conducted jointly by the PTA and the Green Team explaining alternative transportation to school and its safe implementation. Included are Walk-to-School Wednesdays, the Walking School Bus, and Bike-Friendly Fridays. The opening school packet contains a map outlining safe routes to school. Parent volunteers for the Walking School Bus wear identifying t-shirts provided by the school. These volunteers meet students at designated spots and safely walk them to school. Photographs of these programs in action are on display. There are incentive drawings for students participating in these programs at weekly assemblies. Students are recognized for their efforts in reducing carbon emissions by walking or biking to school.
- School bus use is limited to Special Education and field trips; 35% of the LBUSD fleet is powered by CNG. LB Transit is alternatively fueled or hybrid gas/electric and its use is encouraged for field trips. Valet drop off (no idling) is implemented.
- Los Cerritos presented the Safe Moves bicycle safety program in 2013 and 2014 to teach bicycle safety (including a bike helmet giveaway). Additional bicycle racks were installed by Bike Long Beach as the City of Long Beach is making great strides to become the most bicycle-friendly city in the U.S. by installing 400 bike racks, additional bike routes and signage, conducting a citywide bicycle count to guide its efforts to improve bicycle infrastructure and riding conditions, receiving numerous bicycle-related grants valued at over \$10 million for bike planning and improvements and partnering with Tony Cruz, a professional cyclist and Long Beach's own Bike Ambassador.

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

### ***Element II A: Environmental Health***

- The school is inspected routinely by staff members. Pest infestations are handled by custodial staff or LBUSD Pest Control who conduct pest identification, application of non-toxic solutions, monitoring, and recordkeeping. When pesticides are used, it is following state law; written notices are posted in the school office. Applications are done during off-school hours to control unnecessary exposure. Los Cerritos has a written Integrated Pest Management (IPM) Plan.
- There is no routine application of pesticides in LBUSD. Before applying chemicals, low toxicity or non-poison solutions are sought. There have been two applications for weed abatement in 2014.
- To minimize exposure to hazardous contaminants, LBUSD has a written no smoking policy and signs are posted on campus. Mercury thermometers and thermostat switches have been replaced. Gas burning stoves and heaters are inspected, CO detectors are in place, and earthquake standards have been implemented. LBUSD is AHERA compliant. Radon testing is conducted at all sites in LBUSD and purchasing is covered by the Chemical Management Program.

- The school is located in a residential area. Noise from automobile and airplane traffic is minimal. Classrooms have acoustic tile for acoustical performance of 45dBA or better.
- All classrooms have natural light from abundant windows supplemented by T12-T8 lighting.
- Classrooms have good relative humidity control (ASHRAE 30-60%). The school is not air conditioned, with the exception of two bungalows.
- Chemicals on site are in locked storage and an Injury and Illness Prevention Program is in place. The lead custodian has received training regarding chemical use and management including proper handling and storage as well as personal safety equipment including goggles, gloves, masks, and eyewashes. Pesticides and herbicides are applied when necessary by district personnel and are not stored on-site.
- Flaking or loose paint is analyzed for waste characterization and any affected areas are stabilized. Structures are removed according to identified proper disposal procedures if necessary. All drinking structures containing lead were removed and backflow check valves installed by the LBUSD. Water is checked monthly by the LB Water Department.
- LBUSD follows the EPA's IAQ Tools for Schools. Smoking is prohibited, moisture is controlled, classrooms are regularly vacuumed and swept, and the cafeteria is cleaned multiple times per day. LBUSD has an Integrated Pest Management Plan and a Chemical Management Plan to buy, use, and store less toxic products. Students have indoor recess if smog alerts are issued; 22 additional trees were planted on campus to help reduce and mitigate particulate matter.
- Buildings are regularly inspected for signs of leaks, mold, and/or moisture. Leaks are promptly addressed at the source. Small leaks are cleaned up and dried with mops, extractors, fans, and dehumidifiers as necessary. More substantial leaks/damages are handled through the district by contracts with restoration companies. Mold is removed and materials affected are replaced.
- Only two bungalows at Los Cerritos are air conditioned. Most ventilation occurs by opening doors and windows. Where air conditioning is present, filters are replaced twice per year. If cleaning is required, it is performed at that time or at the request of the site manager. Every classroom has multiple ceiling fans.

