

**Quality Assurance Project Plan
For
San Diego State University
Center for Community Energy and Environmental Justice
an EPA and DOE-Supported Environmental Justice
Thriving Communities Technical Assistance Center
Region 9
June 2023 - May 2028
Cooperative Agreement # XJ-98T65801-0
EPA Office of Environmental Justice and External
Civil Rights**

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March 21, 2024

Title: QAPP for CCEEJ
Revision No: 1
Revision Date: March 21, 2024
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A2. APPROVALS

The following individuals have approval authority of this QAPP and will also receive a copy of the final, approved QAPP and any subsequent revisions. Sergio Morales, the Quality Assurance Manager for this project, is responsible for maintaining the official approved QAPP.

**Center for Community Energy and Environmental
Justice Executive Director:**

Date:



4/23/2024

**Center for Community Energy and Environmental
Justice Quality Assurance Manager:**

Date:



4/23/2024

USEPA Region 9 Grants Project Officer:

Date:

**USEPA Region 9 Quality Assurance
Manager:**

Date:

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A4. Project Purpose, Problem Definition, and Background

A4.1. Problem Definition and Background

This Quality Assurance (QA) Project Plan has been prepared specifically for the use of secondary environmental data/information (that were originally collected for a different purpose) by the Center for Community Energy and Environmental Justice (CCEEJ) for the purpose of providing technical assistance related to environmental and energy justice for communities in EPA Region 9. The Center for Community Energy and Environmental Justice is part of the Federal Interagency Thriving Communities Network and delivers on the Biden-Harris Administration's Justice40 Initiative to ensure that 40% of the benefits of certain federal investments flow to disadvantaged communities. This part of the QA project plan describes how the project will be managed, organized and implemented.

There are no other QA planning documents that have relevant requirements for this QAPP.

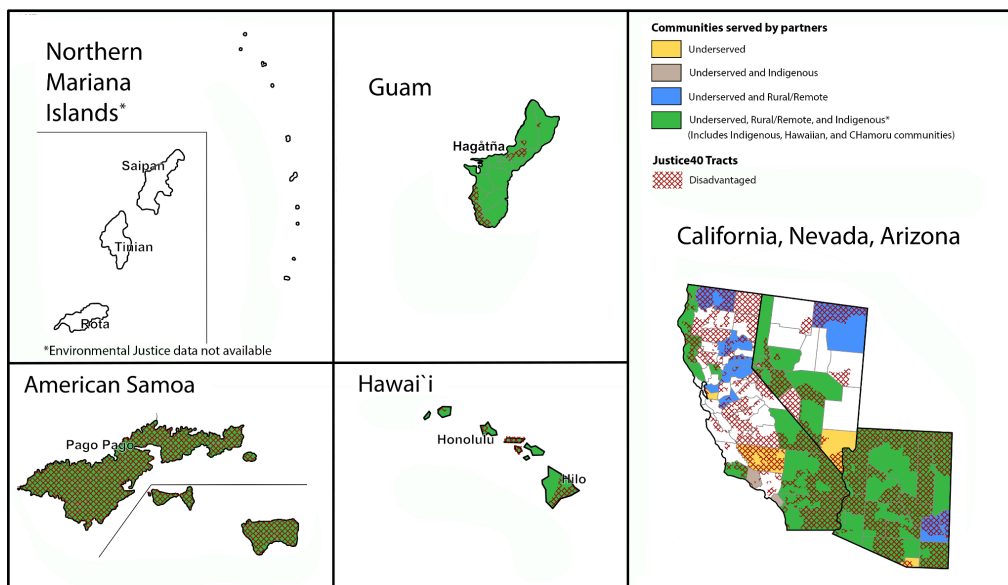
Historically, underserved communities have been disproportionately burdened by environmental hazards and health consequences and have faced environmental and energy justice challenges. These communities are often exposed to unhealthy land uses, poor air and water quality, dilapidated housing, lead exposure, and other environmental threats that drive health disparities. Many of these communities are also surrounded by social inequities such as job insecurity, underemployment, linguistic isolation, underperforming schools, noise pollution, crowded homes, face high energy burden or fossil fuel dependence, and lack access to healthy foods and transportation. In addition, they often lack adequate resources and experience to navigate complex grant application and award making processes and have been limited in their ability to have meaningful access to, and participation in, governmental decision-making processes that affect them, including those relating to environmental health and justice, and energy justice. The combination of environmental risks and social inequities creates a cumulative, disproportionate impact that hinders optimal environmental health and justice particularly for these communities.

Created by the Inflation Reduction Act under Clean Air Act Section 138, the Environmental and Climate Justice Program (EJC) allocated \$2.8 billion dollars for the financial assistance to be implemented by the Environmental Protection Agency (U.S. EPA, Inflation Reduction Act Environmental and Climate Justice Program). This historical investment in environmental justice, along with the vast array of funding opportunities that extend beyond the EJC and EPA, creates a valuable opportunity for

communities to build capacity and achieve environmental, energy, and climate justice. However, barriers such as lack of organizational capacity, inequitable access to resources, language barriers, unreliable internet access, and more, have the potential to inhibit the success of these investments. As one of the 17 Environmental Justice Thriving Communities Technical Assistance Centers (EJ TCTACs), the Center for Community Energy will address these barriers by providing free technical assistance to underserved communities in order to advance accessibility and equity for the communities that need it most. CCEEJ’s environmental information operations (EIO) will be an essential element of the technical assistance provided to communities as it will provide a useful tool to help affected communities demonstrate the magnitude of environmental and energy justice issues. Understanding the magnitude of the issues will in turn aid in building communities’ capacity to prioritize their needs, develop projects to address these issues, develop strong grant applications, and more.

