



# *Laguna Beach Unified School District*

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



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

### **Laguna Beach Unified School District, Laguna Beach, California**

#### *Carbon Neutrality, Wellness, and Eco-Literacy Drive District's Mission*

Laguna Beach Unified School District (LBUSD) demonstrates a strong commitment to sustainability, health, and environmental literacy through initiatives that promote conservation, wellness, and education. The district aims to achieve carbon neutrality by 2030 by implementing renewable energy projects, waste diversion programs, and water conservation efforts. To support these goals, LBUSD is updating its 10-year Facility Master Plan (FMP) to align with Energy Management Plan (EMP) projects, establishing a structured framework for securing funding and implementing energy improvements. The district fosters health and wellness by maintaining pesticide-free, organic landscaping and enhancing indoor air quality using non-toxic cleaning products, High-Efficiency Particulate Air (HEPA) purifiers, and UV-filtered Heating, Ventilation, and Air Conditioning (HVAC) systems. Students and staff benefit from locally sourced meals, garden literacy programs, and a nature therapy framework that integrates outdoor experiences into social-emotional learning. LBUSD develops high-quality environmental literacy for students through professional development for educators, teacher-designed, environmentally-focused interdisciplinary units, hands-on experiences, and innovative programs like the Fire, Land, Ocean, and Water (FLOW) curricular integration initiative and the Poseidon Stormwater Project. Strategic enhancements, including outdoor science gardens, inspire critical thinking and foster meaningful connections to local ecosystems. Through these integrated efforts, LBUSD creates an educational environment that equips students with the knowledge and skills needed to address environmental challenges and lead sustainable lives.

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

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

#### *Element IA: Energy*

- In 2023, LBUSD hired an engineering firm to develop an Energy Master Plan (EMP) for carbon neutrality by 2030. The EMP, created in collaboration with district staff and students, is based on a detailed American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Level 3 audit covering all electrical, HVAC, and plumbing systems. It catalogs existing equipment and provides replacement recommendations. The EMP includes designs and calculations for expanding renewable energy, installing EV chargers, and fully electrifying the bus fleet.
- The district is updating its 10-year Facility Master Plan (FMP) to align with EMP projects. This creates a framework for funding and implementing these energy improvements. Project execution could start in 2025, and completion is expected within two years.
- LBUSD uses the Environmental Protection Agency ENERGY STAR Portfolio Manager and maintains an internal workbook to track utility usage and billing data for electricity, natural gas, water, and waste services. Energy use is tracked monthly to monitor usage, make adjustments, and implement energy reduction measures.
- LBUSD reduced its electricity use by 19% from 2015 to 2023, despite an increase in natural gas consumption only in the recent year. The implementation of the EMP will phase out natural gas in the coming years.

- In 2015, the LBUSD implemented several conservation measures throughout all facilities that included the replacement of lighting systems with energy-efficient light-emitting diode (LED) type fixtures that were 34% better than the current California's Energy Efficiency Standards for buildings (Title 24) lighting requirements.
- In 2020, the district implemented integrated HVAC controls to create a climate management system for all district HVAC systems. A single application controls the HVAC system in each room on every campus, enabling simple operation and featuring built-in functions that minimize system operation outside of occupied use.
- The district maintains low energy demand by using an integrated Pelican wireless thermostat system to manage air conditioning units across all properties. This system ensures thermostats shut off at the end of the day, on weekends, and during non-school days, preventing energy wastage by turning off units in unoccupied spaces.
- Many construction or renovation projects in the LBUSD adhere to green building standards, including the following:
  - Thurston Middle School (MS) classroom modernization converted a single classroom into two energy-efficient, California Building Standards Code Title 24-compliant spaces, exceeding required energy standards by 36.6%.
  - From 2013 to 2018, LBUSD used Proposition 39 (Clean Energy Jobs Act) funding to enhance energy efficiency and expand clean energy generation across all facilities. Upgrades included LED lighting, occupancy sensors, and the replacement of outdated mechanical systems with high-efficiency alternatives.
  - Top of the World Elementary School (ES) replaced three portable classrooms with five permanent modular buildings featuring energy-efficient designs, high ceilings, and abundant natural light, completed in December 2017.
  - Laguna Beach High School (HS) upgraded its stadium track and synthetic turf with durable, shock-absorbent systems, complemented by drainage improvements to enhance water quality and minimize watershed contamination.
- The district reduces the heat island effect on its school sites by planting extensive trees and vegetation to increase shade, provide natural cooling, prevent erosion, and manage stormwater runoff. Additionally, energy-efficient white roofs on most school buildings reflect heat and sunlight, reducing roof temperatures, maintaining cooler indoor environments, and lowering energy demand

