

**ELIGIBILITY CERTIFICATIONS**

**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 early learning to 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 and sustainability 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. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
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**

Public  Charter  Title I  Magnet  Private  Independent  Rural

Name of Principal: Mrs. Kim Labosky

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

Official School Name: Quail Lake Environmental Charter School

(As it should appear on an award)

Official School Name Mailing Address: 4087 N. Quail Lake Drive, Clovis, CA 93619

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

County: Fresno State School Code Number \*: 10 62414 6117865

Telephone: 559-524-6720 Fax: 559-292-1276

Web site/URL: <http://quaillake.sanger.k12.ca.us/> E-mail: [kim\\_labosky@sanger.k12.ca.us](mailto:kim_labosky@sanger.k12.ca.us)

\*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: 2/7/19



Name of Superintendent: Mrs. Adela Madrigal Jones  
 (Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

District Name: Sanger 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, appearing to read "Adela Madrigal Jones", written over a horizontal line.

Date: 2/12/19

(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 Tony Thurmond  
 (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, appearing to read "Tony Thurmond", written over a horizontal line.

Date: 2/14/19

(Nominating Authority's Signature)

### SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2021

### 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.



# *Quail Lake Environmental Charter School*

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



Prepared by  
California Department of Education  
School Facilities and Transportation Services Division  
[Green Ribbon Schools Award Program](#)  
February 2019

## PART II – SUMMARY OF ACHIEVEMENTS

### Quail Lake Environmental Charter School, Clovis, Calif.

#### *Gardening, composting, and recycling: a strong foundation for environmental stewardship*

Quail Lake Environmental Charter School (QLECS) operates under a school-wide initiative to include the sciences in an integrated curriculum, fostering a true understanding and connection to the sustainability of Earth's resources. By teaching the youngest and most impressionable citizens to respect, protect, and preserve the natural world, students begin the process of fixing the problems that threaten the planet. QLECS seeks to teach core subject areas through integrated, hands-on curriculum and real world experiences to make critical connections to sustainability. By instituting a Kindergarten through Grade 8 environmental awareness and education program, QLECS students learn the importance of environmentalism by using green practices at school, incorporating science throughout their school day, and engaging in hands-on experiential learning. Gardening, composting, and recycling are a vital part of creating a strong foundation for environmental stewardship.

QLECS was built on a foundation of environmental principles and in recent years has increased efforts to reduce environmental impacts and costs in the following ways: In 2018, a butterfly garden was built, new planters for student use were built, and a forced air system was added to the compost bin. In the summer of 2016, QLECS installed a 137 kW photovoltaic system to offset 62% of the site's annual energy usage, resulting in approximately \$25,000 in projected annual savings. The school also partnered with Tree Fresno to enhance school grounds by planting 34 trees, decreased water usage by replacing conventional irrigation with drip rings, installed an energy management system (EMS) in all permanent buildings, and decreased waste generation by implementing a composting center on campus. QLECS applied an environmental lens to purchasing decisions and installed energy-efficient lighting, decreased the amount of harmful chemicals through integrated pest management practices and organic farming methods in the garden, switched to compostable lunch trays, and revised methods of communication to exclude paper copies whenever possible.

QLECS seeks to implement practices that promote the health and wellness throughout all campus features and programs. Students participate in the Physical Education Department's "Nutrition Wednesday," where they learn healthy eating habits, calorie intake and expenditure, as well as physical exercise techniques. Garden harvests provide students with education on healthy eating practices and students have the opportunity to taste-test their vegetables during lunch. When planning classroom parties, teachers encourage parents to bring healthy snacks as an alternative to sweets. Fun activities both inside and out of the school day promote physical activity to students, staff, and families.

QLECS recycles 60 cubic yards per month and composts 10 cubic yards per month, achieving a waste diversion rate of 78%. All lunchtime food waste has been composted since 2016. A multiple bin system in the cafeteria allows students sort their liquids, recycling, trash, and food waste. Last year, QLECS switched to using compostable trays and purchased a shredder to be able to use the trays in compost on-site.

In 2018, the QLECS cafeteria eliminated spork packets, replacing them with spork and napkin dispensers. The old spork packets consisted of a plastic spork, a straw, and a small napkin wrapped in a thin plastic bag. Most of this packet was going directly to the landfill or being pulled from the compost by the Green Team. Now, students take a spork or napkin from the

dispensers as needed; there are no more straws used on campus. QLECS students were happy to see the change but were disappointed that the new sporks were not compostable. This disappointment sparked the 8<sup>th</sup> grade class' thoughts on how to solve the compostable spork issue. The class is currently in the process of creating a campaign to convince SUSD's vendor to create a compostable spork that will fit in the dispensers, because none exist currently. The campaign includes petitions, letters, posters, and flyers to rally the students and community behind these efforts.

In 2014, the Sanger Unified School District (SUSD) supported QLECS's focus in environmental sciences by establishing an Instructional Support Provider (ISP) dedicated to science at the school. Since then, the Science ISP has spearheaded the effort to integrate science into all content areas, with a focus on sustainability and the environment. Integrated Units are centered on the strong foundation of instructional practices and initiatives that have been built within SUSD. What distinguishes efforts at QLECS from district initiatives is the autonomy to develop units based around the California Next Generation Science Standards (CA NGSS) that meet the unique needs of the school.

QLECS Integrated Units start with CA NGSS and encompass higher order questioning with response justification, grade level progress monitoring, differentiation in the classroom, technology to enhance the lessons, and integration of curriculum to create relevant learning which meets district's Local Control and Accountability Plan goals. QLECS recognized that students could benefit from units that integrate the curriculum, use project-based and hands-on learning to foster critical thinking, and combine technology to enhance and extend the experience of learning with 21<sup>st</sup> century applications. In addition, the garden curriculum integrates project-based learning with CA NGSS components through a sustainability lens. All students access the garden to learn about the science behind gardening, ecological principles, and nutrition in a variety of ways. QLECS believes that teaching students to be environmentally literate is imperative for the future.

