

**East County AWP Energy Recovery Project
Climate Pollution Reduction Grants – General Competition
Application Workplan**

1.0 OVERALL PROJECT SUMMARY AND APPROACH

The East County Advanced Water Purification (AWP) Program is a collaborative public agency effort among Padre Dam Municipal Water District (Padre Dam), the County of San Diego (County), City of El Cajon (El Cajon), and Helix Water District (Helix). The Program will create a new, local, sustainable, and drought proof drinking water supply using state-of-the-art technology to purify recycled water. The East County AWP Joint Powers Authority (JPA) governs the Program and is comprised of the three East County wastewater agencies: Padre Dam, the County, and El Cajon. Helix is a collaborative but non-voting member of the JPA. Padre Dam is the Administrator for the Program and will operate the Program on behalf of the JPA. Figure 1 shows the service areas for all four partners as well as the location of the Program in Santee, California.

The East County AWP Program (Program) will treat East County's wastewater locally, thereby reducing ocean discharge and energy for transportation. In addition, the Program will implement indirect potable reuse by producing advanced treated water from the AWP facility and pumping it to Helix's Lake Jennings Reservoir for surface water augmentation, where it will be blended with local and imported water. Next, the water will be sent to Helix's R. M. Levy Water Treatment Plant to become potable water for distribution and use by the partners. This local water supply will provide up to 30% of East County's water demand, offsetting an equal demand for imported water.

The East County AWP Energy Recovery Project (Project) is a critical component of the Program that will reduce greenhouse gas emissions (GHG) in the region.

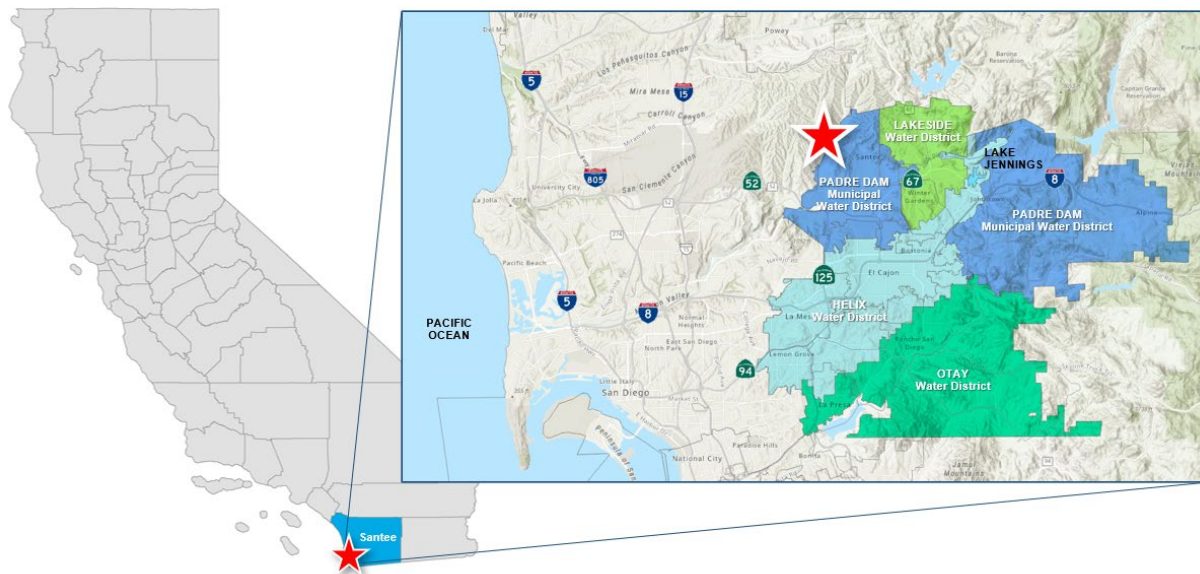


Figure 1. Project Location, San Diego County and Service Area of the East County AWP JPA

Climate Pollution Reduction Grant (CPRG) Program Eligibility

The East County AWP JPA was established in November 2019 as a public agency with the authority to plan for, design, finance, construct, own, lease, operate, maintain, repair, and replace the East County AWP facilities. Per the EPA's CPRG Program Guidance dated March 1, 2023, the JPA is an eligible entity as a Special District Government. East County is part of San Diego County which is one of the 67 Metropolitan areas eligible for funding under the CPRG Program.

The East County AWP Program was included in the San Diego County Regional Primary Climate Action Plan under Program W.1 Improve Water and Wastewater System Efficiency and as Measure W-1.1 Wastewater and Energy Recovery Project. Neither the Program or Project are included in the San Diego County regional application in this EPA grant solicitation; the JPA is submitting this individual application for the Energy Recovery Project separately.

Project Description

The East County AWP Program is located in the eastern portion of San Diego County, California. The Program includes the design and construction of new AWP facilities including a Water Recycling Facility (WRF), Solids Handling Facility (SHF), AWP Facilities, and Energy Recovery Facilities (ERF), as well as associated pump station upgrades and wastewater force mains. Figure 2 below shows the location of these facilities. Preliminary site plans for the Energy Recovery Project, including combined heat and power (CHP) and high strength waste (HSW) facilities, are presented in Figure 3.

