



LEXINGTON

RFP-9-2023 Tetra Tech Supplier Response

Event Information

Number: RFP-9-2023
Title: Greenhouse Gas Emissions Inventory, Target Setting and Reduction Plan
Type: Request For Proposal
Issue Date: 4/12/2023
Deadline: 5/3/2023 02:00 PM (ET)
Notes: Please attach your response in one pdf.

Contact Information

Contact: Sondra Stone
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Tetra Tech Information

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Lexington, KY 40503
Phone: (859) 223-8000

ONLY ONLINE BIDS WILL BE ACCEPTED! By submitting your response, you certify that you are authorized to represent and bind your company and that you agree to all bid terms and conditions as stated in the attached bid/RFP/RFQ/Quote/Auction documents.

Abby Terry

Signature

Submitted at 5/3/2023 10:12:23 AM (ET)

abby.terry@tetratech.com

Email

Response Attachments

TetraTech_LFUCG_9-2023.pdf

Tetra Tech Proposal



Response to RFP #9-2023

Greenhouse Gas Emissions Inventory, Target Setting and Reduction Plan



TETRA TECH





TETRA TECH

May 3, 2023

Director, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor
Lexington, KY 40507

Attn: Selection Committee

Re: **Tetra Tech Proposal (RFP #9-2023)**
Greenhouse Gas Emissions Inventory, Target Setting and Reduction Plan

Dear Selection Committee Member:

In 2012, a group of 75 stakeholders representing a cross-section of the Lexington community published the city's first collective plan aimed at creating a more sustainable and resilient community. The Empower Lexington Plan focused on five sectors critical to reducing energy usage: residential, commercial/industrial/institutional, land use, food, and agriculture, transportation, and waste. The plan outlined goals and recommendations for each sector to help the city achieve an annual 1% reduction in energy use. Almost 11 years later, the mission of the plan to provide a competitive economic advantage, preserve jobs, improve the environment, improve energy security, and improve the quality of life for residents of Lexington is more relevant than ever.

Tetra Tech is pleased to submit this proposal to the Lexington-Fayette Urban County Government (LFUCG) for professional environmental services regarding the development of community-wide and municipal greenhouse gas (GHG) emissions inventories and associated reduction targets. ***Tetra Tech has enjoyed a 30-year working relationship with LFUCG. As a result, we have a deep understanding of city operations and community stakeholders.***

We have assembled a remarkable team of environmental engineers and scientists with specialized experience in developing greenhouse gas inventories and calculating air emissions. Our team has a rich blend of in-depth local knowledge and national experience that will enable us to produce the highest quality of work, control costs, and meet the desired schedule.

Tetra Tech's local office is located within six miles of LFUCG. Being local to the community means ***we are personally invested in improving the quality of life in Lexington, and we take great satisfaction in working together with you to reach your goals.***

We look forward to working with you on this project!

Sincerely,

Andrew R. Webster, LEED AP
Vice President
Tetra Tech

Abby Terry, EIT, LEED Green Associate
Civil Engineer
Tetra Tech

Tetra Tech

424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503
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SECTION 1

Specialized Experience and Technical Competence



Section 1: Specialized Experience and Technical Competence

PROJECT EXPERIENCE

Tetra Tech was ranked No. 1 in [Environmental Management](#), No. 2 in [Consulting/Studies and Environmental Science](#), and No. 4 in [Clean Air Compliance](#) by *Engineering-News Record*.

Tetra Tech is an industry leader in providing clients with a full range of sustainability services, including greenhouse gas management and development of environmental assets. Tetra Tech is dedicated to providing innovative technical services to our clients on issues related to climate change and greenhouse gas mitigation.

In 2006, Tetra Tech became one of 16 firms accredited by the California Climate Action Registry (CCAR) as a registered Verifier and Technical Advisor. Tetra Tech is also a member of the U.S. Environmental Protection Agency's (EPA) Climate Leaders Program and the Chicago Climate Exchange (CCX) and is qualified to verify energy management projects for CCX. [Tetra Tech's carbon management services team has successfully completed verification of more than 75 GHG emissions inventories following CCAR protocols for clients in the power utility industry, municipal sector, and the private sector.](#)

The following projects demonstrate our specialized experience and technical competence for the services requested. Tetra Tech has performed greenhouse gas inventory services for a diverse group including private corporations and municipal entities resulting in a vast knowledge base.

Tetra Tech ENR Rankings



WATER

- 1 Water
- 1 Treatment & Desalination
- 2 Sewer & Waste
- 5 International Water
- 6 Sanitary & Storm Sewers
- 8 Wastewater Treatment Plants

ENERGY

- 1 Hydro Plants
- 2 Wind Power
- 7 Nuclear Plants
- 8 Solar Power
- 10 Power
- 14 Transmission & Distribution

ENVIRONMENT

- 1 Environmental Management
- 2 Consulting/Studies
- 2 Environmental Science
- 2 Site Assessment & Compliance
- 2 Solid Waste
- 3 Hazardous Waste
- 4 Chemical & Soil Remediation
- 4 Clean Air Compliance

DESIGN

- 2 Dams & Reservoirs
- 4 Marine & Port Facilities
- 5 Aerospace
- 5 Federal Clients
- 6 Government Offices
- 6 Private Clients
- 7 Pipelines
- 8 General Building

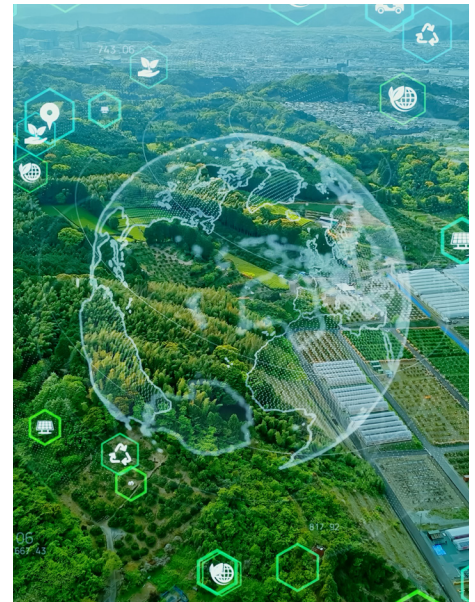
CENTURYLINK GREENHOUSE GAS EMISSIONS INVENTORY

Tetra Tech developed greenhouse gas (GHG) emissions inventories for Qwest Communications International, Inc. (Qwest) operations in the United States from 2006, through 2010, and CenturyLink's U.S. and world-wide operations from 2011, to 2014, (*CenturyLink acquired Qwest in 2011*). CenturyLink's inventory was prepared for submittal to the Carbon Disclosure Project and to The Climate Registry (TCR).

CenturyLink's GHG inventory accounted for emissions of the six original GHGs recognized under the Kyoto protocol: carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons.

CenturyLink's inventory included TCR Scope 1 (direct emissions), Scope 2 (indirect emissions), Scope 3 (optional emissions), and biogenic emissions. Tetra Tech was responsible for identifying emissions sources; calculating emissions following appropriate protocols; and developing an inventory report that summarized the procedures followed for inventory development, identified areas for improvement, and provided recommendations to CenturyLink for tracking and compiling its data in a manner that would be verifiable by an independent, third-party verification body, as required for submittal to TCR.

Tetra Tech documented inventory development activities, results, trends, and suggestions for inventory improvement in an inventory summary report. Tetra Tech included detailed calculation methodologies as an appendix to CenturyLink's inventory summary report. The methodology appendix was sufficiently detailed to provide transparency to CenturyLink's independent third-party verifier.



RELEVANCY

Greenhouse Gas Inventory
Scope 1, 2, & 3 Emissions
Reduction Targets
Trend Analysis

LOCATION

Various Facilities, U.S.

OWNER

CenturyLink
[Qwest Communications
International, Inc.]

DURATION

2009 - 2015

HEALTH CARE SERVICE CORPORATION - BLUE CROSS BLUE SHIELD ASSOCIATION

Health Care Service Corporation (HCSC) contracted Tetra Tech to establish a baseline carbon inventory evaluating greenhouse gas (GHG) emissions from thirty-eight (38) facilities in Illinois, Texas, New Mexico, and Oklahoma. Tetra Tech designed the HCSC carbon inventory according to internationally recognized guidelines and calculation methods for relevant Scope 1, Scope 2, and Scope 3 GHG emissions. The inventory evaluated three greenhouse gases targeted for emission reductions by the Kyoto protocol, including carbon dioxide (CO₂), methane (CH₄), and nitrous Oxide (N₂O) represented by CO₂e-.

Tetra Tech led the client through the process of defining emission inventory boundaries, requirements, and data needs. Tetra Tech collected data for individual facilities, developed and documented emissions calculations, and provided interpretative emissions summaries that provided useful facility performance data to HCSC as well as opportunities for future improvement. Tetra Tech was contracted in 2016 to update the HCSC inventory based upon significant changes throughout their portfolio.



RELEVANCY

Greenhouse Gas Inventory
Scope 1, 2, & 3 Emissions
Reduction Recommendations
Trend Analysis

LOCATION

Illinois, Texas, New Mexico, and
Oklahoma

OWNER

Health Care Service Corporation

DURATION

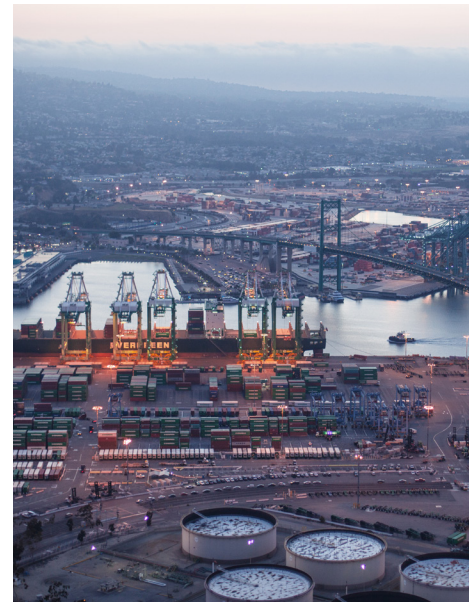
2014 - 2017

PORT OF LOS ANGELES BASELINE GREENHOUSE GAS INVENTORY

Tetra Tech partnered with the Port of Los Angeles (POLA) to provide technical assistance for developing a greenhouse gas (GHG) emissions inventory for the port. POLA is America's busiest port, with record volumes of cargo moving through its 7,500-acre facility.

Tetra Tech developed the emissions inventory by documenting emissions sources and calculating specific emissions consistent with the California Registry's General Reporting Protocol. POLA's 2006 GHG emissions inventory established a baseline that can be used to measure future reductions in CO₂ and CO₂-equivalent gas emissions. The POLA 2006 Inventory boundary included all six original Kyoto-protocol GHGs.

Tetra Tech identified the following sources of indirect and direct emissions within POLA's organizational boundary: purchased electricity recorded on 157 utility meters; 13 pieces of stationary equipment, consisting mostly of generators; and mobile equipment, including 256 on-road fleet vehicles and 146 non-road vehicles including boats and mobile equipment. On-road vehicles include heavy duty vehicles, medium-duty vehicles, and light duty vehicles; non-road vehicles include boats, cranes, forklifts, asphalt pavers and many other construction vehicles and cargo handling equipment.



RELEVANCY

Greenhouse Gas Inventory
Municipal Operations

LOCATION

Los Angeles, CA

OWNER

Port of Los Angeles

DURATION

2007 - 2008

MARKETING AND COMMUNICATIONS SPOTLIGHT

Kentucky Erosion Prevention and Sediment Control Field Guide and Technical Manual

Kentucky Division of Water, Division of Conservation, and Transportation Cabinet, 2003-2007

Working with a technical team from state water, conservation, natural resources, and university programs, Tetra Tech developed and delivered a number of products to improve construction site erosion, sediment, and stormwater control in the Commonwealth. Deliverables included a 100-page full color and laminated Field Guide for construction workers, a 250-page Technical Specifications Manual for design professionals and stormwater plan preparers, a series of 46 technical and field practice workshops across the state, and a web site for accessing the Field Guide, training workshop information, and related materials.

Tetra Tech developed more than two dozen original color graphics depicting various ESC BMPs, provided more than 250 original photographs, developed six separate slide presentations, and produced both manuals and all other materials related to the overall training program. Approximately 3,000 individuals were trained through March 2008. These workshops, manuals, and training materials represented the first statewide effort to upgrade construction site runoff practices in Kentucky.

Municipal Separate Storm Sewer System Compliance & Program Management

Lexington-Fayette Urban County Government, KY, 2012–Present


Tetra Tech has served as LFUCG's Stormwater Program Management Consultant for almost fifteen years. Lexington's MS4 Permit contains requirements pertaining to Public Education and Public Involvement and Participation. Tetra Tech conducts trainings and workshops for city staff and the community for various program elements. This often involves balancing the perspectives of diverse audiences.

In addition, the Tetra Tech team produces technical writing for press releases and community-facing publications including a 2,000+ page report covering the division's activities for each year.

Tetra Tech also regularly attends Lexington Stormwater Stakeholder Advisory Committee meetings to interface with community stakeholders and give presentations on requested topics. Tetra Tech has built a trusting relationship with Lexington stakeholders over the years.



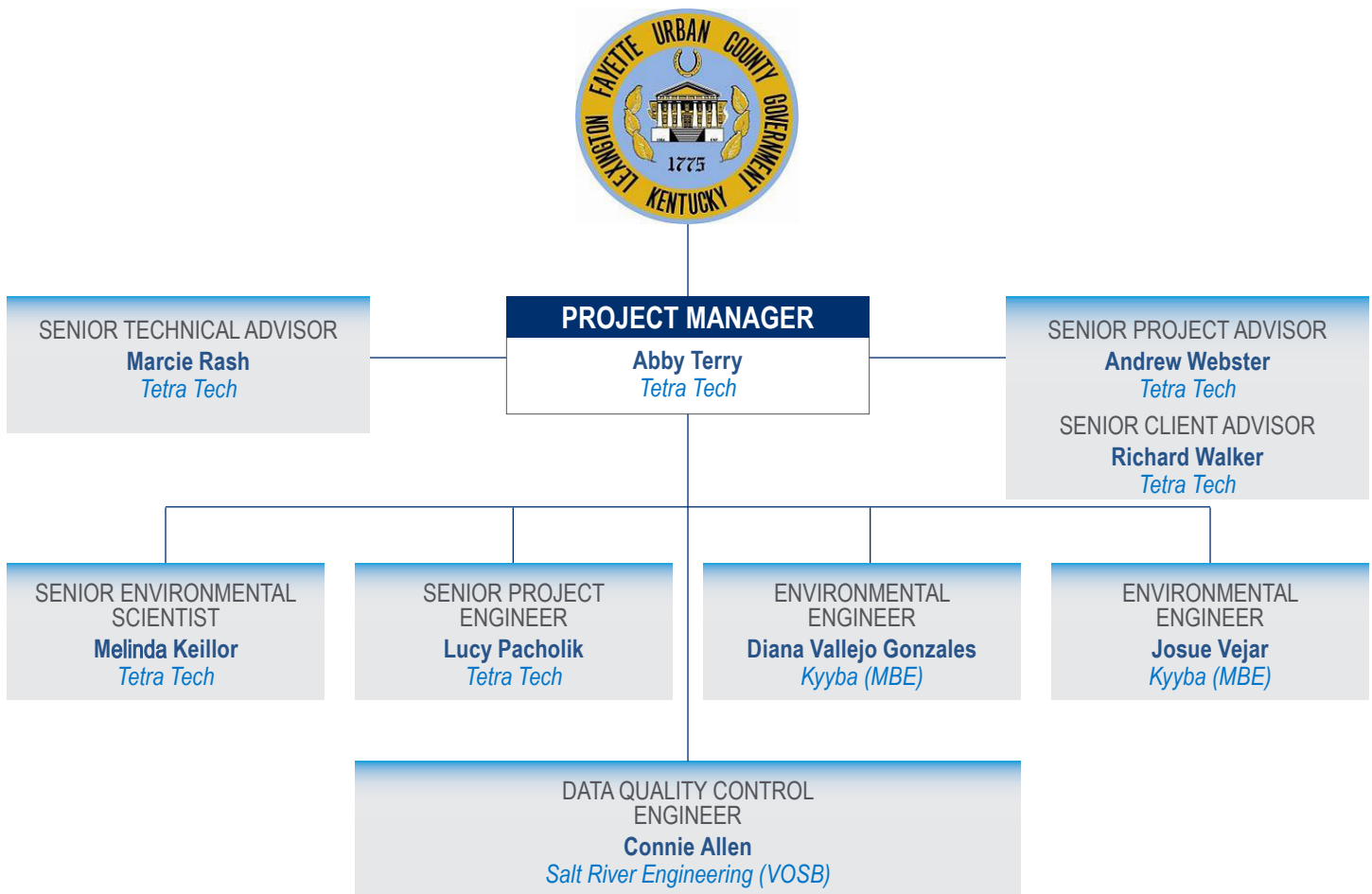
SECTION 2
Our Team



Section 2: Our Team

ORGANIZATIONAL CHART

The Tetra Tech team will provide LFUCG with a highly-qualified group of environmental engineers and scientists with specialized experience. Our team has a rich blend of in-depth local knowledge and national experience.



ANDREW WEBSTER, LEED AP | SENIOR PROJECT ADVISOR

Andy provides international program-level management of Tetra Tech's industrial and commercial client accounts. He has served as Tetra Tech's Ford Global Account Manager since 2012 and directs the Environmental Science & Management service line within the Critical Buildings & Infrastructure business unit.

For over 20 years Andy has provided clients with technical expertise and project solutions related to critical processes and infrastructure projects involving air, water, waste media, design & construction, permitting, compliance solutions, regulatory reporting, and sustainability-related projects – centered on client's unique needs. He has extensive background implementing sustainable Management Systems that leverage an organization's culture, processes, operating practices, and performance objectives. He is also an experienced multimedia environmental compliance and conformance auditor and maintains an ANSI-RAB Lead Auditor certification and services as multi-media SME for regulatory compliance.

RELEVANT PROJECT EXPERIENCE

SUSTAINABILITY

Transformation Sustainability

Ford Motor Company Dearborn Campus, 2016 – 2019

Provided program management and oversight of Tetra Tech's consulting and support of sustainability planning for the Ford's Dearborn Campus Transformation program, a comprehensive renovation and re-building program for a 300-acre campus involving 70 structures and massive infrastructure upgrades estimated at \$900M. Tetra Tech was selected to provide strategic consulting to integrate corporate sustainability objectives into tangible, building specific targets. Initial objectives included targets of LEED, WELL, BREEAM and specific. Tetra Tech's scope included development of planning tools, project tracking, instruction, coordination, consulting, and support on project-specific challenges.

Life Cycle Analyses Studies And Modeling

Center for Innovative Food Technologies, 2015

Tetra Tech was retained by the Ohio Center for Innovative Food Technologies (CIFT) to develop pilot Life Cycle Analysis (LCA) inventories for two member companies. Tetra Tech led each company through the extensive data collection process to develop an LCA model that was then populated using GaBi software. Tetra Tech presented results to each company in a workshop format to educate on model interpretation and identify potential areas of LCA refinement, as well as work through potential initiatives that could reduce resource burden. Results were also presented in a spotlight session at the Ohio CIFT Annual Meeting.