QLECS takes pride in its efforts to produce informed and active students. Through project-based inquiry, students understand a wide variety of issues facing their community. In 7<sup>th</sup> grade, students study and develop new ways to conserve water. They research from citizen, legislator, and farmer points of view and create solutions to community problems. Third grade students work with the California Department of Fish and Wildlife to learn about environmentalism and life cycles by raising salmon to be released into the San Joaquin River and caterpillars/butterflies that are released into the school's garden. Through these processes, they learn to be environmental stewards and that they can help rehabilitate the environment.

All middle school students participate in an online system called Naviance. The program offers students an opportunity to learn about careers that they may have never even heard of. One of QLECS's goals through Naviance is to spend time discussing environmental career pathways. Another way that QLECS middle school students are exposed to green career pathways is through electives such as Ag Business, PLTW Design and Modeling and PLTW Energy and the Environment class. Teachers often discuss career paths that these classes lend themselves to. By the time students are in the 8<sup>th</sup> grade, they all complete a career project where they begin planning for their future careers. This includes researching potential careers and what it will take to get there. The process entails planning their courses for high school, college, and beyond.

Recently, during the garden/ag elective, middle school students researched plants and learned design methods for the new raised beds in front of QLECS. They used iScape on their iPads to assist them in this process. Students then had to present their ideas along with a cost analysis,

scaled drawing, explanation of choices, and exported pictures from iScape to the class and administration to see whose plan would be chosen. Finally, students planted the beds with the winning designs. This one project covered all subject areas while students helped to enhance the campus' outdoor space.

## PART III – DOCUMENTATION OF STATE EVALUATION OF SCHOOL NOMINEE

### Pillar I: Reduce Environmental Impact and Costs

#### Element IA: Energy

- As a dependent charter school, Quail Lake Environmental Charter School (Quail Lake) operates under the Sanger Unified School District's (SUSD) Energy and Water Management Board Policy and Administrative Regulation as the plan to manage and reduce energy use (BP 3511 and AR 3511). These policies outline employee responsibilities for conservation, and Quail Lake continues to come up with strategies for implementing effective and sustainable resource practices, exploring renewable and clean energy technologies, reducing energy and water consumption, minimizing utility costs, reducing the amount of waste of consumable materials, encouraging recycling and green procurement practices, and promoting conservation principles.
- SUSD actively maintains energy usage data using a third-party software, Energy Manager by Dude Solutions. Quail Lake documents a 31% reduction in greenhouse gas emissions from the FY 2009–10 (145 MTeCO<sub>2</sub>) to FY 2017–18 (100 MTeCO<sub>2</sub>) and a 53% reduction in total non-transportation energy use, from 633,056.2 kBTU in FY 2009–10 to 298,091.2 kBTU in FY 2017–18.
- Quail Lake's 137 kW on-site solar PV system meets 62% of the school's energy needs. The solar system consists of a carport and playground shade structures. This system was commissioned in September of 2016 and produced 209,957 kWh in FY 2017–18. The school saved \$44,255 from its Pacific Gas & Electric (PG&E) electric bills and paid \$18,334 in power purchase agreement bills to Tesla during that time for a net electricity savings of \$25,921.
- Remaining electrical needs are met by the local utility, Pacific Gas & Electric (PG&E), which has a 27% renewable portfolio minimum.
- Quail Lake is in the process of implementing PG&E's School Energy Efficiency Program (SEE). With this program, Quail Lake will be able to increase awareness of energy efficiency, save money, and engage students in the process.
- SUSD received grant funding from the California Energy Commission for ten electric school buses, as well as to install and operate a compressed natural gas (CNG) fast-fill fueling station at its transportation facility. The station increases SUSD's ability to refuel its current CNG school buses and allow SUSD to expand its CNG vehicle fleet. The new CNG fueling facility includes a fuel management card reader system, making it possible for other districts and outside public entities to utilize the station as well.
- To reduce the heat island effect, Quail Lake partnered with Tree Fresno to increase tree canopy and vegetation on campus. During the 2015–16 school year, this partnership resulted in the planting of 34 trees to provide shade and lower the air temperature in the surrounding areas. In the 2017–18 school year, a 2,000 square foot butterfly garden further increased the vegetation on campus.

- Quail Lake utilizes an energy management system (EMS) in all permanent buildings. EMS is programmed to control heating, ventilation, and air conditioning equipment. Outside air lockouts are installed on the main central plant, which prevents unnecessary operation during mild weather. Integrated exterior lighting controls operate on a solar clock in combination with a schedule that allows Quail Lake to reduce overall energy use by having a dark campus between the hours of 12:00 AM and 6:00 AM Monday through Friday and on weekends. Programmable thermostats are used in portable classrooms and offices, allowing for on-demand-only air conditioning when staff and students are present. During these times, temperatures are controlled with maximums and minimums to help regulate energy usage. During breaks from school, all devices and equipment are unplugged to save energy. Interior classrooms are equipped with skylights to utilize natural light in learning spaces.