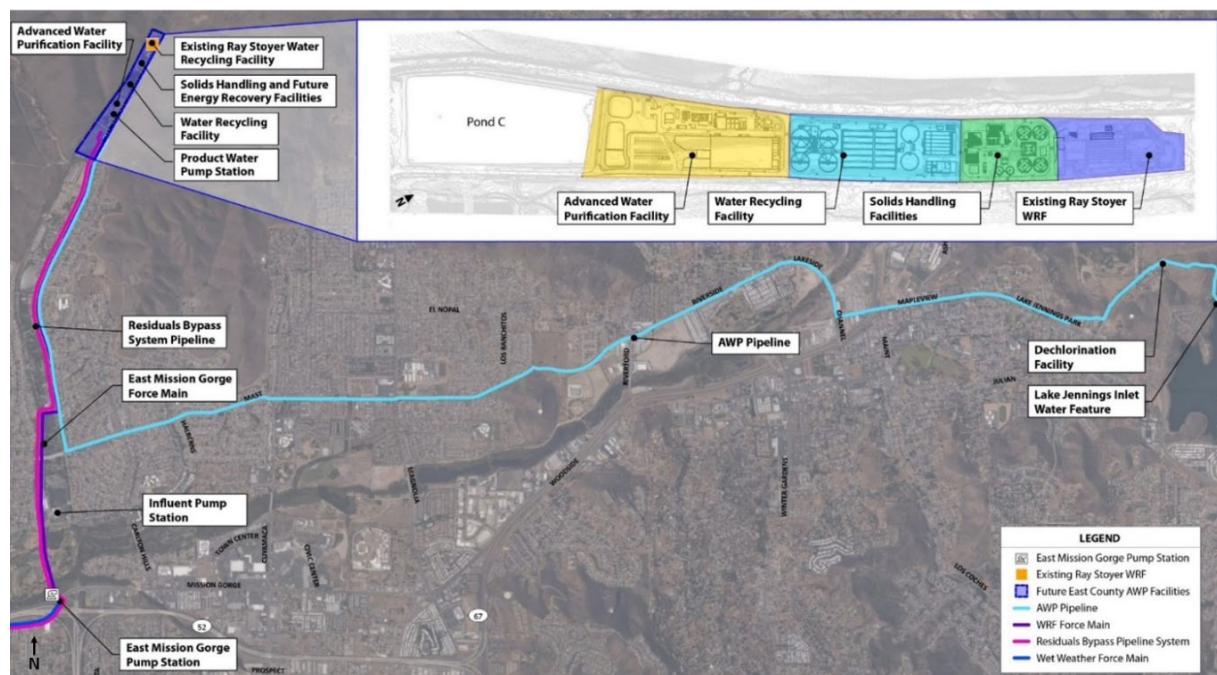


Figure 2. East County AWP Facility Location

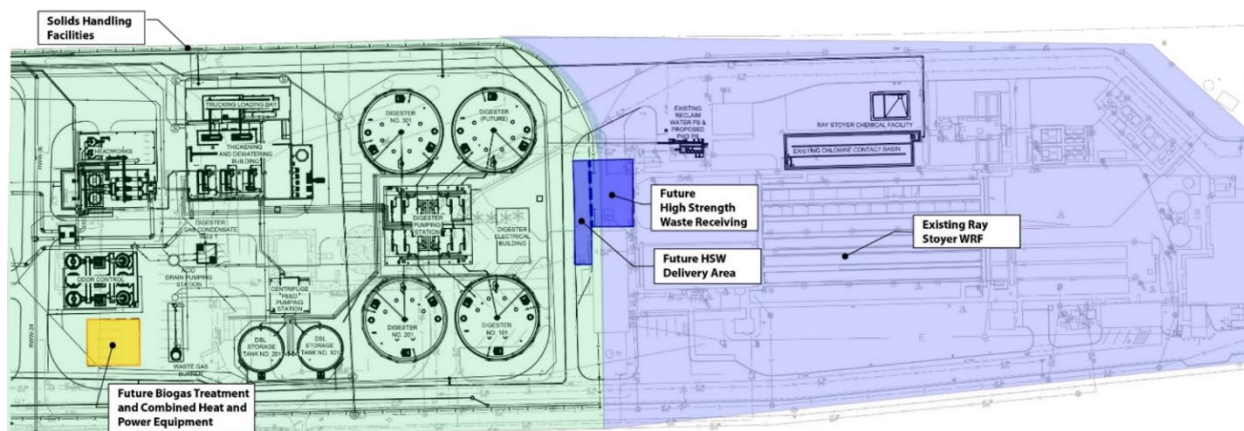


Figure 3. East County AWP Energy Recovery Facilities

The East County AWP Program’s delivery method is progressive design-build (PDB) consisting of two phases: Phase 1 is Preliminary Design up to 60% design completion, and Phase 2 is Final Design and Construction which includes progression of design to 100%, procurement and construction, and startup and commissioning of the facilities. The Program has multiple packages:

- Package 1 includes the WRF, SHF and AWP facility.
- Package 2 includes a 10-mile pipeline from Package 1 to Lake Jennings and a Dechlorination Facility.
- Package 3 includes wastewater pump station upgrades and pipelines to convey wastewater to the AWP Plant.
- Package 4 includes installation of a regional brine line and upgrades to pipelines.
- Package 5 (the Project for the Grant) includes energy recovery facilities.

Phase 1 of Packages 1-3 was completed in May 2022; Phase 2 began in June 2022 with overall Program completion expected in June 2026. Package 4 is currently in Phase 1 and Phase 2 is also expected to be complete by June of 2026. The JPA is currently conducting feasibility level design, assessments, and environmental permitting documentation for Package 5 including CHP and organic waste processing facilities with the goal of construction completion by July 2027. The grant funding requested from the EPA GPRG Program as part of this application will fund a portion of the Package 5 energy recovery facilities construction activities, consisting of the East County AWP Energy Recovery Project.

A. Description of GHG Reduction Measures

As an integral part of the Project, a CHP system will be implemented to capture and utilize the alternative energy source found in biogas produced within anaerobic digesters located at the AWP solids handling facility. In addition, a new HSW receiving facility will collect and distribute locally sourced food waste slurry to the anaerobic digesters to increase biogas production, assist waste management companies and local municipalities in complying with the requirements of AB 1826 (i.e. greater recycling of organics), and reduce dependence on fossil fuel-based energy purchased from San Diego Gas & Electric (SDG&E). Energy recovery results in reduced GHG emissions in two ways: 1) energy produced from sludge generated biogas displaces a similar amount of energy generated from fossil fuels and associated GHG emissions; and 2) processing organic waste in the anaerobic digesters results in reduction of more harmful greenhouse gas

emissions, mainly methane, from the decomposition of food waste and also reduces GHG emissions by off-setting GHGs generated from fossil fuel energy production.

The JPA expects to have the sludge only biogas CHP unit on-line producing energy by the end of 2026 and expects to have HSW deliveries to the digesters and associated energy generation in mid-2027. The energy generated will be used at the AWP facilities to offset power produced by SDG&E.

While stakeholders in the region are working to reduce GHG emissions from all sectors, the PCAP focuses on specific measures where stakeholders and partners have the authority and jurisdiction for implementation. As such, the focus of GHG reduction strategies in the PCAP is in the transportation, building energy, energy supply, and water sectors.

The larger East County AWP Program provides both water and energy recovery and was categorized in the Water Sector in the PCAP. This energy recovery project specifically relates to Clean Energy Supply.