Enterprise GHG Inventory

Health Care Service Corporation, 2014 – 2016

Tetra Tech was initially engaged by Health Care Service Corporation in 2014 to develop enterprise-wide greenhouse gas emissions inventories for the Blue Cross Blue Shield companies. Emission inventories were developed in accordance with established carbon reporting protocols for Scope 1, Scope 2, and select Scope 3 emissions. Tetra Tech led the client through the process of defining emission inventory boundaries, requirements, and data needs. Tetra Tech collected data for individual facilities, developed and documented emissions calculations, and provided interpretative emissions summaries that provided useful facility



TETRA TECH ROLE

Vice President

Senior Program Manager

Environmental Science & Management, Operations Manager

SME, Environmental Compliance

EDUCATION

MS, Environmental Health, University of Michigan

BS, Environmental Protection, Ball State University

REGISTRATIONS/CERTIFICATIONS

- LEED Accredited Professional
- Ford-UAW Safety Engineer Certifications: I, II, and III
- ISO 14001 Lead Auditor
- ANSI-RAB Lead Auditor
- 40-hour HAZWOPER
- DOT/IATA Training

PROFESSIONAL AFFILIATIONS

- Project Management Institute
- US Green Building Council
- National Environmental Health Association
- American Industrial Hygiene Association

OFFICE LOCATION

Ann Arbor, MI

YEARS OF EXPERIENCE

27

ANDREW WEBSTER, LEED AP | SENIOR PROJECT ADVISOR

performance data to HCSC as well as opportunities for future improvement. Tetra Tech was contracted in 2016 to update the HCSC inventory based upon significant changes throughout their portfolio.

Sustainability Management Planning *Sunny Delight Beverages Company, North American Operations, 2007 – July 2014*

Provided high-level corporate coaching and strategic guidance with the development and ongoing implementation of a corporate Sustainability Program built on Triple Bottom Line principles. Sustainability management planning involved leading a team of an organization's senior management through detailed analysis of real and potential economic, environmental, and social risks and opportunities into a uniform sustainability strategy for integration into existing business culture and processes. Successful project delivery has produced two publicly available corporate sustainability reports and has driven continual improvement each year through a cyclical planning and management strategy.

Energy Efficiency and Conservation Block Grant (EECBG) Strategy Development *Department of Energy - Prince George's County, Maryland, 2009*

Provided leadership and coaching to County representatives in the development of a county-wide Energy Conservation Strategy consistent with DOE Block Grant requirements and in alignment with current and ongoing County Programs. The resulting strategy unified county energy efficiency programs under the oversight of a single committee. Additional project elements assisted the County with the identification and prioritization of tasks and activities to allocate DOE Block Grant funding in the amount of \$6.6M.

Wastewater Treatment Plant Energy & Process Optimization *City of Adrian, MI, 2009 - 2009*

Provided overall project leadership to a team of engineers conducting an energy and process optimization assessment for the wastewater treatment facility. Process and facility optimization findings identified included a total potential utility savings of \$240,000/year and \$245,000 of State and utility provider incentives. By working closely with the City, Tetra Tech was able to focus on the largest areas of opportunity and win a \$100K Department of Energy Grant to supplement the required investment costs. Optimization findings included lighting and HVAC retrofits as well as process modifications that would produce larger long-term savings. Due to the engineering needs associated with process modifications recommended, the total simple payback of all optimization findings was 7.0 years.

Existing Building USGBC LEED Gap Analyses *Comerica Bank, Lansing, MI, 2008*

Conducted gap analysis of commercial building, systems, and property against criteria of the U.S. Green Building Council's LEED® for Existing Buildings: Operation & Maintenance. Project objective was to determine attainable LEED® credits and estimate the necessary level of effort and cost of achieving USGBC LEED certification.

Corporate Greenhouse Gas Baseline Inventory *Sunny Delight Beverages Company, North American Operations, 2008*

Managed and led the development of the Sunny Delight Beverages Company North American baseline carbon inventory consisting of five manufacturing facilities and the NA corporate offices. Consulted with client on different carbon reporting protocols, emission calculation methodologies, and determination of the carbon inventory scope and boundaries in a manner consistent with overall sustainability strategy. Identified and communicated a uniform strategy for data collection and emissions calculations for the initial inventory development and future performance tracking. Assembled all carbon emissions data in formats consistent with enterprise sustainability reporting – by scope, units, facility, and organization, as well as normalized carbon emission metrics.

Resource Efficiency Assessments *Sunny Delight Beverages Company, North American Operations, 2008*

Managed and led energy and water assessments with the objectives of 1) determining baseline efficiency of operations, and 2) identification of no-cost and low-cost conservation opportunities. Identified a strategy and method for enterprise data collection process that includes detailed facility and operation utilities, supplemented by facility sub-metering or other analyses, facility and process prints, and identification of major facility processes and equipment. Completion of baseline efficiency calculations and establishment of facility-specific and enterprise-wide normalized metrics to track progress toward meeting corporate efficiency goals. Assessments provided a minimum of 20% overall low-cost (<2 year ROI) conservation/savings opportunities energy and water/sewer.

Resource Efficiency Assessments *Sunny Delight Beverages Company, North American Operations, 2008*

Managed and led energy and water assessments with the objectives of 1) determining baseline efficiency of

ANDREW WEBSTER, LEED AP | SENIOR PROJECT ADVISOR

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ENVIRONMENTAL MANAGEMENT AND COMPLIANCE

Environmental Management and Compliance *CBRE – Deutsche Bank, Implementation of Compliance Program, United States, 2019 – Present*

Program Management to CBRE on their international Deutsche Bank account for a comprehensive environmental compliance program. The program has been structured to provide compliance assurance related to critical infrastructure within the banking industry. Services have included comprehensive environmental assessments of real estate and operations across the US portfolio to identify regulatory applicability, compliance status, prioritization and completion of compliance gaps.

Compliance Program *Confidential Client, Financial Services Industry, United States, 2012 – Present*

Serves as Program Manager since 2012, identifying, developing, and coordinating all compliance activities across commercial real estate portfolio including permit renewals, regulatory filings, agency coordination, preparation and update of required operational plans, procedures, and SOPs, periodic auditing activities, coordination with business group management and engineering staff, annual regulatory reporting, and compliance training activities.

Environmental Permitting *DTE Energy, Blue Water Energy Center, 2017 – 2019*

Provided program leadership and technical expertise on the complex permitting program for the DTE Blue Water Energy Center resulting in the successful issuance of all necessary joint EGLE/USACE permits and Renewable Operating Permit. The Blue Water Energy Center is a nominal 1,150-megawatt combined-cycle electric generating facility on a 100-acre undeveloped site adjacent to the current DTE Belle River Power Plant and St. Clair Power Plant.

316(b) Compliance Strategy/Ongoing Compliance Support *DTE NorthwindTM LLC, 2015 – 2018*

As Program Manager of Tetra Tech's compliance support for DTE NorthwindTM, services included development of a compliance strategy, submittal of a Biological Impingement Study Plan for MDEQ approval, and development of 316(b) Application Requirements, in addition to initiating the submitted biological study. The DTE NorthwindTM facility is a 45 MGD cooling water system for a commercial property and represents impacted industrial facilities that are impacted by the 316(b) Final Rule. Andy led the team of multi-disciplinary engineers and scientists supporting the facility provided support to demonstrate compliance with rule through a combination of 1) seeking credit for the operation of existing variable speed pumps as Best Technology Available, and 2) determination of de minimis level of impingement.

Design of Impingement Reduction Measures *DTE Energy, 2014 – 2015*

As Program Manager, Andy provided oversight of engineering studies related to cooling water intake screenhouse retrofit of Ristroph-type modified traveling water screens and fish return system at a fossil fuel power plant to meet the impingement mortality reduction standards for EPA's 2014 Final Rule for Section 316(b) of the Clean Water Act.

Preparation of 316(b) NPDES Application Requirements *DTE Energy, Multiple Facilities, 2013 – 2015*

Program Manager for the development of 316(b) NPDES Application Requirements for six (6) DTE Energy generating stations: Belle River, St. Clair, River Rouge, Trenton Channel, Monroe, and Fermi II. Andy was responsible for the coordination of a multi-disciplinary team responsible for significant amounts of data collection, analysis, engineering feasibility and cost-evaluation studies, biological data related to source waters and existing impingement and entrainment, as well as existing cooling water intake fish protection measures and general operating practices. Information for each facility was summarized and presented based on requirements of the 316(b) Final Rule, 40 CFR 122.21 (r)(2) through (r)(9).

EHS Compliance Program *BMW of North America, United States, 2008 – 2013*

Tetra Tech provides multi-media EHS compliance services to BMW of North America. Mr. Webster has served as Program Manager since 2008, administering as well as performing environmental Legal and Compliance (L&C)

ANDREW WEBSTER, LEED AP | SENIOR PROJECT ADVISOR

audits, Environmental Management System (EMS) audits, and EHS compliance consulting and support at 27 facilities throughout the US and Canada.

Auditing Program

Confidential Client, Financial Services Industry, United States, 2008 – 2017

Served as Program Manager since 2008, administering as well as performing environmental Legal and Compliance (L&C) audits and Environmental Management System (EMS) audits at nine major client facilities throughout the Americas Region. Audit activities are centered on facility critical systems and infrastructure which are audited against site standard operating procedures, permits, licenses, spill prevention plans, and emergency response plans as well as other applicable federal, state, and local regulations.

Spill Prevention and Control Countermeasures (SPCC) Tank Integrity Testing Program

Ford Motor Company, United States, 2009 – 2010

Program Manager overseeing a scope of work involving 35 Ford facilities throughout the United States that entailed updating specific SPCC Plan language with a uniform approach, provide PE certification to plan amendments, conduct integrity inspections based on industry standard criteria, develop inspection checklists for facility use, and training of facility personnel involved with ongoing SPCC compliance responsibilities. Program management responsibilities included oversight of all aspects of program delivery and financial responsibilities including the involvement of certified, tank inspection subcontractors. Through the use of standard templates, a concentrated project team, and the Program Manager's high-level of involvement Tetra Tech was able to implement significant cost-savings through our overall program approach.

Remote Site Risk and Vulnerability Assessments

Enterprise Risk Management Group, AT&T Wireless, United States, 2004 – 2005

Assessments identified risks associated with company buildings and properties in the areas of Physical Security, Environmental Health and Safety, Business Continuity, and to confirm compliance with federal, state, local, and company policy. Assessments also included a detailed review of surrounding areas and properties with the potential impact on company operations. Assessments were conducted at the physical site through discussions with site personnel and a site walk-through to perform visual observations.

Emergency Response Plans (ERPs)

Ford Motor Company, Multiple Locations, 2000 – 2005

In cooperation with Marsh Risk Consulting, an insurance company, acted as program leader for the design and development of the environmental portion of Emergency Response Plans (ERPs), and Spill Prevention and Control Countermeasures (SPCCs) for Ford Motor Company automotive assembly and stamping facilities in the U.S., Canada, and Mexico; General Motors World Headquarters; a collegiate university; and a steel industry facility. For the Ford facilities in Mexico and Canada, environmental regulations were researched for the ERPs and the client praised the quality of the Canadian ERPs in particular as being thorough in addressing all requirements.

Integrated Spill Plan Creation and Updating

Multiple Facilities, United States, 2000 – Present

Supported numerous clients throughout the United States with their specific compliance needs related to spill prevention and control through the development of Integrated Spill Plans. Integrated Spill Plans combine (where appropriate) contingency planning elements associated with regulatory requirements of Spill Prevention and Control Countermeasures (SPCC), NPDES/Stormwater Pollution Prevention Plans (SWPPPs), Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), (Emergency Planning Community Right-to-Know Act (EPCRA), and other state/local ordinances for their individual needs or providing a format that was designed by Tetra Tech. Completed integrated spill plan formats for more than 60 different client facilities including automotive, metalworking, foundry, research and development, food manufacturing, pharmaceutical manufacturing, and major metropolitan airport facilities.

Powertrain Divisional Staff Environmental & Safety Engineer

Ford Motor Company, 2002 – 2006

Andy served the Powertrain Division as a staff-level Environmental & Safety Engineer. Primary responsibility was to maintain facility EHS compliance at the Automatic Transmission New Product Center a one-million square foot product development facility that includes a large dynamometer lab, non-destructive testing facility, prototype manufacturing, parabolic test track, and many unique durability and component testing labs. Additional engineering support was provided to Livonia Transmission Plant, Van Dyke Transmission Plant, and Batavia Transmission Plant. ■

MELINDA KEILLOR | SENIOR ENVIRONMENTAL SCIENTIST

Mindy has over 30 years of environmental experience with expertise in waste and air regulations. She has experience with both public agencies, such as the Michigan Department of Environmental Quality (DEQ), which is now the Michigan Department of Environment, Great Lakes, and Energy (EGLE), and for private sector in the waste, automotive, steel, and cement/aggregate industries. Her roles include Environmental Manager at Lafarge Holcim; Environmental Specialist at Toyota; Environmental Engineer at U.S. Steel; and Environmental Health & Safety Manager at EQ (now US Ecology). During her more than 15 years at EQ, she also was the company expert on Federal & State Air regulations. At the beginning of her career, Mindy worked for the State of Michigan, DEQ as a Project Manager, Solid Waste Planning Coordinator, specializing in Solid Waste Management, Enforcement, Hazardous Waste Compliance/Inspection, and Environmental Response.

RELEVANT PROJECT EXPERIENCE

Air Emission Inventory Annual Reporting, Hazardous Waste TSDF Automotive, Manufacturing, Steel, Mining, MI, NY, OH, OK, 1999-2021, 2023

Calculated emissions and prepared annual emission inventory reports for submittal via MI MAERS, NYS ACE, OK SLEIS, OH EBIZ (PER & FER).

Air Compliance Reporting (Title V, PTI, PTIO), Hazardous Waste TSDF Automotive, Steel, Mining, MI, NY, OH, OK, 1999-2021, 2023

Prepared compliance reports (monthly, semi-annual and annual). Established and verify inspections and recordkeeping. Trained on new requirements. Ensured compliance MACTs/NESHAPs including Refrigeration NESHAP (F), Asbestos (M), Benzene NESHAP (FF), Landfill & LFG (GGG, AAAA), Boiler (DDDDD), RICE (JJJJ, ZZZZ), TSDF (DD), Mining (OOO), Remediation (GGGGG), Steel (CCC, FFFFF). Also submitted reports for GHG, Benzene NESHAP and Subparts DD, FF, AAA, GGG, etc. also Project Manager overseeing scope of work for monthly reporting.

Air Permit Application, Ohio EBIZ, PTIO, Renewable Energy OH, 2022

Populated EBIZ database with PTI permit elements in preparation for issuance of the PTIO. Air Potential-to-Emit (PTE) and Air Permitting, Hazardous Waste TSDF, Mining, Automotive Battery Manufacturing, Manufacturing. MI, IN, KY. 1999-2014, 2022-2023. Prepared and submitted simple administrative amendments. Submitted and negotiated permits, amendments, and renewals. Collected data, prepared PTE, prepared draft permit application and submitted permit application on behalf of client. Reviewed draft applications and permit conditions and negotiated final conditions. Acted as single point-of-contact between Agency and client with any follow-up regarding the permit application.

Air RMP (EPA Risk Management Program, 112r, 40 CFR 68), Renewable Energy OH, 2022-2023

Preparation of initial Risk Management Plan and initial set-up and entry into CDX, RMP e*Submit Portal. Audits – Hazardous Waste TSDF, Automotive R&D, Manufacturing, Steel, Mining. MI, NY, OH, OK, CAN. 1999-2022. Conducted internal EMS, ISO 14001 & environmental inspections to ensure compliance with permits, regulations, and internal procedures. Developed an action plan for any identified compliance issues. Assisted with Due Diligence Air Reviews. Ensured compliance with the management system. Prepared for annual third-party audits. Followed up on countermeasures related to third party audits.



EDUCATION

BS, Natural Resources, University of Michigan, 1993

REGISTRATIONS/CERTIFICATIONS

- Industrial Wastewater Operator, A1a, W 7486
- Industrial Storm Water Operator, A1i, I-14905
- ISO 14001 Lead Auditor Training
- DEQ Hazardous Waste Inspector
- McCoy RCRA Training
- Hazardous Materials (HAZMAT), DOT, IMDG, IATA
- MIOSHA/OSHA Industrial, 30-hr
- MIOSHA/OSHA Construction 10-hr
- OSHA 24-hr Hazardous Waste Operations & Emergency Response (HAZWOPER), 8-hr Refreshers
- MSHA 24-hr 2017 & 8-Refreshers

PROFESSIONAL AFFILIATIONS

- Air & Waste Management Assoc
- Board Member, Air & Waste Management Assoc, East MI Chapter
- Suppliers Partnership for the Environment
- Wildlife Habitat Council

OFFICE LOCATION

Ann Arbor, MI

YEARS OF EXPERIENCE:

33

MELINDA KEILLOR | SENIOR ENVIRONMENTAL SCIENTIST

Onsite Environment Staff Support *Manufacturing, MI, 2022-2023*

Provided on-site support one day per week. Ensured facility compliance with federal, state and local environmental regulations and overseeing such tasks as inspections and training.

Episode Plan *Automotive, MI, 2022-2023*

Project Manager. Oversaw scope of work. Episode Plan was prepared to serve as an Integrated Contingency Plan (ICP) per client requirements. Performed site visit. Reviewed applicable federal, state and local requirements including: RCRA, Used Oil, SPCC, CERCLA, TSCA, DOT and FL/CL. Using client procedure, included information related to emergency planning, preparedness and response; spill response; notification and reporting.

Air Greenhouse Gas (GHG), Hazardous Waste TSDF *MI, 2011-2014*

Determined threshold and applicability. Prepared calculations for reporting into the e-GGRT portal.

Tier II Reporting (SARA Title III, Tier II, 312) Hazardous Waste TSDF *Automotive R&D, Mining, MI, NY, OH, 1999-2021, 2023*

Collected facility inventory data, conduct physical inspection and SDS review. Calculated thresholds and emission calculations. Submitted via Tier II Submit and Tier II Manager. also Project Manager overseeing scope of work for monthly reporting.

Toxic Release Inventory Reporting (SARA Title III, Tier III, 313), Hazardous Waste TSDF, Automotive, Mining (Asphalt & Ready Mix)

MI, NY, OH, 1999–2015, 2017-2018, 2023 Reviewer 2022-2023
Prepared Section 313 TRI Reports (Form R). Gathered relevant information on product usage, composition, process operation, waste shipments, water discharges, and analytical reports. Used Excel to calculate threshold quantities. Calculated release quantities, off-site transfers, other reporting requirements, and entered results into EPA Central Data Exchange (CDX) software.

Asbestos - Hazardous Waste TSDF *MI, 1999–2014*

Reviewed potential incoming chemicals and waste streams for applicability and reporting. Worked with relevant departments to establish operating procedures to ensure compliance.

Award Applications

National Stone Sand and Gravel Association & Michigan Manufacturing Association, Mining, MI, NY, OH, 2017-2021

Gathered Data, Prepared and submitted award applications for quarries and aggregate facilities for NSSGA & MAA

CERCLA - Hazardous Waste TSDF *MI, 1999–2014*

Reviewed potential incoming chemicals and waste streams for applicability and reporting including 40 CFR 63, Subpart GGGG.

Department of Homeland Security, Hazardous Waste TSDF Requirements *DHS, MI, 1999–2014*

Reviewed Chemicals of interest (COI) under Chemical Facility Anti-Terrorism Standards (CFATS) against screening threshold quantities (STQ) and concentrations. Used the table in Appendix A against security potential for release, theft or diversion or sabotage. Completed the DHS surveys Top-Screen survey, Security Vulnerability Assessment (SVA), Site Security Plan (SSP), and Personnel Surety Program (PSP).

Hazardous Waste Inspections (Part 111, formerly Act 64 & RCRA) State Agency, MI, 1995-1997

State Inspector of licensed hazardous waste treatment, storage, disposal, facilities (TSDF), transporters and generators. Investigated complaints. Entered data in DEQ & EPA database. Reviewed license and permit applications. Wrote technical violations and compliance letters. Explained regulation requirements. Answered questions regarding the compliance status of assigned facilities, waste reduction, reclamation, and recycling.

Hazardous Waste Management (Part 111, formerly Act 64 & RCRA), Hazardous Waste TSDF *Automotive R&D, Mining 1999 – Present*

Managed compliance including EGLE & EPA (Region V) Hazardous Waste permit. Submitted Annual Reports including: Biennial Report, Waste User Fee and Certification, Waste Minimization Plan, and Wayne County EPA RCRA and reporting. Audited and maintained recordkeeping including self-inspections, manifests, Land Disposal Restriction (LDR) forms, lab fingerprints, analytical, and waste profiles. Ensured compliance with permit and regulations including Subpart AA, BB & CC. Performed frequent physical inspections to verify labeling, container and tank management, satellite, and universal waste management. Coordinator for emergencies including fires, releases, and associated agency reporting.