### ***Element IIB: Nutrition and Fitness***

- Los Cerritos has an on-site food garden where students spend at least one hour each week. Students grow and consume food from the garden either raw or prepared in cooking lessons. Los Cerritos donates garden produce to Food Finders, a community-based food rescue organization that serves as a conduit for food, education, and awareness between donors, volunteers, agencies, and people in need.
- Los Cerritos staff is encouraged to use produce harvested from the school garden and to participate in the Community Supported Agriculture (CSA) program. Los Cerritos has been a drop-off location for a local farm CSA program for the past 6 years. The school community partners with a local farm and subscribing families receive a box of fresh produce every other week.
- Weekly garden lessons include turning soil and compost, planting, weeding, and harvesting vegetables and fruits that are prepared and eaten.
- In addition to garden-based learning, the outdoor spaces (including the grassy areas) are utilized for buddy reading, observations, lessons and games, and school events such as graduation, carnivals, movie nights, sleepovers, and potluck dinners.

- Students spend 200 minutes every two weeks engaged in structured physical activity with 100% occurring outdoors. Students spend 75 minutes per week outside at recesses as well. PE takes place outdoors and is supervised by credentialed teachers. PE lessons are standards-based and include warm-up stretches and calisthenics, yoga, strength training, general fitness, and sports instruction. Recess and the afterschool playground program are supervised by recreation aides who organize sports and games while teaching sportsmanship and fair play.
- Los Cerritos sponsors yearly physical fitness fundraisers which have included Jog-a-Thons, Fit-a-Thons, and Dance-a-Thons. A popular incentive for achievement and positive classroom behavior is additional outdoor activity time for students.
- Health measures are integrated into assessments. Fifth grade classes participate in Presidential Physical Fitness testing each year. Achievement grades for Health and Physical Education are included in trimester Student Achievement Reports.
- The school wellness policy addresses positive environmental and health impacts that have helped green the school; wellness policies and practices extend into afterschool programs and/or activities. LBUSD has a well-publicized wellness policy for the district which includes provisions on afterschool snack sales. The afterschool YMCA program also adheres to the wellness policy. Other afterschool wellness programs offered include outside organizations *One-on-Hoops* for basketball, and *SKATE DOGS* for skateboarding. The school has an active wellness committee and provides staff, students, and families information on nutrition and/or education programs.
- Once a week teachers and parents are invited to a Weight Watchers meeting held before school. Teachers have formed walking groups at lunchtime and many teachers take part in the Walking School Bus helping to walk students several blocks to school. Teachers receive wellness information from LBUSD Nursing Services and the Health Curriculum Office as well as healthy lifestyle advice from health insurance providers through school email.
- 100% of families receive notification of sun protection guidelines.
- The food purchased by the school is certified as environmentally preferable. 20% of cafeteria food is prepared in the district's "Scratch Kitchen." Nutrition information is included on the school website, in the PTA newsletter, and on social media.
- Students take walking field trips during the year, many to local businesses such as Ralphs. A popular field trip is a walk to the Dominguez Gap Wetlands located adjacent to the school.
- Roadrunner awards are passed out to students who are eating a healthy snack during recess and/or lunch.
- Los Cerritos actively promotes participation in community-sponsored events such as Kidical Mass, a monthly family bike riding activity.
- Los Cerritos uses a Coordinated School Health approach to address school health issues. Staffing includes a school nurse one day per week, a counselor two days per week, a school psychologist one day per week, and an Occupational Therapist and a Speech and Language Pathologist assigned to the school.
- Los Cerritos strives to improve the health and wellness of the school community by promoting healthy food choices and active lifestyles through activities involving students and their families such as the Dance-a-Thon; Red Ribbon Week and Screen-Free Week, which help students to make healthy choices in their lives; the school garden, lessons on eating locally and seasonally, and cooking lessons; and Character Education. The

school counselor conducts friendship, anger management, and student socialization groups to support emotional health. Classrooms team for buddy reading to allow students to interact across grade levels. Students are recognized monthly for exhibiting scholarly and positive character traits.

