

Table of Contents

1. Overall Project Summary and Approach	2
a) Description of GHG Reduction Measures	2
b) Demonstration of Funding Need	6
c) Transformative Impact.....	7
2. Impact of GHG Reduction Measures	7
a) Magnitude of GHG Reductions from 2025 through 2030.....	7
b) Magnitude of GHG Reductions from 2025 through 2050.....	7
c) Cost Effectiveness of GHG Reductions	7
2. Environmental Results – Outputs, Outcomes, and Performance Measures.....	8
a) Expected Outputs and Outcomes	8
b) Authorities, Implementation Timeline, and Milestones.....	9
SCOPE OF WORK	10
4. Low-Income and Disadvantaged Communities	16
a) Community Benefits	16
b) Community Engagement	18
3. Job Quality.....	19
4. Programmatic Capability and Past Performance.....	19
a) Past Performance	19
b) Reporting Requirements	21
c) Staff Expertise.....	22
5. Budget (Optional Budget Spreadsheet and up to 10 additional pages may be added if needed as an appendix to the Workplan)	22
a) Budget Detail.....	22
b) Expenditure of Awarded Funds	22
c) Reasonableness of Costs	22



1. Overall Project Summary and Approach

The Windsor Water District (District) owns and operates the Windsor Water Reclamation Facility (WWRF or Facility) located in Windsor, California. The WWRF currently receives and treats wastewater in and around the Town of Windsor. Through the wastewater treatment process at the WWRF solids are produced that must then be treated and reused or disposed of offsite (biosolids). These biosolids which are produced through wastewater treatment processes are usually applied on land to condition soils and return nutrients. Beneficial use of biosolids when land applied at appropriate agronomic rate include nutrient addition, improved soil structure, and water reuse.¹ The Town's current disposal method is not sustainable from a cost and land application perspective and results in significant release of methane gas. The Town recently embarked on feasibility study related to a Biosolids Handling Facility to address these major issues with the current biosolids treatment and disposal process. The Greenhouse Gas (GHG) Measure that will have the highest impact to Sonoma County is the proposed Regional Biosolids Handling Facility. This new facility will not only be able to manage the biosolids for the Windsor but it will also be a resource for all of the unincorporated part of Sonoma County and its incorporated cities.

Windsor plans to use biosolids generated by Windsor and surrounding communities to eliminate the need for external disposal contractors. This strategy will significantly decrease associated carbon footprint from truck traffic by reducing waste volume. Additionally, the project aims to create a facility capable of processing and treating sludge for other interested neighboring communities, with the aim to potentially expand in the future. The project will increase beneficial use of biosolids within the Town of Windsor and surrounding Sonoma County communities which will support soils conditions and return nutrients and metals to soils for agricultural, horticultural, or other vegetative processes.

a) Description of GHG Reduction Measures

The Windsor Water District (District) in California owns and operates a 2.2 million gallon per day (MGD) Water Reclamation Facility (WRF) that currently uses sludge ponds for storage and stabilization of the Waste Activated Sludge (WAS) and sludge generated by the Advanced Wastewater Treatment (AWT) clarifiers. The District established specific goals for their future solids management, including eliminating current reliance on outside contractors for biosolids disposal, increasing beneficial use of biosolids, reducing cost and carbon footprint associated with sludge disposal. To achieve these goals, the District completed a Feasibility Study (2021) and a Preliminary design (2022) that established the recommended project. The District selected thickening and dewatering, followed by bio dryers and pyrolysis, as the recommended project. The Town of Windsor is engaging with surrounding Sonoma communities to implement a regional biosolids bio drying and pyrolysis facility, thus the Town is evaluating the design, cost, and greenhouse gas implications of a regional facility that can be utilized by the unincorporated Sonoma County, the incorporated cities (e.g., City of Cloverdale, City of Healdsburg, City of Santa Rosa, City of Sebastopol, City of Rohnert Park, and the City of Cotati) and the Lytton Rancheria.

¹ U.S. Environmental Protection Agency. (2023, December 15). Basic information about biosolids. EPA. Retrieved from <https://www.epa.gov/biosolids/basic-information-about-biosolids>



Features, Tasks and Milestone

The facility will support Windsor and participating Sonoma County communities such as the City of Healdsburg, the City of Cloverdale, the City of Santa Rosa, City of Petaluma, Sonoma Water, and the Lytton Rancheria of California (collectively to be known as, the “Collaborative”). Project design and implementation will be undertaken by Windsor. The Collaborative will be participating by providing biosolids to the facility and sending data that would support the greenhouse gas calculations discussed.

- **Town of Windsor (Windsor).** The Town of Windsor is the applicant and will provide the resources necessary to manage the grant, implement the grant, including all phases of engineering, environmental compliance, construction and monitoring.

The Town of Windsor, as lead applicant, will have submit a Memorandum of Agreement to the Environmental Protection Agency (EPA), signed by all coalition members, on or before July 1, 2024.

- **Lytton Rancheria.** The Lytton Rancheria agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Cloverdale.** The City of Cloverdale agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Santa Rosa.** The City of Santa Rosa agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Petaluma.** The City of Petaluma agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Healdsburg.** The City of Healdsburg agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The Sonoma County Water Agency.** The Sonoma County Water Agency agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.