A4.2 Project Overview and Purpose

Figure 1. Map of EPA Region 9 served by CCEEJ



Environmental and energy justice are integral components to protect human health and the environment, particularly in underserved, rural, remote, tribal, and indigenous communities. Building capacity in and providing technical support and assistance for communities often most vulnerable and affected by environmental challenges is essential to address environmental health and justice challenges. Hosted at San Diego State University, CCEEJ will serve to empower communities in EPA’s Region 9 (California, Arizona, Nevada, Hawai`i, Guam, American Samoa, and the Northern Mariana Islands) by providing critical services to qualified community organizations. These services will provide eligible community organizations with the skills, support and capacity they need to meet community- defined priorities with community-

driven actions and participate meaningfully in decision- making processes in areas related to energy and environmental justice. The mission of CCEEJ is to leverage and strengthen community assets by creating an accessible and inclusive in-person and virtual community center that builds capacity and provides technical assistance in energy and environmental justice centered around four unifying objectives:

- 1) **Engage in outreach and partnership building efforts** with the communities we will serve. This will include conducting community needs assessments, developing and implementing communication strategies and pathways to strengthen our network's existing partnerships, and expanding our network of community partners over time.
- 2) **Develop resources** to share across the network and serve community needs. Our hub partners will compile and integrate existing training materials and work to develop new materials to meet community needs identified during Objective 1 activities.
- 3) **Transfer knowledge and build community capacity.** Through the collaborative efforts of our hub and spoke partners, we will work with community partners to co-produce and co-generate training materials, conduct community training events, deliver of one-on-one services, establish and grow of the Community Knowledge Portal, and disseminate TCTAC resources through a variety of modalities to transfer knowledge and support communities in building capacity. The Community Knowledge Portal will include relevant regional grant opportunities.
- 4) **Evaluate, adapt, and innovate.** To ensure the SDSU TCTAC is meeting the needs of our client communities, we will evaluate our efforts on an ongoing basis, tracking qualitative and quantitative metrics of participant engagement and participating in rigorous internal and external evaluations. We will use the results of these annual evaluations to refine, adapt, and innovate our approaches to best serve our community partners.

Our grant-related support will include:

- Grant-getting capacity
- Strengthening a community's ability to identify, successfully apply for, and effectively manage grants related to environmental and energy justice
- Navigate government systems used in the grant process
- Knowledge of EnJ/EJ grants
- Knowledge and understanding of environmental and energy justice-related grant programs.

Using a hub and spoke model, CCEEJ will create a nexus of centralized expertise and coordination for each critical service to connect and empower eligible community organizations. Our hub and spoke model pairs established partners in each state/territory with hub partners who have the expertise and ability to coordinate, co-develop, share, deliver, and monitor key services while tracking and reporting qualitative (i.e., success stories) and quantifiable metrics of outcomes and outputs from the communities CCEEJ will serve.

No samples of primary information/data will be collected for this project. In order to achieve the previously-stated objectives, the project's EIOs will solely involve the use of existing data/information that were originally collected for a different purpose. The use of secondary environmental data will be directly linked to the following actions:

- Providing training on environmental (EJ) and energy justice (EnJ) screening tools for use in grant proposals along with EJ and EnJ assessments. Screening tools will include (but are not limited to):
 - EJScreen (Environmental Protection Agency)
 - Climate & Economic Justice Screening Tool (White House Council on Environmental Quality)
 - DOE Energy Justice Mapping Tool (Department of Energy)
 - Social Vulnerability Index (Center for Disease Control /Agency for Toxic Substances and Disease Registry)
 - CalEnviroScreen (California Office of Environmental Health Hazard Assessment)
 - Healthy Places Index (Public Health Alliance of Southern California)
- Producing guidance documents for EJ and EnJ analysis
- Provide support reviewing and commenting on environmental impact statements and permits and providing information on EPA regulations and policies
- Producing guidance for energy policy development
- Producing technical guidance on brownfields (providing technical support and assistance in navigating the redevelopment process, including redevelopment analyses, community engagement, and brownfields financing)
- Training communities on environmental program topics
- Development of the Community Knowledge Portal, which will serve as a community resource for data and information, training events, recording narratives, stories, music, art, and community oral histories.

The use of environmental data and information is integral to understanding EJ and EnJ issues and is an essential element of grant proposals addressing these issues. With this in mind, the primary purpose of the EIOs conducted by CCEEJ is to help achieve the primary goal of strengthening community organizations' capacity and effectiveness in applying to, managing and implementing EJ and EnJ grants and programs. The projected outcomes of the project's EIO actions will be 1) advanced community comprehension of environmental and energy justice issues in their region (including from a technical perspective) and 2) Ability for communities to be confident in using pre-existing data in the future (i.e., beyond the scope of their work with CCEEJ) to inform project/solution development, identifying priorities and action items, and/or to strengthen grant proposals that can provide the necessary resources to address EJ/EnJ issues. Leveraging existing data that meets the quality standards set forth in this document (and by the EPA) will provide community organizations with a valuable tool that can be used in grant proposals, project development, identifying priority areas, understanding EJ and EnJ issues

from a technical perspective, and more. Secondary use of existing data will be the most effective in achieving our objectives for the following reasons:

1. Primary data collection is not in the scope, workplan, or budget of this project (and would take up a large amount of the limited resources that could be more effectively used for other project activities, such as community outreach and engagement)
2. Use of secondary data is more cost effective (both for this project and for communities who can continue to use these tools in the future) given that it requires less resources, funding, and time.
3. Secondary data provided to communities as a tool will already have gone through the rigorous screening process both by CCEEJ, as outlined in this QAPP, and by the agencies/experts/other entities who collected the data. This will also ease the burden on communities in the sense that they will not be required to invest additional time and resources (which is most often severely limited) in to confirming the integrity of data to be used in informing their environmental and energy justice efforts
4. Secondary data used by this project will already be presented in a more accessible manner (primarily with the use of screening tools).
5. Analysis and interpretation of this data, though originally conducted for a different purpose, will serve as a useful guide for how to apply this data in the context of a specific needs assessment, community project, grant proposal, and more.

The secondary data that will be used to inform the following environmental decisions:

- What environmental justice challenges should be prioritized in project planning (e.g., air pollution, brownfields, lead contamination, etc.)
- What methods might be the best option to address environmental justice issues
- What resources are available to address environmental justice issues
- What agencies to consult for advice and remedy
- What grant opportunities will be the best fit to fund the project
- What data points will the most salient to highlight in order to strengthen a grant proposal

Refer to Section A6 for discussion of the level of information quality needed in order to ensure that these environmental decisions are based on sound environmental information.

Table 1. Applicable Regulatory Programs and Standards

Regulatory Program	Executive Order/Section Number	Description
Advancing Racial Equity and Support For Underserved Communities Through The Federal Government	Executive Order 13985	A comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality.
Tackling the Climate Crisis at Home and Abroad	Executive Order 14008	Created the Justice40 Initiative, which established a goal of 40% of the overall benefits of certain federal investments—including those in climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, the remediation and reduction of legacy pollution, and the development of critical clean water infrastructure—flow to disadvantaged communities. Increased technical assistance and community engagement of disadvantaged communities was included as a benefit under Justice40 per the Interim Implementation Guidance for the Justice40 Initiative (M-21-28).
Clean Air Act	Section 138	Provides funding for financial and technical assistance to carry out environmental and climate justice activities to benefit underserved and overburdened communities.
Bipartisan Infrastructure Law	23 USC 101	Funds the Clean Energy Demonstration Program on Current and Former Mine Land (CEML) to demonstrate the technical and economic viability of deploying clean energy on current (operating) and former (abandoned or inactive) mine land, one of the priority areas of this program.