#### Element IB: Water and Grounds

- Quail Lake has separate meters for indoor and outdoor water use. According to data collected by Energy Manager, the school achieved a 32.6% reduction in indoor water consumption from July 2009 to June 2018. According to BaseManager, the system used by the grounds department to track outdoor water usage, there has been a 54% reduction in outdoor water use from the baseline year of 2010.
- Quail Lake's water use reduction strategies include switching its irrigation system controller to Basestation 1000, a smart controller that uses a hydrometer to automatically shut down the system if water usage rises 5% higher than normal. The irrigation specialist also receives an email and text from the system so they can immediately look for leaks or any other problems occurring with the system. Additionally, water faucets on all student sinks outside of the classrooms automatically shut off within 15 seconds of being pushed. Gorilla hair mulch has been added to several of the school's outdoor beds to help keep moisture in and slow evaporation.
- Aside from the school garden, all irrigation on campus is with reclaimed water. Quail Lake's new butterfly garden features a dry river bed built off the down spout of an adjacent building in order to effectively reclaim the water. The school sits next to a ponding basin, and all excess irrigation water is routed through drains to the basin to percolate back into the groundwater system.
- Ecologically beneficial uses of school grounds include 4,000 square feet of garden space featuring an outdoor classroom environment, a 2,000 square foot butterfly garden, and planter beds in the front of the school that provide students opportunities to study fruit production and plant management. An additional outdoor learning space has been placed in the budget for the next two years. Students are currently in the process of developing systems for soil diagnostics and replenishment options from the school compost. With the help of the community, Quail Lake has purchased additional outdoor benches and tables to enhance outdoor learning spaces.

#### Element IC: Waste

- QLECS recycles 60 cubic yards/month and composts 10 cubic yards/month, achieving a waste diversion rate of 78%. All lunchtime food waste has been composted since 2016. A multiple bin system in the cafeteria allows students sort their liquids, recycling, trash, and food waste. Last year, QLECS switched to using compostable trays and purchased a shredder to be able to use the trays in compost on-site. Most of the food waste is taken to compost bins in the school garden daily. On occasion, when bins are being serviced or when chicken is served on the bone, food waste is sent off-site to a local composting facility.

Students and staff layer food waste into the bins and cover it with shredded compostable trays. Twice a week, the compost is aerated. This year, QLECS will be installing a forced air aeration system into the compost bins located in the garden to aid in aeration of the piles. So far, the compost has only been used in the school garden beds. In the future, the goal is for middle school students to design bags and sell the compost to the community to help raise funds for the garden program.

- Over the past few years, QLECS has worked closely with Waste Management to have waste and recycling picked up and to help track the school's waste and recycling. Waste Management utilizes its SMART (Service Machine Activity Reporting and Tracking) database to track disposal and recycling loads.
- In 2012, SUSD was awarded an \$83,000 grant through the CalRecycle Beverage Container Grant to purchase infrastructure to begin a structured recycling program. QLECS's allocation was \$2,800, which purchased recycling bins, liners, carts, and dollies for placement around the school site. With these efforts, QLECS was able to immediately change a 6-yard landfill dumpster into a 6-yard recycle dumpster. In 2015, middle school students started an "advertising" program for waste reduction on site, creating short skits, videos, and posters explaining why waste reduction is important and how to sort lunch waste. These were placed around campus and digitally sent to teachers with younger students at QLECS. Middle School students were excited about the new changes on campus and took initiative to help create a better environment, not only on campus but around the community. The project led students to ask their teachers if they could make brochures to send home with students and hang posters in the nearby QLECS neighborhood.
- Over the last five years, QLECS has attempted to go paperless in as many areas as possible. School newsletters and flyers are sent out electronically. Dialer and digital notifications are used by staff to update parents regularly instead of sending notes on paper. QLECS has even convinced SUSD to purchase PeachJar, a digital system for sharing flyers, for the entire district. Because QLECS's student in Grades 1-8 use 1:1 iPads, the use of paper has decreased; when lesson planning, teachers initially will consider using technology before making copies of paper. The office staff has even changed their way of processing reports to help cut down on paper usage. In addition, QLECS has helped to make district systems such as lunch menus and district flyers paperless as well. The office staff uses Google Docs and Forms to quickly get information from classrooms and students. Over the past two years, QLECS has cut down on the overall paper use in many ways and with PeachJar in the near future, the numbers of paper copies will continue to decrease. The school is just now starting to collect data to track this, but they know that by sending the school's weekly newsletter out digitally, they will save 24,000 pieces of paper annually. By offering the school lunch menu online instead of on paper, an additional 6,000 pages are saved. Soon QLECS hopes to have data on the number of cases of paper that are saved each year.
- In 2017, two water filling stations were added to the QLECS campus. Staff and students are encouraged to bring refillable bottles and use the filling stations. All staff was given custom refillable bottles with their names on them to use. Most students on campus now carry refillable water bottles to class and PE. Water bottles are no longer provided at trainings and/or meetings; instead, staff refills their bottles as needed. Since 2017, QLECS has saved over 16,940 plastic water bottles.
- In 2018, the QLECS cafeteria eliminated spork packets and purchased spork and napkin dispensers. The old spork packets consisted of a plastic spork, a straw, and a small napkin wrapped in a thin plastic bag. Most of this packet was going directly to the landfill or being pulled from the compost by the Green Team. With this new system, students can take a



spork or napkin from the dispensers as needed. There are no more straws used on campus. QLECS students were happy to see the change but were disappointed that the new sporks were not compostable. This disappointment sparked the 8<sup>th</sup> grade class' thoughts on how to solve the compostable spork issue. The class is currently in the process of creating a campaign to convince SUSD's vendor to create a compostable spork that will fit in the dispensers, because none exist currently. The campaign includes petitions, letters, posters, and flyers to rally the students and community behind these efforts. Another change that was made in the cafeteria to help reduce waste was moving to condiment dispensers instead of individual condiment packets. Students can now take a squirt of ketchup on their lunch tray as needed. There are no longer condiment packets going into landfill bins.