The GHG reduction measures included in this application which relates to the GHG reduction measures discussed within the **Sonoma County Regional Climate Action Plan 2020** (RCPA, 2016):

- **Goal 13: Increase water and wastewater infrastructure efficiency (Page 5-14).**
 - **Measure 13-R1 – Infrastructure and Water Supply Improvements: Reduce energy demand from water supply infrastructure, investigate new water supply improvements and increase local water supply.**
 - The GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility would provide Sonoma County with a Facility that can process and handle biosolids which would be a major contributor to supporting water supply improvements within the County that would support destroying PFAS through the pyrolysis process which would mitigate the risk of contaminating groundwater.
 - **Measure 13-R2 – Wastewater Treatment Equipment Efficiency: Reduce energy demand from wastewater treatment operations.**
 - While there is no onsite electricity that is being produced by the Facility, there will be energy savings by recovering thermal heat from the pyrolysis process that will be used to offset natural gas demand in the bio drying process.
- **Goal 19: Carbon Farming (Page 3-21).**
 - **Measure 19-R1 – Increase carbon sequestration on croplands and working rangelands by adding soil organic material and other measures. Support increasing availability of local compost.**
 - The GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility will support nutrient management. The Town of Windsor and surrounding participating Sonoma County communities will distribute the biochar which is a charcoal-like product from the pyrolysis process that will occur at the Facility. Biochar is an activated carbon material that can be used to improve soil fertility and can support reducing the usage of chemical fertilizers. As a soil amendment, biochar promotes carbon sequestration and soil quality, serves as a source, sink for nutrients, and improves soil nutrient retention, provides repository for soil organisms, and can immobilize hazardous materials.
 - **Measure 19-R2 – Work with local partners to establish short- and long-term targets for increasing carbon sequestration throughout the County.**
 - The GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility will support The Town of Windsor and surrounding participating Sonoma County communities. The Facility would be an example of a scalable project that can be established in other counties within the state of California.
- **Goal 20: Reduce Emissions from Consumption of Goods and Services (Page 3-21).**
 - **Measure 20-R1: Measure and track consumption-based emissions: Develop metrics and tools to analyze carbon intensity of the transportation of goods and services.**

- Part of the GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility is to develop a semi-annual monitoring plan for GHG emissions.
- Incorporating bio drying and pyrolysis technologies at the Facility will significantly decrease the transportation distances for biosolids from various participating communities to their final disposal sites. For example, the Town of Windsor is currently hauling its biosolids to an offsite landfill located approximately 135 miles away. Having access to the Facility would dramatically reduce this distance, requiring the end product to be hauled within the Town limits. The City of Healdsburg is currently hauling its biosolids to an offsite landfill located approximately 130 to 200 miles away. Having access to the Facility would dramatically reduce this distance, requiring approximately a 10-mile haul for the City of Healdsburg's biosolids.
- **Measure 20-R2: Educate Consumers: Provide information to residents and businesses about the carbon content of goods and services with an emphasis on options that will reduce GHG emissions.**
 - Part of the GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility is to hire a community outreach specialist that will develop an educational video about the Facility and the benefits it will have to the public. This video will be distributed to the residents of the Town of Windsor and to all participating partnering communities.

The GHG reduction measures included in this application which relates to the GHG reduction measures discussed within **the State of California's Draft Priority Climate Action Plan** (US EPA, 2024) include reducing GHG in the following sectors:

- **Energy**

- **Energy Measure 6: Implement Bioenergy Projects (Page 46)**

- As discussed in the Plan, this measure includes emerging opportunities elevated by local jurisdictions to create renewable energy, including renewable hydrogen from various organic waste sources such as landfill methane; woody biomass, yard and agricultural waste; and biosolids. This measure could apply to projects that capitalize on any of these practices, or that are able to combine them to be more cost effective and reduce emissions to achieve even greater co-benefits.
- The GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility would support the processing of biosolids that would support processing organic waste and use thermal energy to offset the bio drying energy, requirements.

- **Agriculture**

- **Agricultural Measure 1: Expand California's Healthy Soils Practices (Page 52)**

- The GHG reduction measure of the Windsor Water Reclamation Regional Biosolids Resource Recovery Facility would support nutrient management. The Town of Windsor and surrounding participating Sonoma County communities will distribute the biochar which is a charcoal-like end product from the pyrolysis process that will occur at the facility. Biochar is an activated carbon material that can be used to improve soil fertility and can support reducing the usage of chemical fertilizers.

After construction of the proposed project, it is anticipated the WWRF would operate as follows:

- Wastewater treatment would continue as currently operated.
- The existing process for generating Class B biosolids would be decommissioned.
- Thickening and dewatering would take place in the new dewatering building.
- The facility design will allow bio drying to operate continuously or a batch process as needed.
- Dewatered sludge would be converted to biochar, a Class A EQ biosolids product, via bio drying and pyrolysis on the concrete slab with canopy structure.
- Filling and emptying the bio dryers would be coordinated with the dewatering process.
- Biochar would be temporarily stored on-site prior to distribution to beneficial use applications within the region.
- The new pump station and wet well would receive the excess water waste from the Class A EQ biosolids process as well as sheet flow stormwater from the newly paved area and direct this water back to the treatment headworks.

b) Demonstration of Funding Need

Biosolids and their reuse are regulated at the federal level by the United States Environmental Protection Agency (EPA) pursuant to CFR 40 Part 503, which divides biosolids into Class A and Class B according to pollutant limits, pathogen and vector reduction, and biosolids production technologies. Class A biosolids



must meet more stringent requirements than Class B and are therefore able to be integrated into a broader diversity of reuse operations. Funding from EPA's CPRG is absolutely critical to allow Windsor to produce a Class A biosolids instead of its existing production of Class B biosolids for beneficial reuse.

c) Transformative Impact

The proposed project will lead to GHG reduction measures that include the potential transformative impacts:

- The Project will serve as a replicable example of cross sector collaboration to reduce GHG emissions within Sonoma County and the state of California.
- The facility is designed to be scalable (e.g., replicable and inform policy) to other incorporated cities in Sonoma County, providing a reproduceable biosolids handling facility program design (i.e., for resident use of biochar and for innovative approach to centralize biosolids handling to reduce hauling miles) and then the facility can expand as additional incorporated cities or federally recognized Indian tribes would like to participate.
- This project has support from the Sonoma County Board of Supervisors and will be used inform future climate adaptation policy decisions in the County General Plans, local General Plans, the next update of the Sonoma County Regional Climate Plan and the County's Multi-Jurisdictional Hazard Mitigation Plan.
- This project utilizes an innovative approach of utilizing the end waste product (e.g., biochar) and offering it as a free product to residents and small agricultural operators for use as a soil amendment.