### *Element IB: Water and Grounds*

- From the 2022 – 2023 school year to the 2023 – 2024 school year, the district reduced its water use by 29% per student. The district reviews usage data each month to align water use with irrigation schedules, allowing for adjustments in irrigation programming and plumbing fixtures to enhance water conservation efforts.
- Since 2019, the district has decreased water consumption by modifying operational practices and implementing water conservation measures. It reduces outdoor water use by replacing spray heads with drought-resistant plants, installing drip lines, and using mulched ground cover. Additionally, the district installed master isolation valves on all irrigation systems, which are regulated by the irrigation controllers. This ensures they're only active during programmed watering schedules, preventing potential leaks outside designated watering times.

- In 2017, the district used a grant to upgrade its irrigation. It switched to U.S. Environmental Protection Agency (EPA) WaterSense Certified Smart Controllers equipped with rain sensors, local weather data, and Wi-Fi capabilities. These Smart Controllers reduce outdoor water consumption by approximately 30%.
- All LBUSD schools have synthetic turf to replace natural grass at athletic fields and high-traffic common areas. This significantly reduces water usage while maintaining functional and durable ground coverings.
- The district incorporated drought-tolerant native landscaping at planters across all school sites, minimizing irrigation water consumption and supporting the local ecosystem. Since 2021, LBUSD has implemented specialized irrigation monitoring services to avoid water waste caused by leaks or mechanical issues across all district-owned properties.
- The district upgraded its faucet fixtures to low-flow automatic faucets that use half a gallon per minute. Outlets were also installed to power the faucets, eliminating the need for batteries and reducing e-waste.
- LBUSD implements proactive stormwater management strategies to mitigate runoff contamination, as exemplified by the district's Water Quality Management Plan (WQMP). Onsite maintenance staff conduct weekly inspections, and third-party engineering consultants evaluate storm drain systems and Best Management Practices (BMPs) monthly to ensure compliance. Additionally, campuses are designed with hardscape slopes directing water to impervious areas, landscape biofiltration systems, and storm drains equipped with catch basin filters for secondary mitigation.
- LBUSD utilizes rain-catching barrels at multiple campuses, including all elementary and middle school gardens, as well as in the senior quad at Laguna Beach HS, to harvest rainwater for vegetation irrigation. TOW has two additional rain barrels near the school library to capture coastal fog and rain for irrigation.
- The district maintains slopes with native, drought-tolerant plants that thrive without additional watering, contributing to water conservation efforts. To combat erosion and support native plant growth, LBUSD introduces jute netting, straw wattles, and local vegetation to stabilize barren areas on campus slopes, allowing irrigation systems to be discontinued in these regions.
- LBUSD replaced traditional drinking fountains with filtered bottle-filling units, installing 18 units around the district. Each drinking fountain conserves the equivalent of 19,200 20-ounce plastic bottles per unit. These installations have collectively prevented the use of over 500,000 plastic bottles.
- Ninety percent of plants across the district are water-efficient or regionally appropriate, supporting sustainable landscaping practices. On the main campus, plant varieties include Acacia shrubs and trees, Agave, Baccharis, Bermuda and perennial rye, Brazilian pepper trees, California sycamore, California deer grass (*Muhlenbergia*), Camphor, Crassula, Elms, Melaleuca, Raphiolepis, and Tecomaria. School gardens feature perennials such as California buckwheat, California lilac, Agaves, Aloes, Lemonade sumac, Salvias, and Dudleya, showcasing native and drought-tolerant species that enhance ecological balance and water conservation.

### *Element IC: Waste*

- LBUSD documents a 45% diversion rate from recycling and composting. The district actively collaborates with the local waste hauler to recycle food waste using eco-friendly systems. It strategically places compost collection containers with biodegradable liners

in student eating areas and kitchens and securely transports the contents to San Juan Capistrano for nutrient recycling. LBUSD also conducts biannual waste audits driven by students at all sites to monitor and enhance waste diversion.