MELINDA KEILLOR | SENIOR ENVIRONMENTAL SCIENTIST

Hazardous Materials (HAZMAT, DOT, IATA, IMDG) *Waste Management Company, Automotive R&D, Mining, 1999-2021*

Ensured tanks and containers were stored and labeled appropriately and reviewed shipping documents. Submitted Annual Registration. Reviewed chemical SDS'.

Solid Waste (Part 115, formerly Act 641) *State Agency, Waste Management Company, Automotive, Mining, MI, 1993-1995, 1997-1999-2016, 2017-2021*

Support Solid Waste Management Plans & interpretation of the Solid Waste regulations (Part 115 of Action 451, formerly Act 641). Relationship with EGLE (formerly DEQ) Solid Waste Unit. Oversaw Grant Project implementation, answered general questions from the public regarding Battery Recycling, Michigan's Bottle Bill, Solid Waste Recycling, Composting, Household Hazardous Waste, Used Oil Recycling & other solid waste programs in Michigan. Company point of contact for assigned facility compliance, agency inspections, inquiry & correspondence. Managed compliance and maintained recordkeeping including DEQ solid waste permit and Wayne County quarterly reporting.

Spill Prevention Control and Countermeasures *Mining, MI, NY, OH, 2017-2021*

Reviewed SPCC Plans to ensure required language was included and audited site against plan. Coordinated updates to align with site.

Water Annual Withdrawal (Use) Reporting *Mining, MI, NY, OH, 2017-2021*

Collected and reviewed facility operating data and operations for the previous year. Submitted Reports to state agency.

Water Groundwater *Mining, MI, 2017-2021*

Coordinated and submitted permit renewals. Worked with finance department to pay annual fees.

Water Industrial Stormwater NPDES/SWPPP *(Individual and General) Mining, MI, NY, OH, 2017-2021*

Obtained permits and renewals. Reviewed SWPPP to ensure current. Verified inspections, reporting, etc.

Toxic Substances Control Act Compliance *Waste Management, Automotive R&D, MI, 1999-2016*

Reviewed potential imported chemicals and waste streams for applicability and TSCA reporting.

Tanks (AST) – Hazardous Waste TSDF *Automotive R&D, Mining, MI, NY, OH, 1999-2021*

Scheduled tank integrity tests and verified compatibility. Conducted inspections to ensure labeling and storage compliance.

Tanks (UST) Inspection *Automotive, Mining, 2014-2016*

Scheduled quarterly tank inspections. Verified interstitial space integrity.

Award Applications *Wildlife Habitat Council, Mining, 2017-2021*

Coordinated with regional facilities to gather data, populate portal and submit award applications.

Hazardous Waste TSDF Database Tracking and Reporting *Steel, Mining, MI, NY, OH, OK, 1999-2014, 2016-2021*

Developed and utilized compliance tracking tools to ensure compliance with environmental laws, regulations, and permits. Submitted reports and verified compliance based on generated reports and data. ■

LUCY PACHOLIK, PE, CDT | SENIOR PROJECT ENGINEER

Lucy is proficient in ArcGIS, AutoCAD Civil 3D, KYPipe, InfoSWMM, InfoWater, HydroCAD, PondPack, Microsoft Excel, Word, and PowerPoint. She provides engineering, technical, and clerical support for environmental compliance projects for private, commercial, industrial, and government clients. This work includes air, drinking water, wastewater, hazardous material, and solid waste permitting; Spill Prevention, Control & Countermeasure (SPCC), Groundwater Protection Plans (GPP), and Best Management Practices (BMP) Plans; data analysis and emissions evaluations for multiple facilities under a major national environmental contract; and project report technical quality control reviews. She is knowledgeable about the collection, preservation, and transporting of samples for analysis, as well as experienced in the operation and calibration of water and wastewater parameter monitoring devices and sequential samplers. In addition, Ms. Pacholik oversees the annual renewal and continual compliance of Tetra Tech's Kentucky Wastewater Laboratory Certification Program.

RELEVANT PROJECT EXPERIENCE

AIR PERMITTING AND COMPLIANCE

Title V Air Permitting and Compliance *Sheridan KY, Versailles, KY, 2022 – Present*

Project Engineer. Completes semi-annual air monitoring reports, annual air compliance certification, and emissions inventory for submittal to state and federal regulatory agencies. Maintains air permitting records and submits air permit renewal documents. Assisted with developing stack test protocol and stack test reporting, as required by air permit.

Air Permitting and Compliance *Minova USA, Georgetown, KY, 2022 – Present*

Project Engineer. Prepares permit modification application for submittal to state regulatory agencies.

Air Permitting and Compliance *Kentucky Finance Cabinet, Department of Corrections, Frankfort, KY, 2021 – 2022*

Project Engineer. Assists with permit application and emission source registration at two correctional facilities for submittal to state regulatory agencies.

Air Permitting *Morehead State University, Morehead, KY, 2021*

Project Engineer. Prepared and submitted permit renewal application for educational institution.

Air Permitting and Compliance *Eastern Kentucky University, Richmond, KY, 2019 – Present*

Project Engineer. Completes semi-annual air monitoring reports, annual air compliance certification, and emissions inventory for submittal to state and federal regulatory agencies. Maintains air permitting records and submits air permit renewal documents.

Title V Air Permitting and Compliance *Polyair Packaging, Bardstown, KY, 2017 – Present*

Project Engineer. Completes semi-annual air monitoring reports, annual air compliance certification, and emissions inventory for submittal to state and federal regulatory agencies. Maintains air permitting records and submits air permit



EDUCATION

MS, Civil Engineering, University of Kentucky

BS, Civil Engineering, University of Kentucky

BA, Arts and Sciences, University of Kentucky

REGISTRATIONS/CERTIFICATIONS

- Professional Engineer: KY-37317
- Construction Documents Technology (CDT)
- Kentucky Erosion Prevention and Sediment Control (KEPSC) Inspector

OFFICE LOCATION

Lexington, KY

YEARS OF EXPERIENCE

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LUCY PACHOLIK, PE, CDT | SENIOR PROJECT ENGINEER

renewal documents. Prepares and submits annual Tier II reports. Assists facility with maintaining risk management plan, including compliance audits, process hazard analyses, and offsite consequence analyses.

Title V Air Permitting and Compliance

Hardin County Landfill, Elizabethtown, KY, 2015 – 2019

Project Engineer. Completed Title V semi-annual air monitoring reports for submittal, and annual air compliance certification and emissions inventory. Performed greenhouse gas generation calculations and submitted annual greenhouse gas report using EPA's electronic Greenhouse Gas Reporting Tool (e-GGRT). Maintained air permitting records and submittal of air permit renewal documents.

Title V Air Permitting and Compliance

Novelis Aluminum, Berea, KY, 2016 – 2019

Project Engineer. Assisted with developing stack testing protocol and stack test reporting, as required by air permit. Assisted plant staff with Title V air permit reporting.

Title V Air Permitting

The Okonite Company, Richmond, KY, 2019

Project Engineer. Assisted with preparing and submitting permit renewal application for cable manufacturing company.

Title V Air Permitting

Walle Corporation, Winchester, KY, 2016 – 2017

Project Engineer. Assisted with preparing Title V construction and renewal permits for label and packaging company.

Combustion Sources Registration

Education Realty Trust, Memphis, TN, 2017 – 2018

Project Engineer. Assisted with preparing and submitting air permit registrations for 13 student dormitories located on the University of Kentucky campus.

WASTEWATER

Sneads Branch Pump Station Elimination

Louisville Metropolitan Sewer District, KY, 2022

Project Engineer. Designed sanitary relief sewer to dewater existing combined sewer system. Assisted with permit compliance and development of specifications and cost estimate.

West Hickman Wet Weather Storage Facility

Lexington-Fayette Urban County Government, Lexington, KY, 2015 – 2020.

Project Engineer and Construction Administrator. Assisted in construction permitting process, specification review, and preparing submittals to LFUCG and KIA. Assisted in

analyzing proposed stormwater management options for the development site including detention facilities and erosion control measures. The development includes two 22 MG storage tanks and a new headworks facility.

Wolf Run Wet Weather Storage Facility

Lexington-Fayette Urban County Government, KY, 2014 – 2016

Project Engineer and Construction Administrator. Assisted in specification and plan review as well as preparing submittals to LFUCG. Reviewed field reports and verified contractor and subcontractor compliance with project's U.S. Department of Housing and Urban Development wage determination. The development includes one 8 MG storage tank and a new pump station.

STORMWATER

Pebble Creek Bank Stabilization

Lexington-Fayette Urban County Government, KY, 2022 – Present

Project Engineer. Analyzed failing stream bank in residential area and developed alternatives for bank stabilization. Assisted with hydraulic modeling to establish FEMA flood elevations using HEC-RAS software. Developed initial cost estimates and designed selected alternatives in AutoCAD Civil 3D. Creates construction drawings, easement exhibits, and project specifications. Assists during construction phase by reviewing shop drawings.

Viley Road Stormwater Analysis

Lexington-Fayette Urban County Government, KY, 2022

Present Project Engineer. Assisted with hydraulic modeling of a residential area and developed alternatives to mitigate flooding issues. Designed preliminary exhibits for selected alternatives in AutoCAD Civil 3D. Developed initial cost estimates.

Campbell Lane, Bob-O-Link Drive, and Barnard Drive Stormwater Improvements

Lexington-Fayette Urban County Government, KY, 2020 – Present

Project Engineer. Performed hydraulic modeling using Innowyze InfoSWMM to analyze and resolve flooding issues at three separate locations in Lexington. Developed initial cost estimates and designed selected alternatives in AutoCAD Civil 3D. Created construction drawings, easement exhibits, and project specifications. Assists during construction phase by reviewing shop drawings.

Industry Road Culvert

Lexington-Fayette Urban County Government, KY, 2020 – 2022

Project Engineer. Performed hydraulic modeling for redesign of failing railroad culvert using HydroCAD

LUCY PACHOLIK, PE, CDT | SENIOR PROJECT ENGINEER

Stormwater Modeling software. Surveyed contributing stormwater piping system and mapped system in ArcGIS and AutoCAD Civil 3D. Developed initial cost estimates, grading/topological design, and creation of project specifications.

KPDES Permit Compliance

Confidential Client, Maysville, KY, 2020 – 2021

Project Engineer. Developed Standard Operating Procedures to ensure compliance with Kentucky Pollutant Discharge Elimination System (KPDES) monitoring program while dewatering Ash Pond.

Firethorn Detention Basin Improvements

Lexington-Fayette Urban County Government, KY, 2019 – 2020

Project Engineer and Construction Administrator. Performed hydraulic modeling for redesign of failing detention basin using Bentley PondPack software. Assisted with initial cost estimates, surveying, grading/topological design, and creation of project specifications. Assisted during construction phase by reviewing shop drawings and pay applications.

Program Management

Lexington-Fayette Urban County Government, KY, 2015 – Present

Project Engineer. Assists with updating Lexington's critical culverts GIS database for the Stormwater Quality Management Program as part of the consent decree. Assists with leading coordination meetings between various municipal divisions. Assists with analysis of various post-construction water quality controls, including hydrologic models and water quality sampling. Also created spreadsheet to aid LFUCG in meeting time-specific consent decree requirements. Assisted with submitting annual MS4 report to the US Environmental Protection Agency.

KPDES Permit Compliance

Applegate Greenfiber, Springfield, KY, 2015 – Present

Project Engineer. Assists facility with KPDES monitoring program including discharge monitoring reports and training for new employees. Assists facility with maintain certification through the Kentucky Wastewater Laboratory Certification Program.

DRINKING WATER

Rip Rap Well Field Improvements

City of Dayton Department of Water, OH, 2023 – Present

Project Engineer. Designed four 3,150 gpm drinking water wells and associated piping in AutoCAD Civil 3D. Created construction specifications for site civil work.

Beasley Lane Line Extension

Henry County Water District No. 2, Sulfur, KY, 2022

Project Engineer. Designed 1,500 LF drinking water line extension in AutoCAD Civil 3D. Used KYPipe to determine minimum/maximum pressures and flushing velocity. Submitted Drinking Water Distribution Construction Application to Kentucky Division of Water for approval.

Zen Forest Line Extension

Henry County Water District No. 2, Turner's Station, KY, 2021

Project Engineer. Designed 3,000 LF drinking water line extension in AutoCAD Civil 3D. Used KYPipe to determine minimum/maximum pressures and flushing velocity. Submitted Drinking Water Distribution Construction Application to Kentucky Division of Water for approval.

Distribution System Design and Hydraulic Model Analysis

Henry County Water District No. 2, Campbellsburg, KY, 2019 – Present

Hydraulic Engineer. Analyzes the hydraulic performance of the District's water distribution system under current and future demands using KYPipe modelling software. Develops model scenarios to analyze proposed infrastructure alternatives and recommended pipe diameters, connection points, and pumping improvements. Designs new water lines, relocations, and extensions.

Estates of L'Esprit Subdivision

Prism Engineering Group LLC, La Grange, KY, 2021

Hydraulic Engineer. Performed hydraulic analysis on proposed drinking water line in new subdivision using KYPipe. Submitted Drinking Water Distribution Construction Application to Kentucky Division of Water for approval.

KY HWY 146 Water Line Relocation

Kentucky Transportation Cabinet/Henry County Water District No. 2, Smithfield, KY, 2019 – Present

Project Engineer. Assisted with design for relocation of 12,500 LF of drinking water lines in AutoCAD Civil 3D. Performed hydraulic analysis using KYPipe to determine minimum/maximum system pressures and submitted Drinking Water Distribution Construction Application to Kentucky Division of Water for approval. Assisted with developing and updating cost estimates. Assists during construction phase by reviewing questions and shop drawings.

Midtown Booster Station Review

City of Ann Arbor, MI, 2020 – 2022

Hydraulic Engineer. Completed review of a proposed booster station for using Innovyze InfoWater, including evaluation of system pressures and fire flows, operating point, pump overlap and cycling, and the impact on the existing system.

LUCY PACHOLIK, PE, CDT | SENIOR PROJECT ENGINEER

Coal Combustion Residual Units: CCR Disposal Study *Confidential Client, Maysville, KY, 2020 – 2022*

Project Engineer. Designed and tested optimal ratios for FGD brine/CCR mixtures for landfill disposal. Designed on-site lysimeter installation. Reviewed laboratory analytical results and compiled industry research for comprehensive report.

Groundwater Monitoring Well Design and Installation *Confidential Client, Winchester, KY, 2016*

Project Engineer. Assisted with the development of groundwater monitoring wells.

SOLID WASTE

Environmental Monitoring and Regulatory Compliance *Hardin County Landfill, Elizabethtown, KY, 2015 – 2019*

Project Engineer. Produced quarterly surface water and groundwater reports for submittal to regulatory agencies. Conducted quarterly groundwater, surface water, leachate, and methane monitoring. Conducted statistical analysis of groundwater sampling results. Completed Title V semi-annual air monitoring reports for submittal, and annual air compliance certification and emissions inventory. Maintained air permitting records and submittal of air permit renewal documents.

Maxey Flats Final Closure Cap, Maxey Flats Disposal Site *Fleming County, Hillsboro, KY, 2015*

Construction Administrator. Managed all construction submittals.

HAZARDOUS WASTE

Hazardous Waste Regulatory Compliance *Applegate Greenfiber, Springfield, KY, 2015 – Present*

Project Engineer. Prepares and submits annual Tier II reports and annual Toxic Release Inventory (TRI) reports.

Flammable Liquid Storage Compliance *Minova USA, Georgetown, KY, 2022 – Present*

Project Engineer. Reviews proposed tank specifications for installation of aboveground storage tank intended to store flammable liquid. Prepares and submits required permit applications to the Kentucky Division of Fire Protection and the Kentucky Division for Air Quality.

AIRPORTS

Environmental Monitoring and Regulatory Compliance *Blue Grass Airport, Lexington, KY, 2015 – 2019*

Project Engineer. Assisted with environmental monitoring program. Duties included reporting and coordination of NPDES monitoring, STI001 inspections, Intergraded Spill Plan updates, and maintenance of flow meters. Submitted

annual Tier II reports. In addition, assisted in monitoring and maintaining analyzer equipment that controls and segregates glycol runoff from clean stormwater.

CIVIL SITE

Southwestern Sluice Gate Chamber RTC Enhancements *Louisville Metropolitan Sewer District, KY, 2021 – Present*

Project Engineer. Assisted with grading/topological design, potable water design, stormwater design, and development of specifications and cost estimates. The project includes the installation of a weir structure to enhance the functionality of the real-time control system at an existing sluice gate chamber.

Rental Car Quick Turn Around Facilities *Blue Grass Airport, Lexington, KY, 2016 – 2017*

Project Engineer. Assisted with grading/topological design, stormwater design, specification review, and initial cost estimates for the QTA facilities.

Spill Prevention Control and Countermeasure Plans Update *Eastern Kentucky University, Richmond, KY, 2019 – 2020*

Project Engineer. Assisted with updating SPCC and GPP, including inspecting and cataloging new assets.

Update SPCC and GPP *Berea College, Berea, KY, 2018*

Project Engineer. Assisted with updating SPCC and GPP.

Update SPCC, GPP, and SWPPP *Firestone, Williamsburg, KY, 2018*

Project Engineer. Reviewed site assessment and assisted with updating SPCC, SWPPP, and GPP for facility.

Update SPCC *Confidential Client, Florence, KY, 2019*

Project Engineer. Reviewed site assessment and assisted with updating SPCC.

Update SPCC and GPP *Confidential Client, Bowling Green, KY, 2019*

Project Engineer. Reviewed site assessment and assisted with updating SPCC and GPP.

Update SPCC *Confidential Client, Louisville, KY, 2019*

Project Engineer. Reviewed site assessment and assisted with updating SPCC.

Update SPCC *Confidential Client, Lexington, KY, 2020*

Project Engineer. Reviewed site assessment and assisted with updating SPCC. ■

ABBY TERRY, EIT, LEED GREEN ASSOCIATE | PROJECT MANAGER

Abby is a project engineer with diverse experience in environmental compliance. She is experienced in air, water, and waste, giving her a broad skillset to contribute to projects. Abby has provided municipal separate storm sewer system program management to the Lexington-Fayette Urban Government for over four years on the ten elements of their permit: public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management in new development and redevelopment, pollution prevention for municipal operations, industrial facility stormwater pollution prevention, water quality monitoring, reporting and recordkeeping, and total maximum daily loads. As a result, Abby has a deep understanding of the dynamics and stakeholders of the Lexington community.

RELEVANT PROJECT EXPERIENCE

KEY PROJECT SPOTLIGHT

Municipal Separate Storm Sewer System Compliance & Program Management *Lexington-Fayette Urban County Government, KY, 2019–Present*

Project Engineer. Provides program management services to ensure compliance with the city's MS4 Permit. Develops policies and procedures for various program elements to be used by city staff and the community. Produces technical writing for press releases and community-facing publications including a 2,000+ page report covering the division's activities for each year. Conducts trainings and workshops on various program elements for city staff and community stakeholders. Attends Stormwater Stakeholder Advisory Committee meetings to interface with community stakeholders.

ENVIRONMENTAL MANAGEMENT AND COMPLIANCE

Auto Industry

Confidential Client, United States, 2022 – Present

Regulatory Reporter. Provides regulatory reporting services in support of compliance with NPDES, SARA, Title V, MACT, HAPs rules, and other federal/state/local ordinances for multiple facilities. Produces monthly emissions reports tracking emissions of various processes and annual emissions inventories. Analyzes new products for impact to emissions and regulatory ramifications. Participates in industry stakeholder group meetings focused on sustainability.

Energy Industry

Confidential Client, United States, 2022 – Present

Provides technical support of development of annual air emission inventories including criteria air pollutants, air toxics, and greenhouse gases for power plant. Provided assessment of solar farm experiencing severe erosion. Provided support on submittal of industrial wastewater discharge permit application and accompanying Slug Plan update.

