



## District Nominee Presentation Form

### CERTIFICATIONS

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#### District's Certifications

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

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

### U.S. Department of Education Green Ribbon Schools District 2015-2018

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Name of Superintendent: **Dr. Robert J. Leri**

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

District Name: **Tahoe Truckee Unified School District**

(As it should appear on an award)

Address: **11603 Donner Pass Road, Truckee, CA 96161-4953**

Telephone: **530-582-2500** Fax: **530-582-7606**

Web site/URL: <https://www.ttusd.org/>

E-mail: [rleri@ttusd.org](mailto:rleri@ttusd.org)



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

*Robert L. Leri*

Date: March 7, 2018

(Superintendent's Signature)

### Nominating Authority's Certifications

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

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

Name of Nominating Agency: **California Department of Education**

Name of Nominating Authority: **State Superintendent of Public Instruction Tom Torlakson**  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

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

*Tom Torlakson*

Date: March 30, 2018

(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, 2018

### 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.



# *Tahoe Truckee Unified School District*

California District Sustainability Award 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](#)  
March 2018

## PART II – SUMMARY OF ACHIEVEMENTS

### Tahoe Truckee Unified School District, Truckee, Calif.

*Integrating a precious natural element into educational goals*

The Tahoe Truckee Unified School District (TTUSD) serves approximately 4,000 students at five elementary schools, two middle schools, three high schools, and one alternative school. The District encompasses more than 720 square miles in the Sierra Nevada Mountains, including the north and west shores of Lake Tahoe.

Among the District's vision and beliefs is a foundational commitment to reducing environmental impact, improving health and wellness, and building environmental literacy. TTUSD Belief #7 states, "The Lake Tahoe region is precious, and we value our physical environment and integrate this element into our educational goals."

A unique partnership exists between TTUSD and Sierra Watershed Education Partnerships (SWEPE), a community-supported 501(c)(3) nonprofit. SWEPE promotes environmental stewardship by connecting students to their community and local environment through comprehensive watershed education and service learning. SWEPE, school administrators, and teachers work to promote environmental education and lead sustainability clubs district-wide. The first Sustainability Club in TTUSD was started in 2010; by 2013, clubs were introduced across all sites.

TTUSD has an in-house Certified Energy Manager that manages energy and water conservation programs. The District has a long history of conservation efforts to reduce energy and water use, dating back to 2002 when the District adopted cool roof standards. The District's first green building project was built in 2005; Alder Creek Middle School received Collaborative for High Performance Schools (CHPS) verification, exceeding Title 24 by 25%. All current projects are designed to LEED Silver standards.

TTUSD subsequently implemented a Conservation Committee, began benchmarking resource use, and adopted Energy Conservation Guidelines. Lighting retrofits, occupancy sensors, boiler replacements, and an energy management system are examples of projects undertaken by the District. In 2012, TTUSD began retro-commissioning projects. The District has used Lucid BuildingOS since 2014; an online dashboard is available to the public.

TTUSD demonstrates a 25% reduction of water consumption between the 2012–13 and 2016–17 fiscal years. Efforts to reduce water use include using reclaimed water for the transportation facility's bus wash, replacing irrigation controllers with smart controllers, replacing restroom fixtures with low-flow fixtures, making auto-off nozzles standard attachments on all hoses, replacing spray irrigation with drip in most landscaping areas, and implementing a leak detection program. In 2015, the District adopted water conservation guidelines and implemented a strict schedule of watering days. In 2017, the District adopted Low Impact Development (LID) standards and implemented these at two construction projects.

As a Farm to School district, salad bars utilizing locally-grown produce are at all sites and preference is given to purchasing locally grown produce within 150 miles of district boundaries. Since 2006, TTUSD has implemented the Harvest of the Month program which features California-grown produce for the purpose of engaging students in the world of agriculture and nutrition. Food Services works in partnership with two dietitians from Tahoe Forest Hospital to coordinate a robust nutrition education program. At every K-8 school campus, every month,

students receive fresh produce in the classroom and taste test a recipe created by utilizing the Harvest of the Month featured fruit or vegetable. Over 100 parent volunteers are organized each school year, provided training, curriculum, and a school schedule to provide lessons in the classroom. Parents work closely with teachers to integrate into daily core academic curriculum in addition to a standard nutrition education lesson.

A project-based learning program called PEAK (Precision, Endurance, Action, and Kindness) is offered as a two-year project-based learning program for ninth and tenth graders. This program includes PEAK versions of both River Ecology and Marine Biology courses offered in the District. Through an integrative learning approach, students are involved in community sustainability efforts.

In the Winter Discovery Program led by SWEP, 3<sup>rd</sup> through 5<sup>th</sup> grade students visit an official “Snow School” site up to three times within three months for three different Winter Ecology lessons. The Snow School is located next to a community Cross Country Center. Students cross country ski for an hour and then do a winter ecology lesson with a SWEP instructor in a heated Yurt supplied with tables, chairs, monitors, and microscopes. These annual winter ecology field trips combine ecology lessons; science explorations; and lessons on climate change, the climate crisis, snow, and water issues; with cross country skiing and basic winter skills.

An annual STEAM Fair, now in its sixth year, is open to all students, parents, and community members. The event celebrates civic and community engagement projects integrating environmental and sustainability concepts such as eco-recycling and solar-charged cars and devices, and averages close to 700 attendees. Local businesses and organizations set up interactive booths for attendees to engage and learn about STEAM application to the real world. CTE Pathways students have the opportunity to publicly exhibit the culmination of their work at the STEAM Fair as well.

At the community’s annual Earth Day event in Squaw Valley, over 200 hundred local TTUSD students participate with fellow students and teachers to share sustainability efforts that schools and students are making in the areas of energy, waste, and water conservation. Students run educational outreach booths with hands-on activities and lead musical performances; Sustainability Club members from at least eight clubs in the District put on a popular Trashion Show in front of an audience of hundreds of local adults and children.

TTUSD is committed to an educational environment that not only sustains the existing natural beauty, but models and provides sustainability enriched learning opportunities for students so they can productively contribute to and make informed decisions as citizens of the 21st Century. TTUSD received recognition as a California Green Ribbon Schools Gold Level district in 2017.

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

The Tahoe Truckee Unified School District (TTUSD) serves approximately 4,000 students at five elementary schools, two middle schools, three high schools, and one alternative school. The District encompasses more than 720 square miles in the Sierra Nevada Mountains, including the north and west shores of Lake Tahoe. The District territory spans Nevada, Placer, and El Dorado counties.