- LBUSD implements a multifaceted composting system that promotes sustainability and integrates school gardens, local sourcing, and food waste recycling. All elementary schools feature "Compost Corners" with seven composting bins, including vermicomposting, tumblers, and above-ground soil-saver bins. Students actively participate in all stages of the composting process, while non-compostable organic waste is directed to the city's green waste bins for proper disposal.
- The district uses a workbook to monitor services purchased through the disposal provider, ensuring maximum material recovery. Collaboration with an account representative allows for periodic review and adjustment of waste and recycling services to meet disposal needs. Prioritizing recycling and food waste reduction, the district increased the number of recycling and food waste containers across campuses and worked with each site to design and promote signage that simplifies and encourages proper usage.
- The district annually collects hazardous materials from science, theater, graphic arts, and maintenance. Inventory sheets track chemicals for disposal and those remaining onsite. A third-party vendor manages the pickup and disposal of expired materials. Battery collection bins are available at all sites, with annual pickups after the school year starts. Fire department-approved hazardous storage units house paint, propane, and flammable materials. In partnership with a paint supplier, old paint is recycled through the state program.
- District and school employees receive training on identifying and using green products. Custodial teams meet regularly to share successful practices and optimize the use of eco-friendly solutions. Green products are identified through sustainable product lists, including biodegradable trash can liners, Green Seal-certified cleaning chemicals, and recycled paper products.
- The district has established a digital workflow through its integration of 1:1 devices. Students complete assignments online, while teachers share documents digitally within their professional learning communities. Moreover, the Forest Stewardship Council certifies all office and classroom paper.
- LBUSD has adopted the LeanPath food preparation program, which helps minimize overproduction by weighing food waste. Cafeteria staff, knowledgeable about USDA guidelines, provide guidance to students on selecting items, emphasizing that not everything on the lunch line must be taken.
- The LBUSD PTA holds Green Luncheons which use real dinnerware, and all food service cutlery and cafeteria trays are compostable.

#### *Element ID: Alternative Transportation*

- These student transportation percentages reflect the district's diverse transportation practices and commitment to supporting varied and sustainable options:
  - 39% ride the school bus
  - 18% roll (e.g., bicycle, scooter, or skateboard)
  - 12% carpool
  - 8% walk

- 4% use other public transportation.
- LBUSD is seeing an increase in students using electric-assisted bikes to ride to school. The district accommodated this increase by installing numerous bike racks. To enhance student safety, the Laguna Beach Police Department launched the E-bike Safety Training program, requiring all students who ride bikes to campus to complete the course. Since its implementation in 2021, the program has contributed to a reduction in bike-related incidents.
- LBUSD promotes healthy air quality conditions around the campus by posting “No Idling” signs and communicating the policy through regular updates from school principals. School bus drivers turn off engines and wait outside for dismissal.
- The district supports active transportation initiatives through participation in the National Walk to School Day and valet-style drop-off and pick-up procedures at three of the four schools. Each school provides bike and skateboard storage areas, offers supervision, and sends regular communications on safe walking and drop-off routes.
- LBUSD has reduced its vehicle fleet by sharing two vehicles between four school sites, eliminating transportation trips between a central yard and school sites. The district plans to convert all vehicles to electric by 2030 and has already taken steps toward sustainability. In 2018, the entire bus fleet was converted to Compressed Natural Gas (CNG), significantly reducing carbon emissions. Additionally, the district is in the process of ordering two electric vehicles to replace internal combustion engine vehicles.

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

### *Element IIA: Environmental Health*

- LBUSD employs Integrated Pest Management (IPM) practices to control structural and landscape pests while minimizing hazards to people, property, and the environment. Pesticides are carefully evaluated and applied only after considering nontoxic and safer alternatives. Monthly site evaluations with the pest management provider ensure service data is reviewed, and proactive management strategies are implemented.
- The LBUSD Facilities Department follows a comprehensive landscape maintenance plan, coordinates schedules with site administrators to minimize hazards and disruptions and implements an organic Integrated Pest Management (IPM) program established in 2018 to control weeds, insects, and diseases safely and effectively.
- LBUSD prioritizes safe alternatives to harsh cleaning chemicals. To improve indoor air quality, the district has ultraviolet (UV) filter lights in all HVAC units and equips classrooms with high-efficiency particulate air (HEPA) air purification units.
- The district requires departments to maintain an inventory list of chemicals and dispose of unnecessary or expired chemicals annually. In past years, a third-party vendor has completed the disposal services.
- The district's Injury and Illness Prevention Program (IIPP) guides the management of chemicals routinely used in LBUSD schools. It outlines the cataloging and management of chemicals. Staff are trained in their use and provided with Material Safety Data Sheets for specific products.
- Custodial staff use a dispenser for cleaning products located inside locked custodial rooms. The dispenser ensures that the proper amount of cleaning product is mixed with the recommended amount of water to avoid overusing cleaning products.
- The custodial team disinfects high-traffic areas daily, focusing on high-touch facility features such as door handles, drinking fountains, handrails, lunch tables, and

restrooms. Staff members complete regular cleaning training and learn strategies for cleaning school areas safely. For example, school employees spray cleaning rags before wiping rather than spraying the surface and then wiping it off. The district utilizes cleaning rags, which the staff washes at each school site to minimize waste from paper towels and single-use items.

