

**ENVIRONMENTAL PROTECTION AGENCY (EPA)**

**Climate Pollution Reduction Grant Program :**

**Implementation Grants General Competition**

**EPA-R-OAR-CPRGI-23-07**

**Applicant Name:** Monterey One Water (M1W)

**Type of Application:** Individual Applicant

**Contact Information:** Yohana Vargas, Grants Administrator  
[yohana@my1water.org](mailto:yohana@my1water.org)  
831-883-6182

**Application Title:** Monterey Renewable Energy and Utility Reliability Program: Enhanced Gas Conditioning

**Funding Requested:** \$49,925,000

**BRIEF DESCRIPTION OF GHG MEASURES**

- Energy Measure 6: Implement Bioenergy Projects - 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 (SB 1383: Short-Lived Climate Pollutants Act), woody biomass, yard and agricultural waste, and biosolids. This measure could apply to projects that capitalize on any one of these practices, or that are able to combine them to more cost effectively reduce emissions and achieve greater co-benefits.
- Waste Measure 2: Bolster Organics Recycling Infrastructure - This measure would enhance organics recycling infrastructure to divert more green materials, food materials, or alternative daily cover from landfills, thereby reducing methane emissions and improving air and water quality. It would also support co-digestion, anaerobic digestion projects, and emerging non-combustion biomass conversion technologies.

**Sectors:** Electricity Generation  
Waste and Materials Management

**EXPECTED TOTAL CUMULATIVE GHG EMISSION REDUCTIONS**

**Estimated cumulative GHG reductions for 2025 – 2030 (in metric tons):** 115,134 tCO<sub>2</sub>e

**Estimated cumulative GHG reductions for 2025 – 2030 (in metric tons):** 663,874 tCO<sub>2</sub>e up to 831,786tCO<sub>2</sub>e

**Project Location:** Monterey Regional Environmental Park  
14811 Del Monte Blvd  
Monterey County, California

## **APPLICABLE PRIORITY CLIMATE ACTION PLAN (PCAP) ON WHICH MEASURES ARE BASED**

**PCAP Lead Organization:** California Air Resources Board  
**PCAP Title:** The State of California's Priority Climate Action Plan  
**PCAP Website:** <https://ww2.arb.ca.gov/our-work/programs/u-s-epas-climate-pollution-reduction-grants-program>

### **List of GHG reduction measures and PCAP page reference for each measure:**

- Energy Measure 6: Implement Bioenergy Projects - Pages 46 - 47
- Waste Measure 2: Bolster Organics Recycling Infrastructure – Pages 62 - 63

## **1. Overall Project Summary and Approach**

### **a. Description of GHG Reduction Measures**

Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature, posing many risks to human beings and all other forms of life on Earth (Oppenheimer, 2024; Prakash, 2021). Across the globe, climate change is significantly damaging human health (Patz et al., 2005; Ebi et al., 2021), the economy (Wade, 2016), and the environment (Fawzy et al., 2020; Xu et al., 2020), and will continue to do so in a future with high greenhouse gas (GHG) emissions. As GHG emissions blanket the Earth, they trap the sun's heat, leading to climate change (Khan et al., 2022; Kweku et al., 2018; Nadeau et al., 2022). The world is now warming faster than at any point in recorded history. The United States, one of the most significant GHG emitters, has caused global economic losses of more than \$1.8 trillion from 1990 to 2014 (Callahan & Mankin, 2021). Climate change caused by these emissions has disproportionately saddled developing countries with economic losses by damaging agricultural yields, reducing labor productivity, and curbing industrial output. A reduction in GHG emissions will not only reduce future warming but will result in co-benefits such as lower emissions of particulate matter (PM) (Li & Crawford-Brown, 2011; Li et al., 2022), ozone and PM precursors (West & Fiore, 2005; Li et al., 2014; Avise et al., 2009), and other hazardous pollutants, reducing the risks to human health from air pollution (Lam et al., 2011; Liao et al., 2006; Pye et al., 2009). The most recent data from the Air Quality Life Index (University of Chicago) reveals that permanently reducing global PM<sub>2.5</sub> air pollution to meet the World Health Organization (WHO) guideline would add 2.3 years to average human life expectancy – or a combined 17.8 billion life years saved (Greenstone & Hasenkopf, 2023). The impact of PM<sub>2.5</sub> on global life expectancy is comparable to that of smoking, more than three times that of alcohol use and unsafe water, more than five times that of transport injuries like car crashes, and more than seven times that of HIV/AIDS.

In many areas of the United States, climate change is expected to worsen harmful ground-level ozone and air quality (Nolte, 2018; EPA, 2021). More than 100 million people in the United States live in communities where air pollution exceeds health-based air quality standards (Nolte, 2018). Air pollution increases the incidence of adverse respiratory (D'Amato et al., 2013; De Paula Santos et al., 2021; Arbex et al., 2012) and cardiovascular health effects (Franklin et al., 2015; Al-Kindi et al., 2020; Newby et al., 2015), including premature death (Lelieveld et al., 2015; Nansai et al., 2021; Dedoussi et al., 2020).

To reduce GHG emissions, improve the health of our communities, decrease our reliance on the local power grid, increase utility reliability of essential wastewater and water recycling services, and create an opportunity for market transformation, we (Monterey One Water) request funding (\$49,925,000) to support the second phase of our *Monterey Renewable Energy and Utility Reliability Program – enhanced gas conditioning*. Enhanced gas conditioning – the process of removing contaminants from fuel gas - will result in GHG reductions of 23,639 tCO<sub>2</sub>e/yr by 2030 and up to 38,587 tCO<sub>2</sub>e/yr by 2050. If not separated from the fuel, these contaminants could cause corrosion, the buildup of chemical deposits, and undesired temperature fluctuations, among other issues (FujiFilm, 2022).

In 2021, Governor Newsom (CA) issued a state of emergency in response to extreme climate events throughout the Western United States. The proclamation aims to expedite clean energy projects and relieve demand on the electrical grid during extreme weather events. Californians are experiencing a rise in sea level, losses to the Sierra snowpack and water supply, wildfires, damage to agriculture, the potential for loss of ecosystems, and public health impacts.

Approximately 85% of California's population live and work in coastal counties. The sea level along California's coasts is projected to rise by as much as 20 to 55 inches by the end of the century (California Natural Resources Agency, 2013). A 55-inch sea level rise could put nearly half a million people at risk of

flooding by 2100 and threaten \$100 billion in property and infrastructure, including roadways, buildings, hazardous waste sites, power plants, and parks and tourist destinations. Higher temperatures are now causing the snowpack from the Sierra Nevada Mountain Range to melt earlier and all at once (California Natural Resources Agency, 2013). Earlier and larger water releases could overwhelm California's water storage facilities, creating a risk of floods and water shortages.

In addition to the threat of rising sea levels, climate change has devastated the area through fire. The Western United States experienced wildfires of unprecedented scale and duration in 2018 and 2020. Forest and rangelands cover over 80% of California's 100 million acres. Record-breaking wildfires burned more than 2.7 million hectares along the West Coast of the United States, killing more than 30 people and leaving tens of thousands homeless (Xu et al., 2020; BBC News, 2020). Projections indicate that the risk of wildfires will continue to increase in most areas of the world as climate change worsens (Bowman et al., 2020; Hurteau et al., 2019; Turco et al., 2018; Sun et al., 2019) and that the fires will increase excess mortality and morbidity from burns, wildfire smoke, and mental health effects. Californians already experience the worst air quality in the nation, and in 2021, twenty out of the top thirty most polluted counties in the United States were in California due to the impact of wildfires. Air pollution remains the most significant external threat to public health (Greenstone & Hasenkopf, 2023). Hotter temperatures lead to more smog, which can damage the lungs and increase childhood asthma, respiratory and heart disease, and death.

California is also one of the most biologically diverse regions of the world, with the highest number of unique plant and animal species of all 50 states and the most significant number of endangered species. The Central Coast of California is also home to the Monterey Bay National Marine Sanctuary, one of our nation's most spectacular federally protected marine areas containing extensive kelp forests and one of North America's largest underwater canyons and closest-to-shore deep ocean environments. Climate change will adversely affect plant and wildlife habitats and the ability of the State's varied ecosystems to support clean water, wildlife, fish, timber, and other goods and services necessary for our well-being.

The proposed project will be located in California's County of Monterey where health disparities are observed across the County. Compared to the U.S. and the state of California, Monterey County residents experience higher rates of cardiovascular disease (6.7% vs. 5% and 6.1%), adult asthma (13.3% vs. 9.3% and 12.9%), childhood asthma (6.5% vs. NA and 7.8%), COPD (6.2% vs. 5.4% and 6.4%), reporting "fair/poor" mental health (34.3% vs. NA and 13.4%) and diagnosed depression (24.6% vs. 14.1% and 20.6%). As temperatures rise, the number of days of extreme heat events also will rise, causing increases in the risk of injury or death from dehydration, heatstroke, heart attack, and respiratory problems. Current and future emissions of GHGs, and thus emission mitigation actions, are crucial for determining future climate change risks and impacts in society. Monterey One Water (M1W) is well positioned to lead innovative measures to decrease GHG emissions in our community, the State of California, and beyond. Our innovative, cross-sector approach will serve as a model for other communities.

