Climate Resiliency Fund – Round #2 Proposals

Table of Contents (clickable)

Overview

1) Please provide an overview of your project. In your narrative, respond to the following questions:

   Following the completion of a baseline greenhouse gas (GHG) inventory in 2021, Regional Parks is requesting the development of a Climate Adaptation and Resiliency Plan (CARP) to further priorities to reduce GHG emissions and increase resiliency and adaptation to climate change.

   Regional Parks will inform the Climate Adaptation and Resiliency Division on baseline data and prioritize reduction plans based on the Board of Supervisors Strategic Plan and Pillars. Parks staff will perform the work identified in the CARP, or manage the projects as needed through contracts.

   Regional Parks is already enrolled in Sonoma Clean Power EverGreen, utilizing 100% renewable electricity at all parks locations. The Climate Adaptation and Resiliency Plan will focus on mitigating the effects of climate change to park facilities while prioritizing economic opportunities for clean energy, water retention and storage, and infrastructure adaptation for the department.

2) Provide a proposed implementation timeline. Include the following as applicable:

   June 2022- RFP created

   August 2022 – RFP submitted

   October 2022 – Proposal awarded

   December 2022 – Community Engagement begun by consultant

   April 2022 – Final CAP submitted to Regional Parks

3) Is this project a part of an existing climate/resilience plan, was it an outcome of the use of an existing climate/resilience tool or model, or would it help create a new climate/resilience plan, tool, or model? If so, please name and describe the plan, tool or model and provide a link to access if available.

   In 2020 Regional Parks formed a Climate Conscious Parks Team. The team created working goals to address and mitigate climate change based on the RCPA "2030 Climate Emergency Mobilization Strategy Framework". These strategies included: decarbonization, carbon sequestration, resilience and adaptation, and equity and community engagement.

In 2021, Regional Parks contracted with Rincon Consultants to prepare a baseline GHG emission study based on 2019 operations, the most recent representative pre-pandemic year available. The baseline assessment of GHG emissions is used to track any future improvements within the identified strategies.

The baseline assessment revealed that Parks created very little emissions as a result of electrical use in 2019 because of Parks' enrollment at that time in Sonoma Clean Power's CleanStart program (93% carbon-free). Emissions have since been further reduced when Parks transitioned all electric service to the EverGreen program (100% renewable energy) in 2021. This led to transitioning from a more traditional CAP to one focusing on reducing both GHG emissions while also increasing the economic benefit to Parks. An example of this is while adding solar to building sites does not necessarily decrease GHG emissions because of Parks' enrollment in EverGreen, it does reduce the amount spent on electricity, can provide shade, charge our own electric vehicles, provide more clean energy for the grid, and, in the case of systems with battery storage components, increase resiliency during power outages.

This requested project is the outcome of that baseline GHG assessment and memo from Rincon Consultants. The assessment was finalized in 2021 with recommendations for the development of a Regional Parks specific Climate Action Plan (CAP) (this project).

4) Will this project result in a return on investment? If so, describe the expected magnitude of the return on investment and if it is expected in the near or long term.

   This project will create both economic and climate change benefits. The plan specifically identifies prioritizing climate mitigation measures that also serve a short and long-term economic benefit.

5) Does this project create new partnerships, expand on an existing one, or continue an existing one? If so, please describe the partnership/s and explain what level of engagement is expected between partners.

   This project will create new partnerships with various climate change organizations internal to the County of Sonoma and external NGO's. The RFP in itself has encouraged collaboration with Sonoma County Energy and Sustainability, Climate Adaptation and Resiliency Division, Regional Climate Protection Authority, Sonoma Clean Power and Resource Conservation Districts throughout the County.

Budget

6) Provide a proposed implementation budget. If available, please include any supporting documents, such as quotes for equipment, staffing plan with cost per job classification, consulting/contractor services, etc. Only include costs that will be covered with the Climate Resilience Fund if awarded.

Item	Cost
Climate Adaptation and Resiliency Plan	$125,000
Total	$125,000

7) Does this project leverage outside (non-County) funds? If so, please describe where the outside funds are coming from, how much it totals to, and how the outside funds will be spent on this project.

   Yes, this project is leveraging $25,000 from the Sonoma County Regional Parks Foundation. These funds will be used toward the CARP.

8) Is this project aligned with the funding priorities of state or federal boards, departments, offices, or agencies? If so, please describe the alignment and list specific funding opportunities that this project could build on.
   NA

Alignment with County Strategic Plan

9) Does the project address any specific Strategic Plan objectives? *(If no, skip the rest of the questions in this section)*
   Yes

10) If answered "YES" to question 9, please indicate which Strategic Plan OBJECTIVE (or objectives) will be furthered by this project. Note: if listed, item must tie to a specific objective, and not simply be in alignment with a general pillar or goal. Please include the

following information:

Pillar: Climate Action and Resiliency Goal: Goal 1, Goal 2, Goal 3, Goal 4, Goal 5 Objective: Goal 1: Objective 1, Objective 2, Objective 3. Goal 2: Objective 1. Goal 3: Objective 1, Objective 2, Objective 3. Goal 4: Objective 1, Objective 2, Objective 3. Goal 5: Objective 1, Objective 2. Department Lead for this Objective: David Robinson Description: The CARP identifies all the goals under the Climate and Action Resiliency pillar. Of the utmost importance is that it identifies the next steps for Regional Parks to implement climate change reduction strategies.

- Link to the Strategic Plan: https://sonomacounty.ca.gov/Board-of-Supervisors/Strategic-Plan/PDF/Five-Year-Strategic-Plan-2021-26-English/
- Link to the Strategic Plan 1 Pager: http://sharepoint-projects/sites/budget21_22/ARPA%20Resources/Strategic_1pager_FINAL_Electronic%20Handout.pdf

11) Is the completion of this project a prerequisite to implementing a part of the Climate Action Pillar of the Strategic Plan? If so, list the objectives or goals that project will help implement and explain the connection.

This project is not necessarily a prerequisite to implementing the Climate Action Pillar of the Strategic Plan. The CARP identifies and prioritizes Regional Parks' approach toward identifying key projects that will be both an economic benefit and fulfill the goals and objectives of the Climate Action Pillar in the Strategic Plan.

Mitigation: Decarbonization and Sequestration

- **Decarbonization:** The removal or reduction of carbon dioxide (CO2) output into the atmosphere. Decarbonization is typically achieved by switching to usage of low carbon energy sources (Deloitte, 2022). For example, switching from coal- or natural gas-powered energy sources to solar- or wind-powered energy sources.
- **Sequestration:** The process of capturing and storing atmospheric carbon dioxide (USGS, 2022). For example, improving soil and livestock management practices to improve soil carbon capture.

12) Does this project result in a reduction or sequestration of County GHG emissions? *(If no, skip the rest of the questions in this section)*
Yes

13) Provide an estimation of this decarbonization/sequestration in metric tons of CO2 / year. Briefly write out your calculation and explain any assumptions made.

Regional Parks received the baseline GHG inventory recently, which identified total metric tons of CO2/year. The CARP will identify next steps for reduction.

14) Provide an estimation of the cost of decarbonization/sequestration in dollars / metric ton of CO2 reduced per year *(divide your project's total cost by the answer above).*

NA

15) Describe the timeline of this decarbonization/sequestration *(for example, XX tons of CO2 reduced or sequestered year 1, XX tons reduced or sequestered year 2 and for every year thereafter)*. Be sure to discuss permanence. After a certain number of years, do emissions go back to business-as-usual or does the sequestered CO2 get released back to the atmosphere?

This will depend on the project identified by the CARP. Regional Parks will focus on projects that will reduce GHG emissions permanently. This may include creating policy for specific actions.

16) Describe the certainty and accountability of the decarbonization/sequestration. How certain is it that this project will lead to the GHG reduction described above? How will project leads account for these reductions?

The reductions will be identified by the consultant and Regional Parks plans to continue data assessments annually to account for these reductions.

17) List and describe any potential co-benefits of this GHG reduction/sequestration. Co-benefits can include: air quality, energy/fuel savings, vehicle-miles-traveled reduction, water conservation, ecosystem health, energy security, public health, public safety, food security, equity, and economic stimulation.

Unknown at this time which projects will be implemented however transportation is a high priority as it was identified as a major component of Regional Parks' emissions. Therefore, vehicle-miles-traveled, fuel savings, and air quality will definitely be addressed.

Resilience and Adaptation

18) Does this project promote climate resilient or adaptive infrastructure or land management? *(If no, skip* the *rest of the questions in this section)*
Yes

19) Describe which climate hazards the project will address and how it will address them. Hazards can include wildfire, drought, extreme precipitation, flooding, temperatures &

extreme heat, sea level rise, air quality degradation, loss of biodiversity, natural cycles disruption, climate migration, and energy interruption.

The CARP will identify opportunities and action steps to increase carbon sequestration and wildfire resiliency of existing stocks, but also through carbon farming via composting.

20) Describe the geographic range, physical area, or targeted population in which the project would aim to address the abovementioned hazards. If possible, describe the area or population's level of exposure and sensitivity to the abovementioned hazards. If possible and applicable, include number of people served, area of land improved, or any other quantifiable metrics.

These projects will be identified across the 58 regional parks and trails throughout Sonoma County. Sequestration projects will take place in both forest and grasslands. Vegetation management will be prioritized on the urban-wildland interface (UWI). It could be argued that these measures will affect the entire population in Sonoma County.

Equity and Community Engagement

21) Identify potential negative impacts of the project on communities of color and low-income communities, and describe what strategies your Department recommends to mitigate any potential adverse impacts. *(For additional resources please refer to the Racial Equity Tool Kit, which the Board adopted on November 17, 2020.)*

There are no known negative impacts to low-income or communities of color with the completion of a Climate Adaptation and Resiliency Plan.

22) How does this project engage with the community? Please describe the level of community engagement in the development and implementation of your project. Review "The Spectrum of Community Engagement to Ownership" and describe the level of participation. As defined in this resource, the levels of participation are: ignore, inform, consult, involve, collaborate and defer to.

The Climate Adaptation and Resiliency Plan RFP has requested the following engagement which best aligns with the "consult" level of participation based on "The spectrum of Community Engagement to Ownership":

- Develop and implement an engagement plan that effectively involves interested and affected stakeholders in identifying needs, priorities and values related to the CARP. Include strategies to reach groups and individuals traditionally under-represented in local government decision making.

- Develop and host/present interactive presentations, workshop materials, notification materials, survey questionnaires, education videos and social media posts.
- Develop a CARP webpage to share progress and information with community.

23) Describe how the project improves, doesn't affect, or worsens access by underserved communities to the services and/or benefits embedded in the project.

The Climate Action and Resiliency Plan does not affect access by underserved communities. Projects based on the CARP should improve access in some cases. Creating resilient infrastructure and shade management for cooling facilities in parks will increase access as an example.

24) Describe how the project contributes to a just transition. Explain how the project does (or why it does not) provide economic benefit to underserved communities.

The CARP will provide a blueprint for Regional Parks' to reduce GHG emissions and impacts due to climate change while creating economic benefits. Parks provide so many benefits at free or low cost to all communities. Regional Parks' offers a vehicle entry pass for low-income families and individuals as well as a partnership with Sonoma County Libraries to "loan" a park pass for free. Parks are a resource to all and the investment proposed by the CARP will continue to improve conditions for the entirety of county residents as well as providing opportunities for low-income and underserved communities.

Leveraging Funds and Community Partnerships

25) Is this project leveraged with other funds? If yes, please describe these funds *(where are they coming from, how much, contingent on anything?)*

The total project is estimated at $250,000. Regional Parks has identified $100,00 in the FY 22-23 budget. $25,000 has been guaranteed by the Sonoma County Regional Parks Foundation. The remainder of the estimated cost of $125,000 is requested from the Climate Resiliency Fund.

26) Is there the potential for this project to be leveraged with other funds? If yes, please describe these funds *(where are they coming from, how much, contingent on anything?)*
NA

27) Will this project leverage community partnerships? If yes, explain. Which organizations? Describe the level of engagement.

NA

Title: Rainwater Catchment for Climate Resilience: Implementation, Planning, and Outreach for Rainwater Systems to Support Regional Parks Operations

Overview

Sonoma County Regional Parks has identified an urgent need to make new investments in alternative water source systems at multiple Regional Parks. Ongoing drought conditions exacerbate water shortages and in turn, reduce ability to implement critical fuels reduction and increase wildfire risk. At several parks there is not enough water available to support grazing, to irrigate restoration projects, to operate restrooms, or for emergency water for prescribed fire or wildfire suppression. This project includes construction of a rainwater catchment system for Helen Putnam Regional Park (Helen Putnam), development of designs for three additional rainwater catchment systems, and public education about the benefits of rainwater catchment as an alternative water source conducted through bilingual signage and outreach.

Water supply at Helen Putnam is critically low. Regional Parks has contracted to haul water from Santa Rosa to Helen Putnam near Petaluma for the last four years. In 2021, Regional Parks closed the restrooms and replaced them with portables to conserve water. In order to have adequate water supply for grazing animals, restoration plantings, fire suppression and possible reopening of restrooms, Regional Parks partnered with Sonoma Resource Conservation District (SRCD) to design a pilot rainwater catchment system. Once implemented, this system will eliminate water hauling to the park. This proposed project will support final design, permitting, and installation of a rainwater catchment system at Helen Putnam. It will also catalyze additional rainwater catchment projects by funding the planning of three additional rainwater catchment systems to designs that are 65% complete. Once projects have reached 65% designs, and Regional Parks has implemented one project at Helen Putnam, grant funding should readily support additional implementation.