Annual Energy and Water Development and Related Agencies Appropriations Bill	H.R. 4394	Funds the DOE Office of Energy Efficiency and Renewable Energy (EERE) that is responsible for enabling renewable energy and end-use energy efficiency technology development and implementation.
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A5. Project Task Description

Table 2. Summary of Project Tasks, Schedule, and Products

Task	Schedule	Description of the work to be performed	Products to be produced
Complete and submit QAPP for EPA approval	February 2024	Complete QAPP, send to EPA Project Officers for review and comment, submit to Region 9 Quality Assurance Manager for Approval	Official approved QAPP
Reviewing and commenting on environmental impact statements and permits, information about EPA regulations and policies	September 2023 - May 2028	Connecting communities with experts who can help review environmental impact statements (EIS) and permits and EPA regulations and policies in order to help communities understand (and comply with when necessary) technical documents. Technical support will take the form on 1-on-1 consultations and webinars/trainings (in person and virtual)	Publicly available documents and information providing guidance to communities (when applicable), recorded webinars/trainings of guidance (when applicable). Review of EIS and permits will include annotated documents of the community's EIS or permit that includes comments with feedback. Methods for these trainings will include presentations, providing examples of energy justice analysis projects, sharing pdf guides covering training content, and Q & A sessions to address specific questions from communities.
Producing guidance documents for energy justice and analysis	September 2023 - May 2028	Translating technical information into plain language to provide more accessible information to communities on energy justice-related policy, analysis, projects, etc. Technical support will take the form on 1-on-1 consultations and webinars/trainings (in person	Publicly available documents and information providing guidance to communities, recorded webinars/trainings of guidance (when applicable). Methods for these trainings will include presentations,

		and virtual)	providing examples of energy justice analysis projects, providing checklists for conducting energy justice analyses, sharing pdf guides covering training content, and Q & A sessions to address specific questions from communities.
Producing technical assistance guidance on brownfields	September 2023 - May 2028	Providing technical support and assistance in navigating the redevelopment process, including redevelopment analyses, community engagement, and brownfields financing. Technical support will take the form on 1-on-1 consultations and webinars/trainings (in person and virtual)	Publicly available documents providing guidance to communities, recorded webinars/trainings of guidance (when applicable). Methods for these trainings will include presentations, demonstrations on how to use tools, providing examples of successful brownfields projects, sharing pdf guides covering training content, and Q & A sessions to address specific questions from communities.
Training to communities on environmental program topics	September 2023 - May 2028	Providing technical support and assistance to communities on a variety of environmental program topics through the form on 1-on-1 consultations and webinars/trainings (in person and virtual). Guidance will focus on presenting community/environmental burdens, how to use pre-existing data in grant proposals, using screening tools such as the Climate and Economic Justice Screening Tool, EJScreen, CalEnviroScreen, DOE Energy Justice Mapping Tool, and more.	Publicly available documents providing guidance to communities, recorded webinars/trainings of guidance (when applicable). Methods for these trainings will include presentations, demonstrations on how to use tools, providing examples of related tasks and uses for pre-existing data, sharing pdf guides, and Q & A sessions to address specific questions from communities.
Creation of Community Knowledge Portal Database	December 2024	Gather EJ/EnJ data and information, training events, recording narratives, stories, music, art, and community oral histories to be stored	Community Knowledge Portal. This will be an online resource that provides a variety of information for

		in central portal that can be accessed by community members	communities to use, including products from all tasks listed in this table.
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A6. Information/Data Quality Objectives and Acceptance Criteria

A6.1. Existing Data/Information Sources

Secondary data that will be used in this project will be identified with the assistance of the TCTAC program and our EPA Project Officers (e.g., sharing useful tools on data sources, holding orientations and training sessions on EJScreen, etc.) and our team members across the sub-recipient organizations in this project, who hold a vast array of knowledge and experience in the various sectors of energy and environmental justice (along with pre-existing data from past projects). Other potential methods for identifying data sources include conducting literature reviews, contacting other EJ/EnJ technical assistance providers, contacting state agencies, and online searches.

A6.2. Assessment for Inclusion of the Data Source

Once a data source has been identified, the team, under the supervision of the Executive Director (also identified as the Senior Project Operations Manager in this QAPP), will assess the integrity and appropriate use of the data source according to the acceptance criteria outlined in this QAPP (refer to section A6.2). During the review of the data source, limitations of the data will be assessed in order to determine appropriate (and inappropriate) uses of the secondary data as it pertains to specific EIOs, topics, and projects. Limitations will be accepted only in the event that the limitations are only specific for certain situations. For example, if a screening tool only provides data for specific parts of EPA Region 9 (e.g., CalEnviroScreen), the screening tool can still be used if it meets the acceptance criteria; however, it will only be used in the appropriate contexts (e.g., CalEnviroScreen will only be used when assisting California-based communities). In the event that limitations are accepted, the specific use(s) of the data source will be clearly outline in order to avoid the limitations inhibiting the effective use of the data source (i.e., the data source will only be used in contexts that aren't exceedingly affected by the limitations). With approval of the Senior Project Operations Manager, this data source will be determined appropriate for the project's EIOs, with a specific clarification on how this data source will be used in the project's technical assistance activities. If there is disagreement over the validity of the data source, the team may consult with the Quality Assurance Manager who can determine whether the data source meets QAPP standards.

Table 3 documents data sources that have already been identified for potential use in this project. Throughout the course of this project, if additional secondary data sources are needed or identified, the team will assess the sources to determine the appropriate use of the data (if any) and will evaluate the source in accordance with data quality objectives, acceptance criteria, and the information laid out in Table 3. Once a new data source has been identified and confirmed for use, this table will be updated and stored in the project files. As necessary, the Quality Assurance Manager will ensure that this documentation is complete and the sources are in accordance with the processes described in this QAPP. If a discrepancy is identified, the Senior Project Operations Manager and the Quality Assurance Manager will determine a resolution and provide documentation within the project files.