- This year, QLECS is piloting "Party Packs" on campus to help further reduce waste. The party packs consist of plastic totes filled with reusable party supplies such as plates and utensils. The school has started with the program in one classroom and with a staff party pack for staff luncheons and celebrations. It has even been used for visiting guests during a ceremony to celebrate a garden grant. The goal is to expand into other classrooms this spring and be throughout the entire school by next year.
- The use of hazardous materials is strictly limited to trained staff members. Each applicable staff member receives Chemical Hygiene Plan and Global Harmonizing System Training annually. Hazard materials are stored in a locked cabinet with limited key access along with other compatible chemicals so as to minimize any adverse reactions, explosions, or combustions, should they occur. On an as-needed basis, the school site will contact the maintenance department to schedule hazardous material pick-up/transport by a certified third-party hazardous material handler.
- QLECS has an environmentally preferable purchasing policy and employees are trained on how to identify and use green products. All of the copy paper used in the school has a recycled content of 30%, meets the FSC global standards, and is Green Seal certified. When ordering supplies, QLECS makes every effort to purchase green products. Vendors have been notified that QLECS is a green school and wishes to be updated on the availability of new green products. Currently, 70% of QLECS's cleaning products are third-party-certified by Ultra Chem Labs as approved green products. QLECS is working with vendors to find the final products needed to be at least 90% green.

#### Element ID: Alternative Transportation

- According to data collected from a mode-share survey completed by students, 4% walk and 6% roll (i.e., bicycle, scooter, skateboard) to school. The data also demonstrated 19% of students carpool with 2 or more students in the car and 18% take the bus to school.
- QLECS has a well-publicized no-idling policy that applies to all vehicles, including school buses. The vehicle loading/unloading area is at least 25 feet from building intakes, doors, and windows. There is also secure storage available on-site to encourage human-powered modes of transportation to school.
- As a charter school, QLECS has no attendance boundaries. This makes the school's safe routes program a complicated undertaking. Students at QLECS come from different cities in addition to covering a large rural area. After incorporating a number of "Walk and Roll" to school days and purchasing additional bike racks in 2016-17, students are now more aware of the importance of creating a healthier environment.
- There are several crossing guards for the three crosswalks on and around campus. Teachers wear bright vests and use stop signs to help students safely cross the street or parking lot. SUSD also holds an annual bus evacuation training with all bus riders that

communicates safety procedures for getting to and from school as well as field trips. Looking to the future, QLECS has plans to reach out to the community and city for advice on how to further solve transportation concerns.

- SUSD has replaced three 1991 2-stroke diesel engine buses with 2018 buses purchased from a manufacturer that demonstrated compliance with the Greenhouse Gas Emission Standards specified in Title 13. Approximately 33% of the district's fleet is fueled by Compressed Natural Gas (CNG). The district has also ordered two fully electric eLion buses with 100-mile ratings and zero emissions, as well as submitted applications for the Rural School Bus Project to replace diesel fueled buses with electric buses.

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

### Element IIA: Environmental Health

- In maintaining compliance with California's Healthy School Act, it has been the goal of SUSD to implement a written Integrated Pest Management (IPM) Plan focusing on long-term prevention or suppression of pests through accurate pest management identification via frequent monitoring, applying appropriate action levels, making the habitat less conducive to pests using sanitation, mechanical, and physical controls. QLECS has worked diligently to avoid the use of pesticides and has not had any pesticide application over the last year.
- QLECS and buses that transport its students are tobacco free. QLECS has eliminated all mercury-filled thermostats and has standardized with programmable electronic thermostats. A natural gas-fired boiler heats the campus. This piece of equipment is in a mechanical yard that does not allow student access. It is routinely tested by the maintenance staff to ensure that the emission levels meet the standards of the San Joaquin Valley Air Pollution Control District. The district uses a third-party consultant to conduct inspections required by the Asbestos Hazard Emergency Response Act (AHERA) and contracts with a hazardous waste disposal company that specializes in the proper removal of chemicals, paints, and toxins.
- All classrooms at QLECS have windows that allow natural sunlight and views of trees and nature, and each of the permanent classrooms have skylights. Light bulbs and fixtures are replaced as needed. Additionally, the site properly maintains an energy management system (EMS) which is programmed to ensure adequate levels of fresh air into occupied spaces and offers a level of humidity control. The district has measured acoustics in the classrooms to ensure levels are suitable.
- There are several maintenance and operations practices related to ventilation that are implemented at QLECS, including a regiment of changing air filters in every HVAC unit four times per year. Pleated High E filters have been used with great success. Additionally, staff periodically inspects, cleans, and sanitizes the coils associated with the air delivery systems. A complete inspection of each unit is done over the summer. An EMS is used district-wide for monitoring and troubleshooting all units. When temperature parameters are out of scope, the EMS alerts personnel and they are able to respond accordingly.
- In order to prevent exposure to asthma triggers in and around QLECS, QLECS ensures that 70% of the cleaning products used at QLECS are third-party certified as green products. Efforts are being made to be at 90% within the next year. QLECS has worked with both the custodial department as well as the food service department to make sure that everyone is on board with the school's mission. Two years ago, QLECS switched to using microfiber cloths as an alternative to chemicals to clean surfaces in classrooms. Microfiber cloths are provided to each teacher to utilize as necessary instead of turning to disinfecting wipes. The cloths are picked up weekly and laundered. Custodial staff uses a "fogger" to do extra

cleanings during high breakouts of illness. This system consists of an all-natural water and saline solution and leaves no chemical residue.