Clean Energy - Electricity emissions account for about 20% of the San Diego region's GHG emissions. Increasing on-site clean energy supply through combined heat and power will help reduce GHG emissions, provide localized energy redundancy to the grid, and eliminate more harmful GHG emissions (methane) from food/organic waste that is diverted from landfills.

This ties directly to the CPRG program goal of implementing a project to reduce GHG emissions. This Project will implement the following primary, quantified GHG reduction measures:

- 1) CHP system – reduced carbon dioxide from fossil fuel-generated electricity and gas energy;
- 2) HSW receiving facility – reduced methane by diverting organic waste from landfills

In addition, the Program will provide the following secondary and unquantified GHG reduction measure:

- 3) Carbon dioxide from fossil fuel generated energy used to import water to the region.

B. Demonstration of Funding Need

The East County AWP Program is a complex, large scale, program budgeted to cost almost \$1 billion. The Program has multiple and far-reaching benefits, including increasing both water and energy supply reliability, and providing good stewardship of the environment through a significant reduction in GHGs. Although the JPA has secured a significant amount of funding for Program components under construction, many of those funding sources (i.e. Title XVI, WIIN, Prop 84) are not eligible for the energy recovery facilities. Consequently, the JPA is pursuing a \$9,000,000 CPRG grant to help bridge the gap between funding secured for the Project of \$35,900,000 and total Project costs of \$44,900,000.

Receiving funding from the CPRG program for the Energy Recovery Project component will directly benefit ratepayers by reducing the cost of purchasing electricity and gas from SDG&E; it will also directly benefit the region by providing significant Regional Green House Gas (GHG) emission reductions. Furthermore, the anticipated completion date of the project (2027) aligns well with the timeline required under the CPRG program guidelines.

The following table details the funding sources obtained to date and amounts currently estimated for the Energy Recovery Project component of the East County AWP Program:

Funding Sources to Date for ECAWP Energy Recovery Project	Federal or State	Estimated Project Funding	Status
EPA WIFIA Loan	Federal	\$2,000,000	Ongoing
California Clean Water SRF Loan	State	\$33,900,000	Ongoing
EPA CPRG Grant	Federal	\$9,000,000	Funding Requested
Total Funding		\$44,900,000	

C. Transformative Impact

By generating electricity for production of a local sustainable water supply, this Project will reduce costs and water/wastewater rates for east San Diego County residents, result in environmental benefits, and bring social parity to disadvantaged communities. It provides a cost effective environmentally sound solution for waste management companies to eliminate disposal of organic waste in landfills required by new regulatory requirements. This has several transformative impacts. First, it eliminates methane produced from decay of organic waste. Second, it reduces the amount of waste disposed in landfills and will prolong the life of the landfill, reducing waste disposal costs by prolonging the life of the landfill and pushing the need for a new landfill out into the future. It also generates energy sufficient to power 30-40% of the AWP facilities which translates into lower water supply costs for the region.

Energy efficiency and renewable energy initiatives and investments produce both primary and secondary electricity system benefits. Primary benefits are those conventionally recognized for their ability to reduce the overall cost of electric service over time, such as the avoided costs of electricity generation or avoiding the need to build new power plants. These benefits can occur over the long run, the short run, or both. Some of these benefits are significant and most can be quantified. Secondary benefits indirectly reduce electricity system costs (such as deferred long-term investments), increase reliability, and improve energy security. Secondary benefits tend to be harder to quantify and, therefore, are less frequently assessed than primary benefits. Nevertheless, it is useful to identify these benefits and quantify them, when possible, to reflect both the costs and benefits of energy efficiency and renewable energy most accurately.

Reducing fossil fuel-based electricity and gas reduces air pollution that poses risks to human health, including respiratory illnesses from fine particulate matter and ozone. Improving energy efficiency reduces global climate change impacts associated with fossil fuel energy generation.

2.0 IMPACT OF GHG REDUCTION MEASURES

A. Magnitude of GHG Reductions from 2025 through 2030

The following table identifies the project's anticipated GHG reduction measures between 2025 and 2030 in metric tons of carbon dioxide equivalent.

Year	GHG Reductions (MT CO₂e)
2025	0
2026	0
2027	4924
2028	5613
2029	5509
2030	5406
Total	21,455*

**Total is rounded.*

Additional information on the assumptions and calculations used for these anticipated GHG reductions is included in the Technical Appendix and GHG calculations spreadsheet.

B. Magnitude of GHG Reductions from 2025 through 2050

The following table identifies the project's anticipated GHG reduction measures between 2025 and 2050 in metric tons of carbon dioxide equivalent.

Year	GHG Reductions (MT CO₂e)
2025	0
2026	0
2027	4924
2028	5613
2029	5509
2030	5406
2031	5245
2032	5084
2033	4923
2034	4763
2035	4602
2036	4441
2037	4280
2038	4120
2039	3959
2040	3541
2041	3372
2042	3203
2043	3035
2044	2866
2045	2697
2046	2697
2047	2697
2048	2697

2049	2697
2050	2329
Total	94,714*

*Total is rounded.

C. Cost Effectiveness of GHG Reductions

The JPA is requesting \$9 million in grant funding for this project. This results in \$95/MT CO₂e reduced.

Factors that may affect the cost-effectiveness of the calculation include the quantity and quality of biogas produced from the anaerobic digestion process, which may result in an increase or decrease in the amount of electricity and heat generated from the CHP process, leading to an increase or decrease in the amount of fossil fuel-based electricity needed by the AWP facilities. Furthermore, there may be changes in the quantity and quality of HSW received from food waste haulers, which would result in an increase or decrease in the amount of waste diverted from landfills, and a resulting increase or decrease in the amount of biogas and local electricity generated by the Project. These factors will be continuously monitored to meet or exceed the estimated GHG reductions.

D. Documentation of GHG Reduction Assumptions

GHG reductions are net GHG emissions of CHP unit emissions minus the eliminated GHG emissions from the boilers (as the CHP waste heat will be used in lieu of the boilers), from the organic waste landfill decay, and from SDG&E power plant energy generation. Please refer to the Technical Appendix and GHG spreadsheet for all assumptions and GHG reduction calculations. We have made the following assumptions:

- Energy recovery project is on-line in 2027;
- Energy recovery system consists of two 1.2 megawatt CHP units for a total output of 2.4 MW (2 times 1.2 MW);
- Biogas production increases over time as a result of increased wastewater flows and HSW production;
- Electrical grid carbon intensity decreases over time in accordance with 2022 Scoping Plan

3. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

A. Expected Outputs and Outcomes

The East County AWP Energy Recovery Project has multiple and far-reaching benefits including increasing both water and energy supply reliability and providing good stewardship of the environment through a significant reduction in GHGs. This program will serve 500,000 people living in east San Diego County, or almost 1 and 6 people living in the region. The operation of the ECAWP energy recovery project would not generate a new impact for Criteria Air Pollutants (CAP) and Hazardous Air Pollutants (HAPs), would not pose a significant impact to the San Diego County and would have a less than significant air quality impact.