In order to ensure the required quality of data, secondary data sources will be assessed both against the acceptance criteria outlined in section A6.2 and against the following general assessment factors:

- *Soundness* – extent to which the scientific and technical procedures, measures, methods, or models employed to generate the information are reasonable for, and consistent with, the intended application.
- *Applicability/utility* – extent to which the information is relevant for the project’s intended use.
- *Clarity/completeness* – degree to which the information, assumptions, methods, QA, sponsoring organizations and analyses employed to generate the information are documented.
- *Uncertainty/variability* – quantitative and/or qualitative evaluation and characterization of the information, procedures, measures, methods, or models.
- *Evaluation/review* – extent of independent verification, validation, and peer review of the information or of the procedures, measures, methods, or models.

A6.3. Data Quality Objectives

For the purpose of this project, the two primary data quality objectives (DQO) include

- The data are as representative as possible of the location and/or socioeconomic, demographic, and environmental characteristics of the community that will be using the data
- The data are produced in accordance with established criteria and procedures for field sampling, sample handling and processing (if applicable), laboratory analysis (if applicable), and record keeping

A6.4. Acceptance Criteria

In order to be deemed appropriate and reliable secondary data for the purpose CCEEJ EIO operations, the data **must be specifically relevant to energy and environmental justice** and meet the following acceptance criteria, expressed in terms of the following data quality indicators (DQI):

- Precision
- Bias
- Accuracy
- Representativeness
- Comparability
- Completeness
- Sensitivity

6.4.5. Usability Assessment to Meet the Project Objectives

In addition to meeting the acceptance criteria listed above, the data source will be assessed to determine its adequacy in meeting the project objectives. After the Senior Project Operations Manager confirms that the data meets the acceptance criteria above, the team members conducting the relevant EIOs will assess the data, under the supervision of the Senior Project Operations Manager, to determine that it also meets project-specific criteria. The following project-specific criteria outlined below have been determined with the primary objectives of accessibility (i.e., the data can be translated in an accessible manner without requiring technical expertise), relevance (i.e., the data is relevant to communities in EPA Region 9 and the EJ/EnJ issues affecting these communities), and integrity (i.e., the data meets quality standards, comes from reliable sources, and presented in a transparent manner).

In order to be used in the project EIOs, the data source must meet *at least three* of the following **project-specific** criteria¹:

- Data is presented in accessible manner (e.g., screening tools that are interactive and accessible for the layperson)
- Data is publicly available and presented in a transparent manner (i.e., the public has the ability to download datasets)
- Data is collected by a government entity (e.g., publicly available data screening tool)
- Data is the most up-to-date available
- Data meets government data quality standards
- Data is presented in a peer-reviewed publication
- Data is collected by an institution held accountable by Institutional Review Board (IRB) or other research ethical standards
- Data is collected by an entity that also has an approved QAPP
- Data has publicly available technical/overview document(s) outlining collection methods, limitations, potential uses, etc.

¹ Given the different natures of the secondary data sources that will be used in this project, the threshold of criteria that needs to be met is lowered in order to allow for more flexibility in the sources that can be used. We believe this will not inhibit the integrity of the secondary data that is used due to the fact that the data must first meet the acceptance criteria listed above before being considered against the project-specific criteria.

Table 3. Currently Identified Existing Data Sources to be Used in EIOs

Data Source ²	Data Type and Existing Data Uses Relative to Current Project	Project-Specific Acceptance Criteria	Factors affecting the reliability of data, and limitations on data use
EJScreen Mapping and Screening Tool - Environmental Protection Agency	Demographic, socioeconomic, and environmental information for a specific geographic area to highlight areas where vulnerable populations may be disproportionately impacted by pollution. Screening tool will be used to train community members how to leverage publicly available data in grant proposals and project development	<ul style="list-style-type: none"> • Data is presented in accessible manner • Publicly available screening tool created by a government agency • Data updated annually • uses highest resolution data available • Ability to download data • Publicly available technical/overview document outlining collection methods, limitations, potential uses, etc. • Data is collected by a government entity 	<ul style="list-style-type: none"> • Limited in the scope and extent to which the information can be used for decisions. • Data very limited for Pacific Islands • Environmental indicators are mostly screening-level proxies for actual exposure or risk
Climate & Economic Justice Screening Tool - White House Council on Environmental Quality	Combination of socioeconomic and environmental data to identify "disadvantaged communities" (mostly for the purpose of J40 Initiative). Screening tool will be used to train community members how to identify "disadvantaged communities" in project planning, development, and grant applications.	<ul style="list-style-type: none"> • Data is presented in accessible manner • Publicly available screening tool created by a government entity • Uses EJScreen for some datasets/indicators • Ability to download data 	<ul style="list-style-type: none"> • Data very limited for Pacific Islands • Less detailed/location specific • Not as appropriate to use for energy justice issues

² Refer to references for data source websites and technical documents (when available)

		<ul style="list-style-type: none"> • Data is collected by a government entity 	
Energy Justice Dashboard - Department of Energy	Screening tool that overlays energy use/cost with other environmental and socioeconomic data to determine energy burden and EnJ issues. Screening tool will be used to train community members how to leverage publicly available data demonstrating energy justice and energy burden issues in grant proposals and project development.	<ul style="list-style-type: none"> • Data is presented in accessible manner • Publicly available screening tool created by a government agency • Ability to download data • Uses data from EJScreen • Data updated regularly • Data is collected by a government entity 	<ul style="list-style-type: none"> • Less detailed/location specific • Less environmental indicators than other tools
Social Vulnerability Index - Center for Disease Control /Agency for Toxic Substances and Disease Registry	Overlays census data with public health data and CDC risk projections to help communities understand their risk to natural hazards that can be exacerbated by climate change. Screening tool will be used to train community members how to leverage publicly available data demonstrating climate justice issues in grant proposals and project development.	<ul style="list-style-type: none"> • Updated regularly • Data is collected by a government entity • Ability to download data • Publicly available technical/overview information outlining collection methods, limitations, potential uses, etc. • Has repository of peer-reviewed journal articles featuring the use of the screening tool 	<ul style="list-style-type: none"> • No data for Pacific Islands • Less detailed/location specific (only displays data at the county level) • Not as appropriate to use for energy justice issues
CalEnviroScreen Mapping and Screening Tool - CA EPA / Office	Environmental, socioeconomic, and public health data to identify pollution- burdened census tracts for enforcement, training, and public outreach. Screening tool will be used to	<ul style="list-style-type: none"> • Data is presented in accessible manner • Publicly available screening 	<ul style="list-style-type: none"> • Limited in the scope and extent to which the information can be used for

