TWAIN HARTE COMMUNITY SERVICES DISTRICT
Park and Recreation/Citizens' Committee Meeting

Chair: *Eileen Mannix*
Co-Chair: *Kathryn deGroot*
Citizen Members: *Wes Jordan, Lynn Crook & John Kinsfather*

PLEASE NOTE LOCATION CHANGE

Twain Harte Bocce Courts
22945 Meadow Drive, Twain Harte

IMPORTANT NOTICE:

This meeting will be held outdoors at the Bocce Courts. COVID-19 safety precautions will be in place, including social distancing and face coverings if appropriate distancing cannot be maintained.

AGENDA

1. **Operations Report.**
2. **Discuss Bocce Court Improvement Project details.**
3. **Discuss updated plans for Twain Harte Meadows Park Project, preliminary award of Proposition 1 Storm Water Grant and other grant opportunities.**
4. **Adjourn.**

State Water Resources Control Board

Sent via email to: ttrott@twainhartecsd.com

February 16, 2021

Tom Trott
Twain Harte Community Services District
PO Box 649
Twain Harte, CA 95383

PROPOSITION 1 STORM WATER GRANT PROGRAM ROUND 2 IMPLEMENTATION GRANT SOLICITATION, NOTIFICATION OF AWARD

Congratulations! The State Water Resources Control Board's (State Water Board's) Division of Financial Assistance (Division) Deputy Director approved the Funding List for the Storm Water Grant Program's (SWGP) Proposition 1 (Prop 1) Round 2 Implementation Grant solicitation. The Twain Harte Community Stormwater Enhancement Project has been approved for funding with a grant award of $3,748,732.

With this project, you are demonstrating that your community is at the forefront of a major shift in California in how we think about storm water. Rather than viewing storm water only as a nuisance due to threats posed by flooding or pollutants in storm water, communities throughout the state are looking for ways to turn storm water into a resource to combat droughts and the effects of climate change. We look forward to our new partnership and leveraging state resources to obtain your project's key benefits.

The SWGP Unit will soon be assigning grant managers and program analysts to initiate the agreement process. You will receive introductory emails from your assigned grant manager and program analyst with further information about roles and responsibilities, grant agreement development, invoicing, deliverables, performance measures, and reporting requirements. We encourage your prompt response to any requests from our staff by specified deadlines; delays or failure to respond could result in withdrawal of this grant award.

The agreement process will begin with the finalization of a scope of work, budget, and schedule that is acceptable to the Division's Deputy Director. The scope of work will be based on the proposal submitted with the application, but improvements to the scope of work, budget, and schedule may be required as part of the grant agreement negotiation process. The Division may have questions or additional clarifications regarding your proposal that will need to be addressed during agreement negotiation.

Your grant award is conditioned on the successful negotiation of an agreement and the following:

1. Applicants selected for funding have sixty (60) days after this award to submit all applicable supplemental documentation. If all required documentation is not submitted within this timeframe, the funding award may be withdrawn;
2. The detailed budget will be submitted as part of the supplemental documentation. It is possible that staff may determine portions of the project costs ineligible for grant reimbursement based on the review of these more detailed cost estimates;
3. Storm Water Resource Plan requirements must be completed within 90-days after this award, including showing proof that the local Integrated Regional Water Management (IRWM) group has received the plan(s) to incorporate into the IRWM Plan;
4. Should the Division determine that this project can be funded in whole or part by unused or re-appropriated funds from older propositions, you may be required submit information to satisfy the legal requirements of those propositions;
5. During agreement negotiation, if complexities are noted regarding the ownership and/or operation of the project, you may be required to submit a legal opinion upon execution of the financing agreement. A sample template for this legal opinion is available on the SWGP webpage. In some cases where ownership and/or operation of the project will be shared by more than one entity, multiple signatories to the funding agreement may be required;
6. California Environmental Quality Act (CEQA) documentation and all permits or other approvals, such as for water diversion, land acquisition and easements, or match funding, as necessary for project implementation should be complete no later than twelve (12) months after this award. Failure to comply with this timeline may result in withdrawal of the funding award; and
7. Eligible costs will not be reimbursed until the deliverables in Condition No. 6 are submitted. Exceptions may be approved on a case-by-case basis for disadvantaged communities. Such exceptions must be requested prior to agreement execution.