- At QLECS, prevention is always the first priority to control moisture from leaks, condensation, and excess humidity. Monthly filter changes and annual summer cleaning allow staff to check HVAC equipment regularly for any necessary repairs or leaks. At the first sign of a leak, staff immediately takes action. Depending on the severity, carpets will be aired out and vacuumed. Fans will be brought in to dry the area, and extractors are used as needed. When an event is reported as mold, district staff immediately accesses the area and cordons off and calls the mitigation company that specializes in this field to test and make recommendations for countermeasures. If necessary, the district hires an abatement company to remove and dispose of the contaminants. Once mitigation has been completed and staff can safely access the cause of the leaks, they repair the source of water infiltration and have qualified contractors perform permanent repairs.
- There are several procedures and policies QLECS follows to ensure buildings and site soils are lead-safe. The district maintenance manager has attended the 8-hour LEAD Awareness training. All of the district's skilled maintenance specialists have attended the 2-hour LEAD Awareness training and been given instruction on the identification, testing, and removal procedures. Whenever lead is suspected, the district has a testing lab pull samples and report. If lead is present, the mitigation company makes recommendations for removal. The district will then contract with a qualified abatement team for the removal. In 2018, the outside of the QLECS campus was repainted. Any findings were abated and no lead-based paints were used.
- QLECS has regulated equipment to provide clean drinking water and ensures the water source and drinking water are protected from potential contaminants. QLECS is equipped with a back-flow device that is tested annually as required by law. In addition, QLECS is on a private well water source under permit by the California Water Board (CWB). The water is tested by a D-2 water certification contractor per CWB regulations. The school posts the Consumer Confidence report annually and sends individual notices home with each child, as well as posting results at the site. To reduce lead contaminants in drinking water, the entire district changed all of its faucets to lead-free beginning in the late 1990s. QLECS continues to use only lead-free appliances for replacement and new construction.
- QLECS is currently in the process of working with the California Department of Public Health's "Healthy Cleaning & Asthma-Safer Schools: A How to Guide" in moving towards a healthier and greener custodial program. Currently, 70% of the school's cleaning products are third-party certified by Ultra Chem Labs as sustainable products that are approved as "green." QLECS recently began using microfiber cloths instead of chemicals and disinfecting wipes. There is also a Multiflex metering system that all custodial staff uses to ensure that products are diluted to the proper concentration measure for the solution as provided by the manufacturer.
- At QLECS, indoor environmental quality is highly important. While they are cleaning, custodians check the classrooms on a daily basis for any potential issues. Teachers can also report concerns at any time. SUSD trains maintenance employees to recognize potential threats, such as lead, mold, and asbestos. All staff reports any concerns immediately so they can be further inspected. An outside agency is used for a comprehensive inspection of the school's overall safety per AHERA standards.
- QLECS has taken several steps to protect the outdoor environmental quality. QLECS has partnered with Tree Fresno and PG&E to help increase the foliage on campus in order to provide opportunities for education in an outdoor environment using living laboratories. In April of 2015, the initial stage took place and 34 trees were planted on campus. In the spring

of 2018, students and staff built a butterfly garden on campus, a 2,000-square foot area with trees, shrubs, and flowers. The garden is used not only for personal enjoyment, but as an educational piece in conjunction with life cycle units in several grade levels. In the fall of 2018, QLECS implemented a no-idle policy and installed signage in the parking lot where parents pick up their students. No-idling policies were published and explained in the school newsletter, and parents were notified at Back to School Night and by staff and administration as they came on campus. Overall the new no-idling policy has been well received, and parents turn off their cars when they are waiting for student dismissal.

#### Element IIB: Nutrition and Fitness

- Healthy food and nutrition is a high priority at QLECS. In 2012, QLECS was recognized as a Bronze Level California Healthy School; now, the school is working with the Alliance for a Healthier Generation to further their health and nutrition program. QLECS has a daily vegetarian option in their cafeteria. All foods served and sold on school grounds within the school day meet federal nutritional regulations.
- SUSD's Child Nutrition Services has focused on incorporating locally grown fresh fruits and vegetables daily within the school menus. All food is served utilizing a compostable tray. Nutrition information is available through online digital menus.
- QLECS has a 4,000-square foot garden that includes a 17x35-foot greenhouse that all students have access to and can use in various ways. Kindergarteners through fifth-graders visit the garden every two weeks for garden lessons led by their teacher and the school's Science Instructional Support Provider. Lessons focus not only on gardening skills, but also tie into the California Next Generation Science Standards (CA NGSS) and California Common Core State Standards (CA CCSS) that are being taught in the classroom. After harvesting produce in the garden, students are encouraged to try it. Recipes and produce are sent home with students. When applicable, a portion of the food is taken to the cafeteria. QLECS does not have a full kitchen on-site, but the food service staff is always willing to help clean and cut the food so that students can sample it. In addition, students and families can buy produce grown in the garden at the school's small farmers market stand several times throughout the school year. Over the summer, staff and students' families help to maintain the garden each week. There is also a walking path that goes by the school garden, which is aesthetically pleasing to see and which can be used by students and the community. Maintenance of the walking path is supported by community donations. QLECS also obtains local produce from the district through the "Buy American Provision," which allows the school to have fresh salad bars with locally-grown produce. Additionally, the sixth through eighth-grade students do projects that relate to their curriculum being taught by their core subject teachers. These projects include science experiments, research projects in language arts and social studies, and projects for elective courses such as service learning and Ag Business.
- In addition to an outdoor physical education sequence of instruction aligned with California's model content standards and curriculum framework, students receive 30 minutes of nutrition education weekly. During these lessons, students are learning about healthy lifestyles that address topics such as diet, healthy lifestyle choices, and exercise. At QLECS, learning opportunities are led by a certificated physical education teacher. These teachers receive continuing professional development to enhance their skills to foster student learning and a lifelong commitment to wellness.
- QLECS is committed to providing a school environment that promotes and protects children's health, well-being, and ability to learn. Last year, QLECS changed the lunchtime

format to put recess time prior to the time students go to the cafeteria to eat. Students no longer feel the need to rush out to play before they finish their food.