of Environmental Health Hazard Assessment	train community members how to leverage publicly available data in grant proposals and project development.	<p>tool created by a government agency</p> <ul style="list-style-type: none"> • Data updated annually • uses highest resolution data available • Ability to download data • Publicly available technical/overview document outlining collection methods, limitations, potential uses, etc. 	<p>decisions.</p> <ul style="list-style-type: none"> • Environmental indicators are mostly screening-level proxies for actual exposure or risk • Data limited to California
Healthy Places Index - Public Health Alliance of Southern California	Environmental, socioeconomic, and public health data to identify community communities in need of public health and EJ-related investments. Screening tool will be used to train community members how to leverage publicly available data in grant proposals and project development.	<ul style="list-style-type: none"> • Data is presented in accessible manner • Publicly available screening tool • Has public document outlining ethical uses for screening tool • Publicly available technical/overview document outlining collection methods, limitations, potential uses, etc. • Meets data quality standards of government entities (who have used this tool for public health policy and project implementation) 	<ul style="list-style-type: none"> • Data limited to California • Data cannot capture rapid changes in population or its characteristics • Includes less indicators of environmental justice issues than other screening tools (aside from public health data) • Not as appropriate to use for energy justice issues
FEMA	Socioeconomic, geographic, and natural	<ul style="list-style-type: none"> • Data is presented in 	<ul style="list-style-type: none"> • Data cannot capture rapid

Community Disaster Resilience Zones Viewer	hazard risk data used to assess community vulnerability and resilience to a variety of natural hazards. This mapping tool will be used to train community members on how to leverage publicly available data in grant proposals and project development, with a specific focus on issues related to climate justice and natural hazards.	<p>accessible manner</p> <ul style="list-style-type: none"> • Publicly available screening tool • Meets data quality standards of government entities • Additional information on each map layer is available through external links 	<p>changes in population or its characteristics</p> <ul style="list-style-type: none"> • Not as appropriate to use for energy justice issues • Harder to identify specific data points (most information displayed is based on an assessment of a large variety of variables that are not immediately displayed on the map) • Data is very limited for Pacific Islands
EPA Science Inventory	Management system that stores, manages, and delivers a large variety of environmental data/information. This management system will potentially be used to identify specific studies, reports, and other information that inform communities in project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Publicly available data/information • Consistent with Federal Geographic Data Committee metadata content standards • Ability to download data • Updated regularly 	<ul style="list-style-type: none"> • Not as easy to navigate as other data sources/screening tools • Not helpful for “discovering” EJ data (i.e., database is only appropriate to use if you already know what data you need to focus on)
National Weather Service	Meteorological—provides information on current and past weather conditions, climate prediction and variability, local data/records, and more. This data source can be used to inform interpretation of weather patterns in relation to climate change and EJ/EnJ issues, which can in turn be used by communities in project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Updated regularly • Data is presented in accessible manner • Publicly available tool created by a government agency 	<ul style="list-style-type: none"> • Certain data points are highly technical (and not as accessible) • Not all data is presented in an accessible manner • Easier to find more recent data (i.e., takes more effort to identify trends)
National Oceanic	Meteorological/Climate data—provides	<ul style="list-style-type: none"> • Updated regularly 	<ul style="list-style-type: none"> • Less detailed/location

<p>and Atmospheric Administration (NOAA) / National Weather Service Climate Prediction Center</p>	<p>projections of future climate conditions that can be used to inform interpretation of weather patterns in relation to climate change and EJ/EnJ issues, which can in turn be used to communities in project planning, development, and grant proposals.</p>	<ul style="list-style-type: none"> Publicly available technical/overview document outlining collection methods, limitations, potential uses, etc. Data is presented in accessible manner with the use of maps Publicly available tool created by a government agency 	<p>specific (only displays data at national/state level)</p> <ul style="list-style-type: none"> No data for Pacific Islands Focused on climate projections with less information on past trends (which are rather inferred by “above normal”/“below normal”)
<p>NOAA National Centers for Environmental Information</p>	<p>Meteorological/Climate data—large inventory of data on a large variety of climate change-related issues. Data can be used to infer/assess climate justice and risk for communities which can in turn be used to communities in project planning, development, and grant proposals.</p>	<ul style="list-style-type: none"> Publicly available tool created by a government agency Data available for Pacific Islands Ability to download data Data vetted by National Research Council (NRC) standards Updated regularly 	<ul style="list-style-type: none"> Not as helpful for “discovering” EJ/Climate justice data (i.e., database is only appropriate to use if you already know what data you need to focus on)
<p>NOAA Office for Coastal Management Digital Coast</p>	<p>Socioeconomic, climate, oceanographic, and other environmental/ecological data. Data can be used to infer/assess climate justice and risk and natural hazard vulnerability for coastal and island communities which can in turn be used to communities in project planning, development, and grant proposals.</p>	<ul style="list-style-type: none"> Publicly available tool created by a government agency Data is presented in accessible manner via its organization into different topics, areas of concern, and offered trainings (on demand and live) 	<ul style="list-style-type: none"> Not relevant for use with non-coastal or island communities Not as easy to navigate as other tools Certain data points are highly technical (and not as accessible)

		<ul style="list-style-type: none"> • Updated regularly • Ability to download data • Data available for Pacific Islands 	
Climate Mapping for Resilience and Adaptation mapping tool (DOE, DOI, FGDC, NASA, NOAA, USGCRP, USGS, White House CEQ, White House OMB, White House OSTP)	Climate, oceanographic, and other environmental/ecological data. Data can be used to infer/assess climate justice and risk and natural hazard vulnerability which can in turn be used to communities in project planning, development, and grant proposals. Primary focus areas for this tool include extreme heat, drought, wildfire, flooding, and coastal inundation.	<ul style="list-style-type: none"> • Publicly available tool created by a government agency • Updated regularly • Data is presented in accessible manner via maps and generated graphs and tables • Ability to generate report on location in focus • Data available for Pacific Islands 	<ul style="list-style-type: none"> • Not as easy to navigate as other tools • Certain data points are highly technical (and not as accessible) • Information provided are predictions for future conditions and are not as focused on present conditions • Data is very limited for Pacific Islands
EPA How's My Waterway? Mapping tool	Water quality data can be used to infer/assess water quality issues depending on the community's watershed. This can in turn be used by communities in identifying water quality threats/issues and sources, project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Publicly available tool created by a government agency • Updated regularly • Data is presented in accessible manner via maps • Data available for Pacific Islands 	<ul style="list-style-type: none"> • Relevant use limited to water quality concerns • Doesn't incorporate socioeconomic data • Data less location specific (only presented at the watershed level)
Neighborhoods at Risk Mapping Tool	Socioeconomic data and climate variables that can be used to infer/assess climate justice and risk and vulnerability. This can in turn be used by communities in prioritizing action items, conducting vulnerability assessments, project planning, development,	<ul style="list-style-type: none"> • Publicly available tool that uses data provided by government entities • Updated regularly • Data is presented in 	<ul style="list-style-type: none"> • Data not available for Pacific Islands (aside from Hawai'i) • Relevant use limited to specific focus on natural hazard and climate change