M1W is a public utility serving more than 285,000 residents and almost 7,000 businesses throughout northern Monterey County, located along the Central Coast of California (Figure A). The Agency conveys and treats approximately 17 million gallons of municipal wastewater daily before safely reintroducing it into the environment. Every



Figure A. Monterey One Water Service Area Map

time our community members use water inside – from washing dishes or clothes to flushing the toilet or using the shower – the water is sent to the M1W Regional Treatment Plant, where it is cleaned and safely reintroduced into the environment. We rely on 30 miles of underground pipes and 13 pump stations. Our extensive, multi-step treatment processes allow us to safely reintroduce water into the environment through regulated ocean discharge, which meets or exceeds State and Ocean Plan requirements. Additional tertiary treatment results in non-potable recycled water for irrigating raw food crops like lettuce and strawberries. Additional purification results in potable recycled water for groundwater replenishment of a local drinking water basin. We strive to be an agile and innovative industry leader providing regional water solutions. M1W values accountability, integrity, respect, transparency, and collaboration.

Utility power to M1W originates from a Pacific Gas & Electric (PG&E) substation in Castroville, representing a single failure point. The substation is in a remote area near a roadway, and traffic incidents can render it unavailable for extended periods. Power outages have occurred frequently (monthly in 2021 and 2022), much higher than PG&E's reported average interruption frequency rate (2.657 in 2022, i.e., more than 2.6 sustained outages per customer per year). For reference, the national average is 1.272. Outage durations range from less than an hour to more than 30 hours. Such outages impact the utility reliability of essential wastewater and water recycling services.



Figure B. PG&E substation aerial view.

The reliability of PG&E services in the Central Coast region has been decreasing year over year since 2015, with a 230% increase in reported sustained outages compared to 2015 to 2022. PG&E has reported its reliability for Monterey County as 99.89% in 2022, translating to an annual cumulative downtime of 9 hours and 33 minutes per customer. The total downtime for M1W in 2022 was 65.2 hours, which indicates that the utility electrical service serving M1W is experiencing significantly higher interruption occurrences than is considered and reported as average. Wastewater reliability is critical to protect public and environmental health, and energy solutions are needed to ensure uninterrupted service. Biogas can be purified and upgraded through gas conditioning to meet natural gas pipeline quality requirements by achieving methane content and characteristics similar to those of fossil-fuel natural gas. Then, it can be used as an equivalent replacement onsite or injected into the PG&E gas grid. This effort will support both greater utility power reliability and achieve GHG reductions.

Driven by our mission, vision, and core values, we initiated an Energy Alternatives Assessment to study a portfolio of onsite renewable energy sources to secure the energy resilience our critical, 24/7 operations require. This led to the development of the *Monterey Renewable Energy and Utility Reliability Program*, a three-phased implementation effort for M1W to meet the climate challenges of the twenty-first century.

The *Program* aims to build community resiliency and utility reliability through the following goals:

- Reduce GHGs through the capture and productive use of landfill and digester methane gas.
- Support California legislation on organics diversion and clean energy generation.
- Create a new renewable energy source for essential utility services, for environmental sustainability, and to eliminate reliance on the California Independent System Operators grid.
- Provide a scalable and replicable model for productive biogas end use within the wastewater sector.

**Phase 1—Organics Diversion and Increased Renewable Energy Production (2023 - 2024):** Organic waste in landfills—such as food scraps, yard trimmings, paper, and cardboard— emits 20% of the state of California’s methane, a climate super pollutant 84 times more potent than carbon dioxide. With more than half of California’s landfills made up of organic waste, the opportunity to divert short-lived climate super pollutants such as these will have the fastest impact on the climate crisis. Therefore, Phase One of the *Program* was designed to divert organic waste from landfills to M1W to be co-digested with wastewater solids, increasing the capture and productive use of methane gas. The diversion of approximately 31,000 tons of organic waste to M1W annually is estimated to reduce GHGs by 14,739 tCO<sub>2</sub>e/yr. Phase One of the *Program* supports the EPA’s goals and California Senate Bill (SB) 1383, the Short-Lived Climate Pollutants Act, establishing a 75% reduction in organic waste disposal by 2025. Phase One, to be completed by November 2024, includes installing a food waste polishing system, an organics-receiving station, and updating the mixing system of our four anaerobic digesters to facilitate the co-digestion of organics and wastewater solids. Phase One is funded by a State of California Department of Resources Recycling and Recovery (CalRecycle) grant (\$4.2 million) and M1W ratepayers (\$3.95 million). Upon the completion of construction in November 2024, organics diversion will begin immediately.

**Phase 2 – Enhanced Gas Conditioning (2024 – 2028):** From Phase One, we estimate an 89% increase in the availability of biogas by 2028 – a renewable fuel that is produced when organic matter, such as wastewater solids or food, is broken down by microorganisms in the absence of oxygen. M1W uses biogas to fuel large, engine-driven co-heat and power (CHP) generators to create electricity, powering approximately 90% of our wastewater treatment process. However, the engines are at capacity, and a new solution is needed to ensure productive use of the increase in biogas from co-digestion. Therefore, M1W seeks funding (\$49,925,000) from the EPA CPRG Program to improve the utilization of biogas produced by anaerobic digestion for a higher and more environmentally beneficial purpose. Renewable natural gas (RNG) can be produced from biogas through the process of conditioning. RNG is a pipeline-quality gas that is fully interchangeable with conventional natural gas and will be used to offset traditional petroleum-based natural gas resources. Phase Two is critical to the overall *Program* and is required to ensure the benefits achieved in Phase One are not diminished by flaring excess biogas into the environment. Flaring releases substantial volumes of potent GHGs, including methane, black soot, and nitrous oxide. With natural gas prices at historic highs, gas flaring is also a waste of money in addition to its adverse impacts on climate change and human health. Bringing this gas to market could offer relief to very tight gas markets and, in many cases, could do so faster and cheaper than investing in new supply.

Wastewater treatment plants (WWTPs), such as M1W, are uniquely placed to help divert organics from landfills. However, a recent study initiated by the California State Water Resources Control Board noted, *“Based on survey responses, the ability for WWTPs statewide to beneficially use biogas is limited by the existing biogas end-use capacity.”* EPA funding for enhanced gas conditioning would directly fill the gap recognized by this study. M1W is ready to begin the design for enhanced gas conditioning. We request EPA funding of \$49,925,000 to construct the enhanced gas conditioning facilities that will allow us to help reduce GHG emissions and other harmful air pollution. Construction is estimated to take two years. M1W has completed many leading-edge projects and can deliver the project within the funding schedule and terms. Construction of Phase Two could also lead to the eligibility of renewable energy Investment Tax Credits as allowed in the Inflation Reduction Act for Phase One.

Based on the EPA CPRG goals, the proposed project – enhanced gas conditioning – will meet the following project-specific goals:

1. We aim to achieve significant cumulative GHG reductions of 23,639 tCO<sub>2</sub>e/yr by 2030 and 38,587 tCO<sub>2</sub>e/yr by 2050.
2. Reduce criteria air pollutants (CAPs) and hazardous air pollutants (HAPS) by 20% by 2030 and 50% by 2050.
3. Assess the eligibility of the Investment Tax Credit (ITC) and community investment in capital improvements by September 2024, facilitating necessary changes and establishing clear cost-sharing responsibilities.
4. By the end of 2025, identify and establish at least three potential partnership opportunities that leverage the water-energy nexus, ensuring alignment with our organization's goals and values. The aim is to enhance sustainability practices and maximize resource efficiency.
5. Within the first six months, develop an equitable engagement plan to reach 5,000 community members to ensure alignment of community needs and priorities related to an equitable planning outcome, including economic and climate resilience needs. This strategy will foster meaningful dialogue, collaboration, and participation through diverse outreach initiatives, enhanced community involvement, and support across the project's life.
6. Within the first year, a needs assessment will be conducted to identify suitable and viable alternatives to providing energy to vulnerable communities who face energy crises resulting from natural disasters such as wildfires or flooding.
7. By the end of 2025, engage 75 community-based organizations to develop transparent and effective outreach strategies to disseminate project information, updates, outcomes, and outputs, ensuring accessibility, relevance, and understanding through targeted channels, increasing awareness and adoption within the community.

**Phase 3—Microgrid/Energy Transmission (2022 - 2025):** Phase Three of the Program is being developed in parallel with Phases One and Two. M1W has an executed power purchase agreement with ReGen Monterey, a neighboring solid waste district, to use its landfill gas to electrify M1W's Advanced Water Purification Facility (AWPF). A medium voltage 21kV transmission line from ReGen to our AWPF is under construction, with an estimated completion of December 2025. The connection from ReGen to M1W creates a backbone by which a microgrid will be constructed to electrify and move energy between campuses. Future expansion of the transmission line will allow ReGen to power all our facilities, including the Regional Treatment Plant (RTP) for wastewater treatment and the Salinas Valley Reclamation Project (SVRP) for non-potable water recycling. This phase of work costs \$3.5 million and is funded through a cost share between M1W and ReGen. By purchasing renewable power from our neighbor, M1W anticipates saving several hundred thousand dollars per year compared to commercial power provided by PG&E. In the future, the buildout of the transmission line and microgrid could allow M1W to retire its co-generation engines once they have a useful life, further reducing greenhouse gas emissions by an estimated 3,798 tCO<sub>2</sub>e/yr.

#### **The State of California's Priority Climate Action Plan (PCAP) PCAP**

In partnership with the California Air Resources Board (CARB) and the Association of Monterey Bay Area Governments, M1W contributed to developing the State (CA) PCAP. We conveyed the advantages of enhanced gas conditioning by engaging in several meetings with CARB to discuss the PCAP content and a finalized project form. We emphasized its significance in mitigating GHG emissions. These contributions were later included in the County's submission of information to the State. In addition, we met with CalRecycle, who assisted CARB in developing the PCAP, and discussed how to maximize our current CalRecycle funding through enhanced gas conditioning. Our state senator, John Laird, also advocated for



the proposed project. More specifically, the proposed project – enhanced gas conditioning – relates to the following priority GHG reduction measures in the State of California PCAP.