2. Impact of GHG Reduction Measures

a) Magnitude of GHG Reductions from 2025 through 2030

The magnitude of GHG reductions from 2025 to 2030 is 2,104 mtCO₂e. The entirety of this value is estimated to take place in 2030 because the new facility will not yet be online in 2025 to 2029. This is discussed in detail in the attached Technical Appendices and calculations spreadsheet (Attachment(s): Techappx_WindsorCollab.pdf and GHGCals_WindsorCol.xls)

b) Magnitude of GHG Reductions from 2025 through 2050

The magnitude of GHG reductions from 2025 through 2050 is 53,169 mtCO₂e. These GHG reductions in the alternative scenario are a result of eliminating onsite anaerobic storage ponds and long offsite biosolids hauling distances from the reference scenario. This is discussed in detail in the attached Technical Appendices and calculations spreadsheet

See Attachment(s): Techappx_WindsorCollab.pdf and GHGCals_WindsorCol.xls

c) Cost Effectiveness of GHG Reductions

The requested grant dollars (\$94,897,335) was divided by 2,104 mtCO₂e to determine the cost effectiveness from 2025 to 2030; the requested grant dollars can be divided by 53,169 mtCO₂e to



determine the cost effectiveness from 2025 to 2050. The cost effectiveness of these reductions is much improved for 2025 to 2050 because the facility is not assumed to come online until 2030.

$\$94,897,335 \text{ ex} / 2,104 \text{ mtCO}_2\text{e} = \$45,103.30 / \text{mtCO}_2\text{e}$

d) Documentation of GHG Reduction Assumptions

See GHG Emissions Reductions Calculations: GHGCalc_WindsorCollab.xls

3. Environmental Results – Outputs, Outcomes, and Performance Measures

a) Expected Outputs and Outcomes

- 1. Outputs:** Outputs from the implementation of this project and the associated GHG reduction measure funded include, but are not limited to:
 - Construction of Regional Biosolids Handling Facility by 2030
 - Climate Change Adaptation - GHG policy measure introduced to the Town of Windsor and the County of Sonoma for inclusion in the next General Plan Update. This data from this project will be publicly available on the Town of Windsor's website and will inform the next update of the Sonoma County Climate Action Plan (2025) by 2026
 - 25% of workers hired to implement this project will be from low-income or disadvantaged communities throughout Sonoma County. The Town of Windsor will provide apprenticeship and training opportunities to promote workforce development in underserved communities. GHG reduction measure, associated low-income and disadvantaged community provisions, and associated trainings for workforce development by 2027.

Progress reports and a final report will be included showing progress to expected output.

- 2. Outcomes:** The GHG reduction measures proposed for this project include:
 - Reduction in cumulative metric tons of GHG emissions: The magnitude of GHG reductions from 2025 to 2030 is 2,104 mtCO₂e. The magnitude of GHG reductions from 2025 through 2050 is 53,169 mtCO₂e.

Other outcomes may include, but are not limited to:

- Reduced energy and wastewater rates for residents in low-income and disadvantaged communities, and throughout the applicant's authority by 2030.
- Increased staff capacity to implement GHG reduction measures by 2026.
- Enhanced level of community engagement, as measured by an increased number of ongoing actions to engage with organizations and residents of disadvantaged communities, and other interested parties by 2026.
- A minimum of 25% of new high-quality jobs for this project will be created for this project, with an emphasis on hiring low-income and disadvantaged communities. Hiring metrics will be provided to EPA by 2027.



- Increased resilience to climate change impacts in CJEST areas as modeled in the Sonoma County Multi-Jurisdictional Hazard Plan Update 2030.

b) Authorities, Implementation Timeline, and Milestones

The Collaborative exists of the following entities and their roles are restated here and in question 1a above. The Town of Windsor has sole responsibility for carrying out the scope and budget, including any quality assurance project plans, procurement, construction and reporting. The dates for completion of each milestone is noted in **Table 1 – Features, Milestones and Deliverables**.

Town of Windsor (Windsor). The Town of Windsor is the applicant and will provide the resources necessary to manage the grant, implement the grant, including all phases of engineering, environmental compliance, construction and monitoring.

The Town of Windsor, as lead applicant, will have submit a Memorandum of Agreement to the Environmental Protection Agency (EPA), signed by all coalition members, on or before July 1, 2024.

- **Lytton Rancheria.** The Lytton Rancheria agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Cloverdale.** The City of Cloverdale agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Santa Rosa.** The City of Santa Rosa agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Petaluma.** The City of Petaluma agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The City of Healdsburg.** The City of Healdsburg agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.
- **The Sonoma County Water Agency (Sonoma Water).** The Sonoma County Water Agency agrees to attend CPRG Coordinating Committee meetings, provide Greenhouse Gas Emissions data requested by the Town of Windsor, solely related to Windsor Water Reclamation Regional Biosolids Resource Recovery Facility and participate in the Regional Operations Study.



SCOPE OF WORK

This Scope of Work is provided in support of the Town of Windsor's (Windsor) Biosolids Handling Facility project grant application for the 2024 Climate Pollution Reduction Grants Program: Implementation Grants General Competition

APPROACH

Windsor intends to enter multiple subcontracts to support the project scope, contractor and/or consultant selection and will follow the guidelines in 2CFR200. Windsor will provide staff to ensure the successful completion of the project. The project will be implemented as described below and will contain the construction sequencing and equipment utilized and as described in the attached Equipment Technical Memo and then further refined in the 60% Design Report. Construction duration and scheduling is further described in this memo. The combined Windsor and a consultant project team will design and administer the project, as well as manage the grant.