	and grant proposals.	accessible manner via maps	vulnerability
Pre-existing data and information from partner organizations	Socioeconomic, public health, and environmental data from past reports, studies, and data collected by partner organizations (not for the purpose of this project). This will help our partner organizations leverage their experience and past work to provide effective technical assistance to communities with the support of existing data that is up to the data quality standards of the organization. Existing data will be used to help inform communities for project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Additional insight in how the data was collected, managed, and stored • Depending on the organization, data is collected by an institution held accountable by Institutional Review Board (IRB) or other research ethical standards • Data is presented in accessible manner 	<ul style="list-style-type: none"> • Might not be as accessible as other data sources/tools • Doesn't cover every part of EPA Region 9
Data from published literature, reports, and handbooks	Socioeconomic, public health, and environmental data relevant to specific energy justice and environmental justice issues. Data will potentially be used to help inform communities in project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Data is presented in a peer-reviewed publication • Data is collected by an institution held accountable by Institutional Review Board (IRB) or other research ethical standards • Data is the most up-to-date available 	<ul style="list-style-type: none"> • Limited in the scope and extent to which the information can be used for decisions. • Might not be as accessible as other data sources/tools
Data from state and local monitoring programs	Socioeconomic, public health, and environmental data that will potentially be used to help inform communities in project planning, development, and grant proposals.	<ul style="list-style-type: none"> • Publicly available data/information • Meets data quality standards of government entities • Data is potentially collected by an entity that also has an 	<ul style="list-style-type: none"> • Might not be as accessible as other data sources/tools • Might not cover every part of EPA Region 9

		<p>approved QAPP</p> <ul style="list-style-type: none"> • Data is collected by a government entity 	
Existing maps, GIS layers, plots, photographs, or land surveys	Environmental data that can be used for project planning, particularly brownfields, land redevelopment, and other site-specific projects.	<ul style="list-style-type: none"> • Data is presented in accessible manner • Data is publicly available • Data is potentially collected by an entity that also has an approved QAPP 	<ul style="list-style-type: none"> • Might not be relevant and/or available for all EJ/EnJ projects • Might not be as accessible as other data sources/tools

A7. Distribution List

QAPP Recipient	Title	Organization	Email	Version
Dani Allen-Williams	Lead Project Officer (PO) for SDSU TCTAC	Environmental Protection Agency	AllenWilliams.Dani@epa.gov	Final/ Approved and subsequent revisions
Michael Cloyd	Technical Project Officer for SDSU TCTAC	Environmental Protection Agency	Cloyd.Michael@epa.gov	Final/ Approved and subsequent revisions
Dr. Rebecca Lewison	Executive Director of SDSU TCTAC Senior Project Operations Manager	San Diego State University	rlewison@sdsu.edu	Final/ Approved and subsequent revisions
Sergio Morales	Quality Assurance Manager	San Diego State University	smorales3@sdsu.edu	Final/ Approved and subsequent revisions
Loren Halili	Project Coordinator for SDSU TCTAC	San Diego State University	lhalili@sdsu.edu	Final/ Approved and subsequent revisions
Paige Dawson	Program Manager for SDSU TCTAC Quality Assurance Officer	San Diego State University	pdawson@sdsu.edu	Final/ Approved and subsequent revisions
Michelle Roos	(Sub-grantee) Executive Director	Environmental Protection Network	michelle.roos@environmentalprotectionnetwork.org	Final/ Approved and subsequent revisions
Dr. Clark Miller	(Sub-grantee) Director	Arizona State University Center for Energy & Society	Clark.Miller@asu.edu	Final/ Approved and

				subsequent revisions
Scott Anders	(Sub-grantee) Administrative Director	University of San Diego Energy Policy Initiatives Center	scottanders@sandiego.edu	Final/ Approved and subsequent revisions
Nikki Cooley	(Sub-grantee) Co-Director	Institute for Tribal Environmental Professionals	Nikki.Cooley@nau.edu	Final/ Approved and subsequent revisions
Claire Weston	(Sub-grantee) Senior Program Manager	Center for Creative Land Recycling	claire.weston@cclr.org	Final/ Approved and subsequent revisions
Dr. Amber Pairis	(Sub-grantee) Founding Director and Lead Advisor	Climate Science Alliance	apairis@climatesciencealliance. org	Final/ Approved and subsequent revisions
Savannah North	(Sub-grantee) Director of Administration & Climate Initiatives	Public Health Alliance of Southern California	SNorth@phi.org	Final/ Approved and subsequent revisions
Dr. Tamara Wall	(Sub-grantee) Research Professor	Desert Research Institute	Tamara.Wall@dri.edu	Final/ Approved and subsequent revisions
Dr. Austin Shelton	(Sub-grantee) Director	University of Guam Center for Island Sustainability	shelton@uog.edu	Final/ Approved and subsequent revisions
Victoria Keener	(Sub-grantee) Co-Lead Investigator	Pacific Research on Island Solutions for Adaptation	vkeener@asu.edu	Final/ Approved and subsequent revisions