#### Energy Measure 6: Implement Bioenergy Projects.

According to the latest inventory (CARB, 2023), electricity currently comprises 16% of the State’s GHGs, constituting the third largest sector in terms of carbon pollution. Further, the majority of emissions from the generation of electricity serving California comes from natural gas (Figure C). As the State begins to implement broad-scale additional efforts to reach carbon neutrality by 2045 (SB 100: 100% Clean Energy Bill), as outlined in the 2022 Scoping Plan Update, a clean, affordable, and reliable electricity grid will serve as the backbone of this effort to support deep decarbonization across California’s economy and foster air quality improvements across the State.

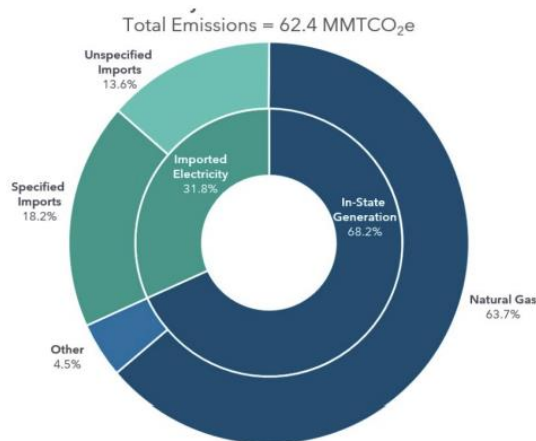


Figure C. Electricity Sector Emissions in 2021

Such critical emissions reductions across several of the State’s sectors depend on an unprecedented energy transition and include the measures listed below. The identified Energy Measures build on California’s past success and continue to develop and deploy affordable renewable and zero-carbon electricity, upgrades to grid capacity, increased energy storage, and bolstering long-term energy planning. They also align with the federal goal to achieve 100% clean electricity by 2035 (DOE, 2023). They can also help provide jobs, economic opportunities, energy security and resiliency, and air quality and health benefits, particularly for low-income and disadvantaged communities.

Energy Measure 6 includes emerging opportunities elevated by local jurisdictions to create renewable energy, including renewable hydrogen from various organic waste sources such as landfill methane (SB 1383: Short-Lived Climate Pollutants Act), woody biomass, yard and agricultural waste, and biosolids. Opportunities that arise from a bold new approach to energy transition could extend to projects that capitalize on any of the practices or may include a combination of them to reduce emissions and achieve more significant co-benefits at a reduced cost. These actions could significantly impact reducing methane emissions, a powerful short-lived climate pollutant.

- Equipment and processes to upgrade landfill gases and/or biogas generated by wastewater treatment plants for energy uses.
- On-site renewable energy and storage for increased energy processing needs.
- Other onsite construction as needed to combine the above operations.

This measure prioritizes technologies or practices that do not expand fossil gas or hydrogen combustion. These projects could also help create jobs and test and scale emerging renewable energy technologies, practices, and markets. All projects could bring these benefits to low-income and disadvantaged communities. Outcomes, benefits, and public engagement efforts from each project could be tracked and documented to help ensure these benefits, share lessons learned, and scale success.

Major implementation milestones of this measure may include outreach to communities to ensure local benefits, site selections, permitting, contracting and coordination with relevant agencies, selecting contractors and making sub-awards, and site construction and equipment installation. Similarly, metrics for tracking success will vary but may include expenditures made, number of equipment installations, jobs created, tons of organic waste utilized, and amount of renewable energy generated.



Enhanced gas conditioning will also meet the following objectives within the Waste, Water, and Sustainable Materials Management Sector of the US Environmental Protection Agency's (EPA's) CPRG Program:

- Reduce organic waste through improved production practices to reduce methane emissions from landfills and wastewater treatment facilities, including gas collection and conditioning for RNG.
- Install renewable energy and energy efficiency measures at wastewater treatment facilities.

Waste Measure 2: Bolster Organics Recycling Infrastructure. Municipal solid waste landfills are California's second-largest source of methane emissions. Because about a third of California's waste stream comprises organic waste, the State must focus on diverting organic waste and improving landfill operations to tackle waste sector emissions from multiple angles. The Global Warming Solutions Act of 2006 (AB 32) tangibly fights global warming by establishing comprehensive programs to reduce GHG emissions from all sources throughout the state, including landfills. Due to the multidecadal time frame required to break down landfilled organic material, the emissions reductions from diverting organic material in one year are realized over several decades. Combined with methane being a powerful GHG and short-lived climate pollutant, near-term action is crucial to avoid locking in future landfill methane emissions.

Although approximately 95% of all waste disposed in the State has been deposited in a landfill that is equipped with a gas collection and control system, as required by California's Landfill Methane Regulation (CARB, n.d.), a portion of the methane still escapes into the atmosphere. Technologies to utilize landfill gas efficiently can contribute to further emission reductions in the energy sector.

These programs were included in the PCAP because they have immediate GHG reduction potential, provide jobs, and protect the environment. Furthermore, these programs directly align with the federal strategies discussed in EPA's Strategies for Methane Mitigation (EPA, 2021)

Waste Measure 2 would enhance organics recycling infrastructure to divert more green materials, food materials, or alternative daily cover from landfills, thereby reducing methane emissions and improving air and water quality. It would also support co-digestion, anaerobic digestion projects, and emerging non-combustion biomass conversion technologies.

This measure could benefit low-income and disadvantaged communities by creating local jobs and targeting hiring in these communities. It could also provide renewable energy and fuel from organic waste, reducing dependence on fossil fuels.

While the implementation of this measure may vary by location, early milestones could include outreach and public workshops, finalization of project details and implementation partners, and ultimate installation of equipment and infrastructure. The success of this measure could be tracked through metrics such as the tons of organic waste diverted from landfills, counts of infrastructure equipment installed by location, funding levels invested, and estimated GHGs reduced or avoided.

Enhanced gas conditioning will also meet the following objectives within the Waste, Water, and Sustainable Materials Management Sector of the US Environmental Protection Agency's (EPA's) CPRG Program:

- Expanded bio-digestion infrastructure to reduce GHG emissions and increase the beneficial use of organic waste.

Successful inclusion of the Monterey Renewable Energy Program in the EPA's CPRG will assist M1W in realizing the full potential of the GHG reduction goals this effort can create. Specifically, funding is being

requested for enhanced gas conditioning facilities, which are critical to the *Program's* success, maximizing GHG reductions and creating beneficial uses biogas produced from organic waste.

Biogas can be purified and upgraded to meet natural gas pipeline quality requirements by achieving methane content and characteristics like fossil-fuel natural gas. After that, it can be used as an equivalent replacement and injected into PG&E's gas grid. However, it is a proven technology and provides the highest greenhouse gas (GHG) emissions reductions with the RNG used in the transportation sector and quantifiable GHG emission reductions by reducing the need for M1W to continue to power the facility with cogeneration units.

M1W will help the region reduce its greenhouse gas footprint and create a more sustainable environment for current and future generations. This innovative approach is a model for using local resources to address regional issues in the interest of local benefits.

b. Demonstration of Funding Need

Under M1W's diligent efforts, grant funding has been received to complete portions of the *Monterey Renewable Energy and Utility Reliability Program*. To date, this includes the O2E Study as part for the Energy Alternative Assessment which determined feasibility of co-digest (U.S. EPA grant) and Phase One of the *Program* which will increase the total amount of biogas produced through anaerobic digestion of organics mixed with wastewater solids (CalRecycle grant). However, funding is needed to condition excess biogas to RNG for beneficial reuse to realize the full extent of the *Program* and possible GHG reductions. The enhanced gas conditioning component has the most significant impact on GHG reductions. It represents the greatest cost for the overall *Program*, with an anticipated total capital investment of approximately \$50 million. With the Energy Alternative Assessment complete and Phase One under construction, our team is actively looking for additional funding sources to complete the *Program*. Specifically for Phase Two of the Program, funding is the last hurdle to implementation.

Under the Inflation Reduction Act of 2022, qualified biogas properties are eligible for an Investment Tax Credit of up to 50% on portions of a project as long as construction has started by December 31, 2024. Federal electricity production tax credits for converting biogas to electricity are also under Section 45 of the Internal Revenue Code. These credits have been extended to include projects that convert biogas into RNG. Specific projects in the EPA's Renewable Identification Number (RIN) market may also be claimed under the Inflation Reduction Act. A qualified biogas property must convert biomass to biogas with 52% or greater methane content by volume and generate electricity or RNG for sale or productive use. Further guidance is anticipated to be released by the IRS.

Based on the EPA summary of the Investment Tax Credit, the Clean Electricity Production Tax Credit and the Clean Electricity Investment Tax Credit will replace the Investment Tax Credit for systems placed in service on or after January 1, 2025. Fuel cells are showing promise in the market and could be used to convert biogas to renewable electricity for the generation of e-RINs in the future. Compared to internal combustion engines, electricity generation using biogas in fuel cells has a much lower carbon intensity.

Biogas upgrading to RNG would be a competitive use of the excess biogas. The revenue generated through the sale of RINs and the Low Carbon Fuel Standard (LCFS) credits could be substantial, with a potential payback period of less than five years, assuming the RNG is used in the transportation industry. This action will directly counterbalance wastewater rates, thereby helping to alleviate the burden of the escalating cost of living in Monterey County, particularly for 61% of the disadvantaged populations identified through the CEJST screening tool within the M1W service area. As an alternative to directly using RNG for transportation, M1W may contract directly with PG&E to off-take the RNG into its natural gas pipeline network. This option provides less revenue but is a reliable revenue stream for a set contract term.

c. Transformative Impact

Based on a recent study initiated by the State Water Resources Control Board, Figure D presents the future potential and scalability of organics conversion (co-digestion) within the state of California. Based on their findings, adequate organic waste is available for co-digestion regardless of proximity to the source. However, *“Based on survey responses, the ability for WWTPs statewide to beneficially use biogas is limited by the existing biogas end-use capacity.”* Co-digestion is a solution to meet State and federal mandates and goals regarding organics diversion and GHG reductions. However, co-digestion can only effectively contribute to bioenergy production and achieve net GHG reductions if viable applications for the biogas generated are available. Co-digestion is commonly the focus of funding opportunities without considering downstream of biogas utilization. EPA CPRG funding for enhanced gas conditioning would directly fill this gap and lead to future transformative impacts.

