



Project Title: Amador Rangeland Soil Health Research & Education Project

Project ID: OW19-349

Project Lead: Amador Resource Conservation District

Project Start Date: June 1st 2019- June 1st 2022

Progress Report Dates: June 1st 2019- April 1st 2020

Date Submitted: March 25th 2021

PROGRESS REPORT #1

Progress Report Narrative:

The Amador RCD, UCCE and ranchers have been successful in the first year of this project accomplishing all goals planned for this time period. In Spring 2019 trials were set at each of the 5 ranches. Each ranch has four treatments with each treatment replicated 3 times. Each treatment measures 0.5 acre with a block of all four treatments taking up 2 acres. The four treatments are as follows: 1. compost applied, 2. seeded with clover mix, 3. compost applied & seeded with clover mix, 4. no treatment. Extensive initial soil sampling was conducted in spring 2019 to get a baseline of soil conditions, staff of the ARCD, NRCS, and UCCE conducted this soil sampling.

In Fall 2019, 200 yards of compost was delivered to each ranch. We are currently in the process of collecting data which will show the first results after compost application, it is anticipated that this reporting will be completed by Summer 2020.

Several outreach meetings have been held for this project. A kick-off meeting was held at PT Ranch, which is one of the research sites. All ranchers were in attendance. The kick-off meeting held on June 13th 2019 provided a review the goals of the project and answered questions of the ranchers (photos of event attached). An article highlighting this project was included in the Summer 2019 Farms of Amador Newsletter (Farms of Amador Newsletter attached). On October 15th 2019 an outreach event was held on PT Ranch in conjunction with the California Rangeland Trust. The event had a total of 80 people in attendance. The compost had been applied at PT Ranch and this project highlighted during this event, both ARCD District Manager and UCCE Farm Advisor discussed the project (photos of the event attached). The ARCD and UCCE are working to develop outreach opportunities in the wake of COVID 19 restrictions; planning for a video update and first year annual report of the data collected in Fall 2019/Spring 2020.

Deliverable Updates

- Compost Application on 5 ranches.
 - This deliverable had been completed.
- Pre-application and annual post application soil and vegetation sampling.
 - Pre-application soil and vegetation sampling has been completed. Post application sampling has been started for Spring 2020, this sampling will continue each fall and spring.
- Host 6 outreach events including, tailgates, workshops, tours, and the county fair.
 - Two events have been held. The first event had the 5 ranchers attend the project kick-off meeting. The second event had 80 people in attendance and was held on PT Ranch in partnership with the California Rangeland Trust.
- Develop Materials, including: Soil Health PowerPoint, Study Results PowerPoint, Press Release, Cost/Benefits Analysis Factsheet, Soil Health Best Management Practices Fact Sheet
 - Several email updates to the ARCD newsletter email list and facebook have been circulated and a newsletter article in the Summer 2019 Farms of Amador Newsletter has been published.

Timeline

Project Timeline				
Start Date: June 1st 2019		End Date: June 1st 2022		
Year	Month	Objective	Milestone Description	Status
2019	June	Objective 5	Kick-off Meeting	Completed
2019	July	Objective 1-4	Sampling Protocol establishment conference	Completed
2019	August	Objective 1-4	Plot site finalization, prep for baseline soil testing and compost application.	Completed
2019	Sept./Oct.	Objective 1-4	Baseline soil sampling and treatment application	Completed
2019	Sept/Oct.	Objective 5	Soil Health Workshop/Application Tailgate.	Completed
2020	April/May	Objective 1-4	Vegetation & Soil Sampling	In Progress
2020	June/July	Objective 1-4	Species Comp (mostly annuals)	
2020	June	Objective 5	Amador County Fair Outreach Event	
2020	November	Objective 5	Fall Range Tour	
2021	April/May	Objective 1-4	Vegetation & Soil Sampling	
2021	May	Objective 5	Spring Range Tour	
2021	June/July	Objective 1-4	Species Comp (mostly annuals)	
2021	June	Objective 5	Amador County Fair Outreach Event	
2021	November	Objective 5	Fall Range Tour	
2021	November	Objective 6	Develop cost benefit analysis using preliminary results	
2022	April/May	Objective 1-4	Vegetation & Soil Sampling, Species Comp.	
2022	May	Objective 5	Spring Range Tour	

Issues/Concerns:

The education/outreach component of this project has been disrupted by COVID 19 restrictions. Upcoming spring events needed to be cancelled due to the restrictions on gatherings, it is anticipated that more events as these restrictions continue. The ARCD and partners are working to provide updates on the project in alternative ways other than planned outreach events. We are in the process of creating an annual report and a video update.