Sonoma County Regional Parks hosts a number of fieldtrips at various parks. Helen Putnam is one of the parks where students are invited to educational hikes. As part if these hikes we will highlight the new rainwater catchment system. Outreach and education will prioritize equitable messaging and learning opportunities. This project will also include bilingual educational signage and outreach materials about rainwater catchment systems, and how they can be used at multiple scales to assist with climate adaptation and resilience.

The project timeline includes the following milestones:

Funded via match

1) January 2022: Onset of work on rainwater catchment system at Helen Putnam
2) May 2022: 65% designs complete for Helen Putnam
3) October 2022: Contract geotechnical assessment at Helen Putnam

Funded via this project

4) December 2022: 100% designs complete for Helen Putnam
5) Spring 2023: Final bid documents; construction bidding; permits for Helen Putnam
6) 2023: 65% designs complete for 3 additional rainwater catchment projects

7) Summer/Fall 2023: Construct rainwater catchment at Helen Putnam
8) Spring 2024: Bilingual signage and outreach at Helen Putnam
9) 2024: Apply for implementation of 3 additional rainwater catchment projects

Planning Background

The *Sonoma County Regional Parks 2019 GHG Emissions Inventory Baseline Assessment Memorandum* (Rincon Consultants, 2021) identified potable water delivery as a source of GHG emissions as a priority for GHG reductions. The *Sonoma Climate Resilient Lands Strategy* and *Sonoma County Regional Parks 2023-2025 Strategic Plan* (both in development) identify rainwater catchment systems as a priority.

Budget Summary

Item	Cost
Construction: Materials, Labor, and Earthwork	$125,761
Metal Water Tanks: 40,000 gal and 5,000 gal	$112,000
Geotechnical Work	$12,000
Electrical Controls and Pump	$14,000
Permitting and Construction Oversight	$40,000
Bilingual Signage and Outreach	$8,000
Design for 3 Additional Rainwater Catchment Projects	$67,800
Total	**$379,561**

This project would lower the annual cost of operations at Helen Putnam by avoiding the cost of water hauling saving an estimated $9,000 per year. Over an estimated 60-year lifetime of the project, avoided costs of hauling water are in excess of $500,000, which will exceed the project costs and thus have a significant return on investment. Supporting documents including construction estimates are attached.

Leveraging Funds and Community Partnerships

This project leverages committed funding including:

- Measure M – $25,000 committed to 65% designs at Helen Putnam
- Sonoma County Regional Parks Foundation – $10,000 committed to implementation.

This project leverages existing partnerships including:

- SRCD works with landowners, conservation professionals to complete habitat restoration, water and soil conservation, including rainwater catchment.

Many statewide grants will support implementation of rainwater catchment, but only for shovel ready projects with 65% designs completed. With one project successfully implemented at Helen Putnam, and 65% designs complete for additional parks, likely funding sources include: California Department of Water Resources (DWR) Urban and Multi-benefit Drought Relief Program and Integrated Regional Water Management (IRWM) programs, California Department of Fish and Wildlife (CDFW), Wildlife Conservation Board (WCB), and the State Coastal Conservancy (SCC).

Alignment with County Strategic Plan

The project addresses the following Strategic Plan objectives:

Pillar: Climate Action and Resiliency

- **Goal**: Goal 1: Continue to invest in wildfire preparedness and resiliency strategies.
    - **Objective**: Objective 1: Leverage grant funding to support sustainable vegetation management program.
- **Description**: This project supports grazing vegetation management at Helen Putnam and multiple other Regional Parks. Grazing is a cost-effective vegetation management strategy to reduce wildfire risks.

Pillar: Climate Action and Resiliency

- **Goal**: Goal 3: Make all County facilities carbon free, zero waste and resilient.
    - **Objective**: Objective 1: Design or retrofit County facilities to be carbon neutral, zero waste and incorporate resilient construction techniques and materials.
- **Description**: Water Scarcity in California is largely a result of limited water storage between the rainy season and the dry season. The project invests in fire-proof water storage tanks and a rainwater catchment system to collect and store rainwater to support park operations. Also lowers greenhouse gas emissions from reducing trucking water.

Pillar: Climate Action and Resiliency

- **Goal**: 5: Maximize opportunities for mitigation of climate change and adaptation through land conservation work and land use policies.
    - **Objective**: Objective 1: Develop policies to maximize carbon sequestration and minimize loss of natural carbon sinks including old growth forests, the Laguna de Santa Rosa, and rangelands. Encourage agricultural and open space land management to maximize sequestration.
- **Description**: This project includes approaches to land management practices that will maximize resilience to climate change and extreme events, particularly drought.

Mitigation: Decarbonization and Sequestration

This project will result in a reduction of GHG emissions and the decarbonization of a portion of the Regional Parks water system. This project will replace water that has been trucked to Helen Putnam with rainwater that is captured on site. Reduction in trucking water will reduce GHG emissions from burning fossil fuels to transport water from Santa Rosa to Helen Putnam in Petaluma. Trucking water has significant GHG emissions. The average truck emits 161.8 g CO_2 per

ton mile[i]. Trucking 45,000 gallons of water from Santa Rosa to Helen Putnam and returning empty produces an estimated 14 metric tons $C0_2$ in GHG emissions per year. Over an estimated 60-year project lifespan the cost effectiveness of the project would be $317 per metric ton of CO_2 reduced. This reduction in emissions is certain to occur if this project is funded, and additional GHG reductions will be realized when additional rainwater projects are implemented. Rainwater catchment systems can efficiently support targeted grazing in parks, which can reduce fuels to avoid catastrophic wildfires and associated emissions. There are many co-benefits that will come with the GHG reductions from this project including: reduced vehicle miles traveled, water conservation of our Russian River potable water supply, ecosystem health by supporting grazing operations, public safety from vegetation management, and public health from access to trails and restroom facilities at Regional Parks. In addition, this project will provide a demonstration of a climate adaptation strategy for our region that will hopefully be adopted by more landowners.

Resilience and Adaptation

This project promotes climate resilient adaptive infrastructure and land management. Rainwater is a multi-beneficial alternative water source that addresses a broad range of water and climate concerns. Collecting water in the winter and storing it for summer use reduces stormwater peak flows, reducing sediment, erosion and flooding. During the dry season utilizing stored rainwater relieves stress on local streams, springs, aquifers, and other water sources during the most critical time year. Leaving more water in the groundwater and creeks during the driest summer months enhances habitat and survival for threatened and endangered aquatic species and helps support ongoing groundwater sustainability goals. Rainwater catchment systems provides water security against both drought and wildfire, which have become omnipresent in our county.

The geographic range of this project includes southern, central, and western Sonoma County. The project will be implemented at Helen Putnam near Petaluma. The project also includes planning and design development for rainwater catchment at three of the following Regional Parks: Taylor Mountain (Santa Rosa), Crane Creek (Rohnert Park), Tolay Lake (southern Sonoma), and Stillwater (coast).

Equity and Community Engagement

The project will engage community through bilingual educational signage and outreach to diverse communities about rainwater catchment systems, and how they can be used at multiple scales to assist with climate adaptation and resilience. Community engagement will inform the public about the project, particularly targetting engagement of youth from diverse backgrounds. This project will assist with resilient park operations and management, which will assist in continuing to provide affordable recreational and educational opportunities to underserved communities. Helen Putnam, Taylor Mountain, and Crane Creek Regional Parks provide access to nature, hiking, and recreation for underserved communities in Petaluma, Santa Rosa, and Rohnert Park. Supporting operation and management of these parks will assist with keeping them open and available to all community members. In particular, at Helen Putnam this project will help to address the water shortage that led to closed restrooms.

[i] Environmental Defense Fund. 2015. Green Freight Math: How to Calculate Emissions for a Truck Move. https://business.edf.org/insights/green-freight-math-how-to-calculate-emissions-for-a-truck-move/

Request: Provide CRF funding assistance to support fare-free transit for all youth riders on Sonoma County Transit, Santa Rosa CityBus and Petaluma Transit for a two-year period, beginning July 1, 2023 - $907,195

Sonoma County Transit, in partnership with Santa Rosa CityBus and Petaluma Transit, seek Climate Resiliency Funds (CRF) to support fare-free transit service for all youth riders for a two-year period beginning July 1, 2023. All youth within Sonoma County, including those still seeking a certificate of completion from high school or youth not currently affiliated with the school system, will be able to use transit services provided by the three operators at no cost. To acquaint students with transit, an adult chaperone will be permitted to ride at no charge for the first three weeks of each semester.

This project is needed to introduce new riders to the transit systems, to demonstrate that public transit can work to supplant GHG generation, reduce emissions and lower traffic congestion associated with the daily school commute and other trips taken by youth. The project will also assist the local transit providers in their efforts to regain ridership as they recover from the impacts of Covid-19.

GHGs will be reduced as more students rely on public transportation for their school commutes, as well as, trips to work, after school activities and other destinations. Youth ridership will be tracked monthly to evaluate and monitor the success of the program.

Beyond GHG reductions, the proposed program will also result in the following co-benefits:

- Improved air quality as less single passenger vehicles drive on local roads.
- Energy/fuel savings for families who use the bus more.
- Vehicle-miles-traveled reduction resulting in less congestion on roads.
- Greater regional energy security due to less reliance on increasingly expensive gas fuel.
- Public health benefits as more people try out transit and active transportation as alternatives to car travel.
- Public safety benefits through reduction in car traffic and associated crash / injuries / fatalities.
- Improved transportation equity as affordability and reliability improves for people who don't drive, including youth, seniors, low-income individuals and people living with disabilities.
- Economic stimulation as families may consider reducing the number of cars they own and save on associated costs.
- Increasing transit's profile in the community.
- Improved school attendance and educational outcomes.

Provide a proposed implementation timeline. Include the following as applicable:

Youth riders will use services provided by the three local bus operators, fare-free, for a two-year pilot period beginning on July 1, 2023. This 24-month period will provide fare-free travel, for all

trips made by youth riders, on Sonoma County Transit, Santa Rosa CityBus and Petaluma Transit.

Implementation of fare-free service will be accompanied by a robust marketing and outreach campaign involving schools, youth services organizations and human services agencies.

Collectively, the three operators will report youth ridership on a quarterly basis beginning September 30, 2023.

Is this project a part of an existing climate/resilience plan, was it an outcome of the use of an existing climate/resilience tool or model, or would it help create a new climate/resilience plan, tool, or model? If so, please name and describe the plan, tool or model and provide a link to access if available.

This project is an important component within the RCPA's Climate Mobilization Strategy, adopted March 2021. Strategy #3 "Drive Less Sonoma County Campaign" has the goal to "make it easier to get around Sonoma County without a car" and objective 3.3 to "Develop a "next generation" transit system for Sonoma County that is an attractive and viable alternative to driving alone and provides equitable mobility for all."

This project is an example of a larger collaboration effort between the three transit systems that started with the Sonoma County Transportation Authority's Transit Integration and Efficiency Study. From the study, the SCTA Future of Transit Ad Hoc committee was established with the goals to increase transit ridership as a mechanism to reduce GHG emissions, improve access to low-cost transportation, and reduce congestion as well as to simplify and enhance the transit customer experience, while maximizing resources available to transit and improving operational efficiency and service quality. The mission is to create consistent and integrated public transit services throughout Sonoma County that share a unified public-facing identity and prioritize ease of use, low cost, and service quality.

By introducing new youth riders to local transit, the three agencies are implementing efforts to reduce GHG emissions and are demonstrating that using public transportation for school commutes and other trip purposes can be a viable alternative to the single occupancy vehicle.

Will this project result in a return on investment? If so, describe the expected magnitude of the return on investment and if it is expected in the near or long term.

This investment has a triple bottom line (social, environmental impact and financial) while also benefiting families and local government goals.

Additionally, this upstream investment may improve educational outcomes for Sonoma County youth as is suggested by the results of a survey administered in May 2022 by CityBus. Of the survey responses, 73% stated that their school attendance had improved with free access to CityBus.

This project will likely reduce car trips and GHG admissions. The CityBus survey from May 2022 resulted in 78% of youth respondents stating that their "family makes fewer car trips now that youth can ride free on CityBus."

In addition, the survey respondents indicated that youth ride CityBus to many activities besides school. Of the 747 youth respondents, 41% used the bus to get to school, 11% to work, 23% to after school activities (sports, club, civic engagement) and 16% to visit friends or family.

This investment will likely improve the economic outcomes for Sonoma County families particularly given the high cost of housing and transportation.

Does this project create new partnerships, expand on an existing one, or continue an existing one? If so, please describe the partnership/s and explain what level of engagement is expected between partners.

This project will create new partnerships and continue to expand existing partnerships. All three Sonoma County bus operators have worked together for years, including efforts to provide Santa Rosa Junior College students with access to unlimited transit county wide. This project furthers those efforts in a coordinated fashion.

Working with the Sonoma County Transportation Authority, we anticipate that the proposed pilot program will demonstrate the need to make the youth fare-free program permanent in 2025 and will look to SCTA's GoSonoma funds, which become available in mid-2025, to support its continuance.

The collaborative approach to developing this project represents a partnership between the three transit operators, Sonoma County Climate Mobilization and Sonoma Transit Riders United. SCCM and SoTRU intend to continue to support and engage with efforts to increase transit ridership.