We look forward to working with you on this project.

Please contact the SWGP Program Manager, Daman Badyal, with any urgent questions at Damanvir.Badyal@waterboards.ca.gov or (916) 319-9436.

Sincerely,

Leslie Laudon, Assistant Deputy Director
Division of Financial Assistance

cc: Danielle Charleston, Danielle.Charleston@Waterboards.ca.gov
Daman Badyal, DFA
Meghan Tosney, DFA
Debbie Cheung, DFA

TWAIN HARTE COMMUNITY STORMWATER ENHANCEMENT PROJECT
Proposition 1 Stormwater Grant Program, SWRCB

Purpose

The *Twain Harte Community Stormwater Enhancement Project* is a collaborative effort to plan for and implement hydrologically-connected stormwater treatments necessary to address existing deficiencies and increase resilience to future conditions. The project area currently experiences flooding and water quality problems associated with its high water table, impervious surfaces, steep surrounding topography, and aging stormwater infrastructure. Extreme precipitation events associated with ongoing climate change will exacerbate these hazards. The proposed improvements will maximize adaptability to climate change, while providing measurable multiple benefits to the disadvantaged community of Twain Harte and the Twain Harte Creek Watershed as a whole. By addressing issues related to water supply, water quality, flood management, environmental quality, and community facilities, the proposed project will qualify as a multi-benefit stormwater management project.

The project will add nature-based low impact development (LID) treatments, like vegetated bioswales and permeable pavement, in an effort to work towards reestablishing the natural hydrograph. These treatments will work synergistically with improvements to the local storm drain infrastructure to not only reduce local flooding impacts, but also protect and improve water quality in Twain Harte Creek. At the same time, the project will enhance public pedestrian facilities and provide educational signage about some of the improvements. These efforts are designed to lead to widespread implementation of the practices throughout the watershed. In total, the project will capture and treat 91.61 acre-feet (af) of stormwater per year, 8.18 af of water captured per year, 2.6 af of rainwater capture per year, and 1.2 acres of habitat restored.

General Project Description

This project includes several stepped and hydrologically connected project components that are individually described below.

Twain Harte CSD Office

The Twain Harte CSD Office project will demonstrate four integrated stormwater approaches in a highly visible, frequently visited location. First, to address excess local flooding, infiltration, and groundwater recharge, the facility's parking area will be converted to permeable pavement. Secondly, to further reach water quality and filtering benefits, vegetative bioswales will be installed around the perimeter of the parking area to reduce heavy metal, hydrocarbon, nutrient, and sediment loading. Thirdly, a portion of the existing pavement will be replaced with a rain garden and climate appropriate plantings, which will create habitat and shade surrounding surfaces. Lastly, a 5,000-gallon tank will be installed to capture rainwater off onsite buildings. Capturing this water will serve to decrease nuisance flooding and the stored water will be reused to sustain the climate appropriate landscaping onsite. Educational signage will be installed to inform visitors about the specifics of these four LID treatments.

Twain Harte Elementary School

Downslope of the Twain Harte CSD office, five stormwater strategies will be implemented at Twain Harte Elementary School. These treatments will be tailored to the unique challenges and opportunities presented at the site. Since the water demand is high for the School's community athletic field, stormwater will be primarily reused at the site for turf and climate appropriate plantings. Considering the site receives stormwater flow from the adjacent community market, which experiences high vehicular use, bioswales have been designed to filter and treat water entering the site. Moreover, a 40,000-gallon capacity galvanized metal stormwater reuse and filtration system will be installed to help filter contaminants, while offsetting athletic turf irrigation.