Attachments:

Summer 2019 Farms of Amador Newsletter, "Amador Ranchers Awarded for Compost Application" p.3

Compost Application Photos

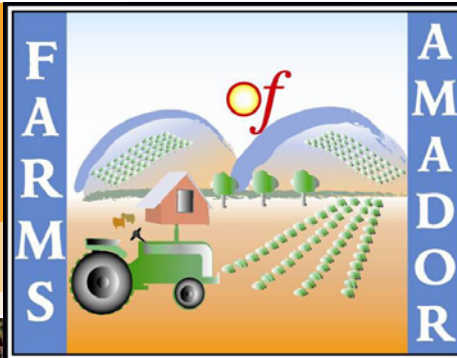
Rancher Kick-off Meeting Photos

Fall 2019 Outreach Event Photos

Summer 2019

on the FARM...

A newsletter from Farms of Amador



Jackson and Lone Third Graders Visit the Haagen Dazs Honey Bee Haven

Farms of Amador provided transportation costs and coordinated visits to the Haagen Dazs Honey Bee Haven garden in Davis for Amador County 3rd graders for the second straight year. 140 students from Jackson and Lone arrived at the gardens in two groups of 70 on separate days in April. The Bee Biology Learning Center is part of the Harry H. Laidlaw Jr. Honey Bee Research Center on the UC Davis campus. Dr. Elina L. Nino, lead research director of the bee biology center, and her staff prepared 4 interactive learning sessions for the students to rotate through during the 3-hour visit.

At Honey Bee Haven, students learn about the importance of pollination and how it affects their everyday lives. The Bee Research staff engaged the students by asking them to name pollinators and identify some of the plants that require pollination. Through a clever interactive display of different types of flowers, students were asked to build their own pollinators with brightly colored pipe cleaners of various shapes and depth to mimic the flower pollen collection process.

Another interactive station provided small handheld "insect vacuums" with connected magnifying lens to capture and examine up close the different pollinators flying all around them.

Students observed a staff beekeeper (inside an enclosed viewing tent) open a hive, remove honey frames, identify the queen and learn about the inner workings of a typical honey bee colony.

Students tried on bee handler protective gear, tasted different types of honey and observed up close and personal the interaction of the bees with the surrounding native plant habitat. A new respect and understanding of our pollinator friends was realized by all.

Farms of Amador appreciates the special arrangements made by Dr. Elina L. Nino and her Bee Research Center staff to allow our Amador County students to visit the Honey Bee Learning Facility again this season. Sutter Creek, Plymouth, Pioneer and Pine Grove students attended last season. This year it was Lone and Jackson's turn.

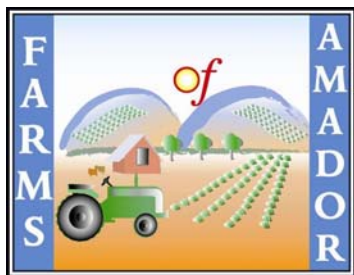
School visits to local farms and environmental learning centers are invaluable components of the Farms of Amador education program. We thank you for your continuing support and encourage our friends and members to donate to Friends of Farms of Amador to help us develop a wider range of educational opportunities for Amador County students. portunities for Amador County students.

SAVE THE DATE: Sunday, September 29

FARM TOUR

& Dinner

Proceeds benefit the Farm Tour
Program for local schools



P. O. Box 1543
Jackson, CA 95642

Mission Statement

Farms of Amador is a countywide organization whose mission is to promote local agriculture and develop youth-oriented and public agricultural education programs for Amador County.

farmsofamador.com

FOA Board of Directors

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Work in Progress...