The *Monterey Renewable Energy and Utility Reliability Program* will be a model other agencies can follow to reduce their municipalities’ carbon footprint and GHG emissions. Especially in the West, where extended periods of drought are predicted, more communities are turning to potable reuse to create local, sustainable water supplies. However, advanced purification for potable water recycling requires significant energy consumption. Once M1W completes the full build-out of its Advanced Water Purification Facility in 2025, our energy demand will increase by 136% compared to 2019, when we only provide wastewater treatment and non-potable reuse services. Yet the Monterey Peninsula community will rely on our water for 51% of its supply due to increasing demand and limitations on historic sources (river water and groundwater).

Processing of organic food waste at wastewater treatment facilities demonstrates the potential of what is possible through the utilization of waste resources to achieve the highest and best use. All the components to convert waste to energy are currently in place, except for the systems needed to connect these facilities to optimize resource utilization. The strategy leverages the current functionality of wastewater treatment systems in a way that can yield renewable energy. The proposed technologies are currently available, although funding is the primary barrier to implementation.

M1W is a leader among wastewater and water recycling agencies in California and is in an excellent position to share this model with other agencies. For example, General Manager Paul Sciuto has presented its renewable energy plans at Singapore Water Week, the Bay Planning Coalition Energy Water Nexus Event, and the California Water Environment Association Technology Seminars. M1W is an active participant in the water sector with membership in 14 local, state, national, and international industry associations. Staff members participate at the Committee and Board levels of the California Association of Sanitation Agencies and the WaterReuse Association, and the team regularly submits abstracts for conference presentations.

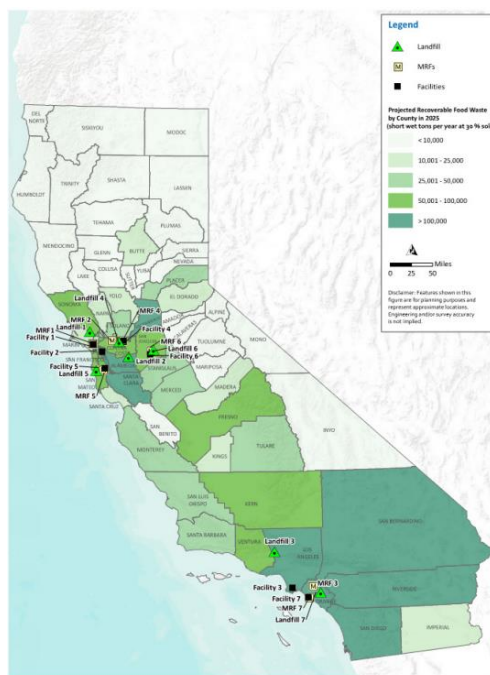


Figure D. Spatial Distribution of Recoverable and Digestible Food Waste by County (2025, projections)

## 2. Impact of GHG Reduction Measures

### a. Magnitude of GHG Reductions from 2025 through 2030

In 2016, California SB 1383 was adopted, which in addition to setting metrics for organics diversions, also requires the reduction of short-lived climate pollutant emissions, including a 40 percent reduction in methane emissions below the 2013 levels statewide by 2030. Because landfills represent 20 percent of the state's methane production, a key strategy to achieve methane reduction is to divert organic waste from landfills to prevent the decomposition that produces methane. By diverting organics to M1W for co-digestion to help meet SB 1383, the immediate GHG reduction targets for the proposed project during 2025-2030 are expected to be 23,639 tCO<sub>2</sub>e/yr. This represents an immediate 14,739 tCO<sub>2</sub>e/yr GHG reduction from organics diversion from landfills plus 8,900 tCO<sub>2</sub>e/yr from gas conditioning facilities once constructed. Avoided landfill emissions are the single most significant contributor to GHG emission reductions. The next most significant GHG emission reduction factor is the subsequent beneficial use of conditioning biogas from co-digestion to produce RNG.

The M1W wastewater treatment plant will be part of the solution to SB 1383 by accepting food waste diverted from landfills and co-digesting it with sewage sludge. The GHG reductions associated with co-digestion include the avoided emissions that would otherwise occur if the food waste had been disposed of in a landfill. By co-digesting diverted food waste in anaerobic digesters, M1W can produce 89% more biogas. The community can benefit from additional biogas through M1W installing gas conditioning equipment that turns biogas into a renewable source of natural gas available onsite or to offset fossil fuel-based natural gas sources in the utility gas distribution system.

Estimation of the GHG emission reduction benefits for biogas production range depending on the use. In this scenario, the highest and best end use is injecting RNG directly into the natural gas distribution system. Direct injection involves connecting to the existing natural gas pipeline, the PG&E utility pipeline that parallels M1W's property line. RNG is transferred from the gas conditioning facility to the utility at an injection station operated by the utility. The injection station is for quality and quantity control and includes the equipment necessary to monitor flow, verify gas quality, and add odorant. PG&E has been contacted to assess the available takeaway capacity in the nearby pipeline and has reported that their pipeline can accommodate the maximum quantity of RNG produced from M1W. Production of RNG allows M1W to offset its fossil fuel-based natural gas requirements. With the planned interconnection, biogas upgraded to RNG could also be beneficially used by others.

California SB 1440, adopted in 2010, authorized the California Public Utilities Commission to adopt biomethane procurement targets for gas utilities. As such, PG&E is now mandated to procure RNG to reduce emissions. The short-term target for PG&E's biomethane procurement is to obtain contracts for 42.34% of 17.6 billion cubic feet (approximately 7.5 billion cubic feet per year) from organic waste (including wood waste) diverted from landfills by 2029. Thus, a viable and compelling pathway exists for biogas conditioning at M1W to produce RNG, which will help meet U.S. EPA CPRG goals, state mandates, and local program goals.

### b. The magnitude of GHG Reductions from 2025 through 2050

Gas conditioning equipment is needed to upgrade biogas from co-digestion to RNG. This would immediately reduce GHGs by an estimated 23,639 metric tons of carbon dioxide equivalent per year, calculated using CalRecycle and EPA's online calculators for organics diversion at 31,000 tons per year of food waste (converted to liquid waste of 51,000 tons per year at less than 15% total solids residual material) sent to co-digestion equal to 14,739 tCO<sub>2</sub>e/yr, in GHG reductions. An additional 703 standard cubic feet per minute (scfm) of biogas will be sent to gas conditioning facilities, resulting in 8,900 tCO<sub>2</sub>e/yr GHG reductions (average, 2023–2050), assuming RNG is to be used in the transportation sector.

Upgrading the biogas to RNG with gas condition equipment represents the most flexible and versatile option. Numerous innovative technologies use RNG, such as the production of green hydrogen in a small methane reforming process, the production of biologically based methane as a feedstock to produce biomass for use in protein-rich animal feed, as well as the manufacturing of a variety of chemicals, including fuels, fertilizers, and plastics. Additional technologies could be added to the *Monterey Renewable Energy and Utility Reliability Program* over time as

the market changes and the RNG upgrading ability could be expanded. The biogas produced by 2050 is predicted to be twice that of 2023, such that equipment could be installed in a two-phase approach to expand system capacity in the future to include landfill gas and biogas from co-digestion (Figure E).

GHG reductions continue to increase over time. 23,639 tCO<sub>2</sub>e/yr is expected between 2025 and 2030, likely 14,739 tCO<sub>2</sub>e/yr right away from organics diversion, followed by 8,900 tCO<sub>2</sub>e/yr once gas conditioning facilities are built, which would be expected within the five-year grant implementation terms. If future measures are enacted to accept landfill gas, a concept actively pursued by M1W in collaboration with the neighboring landfill, M1W could elect to retire its CHP-generating units, bringing the maximum GHG reduction up to 38,587 tCO<sub>2</sub>e/yr.

Towards the end of 2030, the GHG reduction could increase by another 3,798 tCO<sub>2</sub>e/yr by retiring M1W's existing CHP-generating units. The remaining potential for 2050 is increasing as landfill gas is received and conditioned (2,600 scfm in 2025 up to 4,500 scfm in 2050). Landfill gas production increases over time with more material disposed at the landfill such that a linear escalation rate in landfill gas produced results in potential additional GHG reductions of 6,516 tCO<sub>2</sub>e/yr in 2030 and 11,150 tCO<sub>2</sub>e/yr by 2050, which would be added to the existing 14,739 tCO<sub>2</sub>e/yr and achieved by 2030. The total GHG reduction potential of this endeavor is represented in Table 1.

Table 1. Potential Total GHG Reduction

Proposed Measure	GHG Reduction Estimates (tCO <sub>2</sub> e/yr)	Timeframe
Organics Diversion for Co-Digestion	14,739	Immediate
Gas Conditioning for RNG	8,900	2028
Retire CHP units at M1W	3,798	2030
Landfill gas conditioning for RNG	6,516-11,150	2030 - 2050
Total Annual Projections:	33,953 - 38,857	2030 - 2050

#### c. Cost Effectiveness of GHG Reductions

Implementation of the proposed project is calculated to be \$49.925 million. This includes the capital costs of the RNG gas conditioning facilities, injection station, and gas handling equipment at \$47.5 million; construction management at \$2.375 million; and community engagement and outreach at \$50,000. When looking at the short-term impact and cost effectiveness of this funding request, the total emission reductions to be achieved from 2025 – 2030 for this Program will total 115,134 tCO<sub>2</sub>e as detailed in Table 1. The calculation assumes a 6-year operation period of Organics Diversion for Co-Digestion and a 3-year operation period of Gas Conditioning for RNG). The total cost per ton of carbon



Figure E. PG&E gas pipeline near the Agencies and existing interconnections.

dioxide equivalents removed per year would be \$437 per tCO<sub>2</sub>e reduced (\$49.925 million/115,134 tCO<sub>2</sub>e).