Additional strategies to reduce water demand while decreasing runoff include a bank of five, 5,000-gallon rain tanks capturing rainwater off the Gymnasium and adjacent classroom. This storage will blend with the captured stormwater for 5.52-acre feet per year irrigation offset. The overflow from these tanks will flow into bioswales to slow velocities, reduce nuisance flooding and winter ice hazards, create habitat, and recharge groundwater before entering the Tuolumne County storm drain system (see Tuolumne County Storm Drain Rehabilitation Project). An additional 5,000-gallon rain tank will be installed off the Music Room to offset irrigation demand for the school garden. This tank would also serve to reduce nuisance local flooding and winter ice hazards. The overflow from this system, as well as sheet flow entering from the adjacent roadway, will be treated in a bioswale (previously constructed as part of this project through TCRCD DWR funding). Lastly, to reduce nuisance flooding to downtown business, at the lower slope of the property, a rain garden will be placed at the center of the bus and automobile drop off area, near the lowest spot on the property. This strategic raingarden will capture and filter stormwater running across the site before entering the storm drain system. This will serve to create habitat for native species and demonstrate LID treatments in a highly visible area. The asphalt removal displaces impervious surfaces reducing localized heat island impacts by increasing vegetated area. In total, the bioswales and rain garden at the school will treat 7.4-acre feet of water per year.

Twain Harte Meadows Park

This is a community-designed project that entails transforming a vacant lot into a stormwater and water conservation demonstration at the heart of the Twain Harte community. A variety of best management practices (BMPs) will be implemented at Twain Harte Meadows Park to improve stormwater water quality and reduce runoff volume, while demonstrating valuable water offsets through reuse. Construction of working "Learning Laboratories" such as: Stormwater Lab, Rainwater Harvesting Station, Permeable Historical Stories Pathway, and a Water Play Bioretention Laboratory, will provide outreach and demonstration opportunities to visitors.

Stormwater BMPs will include rain tanks, vegetative bioswales, a recycled bioretention basin, and a passive mountain meadow for infiltration and water conservation. On the northeast end of the vacant site, several large irregularly-shaped bioswales will be installed. These bioswales will be planted with climate appropriate plants that will provide shade and a less reflective surface to contribute to cooling. Additionally, these plantings provide habitat for native species. Two new recreational public structures, a

restroom, and a shade pavilion will be built in the central portion of the site with external funding. Seven 5,000-gallon rain tanks will serve to facilitate storage and reuse of rainwater captured from the roofs of these structures. In a year with an average amount of rainfall, 0.21-acre feet of water will be made available as a result of these new tanks, offsetting irrigation demand by an equal amount. These storage tanks will reduce the amount of runoff flowing to other areas of the site, reducing onsite stormwater treatment demand, and thereby maximizing the impact of other onsite treatments. An additional vegetative bioswale and rainwater tank will be situated to the west of the existing skatepark. This rainwater tank, along with reusing well water backflush, will provide 0.16-acre feet of water reuse – offsetting the water demand from the adjacent community garden.

Twain Harte Storm Drain Rehabilitation

The Twain Harte Storm Drain Rehabilitation project will replace 2,900 feet of deteriorated underground storm drain main trunk lines and facilities. At the same time, the project will incorporate pedestrian infrastructure improvements in line with "Complete Streets." The existing storm drain system includes underground pipes ranging from 18 to 42 inches in diameter. These storm drains provide conveyance for stormwater collected from the central portion of the community, including the business area, Twain Harte Elementary School, and the Twain Harte Village shopping center. The water moving through these pipes ultimately discharges into Twain Harte Creek, adjacent to Eproson Park.

As a result of acidic soils, as well as sand and salt used in roadway snow removal, these pipelines have completely eroded down to bare soil at the bottom of the pipeline. This deterioration poses significant environmental and safety risks including increased siltation deposits into Twain Harte Creek, increased stormwater contamination, and formation of sinkholes in roadways over deteriorated portions of the pipeline. Implementation of the rehabilitation project will mitigate those impacts and ensure that potential illicit discharge points are identified and improved to ensure that sediment and pollutant reduction BMPs can be implemented as necessary.