The San Diego County Climate Action Plan notes that solid waste accounts for 11% of GHG emissions in the region and energy production accounts for 20% of the GHG emissions in the region. The Energy Recovery focus of the East County AWP Project will assist in substantially reducing regional GHGs by diverting food and organic material from landfills. Instead, food and organic material will be sent to the AWP Project digesters. The digesters will then turn the organic materials and treatment plant solids into a renewable, local, biogas which will be used to generate energy for on-site use, eliminating equal amounts of energy and GHG emissions from fossil fuels that would otherwise be necessary for operating the AWP facility.

High-strength waste (HSW) receiving station located on-site is in a closed-circuit system that includes odor control systems reducing odorous constituents by 98-99 percent. The HSW and WTP solids are sent to AWP anaerobic digesters generating biogas for the operation of three combined heat power (CHP) engines. The process includes selective catalytic reduction (SCR) and catalytic oxidation emissions control technologies to reduce certain CHP engine pollutants emission up to 90 percent. The system includes the addition and operation of one new flare (and increase in biogas production from ~190 standard cubic feet per minute (scfm) up to ~ 1120 scfm) as backup in the event the CHPs are taken offline.

The Project's long-term operations CAP emissions generated from stationary sources for both normal project operations (all CHP engines) and alternate project operations in which the CHP engines are not operating, and all biogas is sent to the flares for 100 percent of the time for the maximum daily numbers and 80 percent of the time on an annual basis do not exceed San Diego County's significance threshold levels for CAP.

The project's emissions of Hazardous Air Pollutants (HAPs) during operation were accounted for in the project health risk assessment. Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of the Project. Similarly, predicted concentrations were used to calculate non-cancer chronic hazard indices (HIs), which is the ratio of expected exposure to acceptable exposure. The basis for evaluating potential health risk is the identification of sources with increased HAPs. The most recent version of EPA's AMS/EPA Regulatory Model - AERMOD was used to predict the dispersion of emissions from the proposed Project.

The carcinogenic risk and the health hazard index (HI) for chronic non-cancer risk at the point of maximum impact (PMI) do not exceed the significance levels of ten in one million ($10E-06$) and 1.0, respectively for the proposed Project.

B. Performance Measures and Plan

The Project will be operated and maintained under a long-term (currently 10 years) design-build operate and maintain (DBOM) agreement with an Energy Recovery Contractor (ERC) after Project completion. The O&M portion of the DBOM Contract reimburses the ERC for its costs and marginal amounts for management and profit, and does not include sharing of revenue from organic waste tipping fees or energy savings. All tipping fee revenue and energy savings will be for the benefit of the JPA.

The JPA will assume operations and maintenance of the Project after the ERC has completed the initial DBOM term and any extension of the operating agreement, up to a maximum of 20 years. The draft DBOM agreement contains extensive monthly and annual reporting requirements for the ERC including the

following performance measures relevant to achieving the expected outputs and outcomes for each GHG reduction measure once the Project facilities are in operation:

- CHP system - quantities and characteristics of biogas combusted and electricity and heat generated to offset fossil fuel-based energy.
- HSW receiving facility - quantities and characteristics of HSW received and processed that are diverted from landfills.

Both the quantities of biogas combusted and HSW received will be extensively tracked by both the ERC and the JPA. These quantities will be correlated to GHG reduction quantities using the same methods in Technical Appendix, and tracked on an annual basis or as required by the EPA for monitoring and reporting. The progress towards implementing each GHG reduction measure of the Project will be monitored and reported through the project management processes and controls currently employed by the JPA.

The JPA has contracted for Owner's Advisor services to support the management and reporting on the progress of the ERC through the design and construction phases. The Owner's Advisor is responsible for reviewing and approving monthly pay applications, progress schedules, and status reports from the design-build contractors to confirm progress towards completion.

Additionally, as required under the terms of SRF, WIFIA, and other funding agreements for the broader East County AWP Project, the JPA is submitting quarterly reports that include performance measures towards Project completion. These reports are described in more detail in section 5.B Reporting Requirements. Performance measures that are currently being monitored and will be reported for implementation of the GHG reduction measures include:

- Schedule – percent complete from baseline schedule
- Budget and Cost – percent complete (earned value) based on contract schedule of values
- Progress – status report of progress including significant achievements and milestone completion

C. Authorities, Implementation Timeline, and Milestones

The following parties are responsible for implementation of the Project and the corresponding GHG reduction measures:

- JPA – the East County AWP JPA has the authority and is solely responsible for the implementation of the Project. The JPA has contracted with Padre Dam Municipal Water District to serve as the administrator for the Project. The JPA has also contracted with consultants for program management, environmental, regulatory, legal, and other support for the Project.
- ERC – the JPA has procured and contracted with the ERC to provide design, build, operate and maintain services. The ERC is responsible for the design, construction, testing, startup and commissioning of the energy recovery facilities, including the CHP and HSW receiving facilities, during the current Phase 1 and Phase 2 agreements. After Project implementation, the JPA expects to contract with the ERC under a Phase 3 agreement to operate and maintain the facilities for an estimated 10-year timeframe, with an option to extend for an additional 10-years, for a total of 20 years.

The JPA is the implementing entity for the Project and has the current and full authority to carry out the GHG reduction measures.

The current implementation timeline for the Project and each GHG reduction measure includes the following tasks and key milestones to meet the Project goals and objectives by the end of the grant period:

- ERC Phase 1A Preliminary Design Notice-to-Proceed (NTP) – February 20, 2023 (completed)
- ERC Phase 1B Design NTP – May 30, 2024 (estimated)
- ERC Phase 2 Final Design & Construction NTP – March 2025
- Energy Recovery Project Completion and GHG Emissions Reduction Start – December 2026
- ERC Phase 3 Operations NTP – June 2027

4. LOW-INCOME AND DISADVANTAGED COMMUNITIES

A. Community Benefits

SANDAG used the U.S. Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST) to identify LIDACs in the San Diego region in the PCAP. Both CEJST and the U.S. EPA's Environmental Justice Screening Tool (EJScreen) were used to assess climate risks and burdens on these LIDACs. In total, there are 159 census tracts designated as low-income and/or disadvantaged across the San Diego region.