Partnerships with schools and local districts will expand. The City of Santa Rosa, as a result of the Unlimited Rider – Youth Program (UR Free), has developed partnerships with local school districts serving the city, the North Bay Organizing Project, Catholic Charities, Pathways Charter School, CHOPS and the Sonoma County Office of Education.

Budget

Provide a proposed implementation budget. If available, please include any supporting documents, such as quotes for equipment, staffing plan with cost per job classification, consulting/contractor services, etc. Only include costs that will be covered with the Climate Resilience Fund if awarded.

Item	Cost
Fare-Free K-12 rides for FY 2024	$341,718
Fare-Free K-12 rides for FY 2025	$565,477
Total	$907,195

Does this project leverage outside (non-County) funds? If so, please describe where the outside funds are coming from, how much it totals to, and how the outside funds will be spent on this project.

The total budget is $1,127,195 for the two-year project. The total shown above only reflects the amount sought from the CRF program which represents 81% of the project costs. The additional amount includes a contribution of $150,000 from CityBus to assist in FY 2024 and a $70,000 contribution from the three transit operators for marketing purposes over the two-year period. The CityBus contribution comes from Bay Area Air Quality Management District – Transportation for Clean Air Fund and the transit operator's contribution will be from funds provided by the state Transportation Development Act.

The CRF funding will provide a bridge to funds available for reduced fare or fare-free programs through the GoSonoma regional sales tax, which becomes available in 2025. This will allow for the operators to pilot the program, evaluate effectiveness, and make any needed adjustments to maximize impact of the new sales tax dollars. This is a critically important function to ensure GoSonoma dollars are going to have maximum impact in reducing GHG from their launch in 2025.

Is this project aligned with the funding priorities of state or federal boards, departments, offices, or agencies? If so, please describe the alignment and list specific funding opportunities that this project could build on.

The proposed youth fare-free program is a local priority to boost ridership, reduce GHG emissions and congestion at local schools during school commute periods.

Additionally, the proposed project is in clear alignment with the USDOT strategic goal for Equity, which seeks to reduce inequities across U.S. transportation systems and communities by promoting safe, affordable, accessible, and multi-modal access to opportunities and services while reducing transportation-related disparities.

Alignment with County Strategic Plan

Does the project address any specific Strategic Plan objectives? (If no, skip the rest of the questions in this section)

Yes, see below.

If answered "YES" to question 9, please indicate which Strategic Plan OBJECTIVE (or objectives) will be furthered by this project. Note: if listed, item must tie to a specific objective, and not simply be in alignment with a general pillar or goal. Please include the following information:

Pillar: Healthy & Safe Communities: Provide quality and equitable housing, health, and human services for all.

Goal: Goal 1: Expand integrated system of care to address gaps in services to the County's most vulnerable.

> **Objective:** Objective 2: Identify gaps in the Safety Net system of services and identify areas where departments can address those gaps directly and seek guidance from the Board when additional resources and/or policy direction is needed.

Description: The County's bus transit operators provide essential services that provides a safety net for the County's most vulnerable, including the elderly, people living with disabilities, people with low or no-income, and people experiencing homelessness. The provision of fare-free service for all youth will help ensure that children living in difficult circumstances have access to affordable transportation options. This relieves one potential stressor that could otherwise further disadvantage them.

Goal: Goal 4: Reduce the County's overall homeless population by 10% each year by enhancing services through improved coordination and collaboration.

Objective: Objective 3: Increase investment in programs that treat underlying causes of homelessness, including substance abuse, mental illness, poverty, and lack of affordable housing.

Description: Because the transportation system and urban layout has been built out primarily to support car drivers, people who cannot drive are disadvantaged and more easily fall behind due to difficulty applying for jobs, keeping a job, getting to medical appointments, reaching food and support services. This makes lack of reliable, affordable transportation options a structural, root cause for poverty and homelessness. Fare-free transit for youth increases access to the public transportation system for young people whose families do not have or cannot drive a car and thereby reduces likelihood of falling into or farther into poverty.

Pillar: Organizational Excellence: Be an innovative, effective, engaged, and transparent organization focused on quality programs and services.

Goal: Goal 1: Strengthen operational effectiveness, fiscal reliability, and accountability.

Objective: Objective 1: Align the Board of Supervisors' strategic priorities, policy, and operational goals with funding and resources.

Description: Reliable, affordable transportation is clearly a key strategy to achieving climate stability, social & racial justice, and safe & healthy communities. Investing available one-time funds in public transportation will help align the Board of Supervisors strategic priorities with funding.

Is the completion of this project a prerequisite to implementing a part of the Climate Action Pillar of the Strategic Plan? If so, list the objectives or goals that project will help implement and explain the connection.

Completion of this project is not a prerequisite for implementing the Climate Action Pillar of the Strategic Plan.

Mitigation: Decarbonization and Sequestration

- **Decarbonization:** The removal or reduction of carbon dioxide (CO2) output into the atmosphere. Decarbonization is typically achieved by switching to usage of low carbon energy sources (Deloitte, 2022). For example, switching from coal- or natural gas-powered energy sources to solar- or wind-powered energy sources.

- **Sequestration:** The process of capturing and storing atmospheric carbon dioxide (USGS, 2022). For example, improving soil and livestock management practices to improve soil carbon capture.

Does this project result in a reduction or sequestration of County GHG emissions? (If no, skip the rest of the questions in this section)

Yes, this project will result in a reduction, or sequestration, of County GHG emissions.

Provide an estimation of this decarbonization/sequestration in metric tons of CO2 / year. Briefly write out your calculation and explain any assumptions made.

The estimated decarbonization from the youth fare-free program assumes that the initial year of the program will result in a 25% increase in youth ridership followed by an additional 15% during the second year. The reduction of vehicle miles traveled (VMT) is estimated using the average daily number of youth rides multiplied by 255 (the number of annual weekdays) and the average trip length by operator. We have not assumed youth ridership on weekends in our estimate.

VMT reduction is used to estimate CO2 and MTCO2e emissions reduction using the EMFAC2017 (v1.0.2) Emission Rates. In total, we estimate that based on projected ridership and trip length, the project will result in a reduction of 101 MT CO2e emissions annually.

Our calculations are shown below:

Youth Ridership				
	Sonoma County Transit	Santa Rosa CityBus	Petaluma Transit	Total
Projected Annual Youth Riders	FY 2023 Projected 90,000	FY 2023 Projected 275,000	FY 2023 Projected 110,000	475,000
FY 2024 Projected Youth Fare-Free Ridership - 25%	22,500	68,750	27,500	118,750
FY 2024 Projected Youth Ridership	112,500	343,750	137,500	593,750
FY 2025 Projected Youth Fare-Free Ridership - 15%	16,875	51,563	20,625	89,063
FY 2025 Projected Youth Ridership	129,375	395,313	158,125	682,813
Total Ridership Change over Two-Year Project	43.75%	43.75%	43.75%	43.75%
Subsidy - FY 2024	$130,781	$107,813	$103,125	$341,719
Subsidy - FY 2025	$150,398	$296,484	$118,594	$565,477
Average Fare	$1.16	$0.75	$0.75	
Total Subsidy Requested	$281,180	$404,297	$221,719	$907,195

Trips per Day				
	Annual Days	Average Trip Length (Miles)	Annual Average Transit Increase	Annual Ridership Increase per Day
Santa Rosa CityBus	255	3.00	60,156	236
Sonoma County Transit	255	6.00	19,688	77
Petaluma Transit	255	2.50	24,063	94
Total			103,906	407

Emission Reduction Calculations				
	Annual VMT	CO2 Emissions (gr/yr)	Annual MT CO2e Emissions	Annual Cost Efficiency
Santa Rosa CityBus	180,469	50,548,200	51.03	$3,962
Sonoma County Transit	118,125	33,086,095	33.40	$4,209
Petaluma Transit	60,156	16,849,400	17.01	$6,518
Total	358,750	100,483,696	101.44	$4,472

Provide an estimation of the cost of decarbonization/sequestration in dollars / metric ton of CO2 reduced per year (divide your project's total cost by the answer above).

The annual cost of the proposed project is $4,472 per MTC02e reduced.

Describe the timeline of this decarbonization/sequestration (for example, XX tons of CO2 reduced or sequestered year 1, XX tons reduced or sequestered year 2 and for every year thereafter). Be sure to discuss permanence. After a certain number of years, do emissions go back to business-as-usual or does the sequestered CO2 get released back to the atmosphere?

Decarbonization resulting from the youth fare-free project are from vehicle trips avoided, rather than postponed. Ridership is expected to increase over time as more youth become aware of the program and build lifestyles around taking transit. Therefore, ongoing and increasing decarbonization is expected in the future.

Describe the certainty and accountability of the decarbonization/sequestration. How certain is it that this project will lead to the GHG reduction described above? How will project leads account for these reductions?

Based on local data showing strong correlation between fare-free transit and ridership increases, there is a high degree of certainty that the program will result in reduced GHG emissions beyond the two-year funding period. Annual Emissions reductions can be tracked by ridership increases.

List and describe any potential co-benefits of this GHG reduction/sequestration. Co-benefits can include: air quality, energy/fuel savings, vehicle-miles-traveled reduction, water conservation, ecosystem health, energy security, public health, public safety, food security, equity, and economic stimulation.

Co-benefits from the proposed project include fuel savings, a reduction in vehicle-miles travelled and a reduction in vehicle emissions when existing transit trips are highly used by program participants.

Beyond GHG reductions, fare-free transit for youth will result in the following co-benefits:

- Improved air quality as less single passenger vehicles drive on local roads.
- Energy/fuel savings for families who use the bus more.
- Vehicle-miles-traveled reduction resulting in less congestion on roads.
- Greater regional energy security due to less reliance on increasingly expensive gas fuel
- Public health benefits as more people try out transit and active transportation as alternatives to car travel.
- Public safety benefits through reduction in car traffic and associated crash/injuries/fatalities.
- Improved transportation equity as affordability and reliability improves for people who don't drive, including youth, seniors, low-income individuals and people living with disabilities.
- Economic stimulation as families may consider reducing the number of cars they own and save on associated costs.

Resilience and Adaptation

Climate change is requiring a shift away from driving single-occupant vehicles. Most jurisdictions in Sonoma County have banned, or are considering the ban, of new gas station construction. This shift away from gas powered autos requires changes to other transportation systems including public transit. Public support for robust transit services will be key to providing a safe, low carbon transportation option for all members of the community during all seasons and weather events (including extreme heat, poor air quality events, and winter storms.)

A strong public transportation system plays an essential role in bolstering the County's long-term economic and social health as we move into the carbon-free era. An investment made today will make our County more resilient by increasing the use of public transit and reducing dependence on the private auto.

Specifically, the youth fare-free program will develop proficiency among youth for how to navigate the county using transit. This will be an essential skill as we move towards a carbon free transportation future.

The populations most served by the proposed program will be the approximately 365,000 residents living in towns and cities served by the three local transit operators.

Does this project promote climate resilient or adaptive infrastructure or land management? (If no, skip the rest of the questions in this section)

This project does not promote climate resilient or adaptive infrastructure or land management.

Describe which climate hazards the project will address and how it will address them. Hazards can include wildfire, drought, extreme precipitation, flooding, temperatures & extreme heat, sea level rise, air quality degradation, loss of biodiversity, natural cycles disruption, climate migration, and energy interruption.

Increasingly volatile weather conditions will make active transportation (bicycling and walking) less viable and less safe during a greater portion of the year with high heat. A robust transit system will be key to providing a safe, low carbon transportation option for all members of the community during all seasons and weather events (including extreme heat, poor air quality events, and winter storms.)

Describe the geographic range, physical area, or targeted population in which the project would aim to address the abovementioned hazards. If possible, describe the area or population's level of exposure and sensitivity to the abovementioned hazards. If possible and applicable, include number of people served, area of land improved, or any other quantifiable metrics.

The populations most served by the proposed program will be the approximately 365,000 residents living in towns and cities served by the three transit agencies involved with this project. This represents approximately 75% of the County's population.

Equity and Community Engagement

The County's bus systems provide an essential service that enables mobility and self-determination for many residents who cannot or choose not to drive, including youth, seniors, people living with disabilities, people with low or no income, and people experiencing homelessness. Generally speaking, fare-free transit eliminates a barrier to transportation accessibility for those who most need it, contributing to a just transition by reducing GHG emissions in a way that also supports underserved populations that rely on transit.

Fare-free for youth will help families who already rely on transit by reducing their baseline transportation expenses, while also increasing mobility, because there will no longer be any extra cost disincentivizing extra trips on transit. This program also aims to streamline transportation options for all young people, whether or not they already rely on transit. Most youth, regardless of their families' ability to own a car, have both limited income and limited independence in car-dominant Sonoma County.

Taking a countywide approach, this project will reach all youth served by the County's three bus systems. This will simplify the process of using transit for youth who cross system boundaries and will ensure that no-one is left out.

This proposed use of CRF funding is community-oriented and will touch the lives of many individuals, families, and school communities. It provides an opportunity to not only increase the number of people using transit, but also to raise awareness and educate various communities about the transit options available.

In developing this proposal, the transit operators have collaborated with bus riders and other community volunteers from Sonoma Transit Riders United and Sonoma County Climate Mobilization.

We do not anticipate any negative impacts from the project.