- The custodial team uses cleaning products to reduce allergens, irritants, and pollutants in the environment. They also employ vacuums fitted with high-efficiency HEPA filters to improve indoor air quality. In addition, HVAC systems are equipped with ultraviolet light filters, and thermostats are set to keep the fan running continuously when the rooms are occupied.
- LBUSD modernized most classrooms and buildings in the early 2000s to incorporate high-quality acoustics, daylighting, and humidity control. In 2014, the district upgraded to HEPA-grade mechanical unit filters; in 2016, it converted the district to energy-efficient LED lighting.
- LBUSD has updated its classrooms with outdoor make-up air exchangers that achieve five to six air changes per hour. Ninety percent of HVAC units have been replaced in the last decade, ensuring reliable functionality. As part of these updates, teachers receive guidance on choosing indoor plants that enhance oxygen levels.
- LBUSD employs an on-site maintenance technician to monitor and control school ventilation systems using an integrated control system. The technician conducts annual inspections, maintains service logs, and performs routine maintenance for efficiency. Air balancing is done to optimize ventilation volumes. The district engages a third-party environmental company through insurance to inspect and recommend remediation for indoor air quality issues. The technician coordinates remediation and retesting to restore optimal conditions.
- The district prioritizes indoor moisture control during routine maintenance. The maintenance team evaluates the building envelope and roofing to extend their lifespans. They replace below-grade waterproofing, seal joints in frame assemblies, and maintain roofs at critical points. On-site staff conduct annual heating, ventilation, and air conditioning (HVAC) inspections to manage humidity effectively. If mold is discovered, a licensed environmental firm directs the appropriate abatement.
- LBUSD adheres to the Asbestos Hazard Emergency Response Act (AHERA) requirements, routinely conducting necessary inspections and mitigation measures. Furthermore, before commencing any construction project, the district tests and inspects soil to identify and appropriately mitigate hazardous materials before finalizing specifications.
- In 2016, the district tested the water quality at the primary entry source and multiple faucets for lead, confirming that it remained significantly below California's maximum allowable levels for drinking water.

### *Element IIB: Nutrition and Fitness*

- The district integrates nutrition into its Sustainability Strategic Plan, providing USDA-approved meals featuring local dairy products, fresh fruits, vegetables, whole grains, and lean proteins. In the 2023–2024 school year, at least 85% of meals in all schools served locally sourced produce.
- All LBUSD schools earned recognition under the USDA HealthierUS School Challenge and the Small or Rural Food Authority Breakfast Trailblazer Award by improving meal

nutrition, reducing added sugars through menu changes, and prioritizing sodium reduction with salt-free seasonings and lower-sodium options.

- The Thurston MS Young Chefs Club combines garden harvests, cooking lessons, and the Orange County Department of Education (OCDE) “Harvest of the Month” program to enhance students’ understanding of fresh food.
- Seventh-grade students utilized Monterey Bay Aquarium Seafood Watch data to analyze regionally appropriate fish for consumption. They designed sustainable restaurant menus and developed public service announcements (PSAs) addressing the critical issue of overfishing.
- The district’s Farm-to-Table After-School Program annually involves over 200 elementary students in weekly cooking lessons centered around garden-fresh seasonal produce. Dishes include passionfruit sundaes, Caprese salads, watermelon mint slushies, and squash blossom quesadillas. The program concludes with students creating personalized recipe books and harvest bags to continue their culinary exploration at home families.
- LBUSD collects student feedback through food tastings, incorporating preferences into menu planning. The district's executive cabinet receives the insights, ensuring that student voices shape nutritional decisions.
- Seventy-five percent of the schools in the district maintain one or more thoughtfully designed gardens cared for by students, staff, and families. Each garden features elements such as natural outdoor seating, cooking areas, storage, and shade, with a focus on sustainability. Recycled materials are used extensively, including logs repurposed from old play structures for seating and edging, and recycled concrete for low retaining walls. The gardens are strategically located along the borders of a wilderness preserve, providing students with a firsthand view of the natural landscape. Additionally, 90% of the plants used are water-efficient or regionally appropriate. The following schools participate in this initiative:
  - El Morro Elementary School (ES) features a 3,000-square-foot greenhouse, a 10,000-square-foot garden shed, U-shaped garden beds with pest control structures, six garden beds, and a composting zone. The garden is complemented by avocado, peach, citrus, and fig trees. Laguna Beach HS students are designing solar power for the garden shed, which supports cooking classes.
  - Top of the World ES maintains a .5-acre garden divided into an outdoor classroom, a primary garden, and a kindergarten garden. The garden is equipped with seating, composting facilities, and a solar-powered geodesic growing dome greenhouse. It hosts diverse programs, including Master Gardener classes, Green Thumb meetings, and student-run farmers markets.
  - Thurston MS features a student-driven garden with raised beds, composters, an herb garden, and a greenhouse. Supported by a Junior Master Gardener program and a Captain Planet Foundation-funded cooking cart, the garden offers hands-on learning in history, science, and Social Emotional Learning (SEL).
  - Laguna Beach HS provides agricultural and sustainability education through field trips to The Ranch, a local farm-to-table restaurant, and on-campus engagement via the Garden Club. Students in the Agricultural Education and Research course explore agricultural topics, supported by scholarships from the Laguna Beach Garden Club and partnerships with community organizations.