- The FOA school farm tour program continues to thrive with participation from Independence HS, Shenandoah Valley Middle School, and Sutter Creek, Lone & Jackson Elementary Schools. Special thanks to Daniel D'Agostini, Tori & Dan Crawford and Dr. Elina El Nino for inviting students to their farms to experience seasonal crops, sustainable farming methods and the importance of bees in our food chain. A special thank you to the Amador Community Foundation Giving Tuesday program, Amador Resource Conservation District, Emily and Ned Taylor, PT Ranch and the Heryford Family in honor of Dr. Bob Hartmann for providing much-needed financial support.
- The Amador Farmers market season opened in May in Pine Grove. Bolstered by support from the Pine Grove Civic Improvement Club, the new Friday afternoon market continues to improve and attract new vendors. New signage, an active social media presence and support from other Upcountry community organizations help make the market an engaging community gathering place on Friday afternoons. Thank you PGCIC for your involvement! The Sutter Creek market is off to a good start with record attendance and new vendors. Quality local produce, flowers, baked goods, olive oil and honey from surrounding farms make the Saturday morning market a unique part of the Sutter Creek Main Street experience. We look forward to the opening of the Plymouth market in August – great food, music, market vendors and a wonderful early evening setting on Thursdays in McGee Park.
- Our annual Farm Tour and Dinner is set for September 29, with three local farms to tour followed by our dinner event at Iron Hub Winery.



As always, we thank you for your support of Farms of Amador!

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Iron Hub Winery and Vineyard to Host FOA's 2019 Farm Tour & Dinner Event

Farms of Amador is pleased to announce Iron Hub Winery as the 2019 host for our annual Farm Tour & Dinner on Sept. 29.

Iron Hub Winery is owned and operated by Tom and Beth Jones and their children. Tom was the founding winemaker of Lava Cap Winery in Apple Hill. He developed Lava Cap Winery's style of award-winning wines for almost 30 years and left mid-2013 to pursue new endeavors.

Tom and Beth purchased the 33-acre property in 2014. The property, formerly Amador Foothill Winery, features hillside vineyard views in the beautiful Shenandoah Valley.

Tom was drawn to the property, saying "there is no substitution for controlling the growing conditions in the vineyard and, most importantly, tasting the ripening grapes to determine harvest. Our new estate affords me creative control from the vine to the bottle".

Iron Hub Winery is a great wine destination. The name developed from Tom's annual tradition of taking a high mountain sojourn to rejuvenate after each grape harvest. On one recent adventure, Tom discovered an antique, hand-forged wagon wheel hub in the remote outback. The iron hub exemplifies the artistry and beauty of days past. The name Iron Hub also reflects a welcoming place to gather with friends and family to enjoy fine wine, great food, live music and the beautiful Sierra views.

Iron Hub's Aglianico vineyard



Amador Ranchers Awarded For Compost Application

by Molly Taylor

Five Amador ranchers, including Stan Delorto, Tim Curran, Molly Taylor, CW and John Brownlie, received funding this spring as part of the Amador Soil Health Research & Education Project to spread compost to rangeland sites across their properties. Recent studies have shown that a one-time 1/4 inch application of compost to rangeland can increase plant production and soil water holding capacity resulting in a net drawdown of atmospheric CO₂. Some experts have claimed compost to be a valuable inoculant, delivering the soil with a wide range of beneficial fungi and bacteria. The Amador Soil Health Research & Education Project will test the effects of a one-time application of compost to rangeland sites located across five local ranchers' properties, to measure the effect on carbon sequestration benefits, water infiltration and noxious weeds. Noxious weeds present a particularly pressing issue for many ranchers who have seen as much as a 70% reduction in grazing capacity when noxious weeds outcompete species favored for forage.

Awarded by the Western Sustainable Agriculture Research & Education Fund, the project's recipients have \$60,000 with which to purchase compost and test its effects on soil health across the five sites. The Amador Resource Conservation District, who is administering the grant project, will be coordinating demonstration workshops at the sites which will be open to those interested in tracking the progress of project and learning more about soil health.

One of the project's goals is to provide localized data on such topics as species composition, forage production and quality, soil aggregate stability, water infiltration rates, and organic carbon content. The aim is to contribute the project's data to the larger scientific dialogue currently surrounding the viability and effectiveness of healthy soils practices in mitigating risks to agriculture related to climatic changes in California. Compost application as a healthy soils practice benefits the climate by reducing greenhouse gas (GHG) emissions by encouraging green and brown waste diversion from landfills and anaerobic manure storage, greater atmospheric carbon sequestration by stimulating plant growth and improved soil water holding capacity by increasing above-ground biomass.