Financial Services Industry – Tier II Reporting

Confidential Client, United States, 2022 – Present

Project Engineer. Develops facility inventories of chemicals to comply with EPCRA requirements. Prepares annual Tier II forms for submission. Conducts quarterly evaluations of facility inventories. Develops and updates Risk Management Plans for facilities in states with applicable requirements.



EDUCATION

BS, Civil Engineering, University of Kentucky

REGISTRATIONS/CERTIFICATIONS

- Engineer in Training, KY-15830
- LEED Green Associate
- Kentucky Erosion Prevention and Sediment Control (KEPSC) Inspector

PROFESSIONAL AFFILIATIONS

- Kentucky Society of Professional Engineers
- Kentucky Stormwater Association
- Society of Women Engineers

OFFICE

Lexington, KY

YEARS OF EXPERIENCE

5

ABBY TERRY, EIT, LEED GREEN ASSOCIATE | PROJECT MANAGER

Auto Industry – SPCC Rule

Confidential Client, United States, 2022

Project Engineer. Conducted site visit to inventory petroleum products for development of a Spill Containment, Control, and Countermeasures Plan for compliance with 40 CFR 112.

Environmental Site Assessments

Confidential Client – United States, 2022

Project Engineer. Conducted desktop Phase I environmental site assessments to assess properties for the potential presence of recognized environmental conditions, potential environmental concerns, business environmental risks in accordance with ASTM.

Environmental Monitoring & Regulatory Compliance

Blue Grass Airport, Lexington, KY, 2019

Project Engineer. Assisted with environmental monitoring program. Duties included operation of runoff diversion pond and recordkeeping of flow volumes. Assisted in monitoring and maintaining analyzer equipment that controls and segregates glycol runoff from clean stormwater.

Environmental Monitoring & Regulatory Compliance

Hardin County Landfill, KY, 2019

Project Engineer. Produced worksheets for the analysis and reporting of chloride levels in leachate. Assisted with the development of hazardous air pollutants (HAPs) reporting spreadsheet. Calibrated instruments for field tests.

STORMWATER

Drainage Charge Adjustment Applications

City of Detroit Water & Sewerage Department, 2022 – Present

Project Engineer. Reviews submitted Drainage Charge Adjustment and Credit Applications submitted by DWSD customers. Utilizes ArcGIS to determine if impervious areas are accurate and performs edits as necessary. Analyzes green stormwater infrastructure practices to calculate available drainage charge credits. Summarizes findings and recommendations in reports to DWSD.

Watershed-Focused Monitoring Program

Lexington-Fayette Urban County Government, KY, 2019-Present

Project Engineer. Coordinates city staff and volunteers to collect dry and wet weather samples from outfalls and streams in Lexington's watersheds to comply with MS4 Permit requirements. Data collected includes E. coli, total coliform, pH, temperature, total suspended solids, chlorine, fluoride, ammonia, conductivity, and total phosphorus via field and laboratory methods. Reviews data to ensure compliance with LFUCG action levels.

Major Outfall Analysis

Lexington-Fayette Urban County Government, KY, 2019-Present

Project Engineer. Performs analysis of major outfall inventory to search for suspect outfalls in relation to the Stormwater Quality Management Program. Searched for unmapped 18-inch and larger outfalls in rural urban service areas. Performed analysis of GIS-generated drainage areas for major outfalls. Provides analysis of potential new major outfalls as requested.

Wake One Water Plan

Wake County, NC, 2023

Project Engineer. The Wake One Water Plan is a 50-year strategy to uphold equitable access to clean and abundant water supporting all aspects of Wake County's growing population while preserving its limited natural resources. The Plan will integrate all water planning (water supply, wastewater treatment, stormwater and flood management, and surface and groundwater protection) with other comprehensive County and municipal planning objectives including economic development and transportation. The Plan will identify water management challenges and seek to develop solutions that provide economic, environmental, and social co-benefits. Provided review of municipal separate storm sewer opportunities using EPA's MS4 self-assessment modules.

Genesee County Community Water Quality Consortium Website

Genesee County, MI, 2023

Project Engineer. The Genesee County Community Water Quality Consortium is a collection of municipalities, school districts, county organizations, and non-profits charged with overseeing the "Our Water" public education activities website. Developed public education materials for website section regarding best stormwater management practices for various stakeholder groups that includes residents, businesses, kids, and teachers.

Monitoring of Post-Construction Controls

Lexington-Fayette Urban County Government, KY, 2019-2022

Project Engineer. Conducts wet weather sampling at a variety of post-construction BMP locations including rain gardens, pavers, and water quality units. Samples are taken at the influent and effluent of the controls to determine if the controls influence E. coli, total coliform, oil and grease, pH, and total suspended solids levels.

Energy Industry Project

Confidential Client, KY, 2021-2022

Project Engineer. A lysimeter experiment was designed by Tetra Tech to determine the optimal ratio of flue gas

ABBY TERRY, EIT, LEED GREEN ASSOCIATE | PROJECT MANAGER

desulfurization (FGD) brine and coal combustion residuals to create a cementitious mixture to sequester pollutants of concern such as halides and heavy metals from FGD wastewater. Assisted with sampling of the lysimeters including simulated runoff and leachate samples. Delivered samples to laboratory following experiment standard operating procedures. Downloaded and analyzed data from sensors embedded in the layers within the lysimeters.

Combined Sewer Model Update

Metropolitan Sewer District of Greater Cincinnati, OH, 2021

Project Engineer. Update and calibration of MSDGC's existing combined sewer model. This includes reviewing subcatchment delineations based on topography, updating model network to reflect current conditions, verifying rain gage assignments, and inputting appropriate hydraulic and hydrologic parameters via the use of ArcGIS and PCSWMM.

Cherry Bayou Drainage Study

City of Memphis, TN, 2020-2022

Project Engineer. Development of a Stormwater Master Planning Program to evaluate the existing stormwater drainage system and identify improvement opportunities to help alleviate hydraulic contractions and flooding. The Stormwater Master Planning Program includes the collection of data on the existing stormwater drainage systems and development of a comprehensive geographic information system (GIS) dataset for future City planning and maintenance, identification of areas that lack hydraulic conveyance capacity and the corresponding extents of flooding, and the evaluation and recommendation of improvements to alleviate flooding in the stormwater drainage system using ArcGIS and InfoSWMM.

Forensic Analysis of Erosion and Sediment Control on Large Construction Sites

Lexington-Fayette Urban County Government, KY, 2020

Project Engineer. Analysis of two residential and two commercial construction sites in Fayette County to determine if the four construction sites met the requirements of LFUCG's Stormwater Manual and Permitting, Inspection, and Enforcement policies.

DWQ Standard Stormwater Construction Specifications

Lexington-Fayette Urban County Government, KY 2019-2020

Project Engineer. Development of a standard set of construction specifications to be used for LFUCG DWQ capital projects.

Total Maximum Daily Load Implementation Strategy Update

Lexington-Fayette Urban County Government, KY, 2019

Project Engineer. Updated LFUCG's draft TMDL Implementation Strategy document with applicable data. Updated the proposed implementation schedule based on progress to date.

Highlands Neighborhood SEP Monitoring

Lexington-Fayette Urban County Government, KY, 2019

Project Engineer. Conducted dry and wet weather sampling at outfall and stream locations in response to the completion of the Cane Run Private Lateral Pilot Program required by LFUCG's Consent Decree. Samples were taken to determine if the replaced laterals produced an improvement in E. coli, ammonia, or detergents levels.

Wellington and Shillito Park Detention Basin 404 Permitting

Lexington-Fayette Urban County Government, KY, 2019

Project Engineer. Compiled applications for Kentucky Division of Water and USACE permits for in-stream detention basins requiring maintenance.

Precipitation Monitoring

Confidential Client, 22 Locations across KY, 2019-2021

Project Engineer. Assisted with the updating of precipitation logs for 22 packaging distribution facilities for compliance with Kentucky Pollutant Discharge Elimination System (KPDES) permits.

WASTEWATER

North 1 Utilities Extension Project

City of Cape Coral, FL, 2021

CAD Technician. Civil 3D services for the design to extend potable water, sewer, and irrigation service to the currently unserved parcels within the project boundaries.

West Hickman Wet Weather Storage Facility

Lexington-Fayette Urban County Government, KY, January 2019-December 2021

Project Engineer. Wet Weather Storage facility that involves the design of a 20 MG prestressed concrete tank, 70 MGD influent pump station, 70 MGD wet weather pump station, grit facility, and screening facility with a construction value of \$61M. Assists in preparing field order submittals and technical memorandums to LFUCG. Assisted in analyzing solutions for grit removal process challenges.

EPA Risk Management Plan Rule Compliance

Lexington-Fayette Urban County Government, KY, 2019

Project Engineer. Assisted with compiling and organizing the RMP database of documents and training records.

ABBY TERRY, EIT, LEED GREEN ASSOCIATE | PROJECT MANAGER

Metropolitan Sewerage District Apportionments *Southeast Macomb County, MI, 2019*

Project Engineer. Development of equitable apportionments of operation and maintenance costs of the wastewater disposal system in four sub-districts within South Macomb County District. Performed extensive analysis on flow meter and model data from EPA SWMM. Assisted with the calculation of wet weather and dry weather flows. Assisted with apportionment calculations for communities in the Southeast Macomb County Metropolitan Sewerage District.

RECLAIMED WATER

Integrated Utility Master Plan *Palm Beach County, FL, 2020*

Project Engineer. Development of an Integrated Utility Master Plan (IUMP) for the Palm Beach County Water Utilities Department's (PBCWUD) water, wastewater, and reclaimed water system over the next 30-year horizon to help guide utility decisions, budgets, and project delivery schedules in the future. Focusing on the reclaimed water system, compiled names of existing reclaimed water customers, calculated irrigable and total development areas, calculated average, minimum, and maximum daily flows based on flow data, calculated unaccounted for water, developed customer categories and appropriate usage rates for use in modeling, identified potential future customers, compiled data from the South Florida Water Utilities Department permit page for consumptive use permits and daily monitoring reports, created GIS figures of reclaimed water system, and assisted in preparing technical memorandums.

F. Wayne Hill Reuse Line ARV Evaluations

Gwinnett County Department of Water Resources, GA, 2020

Project Engineer. Evaluation of the F. Wayne Hill Reuse Line that includes approximately 20 miles of 48" ductile iron pipe and 90 associated CARVs to make recommendations for performance, improvements, and maintenance of the system. Hydraulic modeling and surge analysis completed using ArcGIS, InfoWater, and InfoSurge.

Lake Monroe Waterhammer Evaluation *Deltona, FL, 2020*

Project Engineer. Analysis of the potential for waterhammer in a 24-inch water transmission main from Lake Monroe to the Alexander Avenue Water Resources Facility. InfoWater and InfoSurge were used to create a model of the proposed line and simulate operating behavior. The model predicted pressure spikes upon collapse of the vapor cavity near the pumps when a power failure scenario was simulated. Proposed one stage air release valves were recommended to be replaced with two stage air release valves to reduce high pressure spikes. ■

MARCIE RASH, MBA, PMP | SENIOR TECHNICAL ADVISOR

Marcie has over 25 years of experience as a government contractor managing and supporting programs and projects for the U.S. Agency for International Development (USAID), U.S. Naval Facilities Engineering Systems Command (NAVFAC), U.S. Forest Service, U.S. Environmental Protection Agency (EPA), and U.S. General Services Administration (GSA), and municipal and private power utility agencies. She is a department director, a senior project manager, and an environmental geologist who has provided both technical and management consulting services support for a variety of international development, and environmental investigations projects and operations.

As the Director of Project Systems and Best Practices, she directs a team that focuses on continuous improvement of project and financial management systems with building, updating, and streamlining project policies, procedures, tools and best practices. This role also includes overseeing the training delivery program as well as advising/mentoring on proposal writing and implementing firm-fixed price contracts and performance based contracts.

For public sector clients, Marcie has managed up to \$2M projects for NAVFAC at former Navy bases located in the San Francisco Bay Area. Projects include Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) related site investigations, remedial investigations, feasibility studies, sampling plans, environmental baseline surveys, finding of suitability to transfer documents, and compliance work such as PCB and UST site closure reports. She manages projects under multiple fixed-price contracts, including two Indefinite Quantity Contracts, direct 8(a) awards, and formerly under the cost plus Comprehensive Long-Term Environmental Action Navy (CLEAN) contract. She has extensive experience negotiating with the Navy and regulatory agencies including Navy positions with the regulators, and presentation of technical approaches, results, and conclusions to the Navy and regulatory agencies. Her areas of expertise include project management, site assessment and characterization, field investigation and study efforts, technical support, report writing, and use of Geographic Information Systems (GIS)/ArcView to analyze and present data.

For private clients, she has managed projects to verify Greenhouse Gas Emissions Inventories for clients in the power utilities industry, in accordance with the California Climate Action Registry General Reporting Protocol, and the Power Utility Reporting Protocols.

RELEVANT PROJECT EXPERIENCE

KEY PROJECT SPOTLIGHT

Greenhouse Gas Emissions Inventory Development & Verifications Private Utilities throughout CA, 2008 - 2010

Project Manager. Marcie has completed verifier training for the general reporting protocol. She has provided project management services for GHG inventory and verification task orders for private companies in the power utilities industry such as Silicon Valley Power, Northern California Power Authority, and Platte River Power Authority. Marcie has gathered supporting documentation in order to verify GHG emissions reported in the California Climate Action Registry's online reporting tool (CARROT), in accordance with the California Climate Action Registry (CCAR) General Reporting Protocol and General Verification Protocol.



EDUCATION

MBA, Sustainable Enterprise,
Dominican University of California
BS, Geosciences, University of Arizona

REGISTRATIONS/CERTIFICATIONS

- PMP (Project Management Professional), Project Management Institute-1840998

TRAINING

- USAID Rules and Regulations
- CERCLA/RCRA (Comprehensive Environmental Response, Compensation, and Liability Act; Resource Conservation and Recovery Act)

OFFICE LOCATION

San Diego, CA

YEARS OF EXPERIENCE

28

MARCIE RASH, MBA, PMP | SENIOR TECHNICAL ADVISOR

PROGRAM AND PROJECT MANAGEMENT

Project Systems and Best Practices

Tetra Tech, Burlington, VT, 2014 – Present

Director. Marcie manages and directs development and continuous improvement of all project management systems with the goal of increasing efficacy and quality of project management of international development projects around the world. Collaborating with content owners across the firm, she works to continuously improve all project management systems, policies, standard operating procedures, and best practices for both home office and field office staff use in project implementation. She led the organizational change management and facilitation efforts with the design, development and launch of Salesforce Apps, a management platform that incorporates procedural steps for implementing grants, subcontracts, procurement and payments for USAID projects. She oversees the training program, designing annual delivery of training on various topics, working with content owners to develop and deliver the training to ensure consistency and effectiveness in project management practices. She works on curriculum development for instructor leads, and online training also serving as a trainer. Her support provides improvements with home office operations, and new business development systems.

Contract Performance Management Advisor

Tetra Tech, Burlington, VT, 2012 – 2016

Marcie is responsible for supporting improvement of full project cycle and financial management oversight rigor by strengthening Tetra Tech's application of existing and new tools through side-by-side mentoring to proposal and project teams. The initial focus has been on building capacity in proposing and implementing firm-fixed price contracts within the international development sector with clients such as USAID, MCC/MCA, World Bank, Stewart Global, and private mining companies. She has expanded focus to support performance based, cost plus, and time and materials contracts in the application of contract and financial management tools, and improvements in the development and delivery of training. Marcie has engaged in proposal preparation and project implementation of firm fixed price and performance based contracts in various sectors including in the Land Tenure and Property Rights, Water Resources and Infrastructure, Democracy and Governance, Agriculture and Economic Growth, and Environmental and Natural Resource for over 15 developing countries.

Sustainable Water and Sanitation in Africa (SUWASA)

Tetra Tech, Burlington, Vermont, 2013 – 2015

Project Financial Advisor. Marcie provides financial management and planning oversight to a \$41M, six-year USAID project conducting work in various countries throughout Africa. She worked closely with the home office project management team and the in-country team in the regional operation located in Nairobi, Kenya. She developed an extensive tracking tool for project financial actuals and projections in order to inform annual planning and monthly management of project finances for 12 countries undergoing a sustainable water reform.

Former Naval Station Treasure Island

NAVFAC Southwest San Diego, CA, 2008 - Present

Project Director. Marcie manages and oversees the Treasure Island project team conducting environmental work at more than 33 sites that contain soil and groundwater contamination. She ensures the overall technical quality of the work completed under the contract task orders (CTOs) by working with the Tetra Tech project managers and technical leaders and assisting in selecting the staff, team firms, and subcontractors supporting this work. Marcie also works with the client in strategic scheduling and contracting of future work. She possesses a broad base of technical and project management skills gained from working on and managing multiple interdisciplinary projects.

Federal Facilities Site Remediation Agreement Support

NAVFAC Southwest, San Diego, CA, 2014 – Present

Project Manager. Marcie manages Contract Task Order 58 for FFSRA, providing administrative and technical support to the Navy Remedial Project Managers and BRAC Environmental Coordinator for former Naval Station Treasure Island. General FFSRA support activities include preparation, attendance and facilitation for BCT and Restoration Advisory Board (RAB) meetings, updating and management of the annual Site Management Plan, data calls support, transfer and FOST/FOSL support, and community relations support. Technical activities under this task order include a five-year review (FYR), Finding of Suitability to Transfer (FOST), Finding of Suitability for Lease (FOSL), Action Memorandum, Record of Decision, and a Remedial Action Correction Report.

MARCIE RASH, MBA, PMP | SENIOR TECHNICAL ADVISOR

Federal Facilities Site Remediation Agreement Support *NAVFAC Southwest, San Diego, CA, 2013 – 2016*

Project Manager. Proposed Plans, Records of Decision, and Screening Level Ecological Risk Assessment, Marcie manages Contract Task Order 38 order for FFSRA that provides administrative and technical support to the Navy Remedial Project Managers and BRAC Environmental Coordinator for the Former Naval Station Treasure Island. General FFSRA support activities include preparation, attendance and facilitation for BCT and RAB meetings, updating and management of the annual Site Management Plan, data calls support, transfer and FOST support, and community relations support. Technical activities under this task order include preparation and finalization of Proposed Plans and Record of Decisions for two separate sites, a Focused Feasibility Study, and a screening level ecological risk assessment for a site located on Yerba Buena Island.

Federal Facilities Site Remediation Agreement Support *NAVFAC Southwest, San Diego, CA, 2001 - 2013*

Project Manager. Through various contract vehicles, Marcie provided FFSRA support to the Navy Remedial Project Managers for the Former Naval Station Treasure Island in strategic scheduling, data calls and contracting of future work. She possesses a broad base of technical and project management skills gained from working on and managing multiple interdisciplinary projects.

Former Palos Verdes Navy Housing Area *Navy Base Realignment and Closure Program Office West, San Pedro, CA, 2007 - 2009*

Project Manager. Screening-Level Ecological Risk Assessment, Site Maintenance and Institution Control Implementation, and Site Closure Documentation. Marcie was responsible for managing and preparing documentation in support of regulatory closure for Operable Unit 1, a former waste disposal area. The site is unique because it supports the endangered Palos Verdes Blue Butterfly which Tetra Tech conducted the ecological and human health risk assessments and documentation of no risk to the butterfly or human health. She oversaw a multi-disciplinary team of environmental scientists, human health risk assessors, and engineers, who are preparing documentation in support of ongoing site maintenance activities including groundwater monitoring and pre- and post-storm inspections of soil cover and drainage ditch system. The assessments and documentation of no risk to human or ecological health that opened the opportunity for the Navy to close the site with a No Further Action Record of Decision with unrestricted use.

Naval Station Mare Island Remedial Investigation *NAVFAC Southwest, San Diego, CA, 1997 – 2001*

Project Manager. Marcie managed the remedial investigations for former lead-battery storage site, and performed removal action support, confirmation field sampling, and reporting of the sampling plan and remedial investigation report as well as procurement and management of the disposal of the waste generated from the removal actions undertaken at the site.