The following Windsor staff are dedicated to this project and its grant administration:

Name	Title	Role	Salary	Fringe (%FTE)	%FTE dedicated to this project
Dave Ernst	Wastewater Treatment Superintendent	Project Manager	\$136,091.16	40%	35%
Garrett Broughton	Senior Civil Engineer	Project Engineer	\$139,483.32	40%	35%
Veronica Siwy	Deputy Director of Water & Environmental Management	Environmental Project Manager, Assistant Project Manager, Communications Manager	\$142,811.28	40%	35%
Jim O'Brien	Project Manager	Construction Manager	\$139,483.68	40%	25%
Danielle Salinger	Administrative Assistant	Administrative Support	\$75,774.40	40%	5%
Jeneen Peterson	Administrative Services Director	Finance Director & Contract Manager	\$186,926.28	40%	5%
Danny Castillo	Finance Manager	Accountant	\$120,351.84	40%	5%

The combined Town of Windsor (Windsor) and a consultant project team will design and administer the project and manage the grant. Roles and responsibilities of Windsor staff are described as follows. The rates for Windsor staff include salary + fringe only. All contractors will



be procured following the guidance in 2CFR200.

- **Project Manager.** The PM is the overall leader and manager of all project efforts with responsibility for the project scope of work, schedule, budget, successful project delivery, and overall coordination with the project team members and other various project stakeholders.
- **Environmental Project Manager.** The EPM provides specialized environmental competency to assist the PM in obtaining CEQA/NEPA and resource agency project compliance as coordinated by the Town of Windsor as the lead agency. The EPM reports to the PM for the project. The EPM reviews project-specific information needs with the Project Manager and Project Engineer, coordinates with EP and manages the environmental consultant contract. The EPM consults and informs the PM on CEQA/NEPA strategy, budget, schedule, and status of deliverables. Additionally, the EPM will contract for environmental services during construction and will be responsible for management of the environmental consultant for additional environmental review, permitting and mitigation monitoring.
- **Project Engineer.** The PE is the overall technical leader and manager of technical engineering activities for the project and is responsible for managing the design consultant firm, other design engineering staff, engineering quality assurance, production of design documents and estimates, construction contract documents and providing design support of construction facilities. PE will deliver the final plans, specification, and estimates.
- **Communications Manager.** The communication manager oversees strategic communications with the public and various stakeholders.
- **Contract Manager.** The contract manager is responsible for overseeing the bid and award process and administration for all contracts.
- **Construction Manager.** The Construction Manager is the lead Windsor representative with the construction contractor during the project. The construction manager provides leadership, direction, management, and overall construction management oversight for Windsor at the work site. The construction manager is the primary point of contact for the construction contractor and is responsible for the constructability review of engineering deliverables, coordination of site access, management, and quality assurance of construction work.
- **Finance Director.** will lead grant administration efforts in compliance with the grant agreement, including but not limited to, grant agreement approval and execution, development and submission of progress and cost reports, inclusion of grant requirements in contract specifications, and management of grant support consultant.
- **Accountant.** is responsible for overseeing payments for the project and will support submission of documentation for project expenditures for the grant. The project accountant will also lead audit requirements.

TASK/MILESTONE DESCRIPTIONS

The following includes a description of the milestones for completing the project by the end of the grant period, such as quality assurance project plans, bidding, procurement, installation, and reporting, along



with estimated dates. The tasks and milestones are described in **Table 1 – Features, Milestones and Deliverables**.

Task 1: Grant Administration

Windsor, with support from a consultant, will manage the grant implementation process. Windsor intends to contract with a Grant Manager following the procurement guidelines found in 2CFR200. Project monitoring will improve the efficiency of project implementation and fulfillment of the obligations associated with the funding process. As a condition of receiving this grant, Windsor is obligated to monitor and evaluate the progress of the mitigation activity in accordance with the following:

1. The approved statement of work and budget
2. Administrative requirements of 2 CFR Part 200
3. Applicable state requirements
4. Federal crosscutter compliance (i.e., Davis Bacon Prevailing Wage Requirements, American Iron and Steel, Build America, Buy American Act and NEPA)

The Grant Manager will manage and coordinate all aspects of the grant, with Quality Assurance/Quality Control conducted by Windsor. This work includes, but is not limited to, the following:

1. Accounting
2. Quarterly progress reporting to the Environmental Protection Agency (EPA), or as specified in the grant agreement
3. Program compliance monitoring
4. Support of Windsor's reimbursement request process
5. Scope of work changes if any
6. Budget changes, if any
7. Period of Performance monitoring
8. Site-specific grant monitoring report
9. Overall record keeping

Task 2: Project Management.

This task also includes managing all schedules and work timetables.

Task 3: Engineering & Design.

The project currently is at the 30% design phase that will need to be amended to include the expanded capacity necessary for the Collaborative. Work on this task includes the development of amended Conceptual Engineering Report (CER), 30% designs, 60% designs and finally 100% Plans and Specifications (P & S), identified as 100% P&S. The expanded 30% designs will be completed prior to notification of the grant award. When Windsor has been notified by EPA that they have been awarded the grant funding, then the amended CER and 30% designs and Preliminary Design Report (PDR) will be submitted to EPA



and utilized for the amended IS/MND identified in Task 5. The 60% design milestone will be utilized for all permits and to confirm estimated budget costs, and the 100% P&S will be utilized to finalize the costs and further utilized in the construction procurement process.

Task 4: Meetings and Outreach

The meetings and outreach tasks have three primary sub-tasks – 1. Collaborative Coordinating Meetings; 2. Public Outreach; and 3. Agency Coordination/Research. Each sub-task is described below.