- The district supports student well-being through a comprehensive Physical Education (PE) program that ensures that half of the class time involves moderate to vigorous activity. Elementary students participate in 100 minutes of weekly PE, led by credentialed PE teachers. Annual FITNESSGRAM assessments in grades 5, 7, and 9 track progress, while Adaptive PE options ensure equal access for all students.
- LBUSD enhances physical education offerings throughout the district with the following programs:
  - Elementary schools enhance physical education through programs such as CORE Basketball, Game On!, yoga, and UK International Soccer. Approximately 60% of students at these schools engage in after-school programs
  - The Thurston MS PE program includes activities such as team sports, nature hikes in Laguna Canyon, and tournaments using new fitness equipment like dot balls and paddle sports. The school also supports intramural sports through the Coastal Athletic League, offering competitions in basketball, volleyball, soccer, cross country, and track.
  - Laguna Beach HS promotes lifelong fitness through courses teaching yoga, dance, and health and wellness. Independent Study PE enables pre-professional athletes to earn credit for specialized training. The school also participates in 25 California Interscholastic Federation (CIF) sports, with 650 students engaged in athletics.
  - The district supports physical and mental well-being by contracting BalaShala Yoga to provide district-wide yoga sessions for students and staff. These sessions integrate into PE, mindfulness activities, and lunchtime programs, fostering relaxation, focus, and resilience.
- LBUSD fosters staff wellness through monthly district-wide activities, including hikes, barbecues, and corn hole, which strengthen community connections. Staff members also engage in “walk-and-talk” meetings in natural settings, promoting open communication and camaraderie. These activities are complemented by yoga sessions that encourage relaxation and resilience.
- LBUSD prioritizes health and well-being through district and individual school-level wellness committees. The district Wellness Committee meets monthly to set goals like the “Kindness Challenge,” incentivizing participation with a point system and gift card rewards. Site-based committees host activities such as yoga, meditation, and ceramics workshops to foster a supportive community culture.
- Mental health support is emphasized through partnerships with Tava Health for virtual counseling and Care Solace to connect students and staff with treatment providers. LBUSD also offers free memberships to wellness apps like Headspace and Calm, promoting mindfulness and stress relief.
- The LBUSD prioritizes student well-being by employing mental health professionals at each school. Elementary schools have a psychologist, counselor, and student support specialist. The middle school has three counselors, a student support specialist, and a psychologist. The high school offers four counselors, a student support specialist, and a psychologist, along with Wellness Spaces designed to support mental health through nature-inspired decor.
- The district’s health team includes registered nurses at two sites and a health clerk at each school. Registered nurses manage student health assessments, Individualized Education Programs (IEPs), and emergency procedures. They also train staff in CPR, Basic Life Support (BLS), and Stop the Bleed. The team also collaborates with

educators for outdoor education, reflecting the district's holistic approach to health and well-being.