TTUSD is a Basic Aid district funded by property tax revenue. For purposes of comparison, approximately 39% of TTUSD students are “unduplicated pupils” for purposes of California’s Local Control Funding Formula, which directs supplemental resources to Local Educational Agencies to support the delivery of targeted services for students who are English learners, foster youth, and/or income eligible for free or reduced-price meals. About 41% of TTUSD students are from communities of color.

## Pillar I: Reduce Environmental Impact and Costs

### Element IA: Energy

- In 2009, TTUSD adopted Energy Conservation Guidelines. Gas, electricity, and water usage are recorded daily via a [Lucid Dashboard](#) that is available to the public.
- Board Policy 3510 (2013): Green School Operation and Board Policy 3511 (2013): Energy and Water Management affirm TTUSD’s commitment to green school practices that conserve natural resources, reduce the impact of district operations on the environment, and protect the health of students, staff, and community.
- Maintenance and facilities staff utilize the background program BuildingOS, which generates a weekly site report to monitor energy usage. TTUSD receives benchmark reports from Liberty Utilities and has implemented nearly \$1 million in energy efficiency measures with Proposition 39 funding. Additionally, Board Policy 7111 dictates that existing facilities are evaluated regularly for adequacy, health, and energy conservation.
- TTUSD began its energy conservation program in the 2008–09 school year, using data from the 2007–08 school year as the baseline year. In 2007–08, TTUSD facilities consumed 5,808,590 kWh and 337,698 therms. TTUSD uses an online conversion tool to convert these values to metric tons of greenhouse gas emissions yearly. TTUSD went from emitting 6,113 metric tons of GHG to emitting only 4,890 metric tons per year, equating to a 21% reduction from 2007–17. The initial GHG emissions rate was 1.358 MTeCO<sub>2</sub>/person. The final GHG emissions rate is 1.078 MTeCO<sub>2</sub>/person.
- Liberty Utilities provides benchmark reports every three years, including an ENERGY STAR score. TTUSD uses these along with the BuildingOS dashboard system to monitor and manage their facilities and prioritize the energy conservation projects. Currently 6 out of 11 facilities have an ENERGY STAR rating above 70: Glenshire ES (84), Alder Creek (88), North Tahoe (76), Sierra Continuation HS (75), Tahoe Lake ES (75), and Sierra Expeditionary Learning School (75). TTUSD has projects under construction to increase the efficiency of three additional schools to bring them above the ENERGY STAR rating by 2019–20.
- The Benchmark reports TTUSD receives from Liberty Utilities indicate the District has reduced non-transportation energy use (kBtu/sq.ft) by 18% from 2007 to 2016 and improved overall performance. Weekly reports from BuildingOS include supporting data.
- TTUSD has two schools that generate renewable energy on-site. A ground source heat pump system at Alder Creek Middle School produces about 50% of the site’s heating and cooling. This site also has a small photovoltaic system which generates an average of 1,000 kWh/year. A photovoltaic system at Kings Beach Elementary generates about 9,000 kWh/year, about 18% of that site’s usage.
- California’s renewable portfolio standard is currently 20%. Truckee Donner PUD utilizes 61% renewable energy which is 41% above their portfolio minimum. Liberty Utilities utilizes 22% renewable energy. Liberty Utilities purchases power through a power

purchase agreement with NV Energy. Liberty Utilities estimates its total renewable power mix is 36%.

- TTUSD's Proposition 39 funding allocation is \$1,093,206 over five years. These funds were used primarily on LED lighting retrofit projects.
- In addition, TTUSD has received \$467,158 in utility company rebates since the beginning of the energy conservation program. The California Conservation Corps provided energy audits at no cost. From these audits, UC Davis developed recommendations for energy conservation measures, valued at over \$150,000. The California Energy Commission provided \$58,895 in engineering assistance; TTUSD submitted another Bright Schools Program grant request in 2018. Liberty Utilities provides TTUSD with energy benchmark reports every three years at no cost, valued at \$28,000 to date.
- TTUSD had several construction/renovation projects that met green building standards. Alder Creek Middle School was one of the first schools certified by CHPS in 2005, exceeding Title 24 by 25%. Energy Conservation Guidelines were adopted in 2009. The last three schools built by TTUSD exceed ENERGY STAR certification requirements. All renovation projects include daylight harvesting, dimming, LED lighting, boiler and HVAC upgrades, window upgrades, increasing R value in walls and roofs, minimizing lighting where possible, smart HVAC solutions that utilize free cooling, heat exchangers, passive solar design, and other items as the project requires – saving an additional 8% when complete. All district architects design to LEED Silver standards.
- TTUSD adopted cool roof standards in 2002. All roofs in the district are cool roofs except small sections required to shed snow. The District works with designers to minimize the paved surfaces on their campuses. TTUSD looks for ways to provide required access for emergency vehicles that can double as playgrounds or services access. TTUSD creates play areas with permeable surfaces and utilizes bioretention basins and vegetated swales in lieu of underground storm drain wherever possible.
- In 2008, an in-house Certified Energy Manager began an energy conservation program. Community support for sustainable practices at TTUSD schools quickly increased. Grant and PTO funding increased, and multiple partnerships were formed to reduce the depletion of natural resources and the district's contribution to the landfills. The first year the program saved \$200,000 on just gas and electricity. Local utility companies provide technical support, free test projects, measurement and verification of energy conservation projects, and generous rebates.

#### Element IB: Water and Grounds

- To monitor indoor and outdoor water usage, TTUSD maintains a spreadsheet with each month's usage and cost recorded for each site. TTUSD also has real-time water consumption monitoring through Lucid Dashboard and *Building OS* systems for half of their sites. The dashboard for each school is publicly displayed on the District website. This system helps find leaks and ensures the controllers are watering only on set days as established for drought regulations. Larger athletic fields have separate water meters to allow better control and monitoring.
- TTUSD demonstrates a 25% reduction of water consumption between the 2012–13 and 2016–17 fiscal years. The data was collected from the three different PUDs that support the three counties. TTUSD has continued this data collection by entering the water usage and bill amount monthly from the water bills.