For our community, this investment will have a greater fiscal impact. When RNG is injected into the PG&E pipeline (Figure E), it is expected to be sold to another end user as part of the PG&E transportation of customer-owned gas so M1W can claim EPA RINs and LCFS credits. Alternatively, M1W could sell RNG to PG&E as part of their biomethane procurement program (per SB 1440).

With either option, upgrading biogas to RNG would be a competitive use of the excess biogas. The revenue generated through the sale of RINs and the LCFS credits could be substantial, with a potential payback period of less than five years, assuming the RNG is used in the transportation industry. Future savings will help M1W manage rates for wastewater and water recycling services, which, as a public entity, solely include the cost of service and no dividend or shareholder payout. This will directly benefit all ratepayers from substantive fee increases and, most notably, the twenty-five census tracts identified as disadvantaged who face diverse economic and social vulnerabilities.

d. Documentation of GHG Reduction Assumptions  
See Technical Appendix.

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

#### a. Expected Outputs and Outcomes

Ultimately, biogas collected from M1W is expected to increase from 371 scfm currently to 4,500 scfm by 2050. This gas conditioning system is scalable and can be installed in phases to condition digester gas now, with the possibility of the neighboring landfill utilizing it in the future. Its function is to separate and remove GHGs and biogas commodities (CO<sub>2</sub>, N<sub>2</sub>, O<sub>2</sub>, siloxanes, H<sub>2</sub>S, VOC's and water) to meet RNG specifications. The system upgrades the biogas by efficiently removing CO<sub>2</sub>, water vapor, and other trace gases to produce clean, dry, pipeline-quality RNG. Gas conditioning systems will unlock a cornucopia of options for power generation systems and provide a universal RNG fuel resource to be used onsite or available to the gas grid. RNG also allows for simple energy storage, whereas equivalent electrical battery energy storage systems (BESS) are complex, require natural resources to manufacture, store energy for a limited duration, and have a finite life expectancy. Expected Outputs and Outcomes by goal are represented in Table 2.

Table 2. Expected Outputs and Outcomes

<b>Goal 1:</b> Achieve significant cumulative GHG reductions of 23,639 tCO <sub>2</sub> e/yr by 2030 and 38,587 tCO <sub>2</sub> e/yr by 2050. <b>Goal 2:</b> Reduce criteria air pollutants (CAPs) and hazardous air pollutants (HAPs) by 20% by 2030 and 50% by 2050.	
<i>Outputs:</i> Installation of gas conditioning equipment; Personnel hired (e.g. consultant, construction, trades) to implement GHG reduction measures	<i>Outcomes:</i> Reduced exposure to hazardous air pollution or unhealthy ambient air quality in low-income and disadvantaged communities; Determine long-term viability of co-gen engines; Number of high-quality jobs created throughout the applicant's jurisdiction and in low-income and disadvantaged communities
<b>Goal 3:</b> Assess the eligibility of the Investment Tax Credit and community investment for capital improvements, facilitating necessary changes and establishing clear cost-sharing responsibilities by September 2024.	
<i>Outputs:</i> Project eligibility analysis; Technical memorandum(s) for each of the eligible tax credits	<i>Outcomes:</i> Determine statutory eligibility for Section 48 Investment Tax Credit

<b>Goal 4:</b> By the end of 2025, identify and establish at least three potential partnership opportunities with organizations to leverage the water-energy nexus, ensuring alignment with our organization's goals and values, with the aim of enhancing sustainability practices and maximizing resource efficiency.	
<i>Outputs:</i> Long-term feedstock management services agreement; RNG off take agreements; Submission of abstracts to conferences; Draft manuscripts	<i>Outcomes:</i> Increase biogas production; purchase of RNG; Replication of transformative model developed by the proposed project
<b>Goal 5:</b> Within the first six months, develop an equitable engagement plan to reach 5,000 community members to ensure alignment of community needs and priorities related to an equitable planning outcome, including economic and climate resilience needs. <b>Goal 6:</b> Within the first year, a needs assessment will be conducted to identify suitable and viable alternatives to providing energy to vulnerable communities who face energy crises resulting from natural disasters such as wildfires or flooding. <b>Goal 7:</b> By the end of 2025, engage 75 community-based organizations to develop transparent and effective outreach strategies to disseminate project information, updates, outcomes, and outputs.	
<i>Outputs:</i> Workforce development training; Final Community Engagement and Outreach Plans; Community workshops	<i>Outcomes:</i> Increased resilience to climate change impacts as measured by the number of buildings or Census tracts that meet certain resiliency standards
<i>Additional Grant Compliance Outputs:</i> EPA required progress reports; EPA required final report	

b. Performance Measures and Plan

M1W will be tracking progress made towards RNG closely as it is directly related to the project's financial viability. The RNG produced will qualify for RIN and LCFS credits, which quantify the amount of RNG to be sold on the market to reduce GHG emissions. Furthermore, M1W already monitors and tracks biogas production quantities. M1W is currently and will continue to use digester gas flow rates to track and evaluate performance with its enhanced co-digestion process.

Also, as part of our permit to operate our facility, we must report on the quantity and quality of our biogas and emissions using EPA-approved testing methods. We produce daily, monthly, and annual reports. A monthly chromatography report based on an air sample taken at the anaerobic digesters uses the EPA-approved testing method ASTM D 1945/D 3580 to quantify emissions. Our annual emissions profiles establish the thresholds for our emissions permits. We diligently submit comprehensive data reports regarding our green energy production and emissions to various entities and regulators to ensure compliance with permits and agreements. These include PG&E (in relation to power purchase agreements for energy sold to the grid), the California Energy Commission, the U.S. Energy Information Administration, the U.S. EPA, the Monterey Bay Air Resources District, and the California Air Resources Board (CARB, which led the PCAP for Phase One of the grant). Furthermore, we furnish CARB with an Annual Toxin Report encompassing tests for 61 constituents.

Moreover, the air emissions currently monitored under our facility's operating permit will serve as the foundation for direct GHG reductions. These reductions are specific and quantifiable and align with our goal of powering M1W's facilities using a portfolio of renewable energy sources.

c. Authorities, Implementation Timeline, and Milestones

**Authorities**

M1W has the authority to implement the proposed project. Our Board will review the contracts needed to complete the work (see letter of commitment from our Board Chair). We will be responsible for soliciting proposals from professional service providers and executing construction contracts. M1W will lead the project in installing gas conditioning facilities with support from expert contractors. Permitting



as described in this application will require additional regulatory entities like the Monterey Bay Air Resources District (MBARD). M1W has a dedicated team member who coordinates with our permitting bodies to ensure compliance and permit new projects as needed.

### Timeline

The proposed project has six tasks across four years (Table 3). Once M1W receives the notice of funding, it will finance the completion of Task One (detailed design). CPRG grant funding will support outreach and dissemination during this time. We anticipate construction beginning in early 2026. Most of the requested funding will support Task Three of the project (construction). The project will be completed within the funding window, and based on similar experience, M1W staff are confident in timely completion. The project implementation is anticipated to take four years, providing a contingency to ensure completion within the EPA CPRG five-year funding period. The timeline assumes grant notification in July 2024, with the funding agreement anticipated by October 2024. M1W assumes EPA-funded tasks would begin immediately upon execution of the grant agreement.

Table 3. Timeline for enhanced gas conditioning.

Tasks	Year and Quarter															
	2024		2025				2026				2027				2028	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Task 1: Detailed Design (M1W-funded)</b>																
1.1 Prelim Design (30%)																
1.2 Design Package (60%)																
1.3 Design Package (90%)																
1.4 Final Bid Documents																
<b>Task 2: Bid/Award</b>																
2.1 Construction Contract																
<b>Task 3: Construction</b>																
3.1 Gas conditioning facilities																
3.2 Equipment purchase																
3.3 Gas injection station																
3.4 Commissioning																
<b>Task 4: Post-Construction</b>																
4.1 Final Acceptance																
<b>Task 5: Outreach</b>																
5.1 Needs assessment																
5.2 Energy Alternatives																
5.3 Engagement Plan																
5.4 Communication Plan																
5.5 Community Workshops																
<b>Task 6: Dissemination</b>																
6.1 EPA Status Report																
6.2 Conference Presentations																
6.3 Professional Meetings																
6.4 Community Presentations																

### Milestones

See the budget narrative for an additional description of each task and accompanying milestone. A detailed look at the implementation timeline for EPA-funded tasks includes:

### *Task 2: Bid/Award*

- Construction Contract. The bidding process will include five key steps: bid solicitation, bid submission, bid selection, contract formation, and project delivery. All contracts awarded will follow competitive procurement standards in 2 CFR 200.317 – 2 CFR 200.327.

Risks and Mitigation Plans. M1W proposes a traditional public project delivery method with minimal risks. No mitigation plans are required.

### *Task 3: Construction*

- Purchase of Equipment. The equipment required to complete the gas conditioning and injection facilities will be purchased in accordance with the approved shop drawings.
- Gas Conditioning Facilities. Systems comprise a scrubber, gas heater, pressure control, filtration, and temporary gas storage for fuel switching (Figure F). The work includes constructing the gas conditioning facilities, including equipment installation, mobilization and demobilization, labor, testing, and start-up.
- Gas Injection Station. Construction of gas injection station, including labor, testing, and start-up.
- Commissioning. Functional test and check of all project components. Validate the performance and operational capabilities of all installed project equipment.