Figure 4, from the PCAP, spatially shows the location of the San Diego region LIDAC census tracts. This represents 25% of all census tracts in the region. Notably, all census tracts that include land within the boundaries of 17 Federally Recognized Tribes are also identified in the map and considered disadvantaged by CEJST. The San Diego region is also home to several military bases, which are also identified as LIDACs by CEJST.

The Project will benefit LIDACs across the region via GHG emission reductions resulting from the energy recovery project. The Project will benefit East San Diego County LIDACs specifically through potential energy cost savings derived from the energy recovery project. Additionally, the Program will benefit LIDACS across the region through:

- Reduced GHG emissions resulting from decrease of imported water resulting from the larger East County Advanced Water Purification Program,
- Project workforce development through job creation and/or training in relation to the project facilities

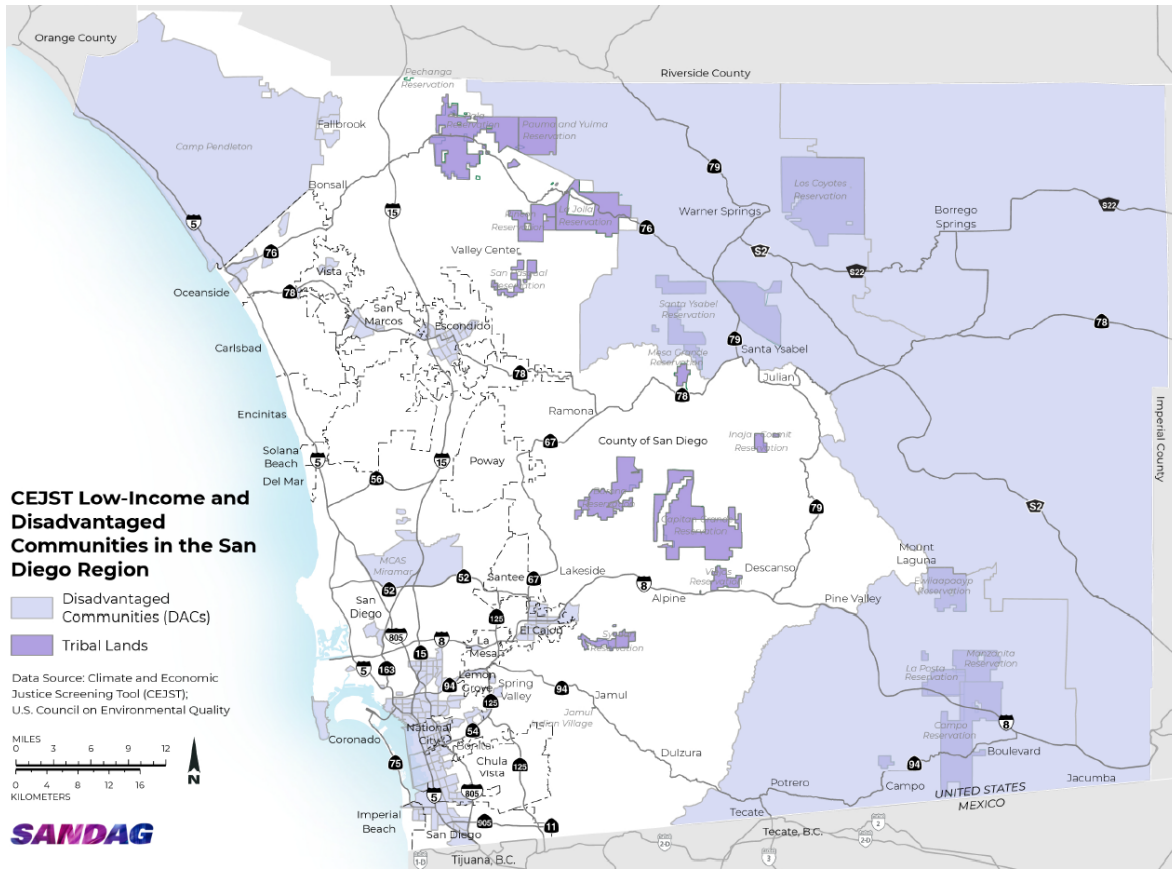


Figure 4. CEJST Low-Income and Disadvantaged Communities in the San Diego Region (San Diego Regional PCAP)

The LIDAC Census Tract IDs that may be impacted by the Project are listed in the following table.

List of LIDAC Census Tract IDs in the San Diego Region					
6073001600	6073003601	6073010401	6073013000	6073018904	6073003108
6073002100	6073003602	6073010402	6073013103	6073018906	6073003112
6073002201	6073003603	6073010502	6073013203	6073019501	6073003115
6073002202	6073003800	6073011601	6073013204	6073019502	6073003201
6073002301	6073003901	6073010012	6073013205	6073019805	6073003209
6073002302	6073003902	6073010013	6073013206	6073020018	6073003214
6073002401	6073004000	6073010106	6073013802	6073020028	6073008352
6073002402	6073004501	6073010110	6073013907	6073020029	6073008357
6073002501	6073004700	6073010111	6073014400	6073020108	6073008360
6073002502	6073004800	6073010112	6073014806	6073020202	6073008600
6073002601	6073004900	6073010401	6073015701	6073020206	6073010103
6073002602	6073005000	6073010402	6073015703	6073020207	6073010107
6073002707	6073005100	6073010502	6073015704	6073020209	6073010300

6073002708	6073005700	6073011601	6073015801	6073020210	6073010501
6073002709	6073006600	6073011602	6073015802	6073020211	6073012003
6073002710	6073008800	6073011700	6073015901	6073020213	6073012303
6073002712	6073009400	6073011801	6073016301	6073020214	6073012402
6073003004	6073009901	6073011802	6073016302	6073020308	6073012800
6073003101	6073010004	6073012002	6073016402	6073020500	6073013102
6073003111	6073010005	6073012101	6073016502	6073020601	6073013104
6073003301	6073010009	6073012102	6073016504	6073020707	6073013306
6073003303	6073010010	6073012200	6073018200	6073020903	6073013307
6073003304	6073010012	6073012302	6073018509	6073021000	6073013308
6073003305	6073010013	6073012401	6073018512	6073021100	6073015301
6073003403	6073010106	6073012501	6073018603	6073021900	6073015902
6073003404	6073010110	6073012502	6073018610	6073022000	6073016503
6073003501	6073010111	6073012600	6073018700	6073002705	6073020309
6073003502	6073010112	6073012700	6073018903	6073002803	6073019206
<i>Source: Climate and Economic Justice Screening Tool, U.S. Council on Environmental Quality</i>					6073020602