- Los Cerritos includes among its partners:
  - Long Beach Assistance League provides backpacks and uniforms to students in need.
  - Long Beach Fire Department participates in fire drills and educates students with a mobile "firehouse" regarding proper procedures when there is a fire in their home or school.
  - Long Beach Police Department brings its K9 unit to teach safety and the role of the police and police dogs.
  - American Breathmobile Association mobile breathing and asthma clinic visits the school several times per year.
  - Lions Club provides vision services.
  - Los Cerritos is also in the process of applying to be an American Heart Association teaching garden which, if successful, will bring more resources to existing garden and nutrition programs.
- Los Cerritos promotes a positive and safe school climate. The counselor conducts groups to help students with socialization, anger management, grief counseling, and making friends to support students' mental health. Classrooms team across grade levels to allow students additional interaction.
- Special Education students are mainstreamed into regular education.
- Students are recognized for scholarly and positive character traits monthly with an awards assembly. After school playground activities encourage sportsmanship and respect towards every student.
- State health curriculum is taught at all grade levels.
- The Safe and Civil Schools program has been used at Los Cerritos since 2008. The school has established Guidelines for Success and uses CHAMPS strategies at all grade levels. Each year the principal conducts an anti-bullying assembly where students act out roles including the bully, the bullied, and the bystander.
- LBUSD has a sexual harassment policy in place signed by all employees.

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

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

- Los Cerritos uses the written definition of environmental literacy in California's Education and the Environment Initiative (EEI). Through this initiative, teachers are encouraged to teach science and social studies through an environmental lens. Curricular materials are also available through this Common Core-aligned program.
- California state standards for science and history/social science detail the overlap between sustainability and the curriculum for grades K-5. Fifth graders are given a standardized science test yearly with Los Cerritos students scoring 75% in 2013. Los Cerritos achieved an API score of 873 in 2013 demonstrating students' mastery of subject matter including environmental and sustainability targets.

- Environmental and sustainability concepts are taught through integration across the curriculum. Garden-based lessons taught outdoors are particularly well suited to this approach. The garden provides hands-on lessons in all subjects including science, social studies, language arts, math, health, and art. Many subjects are touched upon in these garden-based lessons such as biology, plant science and botany, measurement and data collection, seasons and weather, food chains, photosynthesis, ecosystems, watersheds, recycling and pollution, conservation of natural resources including composting, decomposition, cooking, journaling, creative writing and more.
- Lessons are further enhanced by the participation of local institutions such as the Long Beach Aquarium of the Pacific, Heal the Bay Environmental Defenders, Cool the Earth, and Tree People in student activities as well as teacher professional development.
- Past Los Cerritos students are now peer advisors to the Agalita Marine Research Foundation and have presented a POPS assembly educating students about single-use plastics and their environmental effects.
- Los Cerritos has worked with past ED-GRS selectees sharing best practices.
- City Councilmember Al Austin sponsored a Green Team trip to the South East Resource Recovery Facility (SERRF), where solid waste is incinerated to produce electricity. Former City of Long Beach Recycling Specialist Lisa Harris has made several presentations at the school.
- For the past 10 years, Los Cerritos has had a Roots & Shoots club meeting at least once a month after school. Open to all students, Roots & Shoots was created by Jane Goodall to educate and involve youth on sustainability issues regarding the environment, animals and people. Attendance at Roots & Shoots meetings has exceeded 50 students on occasion. Roots & Shoots has reached out to the larger community by organizing Trick or Treat for UNICEF at our school site for 6 years, selling used books to raise money for victims of Hurricane Katrina, and participating in Heifer International's Read to Feed program providing farm animals to deserving families.
- Through the years, students have addressed environmental issues such as urban wildlife and its needs, composting, pollution and recycling, plant biology and growing requirements, and the state of the world's oceans. Projects have ranged from making bird feeders, participating in beach cleanups, making posters and setting up cans for recycling on campus including composting, sewing cloth napkins for lunch boxes, creating wildlife habitats and planting native plants in the garden and setting up and maintaining vermicomposting bins.
- Los Cerritos students have a long history of performing community service and environmental sustainability projects that have addressed the needs of the local community such as making holiday placemats for and touring the Long Beach Rescue Mission, visiting senior citizen homes to sing and deliver lap blankets, making dog and cat toys and blankets for the Long Beach Animal Shelter, collecting pet supplies for needy families at Christmas, providing turkey dinners for local families during the holidays, collecting and wrapping boxes of toiletries to be distributed to the homeless at Christmas, knitting baby caps for the hospital's neonatal unit, and making Valentine's Day cards for the senior center.
- Professional development opportunities for teachers are available through organizations such as Tree People, Heal the Bay, Aquarium of the Pacific, the California Institute for Agriculture in the Classroom, and directly through the LBUSD. A Los Cerritos teacher has also attended professional development offered by the Center for Ecoliteracy in Berkeley and LifeLab in Santa Cruz.