Figure F. Example Gas Conditioning Facility

Risks and Plans for Mitigating. The risks are minimal and mostly associated with unforeseen delays. Many projects are delayed by long lead times for material procurement. This may be mitigated by pre-purchasing the equipment before advertising the project for construction. One of the biggest challenges throughout construction is to keep all essential systems operational. Detailed sequencing and contingency plans must be developed to prevent service interruptions.

### *Task 4: Post-Construction*

- Final Acceptance. Project close-out activities include, but are not limited to, closing the construction contract (e.g., coordinating with the contractor on fulfilling responsibilities such as submittal of as-built plans, completion of punch list items, site clean-up, etc.) and completing the report required by funding agencies.

### *Task 5: Outreach*

- Needs Assessment. We will conduct a needs assessment in partnership with the United Way (see letter of commitment) to identify suitable and viable alternatives to providing energy to vulnerable communities who face energy crises resulting from natural disasters such as wildfires or flooding. From the data collected, we will summarize the results, develop and prioritize strategies for improvement, and create a community action plan.
- Energy Alternatives. In partnership with the United Way (see letter of commitment), we will work with our community members to identify temporary power needs during critical emergencies or hazards.

- Engagement Plan. In the early stages of the project, we will develop an engagement plan to outline a set of specific outreach and public participation strategies with assigned roles and a timeline for new or reoccurring projects that will impact the community.
- Communication Outreach Plan. The written plan will describe who we need to communicate our improvement work to, the purpose of communication with our community, the communication method we will use, how often we will communicate, and who will communicate with the audiences identified.
- Community Workshops. These workshops will include face-to-face gatherings where project representatives, experts, and community members come together to exchange ideas, provide feedback, and collaborate on various aspects of the project.

#### *Task 6: Dissemination*

- EPA CPRG Status Report. At the end of the grant period, M1W will complete and submit the required status report.
- Conference Presentations. M1W's General Manager, Director of Engineering, or future Renewable Energy Manager will present this project at professional conferences.
- Professional Meetings. M1W's General Manager, Director of Engineering, or future Renewable Energy Manager will present this project at professional meetings.
- Community Presentations. Information dissemination is essential for empowering and improving the quality of life of those living in our communities. Effective dissemination ensures the efficient distribution of new knowledge, raises awareness and encourages collaboration. We will regularly engage with community members through identified outlets in Task Five to ensure the proposed project's visibility.

## **4. Low-Income and Disadvantaged Communities**

### **a. Community Benefits**

Monterey County, California is home to 439,000 people. M1W serves multiple communities (Castroville, Del Rey Oaks, Marina, Monterey, Moss Landing, Pacific Grove, Salinas, Sand City, and Seaside) facing significant burdens, as identified by the U.S. Climate and Economic Justice Screening Tool (CEJST). In the agency's service area, twenty-five census tracts have been identified as disadvantaged, representing 61% of Monterey County's disadvantaged population (see CEJST attachment). Common challenges in these areas include workforce development, legacy pollution related to proximity to Risk Management Plan (RMP) facilities, underground storage tanks and releases, housing, and income (Table 4).

Workforce Development. Monterey County residents have a workforce participation rate of 60.8% compared to the national average of 63.2%, yet only 24% have a bachelor's degree, compared to the national average of 34.3%. As of 2024, Monterey County's unemployment rate was 11.4%, surpassing California (5.35%) and the U.S. (3.9%). Unemployment can lead to feelings of depression, anxiety, low self-esteem, demoralization, worry, and physical pain. Unemployed individuals tend to suffer more from stress-related illnesses such as high blood pressure, stroke, heart attack, heart disease, and arthritis. From an economic standpoint, unemployment adversely affects disposable income, erodes purchasing power, and reduces an economy's output. The unemployment rate for individuals without a high school diploma (10%) is higher than for individuals who have completed high school (6%) and/or some college (5%). At the end of the 2021-2022 school year, Monterey County's high school graduation rate of 60.7% trails behind California (87.4%) and the U.S. (79%). Fourteen of the twenty-five census tracts identified as disadvantaged have low high school graduation rates (Table 4). The proposed project will create well-paying construction jobs that do not require a high school diploma. As part of our needs assessment

with the United Way (see letter of commitment), we will investigate the support needed to improve high school graduation rates and training programs to prepare individuals for positions at M1W.

The impact the proposed project will have on workforce development for the population described will be measured by:

1. The completion of a needs assessment related to workforce readiness. Based on the needs assessment, we will develop engagement and outreach plans to improve workforce readiness among community members.

*Legacy pollution related to proximity to Risk Management Plan (RMP) facilities.* Disadvantage populations disproportionately live within proximity to RMP facilities. Black, indigenous, and other people of color (BIPOC) make up 50% of those living within one mile of RMP facilities, while 42% are identified as low-income. Sixteen of the twenty-five census tracts identified as disadvantaged live near an RMP facility. Communities living near these facilities are most at risk of exposure in the event of an accidental chemical release (Richards, 2022). Many adverse health effects are associated with residing near RMP sites. The EPA estimates that about 150 “reportable” incidents of unplanned chemical releases occur each year at RMP facilities, separate from the daily toxic emissions allowed under most operating permits (CDC ATSDR, 2023). The chemical release and explosion incidents result in direct deaths, injuries, increased risk of cancer, and respiratory toxic air pollution (CDC ATSDR, 2023). The proposed project will reduce GHG emissions, CAPs, and HAPs and improve the health of these communities. Clean energy generation from the proposed project will also reduce future RMP facilities.

The impact the proposed project will have on GHG emissions, CAPs, and HAPs for the population described will be measured by:

1. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588, 1987, Connelly), enacted in 1987, established reporting requirements. We comply with the Act by reporting to CARB (criteria and toxins). The Act requires stationary sources to report the types and quantities of certain substances routinely released into the air.
2. Reductions in CAPs and HAPs will be assessed via internal tracking methods and sampling to meet the Air Toxics “Hot Spots” Information and Assessment Act requirements.

*Underground storage tanks and releases.* These sites are responsible for handling hazardous wastes such as manufacturing by-products, cleaning fluids, or pesticides throughout the process of collection, transfer, and, ultimately, disposal. Volatile substances produced by waste can potentially aerosolize or

Table 4. Challenges faced by disadvantaged populations identified by U.S. CEJST

<sup>1</sup> workforce development, <sup>2</sup> proximity to risk management plan facilities, <sup>3</sup> underground storage tank and release, <sup>4</sup> housing, <sup>5</sup> income.					
Census Code	1	2	3	4	5
06053000101					
06053000200					
06053000400					
06053000501					
06053000502					
06053000600					
06053000701					
06053000702					
06053000800					
06053000900					
06053001300					
06053001700					
06053001801					
06053001802					
06053010306					
06053010400					
06053010505					
06053010506					
06053010604					
06053010605					
06053010606					
06053010607					
06053013700					
06053014202					
06053014601					

seep into soil and water, posing risks of vapor intrusion or groundwater contamination (Johnston & MacDonald Gibson, 2015). Living in proximity to hazardous waste sites is linked to increased rates of hospitalizations for diseases such as stroke, diabetes, and coronary heart disease (Kouznetsova et al., 2007; Sergeev & Carpenter, 2005; Shcherbatykh et al., 2005). Compared to the U.S. and the state of California, Monterey County residents experience similar rates of death due to stroke (34.5% vs. 37.8% and 37.6%). However, residents of Salinas, the largest city in the M1W service area (thirteen of twenty-five census tracts identified as disadvantaged are in Salinas), suffer from a stroke at a rate almost twice that of their counterparts in South County (2.4%), Monterey Peninsula (2.4%), and North County (2.4%). Similar trends are observed in rates of diabetes. The prevalence of diabetes in Salinas (14.9%) is higher than in South County (6.8%), Monterey Peninsula (9.9%), and North County (7.7%). Six of the twenty-five census tracts identified as disadvantaged live near underground storage tanks and release. The proposed project will reduce GHG emissions, CAPs, and HAPs and improve the health of these communities. Clean energy generation from the proposed project will also reduce future underground storage tanks and subsequent releases.

The impact the proposed project will have on GHG emissions, CAPs, and HAPs for the population described will be measured by:

1. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly), enacted in 1987, established reporting requirements. We comply with the Act by reporting to CARB (criteria and toxins). The Act requires stationary sources to report the types and quantities of certain substances routinely released into the air.
2. Reductions in CAPs and HAPs will be assessed via internal tracking methods and sampling to meet the Air Toxics "Hot Spots" Information and Assessment Act requirements.

*Housing.* The median house value (of owner-occupied units) in Monterey County is \$516,600, which is higher than the State (\$505,000) and U.S. (\$217,500) values. Within the county, 49% of housing units are renter-occupied compared to the State (45.2%) and U.S. (36%). Salinas and Monterey County are listed as some of the least affordable areas to live in the United States – per the 2019 Harvard State of the Nation's Housing Study, it is often reported that many migrants or domestic workers in the area pack several families into one or two-bedroom apartments just to keep costs low. A Monterey County Needs Assessment reported that housing, including housing cost, affordable housing availability, and homelessness, was the top area needing improvement in the county (cited by 59% of respondents). The proposed project will lead to energy security for M1W's drought-resilient water reuse project, helping lift a moratorium on water connections and thus impacting affordable housing development, a need amongst the most vulnerable. The lack of affordable housing impacts eight of the twenty-five census tracts identified as disadvantaged (Table 4).