As described above, the Tuolumne County Storm Drain Rehabilitation project will work synergistically with other planned improvements. Pipeline replacements will span from Meadow Drive, along the northwest end of Twain Harte Meadows Park, through to Tiffeni Drive adjacent to Twain Harte Market. Additionally, pipeline segments spanning the Twain Harte Elementary School site will be replaced. Pipeline segments west of Twain Harte Elementary along Cedar Drive, Joaquin Gully Road, and Manzanita Drive will also be replaced as a part of the rehabilitation project.

GRANT PROGRAM
DETAILED APPLICATION BUDGET SUMMARY

Applicant: Twain Harte Community Services District **FAAST PIN: 46080**

Project Title: Twain Harte Stormwater Enhancement Project

	Requested Grant	Local Match	Other Funding	Total	% Local Match
1. Direct Project Administration Costs	**$132,960**	**$11,400**	**$0**	**$144,360**	**8%**
2. Planning/Design/Engineering/ Environmental	**$248,884**	**$346,860**	**$0**	**$595,744**	**58%**
2.1 100% Plans & Specifications					
Twain Harte Meadows Park	$63,800	$0	$0	$63,800	
Twain Harte School	$116,584	$46,860	$0	$163,444	
Twain Harte Storm Drain Rehabilitation	$18,750	$0	$0	$18,750	
Twain Harte CSD Office	$16,850	$0	$0	$16,850	
2.2 Environmental/CEQA					
Twain Harte Meadows Park	$3,500	$0	$0	$3,500	
Twain Harte School	$8,000	$0	$0	$8,000	
Twain Harte Storm Drain Rehabilitation	$1,500	$0	$0	$1,500	
Twain Harte CSD Office	$1,200	$0	$0	$1,200	
2.3 Permitting					
Twain Harte Meadows Park	$2,000	$0	$0	$2,000	
Twain Harte School	$14,000	$0	$0	$14,000	
Twain Harte Storm Drain Rehabilitation	$1,500	$0	$0	$1,500	
Twain Harte CSD Office	$1,200	$0	$0	$1,200	
2.4 Land Acquisition					
Twain Harte Meadows Park	$0	$300,000	$0	$300,000	
3. Construction/Implementation	**$3,116,627**	**$336,358**	**$894,020**	**$4,347,005**	**8%**
3.1 Construction Administration					
Twain Harte Meadows Park	$82,400	$0	$0	$82,400	
Twain Harte School	$108,736	$0	$0	$108,736	
Twain Harte Storm Drain Rehabilitation	$160,410	$17,323	$0	$177,733	
Twain Harte CSD Office	$4,800	$0	$0	$4,800	
3.2 Construction Activities					
Twain Harte Meadows Park	$947,385	$98,204	$894,020	$1,939,609	
Twain Harte School	$609,333	$32,379	$0	$641,712	
Twain Harte Storm Drain Rehabilitation	$1,057,063	$117,451	$0	$1,174,515	
Twain Harte CSD Office	$146,500	$71,000	$0	$217,500	
4. Equipment (See * for purchases over $5,000.)	**$0**	**$0**	**$0**	**$0**	**0%**
5. Monitoring/Performance	**$93,755**	**$58,399**	**$0**	**$152,154**	**38%**
6. Education/Outreach	**$156,506**	**$33,462**	**$0**	**$189,969**	**18%**
Grand Total:	**$3,748,732**	**$786,480**	**$894,020**	**$5,429,232**	**14%**

Other Funding Sources:
DWR Water Conservation Grant, Potential Prop 68 State Parks Grant

TWAIN HARTE STORMWATER COMMUNITY ENHANCEMENT PROJECT

SWRCB SWGP Prop 1 2020
Attachment 4: Process Flow Schematic

Treatment Benefits Legend

School Garden Benefits:
Education
Slow clean and treat stormwater
Heat reduction
Habitat creation
Healthy soils

Community Garden Benefits:
Education
Slow clean and treat stormwater
Heat reduction
Habitat creation