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

- Los Cerritos uses sustainability and the environment as a context for learning in various ways. Once a year, Los Cerritos has its own Science Fair in conjunction with Open House showcasing student science projects. The winners at the school level move on to the LBUSD Science Fair. All fourth and fifth grade students are required to participate and other grade level students are strongly encouraged to submit a project. Project topics include inventions, engineering, energy, technology, nutrition, life science, global warming, and human interactions with the natural world.
- Roots & Shoots activities include many learning opportunities for problem solving in an environmental context. Students have made solar ovens with pizza boxes and cooked food in commercial solar ovens, studied energy conservation comparing CFL bulbs with incandescents using Kill-A-Watt meters, learned about photovoltaic panels using two panels found in the garden powering water fountains, and actively composted lunch waste while studying decomposers and calculating the savings provided by their actions.
- During lessons in class and in the garden, students mimic early colonists by growing and using plants as they did (dyes, food, and medicines), perform mathematical calculations to solve problems related to the garden, study weather patterns using instruments located in the garden, solve math problems with seeds, design solutions reducing erosion and flood impacts, understand life science standards such as reproduction as essential to the continued existence of organisms, investigate the life cycles of plants and animals, learn how environmental changes lead to changes in organisms, and evaluate problems caused by changes in ecosystems. Students make circuits and batteries while studying energy, observe the root systems of plants using root view boxes, study the lifecycles of silkworms while measuring and charting their growth, and learn about watersheds with a culminating field trip to the beach with Heal the Bay.
- The garden provides a context for learning green technologies as it houses photovoltaic panels for energy.
- Agricultural careers are explored in garden lessons and Los Cerritos received a grant from the Long Beach School to Work Consortium for this purpose.
- The nationally acclaimed Long Beach College Promise was signed in March of 2008 by leaders from the Long Beach Unified School District (LBUSD), Long Beach City College (LBCC), and California State University Long Beach (CSULB). This college promise ensures access to higher education to all students in the City of Long Beach. Educational benefits are provided for Los Cerritos students by this college promise through family outreach services beginning in the fourth and fifth grades when students take field trips to both institutions of higher learning. College entrance requirements are fulfilled through LBUSD and the promise ensures admission for graduating seniors to LBCC and from there to CSULB. Both LBCC and CSULB offer coursework in environmental studies. A Bachelor of Arts Degree, a Bachelor of Science Degree, and a minor in Environmental Science and Policy are offered through CSULB. Environmental Science is offered at LBCC.

### *Element IIIC: Civic Knowledge and Skills*

- Both the Los Cerritos Green Team and Roots & Shoots offer an ideal way to combine civic engagement with environmental and sustainability concepts. Both of these groups are open to all students at all grade levels. During the lunch period, approximately 12 students daily are involved in organizing recycling efforts and well as sorting the waste and delivering it to the appropriate areas. Many days there are more students than there

is room for; students rotate their duty days, allowing everyone a chance at Green Team jobs.