- For the mental well-being of QLECS students, a Positive Behavior Interventions and Supports (PBIS) system is in place that is deeply embedded in the school culture and incorporates Second Step curriculum in classrooms to help instruct students how to understand and manage their emotions, control their reactions, be aware of others' feelings and have the skills to problem-solve and make responsible decisions. QLECS has an on-site school psychologist, counselor, speech therapist, and RSP teacher to meet the needs of all the students.
- In addition to a formal physical education program, QLECS students also work in the school garden on a regular basis. Students typically spend at least 30-45 minutes in the garden every other week. At recess, students are provided playground equipment that promotes physical play. There are play structures with ladders, steps, a rock wall, and climbing bars for kids to actively play on. Students are encouraged to play four square, tether ball, and a variety of team sports during breaks. QLECS's physical education teachers introduce to their students games and activities that they can and do to continue in their own time. Students are also provided with strategies for calmly solving disagreements during games without always needing adult support. The site custodian has also helped students to organize and run a lunchtime basketball tournament. Students have organized other sporting tournaments such as kickball. QLECS provides whatever is needed to help students lead recreational activities if they choose to do so. During both afternoon programs, LEAP and Campus Club, students are given additional opportunities for physical play. They balance their time between organized activities outdoors and child-led, child-directed physical play.
- To help increase staff wellness, QLECS has added tables with umbrellas in the shade for teachers to sit and take a minute to relax throughout the day. The staff has switched to monthly birthday potlucks which focus on healthy meals rather than treats. This offers both a good lunch as well as time for the staff to enjoy each other's company. Throughout the year, QLECS has student versus staff/parent sporting events to help keep teachers active. Teachers are encouraged to participate in the jog-a-thon with their students, even if it is just to walk with students as they get tired or need encouragement. The district offers free health screening annually to employees as well as free flu shots to all employees, retirees, and dependents.
- To improve health and wellness at QLECS and facilitate SUSD's Wellness Policy, Child Nutrition Services at SUSD has initiated efforts to extend the healthy and balanced school meal options to staff. Through the development of an online staff lunch center order option, all staff will have the ability to purchase and enjoy the same healthy meals that students consume daily. The online "staff lunch center" will extend access to healthy meals districtwide.
- QLECS also holds an annual Ag Day event on campus. This event is a great opportunity for staff and students to work with members of the agricultural industry. Local farmers are invited who teach the students about their business and also bring crop samples for the students to try. The Fresno Farm Bureau attends the event and speaks to students about the importance of farming in the area and healthy eating in general. Through the last several years, QLECS has expanded the Ag Day event to include more presenters, including some of its own students who are actively involved in agriculture organizations.
- QLECS uses the San Joaquin Air Pollution Control District website to monitor local air quality. The school uses this information to limit activities or even cancel events when

needed. Multiple staff members receive regular emails from the RAAN system when the air quality rises to an unhealthy level.

- QLECS uses a Coordinated School Health approach, which focuses on the prevention, identification, modification, and resolution of health related problems that interfere with a student's ability to achieve in the school environment. QLECS implements this approach through providing vision, hearing, and scoliosis screening for the entire student body, maintaining vaccine compliance, practicing preventive care by working with parents and medical professionals outside the school district, and training non-medical staff with First Aid and Emergency care provided in the Health Office. Additionally, QLECS works closely with the Special Education and Support Services staff to help each student learn at their current level of capability and assist these students in overcoming any and all challenges that they may face.
- QLECS partners with multiple organizations to help support student health and/or safety. QLECS's partnership with Hope Sanger has provided necessities to families. QLECS works with the Sanger police and fire departments on Stop the Bleed and Active Shooter training. The Fresno Superintendent of Schools provides Healthy Habits training showing teachers how to make smoothies with students. There are also several partnerships that offer resources for physical and mental health support and education. Such partnerships include working with organizations such as NAMI-Fresno, Turning Point-Rural Mental Health, United Health, and Fresno County Mental Health. QLECS has also partnered with several organizations that assist and support students and their families. Such organizations include Centro La Familia, which offers free nurturing and parenting classes in English and Spanish, Family Solutions, and Sanger Family Resource Center. For QLECS's partnership with the Marjaree Mason Center, victim services are also provided which include 24-hour help coverage, victim advocacy, classes, counseling services, education for youth and the community, safe housing for victims, and wrap around services for families.
- The district's Health Services Team works collaboratively across all sites as well as with community organizations in order to provide comprehensive services for students, families, and staff. At QLECS, a full-time LVN works in the Health Office providing first aid and emergency care for ill students, assistance in managing services for students with chronic medical conditions, and ongoing communicable disease monitoring. She works under the supervision of a credentialed School Nurse who is on site several times each week for support and monitoring; she is also available on-call throughout each school day. Additionally, both the LVN and School Nurse are supported by the district's Health Services Coordinator who oversees the department's protocols, services offered, staff training, interdepartmental collaboration, and community outreach.
- Some of the services offered by SUSD's Health Services Department include:
  1. Maintenance of AEDs, emergency 'stock' Epinephrine, and access to Emergency First Aid Guidelines for California Schools manuals at all school sites.
  2. CPR certification and District Protocol Training for care of medically fragile students offered to all coaching staff, school site office staff, health office staff, after school program staff, and other select site staff as needed.
  3. Care for medically fragile students: collaboration with students, parents and medical providers to create Individualized Care Plans and Emergency Care Plans for students with chronic medical conditions; training all staff working with these students as to implementation of such plans; and coordinating appropriate supervision for these students to ensure full access to school sponsored activities.
  4. Communicable Disease Prevention: strict enforcement of California's immunization requirements and the district's communicable disease protocols; health staff education