- I. **Collaborative Coordinating Meetings** The purpose and work on this task will be to launch of the start of the grant funded projects with the Regional Biosolids Facility Collaborative (Collaborative), consisting of the Town of Windsor, the Sonoma County Water Agency, the City of Santa Rosa, the City of Petaluma, the City of Healdsburg, the City of Cloverdale, and the Lytton Rancheria. The Coordinating Committee will meet bi-annually to share information on changes to their biosolids handling processes, grant updates and to share GHG emissions data, which will then be shared with EPA throughout the project performance period (e.g., 2025-2030). Grant award scope, timeline and background information will be presented to the Collaborative ensure consensus on grant award approach and milestones post-award. Two Go/No-Go Milestones will be addressed during these meetings. The first Go/No-Go milestone will be a part of Task 3 at the 60% design milestone, the second will be prior to the start of construction. The purpose of the GO/No-Go milestones demonstrates Windsor's commitment to a consensus-based approach on the utilization of this regional facility.
- II. **Public Outreach** Public outreach will be managed individually by each of the Collaborative partners. Windsor is developing a video to show how the project will move forward the climate adaptation goals outlined in the Sonoma County Regional Climate Action Plan 2020 how this facility will reduce regional greenhouse gas (GHG) emissions and dashboard to graphically demonstrate GHG reductions. A public facing webpage will be created by and for each participating member of the Collaborative to share information about the facility, resident utilization days for access to biochar, and a dashboard to graphically demonstrate GHG reduction over-time. All materials will be created in both English, including the biosolids video. Meetings will be held at a time and place that is convenient for the broadest community participation. Participation data and timing will take into consideration the schedule of full-time working attendees and an online poll will be developed to identify the best time, location and whether or not an interpreter will be needed to reach minority or underserved community members.
- III. **Agency Coordination/Research Project** The goal of this task is for Windsor to coordinate with EPA and permitting agencies, as applicable, to establish roles and responsibilities of each agency with a stake in the project and to develop the parameters of a student research project. Windsor will lead two meetings that will include all applicable state and federal agencies to provide a forum to discuss project outcomes and environmental requirements. This task will ensure clear communication and coordination between the multiple agency partners that have a role in this project's outcome. Windsor will coordinate with Sonoma State University, and/or UC Berkeley and/or the Sonoma Junior College to design a relevant student research focus with an emphasis on biosolids handling and climate adaptation, using Windsor's Regional Biosolids Handling Facility as the test case. The research project parameters will be developed in close coordination with EPA and one of the colleges.



Task 5: CEQA/NEPA & Permitting

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed project constitutes a project as defined by CEQA (California Public Resources Code, Section 21065). Windsor, as a municipal utility, would implement and operate the proposed project and will therefore act as the CEQA lead agency. Windsor would also fund the proposed project but may also seek funding from available sources. Windsor will be utilizing federal sources of funding, which may include funding from EPA's Water Infrastructure and Innovation Act (WIFIA), as a result, and in addition to the CEQA review process, federal crosscutting requirements are a required part of the environmental review. Therefore, applications for funding must include proof of CEQA compliance and of compliance with federal requirements. Collectively, the process is termed "CEQA+" due to the addition of federal crosscutting studies to CEQA requirements.

In 2022 Windsor completed an Initial Study (IS)/Mitigated Negative Declaration (MND) (Attachment: ISMND_Windsor.pdf) for a new biosolids handling facility. This coalition-based project will enable both the unincorporated Sonoma County, served by Sonoma County Water Agency, and the incorporated cities (e.g., City of Petaluma, City of Santa Rosa, City of Cloverdale, City of Cotati, City of Sebastopol, City of Healdsburg) and the Lytton Rancheria to have access to Windsor's Biosolids Handling Facility. Use of the facility does not indicate participation in the Regional Biosolids Handling Collaborative (Collaborative), but rather the facility will be open to all of Sonoma County, regardless of participation in the Collaborative. The current IS/MND will be amended to accommodate the expansion of the revised design's footprint.

Windsor utilized All CEQA+ documentation will be approved and finalized prior to the start of construction. This task will include all work, as determined by EPA to provide any necessary document and consultations to comply with the National Policy Act (NEPA). NEPA compliance will be initiated upon successful obligation of funding. This task will include any additional alternatives analysis, consultation with the State Historic Preservation Officer (SHPO) and compliance with Section 106, working with EPA to identify historic properties, assess the Regional Biosolids Handling Facilities potential effects to historic properties to avoid, minimize or mitigate any adverse effects and document their resolution. Work on this task will also include securing all applicable permits, which include (Attachment: ISMND_Windsor.pdf, page 26).

Task 6: Contractor Procurement

Windsor will confirm that all procurement and contract documents comply with federal law, including the federal procurement standards in 2CFR200 to enter a construction contract with a contractor that can demonstrate experience and expertise in construction tasks as required by the EPA grant. The scope of work assumes that a General Contractor will secure support from subcontractors with the appropriate expertise and experience to complete all duties as assigned under the terms and conditions defined under a contract with Windsor. Windsor duties will include:

1. Posting of bid advertisement
2. Managing solicitation, outreach, and responses to questions on bid documents (QBDs)
3. Overseeing receipt of bid/proposals, review, selection and award.

All contracts will contain the federal provisions in 2CFR200.327 and any recommended EPA contract clauses, as applicable to the specific contract. All contracts will contain, at a minimum, the following required provisions: 1. Legal or contractual or administrative remedies for contract breach, 2. Termination for clause and convenience, 3. Equal Opportunity Employment, 4. Davis-Bacon Act, 5. Copeland "Anti-



Kickback” Act, 6. Contract Work Hours and Safety Standards, 7. Rights to Inventions made Under a Contract or Agreement, 8. Clean Air and Federal Water Pollution Control Act, 9. Debarment and Suspension, and 10. Byrd Anti-Lobbying Amendment 11., Procurement of Recovered Materials, 12. Prohibition on Contracting for Covered Telecommunications Equipment or Services, 13. Domestic Preferences for Procurement and, as applicable, the recommended EPA contract clauses 14. Access to Records, 15. Contract Modifications or Changes, 16. Compliance with Federal Law. 17. No Obligation by Federal Government, 18. Program Fraud or False Statements Related Acts, 19. Affirmative Action Steps and 20. Copyright. will be used for this task.