Identify potential negative impacts of the project on communities of color and low-income communities, and describe what strategies your Department recommends to mitigate any potential adverse impacts. (For additional resources please refer to the Racial Equity Tool Kit, which the Board adopted on November 17, 2020.)

The proposed youth fare-free program will be available to all youth up to completion of the 12th grade, regardless of where they reside, their color or income. We do not foresee any negative impacts of this project on communities of color or low-income communities.

How does this project engage with the community? Please describe the level of community engagement in the development and implementation of your project. Review "The Spectrum of Community Engagement to Ownership" and describe the level of participation. As defined in this resource, the levels of participation are: ignore, inform, consult, involve, collaborate and defer to.

The proposed program reflects involvement and collaboration with the community. Fare-free transit for youth has been requested from individuals and community organizations in Sonoma County over many years. The proposed program has been developed using feedback from community members to ensure that all youth are able to access fare-free transit. This involvement with continue as the program is implemented.

Working with schools that are served by transit, each transit system will best coordinate their service with school bell times. At the completion of each quarter, surveys will be taken to assess the program, to determine how to better serve the community, and to respond to passenger feedback.

Describe how the project improves, doesn't affect, or worsens access by underserved communities to the services and/or benefits embedded in the project.

The project improves access by underserved youth to county-wide transit. The proposed program provides fare-free service to youth riders on existing transit routes at current service levels. This request does not include any financial assistance to introduce new or higher levels of service to local schools. We do not expect this situation to be of consequence as most routes already serve schools during school commute periods.

Describe how the project contributes to a just transition. Explain how the project does (or why it does not) provide economic benefit to underserved communities.

The majority of riders of Sonoma County's three local bus systems are low-income, with between 73-88% of total passenger trips made by individuals with household incomes under $50,000/year.

Fare-free transit for youth will help families who already rely on transit by reducing their transportation expenses while also increasing mobility at no additional cost for youth riders. Most youth, regardless of their families' ability to own a car, have both limited income and limited travel options. This program will provide more options to youth to travel within Sonoma County.

Leveraging Funds and Community Partnerships

Is this project leveraged with other funds? If yes, please describe these funds (where are they coming from, how much, contingent on anything?)

As noted previously, approximately 19% of the project funds come from outside the CRF program. Santa Rosa CityBus will bring $150,000 in Bay Area Air Quality Management District funds to the project and collectively the transit systems will dedicate $70,000 to market the program over the two-year pilot period.

Is there the potential for this project to be leveraged with other funds? If yes, please describe these funds (where are they coming from, how much, contingent on anything?)

We're seeking CRF funds as a bridge to GoSonoma funds that could be applied towards this project beginning in 2025. We intend to demonstrate that the fare-free youth program is a success, that it reduces GHG emissions and promotes transit usage to a new generation of riders.

Will this project leverage community partnerships? If yes, explain. Which organizations? Describe the level of engagement.

Staff will work with local schools and district offices, youth services organizations, and human services agencies to promote this program to their respective students throughout the county.

Partnerships with youth service organizations and human services offices will ensure that youth that may be most disadvantaged whether due to homelessness, juvenile incarceration, or immigration, still have a method of accessing this program.

Request: Beginning July 1, 2013, for a two-year period, provide CRF funding assistance to support fare-free transit to all youth riders on Sonoma County Transit, Santa Rosa CityBus and Petaluma Transit and to introduce new express bus service on Sonoma County Transit - $1,771,475

Sonoma County Transit, in partnership with Santa Rosa CityBus and Petaluma Transit, seek Climate Resiliency Funds (CRF) to support fare-free transit service for all youth riders for a two-year period beginning July 1, 2023. To acquaint students with transit, an adult chaperone will be permitted to ride at no charge for the first three weeks of each semester.

CRF funds are also sought to support the introduction of new express bus services on Sonoma County Transit. The proposed new service will provide one morning and one evening express bus from West County (Monte Rio), North County (Cloverdale), East County (Sonoma) and South County (Petaluma) to/from the Santa Rosa Transit Mall. The express trips will offer limited stops and provide for quicker travel times when compared to regular routes.

These projects are needed to introduce new riders to the transit systems, to demonstrate that public transit can work to supplant GHG generation and reduce emissions and lower traffic congestion associated with daily school and work commutes. The projects will also assist the local transit providers in their efforts to regain ridership as they recover from the impacts of Covid-19.

Provide a proposed implementation timeline. Include the following as applicable:

Sonoma County Transit's express bus service will be introduced in August 2023 for a two-year demonstration period. The youth fare-free program will begin on July 1, 2023, also for a two-year period. This 24-month period will provide fare-free travel, for all trips made by youth riders on Sonoma County Transit, Santa Rosa CityBus and Petaluma Transit.

Implementation of the fare-free program and the new express service will be accompanied by a robust marketing and outreach campaign involving schools, youth services organizations, local chambers of commerce, etc.

Is this project a part of an existing climate/resilience plan, was it an outcome of the use of an existing climate/resilience tool or model, or would it help create a new climate/resilience plan, tool, or model? If so, please name and describe the plan, tool or model and provide a link to access if available.

This project is an important component within the RCPA's Climate Mobilization Strategy, adopted March 2021. Strategy #3 "Drive Less Sonoma County Campaign" has the goal to "make it easier to get around Sonoma County without a car" and objective 3.3 to "Develop a "next generation" transit system for Sonoma County that is an attractive and viable alternative to driving alone and provides equitable mobility for all."

This project is an example of a larger collaboration effort between the three transit systems that started with the Sonoma County Transportation Authority Transit Integration and Efficiency Study facilitated by SCTA. From the study a Transit Ad Hoc committee: "Future of Transit" was

established with the goals 1) to increase transit ridership as a mechanism to reduce GHG emissions, improve access to low-cost transportation, and reduce congestion as well as 2) Simplify and enhance the transit customer experience, while maximizing resources available to transit and improving operational efficiency and service quality. The Ad hoc's mission is to create consistent and integrated public transit services throughout Sonoma County that share a unified public-facing identity and prioritize ease of use, low cost, and service quality.

Will this project result in a return on investment? If so, describe the expected magnitude of the return on investment and if it is expected in the near or long term.

This investment has a triple bottom line (social, environmental impact and financial) while also benefiting families, workers, and local government goals.

Teaching youth the benefits of riding transit not only provides them a mode of travel to attend school and community activities, but also gives them an affordability strategy for reducing living expenses later when they attend college.

This project will reduce car trips and GHG admissions for youth school commutes and work commutes on the new express bus trips.

This investment will likely improve the economic outcomes for Sonoma County families particularly given the high cost of housing and transportation.

Does this project create new partnerships, expand on an existing one, or continue an existing one? If so, please describe the partnership/s and explain what level of engagement is expected between partners.

This project will create new partnerships and continue to expand existing partnerships. All three Sonoma County bus operators have worked together for years, including efforts to provide Santa Rosa Junior College students with access to unlimited transit county wide. This project furthers those efforts in a coordinated fashion.

Working with the Sonoma County Transportation Authority, we anticipate that the proposed pilot programs will demonstrate the need to make the youth fare-free program and express bus services permanent in 2025, and will look to the SCTA's GoSonoma funds, to support their continuance.

The collaborative approach to developing these projects represent a partnership between the three transit operators, Sonoma County Climate Mobilization and Sonoma Transit Riders United. SCCM and SoTRU intend to continue to support and engage with efforts to increase transit ridership.

Budget

Provide a proposed implementation budget. If available, please include any supporting documents, such as quotes for equipment, staffing plan with cost per job classification, consulting/contractor services, etc. Only include costs that will be covered with the Climate Resilience Fund if awarded.

Item	Cost
Fare-Free K-12 rides for FY 2024	$ 341,719
Fare-Free K-12 rides for FY 2025	$ 565,477
Express Bus Service for FY 2024	$ 421,600
Express Bus Service for FY 2025	$ 442,680
Total	$1,771,475

Does this project leverage outside (non-County) funds? If so, please describe where the outside funds are coming from, how much it totals to, and how the outside funds will be spent on this project.

The total combined budget is $2,471,045 for the two-year project. The total shown above only reflects the amount sought from the CRF program which represents 72% of the project costs. The additional amount includes a contribution of $150,000 from CityBus to assist in FY 2024 (youth program), a local match from Sonoma County Transit of $479,570 (express bus program) and a $70,000 contribution from the three transit operators for marketing purposes over the two-year period. The CityBus contribution comes from Bay Area Air Quality Management District – Transportation for Clean Air funds and the transit operator's contribution will be from funds provided by the state Transportation Development Act.

The CRF funding will provide a bridge to funds available through the GoSonoma regional sales tax, which becomes available in 2025. This will allow for the operators to pilot the programs, evaluate effectiveness, and make any needed adjustments to maximize impact of the new sales tax dollars. This is a critically important function to ensure GoSonoma dollars are going to have the maximum impact in reducing GHG from their launch in 2025.

Is this project aligned with the funding priorities of state or federal boards, departments, offices, or agencies? If so, please describe the alignment and list specific funding opportunities that this project could build on.

The proposed youth fare-free and express bus programs are a local priority to boost ridership, reduce GHG emissions and congestion at local schools during school commute periods.

Additionally, the proposed projects are in clear alignment with the USDOT strategic goal for Equity, which seeks to reduce inequities across U.S. transportation systems and communities by promoting safe, affordable, accessible, and multi-modal access to opportunities and services while reducing transportation-related disparities.

Alignment with County Strategic Plan

Does the project address any specific Strategic Plan objectives? (If no, skip the rest of the questions in this section)

Yes, see below.

If answered "YES" to question 9, please indicate which Strategic Plan OBJECTIVE (or objectives) will be furthered by this project. Note: if listed, item must tie to a specific objective, and not simply be in alignment with a general pillar or goal. Please include the following information:

Pillar: Healthy & Safe Communities: Provide quality and equitable housing, health, and human services for all.

Goal: Goal 1: Expand integrated system of care to address gaps in services to the County's most vulnerable.

> **Objective:** Objective 2: Identify gaps in the Safety Net system of services and identify areas where departments can address those gaps directly and seek guidance from the Board when additional resources and/or policy direction is needed.
>
> **Description**: The County's bus transit operators provide essential services that provides a safety net for the County's most vulnerable, including the elderly, people living with disabilities, people with low or no-income, and people experiencing homelessness. The provision of fare-free service for all youth will help ensure that children living in difficult circumstances have access to affordable transportation options. This relieves one potential stressor that could otherwise further disadvantage them.

Goal: Goal 4: Reduce the County's overall homeless population by 10% each year by enhancing services through improved coordination and collaboration.

> **Objective:** Objective 3: Increase investment in programs that treat underlying causes of homelessness, including substance abuse, mental illness, poverty, and lack of affordable housing.
>
> **Description**: Because the transportation system and urban layout has been built out primarily to support car drivers, people who cannot drive are disadvantaged and more easily fall behind due to difficulty applying for jobs, keeping a job, getting to medical appointments, reaching food and support services. This makes lack of reliable, affordable transportation options a structural, root cause for poverty and homelessness. Fare-free transit for youth increases access to the public transportation system for young people whose families do not have or cannot drive a car and thereby reduces likelihood of falling into or farther into poverty.

Pillar: Organizational Excellence: Be an innovative, effective, engaged, and transparent organization focused on quality programs and services.

Goal: Goal 1: Strengthen operational effectiveness, fiscal reliability, and accountability.

> **Objective:** Objective 1: Align the Board of Supervisors' strategic priorities, policy, and operational goals with funding and resources.
> **Description**: Reliable, affordable transportation is clearly a key strategy to achieving climate stability, social & racial justice, and safe & healthy communities. Investing available one-time funds in public transportation will help align the Board of Supervisors strategic priorities with funding.

Is the completion of this project a prerequisite to implementing a part of the Climate Action Pillar of the Strategic Plan? If so, list the objectives or goals that project will help implement and explain the connection.

Completion of this project is not a prerequisite for implementing the Climate Action Pillar of the Strategic Plan.

Mitigation: Decarbonization and Sequestration

- **Decarbonization:** The removal or reduction of carbon dioxide (CO2) output into the atmosphere. Decarbonization is typically achieved by switching to usage of low carbon energy sources (Deloitte, 2022). For example, switching from coal- or natural gas-powered energy sources to solar- or wind-powered energy sources.

- **Sequestration:** The process of capturing and storing atmospheric carbon dioxide (USGS, 2022). For example, improving soil and livestock management practices to improve soil carbon capture.

Does this project result in a reduction or sequestration of County GHG emissions? (If no, skip the rest of the questions in this section)

Yes, this project will result in a reduction, or sequestration, of County GHG emissions.

Provide an estimation of this decarbonization/sequestration in metric tons of CO2 / year. Briefly write out your calculation and explain any assumptions made.

The estimated decarbonization from the youth fare-free program assumes that the initial year of the program will result in a 25% increase in youth ridership followed by an additional 15% during the second year. The reduction of vehicle miles traveled (VMT) is estimated using the average daily number of youth rides multiplied by 255 (the number of annual weekdays) and the average trip length by operator. We have not assumed youth ridership on weekends in our estimate.

VMT reduction is used to estimate CO2 and MTCO2e emissions reduction using the EMFAC2017 (v1.0.2) Emission Rates. In total, we estimate that based on projected ridership and trip length, the project will result in an reduction of 308 MT CO2e emissions annually.