Greywater Benefits:
Water savings
Water security
Fire resilience
Healthy soils

Rain tank Benefits:
Reduce flooding
Water savings
Water security
Fire resilience

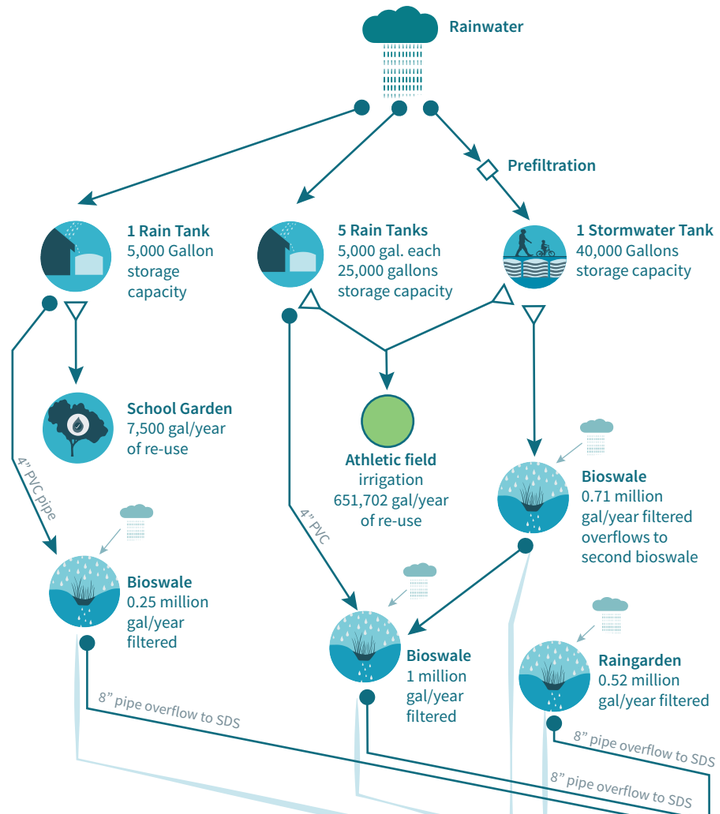
Climate Appropriate Planting Benefits:
Slow clean and treat stormwater
Heat reduction
Habitat creation
Healthy soils

Bioswale Benefits:
Slow clean and treat stormwater
Habitat creation
Healthy soils

Permeable Paving Benefits:
Reduce flooding
Reduce heat
Water security
Fire resilience

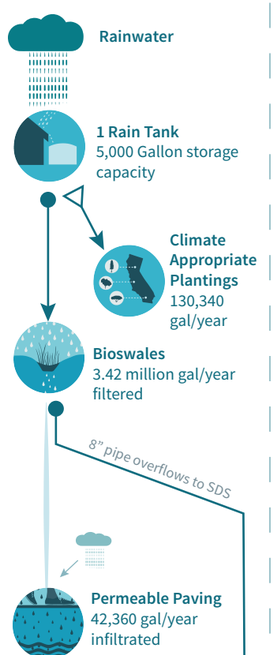
Twain Harte School Project

Education and demonstration via interactive water conservation showcase.



Twain Harte CSD Office Project

Frequently visited public site strategically located just above downtown.



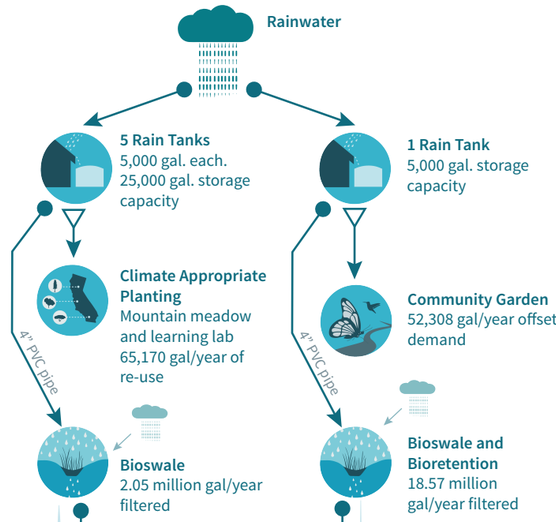
Twain Harte Storm Drain Rehabilitation Project

Replace 2900 feet of underground stormdrain trucklines and facilities as well as pedestrain and ADA infrastructure improvements.