The duties and responsibilities of the general contractor under this task will include, but not be limited to, the following:

1. Agree to terms and conditions as specified by Windsor.
2. Coordinate with the grant manager and stakeholders identified by Windsor.
3. Identify and contract with appropriate subcontractors as needed.
4. Secure and maintain all licenses, certifications and credentials needed to comply with construction contract.
5. Secure appropriate insurance coverage for all potential liabilities associated with this scope of work.

Task 7: Construction

Construction will be performed by the selected Contractor in accordance with the conformed construction documents (specifications and drawings) and managed by the Construction Manager. The main steps under construction will include the following activities:

1. Mobilization
2. Site Work
3. Sludge Storage
4. Dewatering and Thickening Building
5. Dewatering, Thickening, Drying and Pyrolysis, Odor Control, Yard Piping, Electrical and Controls

Once construction is completed, the Contractor will proceed with commissioning of the facility as outlined below.

Task 8: Construction Management

Windsor will manage project construction with support from the construction contractor, and environmental and design consultants, this includes oversight of the following:

1. Implementation of project components within the timelines specified.
2. Documentation of work performed as specified by the grant manager to comply with the grant agreement.
3. Submission of timely and well-documented invoices to Windsor
4. Review of submittals to ensure they conform to the design intent.
5. Respond to Requests for Information (RFI) from the contractor which means providing more information about a specific question or element of the project,
6. Design change memos (DCM) which are typically a written document that includes sketches and specifications where a change may be required to the original design.
7. Potential change order (PCO) reviews where the engineer will review a change to the design that

usually involves additional time and/or money to the contractor.

8. Weekly Site visits to observe the construction progress.
9. Weekly progress meetings led by Construction Manager
10. Prepare a draft and final punch list and participate in one or more site visits to prepare and discuss the punch list.
11. Prepare final record drawings that include all the changes made to the design as part of the construction.
12. Prepare an Operations and Maintenance (O&M) Manual.
13. Inspection services to verify compliance with the specifications' quality and functional requirements including general, warranty, and special inspections. Contractor construction management support during construction includes but is not limited to:
 - a. Report to the Windsor Construction Manager and conduct tasks as directed.
 - b. Conduct periodic surveillance and inspection of the work, monitor the Contractor's quality processes, and coordinate field sampling and testing for verification of quality results as needed.
 - c. Prepare Inspection Reports, quality records, including deficiency and non-conformance notices (NCNs), and field testing and verification reports, as needed.

Task 9: Commissioning: Commissioning of the thickening, dewatering, and bio drying/pyrolysis process would include testing each process to ensure all components are installed and connected, functional and operating as intended as a complete system. Each process, mechanical, and electrical system would be installed and undergo a series of tests to ensure that equipment was functioning properly and installed correctly. Process and system startup would include functional testing and defined period of process testing to ensure that the plant is operating as intended under careful monitoring to ensure that all performance metrics are met prior to bringing the process online for full-time operation.

Task 10: Decommissioning of Current Facility

The decommissioning of the current sludge ponds at the Town of Windsor will involve draining the lagoons, dredging the ponds to remove the biosolids, and removing any equipment and/or piping. The site will then be constructed and utilized to provide additional reclaimed water storage for beneficial reuse.

4. Low-Income and Disadvantaged Communities

a) Community Benefits

The Project will directly and indirectly support both low-income and disadvantaged communities by mitigating climate impacts such as supporting carbon sequestration increasing soil fertility and nutrient recycling by reducing the need for chemical fertilizers which would reduce greenhouse gas emissions. This Project will also increase resiliency to climate change for Sonoma County by providing a scalable Project that could be used as a framework for other counties within the State of California. Currently, according to the Climate and Economic Justice Screening Tool, a population of 44,789 are located within Justice 40 zones in Sonoma County. The following census tracts as part of the Justice 40 zones along with what jurisdiction they are located in are indicated in the table (Table 4-1) below. Windsor will be providing biochar for residential use throughout Sonoma County. Each incorporated city and the