- LBUSD is partnering with the director of nature wellness at the University of California, Irvine (UCI), to develop a nature therapy framework that will be implemented by Spring 2025. The entire SEL team across the district will participate in a professional learning event at UCI, designed exclusively for the LBUSD mental health team in collaboration with the UCI Nature Wellness team. This partnership enables LBUSD to integrate nature therapy practices into its SEL programming.
- In May, to observe Mental Health Awareness Month, the district partnered with Care Solace to enhance access to mental health care. This partnership provides students, staff, and families with 24/7 support for locating treatment services, irrespective of insurance coverage. The collaboration underscores LBUSD's dedication to ensuring accessible mental health care and promoting holistic student success.
- To improve safety, the middle and high school use WeTip, short for "We Tip Anonymous Reporting System." This system allows for confidential crime reporting, promotes collaboration with law enforcement, and creates a secure atmosphere for students and staff.
- The district offers customized mental health services designed to meet the unique needs of each school. This approach guarantees that all students have access to opportunities for personal growth through supportive programs and resources, including the following:
  - All schools participate in the Anti-Defamation League's No Place for Hate® initiative, which promotes inclusivity, respect, and positive culture through activities like Thurston MS's kindness challenges.
  - The middle school hosts Executive Functioning Workshops led by counselors, focusing on essential cognitive skills like planning, organizing, time management, and self-regulation, preparing students for academic success and personal growth. Counselors also lead monthly Mindful Mondays, integrating mindfulness practices into students' routines, with October's focus on deep breathing strategies to enhance stress management and focus.
  - Laguna Beach HS Peer Mentors engage students through events such as Wump World Day, where third-grade students explore environmental empathy with high school mentors, connect emotionally with stories, expand their vocabulary, and reflect on community action.
  - LBUSD trains staff in using Restorative Circles, a structured approach that encourages conflict resolution, community building, and positive communication. Middle school students lead sessions at elementary schools.
  - Both elementary schools offer the Peer Assistance Leadership (PAL) Program, which empowers students to engage in activities such as new student orientation, peer tutoring, community service, and conflict resolution. The middle school also integrates PAL into its leadership elective.
  - The middle and high school offers leadership electives, promoting school spirit, inclusivity, and community service, while El Morro ES employs the Sea Lion Squad to foster leadership and a sense of community on campus.
  - LBUSD implements Positive Behavioral Interventions and Supports (PBIS) to create a proactive school environment that teaches positive behaviors, reinforces expectations, and enhances students' social, emotional, and behavioral well-being.

- The LBUSD Family Resource Center (FRC) creates a secure and welcoming environment where families in the district can articulate their needs. The center offers a comprehensive range of services to support these families, including:
  - Counseling services provide access to mental health support and deliver strategies for improving family dynamics and coping skills.
  - Family support services assist families during challenging times by offering crisis intervention, needs assessments, and help with essential resources such as food, clothing, and housing.
  - Parenting strategies through classes, seminars, discussion groups, and workshops are designed to equip parents with effective approaches for various situations.
  - Community referrals that connect families to additional support beyond the school environment, including mental health services, legal assistance, and job training. Online Resources are readily accessible, offering valuable information on family health, community awareness, and a comprehensive parent and student portal, along with Care Solace, a platform linking families to crucial mental health resources.
  - In Spring 2024, the Family Resource Center released a series of parent workshops dedicated to the environment for Earth Month. One was a painting session on native plants, showing the connection between art and nature and using recycled paint. The second was nature therapy and understanding skills to use the outdoors and nature to mitigate symptoms of stress, anxiety, or depression.

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

#### *Element IIIA: Interdisciplinary Learning*

- LBUSD’s district-adopted definition of environmental literacy is the knowledge, skills, attitudes, and civic responsibility necessary for students to thoughtfully address environmental challenges. The district reinforces this definition through professional learning events, presentations, and strategic planning.
- LBUSD's educational approach, derived from the California Blueprint for Environmental Literacy, aligns with the vision of fostering individuals capable of supporting ecologically sound, economically prosperous, and equitable communities for present and future generations.
- LBUSD is committed to environmental literacy, as outlined in Board Policy (BP) 6142.5. This policy emphasizes the importance of connecting students with the natural world and equipping them with the knowledge and skills to address environmental challenges. In addition, Board Resolution No. 22-04 prioritizes sustainability and environmental literacy. It sets a goal of carbon neutrality by 2030 and outlines strategies to reduce emissions, enhance climate education, and build lasting partnerships with students, families, and the broader community.
- The district integrates California’s Next Generation Science Standards (CA-NGSS) Environmental Principles and Concepts (EP&Cs) into all subject areas, such as English Language Arts, math, science, health, and history, ensuring that environmental and sustainability literacy is embedded in state standards across the curriculum. Using the 5E model (Engage, Explore, Explain, Elaborate, Evaluate), students address

environmental issues, exploring topics such as climate data, ocean acidification, and climate-related agriculture.