A8. Project Organization

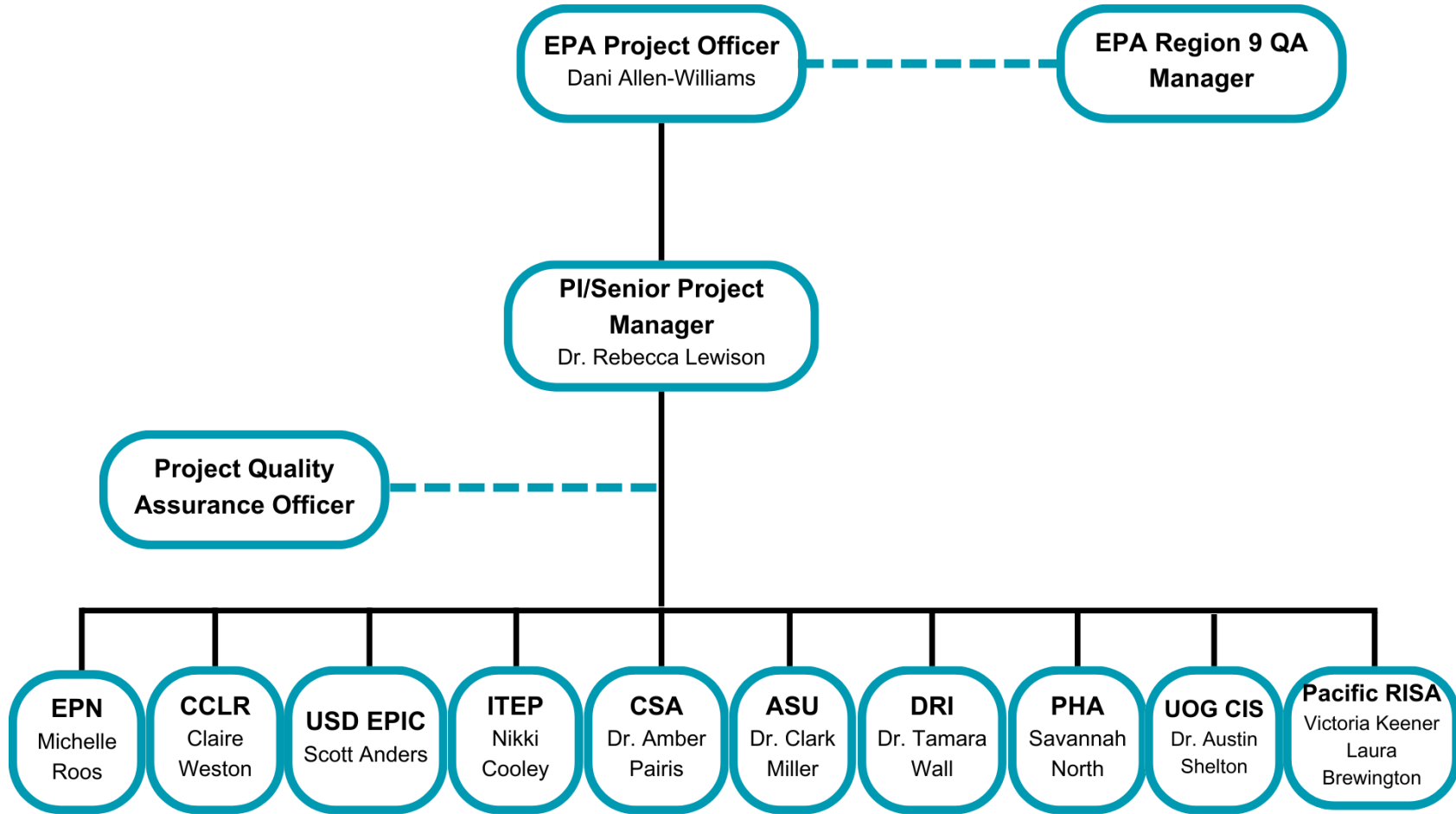
Table 4. General Roles and Responsibilities

Role	Individual in Role, Title, and Name	Roles and Responsibilities
Approval Authority for the QAPP	USEPA Region 9 Quality Assurance Manager	Review and approve the QAPP, has access and discuss quality-related issues with their organization’s senior manager outside of their direct supervisory chain as necessary.
EPA Project Officer	Dani Allen-Williams, Lead Project Officer (PO) for SDSU TCTAC	Oversees development and subsequent revisions of QAPP prior to submitting to Region 9 Quality Assurance Manager
Senior Project Operations Manager	Dr. Rebecca Lewison, Executive Director SDSU TCTAC	Coordinating grant activities including communicating with the EPA and conducting the identification and evaluation of all existing data, compiling results, documenting progress, and writing the report and educational materials. The project manager is responsible for verifying the usability of the data and related information. Oversees environmental information operations of the team to ensure QAPP compliance. The Operations Manager or designee will not have authority to sign QAPPs for the QA Manager or designee, nor will the QA Manager or designee have authority to sign QAPPs for the Operations Manager or designee.
Sub-awardee conducting environmental information operations	Claire Weston Senior Program Manager at Center for Creative Land Recycling (CCLR)	Coordinate and oversee CCLR’s role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Michelle Roos, Executive Director of Environmental Protection Network (EPN)	Coordinate and oversee EPN’s role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental

		information operations
Sub-awardee conducting environmental information operations	Scott Anders, Administrative Director of University of San Diego Energy Policy Initiatives Center (USD EPIC)	Coordinate and oversee USD EPIC's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Nikki Cooley Co-Director of Institute for Tribal Environmental Professionals (ITEP)	Coordinate and oversee ITEP's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Dr. Amber Pairis Founding Director and Lead Advisor of Climate Science Alliance (CSA)	Coordinate and oversee CSA's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Clark Miller, Director of ASU Center for Energy & Society (ASU)	Coordinate and oversee ASU's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Dr. Tamara Wall Research Professor at Desert Research Institute (DRI)	Coordinate and oversee DRI's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Savannah North Director of Administration & Climate Initiatives at Public Health Alliance of Southern	Coordinate and oversee PHA's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental

	California (PHA)	information operations
Sub-awardee conducting environmental information operations	Dr. Austin Shelton Director of University of Guam Center for Island Sustainability (UOG CIS)	Coordinate and oversee UOG CIS's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Sub-awardee conducting environmental information operations	Victoria Keener and Laura Brewington Co-Lead Investigators of Pacific Research on Island Solutions for Adaptation (Pacific RISA)	Coordinate and oversee Pacific RISA's role in conducting environmental information operations while ensuring compliance with QAPP, reporting any issues to Project Operations Manager, communicating QAPP requirements to any team member assisting with environmental information operations
Project Quality Assurance Manager	Sergio Morales Program Coordinator Collaborative of Native Nations for Climate Transformation and Stewardship San Diego State University	Maintaining the official version of the QAPP. The QA Manager is also available for any necessary dispute resolution throughout the course of the project. This position is independent from the personnel who are conducting the identification and evaluation of the existing data/information. The Operations Manager or designee will not have authority to sign QAPPs for the QA Manager or designee, nor will the QA Manager or designee have authority to sign QAPPs for the Operations Manager or designee.
Quality Assurance Officer	Paige Dawson Program Manager Center for Community Energy and Environmental Justice San Diego State University	Technical lead creating the QAPP and monitoring QA activities.

Figure 2. Project Organization Chart¹



¹Solid lines within the organization chart indicate lines of authority; dotted lines indicate lines of communication.