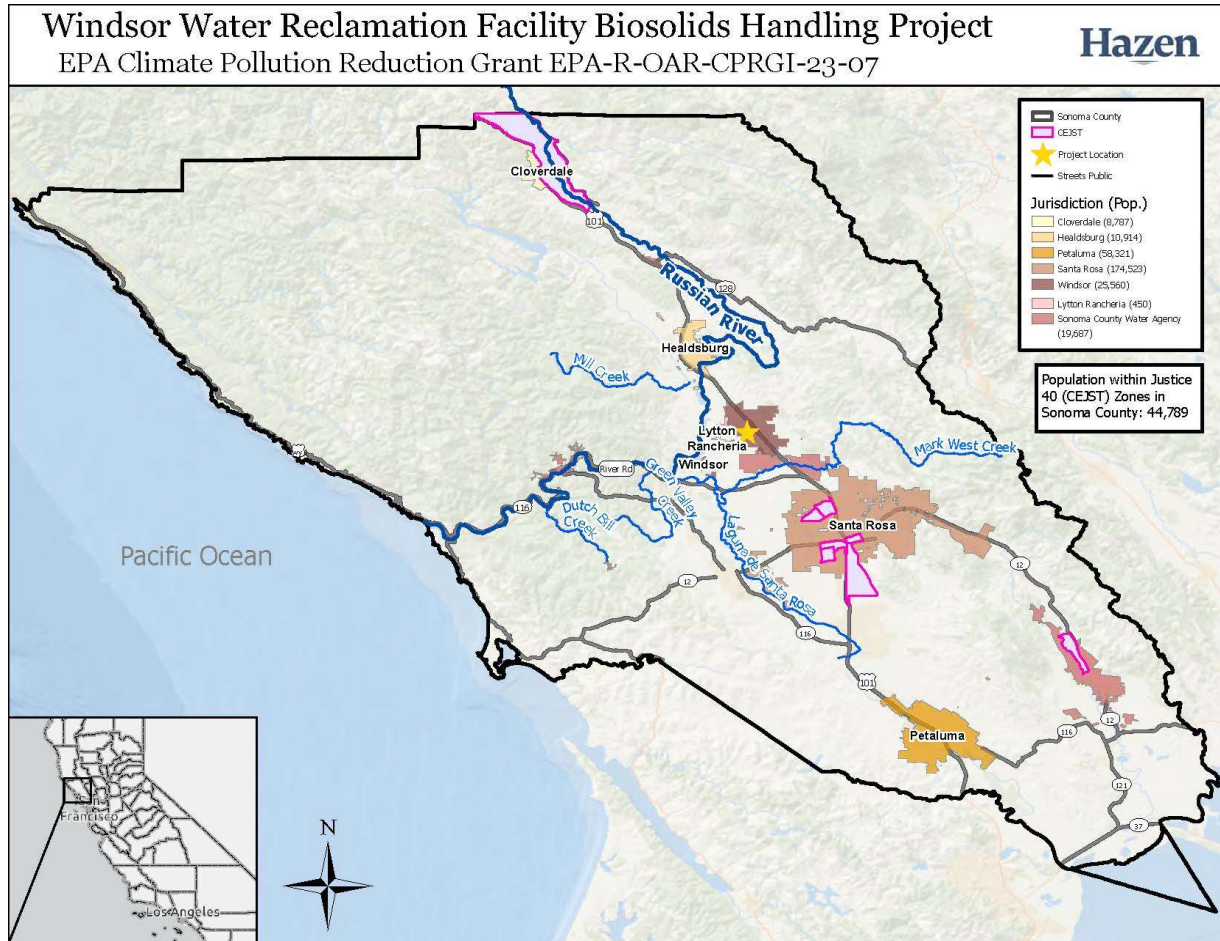
unincorporated County will advertise “resident use days,” where communities can obtain biochar for small agricultural properties and also be given an opportunity to learn how Windsor, and the County writ large, is pioneering the way toward a zero-waste paradigm. The regional facility will also support rate stabilization by providing maximum cost-share at an agency-owned facility which will allow for greater rate control as opposed to contracting the disposal of biosolids.

During the commissioning period of the facility an annual monitoring report will be prepared to assess, quantify the amount of final mass, electricity usage, and chemical usage. Polls will also be taken during public meetings to identify how this project can create additional benefits to residents of low-income and disadvantaged communities within Sonoma County.

Table 4-1: Climate and Economic Justice Screening Tool Census ID Tracts

Climate and Economic Justice Screening Tool Census ID Tracts	
Jurisdiction	Census Tract ID
Santa Rosa	6097151402
Santa Rosa	6097152903
Santa Rosa	6097151900
Santa Rosa	6097152802
Santa Rosa	6097150305
Sonoma County Water Agency	6097153103
Santa Rosa	6097153104
Cloverdale	6097154201

Map 1: Windsor Water Reclamation Facility CEJST Zone Map



b) Community Engagement

The Town will hold annual public workshops on the project to engage all residents including low income and disadvantaged community members. As discussed in Section 1 the Project will support Windsor and participating Sonoma County communities such as the City of Healdsburg, the City of Cloverdale, the City of Santa Rosa, City of Petaluma, Sonoma Water, and the Lytton Rancheria of California (collectively to be known as, the “Collaborative”). In addition to public meetings, Windsor has hired a community engagement consultant to conduct an informational video for the public to demonstrate the steps they are taking to reduce greenhouse gas emissions and move toward a zero-waste goal. The consultant will create marketing materials such as pamphlets and handouts. These materials will be shared with the Collaborative to share within their communities.

Outreach materials will be developed in both Spanish and English and all public meetings will be held at the most convenient times to allow for maximum participation from residents that work full-time or multiple jobs. All public meetings will be record and put on the website for the community to view and then will provide an easily accessible way for community engagement using multiple methods (i.e., social media, polls and a dedicated email comment form that will be responded to within 2 working days).



4. Job Quality

The Town of Windsor will abide by all provisions of the Labor Code Labor Compliance Program (LCP) regarding prevailing wages. This project will also be covered by the Windsor's Labor Agreement with relevant Unions and include Sonoma County local hire provisions. Windsor is in the process of developing local hiring policies for construction, which when passed, will require that 30% of all project work hours within each trade be performed by local residents with at least 15% of those hours performed by disadvantaged workers, and that 50% of work hours performed by apprentices be performed by local residents with at least 25% of those hours performed by disadvantaged workers. Additionally, Windsor is working with the US EPA to execute a WIFIA loan agreement that if funded provides partial financing for this project and is preparing to include all applicable federal requirements in the construction contract. Windsor has executed many federal grant agreements and has extensive experience complying with Davis-Bacon Act and Disadvantaged Business Enterprise requirements, as well as other federal crosscutters. Any labor requirements included in an EPA CPRG funding agreement will be included in the contract specifications and procurement process, as needed. Windsor has extensive experience developing and delivering multi-million-dollar capital improvement programs. Utilizing infrastructure procedures for all capital projects and programs developed from the internationally recognized Project Management Institute (PMI) global standards and Body of Knowledge Guide, Windsor consistently manages and delivers successful projects and programs on time and within budget across all its capital departments. These procedures provide guidelines on the detailed development of planning and design documents, construction management, and quality assurance and quality control of those documents throughout the various project phases.

5. Programmatic Capability and Past Performance

a) Past Performance

Past Performance		
1	Project Title	Department of Energy's FY23 Waste to Energy Technical Assistance for Local Governments
	Assistance Agreement Number	N/A
	Funding Agency	U.S. Department of Energy Bioenergy Technologies Office (BETO)
	Assistance Listing Number/CDFA Number	Not Applicable
	Description of Agreement	The U.S. Department of Energy Bioenergy Technologies Office (BETO) to provide technical assistance in the form of a summary report evaluating Windsor's biosolids handling facility proposal for pyrolysis as it relates to GHG emissions, PFAS, air quality impacts and end use applications for biochar. The Town of Windsor is to provide data and background information necessary to compile the summary report.