For the express bus service, we're assuming a FY 2023 daily average of 200 passengers, with the number increasing 20% or 240 passengers per weekday in FY 2024. This represents approximately 50% of capacity in the first year.

Our calculations are shown below:

Ridership Projections				
	Sonoma County Transit	Santa Rosa CityBus	Petaluma Transit	Total
Projected Annual Youth Riders	FY 2023 Projected 90,000	FY 2023 Projected 275,000	FY 2023 Projected 110,000	475,000
FY 2024 Projected Youth Fare-Free Ridership - 25%	22,500	68,750	27,500	118,750
FY 2024 Projected Youth Ridership	112,500	343,750	137,500	593,750
FY 2025 Projected Youth Fare-Free Ridership - 15%	16,875	51,563	20,625	89,063
FY 2025 Projected Youth Ridership	129,375	395,313	158,125	682,813
Total Ridership Change over Two-Year Project	43.75%	43.75%	43.75%	43.75%
Express Bus Ridership - Projected FY 2024	51,000	----	----	51,000
Express Bus Ridership - Projected FY 2025	61,200	----	----	61,200
Subsidy - FY 2024	$130,781	$107,813	$103,125	$341,719
Subsidy - FY 2025	$150,398	$296,484	$118,594	$565,477
Average Fare	$1.16	$0.75	$0.75	$0.83
Express Bus Subsidy - FY 2024	$421,600	----	----	$421,600
Express Bus Subsidy - FY 2025	$442,680	----	----	$442,680
Total Subsidy Requested	$1,145,460	$404,297	$221,719	$1,771,475

Trips per Day				
	Annual Days	Average Trip Length (Miles)	Annual Average Transit Increase	Annual Ridership Increase per Day
Sonoma County Transit - K-12	255	6.00	19,688	77
Sonoma County Transit - Express Bus	255	13.00	56,100	220
Santa Rosa CityBus	255	3.00	60,156	236
Petaluma Transit	255	2.50	24,063	94
Total			160,006	627

Emission Reduction Calculations				
	Annual VMT	CO2 Emissions (gr/yr)	Annual MT CO2e Emissions	Annual Cost Efficiency
Sonoma County Transit	847,425	237,358,594	239.61	$2,390
Santa Rosa CityBus	180,469	50,548,200	51.03	$3,962
Petaluma Transit	60,156	16,849,400	17.01	$6,518
Total	1,088,050	304,756,195	307.64	$2,879

Provide an estimation of the cost of decarbonization/sequestration in dollars / metric ton of CO2 reduced per year (divide your project's total cost by the answer above).

The annual cost of the proposed projects is $2,879 per MTC02e reduced.

Describe the timeline of this decarbonization/sequestration (for example, XX tons of CO2 reduced or sequestered year 1, XX tons reduced or sequestered year 2 and for every year thereafter). Be

sure to discuss permanence. After a certain number of years, do emissions go back to business-as-usual or does the sequestered CO2 get released back to the atmosphere?

Decarbonization resulting from the youth fare-free and express bus projects are from vehicle trips avoided, rather than postponed. Ridership is expected to increase continuously as more riders become aware of the program and build lifestyles around taking transit. Therefore, ongoing and increasing decarbonization is expected in the future.

Describe the certainty and accountability of the decarbonization/sequestration. How certain is it that this project will lead to the GHG reduction described above? How will project leads account for these reductions?

Based on local data showing strong correlation between fare-free transit and ridership increases, there is a high degree of certainty that the program will result in reduced GHG emissions beyond the two-year funding period. Annual Emissions reductions can be tracked by ridership increases.

It is anticipated that the express bus program will grow from around 50% of capacity in FY 2024 by 20% in FY 2025. If GoSonoma funds become available to support its continuance in FY 2026, Sonoma County Transit will consider providing two trips per route beginning in August 2025. The pilot program will determine if this is warranted.

List and describe any potential co-benefits of this GHG reduction/sequestration. Co-benefits can include: air quality, energy/fuel savings, vehicle-miles-traveled reduction, water conservation, ecosystem health, energy security, public health, public safety, food security, equity, and economic stimulation.

Co-benefits from the proposed project include fuel savings, a reduction in vehicle-miles travelled and a reduction in vehicle emissions when existing transit trips are highly used by program participants.

Beyond GHG reductions, youth fare-free transit and new express buses will result in the following co-benefits:

- Improved air quality as less single passenger vehicles drive on local roads.
- Energy/fuel savings for families who use the bus more.
- Vehicle-miles-traveled reduction resulting in less congestion on roads.
- Greater regional energy security due to less reliance on increasingly expensive gas fuel
- Public health benefits as more people try out transit and active transportation as alternatives to car travel.
- Public safety benefits through reduction in car traffic and associated crash/injuries/fatalities.
- Improved transportation equity as affordability and reliability improves for people who don't drive, including youth, seniors, low-income individuals and people living with disabilities.
- Economic stimulation as families may consider reducing the number of cars they own and save on associated costs.

Resilience and Adaptation

Climate change is requiring a shift away from driving single-occupant vehicles. Most jurisdictions in Sonoma County have banned, or are considering the ban, of new gas station construction. This shift away from gas powered autos requires changes to other transportation systems including public transit. Public support for robust transit services will be key to providing a safe, low carbon transportation option for all members of the community during all seasons and weather events (including extreme heat, poor air quality events, and winter storms.)

A strong public transportation system plays an essential role in bolstering the County's long-term economic and social health as we move into the carbon-free era. An investment made today will make our County more resilient by increasing the use of public transit and reducing dependence on the private auto.

Our proposed youth fare-free program will develop proficiency among youth for how to navigate the county using transit. This will be an essential skill as we move towards a carbon free transportation future. The express bus program will make Sonoma County Transit easier to use for either a school commute (SRJC) or a work commute when traveling into the downtown Santa Rosa/Mendocino Avenue corridor.

The proposed express bus project will enable commuters travelling from the outermost points of Sonoma County Transit's route network, commute trips that operate at a higher speed with limited stops that makes commuting during weekday traditional work hours easier than currently exists. As shown on the attached draft schedule, morning express bus trips arrive at Santa Rosa Transit Mall at 7:30am and they depart in the afternoon at 5:20pm. This is a tentative schedule and efforts to coordinate arrivals/departures with CityBus may affect the proposed times shown.

The populations most served by the proposed program will be the approximately 365,000 residents living in towns and cities served by the three local transit operators.

Does this project promote climate resilient or adaptive infrastructure or land management? (If no, skip the rest of the questions in this section)

This project does not promote climate resilient or adaptive infrastructure or land management.

Describe which climate hazards the project will address and how it will address them. Hazards can include wildfire, drought, extreme precipitation, flooding, temperatures & extreme heat, sea level rise, air quality degradation, loss of biodiversity, natural cycles disruption, climate migration, and energy interruption.

Increasingly volatile weather conditions will make active transportation (bicycling and walking) less viable and less safe during a greater portion of the year with high heat. A robust transit system will be key to providing a safe, low carbon transportation option for all members of the community during all seasons and weather events (including extreme heat, poor air quality events, and winter storms.)

Describe the geographic range, physical area, or targeted population in which the project would aim to address the abovementioned hazards. If possible, describe the area or population's level of exposure and sensitivity to the abovementioned hazards. If possible and applicable, include number of people served, area of land improved, or any other quantifiable metrics.

The populations most served by the proposed program will be the approximately 365,000 residents living in towns and cities served by the three transit agencies involved with these projects. This represents approximately 75% of the County's population.

Equity and Community Engagement

The County's bus systems provide an essential service that enables mobility and self-determination for many residents who cannot or choose not to drive, including youth, seniors, people living with disabilities, people with low or no income, and people experiencing homelessness. Generally speaking, fare-free transit eliminates a barrier to transportation accessibility for those who most need it, contributing to a just transition by reducing GHG emissions in a way that also supports underserved populations that rely on transit.

Fare-free for youth will help families who already rely on the bus by reducing their baseline transportation expenses while also increasing mobility because there will no longer be any extra cost disincentivizing extra trips on the bus. This program also aims to streamline transportation options for all young people, whether or not they already rely on the bus. Most youth, regardless of their families' ability to own a car, have both limited income and limited independence in car-dominant Sonoma County.

Taking a countywide approach, this project will reach all youth served by the County's three bus operators. This will simplify the process of using the bus for youth who cross system boundaries and ensure that no-one is left out.

The proposed express-bus program will enable workers living on the outer reaches of Sonoma County Transit's service area, a quicker trip into downtown Santa Rosa and the Mendocino Avenue corridor.

This proposed use of CRF funding is community-oriented and will touch the lives of many individuals and families. It provides an opportunity to not only increase the number of people using transit, but also to raise awareness and educate various communities about the transit options available.

In developing this proposal, the transit operators have collaborated with bus riders and other community volunteers from Sonoma Transit Riders United and Sonoma County Climate Mobilization.

We do not anticipate any negative impacts from the project.

Identify potential negative impacts of the project on communities of color and low-income communities and describe what strategies your Department recommends to mitigate any potential adverse impacts. (For additional resources please refer to the Racial Equity Tool Kit, which the Board adopted on November 17, 2020.)

The proposed youth fare-free program will be available to all youth up to completion of the 12th grade, regardless of where they reside, their color or income. The proposed express-bus program will be available to all riders and serve existing transit corridors with streamlined, limited, stop service.

We do not foresee any negative impacts of this project on communities of color or low-income communities.

How does this project engage with the community? Please describe the level of community engagement in the development and implementation of your project. Review "The Spectrum of Community Engagement to Ownership" and describe the level of participation. As defined in this resource, the levels of participation are: ignore, inform, consult, involve, collaborate and defer to.

The proposed program reflects involvement and collaboration with the community. Fare-free transit for youth has been requested from individuals and community organizations in Sonoma County over many years. The proposed program has been developed using feedback from community members to ensure that all youth are able to access fare-free transit. This involvement with continue as the program is implemented.

Working with schools that are served by transit, each transit system will best coordinate their service with school bell times. At the completion of each quarter, surveys will be taken to assess the program, to determine how to better serve the community, and to respond to passenger feedback.

Describe how the project improves, doesn't affect, or worsens access by underserved communities to the services and/or benefits embedded in the project.

The project improves access by underserved youth to county-wide transit. The proposed program provides youth fare-free service only on existing transit routes at current service levels. This request does not include any financial assistance to introduce new or higher levels of service to local schools. We do not expect this situation to be of consequence as most routes already serve schools during school commute periods.

The proposed express-bus service is new service on Sonoma County Transit.

Describe how the project contributes to a just transition. Explain how the project does (or why it does not) provide economic benefit to underserved communities.

The majority of riders of Sonoma County's three local bus systems are low-income, with between 73-88% of total passenger trips made by individuals with household incomes under $50,000/year.

Fare free for youth will help families who already rely on transit by reducing their transportation expenses while also increasing mobility at no additional cost for youth riders. Most youth, regardless of their families' ability to own a car, have both limited income and limited travel options. This program will provide more options to youth to travel within Sonoma County.

Leveraging Funds and Community Partnerships

Is this project leveraged with other funds? If yes, please describe these funds (where are they coming from, how much, contingent on anything?)

As noted previously, approximately 28% of the project funds come from outside the CRF program. Santa Rosa CityBus will bring $150,000 in Bay Area Air Quality Management District – Transportation for Clean Air funds to the project and the transit systems will dedicate $549,570 as local match funds to support the proposed projects over the two-year pilot period.

Is there the potential for this project to be leveraged with other funds? If yes, please describe these funds (where are they coming from, how much, contingent on anything?)

We're seeking CRF funds as a bridge to GoSonoma funds that could be applied towards these projects beginning in 2025. We intend to demonstrate that the youth fare-free and express-bus programs are successful projects that reduce GHG emissions and promotes the use of transit to a broad range of the population.

Will this project leverage community partnerships? If yes, explain. Which organizations? Describe the level of engagement.

Staff will work with local schools and district offices, youth services organizations, and human services agencies to promote the youth fare-free program to their respective students throughout the county. Sonoma County Transit will work with local chambers of commerce, the EEOC and other local organizations to promote the new express service.