Pedestrian Stormwater Retrofit

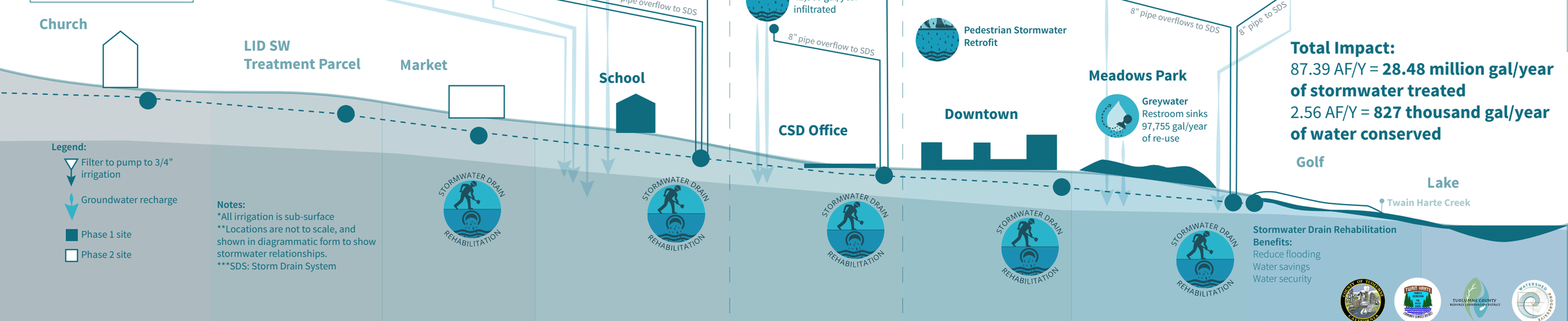
Twain Harte Meadows Park Project

Optimizes and demonstrates wild land fire resiliency, water resource management, and maintaining the integrity of mountain beauty via several recreational features and learning labs.



Greywater
Restroom sinks
97,755 gal/year of re-use

Total Impact:
87.39 AF/Y = **28.48 million gal/year of stormwater treated**
2.56 AF/Y = **827 thousand gal/year of water conserved**



Stormwater Drain Rehabilitation Benefits:
Reduce flooding
Water savings
Water security

Legend:
- Filter to pump to 3/4" irrigation
- Groundwater recharge
- Phase 1 site
- Phase 2 site

Notes:
*All irrigation is sub-surface
**Locations are not to scale, and shown in diagrammatic form to show stormwater relationships.
***SDS: Storm Drain System

RECREATION FEATURES

- OPEN SPACE MOUNTAIN MEADOW
- OUTDOOR PAVILION WITH LIGHTING
- PICNIC/BARBECUE AREAS
- BOCCE SHADE PAVILION WITH LIGHTING
- TOWN CHRISTMAS TREE
- LIVING FOOD FENCE
- ZERO WASTE LAB AND BOTTLE FILLING STATION
- WATER PLAY/WATERSHED DISCOVERY LAB
- RAINWATER DISCOVERY LAB
- BOCCE COURTS RENOVATION
- GREYWATER DISCOVERY LAB
- STORMWATER DISCOVERY LAB
- SOILS DISCOVERY LAB
- MAGIC OF PLANTS/POLLINATORS DISCOVERY LAB
- CULTURAL/HISTORICAL STORIES PATH W/LIGHTING
- ME-WUK INDIAN PLANT GARDEN
- WATER-ENERGY NEXUS LAB WITH SOLAR PANELS
- LOCAL WATER HISTORY DISCOVERY LAB

MAJOR SUPPORT AMENITIES

- RESTROOM FACILITY
- ENTRANCE PARKING LOT WITH LIGHTING
- LANDSCAPING

Educational Stories

Cultural and Historical
Narratives are on boulders and embedded in the paving to be discovered walking through the site.

Ecological
Local ecotones and plant communities from forest to meadows and riparian zones are experienced in the garden.

Water Cycle
The various forms water takes are expressed on-site and connected through the learning labs.