- Efforts to reduce water use include using reclaimed water for the transportation facility's bus wash, replacing irrigation controllers with smart controllers, replacing restroom fixtures with low-flow fixtures, making auto-off nozzles standard attachments on all hoses, replacing spray irrigation with drip in most landscaping areas, and implementing a leak detection program.
  - In 2014, TTUSD purchased two Little MOE Industrial Carpet Cleaners for use at every facility, reducing the water usage from 24 gallons to 1.5 gallons per classroom.
  - In 2015, the District adopted water conservation guidelines and implemented a strict schedule of watering days.
  - In 2017, the District adopted Low Impact Development (LID) standards and implemented these at two construction projects.
- Some of the existing sites and all future projects will utilize roof drains to planters, minimizing or eliminating the need for irrigation. All new construction includes a rainwater capture system. TTUSD received more than \$700,000 in funding from the State Water Resources Control Board's Drought Response Outreach Program for Schools (DROPS) for LID improvements including a rainstore system, bioswales, retention basins, permeable pavers, flow-through planters, roof drain capture, and slope stabilization. This grant has inspired the designers to implement LID features on all projects. TTUSD also looks to minimize paved areas due to snow removal and storage requirements.
- Less than 10% of TTUSD sites are irrigated; existing irrigation systems were installed between 1990 and 2017. 100% of the turf area at TTUSD is used for physical education or other educational purposes, including recess. TTUSD has two out of twelve sites (approx. 17%) that are artificial turf fields. Both turf areas are used for physical education and other educational purposes.
- TTUSD is committed to utilizing native plants, natural soil infiltration methods, and LID techniques in construction projects. All of the sites use 100% native plants and trees with the exception of small vegetable gardens. Many of the sites are natural landscaping (what already existed) or landscaping that requires no water. Where landscaping is required to be installed per regulatory agencies, TTUSD utilizes native plants that require watering only for the first few years of establishment.
- The shared campus of North Tahoe School and North Tahoe High School (serving grades 5–12) is 64 acres. Educational programs occupy less than 9 acres of this parcel, leaving 82% as open forest. Students and community use this vast area for research and field study, running, hiking, biking, and horseback riding. At all sites, a significant amount of unimproved land is retained for snow storage. This provides an ecological study ground for all seasons. On average, 36% of school grounds are devoted to ecologically beneficial uses.

#### Element IC: Waste

- TTUSD calculates garbage service savings in dollars and %; the current waste savings from 2011 to date is \$392,088.51. The local disposal service separates mixed recycling at the Material Recovery Facility. TTUSD separates and diverts all CRV, recycling in the classrooms, and Terracycling. TTUSD will begin to separate all compostable organic waste this summer and the local disposal company will pick it up separately.

- Small vermiculture systems are at all the elementary schools and used for science demonstration of the food cycle with worms. Since 2011, Truckee Elementary has had the most extensive and longest running program with six vermiculture bins. The District partners with the Town of Truckee, Tahoe Truckee Sierra Disposal, and Placer County on testing composting systems. The tests indicate that on-site pile composting is not viable for the climate and active bear population.
- TTUSD is on-track to either have digesters onsite or separate organic waste for special pick-up at the 4 largest facilities by August 2018. TTUSD will begin separating organic solid waste in the school kitchens at summer school to help identify what challenges/successes lie ahead. When school begins in the fall of 2018, all TTUSD kitchens will separate organic waste and the custodians will collect organic waste separately for pick up to be distributed to one of the four largest facilities. In November 2018, student Sustainability Club members will teach all of the students how to properly separate their solid organic waste during lunch time. Kitchens begin the first phase of the process, and then students will follow in the late fall, during the second phase, to assure solid waste collection success. Placer County and the Town of Truckee as well as the Tahoe Truckee Sierra Disposal will all be supporting TTUSD and Sustainability Clubs in this very important waste diversion process and adoption which aligns with California State goals. Sustainability clubs are also always working to reduce the amount of unwanted food students select at lunch. Students made a video about the groups of food and what students are required to select as a tool for educating other students.
- TTUSD and its partners developed a district-wide waste stream management and recycling program in 2011. Regular lunch waste audits are performed by students. TTUSD tracks bills and uses clear plastic bags and regular dumpster inspections to see what is being thrown away. Current waste savings tabulation since implementing the program is at \$392,088.51. "Smart Sorting Bins" allow recyclables and TerraCycling to be separated from trash. Recycling guidelines have been established districtwide.
- Hazardous Materials Surveys and AHERA reports are maintained for all sites. New construction is certified as lead and asbestos free, and uses zero VOC paint. New construction and energy conservation projects eliminate fluorescent lamps (replaced with LED), and remove ballasts containing PCBs. Larger and small batteries in equipment are recycled via a reclaim vendor. Abatement of asbestos, lead, mercury, Freon, and PCBs is performed using a licensed abatement operator and separate abatement inspector for all modernization projects. TTUSD's Transportation Facility has a central fueling station for their vehicles and is the only site that retains hazardous chemical storage; their HazMat business plan is updated annually. All other district sites minimize hazardous chemical containers. A diesel particulate filter (DPF) blaster and oven allows for filters to be used many times and diverts thousands from the landfill. The particulate matter is properly disposed of at the local transfer station. Custodial and food staff is annually trained in handling and disposing of hazardous waste.
- TTUSD's Board Policy on Integrated Waste Management, BP 3511.1, connects the conservation of natural resources and the protection of the environment to the district's educational mission and health and well-being of the community. Board Policy requires an integrated waste management program that incorporates the principles of green school operations and includes strategies designed to help the District reduce solid and hazardous waste generation, improve efficiency in its use of natural resources, and minimize the impact of such use on the environment.
- TTUSD banned the use of Styrofoam at all sites. The Town of Truckee donated 80 sets of dishes to TTUSD Food Services and 20 to the TTUSD Board of Education so single-

use disposable items can be eliminated from meetings, trainings, and catering events. TTUSD Board of Education walks the talk by no longer using single-use disposable water bottles at meetings; washable cups and water pitchers are provided.