The JPA is currently developing a scope of work for a consultant to develop a triple bottom line analysis to identify and quantify the environmental, social, and economic benefits of the Project and to be used as part of a strategic outreach and communications to all Project stakeholders including the JPA partners and elected officials, neighboring cities and communities, waste haulers and suppliers, contractors, environmental groups, and other interested parties. The triple bottom line analysis and quantitative analysis of associated community benefits are expected to be completed by January 2025. The performance measures identified for this grant application, including the implementation of the co-pollutant (CAP and HAP) emission reductions, will be a key outcome of the analysis for reporting to the Project stakeholders.

B. Community Engagement

Meaningful community engagement has taken place as part of the planning and development of the Program and Project, and within the collaborative process involved in the PCAP preparation that includes the Program and Project. Two climate table workshops were held with representatives across the region reporting. Additionally, a number of meetings were held with public agencies, local governments, stakeholders, and information regarding the PCAP and projects was presented at events that included the EPA Regional 9 Tribal Conference.

The East County AWP Program has focused engagement to East County communities, including disadvantaged areas within the southern part of Santee, City of El Cajon, Lakeside, Flinn Springs and Alpine. The Program has worked to communicate information and benefits to these communities through project specific direct mailers, community newsletter articles, website updates that are accessible to all and social media updates shared from the Program pages to larger community organized pages. The Program has also hosted booths at community events including American on Main Street in El Cajon and the Street Fair in Santee. These free community events are open to all and have provided opportunities to reach a broader audience. The Program has aired information videos on the community access

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television station in Santee. All of these efforts provide multiple means for the disadvantaged areas in the East County and larger San Diego Region to receive information about this Program.

5. JOB QUALITY

The East County AWP Program has multiple strategies in place to ensure job quality, strong labor standards, and a diverse and highly skilled workforce. Padre Dam is the Administrator of the East County AWP JPA. The JPA has no employees of their own – all employees working on the AWP Project are Padre Dam employees. The job quality commitments are described below.

Equal Employment Opportunity

Padre Dam's Equal Employment Opportunity Policy, posted on the District's website, describes their commitment to recruit, hire, and promote persons for and to all job classifications without regard to race, religion, creed, color, national origin, ancestry, citizenship, sex, sexual orientation, gender identity, gender expression, marital status, pregnancy, childbirth or related conditions, domestic partner status, physical or mental disability, medical condition, age, genetic condition, military and veteran status, and holding or presenting a driver's license, as well as base employment decisions on the individual's qualifications, and other personnel actions.

Additionally, Padre Dam also implements actions to ensure equal opportunities and encourage diversity in its workforce through recruiting processes, by encouraging diverse employees to seek promotional opportunities, by ensuring that seniority practices, job classifications, and other employee practices and classifications do not have an unlawful discriminatory effect, as well as by soliciting bids for contracts from available contractors, including minority contractor groups and associations.

Americans With Disabilities Act

Padre Dam complies with the Americans with Disabilities Act (ADA) and provides assistance for applicants with disabilities. Padre Dam does not discriminate on the basis of disability in employment, admission to, access to, or operation of its programs, services, or activities. Notices for those who are disabled and need an accommodation to participate in the testing and interview process are provided in alternative formats. Those with questions or requests for additional information or accommodations under the Americans with Disabilities Act (ADA) are directed to Padre Dam's ADA Coordinator.

Compliance with WIFIA Labor Requirements

As the Program is receiving loan funding from WIFIA, the JPA and Padre Dam (the Borrower) are also required to comply with additional labor requirements and laws described in the WIFIA agreement, included below:

- (i) The Borrower, and each of its contractors and subcontractors at all tiers with respect to the Project, has complied with all applicable laws, rules, regulations and requirements, including without limitation 40 U.S.C. §§3141-3144, 3146, and 3147 (relating to Davis-Bacon Act requirements) (and regulations relating thereto) and 33 U.S.C. §3914 (relating to American iron and steel products).
- (ii) To ensure such compliance, the Borrower has included in all contracts with respect to the Project (A) the contract clauses relating to the Davis-Bacon Act requirements that are set forth in the Code of Federal Regulations, Title 29 Part 5.5 and (B) requirements that its contractor(s) (1) shall comply with all applicable laws, rules, regulations, and requirements set forth in this Section 12(j) and follow applicable federal guidance and (2) incorporate in all subcontracts (and cause all

subcontractors to include in 41 lower tier subcontracts) such terms and conditions as are required to be incorporated therein by any applicable laws, rules, regulations and requirements set forth in this Section 12(j) (including without limitation with respect to the Davis-Bacon Act requirements).

- (iii) No notices of violation of any applicable law have been issued, entered or received by the Borrower or, to the Borrower's knowledge and solely in respect of the Project or any Construction Contract, other than, in each case, notices of violations that are immaterial.
- (iv) The Borrower is not, (A) a Sanctioned Person or (B) now, or on any date within five (5) years prior to the Effective Date, has been in violation of: (1) any applicable Anti-Money Laundering Laws; (2) any applicable Sanctions; (3) any applicable Anti-Corruption Laws; or (4) any applicable anti-drug trafficking, anti-terrorism, or anti[1]corruption laws, civil or criminal. There are no pending or, to the knowledge of the Borrower, threatened claims or investigations by any Governmental Authority against, or any internal investigations conducted by, the Borrower or any Construction Contractor, with respect to any possible or alleged violations of any Sanctions, Anti-Money Laundering Laws, Anti-Corruption Laws, or any anti-drug trafficking or anti-terrorism laws. No use of proceeds of the WIFIA Loan or any other transaction contemplated by this Agreement or any other Related Document will violate any applicable Sanctions, Anti-Money Laundering Laws...