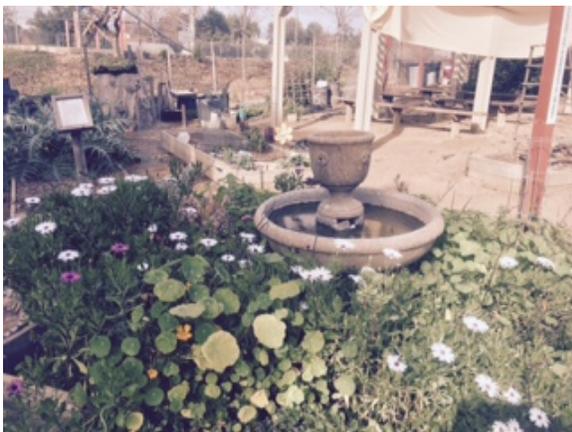
- The Green Team promotes Trashless Tuesdays, teaching ways to be trash-free through the use of reusable containers, cloth napkins, and reusable water bottles. 4<sup>th</sup> graders tackled a problem-based learning project attempting to solve the issue of food waste through research and collaboration. Students have participated in campus tree plantings, bottle/can recycling, garden clean up, and cloth napkin-making workshops. Students are actively helping to keep their campus clean by participating in trash collection and educating about the effects of littering on our oceans and environment.
- Walk-to-School Wednesdays and Bike-Friendly Fridays promote physical fitness and the reduction of carbon emissions. Valets at drop off points expedite the process and reduce idling of automobiles.
- Roots & Shoots takes an active role in the community raising food for Food Finders, the local food bank; projects helping pets, and the homeless and senior citizens of Long Beach; beach clean ups and litter pick-ups.
- The Green Team hosts book and uniform swaps collecting items and distributing them for reuse rather than disposal. A collection was hosted for the Goodwill raising funds for the 5<sup>th</sup> grade Sacramento field trip.
- The Green Team is currently partnering with the Port of Long Beach to provide each student with his or her own reusable water bottle as part of its Thirstless Thursdays. All students and families are encouraged to participate in these activities.
- Los Cerritos families are invited to spend the night camping on the Los Cerritos campus as a fundraising activity for the 5<sup>th</sup> grade field trip to Sacramento. This outdoor experience is well-attended and available to all Los Cerritos families. The evening includes dinner, a movie under the stars, a sleepover, and breakfast the next morning.
- The GATE program hosts an "Evening Under the Stars" in conjunction with a stargazing dome assembly. The outdoor evening activity encourages families to gather on the lawn with telescopes provided by several parents and practice identifying stars and constellations. This is also open to all Los Cerritos families.
- Many school-wide activities at Los Cerritos take place outdoors, including potluck dinners, graduations, classroom lessons on the lawn, as well as special events such as AG Day LA in 2006.
- Walking field trips occur at each grade level including trips to Ralphs, the Dana Branch Library, the Dominguez Gap wetlands, Rancho Los Cerritos, and neighborhood parks. Other outdoor field trips include Centennial Farms (Kindergarten), teaching about where food comes from and how it is produced; the Los Angeles Zoo (1st grade), teaching biodiversity; Cabrillo Beach Aquarium and LaBrea Tar Pits (2nd grade), teaching sea life and conservation and fossils and dinosaurs; El Dorado Nature Center and NASA Jet Propulsion Laboratories (3rd grade), teaching ecosystems and space and technology concepts; and LBCC and CSULB (4th and 5th grades), promoting career and college readiness.
- Most Green Team activities and many Roots & Shoots activities also take place outdoors. In addition, all grade levels spend at least one hour per week engaged in garden-based learning in the 5,400 square foot (60 x 90) Los Cerritos Urban Farmyard (more information below) as well as additional outdoor time spend buddy reading or doing science observations at various spots on campus.

- Garden lessons teach a wide range of subjects including plant lifecycles and growth, My Plate nutrition guidelines, biodiversity, botany, decomposition, math calculations, weather patterns, vermicomposting, urban wildlife needs and threats, and energy production and conservation. The garden is also used to teach Language Arts including journal, creative, and poetry writing. Art lessons are taught in the context of the garden as well as music, when the garden is used as a performance venue for garden themed music and dance. Social Studies/History is taught in the garden as colonial and Native American plant uses are studied and duplicated.
- The school garden is used to teach Character Education including respect for oneself and others and the environment. Trees are planted in honor of staff who have retired or passed away.
- The outdoor spaces on campus are often used as meeting places for community and school-wide events including University of California Cooperative Extension (UCCE) Master Gardeners and a recycling event for LBUSD. Celebrations such as the Urban Farmyard Dedication and AG Day LA were attended by local and state dignitaries including the Superintendent of LBUSD, City Council and School Board members, the CA State Secretary of Agriculture and the State Secretary of the California Department of Weights and Measures.
- The Urban Farmyard was a stop on the National Conference for Agriculture in the Classroom tour where teachers from across the country viewed the garden and many student learning projects. The Urban Farmyard has also served as a school garden model for teachers in Long Beach through the Long Beach School Garden and Nutrition Coalition organized by a Los Cerritos teacher from 2003-2006.
- Civic skills are sharpened through outdoor learning experiences such as growing food for the needy, providing habitat for wildlife, and planting trees to provide environmental benefits. Waste reduction through recycling and composting are taught by the City of Long Beach in our outdoor spaces.
- Partnerships include CSA deliveries by Tanaka Farms, who additionally provides days for families to visit and experience the farm through tours. The Urban Farmyard has partnered with LBCC through the LB School-to-Work Consortium when the LBCC carpentry class built the school's "barn." CA Women for Agriculture, the Farm Bureau, Western Grower's Foundation, and Los Angeles Beekeepers, among others, collaborated in producing Ag Day LA 2006 for all Los Cerritos students.
- Los Cerritos participated in a Bank of America "Sharefest" where volunteers donated time to lay brick paths and for garden cleanup; and in the U.S. Green Building Council's Green Apple Day of Service in 2012.
- Roots & Shoots has participated in Peace Day celebrations, sharing its work with the larger community in LA and meeting Jane Goodall herself. Los Cerritos was the venue for a large Peace Day celebration coordinated by Charter Cable and Animal Planet and was attended by representatives of each.
- A Los Cerritos teacher, Dianne Swanson, was named CA Teacher of the Year for Agriculture and the USDA Outstanding Teacher of Agriculture in 2006.