Region IX Rocketdyne Santa Susana Field Laboratory *U.S. Environmental Protection Agency, San Francisco, CA, 1999 – 2004*

Project Manager. Marcie managed the oversight, sampling, and technical review of documents for the Rocketdyne Santa Susana Field Laboratory in southern California. The work included review of decontamination and decommissioning reports, implementation of survey and sampling work plans, oversight of and performing radiation surveys, and groundwater monitoring activities, and collection of groundwater split samples for analysis.

Mare Island Remedial Investigation and Report *NAVFAC Southwest, Mare Island, Vallejo, CA, 2000 – 2002*

Task Manager. Marcie managed reporting of the remedial investigation for an area comprised of five sites light industrial sites scheduled for residential reuse at Mare Island. Marcie managed a team to prepare the remedial investigation report documenting the chemical and physical characterization, human health and ecological risk assessment, and fate and transport evaluation for all five sites. ■

RICHARD WALKER, PE, CFM | SENIOR CLIENT MANAGER

Richard has a broad range of experience in civil and water resources engineering, hydrologic/hydraulic modeling, stormwater/floodplain management, water/wastewater engineering, and landfills. He has developed stormwater design manuals for municipalities that contain requirements for post-construction runoff, erosion prevention and sediment control, and green infrastructure. In addition, he has assisted cities with implementing stormwater utilities.

He is currently the MS4 Program Manager for the Lexington-Fayette Urban County Government where he is responsible for ensuring the city complies with the MS4 Permit and stormwater provisions in the 2011 EPA Consent Decree.

RELEVANT PROJECT EXPERIENCE

Municipal Separate Storm Sewer System Compliance

Lexington-Fayette Urban County Government (LFUCG), KY

Program Manager. Provides program management services to maintain compliance with the MS4 Permit and stormwater requirements of the EPA Clean Water Act consent decree. Develops procedures for the permitting, plan review, inspection, and enforcement of construction sites and post-construction stormwater management for new development and redevelopment. Directs the development of procedures for illicit discharge investigations, inspections of municipal facilities, and inspection/enforcement of industrial facilities. Develops training programs for staff involved in the inspection of construction sites, illicit discharges, and industrial facilities. Developed stormwater low impact development (LID) guidelines for new development and redevelopment. Directs the water quality monitoring program and development of TMDL implementation strategies. Assists the city with implementing the updated Stormwater Manual that contains the post-construction stormwater management requirements for new development and redevelopment. Conducts monthly coordination meetings with 25 staff in the city's stormwater program.

Stormwater Manual Update

Lexington-Fayette Urban County Government, KY

Program Manager. Developed new requirements for post-construction stormwater management in new development and redevelopment that addressed flood control, runoff reduction using green infrastructure, and water quality volume treatment. Also revised sections on floodplain management, erosion and sediment control, hydrology, inlets, storm sewers, culverts, and open channels. Developed a compliance Excel spreadsheet for design engineers that summarized the required Water Quality Volume/ Runoff Reduction Volume and the proposed water quality controls. Conducted stakeholder involvement with home builders, developers, engineers, businesses, and citizen groups.

Water Quality Management Fee

Lexington-Fayette Urban County Government, KY

Program Manager. Directed the stormwater rate study for the city that involved the creation of the impervious area database and development of the enabling ordinance. The fee generates \$13M annually.

Engineering Manuals for New Development

Lexington-Fayette Urban County Government, KY

Project Manager. Developed engineering manuals that contained the design and construction standards for new development infrastructure. Conducted



EDUCATION

MSCE, Water Resources Engineering,
University of Kentucky

BS, Agricultural Engineering,
University of Kentucky

REGISTRATIONS/CERTIFICATIONS

- Professional Engineer: KY-15345
- Certified Floodplain Manager
- Qualified Inspector, Kentucky
Erosion Prevention and Sediment
Control

AFFILIATIONS

- National Society of Professional
Engineers
- Association of State Floodplain
Managers
- Water Environment Federation

OFFICE LOCATION

Lexington, KY

YEARS OF EXPERIENCE

37

RICHARD WALKER, PE, CFM | SENIOR CLIENT MANAGER

stakeholder involvement with elected officials, government agencies (planning, law, engineering, and sanitary sewers), developers, citizen groups, and engineering firms. Coordinated the work of four consultants who wrote the roadway, geotechnical, structures, sanitary sewer, and construction inspection manuals. Developed the Procedures Manual for Infrastructure Development, which described the role of the developer, engineer, and the government in the development process, beginning with the submission of construction plans and extending through home building. Primary author of the Stormwater Manual that established standards for flood control, water quality, and floodplain management.

Best Management Practice Planning and Specifications Manual

Kentucky Division of Water, KY

Project Manager. Co-author of the manual entitled KY Best Management Practices (BMPs) for Controlling Erosion, Sediment, and Pollutant Runoff from Construction Sites. The manual includes sections on regulatory considerations; guidance for developing a BMP plan; and technical specifications for site preparation, soil stabilization, slope protection, drainage system controls, sediment basins, stream and wetland protection, and good housekeeping. Conducted workshops on the manual with contractors, home builders, and state and local agencies.

Walhampton Stormwater Improvements

Lexington-Fayette Urban County Government, KY

Principal-in-Charge. Stormwater improvements project that involved the design of a detention basin and storm sewers to reduce flooding in the neighborhood. Provided QA/QC on the hydrologic/hydraulic model.

Expansion Area 2 Stormwater Master Plan

Lexington-Fayette Urban County Government, KY

Project Manager. Developed a stormwater master plan for 3,000 acres planned for new development. Directed a multi-disciplined team of engineers, biologists, and planners for the design of a stormwater management system of regional facilities and greenways. The project involved chemical and biological monitoring of the streams to establish baseline water quality conditions. A system of detention ponds, wetlands, riparian buffers, and greenways were proposed to control flooding and protect the water resources. The estimated cost of the facilities was \$10 million.

Danby Corners Letter of Map Revision

Lexington-Fayette Urban County Government, KY

Project Manager. Directed a flood study of the unnamed tributary of the I-75 Tributary and submittal of the LOMR application to FEMA.

Vaughn's Branch Flood Mitigation

Lexington-Fayette Urban County Government, KY

Project Manager. Directed the hydrologic and hydraulic analysis and preparation of the documentation needed to obtain FEMA mitigation funds.

Southland Drive Drainage Study

Lexington-Fayette Urban County Government, KY

Project Manager. Directed a drainage study that involved obtaining input from citizens by use of surveys and interviews. Prepared a report that summarized the citizen responses, severity of flooding, and potential solutions.

Detention Basin Survey and Evaluation

Lexington-Fayette Urban County Government, KY

Project Manager. Evaluated 50 detention basins and retention ponds for maintenance needs. Reviewed the plat of each basin, conducted a field investigation, identified maintenance problems, and prepared a cost estimate of needed repairs. Developed a maintenance program that involved a cooperative arrangement between the government and the property owner.

Stormwater Manual

Lexington-Fayette Urban County Government, KY

Project Manager. Developed the stormwater manual that contained requirements for post-construction runoff, floodplain management, flood control, culverts, storm sewers, open channels, and best management practices. Updated the manual in 2005, 2009, 2011.

North Elkhorn SWMM Model

Lexington-Fayette Urban County Government, KY

Project Manager. Directed the development of a hydrologic and hydraulic SWMM model for the North Elkhorn watershed. The work involved installing rain gauges and stream gauges, field investigation of control structures, determining inputs to the model such as percent impervious and soil infiltration parameters, and calibrating the model.

Floodplain Map Modernization Program

State of Kentucky

Project Manager. Directed the hydrologic and hydraulic studies for the counties of Boyle, Clark, Christian, Montgomery, and Wolfe.

RICHARD WALKER, PE, CFM | SENIOR CLIENT MANAGER

Stormwater Utility and Master Drainage Plan *City of Hopkinsville, KY*

Project Manager. Developed a stormwater master drainage plan for the city that identified projects to address river flooding and surface drainage problems with a total construction cost of approximately \$22M. Assisted the City with implementing a stormwater utility to generate \$1M in annual revenues. Prepared a feasibility study for a flood control structure on the South Fork of the Little River. ■

KEY SUBCONSULTANT BIOGRAPHIES



Diana Vallejo Gonzales (KYYBA)

Diana is an environmental engineer with over eleven years of experience. She specializes in manufacturing and industrial operations, such as surface coating spray and dip applications, paint and coating mixing/production, metal stamping, metal surface finishing, direct and indirect combustion sources, and bulk liquid storage. She is also experienced in water quality, air quality, waste management, and EH&S compliance in Mexico.

Her expertise in air quality includes source identification, legal requirements assessment, emission factor assessment, and emissions calculations including, Criteria Pollutant (AP42/NPI), VOC (NOM-121-SEMARNAT-1997), RETC (NOM-165-SEMARNAT-2013) and GHG (SEMARNAT-2015).

She has received third party verifications on more than seven GHG preparedness reports.

Diana is fluent in English and native Spanish. ■

Josue Vejar (KYYBA)

Josue is an industrial engineer with over eleven years of experience in the automotive industry. Currently, Josue's work is concentrated on environmental law requirements for the automotive industry in Mexico. This work includes analyzing and organizing data from factories related to environmental performance (air, water, and hazardous waste), and greenhouse gas (GHG) emission inventories and reporting. He has also performed environmental health and safety audits for various industries to review compliance with corporate standards and federal law. ■



Connie Allen (Salt River Engineering)

Colonel (ret.) Connie Allen has over 30 years of experience as a design engineer, project manager, construction manager, and principal of a veteran-owned small business. Salt River Engineering has performed work for LFUCG and many other municipalities that will provide unique insight for the project. She will serve as an external Data Quality Control Manager performing QA/QC on all calculations and deliverables. ■



DEGREE OF LOCAL EMPLOYMENT

Tetra Tech's local office is located at 424 Lewis Hargett Circle, Suite 110, Lexington, KY. Tetra Tech is currently registered by the Commonwealth of Kentucky in accordance with KRS 322.060 to perform the engineering services needed for this project. Our Kentucky registration number is 1555.

We understand the importance of Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) Business Enterprises and Veteran-Owned Small Business (VOSB) goals and are committed to providing meaningful participation at levels desired by LFUCG. Our track record on similar efforts demonstrates our commitment to, and success in, achieving or exceeding project-specific goals.

To achieve and exceed your 10% MWDBE participation goal, we have enlisted the services of Kyyba to provide our team a highly qualified MBE.

To achieve your 3% Veteran-Owned participation goal, we have enlisted the services of Salt River Engineering located at 108 West Poplar Street, Harrodsburg, KY.



TETRA TECH IS A PROUD PARTNER OF



REFERENCES

Our references are familiar with the extra effort put forth by our staff to establish and maintain good working relationships with our clients. The following references can attest to Tetra Tech's character and reputation.

JENNIFER CAREY, PE

Director of Environmental Services
Lexington-Fayette Urban County
Government
859.425.2888
jcarey@lexingtonky.gov

BARRY MARIETTA

Director, Air Quality Services
Environmental Management &
Resources
DTE Energy
313.235.5611
barry.marietta@dteenergy.com

IAN FUDALSKI

Manager, Environmental Compliance
Onward Energy
303.623.2908
ian.fudalski@onwardenergy.com



SECTION 3

Project Understanding



Section 3: Project Understanding

PROJECT UNDERSTANDING

LFUCG intends to develop community-wide and municipal GHG emissions inventories and associated reduction targets in accordance with Intergovernmental Panel on Climate Change (IPCC) requirements and the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC). The GPC is a globally recognized standard that enables cities to utilize consistent methodologies for developing inventories, thus allowing for ease of comparison to peers, transparent calculations, and meaningful results. The GPC is a comprehensive inventory method resulting in emissions aggregated by sector, scope, gas, total, and biogenic origin. The GPC accomplishes this through the use of two frameworks, “scopes” and “city-induced.”

From the GPC, “The scopes framework allows cities to comprehensively report all GHG emissions attributable to activities taking place within the geographic boundary of the city by categorizing the emission sources into in-boundary sources (scope 1, or “territorial”), grid-supplied energy sources (scope 2), and out-of-boundary sources (scope 3).” The city-induced framework ensures all emissions generated by a city, inside or outside of the geographic boundary, are totaled. The GPC offers a BASIC and a BASIC+ level of reporting that represent varying degrees of inventory completeness.

The BASIC level includes Scope 1 emissions from stationary energy, in-boundary transportation, and waste and wastewater generated and disposed of in the geographic boundary, Scope 2 emissions from grid-supplied electricity, and Scope 3 emissions from waste and wastewater generated in the geographic boundary and disposed of outside of the boundary. BASIC+ includes the components of the BASIC level plus Scope 3 emissions for electricity transmission and distribution and out-of-boundary transportation as well as Scope 1 emissions for Industrial Processes and Product Use (IPPU), Agriculture, Forestry, and Land Use (AFOLU), and any other emissions occurring outside of the geographic boundary as a result of city activities. Therefore, the BASIC+ level of reporting requires challenging data collection and more complex calculation methodologies.

The resulting inventory will feature the seven greenhouse gases covered by the Kyoto Protocol (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃)). The GPC requires reporting

for emissions by sector and sub-sector, emissions by scope, emissions by gas, emissions from biogenic origin, and emissions by total (based on selection of BASIC or BASIC+).

After completion of the GHG inventories (community-wide and municipal operations), LFUCG intends to compare the current reporting year (2021) to prior emissions inventories to identify trends in aggregate, per capita, and gross domestic product (GDP) inventory results. In addition, an analysis of relevant trends such as sector-level drivers, data availability, data sources, emission factors, and methodology will be conducted to determine how these factors may impact changes in GHG inventory emissions. The base inventory and results of the trend analysis will be used to develop “business-as-usual” emissions forecasts for 2025, 2030, and 2050 that represent the expected emissions if no action is taken.

The data compiled from the GHG inventories, trend analysis, and forecasts will be used to develop an Arc score for the city. Arc is a software created by the Green Business Certification, Inc. (GBCI) that benchmarks the environmental impacts of a city through a performance score that can be compared to other cities globally. The Arc score can offer insight on areas (energy, water, waste, transportation and human experience) where the city may have room for improvement.

Finally, LFUCG intends to set emission reduction targets that align with the current U.S. initiative to “meet the moment” by achieving a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030 and net-zero greenhouse gas emissions by no later than 2050. Targets will be developed for each sector identified in the GHG inventories that total to an overall reduction goal.

Based on our project understanding, the scope of work to meet your project requirements can be broken down to the following tasks:

TASK 1 – DEVELOPMENT OF COMMUNITY-WIDE AND MUNICIPAL GREENHOUSE GAS INVENTORIES

A. Define Methodology and Develop Work Plan

Prior to project kickoff, the Tetra Tech team will develop a comprehensive work plan that outlines a strategy to manage and deliver the project. The plan will outline tasks

SCOPE OF WORK

for each team member, key milestone dates, and quality control mechanisms.

In-Person Project Kickoff Meeting

In early June, a project kickoff meeting will be held with Lexington-based team members and the Sustainability Program Manager Senior to discuss the work plan, schedule, and expectations.

Confirm Applicability of GPC BASIC/BASIC+ Requirements and Reporting Protocols

The Tetra Tech team will determine if the additional sources for BASIC+ are material and relevant for the city of Lexington and if the associated data requirements are attainable. BASIC+ requires that no sources required in the BASIC level are reported as “Not Estimated.” If the additional sources are determined to be not significant, not relevant, or unattainable, the BASIC reporting protocol will be selected and followed.

Confirm Emissions Categories and Activities for Tracking and Analysis (Scope 1, 2, & 3)

After a reporting level is selected, Tetra Tech will use their background knowledge of the city to develop a preliminary list of applicable emissions categories and activities (scope 1, 2, and 3). These findings will be provided to the Sustainability Program Manager Senior for input and confirmation.

Monthly Progress Meetings

Tetra Tech understands that LFUCG wishes to complete the GHG inventories by September 2023. To ensure the schedule is met, Tetra Tech will facilitate monthly check-in meetings (July, August, and September) to update the Sustainability Program Manager Senior on the current status of the project, obstacles identified, budget, and overall schedule. At least one meeting will be held in-person.

B. Review Relevant Local, Regional, National, and Global Comparisons

Identify Data Requirements and Benchmarks to Enable Meaningful, Multi-Year Trend Analysis and Comparisons

The Tetra Tech team will review standard GHG inventories at the local, regional, national, and global levels to identify typical parameters, datasets, and benchmarks required to develop meaningful GHG inventories that allow for aggregation at subnational and national levels. Tetra Tech will also review past GHG inventories compiled by LFUCG to identify gaps in past reporting, if any, that should be captured in the current reporting year (2021).

C. Identify Data Requirements and Develop Data Requests

Tetra Tech will compile a list of data needs based on the emissions categories and activities identified above. Required data may include but is not limited to previous GHG inventories, annual waste reports, and activity data. The GPC sets forth expectations for the relevance, completeness, consistency, transparency, and accuracy of the data used in developing the inventory. The GPC also requires that a High-Medium-Low rating be assigned to the data quality of activity data and emission factors. Tetra Tech will complete this assessment upon receipt of the requested data and follow the GPC for adapting data (scaling) for inventory use where necessary. These instances will be discussed with the Sustainability Program Manager Senior.

D. Collect Data Inputs for 2021 Inventory and Trend Analysis

Tetra Tech will collect the GHG emissions activity data required to complete the GPC and trend analysis. This will include selection of emission factors associated with the activity being measured. Emission factors convert activity data into a mass of GHG emissions. Where available, local, regional, and/or country-specific factors will be used. If none, IPCC default factors or data from the Emission Factor Database (EFDB) will be used in accordance with the GPC.

E. Calculate and Analyze LFUCG 2021 Emissions, Trends, Forecasts, and Relevant Comparisons

Tetra Tech will utilize the selected reporting level (BASIC or BASIC+) and collected data to complete community wide and municipal GHG inventories using the procedures specified in the GPC. The resulting inventory will feature the seven greenhouse gases covered by the Kyoto Protocol (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃)). Emissions by sector and sub-sector, emissions by scope, emissions by gas, emissions from biogenic origin, and emissions by total (based on selection of BASIC or BASIC+) will be calculated.

Analyze Results and Identify Trends

The results of the inventories will be analyzed using the research compiled during the preliminary data requirements and benchmark analysis (Task 1B). Tetra Tech will compare the current reporting year to prior emissions inventories to identify trends in aggregate, per capita, and gross domestic product (GDP) inventory results. In

SCOPE OF WORK *(continued)*

In addition, an analysis of relevant trends such as sector-level drivers, data availability, data sources, emission factors, and methodology will be conducted to determine how these factors may impact changes in GHG inventory emissions.

Develop "Business-as-Usual" Forecasts for 2025, 2030, and 2050

The base inventory and results of the trend analysis will be used to develop "business-as-usual" emissions forecasts for 2025, 2030, and 2050 that represent the expected emissions if no action is taken.

F. Document Trends Impacting Emissions up to 2021

Tetra Tech will summarize the results of the trend analysis in a written report. The report will include methodologies used to complete the analysis, figures depicting identified trends, and limitations identified between datasets. An executive summary of the report will be prepared for inclusion in the final GHG inventory report.

Tetra Tech will provide the draft trend analysis report and executive summary in digital format to the Sustainability Program Manager Senior for review and comment. Tetra Tech will incorporate any necessary revisions and finalize the documents. Tetra Tech will deliver two (2) hardcopies of the final documents to the Sustainability Program Manager Senior.

G. Ensure Data Quality and Control

Tetra Tech is committed to producing quality work. Data quality and control processes will be integrated into every step of the process as defined in the work plan. Internal reviews will be performed by other team members, the project manager, and senior advisors. In addition, Tetra Tech has contracted Salt River Engineering to serve as the Data Quality Control Manager. All workbooks, calculations, and deliverables will be reviewed by the Data Quality Control Manager for accuracy before being submitted to the Sustainability Program Manager Senior. Internal and external reviews will be conducted in accordance with the Managing Inventory Quality and Verification procedures in the GPC.