Energy Recovery Contractor

The JPA selected an Energy Recovery Contractor (ERC) based on a highly competitive qualifications-based solicitation. The solicitation evaluation criteria included design, construction and operations and maintenance experience and expertise with energy recovery systems including CHP. The ERC selected by the JPA has designed, constructed and operates and maintains numerous biogas energy recovery facilities both in California and in other parts of the United States. The operations and maintenance portion of the contract extends a minimum of 10 years after construction completion (2037) with the option to extend it another 10 years (2047). Should the JPA opt not to continue with the contract extension, it will either solicit another qualified contractor to operate and maintain the ERF or hire qualified personnel to operate and maintain this facility maintaining GHG reduction goals until 2050.

6. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

A. Past Performance

The JPA has a long-term history of successfully performing and completing the federal and non-federal assistance agreements for various funding sources and programs. The progress reporting requirements are currently ongoing or have been completed for the following funding sources and durations:

- State of California Natural Resource Agency, Department of Water Resources - Integrated Regional Water Management Implementation Grant (California Proposition 84 Bond) – Quarterly Progress Reports from 7/1/2021 to 9/30/2023; Project Completion Report dated March 2024
- State of California, State Water Resource Control Board, Clean Water State Revolving Fund, Water Recycling Funding Program – Quarterly Progress Reports from 6/30/2017 to 12/31/2023
- United States Environmental Protection Agency, Water Infrastructure Finance and Innovation Act (WIFIA) - Quarterly Progress Reports from 10/1/2021 to 12/31/2023
- United States Department of the Interior Bureau of Reclamation WaterSMART: Title XVI Congressional Authorized Water Reclamation and Reuse Grant, for Phase 1 and 2 ECAWP – Quarterly Progress Reports from 1/1/2014 to 12/31/2022

B. Reporting Requirements

The Energy Recovery Project is one component of the larger East County AWP Program that totals approximately \$1 billion in total program implementation costs. The JPA has secured a significant amount of funding for the Program from the following sources:

- State of California Natural Resource Agency, Department of Water Resources - Integrated Regional Water Management Implementation Grant (California Proposition 84 Bond)
- State of California, State Water Resource Control Board, Clean Water State Revolving Fund, Water Recycling Funding Program.
- United States Environmental Protection Agency, Water Infrastructure Finance and Innovation Act (WIFIA).
- United States Department of the Interior Bureau of Reclamation WaterSMART: Title XVI Congressional Authorized Water Reclamation and Reuse Grant, for Phase 1 ECAWP.
- United States Department of the Interior Bureau of Reclamation WaterSMART: Title XVI Congressional Authorized Water Reclamation and Reuse Grant, for Phase 2 ECAWP.
- United State Department of the Interior Bureau of Reclamation WaterSMART: Title XVI Water Infrastructure Improvements for the Nation (WIIN) Act.

In addition to the reporting and documentation required for disbursement requests from each funding source, additional reporting is required that includes, but is not limited to:

- Semi-Annual, Quarterly and Monthly Progress Reports
- Project Completion Reports
- Grant and Loan Agreement Amendments
- Budget updating documentation
- Environmental and Permitting documentation:
 - Air Quality and Pollution Permitting
 - Stormwater Pollution Prevention Permitting
 - National Pollutant Discharge Elimination System Permitting
 - California Environmental Quality Act
 - National Environmental Policy Act
 - Construction Permitting
- Monitoring and Operations Plans
- Labor Compliance Plans
- Construction and Project Management Plans
- Feasibility Studies
- Geotechnical Reports, and
- Engineers Cost Estimates and Basis of Design Reports

The JPA is efficient and timely at submitting these documents electronically at the direction of the agencies, using both state and federal websites and portals.

C. Staff Expertise

The East County SWP Program has highly skilled organizational, operational, and technical staff in place to successfully implement the Project. The following bios summarize the experience of the Program and

Project staff demonstrating the capability and resources to successfully achieve the Project and larger Program goals.

Kyle Swanson, CPM

Kyle Swanson is the CEO/General Manager of Padre Dam MWD, Administrator of the East County Advanced Water Purification (AWP) Program. Mr. Swanson has over 21 years of water industry experience with a focus on operations and project management. Prior to serving as CEO/General Manager for Padre Dam, Mr. Swanson served as the Director of the East County AWP Program. Mr. Swanson maintains multiple industry operational licenses, is a certified Public Manager, and a graduate of San Diego State University.

Karen Jassoy, CPA

Karen Jassoy is the Treasurer and Auditor/Controller of the East County AWP Program and the Chief Financial Officer/Director of Finance for Padre Dam MWD. Ms. Jassoy is responsible for all the financing and financial management of the Program. Ms. Jassoy is a Certified Public Accountant with over 34 years' experience in the finance/accounting field, including 13 years with the San Diego Catholic Diocese and 16 years at the District. Ms. Jassoy holds a Bachelor's degree from the University of California, San Diego and a Master of Business Administration (Accounting) from San Diego State University.

Mark Niemiec, P.E.

Mark Niemiec is the Director of the East County AWP Program. He obtained his Bachelor's Degree in Environmental Resources Engineering from Humboldt State University and a Master's Degree in Civil Engineering from University of California at Los Angeles. He has served in his capacity as Director of the AWP Program since August 2021 managing and overseeing the design and construction of all facilities. He is a registered Civil Engineer in the State of California with more than 20 years of professional experience in the water/wastewater industry.

Seval Sen, P.E.

Seval Sen is an Engineering Manager for the East County AWP Program and a senior District Engineer at Padre Dam MWD. She received her Master's degree from San Diego State University and has over 20 years of diverse experience in municipal water, wastewater, potable reuse, recycled water, and infrastructure projects. She is currently leading the progressive design build contract to complete the Program's treatment facilities including wastewater treatment, solids handling, and advanced water purification facilities. She is also leading the Program's permitting activities.

Rebecca Abbott, P.E.

Rebecca Abbott is an Engineering Manager for the East County AWP Program and an Engineer at Padre Dam MWD with more than 15 years of experience in civil engineering and project management. She received a Bachelor's degree in Civil and Environmental Engineering from the University of California, Davis and is a registered Professional Civil Engineer in California. In collaboration with the City of San Diego, Rebecca manages the progressive design-build contract that will handle the disposal of residuals and manage peak wet weather wastewater flows from Eastern San Diego County, and oversees the construction of the wastewater conveyance system and the purified water conveyance system.