- TTUSD has an environmentally preferable purchasing policy through Office Depot and the local custodial supply company. TTUSD tracks Office Depot green purchases and currently purchases office/classroom paper with a 30% post-consumer material content. About 10% of the products (writing pads, pens, folders) have some post-consumer recycled content. All purchases of cleaning products are from a local supplier of Green Seal Certified products, Tahoe Supply Company; 90% of cleaning products are third-party-certified as green. Cleaning products are purchased in “Smart Sacks” whenever possible to significantly reduce waste—the sacks flatten to nearly nothing. The food service department buys green and has trained vendors to look for product with the least packaging. TTUSD converted all of its paper towel dispensers to 100% recycled content product in 2013.
- In addition to computer labs at each school, the Technology and Information Services Department at TTUSD provides 1:1 Chromebooks and maintenance for all students in grades 4–12. This promotes the use of online education programs and has significantly reduced the District’s paper usage over the last few years. Schools have also used site funds to purchase additional Chromebooks for 3<sup>rd</sup> grade students. Most of the K–2 students are using iPads provided by the sites. Parents register students online and purchase bus passes and school meals online avoiding paper use.
- At the end of the 2016–17 school year, all schools received a message from TTUSD and SWEP staff [Sierra Watershed Education Partnerships] to help reduce “End of the School Year Waste.” Donation-reuse tables were set up in the main lobby of each school to collect and redistribute unused school supplies. Any excess was donated to local thrift stores and organizations or saved to donate at the beginning of the next school year. TTUSD Eco Action students made this [how-to video](#).

#### Element ID: Alternative Transportation

- TTUSD encompasses more than 720 square miles and winter driving conditions can be challenging. The Transportation Department, made up of seasoned professionals, takes pride in their work and in the safe and timely arrival of the students. Thus, getting to school by school bus, of which approximately 3100 (78%) students do, is very safe. Glenshire ES held a “Fresh Air Day” on September 27, 2017 as an education and outreach effort to get students and parents out of individual cars. On the day of the event they recorded a 30% reduction in single student cars, a 20% increase in walkers, and a 10% increase in rollers to the school. Glenshire ES, Truckee ES, King Beach ES, and Truckee HS are located in residential zones and a higher percentage of students walk or ride a bike to these schools (estimated at 15% average).
- TTUSD has installed “No Idling” signs at parent loading zones for schools and buses to not idle on campus. TTUSD has in its design standards and owner’s project requirement documents for all facility construction projects that vehicle loading/unloading areas are at least 25 feet from building intakes, doors, and windows. Glenshire ES has a “walking bus” program and is located within a residential area. A higher percentage of students walk or ride their bike to this school, some with parents. Electric vehicle charging stations are being installed at four major campus bond projects over the next two years. Bike racks are provided at all campuses; skateboards and scooters are stored inside.

- Board Policy 5142.2 details the strategies to establish and promote safe routes to schools. Qualified transportation staff completes a rigorous training program that exceeds both state and federal requirements. TTUSD partnered with the Town of Truckee for both State and Federal Safe Routes to School Program funding to construct sidewalks, crosswalks, flashing lights, speed reductions radar signs, and lighting around multiple sites (5 out of 10). The Town of Truckee participated in the design, engineering, and costs of these improvements, contributing more than \$500,000.
- The District fleet has reduced environmental impact by recycling motor oil, solvents, coolant, oil filters, absorbent materials, aerosol spray cans, tires, metal, batteries, fluorescent bulbs, glass, cans, aluminum, and cardboard. A water recycling system is built into the bus wash system. Grants and other funding enabled TTUSD to replace three buses, install 21 diesel particulate filters (DPF) on the old buses, and purchase a DPF blaster and oven. Paperless vehicle inspection devices are used daily to reduce dependency on paper products.

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

### Element IIA: Environmental Health

- TTUSD has a written Integrated Pest Management (IPM) Plan and is in full compliance with the *Healthy Schools Act*. Two IPM coordinators, Supervisors of Custodial Services and Maintenance, manage the IPM requirements and staff training. There are few pest management challenges due to climate (Zone 16). Pesticides are not used on any campuses. For a severe situation, signage is posted before, during, and after the application. TTUSD conducts limited or no spraying for pests and address specific issues with targeted measures like bird netting, bird-be-gone electronic sound waves, termite management, under-slab injections, and electronic sound waves for rodent control. Traps are used for maintaining the yellow jacket population with the exception of some spray controls for underground hives. These are all posted as required. Two artificial turf fields require no water, fertilizers, or pesticides.
- Signs in English and Spanish citing district no smoking policy are clearly posted across all district-maintained facilities. Mercury, found in some switches and thermostats from the 1950s, has been removed and properly disposed. CO detectors are in all facilities. Code-approved equipment is used in natural gas-powered boiler rooms. Trained personnel properly identify, test, and report potential asbestos. Only one school has a wood structure made of locally harvested, untreated wood, which is not expected to have chromate or copper arsenate. All chemicals are labeled and stored in a vented and locked room. Small quantities are purchased to minimize exposure. Science classes do not use mercury.
- Maintenance and custodial staff are trained annually on chemical handling, storage and use. Annual inventory and disposal is done with third-party licensed handlers. Transportation department follows the TTUSD HazMat Business Plan when handling hazardous materials. The District has been tested for radon and no actionable levels were detected.
- 90% of the classrooms in TTUSD schools have good acoustics; 95% have good daylighting and high-quality electrical light when needed; and 100% have good relative humidity control. 50% of the classrooms exceed minimum outdoor air exchange rates; the exceptions are sites that were designed without fresh air in the 1950s. These will be brought up to CMC requirements by the current bond program. Under this bond

program, the district will finish updating all schools during the next two years. 100% of the classrooms have views of trees and nature.