The impact the proposed project will have on affordable housing for the population described will be measured by:

1. The lifting of the moratorium by the State as our water supply increases and is sustainable and reliable.
2. Each municipality will track the number of affordable housing units under California's Housing Element Law.

*Income.* The median household income in Monterey County (\$71,015) is lower than the State median (\$75,235) but higher than the U.S. median of \$62,843. However, Monterey County residents experience income disparities, as seen in fifteen of the twenty-five disadvantaged census tracts (Table 4). The 2023 federal poverty level (FPL) annual income is \$30,000 for a family of four. In Monterey County, over 12% of residents earn income at or below the FPL. The poverty rate does not affect residents and households equally; people of color experience poverty at a higher rate (13.5% African American, 15% Hispanic, 22%

Hispanic children < age of 4) than their white counterparts. The actual cost of living is much higher than the FPL – especially in California. Residents living at or below twice the FPL still do not earn enough for basic needs. In Monterey County, over 29% of residents live at or below 185% of FPL and struggle financially but do not qualify for many federal benefit programs. Causes of poverty include a high cost of living, shortage of affordable housing, an economy based on low-wage, low-skill jobs, and low levels of educational attainment. People living in poverty disproportionately experienced job loss, exposure, and economic impacts due to severe storms and flooding. The proposed project will immediately create high-quality and well-paying jobs in the construction industry for pipe fitters, electricians, and other skilled technical trades over the five-year funding period. In the long term, M1W anticipates adding two full-time positions – that will not require a college degree – with six-figure earning potential (plus full benefits) to meet the needs of the new equipment installed and subsequent processes. Reducing GHG emissions, CAPs, and HAPs will ultimately impact the changing climate and extreme adverse weather events.

The impact the proposed project will have on the income of the population described will be measured by:

1. A third-party consultant will conduct a labor compliance assessment, resulting in a report collecting information on all employees on the site, quantifying the number of workers, and verifying that employees are being compensated appropriately.
2. The number of new positions created and the demographics of the individuals who fill those positions will be collected as part of M1W's hiring process.

b. Community Engagement

M1W is a public entity with a transparent and open process for sharing project information and receiving public input. M1W works with a range of local organizations, nonprofits, business associations, and regulatory bodies to present routine updates on organizational affairs, including this Project and the benefits it will create for the community.

Community engagement is essential for building vibrant, resilient, and inclusive communities where individuals feel empowered by actively participating in shaping their future. Inclusivity fosters a sense of belonging and empowerment among community members, especially those who are often marginalized or underrepresented. Although the proposed enhanced gas conditioning project does not lend itself to community input to select needed technology, we are passionate about involving community members in identifying economic and climate resilience needs, discussing suitable and viable solutions to energy needs during natural disasters, and developing inclusive dissemination strategies and messaging.

To meet the previously outlined goals focused on community engagement (goals five, six, and seven) we plan on completing the following activities:

- Conduct a needs assessment, in partnership with the United Way (see letter of commitment) to identify suitable and viable alternatives to providing energy to vulnerable communities who face energy crises resulting from natural disasters such as wildfires or flooding. We will (1) identify a community team, (2) describe the scope of the assessment, (3) determine the questions to ask, (4) select sites, (5) determine data collection methods or sources, and (6) identify critical informants. From the data collected, we will summarize the results, develop and prioritize strategies for improvement, and create a community action plan.
- Conduct community workshops to serve as interactive platforms designed to actively engage the public in project initiatives. During these workshops, attendees will participate in discussions, presentations, hands-on activities, and group exercises aimed at fostering understanding,

generating ideas, and soliciting input. Workshops will cover a range of topics related to the project, including its objectives, scope, potential impacts, and proposed outcomes.

- Develop a transparent and effective outreach strategy, in partnership with the United Way, to disseminate project information, updates, outcomes, and outputs will be an essential and meaningful piece of the proposed project. Monterey County has a diverse population, so M1W is mindful of linguistic and medium diversity. Presentations get coupled with social media and other multi-media outlets to ensure broad conversation and feedback can be collected. Most customer communications are offered in English and Spanish, and bi-lingual Spanish support is also available on the M1W website, through the M1W customer service team, and during public meetings for greater inclusion in the public process.
- Participate in advisory committees and ready-to-work programs at our local community colleges. To improve students' readiness for the workforce, Monterey Peninsula College and Hartnell College (State Designated Hispanic-Serving Institutions) are initiating collaborations with local employers. These partnerships aim to incorporate industry expertise into workforce development programs. For some, this means attending a four-year university and receiving a bachelor's degree. However, for others, that means preparing to work right after community college. More specifically, M1W looks to join the "Ready to Work Advisory Board" where community members meet at least annually to provide information about labor market needs and changes, industry standards and practices, and provide feedback to the program by reviewing curriculum, student learning outcomes, and student internships in related occupations.
- Provide input on skills and training needed to succeed in the water industry for local colleges' workforce needs surveys.
- Collaborate with our local State University – Cal State Monterey Bay – located five miles from M1W on shared interests in organics diversion and GHG emission reductions. There is an opportunity to share knowledge, strategies, partnerships, etc.

Community engagement brings together individuals with diverse backgrounds, experiences, and expertise. This diversity of perspectives often leads to more creative problem-solving and innovative solutions to complex challenges. Meaningful community engagement builds social capital by strengthening relationships, networks, and bonds within the community. As a result, our community will become more resilient and better equipped to address future challenges.

## **5. Job Quality**

The proposed project will immediately create high-quality and well-paying jobs in the construction industry for pipe fitters, electricians, and other skilled technical trades over the five-year grant period. M1W uses local contractors when feasible. A Skilled and Trained Workforce requirement per PCC 2600-2602 will be enforced during construction. Long-term job creation will be well-paid operation and maintenance technicians assigned to the gas conditioning system. For example, a Cogeneration Specialist I/II position will have an annual salary of \$90,000 - \$126,000 plus full benefits. An individual would be eligible for this position with an equivalent to completing twelfth grade supplemented by specialized coursework in mechanical, electrical, and electronic maintenance and repair. Beneficial use of the RNG in the transportation, technology, and utility industries is also expected to create ancillary jobs. The agency prioritizes employing the local workforce, and efforts will be made to ensure project implementation (e.g., construction) benefits the economic development area (EDA) and disadvantaged



communities (DAC). M1W will follow an AB 1550 preferential hiring policy, prioritizing residents surrounding AB 1550 communities.

## 6. Programmatic Capability and Past Performance

### a. Past Performance

The M1W team is highly competent and can successfully implement and operate the *Monterey Renewable Energy and Utility Reliability Program—enhanced gas conditioning*. As essential public works professionals, team members have vast programmatic and technical knowledge and experience implementing large capital projects. M1W has extensive experience managing grants for collaborative projects. Table 5 describes relevant recent examples.

Table 5. Recent grant funding by project.

Agency	Project	Date	Amount	Outcome(s)
U.S. Environmental Protection Agency	SCADA and Cybersecurity	2024-2026	\$1,200,000	Strengthening our digital assets against external threats.
U.S. Bureau of Reclamation	Pure Water Monterey	2023-2025	\$10,316,822	Construct the Pure Water Monterey Project – potable reuse project.
U.S. Environmental Protection Agency	Coral Street Pump Station Electrical Relocation Project	2023-2025	\$400,000	Relocate electrical equipment away from storm surges and sea level rise.
California Department of Resources Recycling and Recovery (CalRecycle) (Agreement: COD1-21-0022)	Co-Digestion Grant Program	2022-2025	\$4,218,900	Implement enhancements to anaerobic digesters for co-digestion.
U.S. Environmental Protection Agency (Agreement: 98T37201)	Organics to Energy Co-Digestion Feasibility Study	2022-2024	\$169,054	Determine viable co-digestion processes.
CA State Water Resources Control Board (Agreement: D16-01033)	Expanded Pure Water Monterey Project	2017-2022	\$15,000,000	Expanded the Pure Water Monterey Project – potable reuse project.
U.S. Bureau of Reclamation (Agreement: R20AP10344)	Pure Water Monterey	2018-2020	\$19,598,985	Construct a critical potable reuse project.

### b. Reporting Requirements

M1W has successfully worked with the Bureau of Reclamation, State Water Control Board, U.S. EPA, and other Federal and California agency staff to ensure compliance in meeting reporting requirements from the granting agencies. M1W has a dedicated Grants Administrator (Yohana Vargas) on staff to effectively manage all contracts, agreements, and reporting documents according to funding requirements. M1W provides quarterly reports detailing all project activity, including construction progress, milestones achieved, labor and environmental compliance, expenditures, and any challenges. All funding reports, including the Project Completion, Final Project, and Fiscal Sustainability Reports, have been submitted on time. A selection of examples is detailed in Table 6.

Table 6. Description of reports completed for recent grant funded projects.