- LBUSD supports professional development focused on sustainability, using the United Nations' 17 Sustainable Development Goals (SDGs) as a framework. Site-wide learning events are designed to help educators understand environmental literacy strategies.
- LBUSD's green teams actively engage students in schoolyard assessments, collecting data on plant health, soil quality, and waste practices. This empowers them to advocate for and maintain vibrant, sustainable school environments.
- The high school's Fire, Land, Ocean, and Water (FLOW) program unites disciplines for ninth through twelfth-grade students, deepening their understanding of local environmental issues, including fire, land, ocean, and water, through collaborative projects, community events, and cross-curricular efforts in English, Social Studies, Science, Foreign Language, and Arts.
- LBUSD partnered with the Green Schools National Network in the 2022 – 2023 school year to enhance sustainability goals and environmental literacy. The district conducted a curriculum audit and developed new modules, and an environmental literacy coordinator was appointed to lead staff training, school gardens, and program evaluation.
- Teachers from both elementary schools partner with the Roots and Wings program to engage kindergarten through fifth-grade students in hands-on, garden-based lessons, using the garden as an interdisciplinary living laboratory aligned with California's Common Core State Standards, California History standards, and CA-NGSS. Grade-specific activities include observing plant growth and sowing seeds in kindergarten and first grade; designing efficient gardening models in second grade; applying multiplication through seed tray arrays in third grade; integrating California history and botany by planting artichokes in fourth grade; and conducting soil analyses with a focus on nitrogen, phosphorus, and potassium in fifth grade.
- LBUSD has established a process for teachers to create units on authentic environmental issues. The professional development program starts with an open-ended driving question that promotes deeper student engagement. These units allow students various ways to express their understanding while tackling real-world challenges. Teachers receive a stipend for each unit redesign and can earn more through activities like writing educational blogs, presenting at conferences, and consulting with a coach for student feedback. For the 2024 – 2025 school year, a new incentive will compensate teachers for anchoring their units in sustainability. These project-based initiatives align with the SDGs, which focus on the three pillars of sustainability: environment, economy, and equity.
- The Environmental Literacy Coordinator provides professional development during lunch sessions known as Green Gatherings, which focus on strategies for integrating environmental literacy while achieving high teacher attendance. In 2024, the coordinator organized four district-wide professional development sessions for schools covering topics such as global environmental goals, place-based education, and additional relevant subjects. Furthermore, the coordinator facilitated classified sustainability professional development programs and hosted the first all-county environmental literacy professional learning event in Orange County.
- The LBUSD Green Teams, consisting of site leads, district administrators, and sustainability experts, meet monthly to assess progress, set goals, and organize projects that promote sustainability initiatives. These teams enhance environmental stewardship

by conducting waste audits, analyzing data for the district's comprehensive Waste Action Plan, and participating in activities that support the Energy Master Plan.

- Students participate in field trips and stewardship experiences throughout the school year. These activities include the following:
  - Kindergarten students explore tide pools at Crystal Cove.
  - First graders experience farming at Tanaka Farms, while second graders engage in whale watching. These trips help foster an early appreciation for ecosystems and conservation.
  - Third graders from El Morro ES visit the Environmental Nature Center.
  - Middle school students deepen their learning through field experiences, including a 3-day outdoor camp at the Pali Institute for 6th and 8th graders.
  - Middle and high school art students participate in an outdoor cyanotype art activity. Using kelp harvested from La Jolla, students create a 12 x 50-foot silk canvas to represent the connection between art, the ocean, and learning. The piece is permanently displayed at the high school.
  - High school students participate in environmental and global learning experiences, including clam digs, service projects at The Ranch restaurant, and visits to sustainability fairs.

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

- Elementary science teachers integrate environmental challenges into engineering projects, such as designing renewable energy systems, modeling endangered species, creating solar ovens, and developing waste solutions to promote sustainability.
- Thurston MS embeds environmental themes into each grade level's science curriculum through Professional Learning Communities, allowing students to engage in hands-on projects such as investigating ocean acidification, building windmills from recycled materials, and creating Town Hall presentations on environmental impacts.
- The middle school STEAM (Science, Technology, Engineering, Art, and Math) elective partners with Poseidon Education to provide stormwater education. Students in this class collect and analyze stormwater samples, present mock Water Quality Impact Assessments, and share their findings with the LBUUSD School Board.
- High school integrated science courses explore environmental topics such as climate science, energy sustainability, and ecosystem management. Projects include analyzing greenhouse temperature data, studying CO<sub>2</sub> trends with the Keeling Curve, and examining fertilizer impacts on ecosystems.
- The district integrates sustainability into math across all grades. Elementary students focus on reducing food waste and gardening, with fourth graders designing tiny homes using area and perimeter and fifth-grade students connecting fractions to environmental practices. Middle school students analyze electric vehicle efficiency, investigate population growth with exponential functions, and study global sustainability with real-world data. High school instruction emphasizes human environmental impacts and sustainability trends. In Algebra 2, students examine rates of change in polynomial functions, linking them to real-life indicators like ocean temperature changes, showcasing math's relevance to climate science and environmental issues.
- Laguna Beach HS data science class students examine environmental datasets using tools like CODAP (Common Online Data Analysis Platform). This class fosters data

literacy and helps students comprehend global sustainability challenges through practical mathematical applications.