The study is part of a larger phenomenon called Carbon Farming which recognizes the role farmers and ranchers play in the carbon cycle as stewards of land that, with varying management practices, has both the capacity to emit and sequester significant amounts of GHGs. With the right management practices the agriculture industry has the potential to go from a net emitter to a net sequesterer of CO₂. Increasing soil carbon content is one of the most stable and long term solutions to draw down GHGs. A recent study from the Marin Carbon Research Project suggests that sequestration of one metric of CO₂ per hectare on half of California's rangeland would offset 42 million metric tons of CO₂, an amount which is equivalent to all the annual commercial and residential emissions in the state.

The Amador Soil Health Research & Education Project will begin compost applications in fall 2019. Workshops will be held throughout the project. If you would like to keep up with the Amador Soil Health Research & Education Project and other local carbon farming news, email amanda@amadorrcd.org or molly@ptranch.co or visit amadorrcd.org

Financial Assistance to Implement Best Management Practices

by Amanda Wood

Did you know that there is financial and technical assistance available for Amador County farmers and ranchers? There are several sources of assistance to implement best management practices.

The Natural Resource Conservation Service (NRCS) offers voluntary technical and financial assistance to help farmers, ranchers, and forest landowners develop a conservation plan to address natural resource concerns.

NRCS staff can also help landowners apply for the Environmental Quality Incentives Program (EQIP) which offers financial assistance to implement practices in the conservation plan. Private agricultural land may be eligible for EQIP regardless of the crop, type of livestock or farm size. Non-industrial private forest land and tribal land engaged in agriculture may also be eligible. Interested landowners can contact NRCS at the Jackson Local Partnership Office covering Amador, Calaveras and Tuolumne Counties: 12200B Airport Road Jackson, CA 95642. Phone is 209-223-3581 x8050, 8046 or 8045. Bobette Parsons is the District Conservationist for this office.



ARCD board member Dan Port discusses NRCS program with local ranchers

There are also two grant programs currently available through the California Department of Food & Agriculture (CDFA). Funding is available to California farms and ranches for a variety of practices that can cut on-farm water and energy use, build soil fertility and reduce greenhouse gas emissions, while providing economic benefit to the operations. Project awards are available to operations of all sizes. Medium and small-scale operations are encouraged to apply. The State Water Efficiency & Enhancement Program (SWEET) can award up to \$100,000 for irrigation systems that reduce greenhouse gases and save water on agriculture operations. The Healthy Soils Incentives Program can award up to \$75,000 to implement any of the 25 eligible soil health practices, including cover crops, compost application, hedgerows, mulching, no-till or reduced till, and prescribed grazing on pasture.

The application process is expected to start mid to late summer of 2019. The Amador Resource Conservation District (ARCD) is working to be able to provide producers one-on-one technical assistance and support to develop grant applications to each of these programs. If you're interested in possibly applying for funding, visit www.amadorrcd.org/newsletter to add your email to ARCD's email list, so you'll be updated about these and other upcoming funding opportunities.

There is also funding to implement these practices as a demonstration on your property. Your property could then be used to help educate your fellow agriculturalists and the public regarding healthy soil techniques. If you're interested in having a demonstration of any of the Healthy Soil Incentives Program practices on your property, contact Amanda Watson, ACRD Manager at Amanda@AmadorRCD.org



CAFF and The Farmers Guild are farmers, ranchers and sustainable food system advocates with a passion for feeding our local communities. Amador County has joined these two amazing organizations to cultivate and sustain a new generation of agricultural professionals and support the Tri-County agricultural community.

The Amador County start up group has altered the local guild title to the FOOTHILL AGRICULTURAL GUILD to ensure that farmers, ranchers, and vintners in the tri-

county area are all included in future efforts to support our local farming economy.

Meetings will be held the third Monday of every month at 6:30 p.m. at the Amador City Community Hall for an evening potluck. To be included on the email list for notices, discussion items, and upcoming events, please email your contact information to andreaajmemail@gmail.com. A Facebook group page will be added soon.

Farms of Amador is proud to be a charter member of the new Agriculture Guild and look forward to participating in the development of a wide range of agriculture, viticulture and ranching community collaboration.