- about symptom identification and ongoing tracking; prompt notification to appropriate authorities regarding any potential outbreaks; staff/family/staff education about prevention; free flu shots provided/encouraged for all district staff.
5. Vision and Hearing Screening for students to identify potential problems and provide options for follow-up and treatment by medical professionals.
  6. Free Mobile Health, Dental, and Vision Clinics offered throughout the year at district school sites.
  7. TB Surveillance and Prevention Program for staff and students.
  8. Collaboration with district to promote safe and healthy school environments.
  9. Assistance with implementation of district's comprehensive sexual health and HIV/AIDS prevention program.
  10. Ongoing training and supervision of health staff to maintain up-to-date information about district health protocols/procedures and evidence-based best practices in School Health.
- QLECS has a strong foundational belief in supporting students' mental health with both strong prevention and intervention programming that includes healthy staffing ratios, professional development, and data collection that monitors implementation and efficacy standards. From its participation in various programs such as Positive Behavior Intervention and Supports, Student Assistance Programming, Second Step implementation, Special Friends, and Friendship Club, QLECS strives to build robust multi-tiered systems of support for all its students.
  - Beginning in 2014-15, SUSD created its Child and Adult Resource and Education team (CARE) to promote mental and physical health support for our students, families, and community. It works to eradicate the stigma of mental illness, bring mental and physical health services to the local rural community, and create stability through providing families with medical and mental health interventions. In addition to these programs, QLECS engages students to help in these efforts. In 2018, QLECS's 8<sup>th</sup> grade class played an integral part in suicide prevention week. The school partnered with Fresno County's Civic Learning Partnership as part of the Democracy School Program, which helped deepen commitment to prepare the students for the future and focus on those values and skills critical to the rights and responsibilities of U.S. citizenship. As part of this project-based learning initiative, QLECS's junior high students have worked collaboratively to help educate the greater community about teenage suicide and have produced educational videos that are now viewed on online.

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

#### Element IIIA: Interdisciplinary Learning

- QLECS is currently using the environmental literacy definition from California's *Blueprint for Environmental Literacy*. The current environmental or sustainability literacy requirement that QLECS has is for all grade levels to incorporate environmental topics into their integrated units. This includes reading, writing, and a final project on these topics. Many times, students will produce an opinion or argumentative writing piece based on what they have learned. A few examples of this are:
  - An integrated unit in kindergarten, "Animals, Plants and their Environments", in which teachers and students have discussions around "What human actions change the environment?" and "What choices can humans make to reduce their impact on the environment?"

- 6<sup>th</sup> grade students study a water conservation unit where they learn how and why California needs to conserve water. Students that attend the school and live in the QLECS community study their water use and ways to advertise water conservation approaches in their neighborhood. At the end of the unit, students write an informative essay covering water conservation and their approach to the issue.
- 7<sup>th</sup> grade students participate in a Science and English integrated unit where they learn how plastic water bottles harm the environment, as well as the consumer market scheme around them. Students debate whether recycling water bottles is more effective than not using them, and create an advertisement campaign around their choice. Students also visit a water treatment facility in Clovis where they learn the history of water filtration, the use of and environmental positive impacts of aquaponics, water testing and legal water rights.
- Being located in a rural area, QLECS's vision is to create school grounds that provide students with opportunities to play and learn in an environment that promotes a healthy lifestyle while gaining an appreciation of the environment. QLECS works closely with the district grounds team to grow more grass, add native species to flower beds, and make additional outdoor working spaces for students.
- QLECS has spent the past four years building integrated units in each grade level. These units combine standards from multiple subject areas, project based learning, technology in the classroom, and hands-on lessons to strengthen students' skills and understanding within the more rigorous guidelines of CA NGSS and CA CCSS. Whenever possible, staff integrates environmental and sustainability concepts within the units. Several teachers have completed the Education and the Environment Initiative training and obtained the materials to use as resources for their units.
- In addition, Project Lead the Way (PLTW) is used in many of the Integrated Units. PLTW is a K-12 STEM curriculum incorporating project-based learning in order to prepare students with the knowledge and skills they need to succeed in the 21<sup>st</sup> century.
- As young as Kindergarten, students are beginning to think critically, as well as begin to lead their own learning. Students in grades K-8 participate in garden education classes. The K-5 program is designed to teach students how to grow seasonal crops, become scientific observers and complete field journals. Students learn the importance of environmental stewardship, sustainability and healthy eating habits. Garden teachers use the standards to connect to the concepts and topics that are being taught daily in the classrooms.
- In 2016, QLECS created a student Green Team to support the school's environmental initiative. Monitoring the three-bin system in the cafeteria is now a routine job for all students that is part of campus culture. Green Team members help to teach other students about new programs or systems on campus, monitor the lunch room, and help maintain the outdoor compost bin.
- QLECS field trips to study environmental education include:
  - Kindergarten students visit a local pumpkin patch farm to extend their unit on plants.
  - First grade students visit the Fresno Chaffee Zoo's Education Center.
  - Second grade students attend the Sanger Nature Center.
  - Third grade students visit Scout Island (an outdoor education center located on the San Joaquin River) to release the fish that they grow as a science project in their classroom.
  - Fourth grade students visit Sequoia National Park.
  - Students in 5<sup>th</sup> grade visit Sequoia Lake for Conservation Day.
  - Sixth grade students spend three days at Sierra Outdoor School (6<sup>th</sup> Grade Camp).



- 7<sup>th</sup> grade students visit a Clovis Water Treatment Facility.