<b>California Department of Resources Recycling and Recovery (CalRecycle) (Agreement: COD1-21-0022) - Co-Digestion Grant Program (\$4,218,900)</b>
From 2022 – present, M1W has provided four semi-annual reports detailing all project activity, including construction progress, milestones achieved, labor and environmental compliance, expenditures, and any challenges. All reports have been submitted on time, including the Project performance tracker documenting GHG reductions. Construction completion is set for November 2024 at which time M1W plans to submit a Final Project Report. The Project Performance Tracker will continue to be submitted for an additional 12 months per grant requirements.
<b>U.S. Environmental Protection Agency (Agreement: 98T37201) - Organics to Energy Co-Digestion Feasibility Study (\$169,054)</b>
From 2022-present, M1W provided five trimestral reports detailing all project activity, milestones achieved, labor and compliance, expenditures, and any challenges. All reports were submitted on time, including the required Quality Management Plan, Quality Assurance Project Plan, and Federal Financial Reports. M1W is currently working on the Final Completion Report for this grant.
<b>CA State Water Resources Control Board (Agreement: D16-01033) - Pure Water Monterey Project (\$15,000,000)</b>
From 2017-2022, M1W provided 47 quarterly reports, including one for each project component, detailing all project activity, e.g., construction progress, milestones achieved, labor and environmental compliance, expenditures, and any challenges. All reports, including the Project Completion, Final Project Report, and Fiscal Sustainability Report, were submitted on time.
<b>U.S. Bureau of Reclamation (Agreement: R20AP10344) - Pure Water Monterey (\$19,598,985)</b>
From 2018-2020, M1W provided semi-annual reports detailing all project activity, including construction progress, milestones achieved, labor and environmental compliance, expenditures, and any challenges. All reports including the Project Completion, Final Project Report, and Federal Financial Reports, were submitted on time.
<b>California Prop 1 Small Community Wastewater Grant (Agreement: D16-04029) – Connect farmworker housing complex to the regional sewer system (\$2,280,480)</b>
From 2017-2019, M1W provided eight quarterly reports detailing all project activity, including construction progress, milestones achieved, labor and environmental compliance, expenditures, and any challenges. All reports were submitted on time, including the Project Completion, Final Project, and Fiscal Sustainability Reports in July 2019.

c. Staff Expertise

M1W manages and completes complex public works projects to maintain and operate our infrastructure. Our Board adopts a Capital Budget each year to fund critical asset improvements. M1W manages an annual capital budget of approximately \$27 million. To ensure fair purchasing and procurement decisions, M1W has a board-adopted Procurement Policy. For the proposed project, staff will follow the policy's responsive process when selecting consultants for programmatic tasks. A project coding system will also be utilized to accurately account for staff time and expenditures for reimbursement. To further financial transparency, team members will use their experience to ensure proper public procedures are followed, including clearly providing the public with opportunities to provide input on the proposed project and comment on proposed expenditures and contracts.

No concerns have been raised to date by the local community as relevant to the proposed project, its components, or its general concept/execution. The project will provide significant environmental, waste management, and community benefits and is generally viewed as a benefit to the community. It will reduce GHG emissions, decrease our reliance on the local power grid, increase utility reliability of essential wastewater and water recycling services, improve the health of our communities, and create an opportunity for market transformation. M1W will be responsible for implementation and grant

management, including adherence to funding and reporting requirements and timely completion of all deliverables.

The following team members will be integral to the proposed project:

- Matt Thompson, P.E. (Director of Engineering). Matt brings over two decades of expertise in civil engineering within the wastewater/recycled water sector. He leads the development efforts for both the Renewable Energy Project and the Pure Water Monterey Project (Funding Sources: Bureau of Reclamation, CA State Water Resources Control Board). Matt will assume responsibility for overseeing all phases of the proposed project – enhanced gas conditioning – to guarantee its successful execution.
- Jennifer Gonzalez, P.E. (Capital Improvement Project Manager). Jennifer has over 25 years of experience in civil engineering and the management of public works projects. She strategically plans and prepares for needed and future capital improvements of M1W assets. Currently, she oversees Phase One of the Program, the co-digestion project (CalRecycle) construction. Jennifer will manage the day-to-day construction and compliance activities for the proposed project.
- Yohana Vargas (Grants/Management Administrator). Yohana brings an analytical and organizational skillset to carefully managing M1W’s funding opportunities. She has over 20 years of experience in finance and policy, including executing contracts and ensuring the timely submission of funding reports. For the proposed project, she will ensure that the execution meets all federal and EPA funding requirements, e.g., funding contracts and reporting deadlines.
- Sarah Stevens (Environmental & Regulatory Compliance Supervisor). Sarah has over seven years of experience in environmental and regulatory compliance, overseeing the development and implementation of programs to ensure compliance in all resource areas, including air quality. She is responsible for maintaining emissions inventories, coordinating source testing for M1W’s existing cogeneration facilities, and implementing M1W’s Federal Title V program. For the proposed project, Sarah will support the selection and direction of qualified firms to assist with permitting and establishing compliance programs.
- Rachel Gaudoin (Communications & Federal Advocacy Lead). Rachel works closely with engineers and operators to “translate” technical information to help the community better understand the Agency’s services. She is also the Federal Advocacy Lead responsible for developing and executing a successful federal legislative and government advocacy program. Before joining M1W in 2017, she served eight years in nonprofit communications, emphasizing educational outreach. Her experience includes print and digital communications, graphic design, and strategic relationship building. Rachel will lead community outreach efforts described in this application.

## **7. Budget and Timely Expenditure of Grant Funds**

### **a. Budget Detail**

The EPA has set a clear precedent for supporting the *Monterey Renewable Energy and Utility Reliability Program* by awarding funding for the Organics to Energy Co-Digestion Feasibility Study (O2E Study), which has recommended implementing future measures. A recommended measure included in the study is installing a gas conditioning system to produce RNG from the biogas to ensure productive, beneficial use. The feasibility study has identified that the existing natural gas utility piping serving M1W has ample capacity to accept all the RNG M1W, and future partners can produce at any time of the year.

This proposal requests \$49.925 million (Table 7) to support the implementation of the second phase of our Monterey Renewable Energy and Utility Reliability Program – enhanced gas conditioning. M1W will

fund the remaining costs as detailed in the cost breakdown by task in the Budget Narrative Attachment. The system has undergone an economic analysis showing that energy savings for the project will result in a payback period of five years based on the assumptions used for energy use and savings, natural gas use, and biogas production. In addition to immediate GHG reductions, this will directly benefit the M1W ratepayers who face high housing costs compared to state and national averages but lower earning capacity and higher unemployment.

M1W has demonstrated fiscal responsibility in using and reporting to the U.S. EPA on the Anaerobic Co-Digestion Cooperative Agreement used to fund the O2E Study and successfully achieving the project timelines in the grant. Continued U.S. EPA funding will advance the progression of the *Monterey Renewable Energy and Utility Reliability Program* to implementation for the recommended measures. See the attached budget narrative for specific details.

Table 7. Enhanced Gas Conditioning Project Budget						
Cost type	Category	Year 1	Year 2	Year 3	Year 4	Total
<b>Direct Costs</b>	<b>Contractual</b>					
	Contractor to perform the construction of the Gas Conditioning Facilities for 24 months	\$0	\$11,875,000	\$23,750,000	\$11,875,000	\$47,500,000
	Contract to perform Construction Management Services for the construction of the Gas Conditioning Facilities over 24 months	\$0	\$593,750	\$1,187,500	\$593,750	\$2,375,000
	<b>TOTAL CONTRACUTAL</b>	<b>\$0</b>	<b>\$12,468,750</b>	<b>\$24,937,500</b>	<b>\$12,468,750</b>	<b>\$49,875,000</b>
	Other					
	Program Outreach	\$15,000	\$15,000	\$10,000	\$10,000	\$50,000
	<b>TOTAL OTHER</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$50,000</b>
	<b>TOTAL DIRECT</b>	<b>\$15,000</b>	<b>\$12,483,750</b>	<b>\$24,947,500</b>	<b>\$12,478,750</b>	<b>\$49,925,000</b>
<b>Total Funding</b>		<b>\$15,000</b>	<b>\$12,483,750</b>	<b>\$24,947,500</b>	<b>\$12,478,750</b>	<b>\$49,925,000</b>

b. Expenditure of Awarded funds

Innovation and developing cooperative, regional solutions are core to M1W's operation philosophy, and funding opportunities like U.S. EPA CPRG directly assist in making this possible. To ensure the Agency's grant activities are carried out as planned, M1W implemented a Grant Administration Policy. M1W monitors grants in several ways, including:

- Monitoring grant activities, no less than monthly, to ensure expenditures are valid.
- Ensuring any reports due are submitted accurately and timely.
- We provide authorization, documentation, special conditions, or language as required by the purchasing division for purchases needed to carry out the grant's requirements.

Each year, M1W prepares a Comprehensive Annual Financial Report, a detailed look at the Agency's financial condition, including an unmodified review by an independent auditor. A report summary is also produced annually, known as the Popular Annual Financial Report. The Agency has two outstanding bonds secured by its wastewater system revenues and an existing State Revolving Fund loan for the

Pure Water Monterey Project. The two bonds are currently rated “Aa3” by Moody’s Investors Services and “A+” by Standard & Poor’s, reflecting M1W’s strong financial management.

c. Reasonableness of Cost

When creating the budget for the proposed project, staff carefully reviewed all grant requirements to ensure alignment with the U.S. EPA CPRG terms. Line items were reviewed for cost eligibility. At the end of the grant term, M1W also recognizes that the project team will produce a case study to share their experiences and climate resiliency solutions.

EPA-funded tasks will occur from January 2025 through June 2028 and are designed to achieve diverse community benefits. Cost estimates for each task represent the total amount required to complete that task. This includes consultant expertise and staff time for the partners, such as the United Way, as needed. Each partner evaluated their associated tasks and responsibilities and provided staffing costs based on commitment, task-specific assignment, and related team member pay rates. This collaborative budgeting practice prioritizes adequate resource allocation across tasks and partners.

Based on project deliverables, feasible financial projections, and grant requirements, the budget allocation will occur as follows:

- Tasks 3-4: Construction: \$49,875,000
- Tasks 5-6: Outreach \$50,000

*Tasks 1-2 are part of the implementation timeline but will be funded by M1W prior to the start of construction.*

As public works professionals, M1W recognizes the importance of accurate budgeting and contingency planning. M1W will fund the costs associated with the remaining tasks outlined in this application. Any professional service contracts awarded under this grant will follow the M1W Procurement Policy. M1W follows all federal laws and regulations in section 2 CFR 200.317 – 2 CFS 200.327.