- The Los Cerritos School community has a long history in environmental education and sustainability. The gardening jewel in our crown, the Los Cerritos Urban Farmyard, began in 2000, well before the school garden movement became popular. The first large edible school garden in the Long Beach Unified School District—the 3<sup>rd</sup> largest school district in the state and recognized by USA Today as the “most diverse city in the U.S.”—the Urban Farmyard was created in formerly uncharted territory. Beginning with 4 raised beds utilized by 2 teachers, it has grown to 48,000 square feet encompassing 22 raised beds for over 35 types of fruits, vegetables, and herbs; borders of perennial flowers and herbs designed to attract beneficial insects and butterflies, and as a habitat for wildlife; a seasonal flower garden with a Peace Pole and a solar-powered water feature; a composting area; outdoor classroom seating and tables; a chicken coop housing 10 hens, a guinea fowl, and a duck; a small fruit orchard; and a red tool “barn.” Amidst a city of 500,000 residents and within sight of one of the most congested freeways in the nation, this farmyard is an oasis of environmental stewardship and learning.
- The Urban Farmyard has been designated a Monarch Butterfly Way Station and a certified Wildlife Habitat. It has served as a school garden model for schools locally and nationally and was featured prominently in the book, Gardens for Learning, published by the California School Gardens Network (CSGN), an organization of interested stakeholders encouraging and supporting a garden in every school, as well as on national television. A Los Cerritos teacher has served on the Board of Directors of CSGN, as well as on committees linking garden lessons to state standards with the CA Foundation for Agriculture in the Classroom.
- The garden has been the recipient of grants and awards from the National Gardening Association, the CA Fertilizer Foundation, Western Grower's Foundation, Scott's Fertilizer, OSH Hardware, Home Depot, Bonnie Plants, the National Wildlife Federation, Sea World, BP, the UCCE, Rodale Press, and Gardener's Supply Hardware.
- Over the past 14 years while the garden was evolving, the Los Cerritos community embraced other sustainability activities as well. A logical outgrowth of the garden was a comprehensive recycling and composting program. Through the years Los Cerritos students have “walked the walk,” participating in numerous environmental awareness activities such as Cool the Earth and Roots & Shoots. Signs at each door remind staff to turn out the lights; recycling has included batteries, ink cartridges, writing instruments, crayons, and tape dispensers as well as lunchtime waste including drink pouches and chip bags; recycling of all paper has been implemented as all stakeholders continue to be committed to improving the sustainability and environmental awareness of the school community.



Clockwise from bottom: Students lead the recycling program, helping to reduce waste; Safe Moves helped educate parents and students about bike safety and the positive impact biking versus driving to school has on the community; The school barn houses tools and supplies for students to support the school garden and chicken coop; The racks are full on Bike-Friendly Friday; Students participate in Walk-to-School Wednesday.



Clockwise from bottom: The fountain in the school garden is powered by a solar panel; Seasonal vegetables are planted and harvested in the garden; Students enjoy working in the garden; Students sort lunchtime waste into recycling, Terracycling, scraps for school chickens, and compost; A Walking School Bus encourages students to get active before school.