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

- At QLECS, sustainability and the environment is used as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge. To accomplish this, the school encourages students to utilize recycled supplies when doing STEAM projects. QLECS provides reused and recycled materials for students to use in the school Makerspace. In addition, they are asked to think about what resources they originally came from and the sustainability of those resources.
- As students enter middle school, staff begins discussing and modeling green engineering principles with them. Middle school students are offered a PLTW elective class called Energy and the Environment. In this course, students explore the impact of energy in our lives and search for sustainable solutions for the future. They design and model alternative energy sources and evaluate ways to reduce energy consumption. Students are also given the opportunity to participate in robotics at QLECS in varying levels. Robotics challenges address real-world problems such as energy, recycling, and food safety.
- Through the QLECS school garden, students are taught about sustainability on a regular basis. Whenever possible, green technologies such as the drip irrigation, moisture detecting irrigation systems, alternate energy sources, and organic farming are incorporated. For the school-wide Ag Day, local farmers and community members involved in the agriculture industry are brought in to speak with students. This gives students an opportunity to learn about various careers in the ag science industry. QLECS incorporates a note-taking and writing piece as a follow up to Ag Day. This helps students to focus on specific information during presentations and then reflect on what they have learned. For older students, this incorporates a career section.

### Element IIIC: Civic Knowledge and Skills

- QLECS takes pride in its efforts to produce informed and active students. Through project-based inquiry, students understand a wide variety of issues facing their community. In 7<sup>th</sup> grade, students study and develop new ways to conserve water. They research from citizen, legislator, and farmer points of view and create solutions to community problems. Third grade students work with the California Department of Fish and Wildlife to learn about environmentalism and life cycles by raising salmon to be released into the San Joaquin River and caterpillars/butterflies that are released into the school's garden. Through these processes, they learn to be environmental stewards and that they can help rehabilitate the environment.
- Each K-5 class works with their students to design a classroom Science Fair project/problem that is built around an environmental aspect and/or issue. These projects change from year to year. One example is from fourth grade, where students chose to test the effectiveness of solar panels with different types of debris on them. Other topics include various types of pollution and water conservation. These projects often lead to teachers bringing in experts in the field as guest speakers or reaching out into the community for help.
- All middle school students participate in an online system called Naviance. The program offers students an opportunity to learn about careers that they may have never even heard of. One of QLECS's goals through Naviance is to spend time discussing environmental career pathways. Another way that QLECS middle school students are exposed to green career pathways is through electives such as Ag Business, PLTW Design and Modeling and

PLTW Energy and the Environment class. Teachers often discuss career paths that these classes lend themselves to. By the time students are in the 8<sup>th</sup> grade, they all complete a career project where they begin planning for their future careers. This includes researching potential careers and what it will take to get there. The process entails planning their courses for high school, college, and beyond.

- For the last few years, QLECS has participated in Living Schoolyard Month. School personnel plan extra activities for students to enjoy the outdoors and appreciate nature on campus. Last year, with the help of the Dyer foundation, the school was in the process of completing the new butterfly garden. Students helped work on this project throughout the month by moving soil, planting plants, building benches, painting rocks to create borders around the various beds, and completing a variety of other tasks involving the school's outdoor environment. Kindergarten and third grade students also raised butterflies and released them in the newly opened garden. Students now enjoy this space daily.
- Recently, during the garden/ag elective, middle school students researched plants and learned design methods for the new raised beds in front of QLECS. They used iScape on their iPads to assist them in this process. Students then had to present their ideas along with a cost analysis, scaled drawing, explanation of choices, and exported pictures from iScape to the class and administration to see whose plan would be chosen. Finally, students planted the beds with the winning designs. This one project covered all subject areas while students helped to enhance the campus' outdoor space.
- QLECS has partnered with California State University Fresno to work with future teachers. For the first time this winter, students in the credential program will come out to QLECS to teach science lessons. Through this experience, future teachers will be able to put into practice what they are learning in their science theory class. QLECS students will receive exposure to additional lessons in science and our teachers will have a chance to mentor future teachers.
- Over the past few years QLECS was able to increase the service learning projects on campus. A new service learning class was implemented, where students have designed and carried out many projects to help the local community. In this class, students are encouraged to research topic that interest them and they feel they can have an impact in. This year a group of students is working on a hand dryer versus paper towel project. They are looking at which is more cost effective, healthier for kids, and better for the environment.
- The student government/leadership team created a "Kindness Tree" where students left positive and inspirational messages to encourage the community to respect and love each other. This year, students are endeavoring to help the district embed environmental practices throughout the Sanger community by providing teams of students to other school sites who want to implement green practices.
- Over the last five years, QLECS has gone from being an environmental school in name to embedding environmental aspects into almost all it does. Although the program started small by just introducing recycling, it has now far surpassed what some thought could be done with the full circle of composting lunch waste in the garden. The school custodian now returns from family vacations with pictures of waste sorting systems that he saw with his family, students are asking their parents where the compost bin is at McDonald's and the office staff is leading the district in several ways to go paperless and green. Across the school district, school secretaries are sharing microfiber cloths and water refilling station installations are becoming a common school accessory.
- At QLECS Environmental Charter School, a variety of learning experiences happen in the school garden outdoors. The school recently received a grant from CORTEVA agriscience to start the process updating the outdoor space to allow for more engaging lessons, thus

turning it into a 21<sup>st</sup> century garden. The update will include outdoor technology, a shade structure, and new tables to help enhance the Science and Ag Education Program. The goal is to get new benches and a retractable shade sail for the students' work space where they can complete labs and activities in a comfortable environment, next to the garden beds. The school is in the process of installing a large, outdoor TV with an Apple TV to make presenting crop and weather data, video resources and much more with iPads and/or laptops. A video microscope will also allow students to learn lab skills and share their findings with the entire class. By making these changes to the current space, students will see how technology, science, and agriculture all go hand in hand. Today, many farmers use a variety of technology to increase crop production. Students will begin to see the relevance of technology in farming and plant production today, so they are prepared for a possible Science or Ag Career pathway if they choose.