- The three newest schools (Glenshire Elementary, Alder Creek MS and North Tahoe MS/HS) were all built with classroom acoustics as a high priority. Acoustical properties were a high priority during material selection, particularly the acoustical ceiling tiles. TTUSD targets reverberation times of between 0.5 and 0.67 seconds on all new ACT installations. Modernizations on all sites were performed from 2000 to 2008. All classrooms were upgraded with new ceiling tiles, carpet, and window coverings to improve the acoustics of each room. All classrooms have natural daylighting and complete overhead lighting systems. Low relative humidity is experienced year-round with the average relative humidity at about 50% to 60% in summer and 70% to 80% in winter. TTUSD is fortunate to be located in the Tahoe National Forest. Because of good site planning, over 95% of classrooms look directly out at trees or trees within a playground or parking lot. This creates the strong connection to the natural environment within the District.
- Filters are changed twice every year to maintain good quality air and filtration. Regular cleaning of coils and fans are performed at this time. The prevailing storm direction in the area is from the south and west. All air intakes are located on the north or east side of the buildings keeping the air intake ducts dry and clean. A building management system gives clear indications of problems and supports the quick and effective response needed to address ventilation issues. CO<sub>2</sub> sensors and 'demand controlled ventilation systems' are installed in all large spaces to maintain an ideal air exchange rate without using unnecessary energy to over condition these spaces. The design standards in the district specify all air intakes are to be placed away from vehicle paths. Dedicated exhaust systems have been identified for chemical storage areas, restrooms, locker rooms and gyms.
- Only low VOC materials are used in classroom construction and maintenance programs. There are very limited mold problems due to naturally low humidity. All air filters on all the HVAC equipment is changed twice per year and more often if needed. The district does not use pesticides or herbicides on fields or landscaping. Ceiling tiles and other materials that are impacted by leaks are replaced so mold can't grow.
- Annual roof inspections minimize roof leaks and remediate excess water and include dehumidification as necessary. Replacement of materials like ceiling tiles, insulation, walls, and carpet are done when water damage occurs. Maintenance and construction practices include capture of condensation, quick draining to avoid standing water and evaporation.
- TTUSD is served by three separate water providers: Truckee Donner PUD, Tahoe City PUD, and North Tahoe PUD. All PUDs annually test the water serving all facilities and the water consistently meets or exceeds regulatory standards. One school is served by a private well and is tested monthly for coliform and annually for all contaminants. This site has occasionally had some contaminants exceed allowable levels due to naturally occurring soils conditions. When this occurs, the site is provided bottled drinking water until the problem is resolved. TTUSD has a "no lead" policy for all water pipes, fittings, and fixtures. Construction projects at TTUSD are all certified to be lead free for drinking water elements. All maintenance projects utilize lead free pipes, fittings, and fixtures. The Public Utility Districts conduct tests for lead and have not reported any elevated lead levels to date.
- Employees follow safe personal protection measures. All chemicals are handled with gloves and masks during application. Chemicals are stored in locked and labeled

custodial closets and regularly inventoried. All cleaning products are Green Seal Certified from Tahoe Supply Company with the exception of bleach, which is used rarely, never during school hours, and diluted when used with notices posted. Floor stripping and waxing is completed during summer and school holidays only. During this process, doors and windows are opened and ventilation is set to 100% fresh air. High school science teachers have updated lab safety, chemical storage, and disposal protocol using the National Science Teachers' Association (NSTA) Position Statement on Lab Safety, Flinn Scientific Chemical Disposal Procedures, and collaborated with scientists from the local sanitary district and sanitation agency. All surplus chemicals are removed by a third party and disposed of properly. Science lab chemicals are used in conjunction with exhaust hoods whenever fumes are produced.

- Air filters are routinely maintained and changed twice a year to ensure indoor air quality. Carpets are cleaned twice a year during school vacations allowing for ample drying time and ventilation. Ceiling tiles are inspected regularly by site custodians and maintenance. They are replaced whenever necessary (for example, if a roof leak occurs), to prevent any mold or mildew growth.
- TTUSD develops a Stormwater Pollution Prevention Plan (SWPPP) with every project and hires a third-party QSP (Qualified SWPPP Practitioner) for all projects that disturb large areas of soil. At all sites, rock, pine needles, and wood chips are used to minimize soil erosion. TTUSD's DROPS grant has been used to install LID features as described in Pillar I. Additionally, the DROPS funds will pay for educational signage to help the students and community understand the importance of LID. A portion of the grant will also pay for education and outreach programs that will include onsite monitoring of LID features, videos, posters, brochures, field trips, and event publicity.
- Grass clippings are mulched into the fields. TTUSD does not use pesticides or herbicides. TTUSD utilizes underground de-icing systems at all its major entrances to each facility. Additionally, TTUSD uses environmentally friendly ice melt products. Watering practices continue to follow drought guidelines.

#### Element IIB: Nutrition and Fitness

- All school meals programs meet the General Criteria section and Bronze eligibility of the Healthier US School Challenge. All snacks and a la carte items exceed the Smart Snacks in School Nutrition Standards. Smarter Lunchrooms strategies are implemented daily. Preference is given to purchasing locally grown produce within 150 miles of district boundaries. TTUSD is a Farm to School district, with salad bars featured at every school site utilizing locally grown produce. Tahoe Food Hub, an established partner, provides an average of 17,000 pounds of locally grown produce for school meal programs. Roughly 80% of food is scratch cooked. Bulk purchases are made when available. Real silverware and reusable trays are used at elementary school sites, while others use 100% biodegradable lunch trays. Department monthly newsletter is provided to all stakeholders showcasing new menu options, the featured Farm to School grower and produce in the salad bar, Harvest of the Month, and B-Fit programs.
- The location of the district in Climate Zone 16 is not conducive to outdoor school gardens. However, indoor gardens and/or tower gardens are utilized. One elementary science specialist's room has an indoor garden and a tower garden. Both were purchased through a local bond measure (Measure A). Students compare traditional gardening with Aeroponic gardening, a form of Hydroponic gardening using air, water and light. Students are also looking at alternative growing methods that will meet the needs of their generation. Another

elementary school also has a classroom garden in the science specialist's classroom and three other sites have garden towers. Various growing projects take place in many classrooms at sites as part of the science programs.