To learn more about The Farmers Guild, please visit their website at: www.farmersguild.org

Amador Farmers Market Celebrates 26th Season

by Ericka Lutz, Market Manager



Amador County Farmers Market Association celebrates 26 years of continuous operation in Amador County this year. All three Amador County certified farmers' markets offer locally grown produce, artisan-baked goods, local olive oil, jams, jellies, fresh-cut flowers, and artisan crafts.

The Pine Grove Farmers Market has returned for another season in Community Park on a new day. The market opened Friday, May 17th with the help of the Pine Grove Civic Improvement Club and will continue to operate from 3pm to 6pm every Friday through mid-October. Customers will enjoy local seasonal produce, flowers, olive oil, baked goods, Texas-style barbeque, and oven-fired pizza. They can enjoy live music by Slade Rivers and other musicians while their children play in the shaded playground.



Opening day in Sutter Creek, which runs from 9am to 1pm every Saturday through mid-October, featured musician Herb Boxhorn, who has played at the markets for all 26 seasons. Other popular local musicians will be featured throughout the season. Cooking demonstrations by local chefs, the traditional August tomato tasting contest, a salsa contest, and a pie baking contest also enhance the small-town ambience of the very popular Main Street market.

The evening Plymouth Farmers Market will open Thursday, August 1st in McGee Park with our traditional opening day musician Herb Boxhorn. New market hours are 5pm to 8pm every Thursday evening through September. In addition to great music, fresh produce, olive oil, flowers, and craft vendors, the Plymouth-Foothill Rotary-sponsored event features wine from local vintners, beer, and special food offerings under the lights of the historic Victorian bandstand.

All of our Amador Farmers Markets offer fresh local produce. Farmers harvest their produce and flowers the morning of each market. Baked goods are always same-day fresh. All of the wonderful jams, jellies, olive oil, and artisan crafts are made locally by the vendors who sell them. Amador Farmers Market totes, hats, t-shirts, jerseys, and aprons are available to help support market operating costs.

We invite locals and tourists to come early, stay late, and enjoy the small-town farmers market atmosphere

on Thursday evenings in Plymouth, Friday afternoons in Pine Grove and Saturday mornings in Sutter Creek. Help support local farmers. Buy Local: stimulate your local economy and shake the hand that feeds you. Eat Fresh: because where you shop makes a difference for our local farmers and supports a healthy eating lifestyle.

Amador Farmers Market Association is a proud member of the California Farmers Market Coalition, the Supplemental Nutrition Assistance Program (SNAP) and the California Women, Infants & Children Food Assistance program (WIC) offering families a fresh produce choice for their supplemental food needs.

For more information about the Amador County Farmers Market Association, SNAP and WIC, please visit our website: amadorfarmersmarket.com

Top to bottom: Sutter Creek Farmers Market; Susan Bragstad returns for her 26th season selling local olive oil; Upcountry Farm's fresh produce; new AFM manager Ericka Lutz sells logo items.



Local Schools Participate in 2019 Farm Tour Program

Shenandoah Valley Middle School in Plymouth made the short journey to Daniel D'Agostini's Abbondanza Farm to discover the value of hands-on experiential learning.

SVMS students visited Abbondanza twice this season to learn about organic and biodynamic farming, composting, soil, transplanting seedlings, edible flowers and the benefits of certain plants with healing components. As part of the John Muir journal program, students were given time to observe and reflect on the seasonal changes they noticed during their winter and spring trips to the farm.



Sutter Creek fifth graders at Abbondanza Farm

Sutter Creek fifth graders also made their annual return to Abbondanza to help plant corn, beans and flowers.

The FOA program's goals depend on repeat visits from students and teachers to learn how cold weather, warm weather and climate change affect growing cycles.