	Contact from Organization	Anelia Milbrandt, Sr. Research Analyst, National Renewable Energy Laboratory Phone: 303-275-4633, Email: anelia.milbrandt@nrel.gov
2	Project Title	Reclaimed Water Expanded Use Feasibility Study, under United States Department of the Interior Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Funding Opportunity
	Assistance Agreement Number	Not Applicable
	Funding Agency	Bureau of Reclamation
	Assistance Listing Number/CDFA Number	Not Applicable
	Description of Agreement	Feasibility study to evaluate the cost, system assessment and feasibility of 1) consolidating with Sonoma Water's Airport-Larkfield-Wikiup Sanitation Zone (ALWSZ) Treatment Plant with Windsor's Water Reclamation Facility 2) expand Windsor's recycling water system to the Sonoma County Regional Airport irrigation area and 3) aeration basin upgrades to manage increasing flows from ALWSZ.
	Contact from Organization	Owen Welch, Interdisciplinary Project Manager, BOR Phone: 916-978-5204, Email: owelch@usbr.gov
3	Project Title	Downtown Bike/Ped US 101 Crossing Underpass Widening
	Assistance Agreement Number	04-2960
	Funding Agency	California Department of Transportation (Caltrans)
	Assistance Listing Number/CDFA Number	Not Applicable
	Description of Agreement	Funding agreement for Caltrans to provide quality management assessment services, environmental document quality control and owner/operator approvals of the project design.
	Contact from Organization	Alex Lim, Caltrans Phone: 510-418-3851, Email: alexander.lim@dot.ca.gov
4	Project Title	Old Redwood Highway Corridor Enhancement Plan
	Assistance Agreement Number	74A1134
	Funding Agency	California Department of Transportation (Caltrans)
	Assistance Listing Number/CDFA Number	Not Applicable
	Description of Agreement	A planning grant to revitalize a 3.6-mile corridor of Old Redwood Highway through the Town of Windsor.
	Contact from Organization	Emmanuel Mekwunye, Caltrans Email: Emmanuel.mekwunye@dot.ca.gov

5	Project Title	Windsor River Road/Windsor Road Intersection Improvements
	Assistance Agreement Number	04-5472F15-F019-ISTEA
	Funding Agency	California Department of Transportation (Caltrans)
	Assistance Listing Number/CDFA Number	Not Applicable
	Description of Agreement	Improve the intersection of Windsor Road/Windsor River Road for motorists, pedestrians and bicyclists by converting the intersection from an all-way signalized intersection to a complete roundabout including a railway through the middle of the roundabout.
	Contact from Organization	Ken Nguyen, Caltrans Phone: 510-522-5916, Email: ken.nguyen@dot.ca.gov

b) Reporting Requirements

Reporting Requirements		
1	Project Title	Department of Energy's FY23 Waste to Energy Technical Assistance for Local Governments
	Submission of Acceptable Interim and/or Final Reports	Reports were not required; however, the Town submitted responses to data and information requests.
	Extent of Timely Reporting	All requests were met within a satisfactory timeframe.
	Unmet Progress Reporting	Not Applicable
2	Project Title	Reclaimed Water Expanded Use Feasibility Study, under United States Department of the Interior Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Funding Opportunity
	Submission of Acceptable Interim and/or Final Reports	We have been awarded the Feasibility Study but have not finalized the agreement. Not Applicable.
	Extent of Timely Reporting	Not Applicable
	Unmet Progress Reporting	Not Applicable
3	Project Title	Downtown Bike/Ped US 101 Crossing Underpass Widening
	Submission of Acceptable Interim and/or Final Reports	Project has just commenced. No reports have been submitted yet. Not Applicable
	Extent of Timely Reporting	Project has just commenced. Not Applicable.
	Unmet Progress Reporting	Project has just commenced. Not Applicable.
4	Project Title	Old Redwood Highway Corridor Enhancement Plan
	Submission of Acceptable Interim and/or Final Reports	Regular reports were required during the course of the project with a final report and plan at the end of the project

	Extent of Timely Reporting	All reports were provided on schedule
	Unmet Progress Reporting	Not Applicable
5	Project Title	Windsor River Road/Windsor Road Intersection Improvements
	Submission of Acceptable Interim and/or Final Reports	Quarterly reports were submitted to Caltrans
	Extent of Timely Reporting	All reports and invoices were provided on schedule
	Unmet Progress Reporting	Not Applicable

c) Staff Expertise

Staff Resumes are attached in the Optional Attachment Section.

6. Budget

See Attached Budgetcalc_WindsorColl.xls

a) Budget Detail

See Attached Budget_WindsorCollab.pdf

b) Expenditure of Awarded Funds

See Attachment: BudgetNarrative_WindsorCollab.pdf

c) Reasonableness of Costs

The cost is considered to be reasonable for this size project and was based on the following assumptions for the Regional Biosolids Facility:

1. Construction NTP is assumed to be second quarter 2025.
2. Construction Duration is assumed to be 30 months for the regional option.
3. The project is assumed to be procured as a single prime contract through a traditional design/bid/build process.
4. Wage rates utilized are based on prevailing wages published for Sonoma County current to June 30, 2023.
5. A 40-hour work week is assumed, no shift, weekend or other premium time is provided. 6. Wherever possible, equipment rates are based on current published rental rates as listed in the



AED Blue Book, supplemented by RS Mean's data, the AED Green Book and local rental suppliers.

6. Crews, equipment and productivity used for work items are based mostly on standards specific to each trade. Some information was supplemented by RS Mean's data modified where necessary by estimator judgment.
7. The major equipment costs were based upon vendor quotes.

Project factors used were in-line with recent estimated similar type projects in this location and of this size and conform to the AACE Class of each scope.