Attachment A - Conceptual Express-Bus Schedules

Sonoma County Transit

Conceptual Express-Bus Schedules

Route 20 - Monte Rio, Guerneville, Rio Nido, Santa Rosa

AM Service	6:30	Monte Rio
	6:41	Guerneville
	6:45	Rio Nido
	7:18	County Center
	7:23	SRJC
	7:30	**Santa Rosa Transit Mall**
PM Service	**5:20**	**Santa Rosa Transit Mall**
	5:27	SRJC
	5:32	County Center
	6:05	Rio Nido
	6:09	Guerneville
	6:20	Monte Rio

Route 30 - Sonoma, Boyes Hot Springs, Glen Ellen, Santa Rosa

AM Service	6:25	Sonoma Plaza
	6:31	El Verano
	6:38	Boyes Hot Springs
	6:52	Glen Ellen
	7:01	Kenwood
	7:21	Memorial Hospital
	7:30	**Santa Rosa Transit Mall**
	7:37	SRJC
	7:42	County Center
	7:51	Coddingtown
PM Service	**5:00**	Coddingtown
	5:10	County Center
	5:15	SRJC
	5:20	**Santa Rosa Transit Mall**
	5:29	Memorial Hospital
	5:49	Kenwood
	5:58	Glen Ellen
	6:12	Boyes Hot Springs
	6:19	El Verano
	6:25	Sonoma Plaza

Route 48 - Petaluma, Cotati, Rohnert Park, Santa Rosa

AM Service	6:45	Petaluma Transit Mall
	7:05	Cotati Hub
	7:12	Rohnert Park
	7:30	**Santa Rosa Transit Mall**
	7:37	SRJC
	7:42	County Center
	7:51	Coddingtown
PM Service	5:00	Coddingtown
	5:09	County Center
	5:14	SRJC
	5:20	**Santa Rosa Transit Mall**
	5:38	Rohnert Park
	5:45	Cotati Hub
	6:05	Petaluma Transit Mall

Route 60 - Cloverdale, Geyserville, Healdsburg, Windsor, Santa Rosa

AM Service	6:15	Cloverdale City Hall
	6:34	Geyserville
	6:51	Healdsburg Plaza
	7:03	Windsor Depot
	7:25	SRJC
	7:30	**Santa Rosa Transit Mall**
PM Service	**5:20**	**Santa Rosa Transit Mall**
	5:25	SRJC
	5:47	Windsor Depot
	5:59	Healdsburg Plaza
	6:16	Geyserville
	6:35	Cloverdale City Hall

TPW Bikeable Sonoma County

Project Overview

The Arnold Drive Bike Lane project will add nearly 2 miles of Class II bike lanes on Arnold Drive in the Sonoma area, between Country Club Drive and Madrone Road. Class II bike lanes are defined as adjacent to roadway travel lanes, with signage and striping denoting the exclusive use of bicycles in the bike lane.

The additional bike lanes provide alternate transportation connectivity to commerce and retail resources in this economically disadvantaged community. Arnold Drive is a prominent roadway running north-south in the Sonoma Springs area. This bike lane project extends the Class II bike lanes northerly already in existence on Arnold Drive between Leveroni Road and Country Club Drive. Existing bike lanes on Verano Avenue provide an important east-west link to the Boyes Hot Springs area and Fetters Hot Springs areas accessible by existing bike lanes on State Route 12. These communities have shops, groceries, thrift stores and a variety of commerce valuable to disadvantaged community population.

This extension of bike lanes will promote the use of bicycles as an alternate form of transportation, and will lead to lowering vehicle-miles-traveled (VMT). Extending the bicycle lanes makes alternate transportation accessible to more people by reaching further into the community. Additional benefits include an increase in community health from the use of bicycles for transportation and provide a disadvantaged community access to safe, more cost effective bicycle transportation. This project contributes to improved community resilience from the increase in health benefits and reduced transportation costs.

The Board of Supervisors have clearing stated their strong interest in the construction of additional bicycle lanes through the Strategic Plan Pillars of Climate Resiliency and Resilient Infrastructure. The Arnold Drive Bike Lane project is specifically listed in the Resilient Infrasture objective.

The total cost of the project is $4,175,000 dollars, which includes design, environmental, construction and inspection costs. The construction costs are funded with $2,375,000 of Sonoma County Transportation Authority Measure M Bicycle and Pedestrian Project funds. TPW is requesting $500,000 of Climate Resiliency funding for costs associated with right-of-way portion of the project. These costs include right-of-way engineering (the determination of the existing and proposed right-of-way boundaries), appraisal and acquisition consultant services, and finally the purchase of the right-of-way.

The project is broken down into several phases, outlined below.

Implementation Timeline

Phase 1: August 2021 – Dec 2022; Project Design: Preliminary Engineering, Environmental and Public Outreach

Phase 2: January 2023- Dec 2023; Right of way acquisition and continued public outreach

Phase 3: June 2024 – Dec 2025; Construction and Construction Inspection

Budget

Item	Phased Cost
2022: Phase 1: Design: preliminary engineering, environmental	<$800,000>
Public Outreach – community meeting, exist County Road funds	
2023: Phase 2: Right of Way acquisition	$500,000
2024: Phase 3: Construction – existing SCTA funding	<$2,375,000>
2024: Phase 3: Construction and Construction Inspection - TBD	<$500,000>
Project Summary	**Total Cost**
Project Cost Arnold Drive Bike Lanes	$4,175,000
Existing funding: County Road funds, SCTA, TBD	<$3,675,000>
Requested funding	$500,000

This $4,175,000 project has leveraged other funds through Sonoma County Transportation Authority Measure M funds of $2,375,000 bike/ped. This project includes 56% leveraged funds from outside sources and 20% funding from County Road funds. The Climate Resiliency request of funds of $500,000 represents 12% of the project cost. The remaining unfunded need of $500,000 represents 12% that TPW will continue to seek from Federal Stimulus funding programs.

Alignment with County Strategic Plan

This project directly supports the Resiliency Infrastructure R3.3 as described below. Arnold Drive Bike Lanes is one of 3 projects specifically listed in the objective to invest $5 million by 2024 on new bicycle and pedestrian facilities.

Pillar: Resilient Infrastructure

- **Goal 3:** Continue to invest in critical road, bridge bicycle and pedestrian infrastructure
  - **Objective 3:** Invest $5 million by 2024 on new pedestrian and bicycle facilities
- **Department Leads:** TPW
- **Description:** TPW has 3 upcoming construction projects to support this objective:
  1. Arnold Drive Bike Lane project which includes adding nearly 2 miles of bike lanes to Arnold Drive in the Sonoma area. Bike lanes provide transportation alternative to lower income populations.
  2. Mark West Springs Sidewalk project involving addition of new sidewalk along Mark West Springs Road between Old Redwood Hwy and Ursuline Drive in the Larkfield area and serving John Riebli Elementary School. This area was affected by the 2017 Fires.

3. Crocker Bridge Sidewalk project which includes new pedestrian path on Crocker Road Bridge in the Cloverdale area. Benefits include providing a pedestrian link between disadvantaged neighborhoods to the east and downtown Cloverdale shops and businesses and safe access to the Russian River.

Mitigation: Decarbonization and Sequestration

According to the August 2021 Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities and Advancing Health and Equity, Green House Gas (GHG) emissions are reduced by 0.8% from vehicles with the addition of a Class II bike lane.

Bike lanes encourage a transportation mode shift from vehicles to bicycles, reducing Vehicles Miles Traveled (VMT) and thus reducing GHG emissions. Air quality and fuel energy savings are additional benefits from this project.

Resilience and Adaptation

The increased availability of bicycle lanes will provide increased health benefits. Using bicycles as an alternate form of transportation translates into increased physical activity. The increased physical activity yields greater resiliency in the community. The improved connectivity to the Sonoma Springs area adds an important link to retail shops.

Class II Bike lanes are constructed by widening the roadway to include shoulder width dedicated to the use of bicycles. The result is a wider roadway surface. The wider roadway surface acts as an increase in the fire fuel break for wildfires, thus increasing resilience.

Additional benefits of the project include improved local air quality and savings in fuel and energy due to the increase use of bicycles for transportation and decrease in vehicle traffic.

Equity and Community Engagement

There are no negative impacts from this project on communities on low-income communities. This project provides numerous benefits, including increased health from the use of bicycles, provision of vital transportation linkage through both bike lanes and public transit to nearby commerce resources and community resilience from added fire fuel breaks.

Bike lanes provide a source of safe transportation alternative of bicycling to disadvantaged communities who may not have access to vehicles. This project provides bike lane connectivity to Sonoma County Transit bus stops along Arnold Drive, including bus stops at Agua Caliente Road. This vital link to public transit plays an important role in providing equitable transportation options. The extension of the bike lanes provide a link to the Sonoma Spring area surrounding Highway 12. These communities have shops, groceries, thrift stores and a variety of commerce valuable to disadvantaged community population.

Regarding community engagement, we have already meet with the Sonoma County Bicycle and Pedestrian Advisory Committee. The project was presented during an evening meeting online and the

committee agreed the project was in compliance with the Bicycle Master Plan. Additional project feedback was noted and will be incorporated into the project design wherever feasible.

The next opportunity for community engagement will be a public meeting at the 30% design stage. TPW has procured consultant design services for the project that include scope for public meetings. The plan includes the use of multiple outreach efforts to fully engage the surrounding communities in our bike lane project.

Leveraging Funds and Community Partnerships

This $4,175,000 project has leveraged other funds through Sonoma County Transportation Authority Measure M funds of $2,375,000 bike/ped. This project includes 56% leveraged funds from outside sources and 20% funding from County Road funds. The Climate Resiliency request of funds of $500,000 represents 12% of the project cost. The remaining unfunded need of $500,000 represents 12% that TPW will continue to seek from Federal Stimulus funding programs.

This project's community partnerships are represented by the Sonoma County Bike and Pedestrian Advisory Council (SCBPAC). The project was presented to this Council and was found to be in conformance with the 2010 Master Bike Plan.

TPW has plans for community outreach meetings later this winter to share preliminary plans and to gather community feedback and input on the project. Equitable advertisement for the public outreach meetings will be included to ensure public involvement and collaboration in the project.

GSD/TPW EV Infrastructure Expansion

Overview

The Electric Vehicle (EV) Infrastructure Expansion Project is the collective of County projects with the goal to expand the EV infrastructure at County owned and leased properties to drive the adoption of greener zero-emission vehicles, such as plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs), and ultimately maximize sustainability and emissions reductions.

Without a place to "refuel" (charge) electric vehicles (EVs) effectively and efficiently, adoption of EVs within the County Fleet and with the public will be severely hindered – bottlenecking EV acceptance as suitable replacements for internal combustion engine (ICE) vehicles, until more charging infrastructure is put in place. With the appropriate charging infrastructure implemented to support EVs, the hesitancy to embrace new technology due to range anxiety or charger availability is put at ease. The transition from ICE vehicles to EVs should, therefore, ideally occur simultaneously with the installation of new charging infrastructure. As the County establishes new EV infrastructure and the number of EV models available increase, there should be a natural transition and progression into a more sustainable world.

The overall project's success will be measured by the total number of EV chargers installed for each use case, the utilization of each bank of chargers (sessions, revenue, etc.), and the overall reduction of Green House Gas (GHG) emissions. Because the project is dependent and measured on the implementation of tangible items, any funding received (full or partial) would impact the level of achievement and progression towards the goal.

The key players in the project implementation will include Fleet, Regional Parks, the Sheriff's Office, Transportation and Public Works, Sonoma County Transit Authority, Energy and Sustainability, the Office of Equity, Sonoma Clean Power, and PG&E. Regional Parks, the Sheriff's Office, Transportation and Public Works, and Sonoma County Transit will each supply lots and sites for charger installations. Fleet and Energy and Sustainability will support in outreach and marketing of newly implemented infrastructure. The Office of Equity will support as a thought partner to imbed equity throughout the program process. Sonoma Clean Power will sponsor a number of Regional Park sites by offsetting the cost for charging station equipment. PG&E through their EV Fleet program will fund and provide "to-the-meter" infrastructure upgrades to support fleet charging with the Sheriff's Office and Transportation and Public Works. The following are the intended projects under the greater EV Infrastructure Expansion Project:

A. ARCs at Parks: As an immediate solution to increase the County's EV charging infrastructure and community awareness, EV ARCs are planned for immediate implementation in each district at the following Regional Parks: Helen Putnam Park, Andy's Unity Park, Spring Lake, Schopflin Fields, Ragle Ranch, and Spud Point Marina. The EV ARC is a rapidly deployable and highly transportable solar-powered Level 2 EV charging infrastructure product that also has the capability of providing a reliable source of backup power to first responders during an emergency. Andy's Unity Park is located in South Santa Rosa in a disadvantaged census tract (tract: 6097153200), based on data from CalEnviroScreen. Andy's Unity Park is currently vying for funding through a federal earmark. Should those funds be obtained, Andy's Unity Park will

be replaced by Taylor Mountain as an alternate site. Future locations will be determined through engagement with communities within the County.

B. Electrifying Patrol: The Sheriff's Office will implement up to two (2) Level 3 direct current fast chargers (DCFC) and up to ten (10) Level 2 chargers. The Level 3 chargers will directly support EV law enforcement vehicles with a 24 hour duty cycle, and have the capability of staying operational should grid power be lost. With the implementation of appropriate and necessary infrastructure, Fleet will order and pilot two (2) new EV patrol vehicles during the FY 22-23 replacement cycle. The level 2 chargers will provide charging for administrative fleet vehicles. Provisions will be included during construction to ensure expandability of future chargers as the EV fleet grows.
C. Big EVs: Transportation and Public Works will implement a minimum of one (1) Level 3 charger and four (4) Level 2 chargers at each one of the following equipment yards: Santa Rosa Road Yard, Cotati Yard, Healdsburg Yard, Guerneville Yard, and Sonoma Yard. The Level 3 chargers will specifically support new to market medium and heavy duty vehicles and equipment that have substantially larger batteries or are critical to providing essential services with minimal interruptions. The level 2 chargers will provide charging for administrative fleet vehicles. Provisions will be included during construction to ensure expandability of future chargers as the EV fleet grows.
D. Park and Charge: Subject to an RFP, the Park and Ride lots, maintained and operated by Sonoma County Transit, in Cloverdale, Geyserville, Windsor, Guerneville, Occidental, and Boyes Hot Springs will seek a qualified vendor to construct, install, operate, maintain, and secure Level 3 chargers at each location with minimal or no cost to the County. The vendor would be responsible for leasing a portion of each lot at fair market value, paying for all electricity usage, and establishing a free or reduced rate option for qualified low-income individuals and Fleet users. Additional points on the RFP would be given to Park and Ride location that are in underfunded communities or in areas with high density multifamily homes. The Park and Ride locations are highly desirable locations for both the vendor and the County as there are very few Level 3 charging options in the area. The implementation of new charging infrastructure in these locations will help fill a service gap to reach the outlying areas of the County.