Table 5. Sub-recipients Supporting Project and Role

Sub-Recipient	Specific EIO(s) to be supported
Environmental Protection Network	<ul style="list-style-type: none"> ● Reviewing and commenting on environmental impact statements and permits, information about EPA regulations and policies ● Training to communities on environmental program topics
University of San Diego, Energy Policy Initiatives Center	<ul style="list-style-type: none"> ● Producing guidance documents for energy justice and analysis ● Producing guidance for energy policy development ● Training to communities on environmental program topics
Arizona State University, Center for Energy & Society	<ul style="list-style-type: none"> ● Training to communities on environmental program topics ● Producing guidance documents for energy justice and analysis ● Producing guidance for energy policy development
Center for Creative Land Recycling	<ul style="list-style-type: none"> ● Training to communities on environmental program topics ● Producing technical guidance on brownfields (providing technical support and assistance in navigating the redevelopment process, including redevelopment analyses, community engagement, and brownfields financing)
Institute for Tribal Environmental Professionals	<ul style="list-style-type: none"> ● Training to communities on environmental program topics
Climate Science Alliance	<ul style="list-style-type: none"> ● Training to communities on environmental program topics
Public Health Alliance	<ul style="list-style-type: none"> ● Training to communities on environmental program topics
Desert Research Institute	<ul style="list-style-type: none"> ● Training to communities on environmental program topics
Pacific Research on Island Solutions for Adaptation	<ul style="list-style-type: none"> ● Training to communities on environmental program topics
University of Guam Center for Island Sustainability	<ul style="list-style-type: none"> ● Training to communities on environmental program topics

Table 6. Communication Pathways and Mechanisms

Description of Communication	Individual Responsible	Pathway & Timing	Mechanism
Elevating discrepancies within organization	QA Officer	<p>Immediately upon identifying a discrepancy, the Quality Assurance Officer shall notify the Senior Project Operations Manager, the Project QA Manager, and the TCTAC team. The following procedures will follow:</p> <ul style="list-style-type: none"> ● If discrepancy is identified by project personnel, they must immediately report to QA Officer, who will elevate the issue to the Project QA Manager and Senior Project Operations Manager ● Upon receiving report of discrepancy, Senior Project Operations Manager must coordinate with the Project QA Manager on the resolution of the discrepancy ● The Project QA Manager will facilitate any necessary dispute resolution ● Inform relevant stakeholders of discrepancy (in the event that the affected data has already been used in technical assistance activities) ● Discrepancy, correspondence, and subsequent resolution will be documented in the QAPP by the QA Officer in collaboration with the Project QA Manager and kept on file 	Internal project meetings and direct communication via email
Elevating discrepancies within organization with contractors or subcontractors	Senior Project Operations Manager	<p>Immediately upon identifying a discrepancy, the Senior Project Operations Manager will notify the EPA Project Officer and will work with them to determine resolution for the discrepancy. The following procedures will follow:</p> <ul style="list-style-type: none"> ● The Senior Project Operations Manager will initiate communication and facilitate discussion ● The Senior Project Operations Manager will identify potential avenues for resolution ● The Project QA Manager will facilitate any necessary dispute resolution ● Discrepancy, correspondence, and subsequent resolution will be documented in the QAPP by the QA Officer in collaboration with the Project QA Manager and kept on file 	Meetings and direct communication via email

QAPP non-conformances	QA Officer	<p>Immediately upon identification of QAPP nonconformance, the QA Officer will notify the Senior Project Operations Manager, Project QA Manager, and team members involved in the EIOs. The Following procedures will follow:</p> <ul style="list-style-type: none"> • The Senior Project Operations Manager will initiation communication and facilitate discussion with the EPA Project Officer • The Senior Project Operations Manager will identify potential avenues for resolution • The Project QA Manager will assist with any necessary dispute resolution • Description of non-conformance, correspondence, and subsequent resolution will be documented in the QAPP by the QA Officer in collaboration with the Project QA Manager and kept on file 	Meetings and direct communication via email
Concurrence and approvals between project personnel	Senior Project Operations Manager	<p>As needed based on project milestones, the Senior Project Operations Manager will request formal approval from project personnel. The following procedures will follow:</p> <ul style="list-style-type: none"> • Written approval of all parties must be updated in the QAPP by the Project QA Manager and kept on file 	Internal project meetings and direct communication via email
Concurrence and approvals between contractor and organization responsible for Environmental Information Operations	Senior Project Operations Manager	<p>As needed based on project milestones, the Senior Project Operations Manager will request formal approval from EPA Project Officers.</p> <ul style="list-style-type: none"> • Written approval of all parties must be updated in the QAPP by the Project QA Manager and kept on file 	Internal project meetings and direct communication via email

A11. Personnel Training/Certification

Given that this project will only be using publicly available secondary data, no specialized training or certifications will be required for the environmental information operations. Key personnel selected to provide technical advice to this project were hired based on their expertise demonstrated on their resumes. With this in mind, all subrecipients have extensive professional and academic experience and expertise to make them qualified to conduct the environmental information operations outlined in this QAPP.

The EIOs in this project will not involve any Personally Identifiable Information.

A12. Documents and Records

Table 7. Documents and Records

Document or Record Name	How will the document or record be managed?
QAPP	Upon final approval, the QAPP stored in the shared Google Drive folder with our EPA Project Officers. The QAPP will also be made available to the CCEEJ team for review in order to ensure compliance. The QAPP file, along with all future revisions (if applicable) will be kept and maintained by the Project QA Manager for the entire duration of this project.
Existing data and information from other sources such as databases or literature	When necessary, existing data will be stored in the shared CCEEJ Google Drive for the team to access. Depending on the use of the data, summary of the data will also be condensed into shared documents that will in turn be produced in various training formats (handouts/"one pagers", summary notes, presentations for trainings, etc.). The resources that were created from the use of this existing data will also be shared in the Community Knowledge Portal and potentially on the CCEEJ website. These documents will be kept for the entire duration of this project.
Email and other correspondence	Emails pertaining to QAPP activities, document approval, and other required EPA deliverables will be kept on file, both by the CCEEJ team (i.e., team members who are included in the emails) and the EPA Project Officers, in order to document compliance with all requirements set forth in the QAPP and cooperative agreement with the EPA.
Quarterly Reports	The CCEEJ team will prepare quarterly reports that will be sent to the EPA via email. These reports include: a brief project description, project tasks, objectives and accomplishments, description of the quality considerations (when applicable), funding status, upcoming events, and assistance required. The final version of each quarterly report will be shared both in the Shared Google Folder with our EPA Project Officers and also made available to the CCEEJ team through the shared CCEEJ Google Drive.

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