H. Prepare and Present Final Report and Other Deliverables

Tasks 1A-1G will culminate in the development of a comprehensive final report that outlines the GHG inventory methodology, results, findings of the trend analysis, and recommendations for future GHG inventories. All supporting documentation including workbooks, calculations, assumptions, and QAQC documentation will

be included. An executive summary and one page (front and back) fact sheet will be composed based on key points from the final report. Tetra Tech will carefully document the process in order to produce a set of work instructions that may be used for future GHG inventories.

The draft report, executive summary, fact sheet, and work instructions will be provided in digital format to the Sustainability Program Manager Senior for review and comment. Tetra Tech will incorporate any comments on the first draft into a second draft suitable for publication to be circulated within LFUCG leadership for comment and review. Tetra Tech will incorporate any edits to the documents into a final draft. Upon acceptance of the final draft by the Sustainability Program Manager Senior, the document will be considered final and released to the public.

Tetra Tech will provide a signed certification statement that the inventory was completed in accordance with the GPC. Tetra Tech will deliver two (2) hardcopies of the final report, executive summary, fact sheet, and work instructions to the Sustainability Program Manager Senior.

TASK 2 – DEVELOP GREENHOUSE GAS EMISSIONS REDUCTION TARGETS

A. Analyze Existing Trends and Constraints

Arc Scoring

Tetra Tech will use the data compiled from the GHG inventory, trend analysis, and forecasts to develop an Arc score for the city, as applicable. The Arc score will help inform areas (energy, water, waste, transportation and human experience) where the city may have room for improvement. The Arc score will also be beneficial for the city's LEED for Cities initiative.

Review Policies and Stakeholder Groups that May Impact Adoption of GHG Reduction Targets

Tetra Tech will review federal, state, and local policies that may affect any targets adopted by LFUCG. In addition, the Tetra Tech team will use its knowledge of the Lexington community to identify state and local lobbying and activist organizations that may oppose reduction efforts.

B. Conduct Relevant Local, Regional, National, and Global Comparisons

Tetra Tech will use the completed GHG inventories to perform comparisons between Lexington and its peers. Tetra Tech will perform comparisons based on available

SCOPE OF WORK *(continued)*

datasets for local, regional, national, and global peers (such as the May 2008 Brookings Institute Report Shrinking the Carbon Footprint of Metropolitan America used for comparisons in the 2012 Empower Lexington Plan). Tetra Tech will review current targets set by these peers and assess their progress towards them where applicable.

C. Produce a Proposal Document

Develop Sector-by-Sector and Overall Reduction Targets

LFUCG wishes to set emission reduction targets that align with the current U.S. initiative to “meet the moment” by achieving a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030 and net-zero greenhouse gas emissions by no later than 2050. Targets will be developed for each sector identified in the GHG inventories that total to an overall

reduction goal. The GPC outlines four types of goals including base year emissions goals, fixed level goals, base year intensity goals, and baseline scenario goals. Tetra Tech will work with the Sustainability Program Manager Senior to identify the most relevant type of goal for Lexington and use the Setting Goals and Tracking Emissions Over Time guidance in the GPC as well as the recommendations provided in the updated Empower Lexington Plan to set reduction targets.

Develop Draft Summary Report on GHG Inventory and Reduction Targets

Tetra Tech will develop a draft summary report on Tasks 1 and 2 to be presented to LFUCG and select community partners. Tetra Tech will incorporate any edits into a final document. Two (2) hardcopies will be delivered to the Sustainability Program Manager Senior.

In-Person Final GHG Inventory and Recommended Reduction Targets Presentation

Tetra Tech will present the final results and deliverables of Task 1 and 2 to the Sustainability Program Manager Senior.

In-Person Stakeholder Meeting

Tetra Tech will attend the in-person meeting with the Sustainability Program Manager Senior (if requested) and selected internal and external partners to review the recommended targets.

Project Conclusion Meeting

Tetra Tech will conduct an in-person conclusion meeting to ensure that all data and deliverables have been delivered to the Sustainability Program Manager Senior’s satisfaction. Any outstanding items will be identified and deadlines will be set for delivery of final work products. ■

SECTION 4

Estimated Cost of Services, Hourly Rates, and Schedule



Section 4: Estimated Cost of Services, Hourly Rates, & Schedule

ESTIMATED COST OF SERVICES

The total estimated cost for the BASIC reporting level on a time and materials, not to exceed basis is estimated to be **\$106,290 USD**. Pricing is valid for 30 days. Our hourly rates for personnel engaged in the project are presented in Table 4.1 below. Tetra Tech proposes to conduct all work included in accordance with Tetra Tech Standard Terms and Conditions (attached). Alternatively, Tetra Tech will work in good faith to negotiate contract terms with LFUCG. We will invoice each month for the portion of work completed and our payment terms are net 30 days.

Tetra Tech's proposed alternative price for the BASIC+ reporting level on a time and materials, not to exceed basis is estimated to be **\$135,393 USD**.

HOURLY RATES

The following tables present hourly rates for all members and subconsultants of the project team.

TABLE 4-1: TETRA TECH

ROLE	NAME	HOURLY BILLING RATE
Project Manager	Abby Terry	\$130
Senior Project Advisor	Andrew Webster	\$230
Senior Technical Advisor	Marcie Rash	\$200
Senior Project Engineer	Lucy Pacholik	\$120
Senior Environmental Scientist	Mindy Keillor	\$145

TABLE 4-2: KYYBA

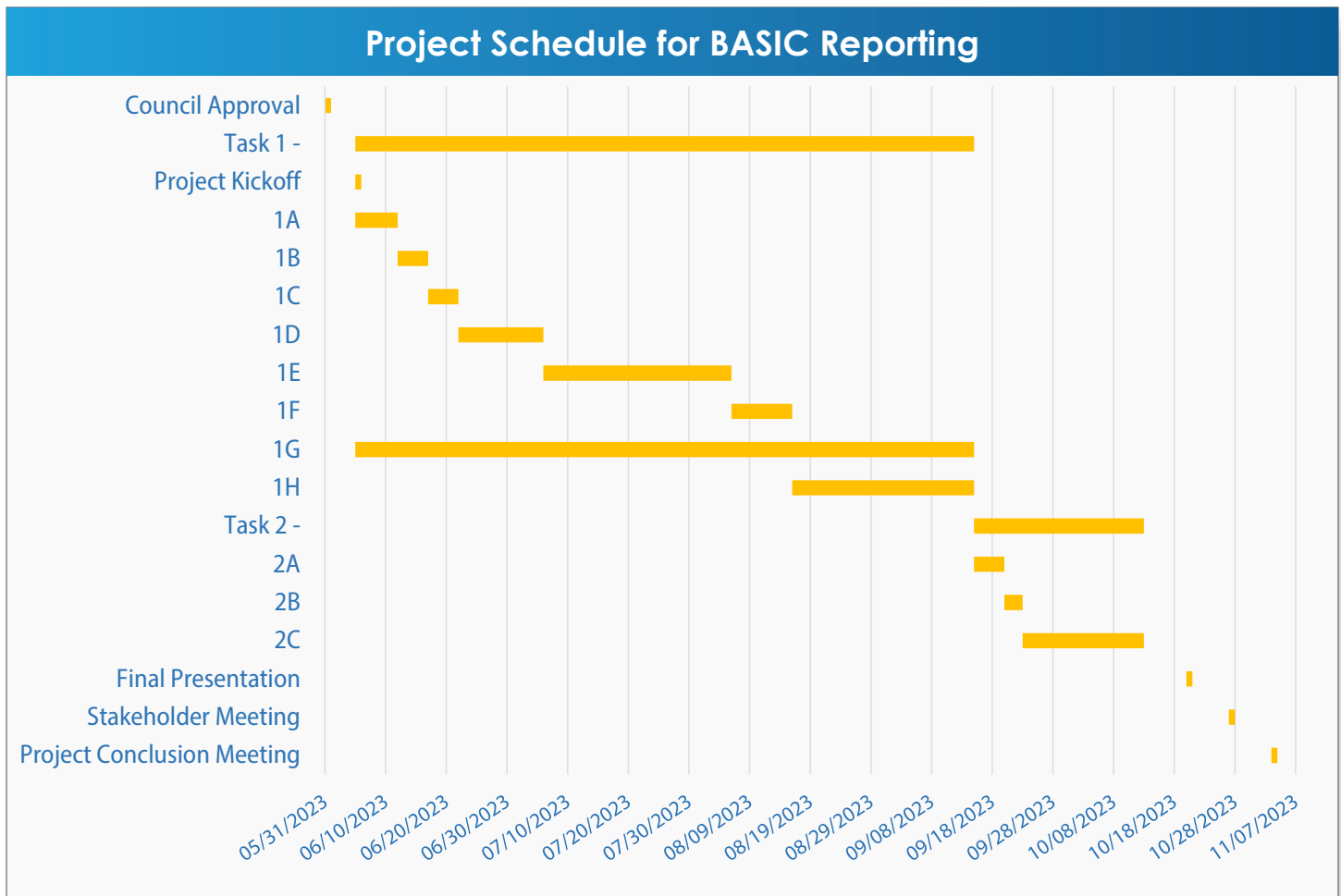
ROLE	NAME	HOURLY BILLING RATE
Environmental Engineer	Diana Vallejo Gonzalez	\$100
Environmental Engineer	Josue Vejar	\$80

TABLE 4-3: SALT RIVER ENGINEERING

ROLE	NAME	HOURLY BILLING RATE
Data Quality Control Engineer	Connie Allen	\$160

PROJECT SCHEDULE

Tetra Tech is prepared to initiate this project immediately upon receipt of a notice to proceed. We understand the aggressive timeline and have developed the following schedule to implement the BASIC reporting protocol within the allotted time. Should LFUCG decide to implement the BASIC+ reporting protocol, this timeline will be under more pressure and may require additional resources.



CRITICAL ASSUMPTIONS

- Council approval will be granted in May 2023. Any delay in this milestone will delay the project schedule.
- Requested data must be provided to Tetra Tech in a timely manner.
- Tetra Tech is not responsible for project delays resulting from circumstances beyond their control and/or delay from client reviews and approval.

SECTION 5

Past Record & Performance



Section 5: Past Record & Performance

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT AND TETRA TECH

THE QUALITIES YOU SEEK

The characteristics that you seek in a firm are embodied in our people and in the way we approach projects:

CHARACTER AND INTEGRITY

These qualities are demonstrated by the staff that represent Tetra Tech to our clients. We recognize the essential need to earn the trust of the many stakeholders that will be involved in a project of this type.

REPUTATION

Tetra Tech's reputation in Lexington is one of providing a high level of service to LFUCG. We do this while collaborating with your staff and other team members to ensure your goals are met.

EXPERIENCE

We have designed our team to provide Lexington with the best local capability along with the experience that we have in our offices around the country.

EFFICIENCY

Efficiency in professional services means "hitting the ground running." Because of our history of work with LFUCG, there will be no learning curve for our staff. We understand the dynamics of LFUCG and the Lexington community.

PROJECTS

The Tetra Tech team has enjoyed a 30-year working relationship with LFUCG. Below is a partial listing of current and completed projects, performed on schedule and within budget for the LFUCG. During these projects the quality of work, control of costs, and ability to meet schedules has been maintained. For example, under the current MS4 program management contract, we have worked in a collaborative manner with staff to complete MS4 Permit milestones on time and in a cost-effective manner.

Through the work completed to date, Tetra Tech has worked with a variety of groups within the government including the Division of Water Quality, Division of Environmental Services, and Division of Engineering.

- Division of Community Corrections Facility Air Permitting
- Municipal Separate Storm Sewer System (MS4) Program Management Services
- Development of the Stormwater Quality Management Program (SWQMP) as part of the EPA Consent Decree Negotiations
- Stormwater Manual
- Procedures Manual for Infrastructure Development
- Vaughns Branch / Sugar Mill Flood Mitigation
- Danby Corners FEMA Letter of Map Revision
- Expansion Area 2 Stormwater Master Plan
- Southland Drive Drainage Study
- North Elkhorn Hydrologic and Hydraulic Model
- Town Branch Hydrologic and Hydraulic Model
- Detention Basin Maintenance Program
- Firethorn Detention Basin Improvements
- Walhampton Stormwater Improvements
- Wolf Run Wet Weather Storage
- West Hickman Wet Weather Storage



APPENDIX
Forms



AMERICAN RESCUE PLAN ACT**AMENDMENT 1 —
CERTIFICATION OF COMPLIANCE FOR EXPENDITURES USING FEDERAL FUNDS,
INCLUDING THE AMERICAN RESCUE PLAN ACT**

The Lexington-Fayette Urban County Government (“LFUCG”) may use Federal funding to pay for the goods and/or services that are the subject matter of this bid. That Federal funding may include funds received by LFUCG under the American Rescue Plan Act of 2021. Expenditures using Federal funds require evidence of the contractor’s compliance with Federal law. Therefore, by the signature below of an authorized company representative, you certify that the information below is understood, agreed, and correct. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

The bidder (hereafter “bidder,” or “contractor”) agrees and understands that in addition to all conditions stated within the attached bid documents, the following conditions will also apply to any Agreement entered between bidder and LFUCG, if LFUCG uses Federal funds, including but not limited to funding received by LFUCG under the American Rescue Plan Act (“ARPA”), toward payment of goods and/or services referenced in this bid. The bidder also agrees and understands that if there is a conflict between the terms included elsewhere in this Request for Proposal and the terms of this Amendment 1, then the terms of Amendment 1 shall control. The bidder further certifies that it can and will comply with these conditions, if this bid is accepted and an Agreement is executed:

1. Any Agreement executed as a result of acceptance of this bid may be governed in accordance with 2 CFR Part 200 and all other applicable Federal law and regulations and guidance issued by the U.S. Department of the Treasury.

2. Pursuant to 24 CFR § 85.43, any Agreement executed as a result of acceptance of this bid can be terminated if the contractor fails to comply with any term of the award. This Agreement may be terminated for convenience in accordance with 24 CFR § 85.44 upon written notice by LFUCG. Either party may terminate this Agreement with thirty (30) days written notice to the other party, in which case the Agreement shall terminate on the thirtieth day. In the event of termination, the contractor shall be entitled to that portion of total compensation due under this Agreement as the services rendered bears to the services required. However, if LFUCG suspects a breach of the terms of the Agreement and/or that the contractor is violating the terms of any applicable law governing the use of Federal funds, LFUCG may suspend the contractor’s ability to receive payment by giving thirty (30) days’ advance written notice. Further, either party may terminate this Agreement for cause shown with thirty (30) days written notice, which shall explain the party’s cause for the termination. If the parties do not reach a settlement before the end of the 30 days, then the Agreement shall terminate on the thirtieth day. In the event of a breach, LFUCG reserves the right to pursue any and all applicable legal, equitable, and/or administrative remedies against the contractor.

3. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

- (1) Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and

- applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
 - (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
 - (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event a contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

4. If fulfillment of the contract requires the contractor to employ mechanic's or laborers, the contractor further agrees that it can and will comply with the following:

- (1) *Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.*

- (2) *Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.*
 - (3) *Withholding for unpaid wages and liquidated damages. LFUCG shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.*
 - (4) *Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower-tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.*
5. *The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.*
 6. *The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.*
 7. *The contractor shall include these requirements in numerical paragraphs 5 and 6 in each subcontract exceeding \$100,000 financed in whole or in part with Federal funding.*
 8. *The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.*
 9. *The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.*
 10. *The contractor shall include these requirements in numerical paragraphs 8 and 9 in each subcontract exceeding \$100,000 financed in whole or in part with Federal funds.*
 11. *The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.*
 12. *The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency regional office.*
 13. *The contractor shall include these requirements in numerical paragraphs 11 and 12 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.*

14. The contractor shall include this language in any subcontract it executes to fulfill the terms of this bid: “the sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with ‘Limited English Proficiency’ in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement.”

15. *Contractors who apply or bid for an award of \$100,000 or more shall file the required certification that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier, up to the recipient. The required certification is included here:*

- a. The undersigned certifies, to the best of his or her knowledge and belief, that:
 - (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- b. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

16. The contractor acknowledges and certifies that it has not been debarred or suspended and further acknowledges and agrees that it must comply with regulations regarding debarred or suspended entities in accordance with 24 CFR § 570.489(1). Funds may not be provided to excluded or disqualified persons.

17. The contractor agrees and certifies that to the greatest extent practicable, it will prefer the purchase, acquisition, and use of all applicable goods, products or materials produced in the United States, in

conformity with 2 CFR 200.322 and/or section 70914 of Public Law No. 117-58, §§ 70901-52, also known as the Infrastructure Investment and Jobs Act, whichever is applicable.

18. The contractor agrees and certifies that all activities performed pursuant to any Agreement entered as a result of the contractor's bid, and all goods and services procured under that Agreement, shall comply with 2 C.F.R. § 200.216 (Prohibition on certain telecommunications and video surveillance services and equipment) and 2 C.F.R. 200 § 200..323 (Procurement of recovered materials), to the extent either section is applicable.

19. If this bid involves construction work for a project totaling \$10 million or more, then the contractor further agrees that all laborers and mechanics, etc., employed in the construction of the public facility project assisted with funds provided under this Agreement, whether employed by contractor, or contractor's contractors, or subcontractors, shall be paid wages complying with the Davis-Bacon Act (40 U.S.C. 3141-3144). Contractor agrees that all of contractor's contractors and subcontractors will pay laborers and mechanics the prevailing wage as determined by the Secretary of Labor and that said laborers and mechanics will be paid not less than once a week. The contractor agrees to comply with the Copeland Anti- Kick Back Act (18 U.S.C. § 874) and its implementing regulations of the U.S. Department of Labor at 29 CFR part 3 and part 5. The contractor further agrees to comply with the applicable provisions of the Contract Work Hours and Safety Standards Act (40 U.S.C. Section 327-333), and the applicable provisions of the Fair Labor Standards Act of 1938, as amended (29 U.S.C. et seq.). Contractor further agrees that it will report all suspected or reported violations of any of the laws identified in this paragraph to LFUCG.



Signature

April 26, 2023

Date

PRIVILEGED AND CONFIDENTIAL

**AFFIRMATIVE ACTION PROGRAM
FOR
WOMEN & MINORITIES**

Tetra Tech, Inc



01/01/2023 to 12/31/2023

AFFIRMATIVE ACTION PROGRAM FOR WOMEN & MINORITIES

Contractor: Tetra Tech, Inc.

EEO Manager: Janet Brunner

01/01/2023 to 12/31/2023

CONFIDENTIAL TRADE SECRET MATERIALS
(Not for distribution except on a need-to-know basis.)

This affirmative action program contains confidential information that is subject to the provision of 18 U.S.C. 1905, *Chrysler Corp. v. Brown*, 441 U.S. 281, 19 FEP 475 (1979). Furthermore, release of any trade secret, confidential statistical or commercial information is considered arbitrary and capricious and is in violation of the Administrative Procedure Act. See *CNA Financial Corp. v. Donovan* 830 F.2nd 1132, 1144 and n. 73 (D.C. Cir.) certiorari denied, 485 U.S. 977 (1988). Copies of this affirmative action program and all related appendices, documents, and support data are made available on loan to the U.S. Government upon the request of said Government on the condition that the Government holds them totally confidential and does not release copies to any persons whatsoever. This affirmative action program and its appendices and other supporting documents contain much confidential information that may reveal, directly or indirectly, plans for business or geographical expansion or contraction. Pursuant to the Freedom of Information Act, this affirmative action program is exempt from disclosure, reproduction and distribution upon the grounds, among others, that such material constitutes 1) personnel files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, and that are exempt from disclosure under 5 U.S.C. 552(b) (6); 2) confidential, commercial or financial information, which is exempt from disclosure under 5 U.S.C. 552(b) (4); 3) investigatory records compiled for law enforcement purposes, the production of which would constitute an unwarranted invasion of personal privacy, and that are exempt from disclosure under 5 U.S.C. 552(b) (7) (C); and 4) matters specifically exempted from disclosure by statute, which are exempt from disclosure under 5 U.S.C. 552(b) (3). Notice is hereby given of a request that this Program be kept confidential.