The expansion of EV infrastructure will significantly reduce emissions and maximize sustainability by replacing carbon producing internal combustion engine (ICE) vehicles with EVs. Not only does the overall project improve community health, but it increases the availability of chargers for use by the public, employees, and Fleet. The expansion of EV infrastructure directly aligns with the County's Strategic Plan and in some aspects provides resilient and sustainable back-up power during power outages.

The following chart is provided with assumption of funding being made available by October 2022.

Major Activities / Projects	**Approximate Timelines**
Order Portable EV ARC Solar Chargers for Regional Park Locations	October 2022 (Lead time 90-120 Days)
Engage PG&E on EV Fleet Program	October 2022
Place Capital Projects Requests for Sheriff's Office and Transportation and Public Works Projects	October 2022

RFP for Park and Ride EV Private/Public Partnership	October 2022
Order Level 2 and Level 3 Chargers	November 2022 (Lead time 60-90 Days)
Order Sheriff's Office EV Patrol Pilot Vehicles	December 2022
Award RFP for Park and Ride EV Private/Public Partnership	December 2022
Deploy Portable EV ARC Solar Chargers at Regional Park Locations	March 2023
Break Ground on Charger Installations for Sheriff's Office and Transportation and Public Works Projects	March 2023
Complete Charger Installations for Sheriff's Office and Transportation and Public Works Projects	December 2023
Complete Park and Ride EV Private/Public Partnership	December 2023
Maintain EV Infrastructure	Ongoing

This project supports part of an existing climate/resilience plan developed and adopted by the Regional Climate Protection Agency (RCPA) in 2019 titled "Sonoma Climate Mobilization"[1].

The project is expected to have significant returns on investment through the California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) Program, in which credits are generated through emission reductions – electricity dispensed by County owned EV chargers. These credits are then monetized through a sale to regulated emitters that need carbon reductions to remain in compliance with CARB. The more electricity dispensed by the EV chargers, the more credits the County earns. This project creates new partnerships and expands and continues existing ones. New partnerships will include outside entities, Sonoma Clean Power and PG&E.

The level engagement from these entities would be on project implementation. Upon successful award of the public-private EV infrastructure RFP, a new partnership will be in place with a third party EV infrastructure owner/operator, involving similar engagement. Additionally, owner/operator will be heavily engaged in establishing a free or reduced rate option/program for qualified low-income individuals and Fleet users, and providing charger utilization data. Within the County, Fleet will expand and continue their relationship with Regional Parks, the Sheriff's Office, Transportation and Public Works, Sonoma County Transit, Energy and Sustainability, and the Office of Equity. Regional Parks, the Sheriff's Office, Transportation and Public Works, and Sonoma County Transit will all engage in various capacities to facilitate site visits, attend project meetings, and ensure overall operation of the new infrastructure. The Office of Equity will engage as a thought partner to imbed equity throughout the program process. Fleet with Energy and Sustainability will help promote the newly installed and publicly available charging stations, and outreach to disadvantaged, low-income, and communities of color on their availability. The level of engagement will increase as Fleet scales the EV infrastructure and involves the community for preferences for future sites.

[1] https://rcpa.ca.gov/what-we-do/sonoma-climate-mobilization/#:~:text=RCPA%20has%20developed%20a%20Climate,scale%20of%20the%20climate%20crisis.

Budget

The following budget table shows the collective of projects broken out by the funding amounts needed to leverage outside funding.

Item	Cost
A. ARC in Parks	
Portable EV ARC Chargers (Qty 12 x ~$80K per unit)	$960,000
EV Charger Network Fees	$67,200
Sub-Total	1,027,200
B. Electrifying Patrol	
Level 3 Chargers (Qty 2 x ~$190K per unit)	$380,000
Level 2 Chargers (Qty 5 x ~7K per unit)	$35,000
Capital Project Costs (i.e. design, permitting, construction, PM Mgmt., etc.)	$200,000
EV Charger Network Fees	$30,000
Utility Charges (~155,000 kW Demand x Average of ~$0.237/kWh)	$40,000
Sub-Total	$685,000
C. Big EVs	
Level 3 Chargers (Qty 5 x ~$190K per unit)	$950,000
Level 2 Chargers (Qty 10 x ~7K per unit)	$70,000
Capital Project Costs (i.e. design, permitting, construction, PM Mgmt., etc.)	$500,000
EV Charger Network Fees	$65,000
Utility Charges (~155,000 kW Demand x Average of ~$0.237/kWh)	$40,000
Sub-Total	$1,585,000
D. Park and Charge	
Support Funding (i.e. Capital Projects oversight and consulting)	$100,000
Sub-Total	$100,000
Total	**$3,437,200**

This project leverages several (non-County) funds from the following sources:

- PG&E's EV Fleet Program provides "to-the-meter" infrastructure upgrades. The value of the funding is highly variable (potential range is approximately $1M – $1.5M), and is dependent on the distance between the utility supply line and the meter, the required equipment upgrades, and the cost of construction. In general, "to-the-meter" funding will subsidize substantial costs to the mentioned EV infrastructure projects with the Sheriff's Office and Transportation and Public Works, leaving the County with only the costs of equipment and construction for infrastructure "behind-the-meter".
- Sonoma Clean Power will sponsor a number of Regional Park sites by offsetting the costs for charging station equipment. The value of the funding is based on the cost of charging station equipment (approximately $150,000).
- Public-Private Partnership will leverage private funding from a third party owner/operator to accelerate EV infrastructure expansion and EV adoption at minimal or no cost to the County. An RFP will be performed to seek a qualified vendor to construct, install, operate, maintain, and secure Level 3 chargers at several County Park and Ride locations. The vendor would be responsible for leasing a portion of each lot at fair market value, paying for all electricity usage,

and establishing a free or reduced rate option for qualified low-income individuals and Fleet users. The value of the funding is approximately $2.5 million.

- Clean Vehicle Rebate Program (CVRP) will be leveraged to offset the costs of EVs purchased for Fleet use. Select PHEVs offers $1000 credit, while select BEVs offer $2000 credit.
- California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) Program will be utilized to earn credits through emission reductions – electricity dispensed by County owned EV chargers. These credits are then sold to regulated emitters that need carbon reductions to remain in compliance with CARB. A single LCFS credit varies in value, but averages about $150 per credit. These credits would be used to offset the ongoing costs to maintain the chargers, and possibly fund additional EV infrastructure or climate related projects. Based on anticipated usage, the value of this funding is approximately $62,000.

On the State level, this project is in direct alignment with Executive order N-79-20, which requires by 2035, all new cars and passenger trucks sold in California be zero-emission vehicles. Federally, the project is also in direct alignment with the Bipartisan Infrastructure Law, which contains new funding for EV charging stations. Several funding opportunities are likely to surface in the upcoming years though the US Department of Transportation (USDOT), California Energy Commission (CEC), Bay Area Air Quality Management District (BAAQMD), California Air Resources Board (CARB), Metropolitan Transportation Commission (MTC), and PG&E. While this project could build on the funding opportunities available in the near future, nearly all of them are through reimbursement, which requires initial funding by the County.

Alignment with County Strategic Plan

- **Pillar**: Climate Action and Resiliency and Resilient Infrastructure
- **Goal 4**: Maximize sustainability and emissions reductions in all County Fleet vehicles
- **Objective 1**: Where feasible, phase out County (owned or leased) gasoline powered light-duty cars, vans, and pickups to achieve a 30% zero-emission vehicle light-duty fleet by 2026.
- **Objective 3**: Upgrade the existing County owned Electric Vehicle charging station infrastructure by 2023.
- **Department Lead for this Objective:** General Services
- **Description / Connection**: This project upgrades and expand the existing County owned EV charging infrastructure. The expansion the EV infrastructure at County owned and leased properties helps drive the adoption of greener zero-emission vehicles, such as plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs).

Mitigation: Decarbonization and Sequestration

Using an example from Green Light Lab's Fleet Electrification Report, and under the assumption the County replaces all 81 Internal Combustion Engine (ICE) vehicles due for replacement in FY21-22 with equivalent EVs, the annual GHG reduction would be 320 metric tons of CO2.

	All Replacement Vehicles (81)		
	Existing Fleet	**Electric Vehicles**	**Annual Savings**
Annual GHG Reductions (ton CO_2)	500	180	320

Based on this calculation and the projected cost of the project, it is estimated that the cost of decarbonization for FY 21-22 would be $2,800,000 / 320 = $8,750 per year. The cost of decarbonization is expected to decrease significantly after year one and over time as more EVs are adopted (increased GHG reductions) alongside the implementation of EV charging infrastructure, which is also expected to decrease in cost with economies of scale and need. EVs are also expected to be on the road longer and the GHG reductions would be cumulative over the years. With the assumption the average American drives 12,000 miles per year, the life expectancy of an EV battery pack is around 200,000 miles, equating to about 17 years of use. In comparison, a traditional ICE vehicle has a life expectancy around 100,000 miles, which equates to about 8 years of use.

Green Light Lab's Fleet Electrification Report provides the following chart to summarize the potential GHG reductions over time and assumes 622 of the 951 County fleet vehicles are replaced with equivalent EVs.

	Year 2021 to 2025	Year 2026 to 2029	Total
Vehicles due for replacement	791	160	951
EV candidates	463	159	622
GHG reductions (metric tons CO2)	6000	7000	13000

Resilience and Adaptation

The project as a whole will promote a better environment through decarbonization. Additionally, the project supplies adaptive infrastructure (in reference to the portable EV ARC Solar Chargers) that doubles as back-up generators during an emergency and preserves the environment by requiring no construction and grid power. The EV ARC is a rapidly deployable and highly transportable solar-powered electric vehicle charging infrastructure product that has the capability of providing a reliable source of backup power to first responders during a Public Safety Power Shutoff (PSPS) or a natural disaster like a fire, flood, or earthquake. Utilizing 100% renewable energy from the sun, the EV ARC operates fully independent of grid electricity, is built to withstand extreme weather (120 mph winds and floods up to 9.5 feet), and requires no construction or permitting. Because deployment of the EV ARC takes minutes, and it is highly transportable, first responders can move the unit to critical and strategic locations, as needed, to provide reliable power. During an emergency critical and strategic locations include Veteran's buildings, County Campus, Local Assistance Centers, and Temporary Evacuation Points. After initial cost of acquisition, there are no utility costs associated with the units. The EV ARC units could also provide as a "bridge" solution (deployed as temporary charging infrastructure) for more permanent EV infrastructure projects in the near future that require construction and permitting.

Additionally, the projects implementing Level 3 charging look to procure chargers with onboard batteries that allow the chargers to stay operational should there be a grid outage for any reason. The onboard batteries also act as a buffer between the utility and the charging vehicle, allowing the ability to mitigate demand charges from the utility when the chargers require a high amount of power draw, or during peak grid usage periods.

Equity and Community Engagement

The potential negative impacts of the project on communities of color and low-income communities include providing an infrastructure they cannot readily use or access, due to being priced out of EV ownership and chargers being places in less impactful areas. This issue will be negated with the prioritization of underserved communities that have been historically excluded from environmental projects. This issue would be further minimized with community engagement and dissemination of information related EV incentives through Regional, State, and Federal EV rebates, fuel savings through lower cost of charging, and the true total cost of ownership. Engagement and the dissemination of information will be developed in partnership with Energy and Sustainability. Furthermore, over time, as manufacturers increase EV production and achieve economies of scale, the price of EVs will naturally fall.

Providing public EV charging and charging at discounted or no cost within underserved communities of color and low-income communities, further incentivizes individuals to convert to EVs and make EVs more affordable. Potentially, accessibility and availability of EV Charging stations to communities of color and low-income communities may become a negative issue. However, these concerns will be addressed by optimizing the locations where these units will be placed, implementing a time limit on the charging stations (to avoid long term parking without charging), and for the County to potentially offer 'fuel cards' for charging at other public charging stations similar to pre-paid cards for using public transportation. As expansion scales, Fleet will involve the community on their preferences for new site locations that is most beneficial.

Leveraging Funds and Community Partnerships

This project leverages several outside (non-County) funds including, PG&E's EV Fleet Program, Sonoma Clean Power's sponsorship of chargers, a public-private partnership, CVRP, and CARB's LCFS Program. Funding amounts and contingencies are described in the Budget section. Additional funding opportunities are likely to surface in the upcoming years though the USDOT, CEC, BAAQMD, CARB, MTC, and PG&E. While this project could leverage the funding opportunities available in the near future, nearly all of them are through reimbursement, which requires initial funding by the County.

The next opportunity for funding is anticipated through the MTC, which is seeking proposals and concepts related to all things EV through a letter of interest form. The MTC hopes to create a formal funding opportunity by the end of 2022 based on the project ideas received. The BAAQMD is likely to release funding through their annual Charge! Program for FY2023, but no official announcements has been made. The Charge! Program provides grant funding to offset the cost of purchasing and installing new publicly accessible chargers for light-duty EVs at workplaces, destinations, transit parking locations, along transportation corridors, and at multi-unit dwelling facilities. Another potential outside funding source is through Senate Bill 1 (SB-1) Funding, also known as the Road Repair and Accountability Act of 2017. Fleet with the assistance of TPW has engaged the State Controller's Office to confirm the applicability of the funding towards EV infrastructure that directly supports equipment for the improvement of transportation infrastructure. Should this be confirmed, Fleet hopes to utilize any windfall this fiscal year to offset the cost of infrastructure to the various TPW yards, and earmark funds for additional improvements for the future.