- Energy Inquiry Labs offer hands-on opportunities for students to explore sustainability. Elementary students conduct solar energy experiments, middle school students design STEAM energy projects, and high school students investigate advanced energy applications in Advance Placement Physics and Integrated Science.
- The Career Talks program introduces students to professionals in sustainability-focused fields, including conservationists, marine biologists, and environmental artists. These professionals offer insights into green career pathways and inspire environmental stewardship.
- Career Technical Education (CTE) courses, including Graphic Design, Theatre, and Dance, emphasize environmentally conscious practices. For instance, in Theatre and Dance, students repurpose costumes and sets to minimize waste. In Graphic Design Classes, students creatively transform old records into clocks and other innovative designs, fostering sustainability awareness and responsibility.

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

- The high school's Model United Nations course aligns its efforts with the SDGs, fundraising for the Maasai Oololaimutia Village in Kenya, and providing sustainable energy solutions, educational support, and other contributions to the village.
- Third-grade students take an annual city hall field trip and interact with local government services. They then participate in The Wump World Day, a district-wide event promoting empathy for environmental conservation. These experiences foster awareness of local governance and civic engagement through an environmental lens.
- High school students in the Authentic Exploratory Research course explore environmental science with a focus on project-based learning, including serving as student representatives to city initiatives and supporting stronger city-district sustainability connections.
- LBUSD participates in California's Civic Seal of Engagement, which recognizes high school students who demonstrate commitment to civic engagement. This seal aligns with FLOW projects and promotes celebration and recognition of exceptional civic engagement.
- Twelfth-grade students participate in marine ecology fieldwork, including outdoor learning projects at local coves, photography collaborations with the Laguna Art Museum, and student-led FLOW Fairs addressing environmental impacts. Students conduct waste audits in the quad to support the district's goal of 100% waste diversion by 2030.
- The high school's Environmental Stewardship Club designed a rooftop green space for its pollinator garden, maximizing the compact campus layout and promoting outdoor learning. Additionally, the club collaborates with Orange County Parks and Laguna Greenbelt to host guest speakers, fostering a deeper understanding of Marine Protected Areas and wilderness parks and highlighting the importance of preserving outdoor spaces.
- Students from the high school math, art, and science classes collaborated to design the school's outdoor quad, integrating concepts from all subjects. The space features seating, shade, a stage, pollinator gardens, and rain barrels. The project exemplifies

civic responsibility and interdisciplinary collaboration in creating a functional outdoor learning environment.

- Thurston MS incorporates diverse outdoor spaces, including an edible garden maintained by Junior Master Gardener students, a shaded quad with hemp turf, an outdoor amphitheater, and a walking path with nature signs to support learning, reflection, and physical activity.
- In California's Living Schoolyard Month 2024, LBUSD students collected data to inform the district's 2028-2030 facilities master plan for outdoor space. Green Teams mapped heat, measured surface areas, and researched diverse play structures. Their analysis highlighted areas needing more greenery, shaded seating, and multi-use spaces. By incorporating student recommendations, LBUSD aligns upgrades with community goals.
- LBUSD collaborates with partners across various sectors to create a robust network that enhances resources and support for students and the broader community. The partners promoting environmental initiatives include the following:
  - The Laguna Beach Education Foundation (SchoolPower) provides critical funding and organizes events that promote environmental education. Its sponsorships subsidize outdoor camps, bring environmental guest speakers to LBUSD schools, and fund after-school environmental literacy programs, such as the Wump World field experience. Additionally, SchoolPower fully finances elementary after-school sustainability classes—including gardening, farm-to-table, and eco-challenge courses—offered on Tuesdays, Wednesdays, and Thursdays.
  - Laguna Beach Garden Club contributes \$1,500 annually to each school's garden, supporting student-led projects focused on gardening and sustainability.
  - LBUSD partners with Roots and Wings to provide hands-on gardening education, engaging elementary students in nature-based learning activities.
  - Sustain SoCal helped LBUSD design the Orange County Green Classroom Challenge, which enables high school students to conduct sustainability audits on waste, energy, and water conservation under the guidance of mentors.
  - Wyland Foundation and Laguna Beach County Water District educate students on ocean and water conservation topics. The Wyland Foundation brings the Mobile Ocean Experience to El Morro ES students annually.
  - Rivian Laguna Beach Coast Film Festival partners with LBUSD schools to provide environmental speakers from athletes, filmmakers, and the Surfrider Foundation. It offers experiences like a filmmaking showcase and a sustainability summit at Rivian.
  - Laguna Beach Fire Department provides support in environmental literacy and learning experiences in creating defensible spaces in the fire-prone Laguna Beach community.