Rob Northcote

Rob Northcote is the Operations Manager for East County AWP Program and shares the same role at Padre Dam's Ray Stoyer Water Recycling Facility, where he has worked since 1997. Rob holds both a Wastewater Treatment Grade 5 from State Water Resources Control Board and an Advanced Water

Treatment Operators Grade 5 from CWEA/AWWA, in addition to a Recycled Water Operator Grade 5, Water Treatment Operator Grade 2 and Distribution Operator Grade 2. Rob is a member of the technical team for the Project's treatment and conveyance facilities.

Ryan Hughes

Ryan Hughes is the Operations Supervisor for the East County AWP Program and shares the same role at Padre Dam's Ray Stoyer Water Recycling Facility, where he has worked since 2006. Ryan has studied water and wastewater treatment at Cuyamaca College and holds both a Wastewater Treatment Grade 5 from State Water Resources Control Board and an Advanced Water Treatment Operators Grade 5 from CWEA/AWWA. Ryan is a member of the technical team for the Project's treatment and conveyance facilities.

Energy Recovery Contractor

The JPA selected an Energy Recovery Contractor (ERC) based on a highly competitive qualifications-based solicitation. The solicitation evaluation criteria included design, construction and operations and maintenance experience and expertise with energy recovery systems including CHP. The ERC selected by the JPA has designed, constructed and operates and maintains numerous biogas energy recovery facilities both in California and in other parts of the United States. The operations and maintenance portion of the contract extends a minimum of 10 years after construction completion (2037) with the option to extend it another 10 years (2047). Should the JPA opt not to continue with the contract extension, it will either solicit another qualified contractor to operate and maintain the ERF or hire qualified personnel to operate and maintain this facility maintaining GHG reduction goals until 2050.

7. BUDGET /BUDGET NARRATIVE

The Energy Recovery Project is one component of the larger East County AWP Program that is approximately \$1 billion in total program implementation costs. The JPA is requesting CPRG funding for approximately 20 percent, or \$9.0 million, of the total Energy Recovery Project costs which are currently estimated at \$44.9 million for the ERC's Phase 2 final design and construction costs, including contingency and escalation to the mid-point of construction. The Project is currently contracted with a design-build contractor for Phase 1A preliminary design that is nearing completion, and is negotiating the Phase 1B design contract and costs. Phases 1A and 1B of the Project are fully funded and are not included in this grant application. Other Project costs for Phase 2 final design and construction, including JPA and non-design-build contractor personnel, fringe benefits, travel, and equipment, are expected to be funded through SRF and WIFIA loans and also not included in this grant application.

A. Budget Detail

The Project budget is itemized in the table below.

East County AWP Energy Recovery Project Itemized Budget Table							
Categories	Line Item & Itemized Costs	Year 1 (2025)	Year 2 (2026)	Year 3 (2027)	Year 4	Year 5	Total EPA Funding
PERSONNEL		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL PERS.	\$0	\$0	\$0	\$0	\$0	\$0
FRINGE BENEFITS		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL FRINGE	\$0	\$0	\$0	\$0	\$0	\$0

TRAVEL		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL TRAVEL	\$0	\$0	\$0	\$0	\$0	\$0
EQUIPMENT		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL EQUIP.	\$0	\$0	\$0	\$0	\$0	\$0
SUPPLIES		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL SUPPL.	\$0	\$0	\$0	\$0	\$0	\$0
CONTRACTUAL							
	Energy Recovery Contractor for Phase 2 final design & construction of ERP CHP & HSW facilities	\$3,000,000	\$4,000,000	\$2,000,000	\$0	\$0	\$9,000,000
	TOTAL CONTRACTUAL	\$3,000,000	\$4,000,000	\$2,000,000	\$0	\$0	\$9,000,000
OTHER		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL OTHER	\$0	\$0	\$0	\$0	\$0	\$0
INDIRECT COSTS		\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL INDIR.	\$0	\$0	\$0	\$0	\$0	\$0
	TOTAL FUNDING FOR PROJECT	\$3,000,000	\$4,000,000	\$2,000,000	\$0	\$0	\$9,000,000

B. Expenditure of Awarded Funds

The JPA has extensive project procedures, controls, and staffing in place to manage the expenditure of awarded grant funds efficiently and effectively. Specifically, the JPA has contracted with an Owner's Advisor to provide program management support including scope, quality, schedule, cost, and budget controls. The JPA and Owner's Advisor have been successfully managing the implementation of the overall East County AWP Program, with five separate progressive design-build contractors, over multiple planning, design, and construction phases that began more than 8 years ago. Three of the design-build contracts are currently in Phase 2 final design and construction with monthly contractor payment applications, reviews, and approvals based on a schedule of values and percent completes, and WIFIA and SRF disbursement requests submitted for state and federal reimbursement approximately monthly. The JPA plans to include the requests for disbursement of awarded EPA grant funds in coordination with the WIFIA and SRF loan funds processing.

The JPA, with Owner's Advisor support, is performing cost management through the use of initial budgets combined with baseline schedules to produce cost-loaded spending plans for each of the projects. Earned value is used to measure performance of the design-build contractors, comparing the cost and value of work performed to the baseline schedule and budget. This effort requires close coordination with the contractors to determine accurate forecasts for each of the project phases and as the work progresses towards completion. Integrating monthly expenditure forecasts for the projects into one master program budget supports accurate financial management and will provide transparent and supportable information for progress reports and disbursement requests submitted to the EPA and other funding agencies.

C. Reasonableness of Costs

The GHG reduction measures covered by this application will be implemented through the design, construction, and commissioning of the East County AWP energy recovery facilities including the CHP system for reduction of fossil-based electricity and gas use, and HSW receiving facility for diversion of organic/food waste from landfills. The requested grant funds of \$9M are approximately 20 percent of the contracted design-builders estimated costs for Phase 2 final design and construction. The JPA originally estimated the Project design and construction costs in July 2022 as \$27.2M, including escalation and contingency. As part of the contractor's Phase 1A preliminary design scope of work, the estimated cost for Phase 2 was adjusted to \$44.9M in March 2024 to be in alignment with a draft Basis of Design Report. The Phase 2 Project costs will be further refined and updated under the Phase 1B design scope of work and GMP amendment negotiations with an expected Phase 2 notice-to-proceed for the energy recovery contractor in March 2025. Other Project costs for Phase 2 final design and construction, including JPA and non-design-build contractor personnel, fringe benefits, travel, and equipment, are not requested for funding under this grant application. The JPA is making every effort to control costs for the Project, including performing value engineering of the design during Phase 1B and diligently managing scope, schedule, and costs, including change orders.