Fleet, with Energy and Sustainability, will initially inform the community on current public EV site developments. As expansion scales, Fleet will engage and involve the community on their preferences for new site locations that will be most beneficial to serve them.

Prescribed & Targeted Grazing Program
October 2022 – September 2024

Submitted by
Stephanie Larson, PhD
UC Cooperative Extension

1. Project Overview

UCCE provides education and research-based information to both private and public landowners and managers, and while not listed as direct leads, UCCE will work with Department leads to ensure that goals are reached. Given UCCE's resources and long-standing connections with landowners, agencies, NGOs, and other science-based affiliates, UCCE is the best county department to implement a robust countywide grazing program that will address decarbonization, carbon sequestration, water retention, and reduced wildfire risk as it relates to grazable lands.

a. Goal of the Project

Grassland accounts for approximately 10% of California's total land area, and oak woodlands and coastal scrublands, in which grasses make up a key part of the understory, accout for another 8% of California's land use[1] . In this context, grazing (or another disturbance like prescribed fire) is necessary to manage these grasslands for conservation and wildfire risk reduction purposes. The goal of the project is to assess the total grazable acreage in Sonoma County and work with landowners and managers to better amnage these lands to achiee climate mitigation and conservation goals.

b. Measure Success of the Project

This project creates climate-resilient communities and ecosystems, through a University of California Cooperative Extension (UCCE) lead effort that educates landowners and managers on vegetation management tool(s) to assist with fuels reduction and ecological enhancement on private and public lands, especially in the Wildlands Urban Interface (WUI).

c. Key Players

UCCE will work with organizations focused on youth, high school agriculture programs, and the Santa Rosa Junior College to train individuals interested in providing fuel management services, principally grazing. Hired staff will work with Dr. Stephanie Larson, educating landowners on how to utilize grazing as a vegetation management tool, providing qualified grazers for work on public and private wildfire prone lands. UCCE will create a grazing program that works with Resource Conservation Districts (RCDs), Natural Resource Conservation Service (NRCS), and other county departments managing grazing lands. This project builds on Match.Graze, https://matchgraze.com/,an online platform that already has over 200 users throughout the Bay area. Sonoma County has a unique opportunity to support the economic development of a full-scale grazing program – from cooperative grazing units, contract grazing, and commercial grazing for commercial livestock producers. The project provides trainings, resources and mentorships on grazing management and business / workforce development to increase grazing enterprises.

d. Potential Co-Benefits

The project addresses both decarbonization and carbon sequestration, resulting in a more resilient, climate neutral county. The County should look towards actions to not only maintain, but

increase, carbon sequestration rates to ensure long-term resiliency. In the current business-as-usual context, there are several factors limiting the County's carbon sequestration potential; these include: 1) many of the identified grazable lands are not currently being grazed and/or are not accessible for grazers to access in order to implement grazing, thus missing potential for additional sequestration, 2) many of these grazable lands (approximately 580,296 acres or 87% of the total grazable lands in Sonoma County) are also designated by CAL FIRE Fire Hazard Severity Zones as moderate, high, or very high hazard classes, and 3) these lands could be vulnerable to growing urban development and sprawl (according to the FMMP, from 2014-2016, approximately 1,102 acres of grazing lands were converted). In the current scenario, there is a need for increased grazing across the County on grazable lands to maintain and enhance carbon sequestration and reduce fire risk and associated GHG emissions.

The project will ensure that Latinx and BIPOC communities are served, along with traditional agriculture communities; improving community resiliency, ecosystem services and/or increased economic stability. Success will be measured by the increases in grazable lands managed, number of grazing business created, increased diversity of business owners and trained work force. In addition, applying prescribed grazing practices on 387,670 acres can provide long-term community resiliency and overall impacts to decarbonization, carbon sequestration and GHG reduction.

2. Proposed Timeline

October 2022 – March 2023: (consultant)

- Hire consultant to work with Dr. Stephanie Larson, Certified Rangeland Manager, & Livestock and Range Management Advisor. This consultant will set up "grazing collectives" in areas determined by using the Decision Support Framework (Sonoma Water / UCCE tool). Grazing collectives are groups of property owners working together to create large scale vegetation management areas; to improve resiliency while reducing costs.

November 2022 – December 2023

- UCCE will work with landowners and/or grazing collectives to assist landowners in obtaining the infrastructure needed for long term vegetation management. This includes worked with Natural Resource Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP). Both will be provided funding in 2023; but prior will work with landowners / leasees to get applications ready for submitting January 2023.

January 2023 – December 2023: (Cost Share Application Assistance)

- Provides grant application assistance for landowners and grazers through County's PGE funds, NRCS, RCDs, Cal Fire, NGOs, etc.

January 2023 – September 2024: (Ongoing - Working with Landowners)

- Analyze all potential grazable lands, land ownerships, grazing potential evaluated;
- Provide landowners with educational outreach, funding opportunities, etc.
- Create a list of infrastructure needs, fencing, water, determine funding requirements, align with appropriate grants, funding sources, etc.

January 2023 – September 2024: (Ongoing - Working with Grazers)

- Host grazing schools, provide hands on training to current and new grazers;
- Provide training for Hispanic and BIPOC herders, assisting them to start their own grazing business.

- Assistance with business management through SRJC, English as a Second Language (ELS), etc.
- Create an equipment and tools share program; small rental fee, for replacing equipment.

January 2023 – September 2024: (Mentorship Program)

- Develop mentorship program; work with established local grazers to provide internships and/or mentoring to increase program success and ensure a workforce reflective of the community.
- Work directly with Latinx and BIPOC communities to increase skilled work force and opportunities.

3. Part of an Existing Climate/Resilience Plan

Management of working landscapes is a critical work of climate mitigation. A more resilient landscape will lead to increased carbon sequestration and a reduced risk of catastrophic wildfires fires.

4. Create New Partnerships

This project provides opportunities to influence a greater diverse work force development, by working with organizations focused on youth, high school agriculture programs, and Santa Rosa Junior College to train individual interested in providing fuel management services, especially grazing. An expansion of this currently small local industry could lead to more business opportunities for *new* and existing farmers, grazers, and herd managers. Eventually this new workforce could help build a more resilient, local, and sustainable industry.

5. Budget

Item	**Cost**
Consultant(s) - Landowner Outreach / Cost Share Application Assistance	$ 100,000
Technology – Web services, Match.Graze, GIS, etc.	50,000
Grazing Schools	25,000
Spanish Translation of School & Materials	25,000
Educational Materials – Print & Video	25,000
Equipment and Tools	100,000
Mentorship	50,000
Total	$ 375,000

6. Leveraging Outside County Funds

The Natural Resource Conservation Service (NRCS) has two funding opportunities for landowners and/or grazers (ranchers / farmers) to apply for. The programs are Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP). Both will be provided funding in 2023 but time is from the beginning of the project through December to get landowners / leasees working towards getting their applications together. EQIP can provide one-time payments for - interior fencing, infrastructure, water developments, etc., up to several thousands of dollars. The CSP provides payments for practices 1-5 years, paying for long term maintenance of the implemented practices; not just a one and done practice. This will go towards ensuring that long term resiliency and climate directives are achieved through incentive payments to landowners. The practices include prescribed grazing, hedge rows, planting pollinator species, silvopastures, trees, etc. All of these practices increase carbon sequestration.

7. Project aligned with the Funding Priorities of State or Federal Boards, etc.

A current request of 8 million dollars has been made to Governor Newsom and the State Legislators for Prescribed and Targeted grazing infrastructures for Wildfire Prevention and biodiversity enhancement. If those funds become available, Sonoma County would be in an excellent position to apply for that funding. This UCCE project will have mapped out priority areas, acreage impacts and funds needed. It will have generated landowner and grazers' support and willingness to implement and maintain a prescribed grazing practice for at least 5 years, ensuring a more resilient landscape.

Alignment with County Strategic Plan

9. Does the Project address any specific Strategic Plant objectives. YES

10. Strategic Plan Objectives

Pillar: Climate Action & Resiliency

- **Goal 1:** Continue to invest in wildfire preparedness and resiliency strategies
  - **Objective 1:** Provide educational resources to the community that promote and facilitate carbon neutral and fire hardening construction for new and existing homes. *Department Lead(s): General Services Department and Permit Sonoma*
  - **Objective 2:** Expand outreach and education on vegetation management and provide additional resources to land owners to help mitigate fire risk. *Department Lead(s): UCCE*
  - **Objective 3:** Leverage grant funding to support a sustainable vegetation management program. *Department Lead(s): County Administrator's Office*
- **Goal 5:** Maximize Carbon Sequestration through land conservation work and land use policies
  - **Objective 1:** By 2025, update the County General Plan and other county/special district planning documents to incorporate policy language and identify areas within the County that have the potential to maximize carbon sequestration and provide opportunities for climate change adaptation. *Department Lead(s): Permit Sonoma, Sonoma Water, and Ag + Open Space*
  - **Objective 2:** Encourage agricultural and open space land management to maximize sequestration. Develop a framework and policies to incentivize collaboration with private and public land owners. *Department Lead(s): Ag + Open Space*

11. Is the completion of this project a prerequisite to implement a Part of the Climate Action Pillar? NO

Mitigation: Decarbonization and Sequestration

12. Does this project result in a reduction or sequestration of County GHG emissions? YES

13. Estimation of this Decarbonization Sequestration in metric tons of CO2/year/

Estimation of County Grazable Lands: The approximate acreage of grazable lands in the county is 665,400 acres. This project looks at the FMMP Grazing Lands and Grassland/Herbaceous, total acres, 387,669 acres (Table 1).

Table 1: *Estimation of County Grazable Lands*

Grazing Category	Area (ac.)
FMMP 'Grazing Lands'	106,273.71

Grasslands/Herbaceous	281,396.98
Total	387,669 acres

1. ***Estimation of GHG emissions reduction/carbon sequestration of prescribed grazing on grazable lands:*** The project could result in County GHG emissions reductions/carbon sequestration estimated at 1,322.5 metric tons of CO2/year by implementing prescribed grazing (a total of 2,645 metric tons of CO2 equivalent by implementing prescribed grazing on the total 332,700 acres over two years) (Table 1).

Table 2: ***Estimation of GHG emissions reduction/carbon sequestration of prescribed grazing on grazable lands***

Total # Grazable Lands (ac.)	**Total Expansion of Grazable Lands in Proposed Project (50% of Total Grazable Lands) (ac.)**	**Year 1 Expansion of Grazable Lands (ac.) (25%)**	**Year 2 Expansion of Grazable Lands (ac.)**	**Metric Tons of CO2 equiv./year (from COMET-Planner)**	**Total Metric Tons of CO2 equiv. throughout Project Duration (Year 1 + Year 2)**
387,670	193,835	96,915	96,915	4566	9,132

2. ***Estimation of GHG emissions reduction of reduced fire hazard and related wildfire emissions:*** The project could reduce wildfire risk and related emissions; estimated reduction of GHG emissions, roughly 9,132 metric tons CO2 equivalent for the total 96,915 acres proposed project area (Year 1 + 2) (Table 2).

Carbon Sequestration and Ecosystem Services

Estimation of GHG emissions reduction of reduced fire hazard and related wildfire emissions. The two-year project estimates sequestration cost of approximately $41/metric ton of CO_2 per year; ($375,000 / 9,132 metric tons of CO_2/year). **GHG reduction will occur over the short-term and long-term:**

- **Year 1**: approximate GHG emission reduction of 4,566 metric tons of CO_2/year;
- **Year 2**: approximate GHG emission reduction of 4,566 metric tons of CO_2/year.

Resilience and Adaptation

The project promotes climate resilient and adaptative land management. It creates a robust, county-wide grazing plan that evaluates all potential grazing lands and recommends grazing as a management tool where appropriate; focusing on both small- and large-scale landscapes. Grazing will be implemented as a sustainable, long-term vegetation management tool. The outcomes of the project will lead to a more resilient landscape for climate mitigation and conservation. The geographic range of the project encompasses all of Sonoma County.

Equity and Community Engagement

The project is supported by several community partners, including Straus Family Dairy, CAFF, Circuit Rider, Wild Oat Hollow Grazing Cooperative, Fibershed, RCDs, NRCS, and Farm Bureau. UCCE is currently working with Ag & Open Space to increase land access to increase opportunities for BIPOC farmers and ranchers to engage in agriculture production in Sonoma County. This project will contribute to a just transition; providing job opportunities to underserved communities. It also reduces the risk of fire that impacts the health of these communities.

Leveraging Funds and Community Partnerships

This project provides opportunities to influence a greater diverse work force development, by working with organizations focused on youth, high school agriculture programs, and Santa Rosa Junior College to train individual interested in providing fuel management services, especially grazing. An expansion of this currently small local industry could lead to more business opportunities for *new* and existing farmers, grazers, and herd managers. Eventually this new workforce could help build a more resilient, local, and sustainable industry. UCCE is working closely with Ag & Open Space to leverage community partnerships and funding.

[1]Ecosystems of California. By Harold Mooney & Erika Zavaleta. 2016. https://www.ucpress.edu/book/9780520278806/ecosystems-of-california.