- High Schools require 2 years (20 units) of PE including 5 units of Health, which may be embedded into the PE course. Physical, social and emotional growth is promoted through experiences that give students the satisfaction of purposeful exertion, exhilaration of success, and the fun of cooperation through competition. Individual instructional and group recreational activities are offered to allow students opportunities to develop skills and knowledge that will carry over toward adult leisure time activities. Students are required twice a week to participate and pass minimal competencies toward personal physical fitness. Middle schools offer Lifelong Fitness five days a week to every student on campus. Traditional team sports, as well as individual sports are offered during and after school. A weight room is utilized to teach lifelong fitness skills. Elementary schools provide students with 60 minutes of physical education classes each week and a Be Fit program (regular physical activity breaks during class time).
- The district Wellness Committee meets bimonthly to plan and implement Wellness Policy goals. The Wellness Policy restricts food and beverages for classroom celebrations and/or events to one per month only for the entire school and must follow the nutrition guidelines set forth by the Smart Snacks in Schools guidelines by California Department of Education, which exceed the USDA Smart Snacks standards.
- TTUSD K–12 students participate in swimming, cross-country skiing, Lake Tahoe focused field trips (hike from DL Bliss to Vikingsholm, hike from Emerald Bay to Eagle Lake), geology trips to Donner Summit, a two night environmental program at Pigeon Pt. Lighthouse near Pescadero, and winter survival programs. Programs at middle schools include cross country skiing, student-driven research activities with Headwaters Science Institute, overnight trip to Mono Lake, 4-day/3-night environmental camp at Shady Creek, Forest Health Day facilitated by SWEF, Granlibakken Ropes Course, and a 3-day trip to Catalina Island. Some of the high school courses use walking field trips to access the outdoor local environment. For example, students in River Ecology walk to a local creek for class activities.
- Staff are encouraged to follow the district Wellness policy and nutrition guidelines (e.g., when bringing snacks to meetings). Examples of efforts being made to do this include bi-monthly staff breakfasts and meetings that follow, after-school weight room usage for staff, and an annual Wellness Faire that involves local community members.
- Since 2006, TTUSD has implemented the Harvest of the Month program which features California grown produce to engage students in the world of agriculture and nutrition. Food Services works in partnership with two dietitians from Tahoe Forest Hospital to coordinate a robust nutrition education program. At every K-8 school campus, every month, students receive fresh produce in the classroom and taste test a recipe created by utilizing the Harvest of the Month featured fruit or vegetable. Over 100 parent volunteers are organized each school year, provided training, curriculum and a school schedule to provide lessons in the classroom. Parents work closely with teachers to integrate into daily core academic curriculum in addition to a standard nutrition education lesson.
- TTUSD is a key partner in the Tahoe Truckee Youth Health Initiative, a collaborative effort designed to leverage and expand existing community and school-based strategies to build an integrated continuum of health supports for children and youth in the community. Strategies are being implemented to improve student access to a variety of health care services (i.e., teen reproductive health, oral health care prevention for elementary and middle school students, mental health and drug and alcohol services). Coordinated Care Teams, comprised of school counselors, psychologists, high school Wellness staff, school

administration and county mental health providers, work together to identify at-risk students and connect them to school intervention supports and community health resources. A Youth Health Navigator, a social worker from Tahoe Forest Hospital, works in the school to connect students to health insurance, develop a youth care management program and launch a youth health education campaign.

- The many partnerships that TTUSD has with the community include: Sierra Watershed Education Partnerships (outdoor, hands-on stewardship activities that empower students to feel important contributors to their community's environmental welfare); Tahoe Safe Alliance (supports the district schools in creating violence free communities); Tahoe Forest Hospital (student health and crisis support); Tahoe Performance Centers (local Tae Kwon Do dojo); local industry fitness instructors (student physical fitness and well-being support); Fire Departments and Police Departments (drunk driving, drug addiction, campus safety, and awareness and support programs); High Fives (supports injured athletes through recovery); Harvest of the Month and Dairy Council of California (supports Food and Nutrition Services both in classrooms and during meal breaks); local dentist for screening, local nurses for scoliosis, and local community hearing services.
- Students across the district have daily access to nurses and counselors. Nursing, school counseling, and wellness services support student mental health and improve school climate. School nurses oversee immunization reporting, provide annual health screening, develop health plans, and work with families and students to support healthy lifestyle choices. Counselors help students succeed academically, socially, and emotionally. Topics they address include body image, decision making, coping strategies, stress management, drug and alcohol prevention, and career/college planning. School Psychologists and Special Education staff support students with more intensive needs. Staff work together to triage students via Coordinated Care Team. A strength-based approach is used and staff work extensively with parents and students to develop comprehensive student support plans.
- Nursing, school counseling and wellness services support student mental health and improve school climate. Suicide Prevention education, and on-site therapy are at all sites. A Peer Leader Model is used to empower students to have a stronger leadership voice, make connections to supportive adults, and take an active role in improving the social climate at their schools. A current focus is on expansion of a peer mentor program called Link Crew in the high schools to support a smoother transition and network for incoming 9<sup>th</sup> graders. *What's Up?* Wellness Checkups provide initial prevention and support and is based on Columbia University's Teen Screen program for suicide risk, depression, substance abuse and other emotional health challenges for all 10<sup>th</sup> graders, and are open to any other students upon recommendation and parent consent. If the screen indicates the need for further support, *What's Up?* staff notify parents and help families identify services that meet their teen's needs. Elementary and Middle Schools have implemented the Second STEP program, an evidence-based and developmentally appropriate "Social-Emotional Learning (SEL) Program with Bullying Prevention and Child Protection Units."

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

#### Element IIIA: Interdisciplinary Learning

- BP 6142.5, TTUSD's Board Policy on Environmental Education, states, "The Governing Board recognizes that schools play a crucial role in educating students about the importance of the environment and in preparing them to be stewards of natural resources. The Board believes that students should value the environment, respect all life forms, understand the basic ecological principles which support the planet, and live an ecologically responsible life-

style.” The district's environmental education program is deeply rooted in California's Environmental Principles & Concepts (EP&Cs).

- Sierra Watershed Education Partnerships (SWEP) is a non-profit that has operated and partnered with the TTUSD since 1996. SWEP programs have engaged over 3,977 TTUSD students multiple times per year through various environmental programming in grades K-12. SWEP supports academic and extracurricular activities such as field studies, science assemblies, science family nights, and Trashion show assemblies prepared and performed by sustainability club members shown to school sites and community members at events such as Earth Day.
- As TTUSD continues to transition to NGSS full implementation, science courses will fully align to K-12 Connections to EP&Cs. A number of teachers in the district representing most schools are using the Education and the Environment Initiative curriculum (EEI). In addition to Elementary and MS teachers who have previously been trained and have used EEI in both science and social studies courses, 19 additional teachers, including HS teachers, attended a district-sponsored EEI training in Spring 2017.
  - District-provided professional development for CA NGSS includes use of the 2016 California Science Framework, including Appendix 2: Connections to Environmental Principles and Concepts. As Science Teachers shift their instruction to 3-Dimensional learning for students, this document will serve to support teachers in understanding and integrating the EP&C's throughout all domains of science, K-12.
  - This fall, information was compiled from district MS and HS Social Science teachers in order to better understand alignment of instruction to the California History/Social Studies Framework, 2016 Appendix A Themes. Substantial alignment has been identified in grades 6-12 for three themes: Theme 1: Patterns of Population, Theme 3: Worlds of Exchange, and Theme 6: Science, Technology, and the Environment. More importantly, the district document created from this information can now be used as a collaboration tool for teachers for the purpose of continually improving upon student learning.
  - Classes in all grade spans access the local natural outdoor environments for study. Students in AP Environmental Science courses conduct field research to support sustainability projects. Also, two elementary schools, all 7<sup>th</sup> grade classes at both middle schools, and marine biology students at one of the high schools work with Headwaters Science Institute to conduct student driven research projects.
  - Although the location of the district in Climate Zone 16 is not conducive to outdoor school gardens, indoor gardens and tower gardens are utilized, as described in Pillar II.
- STEMscopes, an NGSS-aligned curriculum that also supports CA Common Core, has been implemented for the past two years to support the K-5 transition to CA NGSS. Examples of STEMscope unit topics related to environmental and sustainability education include Weather and Climate, Uses of Natural Resources, Organisms' Impact on the Environment, and Reducing Human Impact.
- A project-based learning program called PEAK (Precision, Endurance, Action, and Kindness) is offered as a two-year project-based learning program for ninth and tenth graders. This program includes PEAK versions of both River Ecology and Marine Biology. Through an integrative learning approach, students are involved in community sustainability efforts.
- An AP Environmental Science course offers a rigorous study of green STEM curriculum. This course offers a scientific and balanced approach to key concepts while familiarizing