Tetra Tech, Inc wishes to make it clear that it does not consent to the release of any information whatsoever contained in this affirmative action program under the Freedom of Information Act or otherwise. If the U.S. Government, or any agency or subdivision thereof, is considering breaching the conditions under which this affirmative action program was loaned to such government, or is considering a request of this Program under the Freedom of Information Act, request is hereby made that the Government immediately notify Tetra Tech, Inc and its counsel of any and all Freedom of Information Act requests by the government or any other contemplated release of this Program by the Government that relates to information obtained by the Government. Tetra Tech, Inc further requests that everyone who has any contact with this affirmative action program and its supporting appendices, documents and other data treats such information as totally confidential and that such information not be released to any person whatsoever. Retention or disclosure of information relating to identifiable individuals may also violate the Privacy Act of 1974.

INTRODUCTION

Tetra Tech, Inc develops an annual affirmative action program as one of several tools to implement the affirmative action policies effectively. The form, language and analysis of the program necessarily complies with the requirements of 41 CFR 60-2, et seq. (affirmative action programs) and other regulations established pursuant to the provisions of Executive Order 11246 and all other civil rights related laws and regulations that have or may be enacted, as amended. Accordingly, terminology such as "problem areas" and "utilization analysis" appearing in this affirmative action program is that which the organization is required to use by these regulations. The criteria used in relation to these terms are those specified by the Government. These terms have no independent legal or factual significance whatsoever. Although Tetra Tech, Inc uses this terminology and methodology in connection with this affirmative action program and the affirmative action policies, such usage does not necessarily signify that the organization agrees that these terms properly apply to any particular factual situation.

Information regarding identifiable individuals is private and confidentially maintained. Everyone who has official access to confidential data will exercise every precaution to protect this information.

DESIGNATION OF RESPONSIBILITY

41 CFR Section 60-2.17(a), 60-2.10(b)(2)(i)

Dan Batrack, CEO, has overall responsibility for implementation of the Equal Employment Opportunity Policy. Janet Brunner, Equal Employment Opportunity Manager, assumes the responsibility for the development, implementation and monitoring of the affirmative action program, which includes all those positions located in subordinate and/or lower-level establishments for which the selection decisions are made at the corporate level.

Responsibility for the implementation and monitoring of the affirmative action program rests with the EEO Manager, whose responsibilities include but are not limited to the following:

1. Developing policy statements and affirmative action programs.
2. Developing internal and external communication procedures when appropriate.
3. Developing an internal audit and reporting system that:
 - a. Identifies areas that require remedial action, and develops programs to correct those problem areas.
 - b. Determines the degree to which the goals and objectives are reached.
4. Monitoring the following internal practices:
 - a. Proper display of EEO posters and policies.
 - b. Full participation of minority, female, and disabled employees in all Tetra Tech, Inc sponsored educational, training, recreational, and social activities.
5. Assisting management in solving any identified problems. It is the responsibility of department heads, managers, and supervisors to provide the EEO Manager with such information and/or statistical data as is necessary to measure progress toward the attainment of goals and to assure good faith efforts to implement the affirmative action program. Such information and/or statistical data are used to set reasonable placement goals.
6. Keeping management informed of the latest developments in the equal employment opportunity area.
7. Assisting employees in solving problems and resolving EEO complaints.
8. Serving as a liaison between Tetra Tech, Inc and appropriate women and minority groups.
9. Serving as a liaison between Tetra Tech, Inc and appropriate EEO enforcement agencies.

IDENTIFICATION OF PROBLEM AREAS

41 CFR Section 60-2.17(b)

As part of the monitoring practice, an analysis of personnel matters is conducted. The following items are considered:

1. Composition of the workforce by minority group and sex. Good faith placement goals are established where necessary.
2. Composition of applicant flow by minority group and sex. Corrective action is taken when appropriate whenever the referral ratio of women and minorities indicates a significantly higher percentage is being rejected as compared to non-minority and male applicants.
3. Compensation system. Tetra Tech, Inc evaluates its compensation system to determine whether there are gender, race or ethnicity-based disparities. The purpose of the analysis is to identify potential areas where impediments to equal employment opportunity may exist. Disparities alone do not necessarily indicate a problem area; there may be many non-discriminatory reasons for a disparity.
4. Selection process. The selection process includes: position descriptions, titles, application forms, pre-employment forms, interview procedures, test validity and administration, referral procedures, final selection process and similar factors. The application and related pre-employment forms are in compliance with federal guidelines, and position descriptions accurately reflect actual duties and responsibilities.

The following areas are reviewed annually to ensure the success of this affirmative action program:

- Transfer and promotion practices,
- Facility and Tetra Tech, Inc sponsored recreational, social and educational events,
- EEO posters,
- Policy statements,
- Training Programs, and
- Suitable housing and transportation does not inhibit recruitment efforts and employment of minorities.

ORGANIZATIONAL PROFILE

41 CFR Section 60-2.11

Organizational Display

The Organizational Display is a detailed presentation of the Tetra Tech, Inc. organizational structure. It identifies each organizational unit and shows the relationship to other organizational units.

An organizational unit is any component part of the Tetra Tech, Inc. corporate structure. It might be a department, division, section, branch, group, project team, job family, or similar component. This includes an umbrella unit (such as a department) that contains a number of subordinate units, and it separately includes each of the subordinate units (such as sections or branches).

For each organizational unit, the organizational display includes the following:

1. The name of the unit;
2. The job title, gender, race, and ethnicity of the unit supervisor(s) (if the unit has a supervisor);
3. The total number of male and female incumbents; and
4. The total number of male and female incumbents in each of the separate minority groups.

The total number of incumbents in each minority classification is given for each job title. All job titles, including all managerial job titles, are listed.

WORKFORCE BY JOB GROUP

41 CFR Sections 60-2.12, 60-2.17(b)(1)

The Job Group Analysis groups jobs with similar content, wage rates, and opportunities into job groups. This analysis includes a list of the job titles that constitute each job group.

PLACEMENT OF INCUMBENTS IN JOB GROUPS

41 CFR Section 60-2.13

Tetra Tech, Inc states separately the percentage of minorities and the percentage of women it employs in each job group established pursuant to Sec. 60-2.12.

WORKFORCE BY JOB GROUP - ANNOTATIONS
41 CFR Section 60-2.1e

Tetra Tech, Inc. prepares a separate Job Group Annotations report, which lists employees who are included in an affirmative action program for an establishment other than the one in which the employees are located, and identifies the actual location of such employees.

EVALUATION OF PERSONNEL ACTIVITY
41 CFR Section 60-2.17(b)(2)

Tetra Tech, Inc. evaluates personnel activity to determine whether there are selection disparities.

DETERMINING AVAILABILITY

41 CFR Section 60-2.14

Availability is an estimate of the number of qualified minorities or women available for employment in a given job group, expressed as a percentage of all qualified persons available for employment in the job group. The purpose of the availability determination is to establish a benchmark against which the demographic composition of the incumbent workforce can be compared in order to determine whether barriers to equal employment opportunity may exist within particular job groups.

Tetra Tech, Inc. separately determines the availability of women and minorities for each job group. To determine availability, Tetra Tech, Inc. considers the following factors:

1. The percentage of minorities or women with requisite skills in the reasonable recruitment area. The reasonable recruitment area is defined as the geographical area from which the contractor usually seeks or reasonably could seek workers to fill the positions in question. 41 C.F.R. 60-2.14(c)(1).

Factor 1a considers the percent of women and minorities with requisite skills in a local recruitment area. The most current U.S. Census data is used to derive the availability of women and minorities. If this factor is used, it is because Tetra Tech, Inc. recruits, and many of its applicants live within the local recruitment area, or because we plan on recruiting in this region in the future. Any recruitment practices unique to a job group are noted on the Availability Analysis.

2. The percentage of minorities or women among those promotable, transferable, and trainable within the contractor's organization. Trainable refers to those employees within the contractor's organization who could, with appropriate training that the contractor is reasonably able to provide, become promotable or transferable during the AAP year. 41 C.F.R. 60-2.14(c)(2).

Factor 2a considers the percentage of women and minorities promotable and transferable within the contractor's organization. If this factor is chosen, it is because we fill positions by recruiting from within the workforce either through promotions or transfers. Internal applicants normally apply for these positions. Any recruitment practices unique to a job group are noted on the Availability Analysis.

PLACEMENT GOALS - COMPARING INCUMBENCY TO AVAILABILITY

41 CFR Section 60-2.15

Tetra Tech, Inc compares the percentage of women and minorities in each job group determined pursuant to Sec. 60-2.13 with the availability for those job groups determined pursuant to Sec. 60-2.14. When the percentage of minorities or women employed in a particular job group is less than would reasonably be expected given their availability percentage in that particular job group, a placement goal is established in accordance with Sec. 60-2.16.

PLACEMENT GOALS

41 CFR Section 60-2.16

Placement goals serve as objectives or targets reasonably attainable by means of applying every good faith effort to make all aspects of the entire affirmative action program work. Placement goals are also used to measure progress toward achieving equal employment opportunity.

The establishment of a goal under Sec. 60-2.15 is neither a finding nor an admission of discrimination.

Where, pursuant to Sec. 60-2.15, a placement goal for a particular job group is established, a percentage goal is equal to the availability figure derived for women or minorities, as appropriate, for that job group.

In establishing placement goals, the following principles from Sec 60-2.16(e) also apply:

1. Placement goals are neither rigid or inflexible quotas, nor are they considered to be either a ceiling or a floor for the employment of particular groups.
2. All employment decisions are made in a nondiscriminatory manner. Placement goals are not used to extend a preference to any individual, select an individual, or adversely affect an individual's employment status on the basis of that person's race, color, religion, sex, sexual orientation, gender identity, or national origin.
3. Placement goals do not create set-asides for specific groups, nor are they intended to achieve proportional representation or equal results.
4. Placement goals are not used to supersede merit selection principles.

ACTION ORIENTED PROGRAMS

41 CFR Section 60-2.17(c)

Tetra Tech, Inc develops these action-oriented programs to correct any problem areas identified in the Identification of Problem Areas 41 C.F.R. Section 60-2.17(b) and to attain established goals and objectives.

THE SELECTION PROCESS

1. At least annually, a detailed analysis of position descriptions is conducted to ensure that they accurately reflect position functions.
2. Job requirements are validated by division, department, location or other appropriate organizational units. Special attention is given to academic, experience, physical, and skill requirements to ensure that the requirements themselves do not constitute inadvertent discrimination. Job specifications are free from bias in regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disabled or veteran status, except where there is a bona fide occupational qualification. Job requirements are validated when the number of individuals from a particular race or gender group is disproportionately selected as determined by Impact Ratio studies.
3. Position descriptions and specifications are distributed to recruiting sources and members of management involved in the recruiting, screening, selection, and promotion processes.
4. Selection processes are evaluated at least annually to ensure that they are nondiscriminatory.
5. Individuals who have a role in the selection process are chosen with special care given to their qualifications for such roles and are provided any necessary ongoing training to ensure that the selection processes remain nondiscriminatory.

RECRUITMENT

Any one or all of the following techniques are used to improve recruitment and increase the flow of minority or female applicants:

1. Linkage with recruiting sources, which may include briefing sessions, plant tours, presentations by minority and female employees, and full descriptions of appropriate job openings and the selection process;
2. Encouragement of minority and female employees to refer qualified applicants;
3. Inclusion of women and minorities on the personnel staff;
4. Minority and female participation in career days, youth motivation programs and other similar programs in the community;
5. Minority and female participation in "job fairs;"
6. Active recruiting at various training institutions, especially those that have high minority and female enrollments; and
7. Expansion of help-wanted advertising to include the minority news media and women's interest media.

PROMOTIONS

Any one or all of the following techniques are used to improve promotional opportunities for minority and female employees:

1. Posting or general announcement of all appropriate job openings;
2. Assessment of current female and minority employees' academic, skill and experience levels;
3. Provision of job training and work-study programs;
4. Completion of performance appraisals;
5. Validation of job specifications;
6. Justification by supervisors when apparently qualified minority or female employees are passed over;
7. Establishment of career counseling programs, which may include attitude development, education aid, job rotations, buddy systems and similar programs;
8. Ongoing review of seniority practices in clauses and contracts to ensure that they are nondiscriminatory;
and
9. Review of all company-sponsored recreational and social activities to ensure that they are desegregated.

INTERNAL AUDIT AND REPORTING SYSTEMS

41 CFR Section 60-2.17(d)

Monitoring and reporting procedures are developed to evaluate the extent to which the goals of the affirmative action program are being met. Tetra Tech, Inc takes the following measures:

1. Information on race and sex is obtained when an application for a position is submitted.
2. An Adverse Impact (Impact Ratio) Analysis is performed when sufficient data exists on applicants, hires, promotions, and terminations to ensure compliance with the Uniform Employment Selection Guidelines.
3. Any training programs are analyzed regularly to eliminate potential discrimination in participation rates.
4. Any tests administered are routinely analyzed to uncover potential discrimination in grading scores or test results.
5. Compensation practices are reviewed at least annually for wage discrepancies.
6. The Availability Analysis for women and minorities is reviewed and good faith placement goals are established when necessary.
7. Progress toward established goals is reviewed at least annually for possible adjustments to employment practices.
8. Internal reporting is prepared as needed to determine why goals were not met.
9. Results of the affirmative action program are reviewed with all levels of management.
10. Top management is informed on a regular basis of the effectiveness of these policies and any recommendations for improvement.

GOALS PROGRESS

41 CFR Section 60-2.16, 60-2.17(d)

Tetra Tech, Inc. monitors progress toward goals.

RELIGION AND NATIONAL ORIGIN DISCRIMINATION GUIDELINES

41 CFR Section 60-50

Tetra Tech, Inc reaffirms its policy to afford equal employment opportunity to all individuals. Neither national origin nor religion is a factor in recruitment, selection, promotion, transfer, termination, or participation in training. The following activities are undertaken to ensure that religion and national origin are not used as a basis for employment decisions:

1. Employment practices are reviewed to ensure that members of particular religious and/or ethnic groups are given equal employment opportunities.
2. All employees, including supervisors, managers, and executives are informed of our commitment to provide equal employment opportunity without regard to religion or national origin.
3. Recruitment sources are informed of our commitment to provide equal employment opportunity without regard to religion or national origin.
4. Internal procedures exist to implement equal employment opportunity without regard to national origin or religion.

ACCOMMODATION FOR RELIGIOUS OBSERVANCE AND PRACTICE

41 CFR Section 60-50.3

The religious observances and practices of employees are accommodated by Tetra Tech, Inc, except where such accommodation would cause undue hardship on the conduct of business. The accommodation offered is determined by considering business necessity, financial expense and any personnel coverage problems that may result.

NONDISCRIMINATION

41 CFR Section 60-50.5

Tetra Tech, Inc does not discriminate against any qualified employee or applicant because of race, color, sex, sexual orientation, gender identity, age, disabled, or veteran status in implementing the policy concerning nondiscrimination based on religion or national origin

WORKFORCE ANALYSIS FORM

Name of Organization: Tetra Tech, Inc.

ALL LOCATIONS	Total Employees	Male				Female							
		W	B	NHPI	A	W	B	NHPI	A				
Exec/Sr Officials and Managers	359	269	4	0	15	0	0	2	0	0	2	0	1
First/Mid Officials and Managers	1319	717	26	2	46	2	17	355	23	1	36	2	15
Professionals	5141	2382	168	5	252	13	100	1391	122	3	188	9	87
Technicians	1110	558	72	6	49	11	39	171	9	2	22	2	14
Sales Workers	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative Support Workers	627	83	25	1	10	0	10	227	86	3	37	3	26
Craft Workers	50	30	5	0	2	2	1	0	0	0	0	0	0
Operatives	242	113	21	1	28	7	2	7	0	0	2	0	1
Laborers and Helpers	54	36	3	1	0	0	2	2	0	0	0	0	0
Service Workers	2122	475	476	6	14	6	106	284	367	4	13	7	60
TOTAL	6947	4663	800	22	416	42	277	2495	609	13	300	23	204
PERCENTAGE	100%	42.3%	7.3%	0.2%	3.8%	0.4%	2.5%	22.6%	5.5%	0.1%	2.7%	0.2%	1.9%

Prepared by: Barbara Woo, Corporate Human Resources

Date: **04/20/2023**

(Name and Title)

Revised 2015-Dec-15

WORKFORCE ANALYSIS FORMName of Organization: Tetra Tech, Inc.**ALL ALLOCATIONS**

GRAND TOTAL	Total				M	F
ALL LOCATIONS	Employees	Male	Female	Minority	H	H
Exec/Sr Officials and Managers	359	294	65	32	5	2
First/Mid Officials and Managers	1319	859	460	247	49	28
Professionals	5141	3160	1981	1368	240	181
Technicians	1110	854	256	381	119	36
Sales Workers	0	0	0	0	0	0
Administrative Support Workers	627	168	459	317	39	77
Craft Workers	50	50	0	20	10	0
Operatives	242	228	14	122	56	4
Laborers and Helpers	54	52	2	16	10	0
Service Workers	2122	1282	840	1363	199	105
TOTAL	11024	6947	4077	3866	727	433
PERCENTAGE	100%	63.0%	37.0%	35.1%	6.6%	3.9%

MALE

GRAND TOTAL	Total	Male					
ALL LOCATIONS	Employee	W	B	NHPI	A	NA	2
Exec/Sr Officials and Managers	359	269	4	0	15	1	0
First/Mid Officials and Managers	1319	717	26	2	46	2	17
Professionals	5141	2382	168	5	252	13	100
Technicians	1110	558	72	6	49	11	39
Sales Workers	0	0	0	0	0	0	0
Administrative Support Workers	627	83	25	1	10	0	10
Craft Workers	50	30	5	0	2	2	1
Operatives	242	113	21	1	28	7	2
Laborers and Helpers	54	36	3	1	0	0	2
Service Workers	2122	475	476	6	14	6	106
TOTAL	11024	4663	800	22	416	42	277
PERCENTAGE	100%	42.3%	7.3%	0.2%	3.8%	0.4%	2.5%

FEMALE

GRAND TOTAL	Total	Female					
ALL LOCATIONS	Employees	W	B	NHPI	A	NA	2
Exec/Sr Officials and Managers	359	58	2	0	2	0	1
First/Mid Officials and Managers	1319	355	23	1	36	2	15
Professionals	5141	1391	122	3	188	9	87
Technicians	1110	171	9	2	22	2	14
Sales Workers	0	0	0	0	0	0	0
Administrative Support Workers	627	227	86	3	37	3	26
Craft Workers	50	0	0	0	0	0	0
Operatives	242	7	0	0	2	0	1
Laborers and Helpers	54	2	0	0	0	0	0
Service Workers	2122	284	367	4	13	7	60
TOTAL	11024	2495	609	13	300	23	204
PERCENTAGE	100%	22.6%	5.5%	0.1%	2.7%	0.2%	1.9%

Prepared by: Barbara Woo, Corporate Human ResourcesDate: **04/20/2023**

(Name and Title)

Revised 2015-Dec-15

AFFIDAVIT


Comes the Affiant, Andrew R Webster, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Andrew R Webster and he/she is the individual submitting the proposal or is the authorized representative of Tetra Tech, the entity submitting the proposal (hereinafter referred to as "Proposer").
2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
4. Proposer has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.
6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

Continued on next page

7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

Andrew Webster 

STATE OF Michigan

COUNTY OF Washtenaw

The foregoing instrument was subscribed, sworn to and acknowledged before me

by Andrew R Webster on this the 26th day
of April, 2023.

My Commission expires: 5-16-24

MICHAEL C. NOLTA
Notary Public, State of Michigan
County of Wayne
My Commission Expires 5-16-24
Acting County of Washtenaw


NOTARY PUBLIC, STATE AT LARGE

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the “Recipient”) hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the “Act”), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the “Regulations”) and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

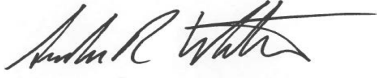
The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.