Independence High School administrators renewed their commitment to participate in the 2019 Farms of Amador School Farm Tour program. The first of three farm visits brought Lisa Farrar and her students to Tori and Dan Crawford's Upcountry Farm in Jackson Valley. Students uncovered and prepared winter beds with soil amendments. Dan explained how numeric soil tests provide vital

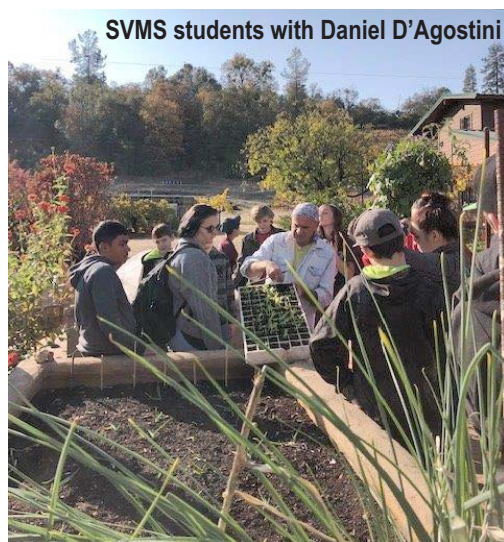
information needed to balance soil components. Students helped weigh, mix and apply nutrient components to the beds in preparation for planting cold-hardy leafy greens. Onion beds were weeded, radishes and beets were harvested, and Tori prepared a hearty soup for lunch from the morning harvest.

The group discussed the farm to fork concept, and decided to invite a local chef to the next farm visit. Justin Lewis enthusiastically accepted, and guided the students through a very simple, delicious series of food preparations from the morning harvest. The students left with a newfound appreciation for fresh farm food. Many thanks to Dan and Tori Crawford and Justin Lewis for two very enlightening mornings on the farm.

The third farm visit reunited students with Daniel D'Agostini at his Abbondanza Farm learning center. Students were introduced to the origins of organic farming and the concept of biodynamic farming. The hands-on farm visit included a walk through the olive orchard, free-range chicken area, vegetable and compost areas all while discussing and observing beneficial insects and plants. Fava beans were harvested in preparation for delivery to the Corti Brothers in Sacramento. Daniel, with students' assistance, created a delicious lunch of fresh bread, pesto and of course his special Italian recipe for fava beans.

Many thanks to Tori and Dan, Justin, Daniel and everyone who made these visits so educational. We appreciate the teachers and administrators who participate in the FOA school farm tour program and use the farm visits as an integral part of their curriculum.

Funds raised from FOA member donations and our annual Farm Tour & Dinner help to fill a much-needed funding gap for local schools to participate in the field trips to local farms. Bus transportation costs are provided by FOA, as well as stipends for the farmers who host the students.



SVMS students with Daniel D'Agostini



Independence HS students with Tori Crawford at Upcountry Farm

LET'S GROW TOGETHER



Help Farms of Amador continue its mission to:



PROVIDE SCHOOL FARM TOUR PROGRAMS

Offer all-day hands-on student field trips to local farms by helping to pay for student transportation costs and farmer/mentor stipends



SUPPORT OUR LOCAL FARMER'S MARKETS

Educate consumers on the value of locally grown agriculture, encourage and invite new farmers to our area, and provide educational opportunities for existing farmers

PROMOTE AGRITOURISM

Develop community tourism appeal to bring local and out-of-town visitors to local farms



SUSTAIN OPEN SPACE

Enhance the health and well-being of our community by maintaining the quality of our rural life

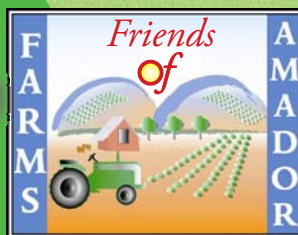
The Farms of Amador Board of Directors appreciates your support! We are committed to making local agriculture more available to our community and to providing ongoing agricultural education.

Daniel D'Agostini
Ron Antone
Susan Bragstad
Lynn Morgan
Mel Welsh
Andrea Macon
Andrew Gardner

**DONATE
ONLINE
TODAY**

farmsofamador.com
(click on Support Amador Agriculture)

Friends of Farms of Amador is a 501c(3)
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PLYMOUTH

**THURSDAYS
5PM - 8PM**

AUGUST 1 - SEPTEMBER 26
McGEE PARK - MAIN STREET
FAMILY FUN WITH LIVE MUSIC

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Amador Farmers Market Association is a proud member of the Supplemental Nutrition Assistance Program (SNAP) and the California Women, Infants & Children Food Assistance Program (WIC) offering families a fresh produce choice for supplemental food needs.

Compost Application Photos





Project Kick-off Event Photos





Fall 2019 Outreach Event Photos