students with findings that inform environmental decision making at all levels - from personal choice to national and international policy.

- All science teachers, grades 6-12, participate in district level NGSS PD facilitated by a science coach at least two full school days per year. This process includes building awareness of how the NGSS provides a framework for teaching STEM, and human impact content, knowledge, and skills. MS and HS teachers continue to modify lessons and instructional strategies to meet the NGSS pedagogical shifts, using the 2016 California Science Framework, including Appendix 2.
- Additionally, the following is a substantial representation of the types of environmental and sustainable academic activities TTUSD students participate in. Many supported by community partners like Sierra Watershed Education Partnerships (SWEP):
  - Elementary students take a field trip to Taylor Creek, Lake Tahoe during the fall when Kokanee Salmon are spawning. The focus is on seeing life cycle changes first hand and to experience/study a local riparian habitat.
  - 5<sup>th</sup> grade students district-wide participate in a multi-day experience that includes field-study activities about the forest, watershed, water quality, and plants and animals at the UC Berkeley Sagehen Creek Field Station.
  - Some elementary classes participate in SWEP's Wonders of Watersheds, a hands-on, watershed-themed science lesson that explore issues impacting the Lake Tahoe Watershed, then take action through a service project focused on improving the health of the watershed.
  - In SWEP's Tahoe Basin Watershed Education Summit, high school students from all over the basin in the Fall come to work alongside scientific professionals, resource specialists with the Forest Service in hands-on, field data collection to develop future restoration activities for the watershed. Students collect critical data contributing directly to the water clarity of Lake Tahoe.
  - 6<sup>th</sup> grade students from one middle school attend a 4-day residential environmental science camp at Shady Creek Outdoor School which provides student service learning activities that promote personal responsibility to help preserve, conserve, and enhance the environment.
  - The other middle school in the district provides an overnight outdoor field trip to Mono Lake. Students experience this vital habitat for millions of migratory and nesting birds and study the unique ecosystem.
  - In SWEP's Re-vegetation and Forest Health Field Day, SWEP partners with Sugar Pine Foundation to offer a hands-on re-vegetation and forest health monitoring field day for middle school students in the Fall and Spring. This forest stewardship project involves water quality monitoring and mapping activities that directly contribute to service-based learning experiences.
  - In SWEP's Environmental Detectives program, 8<sup>th</sup> grade students are taken on a science field trip day to investigate watershed health and human impacts on terrestrial and aquatic ecosystems. Students become detectives and grapple with complex, interdisciplinary scientific problems presented in "Mystery of the Dying Fish", a GEMS Environmental Detectives curriculum. This program takes all 8<sup>th</sup> graders within the TTUSD to the "Tahoe Environmental Research Center" to do this activity, there are many volunteers that assist, this program takes place in early June.
  - In SWEP's Winter Discovery Program, 3<sup>rd</sup> through 5<sup>th</sup> grade students visit an official Snow School site up to 3 times within 3 months for 3 different Winter Ecology

- lessons. The snow school is located next to a community Cross Country Center. Students cross country ski for an hour and then do a winter ecology lesson with a SWEP instructor in a beautiful heated Yurt supplied with tables, chairs, computer screen and microscopes. These annual winter ecology field trips, combine ecology lessons, science explorations, lessons on climate change, the climate crisis, snow and water issues along with cross country skiing and basic winter skills.
- There are multiple Native Fish Field trips and activities within the TTUSD, including Trout in the Classroom programs at all grade spans and schools with students monitoring and caring for Lahontan Cutthroat from egg to fingerlings and releasing them into approved local streams.

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

- SWEP facilitates the Envirolution Trashion Show school day assemblies (including environmental messages on how to take action towards energy, waste, and water reduction) and Family Science Nights at elementary schools. Students participate in inquiry-based activities led by SWEP staff and trained community volunteers. Activities emphasize energy and water conservation, as well as science content activities complemented by engaging students in math and listening/speaking skills. For example, the science fair assembly for elementary school has an experiment in which the student hypothesizes on energy levels between incandescent and LED light bulbs. Students plug in each kind of light bulb and audit energy use of the light bulb with energy meter readers. TTUSD partner, Truckee Donner PUD, also empowers students to bring home this new found knowledge on LED energy savings by providing each student with two energy saving light bulbs to take home and install in their light fixtures.
- Elementary Science Specialists are partnering with technology instructors to complement NGSS aligned STEMscopes inquiry activities. Online STEMscopes curriculum include Human Impact units that align to grade level appropriate standards. Examples include Weather and Climate, Uses of Natural Resources, Organisms' Impact on the Environment, and Reducing Human Impact. Technology teachers are striving to enrich students' academic experiences of these units with computer applications that support the analysis of data through use of programs such as graphing and coding.
- Fifth grade students at one school compiled a group Google slide presentation after researching data on water, including capturing images, creating a slide deck, and building a relevant graph. Students are now creating virtual tours using Google Maps in the computer lab with the tech teacher. Students are putting in pins on the Google Map tour and creating slides with relevant information on different types of Earth's water. Third grade students at this same school are transferring a paper data set into a Google spreadsheet, and will then graph the data. Other sites are also focusing on more integration between science lessons and technology time with students.
- Growth in use of technology has been a priority for TTUSD. In addition to technology labs at each school, the Technology and Information Services Department at TTUSD provides Chromebooks and maintenance as described in Pillar I. This access for students, provides for integration of technology in all subjects like the use of STEMscopes for elementary science. The sixth grade classes districtwide will be beginning the use of an online science program called Amplify, in February of 2018.
- Units specific to understanding water as a precious and powerful resource are enhanced by both STEMscopes and teacher-designed projects that require students to engage in engineering projects requiring teams of students to define a problem and create a solution.