Signature

Tetra Tech

Name of Business

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The Lexington Fayette Urban County Government also has set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to Veteran-owned Small Businesses. The goal for the utilization of Disadvantaged Business Enterprises as well Veteran –owned Small Businesses as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Sherita Miller, MPA, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov

Firm Submitting Proposal: Tetra Tech

Complete Address: 424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503
Street City Zip

Contact Name: Andrew Webster Title: Vice President, Environmental

Telephone Number: 734-213-5034 Fax Number: 734-213-3003

Email address: andy.webster@tetrattech.com



LFUCG MWDBE PARTICIPATION FORM
 Bid/RFP/Quote Reference # RFP #9-2023

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWDBE Company, Name, Address, Phone, Email	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. Kyyba Inc. 28230 Orchard Lake Rd, Unit 130 Farmington Hills, MI 48334 248-813-9665 contact@kyyba.com	MBE / WBE	Staff-level support to include research & development of LFUCG GHG Inventory	\$10,860	Estimated at 10% of proposed budget
2. Salt River Engineering 108 West Poplar Street Harrodsburg, KY 40330 859-734-2334 connie@saltrivereng.com	Veteran owned	Technical review of intermediate deliverables including calculation workbooks, reports, and presentations, etc.	\$4,400	Estimated at 4% of proposed budget
3.				
4.				

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Tetra Tech
 Company

April 26, 2023
 Date

Andrew R Webster
 Company Representative

Vice President, Environmental
 Title



LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # RFP #9-2023

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1. Not Applicable					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Tetra Tech
Company

April 26, 2023
Date

Andrew R Webster
Company Representative

Vice President, Environmental
Title



LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # RFP #9-2023

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1. Not Applicable					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Tetra Tech
Company

April 26, 2023
Date

Andrew R Webster
Company Representative

Vice President, Environmental
Title



MWDBE QUOTE SUMMARY FORM
 Bid/RFP/Quote Reference # RFP #9-2023

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name Tetra Tech	Contact Person Andrew R Webster
Address/Phone/Email 1136 Oak Valley Drive, Suite 100, Ann Arbor, MI 48108 734-213-5034 andy.webster@tetratech.com	Bid Package / Bid Date RFP #9-2023: Greenhouse Gas Emissions Inventory, Target Setting and Reduction Plan May 3, 2023

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female	Veteran
Not Applicable								

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Tetra Tech
 Company
April 26, 2023
 Date

Andrew R Webster
 Company Representative
Vice President, Environmental
 Title



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran contractors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # RFP #9-2023

Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract #	Work Period/ From:	To:
Company Name:	Address:	
Federal Tax ID:	Contact Person:	

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date
N/A							

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Tetra Tech

Company

April 26, 2023

Date

Andrew R Webster

Company Representative

Vice President, Environmental

Title



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran contractors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # RFP #9-2023

Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract #	Work Period/ From:	To:
Company Name:	Address:	
Federal Tax ID:	Contact Person:	

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date
N/A							

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Tetra Tech

Company

April 26, 2023

Date

Andrew R Webster

Company Representative

Vice President, Environmental

Title

LFUCG STATEMENT OF GOOD FAITH EFFORTSBid/RFP/Quote # [RFP #9-2023](#)

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

_____ Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

_____ Included documentation of advertising in the above publications with the bidders good faith efforts package

_____ Attended LFUCG Central Purchasing Economic Inclusion Outreach event

_____ Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

_____ Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

_____ Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).

_____ Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

_____ Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

_____ Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items

GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, 29 U.S.C. 650 *et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. Additional Information: While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. Ambiguity, Conflict or other Errors in RFP: If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. Cancellation: If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

A. Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
 - (a) Failure to perform the contract according to its terms, conditions and specifications;
 - (b) Failure to make delivery within the time specified or according

- to a delivery schedule fixed by the contract;
- (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
 - (d) Failure to diligently advance the work under a contract for construction services;
 - (e) The filing of a bankruptcy petition by or against the contractor; or
 - (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

B. At Will Termination

Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

13. **Assignment of Contract:** The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. **Authority to do Business:** The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this Contract. The Respondent will provide LFUCG with a copy of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must

be signed by a duly authorized officer, agent or employee of the Respondent.

16. **Governing Law:** This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. **Ability to Meet Obligations:** Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.



Signature

April 26, 2023

Date



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/27/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Insurance Services West, Inc. Los Angeles CA Office 707 Wilshire Boulevard Suite 2600 Los Angeles CA 90017-0460 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105		
	E-MAIL ADDRESS:		
INSURED Tetra Tech, Inc. 424 Lewis Hargett Circle Suite 110 Lexington KY 40503 USA	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Zurich American Ins Co		16535
	INSURER B: American International Group UK Ltd		AA1120187
	INSURER C: Allied world Surplus Lines Insurance Co		24319
	INSURER D:		
	INSURER E:		

Holder Identifier :

COVERAGES **CERTIFICATE NUMBER: 570095591906** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> X,C,U Coverage GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			GLO181740604	10/01/2022	10/01/2023	EACH OCCURRENCE	\$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$2,000,000
							GENERAL AGGREGATE	\$4,000,000
							PRODUCTS - COMP/OP AGG	\$4,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			BAP 1857085 04	10/01/2022	10/01/2023	COMBINED SINGLE LIMIT (Ea accident)	\$5,000,000
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$100,000			62785232	10/01/2022	10/01/2023	EACH OCCURRENCE	\$10,000,000
							AGGREGATE	\$10,000,000
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			WC254061604 WC185708704	10/01/2022 10/01/2022	10/01/2023 10/01/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER	
							E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000
C	Env Contr Prof			03120276 Prof/Poll Liab SIR applies per policy terms & conditions	10/01/2022	10/01/2023	Each Claim Aggregate	\$2,000,000 \$2,000,000

Certificate No : 570095591906

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Evidence of Insurance.
Stop Gap coverage for the following states: OH, ND, WA, WY.

CERTIFICATE HOLDER

CANCELLATION

Tetra Tech, Inc. 424 Lewis Hargett Circle, Suite 110 Lexington KY 40503 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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Tetra Tech, Inc.

Architectural and Engineering Services Standard Terms & Conditions

Services Consultant will perform services for the Project as set forth in the provisions for Scope of Work/Fee/Schedule in the proposal and in accordance with these Terms & Conditions. Consultant has developed the Project scope of service, schedule, and compensation based on available information and various assumptions. The Client acknowledges that adjustments to the schedule and compensation may be necessary based on the actual circumstances encountered by Consultant in performing their services. Consultant is authorized to proceed with services upon receipt of an executed Agreement.

Compensation In consideration of the services performed by Consultant, the Client shall pay Consultant in the manner set forth above. The parties acknowledge that terms of compensation are based on an orderly and continuous progress of the Project. Compensation shall be equitably adjusted for delays or extensions of time beyond the control of Consultant. Where total project compensation has been separately identified for various tasks, Consultant may adjust the amounts allocated between tasks as the work progresses so long as the total compensation amount for the project is not exceeded.

Fee Definitions The following fee types shall apply to methods of payment:

- **Salary Cost** is defined as the individual's base salary plus customary and statutory benefits. Statutory benefits shall be as prescribed by law and customary benefits shall be as established by Consultant employment policy.
- **Cost Plus** is defined as the individual's base salary plus actual overhead plus professional fee. Overhead shall include customary and statutory benefits, administrative expense, and non-project operating costs.
- **Lump Sum** is defined as a fixed price amount for the scope of services described.
- **Standard Rates** is defined as individual time multiplied by standard billing rates for that individual.
- **Subcontracted Services** are defined as Project-related services provided by other parties to Consultant.
- **Reimbursable Expenses** are defined as actual expenses incurred in connection with the Project.

Payment Terms Consultant shall submit invoices at least once per month for services performed and Client shall pay the full invoice amount within 30 days of the invoice date. Invoices will be considered correct if not questioned in writing within 10 days of the invoice date. Client payment to Consultant is not contingent on arrangement of project financing or receipt of funds from a third party. In the event the Client disputes the invoice or any portion thereof, the undisputed portion shall be paid to Consultant based on terms of this Agreement. Invoices not in dispute and unpaid after 30 days shall accrue interest at the rate of one and one-half percent per month (or the maximum percentage allowed by law, whichever is the lesser). Invoice payment delayed beyond 60 days shall give Consultant the right to stop work until payments are current. Non-payment beyond 70 days shall be just cause for termination by Consultant.

Additional Services The Client and Consultant acknowledge that additional services may be necessary for the Project to address issues that may not be known at Project initiation or that may be required to address circumstances that were not foreseen. In that event, Consultant shall notify the Client of the need for additional services and the Client shall pay for such additional services in an amount and manner as the parties may subsequently agree.

Site Access The Client shall obtain all necessary approvals for Consultant to access the Project site(s).

Underground Facilities Consultant and/or its authorized subcontractor will conduct research and perform site reconnaissance in an effort to discover the location of existing underground facilities prior to developing boring plans, conducting borings, or undertaking invasive subsurface investigations. Client recognizes that accurate drawings or knowledge of the location of such facilities may not exist, or that research may reveal as-built drawings or other documents that may inaccurately show, or not show, the location of existing underground facilities. In such events, except for the sole negligence, willful misconduct, or practice not conforming to the Standard of Care cited in this Agreement, Client agrees to indemnify and hold Consultant and/or its Subcontractor harmless from any and all property damage, injury, or economic loss arising or allegedly arising from borings or other subsurface penetrations.

Regulated Wastes Client is responsible for the disposal of all regulated wastes generated as a result of services provided under this Agreement. Consultant and Client mutually agree that Consultant assumes no responsibility for the waste or disposal thereof.

Contractor Selection Consultant may make recommendations concerning award of construction contracts and products. The Client acknowledges that the final selection of construction contractors and products is the Client's sole responsibility.

Ownership of Documents Drawings, specifications, reports, programs, manuals, or other documents, including all documents on electronic media, prepared under this Agreement are instruments of service and are, and shall remain, the property of Consultant. Record documents of service shall be based on the printed copy. Consultant will retain all common law, statutory, and other reserved rights, including the copyright thereto. Consultant will furnish documents electronically; however, the Client releases Consultant from any liability that may result from documents used in this form. Consultant shall not be held liable for reuse of documents or modifications thereof by the Client or its representatives for any purpose other than the original intent of this Agreement, without written authorization of and appropriate compensation to Consultant.

Standard of Care Services provided by Consultant under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Consultant makes no warranty or guaranty, either express or implied. Consultant will not be liable for the cost of any omission that adds value to the Project.

Period of Service This Agreement shall remain in force until completion and acceptance of the services or until terminated by mutual agreement. Consultant shall perform the services for the Project in a timely manner consistent with sound professional practice. Consultant will strive to perform its services according to the Project schedule set forth in the provisions for Scope of Work/Fee/Schedule above. The services of each task shall be considered complete when deliverables for the task have been presented to the Client. Consultant shall be entitled to an extension of time and compensation adjustment for any delay beyond Consultant control.

Insurance and Liability Consultant shall maintain the following insurance and coverage limits during the period of service. The Client will be named as an additional insured on the Commercial General Liability and Automobile Liability insurance policies.

Worker's Compensation – as required by applicable state statute

Commercial General Liability - \$1,000,000 per occurrence for bodily injury, including death and property damage, and \$2,000,000 in the aggregate

Automobile Liability – \$1,000,000 combined single limit for bodily injury and property damage

Professional Liability (E&O) - \$1,000,000 each claim and in the aggregate

The Client shall make arrangements for Builder's Risk, Protective Liability, Pollution Prevention, and other specific insurance coverage warranted for the Project in amounts appropriate to the Project value and risks. Consultant shall be a named insured on those policies where Consultant may be at risk. The Client shall obtain the counsel of others in setting insurance limits for construction contracts.

Indemnification Consultant shall indemnify and hold harmless the Client and its employees from any liability, settlements, loss, or costs (including reasonable attorneys' fees and costs of defense) to the extent caused solely by the negligent act, error, or omission of Consultant in the performance of services under this Agreement. If such damage results in part by the negligence of another party, Consultant shall be liable only to the extent of Consultant's proportional negligence.

Dispute Resolution The Client and Consultant agree that they shall diligently pursue resolution of all disagreements within 45 days of either party's written notice using a mutually acceptable form of mediated dispute resolution prior to exercising their rights under law. Consultant shall continue to perform services for the Project and the Client shall pay for such services during the dispute resolution process unless the Client issues a written notice to suspend work. Causes of action between the parties to this Agreement shall be deemed to have accrued and the applicable statutes of repose and/or limitation shall commence not later than the date of substantial completion.

Suspension of Work The Client may suspend services performed by Consultant with cause upon fourteen (14) days written notice. Consultant shall submit an invoice for services performed up to the effective date of the work suspension and the Client shall pay Consultant all outstanding invoices within fourteen (14) days. If the work suspension exceeds thirty (30) days from the effective work suspension date, Consultant shall be entitled to renegotiate the Project schedule and the compensation terms for the Project.

Termination The Client or Consultant may terminate services on the Project upon seven (7) days written notice without cause or in the event of substantial failure by the other party to fulfill its obligations of the terms hereunder. Consultant shall submit an invoice for services performed up to the effective date of termination and the Client shall pay Consultant all outstanding invoices, together with all costs arising out of such termination,

within fourteen (14) days. The Client may withhold an amount for services that may be in dispute provided that the Client furnishes a written notice of the basis for their dispute and that the amount withheld represents a reasonable value.

Authorized Representative The Project Manager assigned to the Project by Consultant is authorized to make decisions or commitments related to the project on behalf of Consultant. Only authorized representatives of Consultant are authorized to execute contracts and/or work orders on behalf of Consultant. The Client shall designate a representative with similar authority. Email messages between Client and members of the project team shall not be construed as an actual or proposed contractual amendment of the services, compensation or payment terms of the Agreement.

Project Requirements The Client shall confirm the objectives, requirements, constraints, and criteria for the Project at its inception. If the Client has established design standards, they shall be furnished to Consultant at Project inception. Consultant will review the Client design standards and may recommend alternate standards considering the standard of care provision.

Independent Consultant Consultant is and shall be at all times during the term of this Agreement an independent consultant and not an employee or agent of the Client. Consultant shall retain control over the means and methods used in performing Consultant's services and may retain subconsultants to perform certain services as determined by Consultant.

Compliance with Laws Consultant shall perform its services consistent with sound professional practice and endeavor to incorporate applicable laws, regulations, codes, and standards applicable at the time the work is performed. In the event that standards of practice change during the Project, Consultant shall be entitled to additional compensation where additional services are needed to conform to the standard of practice.

Permits and Approvals Consultant will assist the Client in preparing applications and supporting documents for the Client to secure permits and approvals from agencies having jurisdiction over the Project. The Client agrees to pay all application and review fees.

Limitation of Liability In recognition of the relative risks and benefits of the project to both the Client and Consultant, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of Consultant and its subconsultants to the Client and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, so that the total aggregate liability of Consultant and its subconsultants to all those named shall not exceed \$50,000 or the amount of Consultant's total fee paid by the Client for services under this Agreement, whichever is the greater. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, breach of contract or warranty.

Consequential Damages Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the Client nor Consultant, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the project or to this Agreement. This mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation or any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both the Client and Consultant shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this project or with this Agreement.

Waiver of Subrogation Consultant shall endeavor to obtain a waiver of subrogation against the Client, if requested in writing by the Client, provided that Consultant will not increase its exposure to risk and Client will pay the cost associated with any premium increase or special fees.

Environmental Matters The Client warrants that they have disclosed all potential hazardous materials that may be encountered on the Project. In the event unknown hazardous materials are encountered, Consultant shall be entitled to additional compensation for appropriate actions to protect the health and safety of its personnel, and for additional services required to comply with applicable laws. The Client shall indemnify Consultant from any claim related to hazardous materials encountered on the Project except for those events caused by negligent acts of Consultant.

Cost Opinions Consultant shall prepare cost opinions for the Project based on historical information that represents the judgment of a qualified professional. The Client and Consultant acknowledge that actual costs may vary from the cost opinions prepared and that Consultant offers no guarantee related to the Project cost.

Contingency Fund The Client acknowledges the potential for changes in the work during construction and the Client agrees to include a contingency fund in the Project budget appropriate to the potential risks and uncertainties associated with the Project. Consultant may offer advice concerning the value of the contingency fund; however, Consultant shall

not be liable for additional costs that the Client may incur beyond the contingency fund they select unless such additional cost results from a negligent act, error, or omission related to services performed by Consultant.

Safety Consultant shall be responsible solely for the safety precautions or programs of its employees and no other party.

Information from Other Parties The Client and Consultant acknowledge that Consultant will rely on information furnished by other parties in performing its services under the Project. Consultant shall not be liable for any damages that may be incurred by the Client in the use of third party information.

Force Majeure Consultant shall not be liable for any damages caused by any delay that is beyond Consultant's reasonable control, including but not limited to unavoidable delays that may result from any acts of God, strikes, lockouts, wars, acts of terrorism, riots, acts of governmental authorities, extraordinary weather conditions or other natural catastrophes, or any other cause beyond the reasonable control or contemplation of either party.

Waiver of Rights The failure of either party to enforce any provision of these terms and conditions shall not constitute a waiver of such provision nor diminish the right of either party to the remedies of such provision.

Warranty Consultant warrants that it will deliver services under the Agreement within the standard of care. No other expressed or implied warranty is provided by Consultant.

Severability Any provision of these terms later held to be unenforceable shall be deemed void and all remaining provisions shall continue in full force and effect. In such event, the Client and Consultant will work in good faith to replace an invalid provision with one that is valid with as close to the original meaning as possible.

Survival All obligations arising prior to the termination of this Agreement and all provisions of these terms that allocate responsibility or liability between the Client and Consultant shall survive the completion or termination of services for the Project.

Assignments Neither party shall assign its rights, interests, or obligations under the Agreement without the express written consent of the other party.

Governing Law The terms of Agreement shall be governed by the laws of the state where the services are performed provided that nothing contained herein shall be interpreted in such a manner as to render it unenforceable under the laws of the state in which the Project resides.

Collection Costs In the event that legal action is necessary to enforce the payment provisions of this Agreement if Client fails to make payment within sixty (60) days of the invoice date, Consultant shall be entitled to collect from the Client any judgment or settlement sums due, reasonable attorneys' fees, court costs, and expenses incurred by Consultant in connection therewith and, in addition, the reasonable value of Consultant's time and expenses spent in connection with such collection action, computed at Consultant's prevailing fee schedule and expense policies.

Equal Employment Opportunity Consultant will comply with federal regulations pertaining to Equal Employment Opportunity. Consultant is in compliance with applicable local, state, and federal regulations concerning minority hiring. It is Consultant's policy to ensure that applicants and employees are treated equally without regard to race, creed, sex, color, religion, veteran status, ancestry, citizenship status, national origin, marital status, sexual orientation, or disability. Consultant expressly assures all employees, applicants for employment, and the community of its continuous commitment to equal opportunity and fair employment practices.

Attorney Fees Should there be any suit or action instituted to enforce any right granted in this contract, the substantially prevailing party shall be entitled to recover its costs, disbursements, and reasonable attorney fees from the other party. The party that is awarded a net recovery against the other party shall be deemed the substantially prevailing party unless such other party has previously made a bona fide offer of payment in settlement and the amount of recovery is the same or less than the amount offered in settlement. Reasonable attorney fees may be recovered regardless of the forum in which the dispute is heard, including an appeal.

Third Party Beneficiaries Nothing in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Client or the Consultant. The Consultant's services under this Agreement are being performed solely for the Client's benefit, and no other entity shall have any claim against the Consultant because of this Agreement or the performance or nonperformance of services hereunder. The Client agrees to include a provision in all contracts with contractors and other entities involved in this project to carry out the intent of this paragraph.

Lien Rights Consultant may file a lien against the Client's property in the event that the Client does not make payment within the time prescribed in this Agreement. The Client agrees that services by Consultant are considered property improvements and the Client waives the right to any legal defense to the contrary.

Captions The captions herein are for convenience only and are not to be construed as part of this Agreement, nor shall the same be construed as defining or limiting in any way the scope or intent of the provisions hereof.

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