An example of one such project involves elementary students designing, creating, testing, and improving water filters to purify water from snow melt and storm drainage. Another activity, prompted by the real-life events of the Oroville Dam in crisis, involves student's designing, building, and testing prototypes of dams using manmade and natural and materials to manage snowmelt runoff.

- TTUSD offers many CTE Pathway Courses. In the Principles of Engineering course taught by Project Lead the Way (PLTW) trained instructors, students learn and apply the design process, acquire strong teamwork and communication proficiency, and develop organizational, critical-thinking, and problem-solving skills. During the Energy and Power unit in this course, students learn that as energy and power are transferred and transformed; losses to friction in the system will occur. They learn that such losses affect the overall efficiency of the system. Students investigate thermal energy and alternative energy applications and explore and gain experiences relating to solar hydrogen systems and thermal energy transfer through materials. The unit culminates with a design problem in which students must apply the knowledge and understanding developed throughout the unit to create a solution to a problem. Students gain the understanding that an acceptable solution is one that fits the criteria and constraints of the design brief. The course complements traditional mathematics and science courses and can serve as the foundation for STEM-centered or specialized academies.
- Kings Beach Elementary School has a small solar electric generating about 9,000 kWh per year which is 18% of that sites usage. This information is available through the Lucid dashboard system. The site science teacher reinforces the concept of this renewable energy source with classroom and outdoor activities that provide students with hands-on inquiry based electric solar energy activities, using small photovoltaic cells to power motors that supply energy to small-scale model equipment such as solar cars.
- Alder Creek Middle School also has a small demonstration pole mount photovoltaic system with a passive tracker funded with an A+ for Energy grant and local donations in 2007, which generates an average of 1000 kWh per year. This system provides a learning tool for teacher use to demonstrate solar technology. A Sunny Web Box is connected to the school's inverter, allowing teachers, students, parents, and community members online access to production and cost savings information.

### Element III C: Civic Knowledge and Skills

- Civic and community engagement projects provide education and eco-friendly awareness. SWEF runs Science Fair Assemblies, Energy lessons, and Family Science Nights at elementary schools where students share their learning with their family members. Lessons are taught to Green Teams (Sustainability Club for Elementary age students). The learning is then shared throughout the entire school.
- At the community's annual Earth Day event in Squaw Valley, over 200 hundred local TTUSD students participate with fellow students and teachers outreaching to the public about sustainability efforts that schools and students are making in the areas of energy, waste and water conservation. Students run educational outreach booths with hands-on activities and lead musical performances; Sustainability Club members from at least 8 clubs in the District put on a very popular Trashion Show in front of an audience of hundreds of local adults and children.
- Engineering Manufacturing and Engineering Technology Pathway students develop projects that focus on repurposing, upcycling, and philanthropy with community partners.

- An annual STEAM Fair, now in its sixth year, is open to all students, parents and community members. Projects celebrate civic/community engagement projects integrating environmental and sustainability concepts such as eco recycling and solar charged cars and devices, and averages close to 700 attendees. Local businesses and organizations involved in science, technology, engineering, art, and/or math set up interactive booths for attendees to engage and learn about STEAM application to the real world. CTE Pathways students have the opportunity to publicly exhibit the culmination of their work at the STEAM Faire as well.
- Meaningful outdoor learning experiences are abundant in the Tahoe Truckee Unified School District, as described in earlier sections. Headwaters' Science Institute, a local provider of science inquiry education, focuses on student-driven research. Two elementary schools, all 7th grade classes at both middle schools, and marine biology students at one of the high schools work with Headwaters Science Institute to conduct student-driven research projects. The projects are field based and include a multi-day experience including both classroom and field trip activities in local natural habitats.
- The evolution of Sustainability Clubs at TTUSD began with a Green Team at Truckee Elementary during the 2011-12 school year. During the 2013-14 school year, SWEP added Tahoe Lake Elementary and Kings Beach Elementary Green Team programs and in 2014-15 these programs expanded to additional sites with the support of corporate and SWEP foundation. In 2016, the Town of Truckee was successful in receiving a CalRecycle grant that will provide three years of funding for Truckee Green Teams, other Sustainability Clubs facilitated by SWEP, and much needed recycling equipment.
  - TTUSD and SWEP have successfully achieved their goal to support Sustainability Clubs within every school. It is timely for TTUSD and SWEP to be able to provide access for all students at all school sites to engage in these model educational programs. Each community benefits from environmental service learning projects which may be aimed at an environmental issue specific to their individual geography or through meeting a particular community need. An additional benefit is the personal growth of young community members, who develop a strong sense of civic responsibility and the skills, experience, and leadership needed to accomplish community aid. Youth will become familiar with environmental careers and jobs for the future as new young leaders are developed. This partnership will serve over 400 TTUSD staff, 3700 TTUSD students, their parents, and over 5,000 community members through public outreach. The program partners with multiple community organizations, parent groups and teachers to provide a wide array of learning opportunities for youth.
  - Sustainability Clubs utilize service learning projects to empower students and teachers to be engaged global citizens working to ensure adequate resources for a sustainable environment. In doing so, students practice data collection and monitoring, while enriching language arts, math, and science skills. At the HS level, the Envirolution Club meets weekly to explore and create innovative projects to engage all students. Club members empower younger students and the community to take action towards conservation measures in the areas of energy efficiency, water conservation, composting, and recycling through projects like "Lead it, Live it" Trashion Show Assemblies. Lower grades do community service projects such as native tree planting or water quality service projects (e.g., drain marking in a Tahoe City neighborhood). Service projects are often documented through student-made videos and distributed district-wide to magnify the outreach to other students. These projects includes student voice, student representation, empowerment, and environmental outreach.