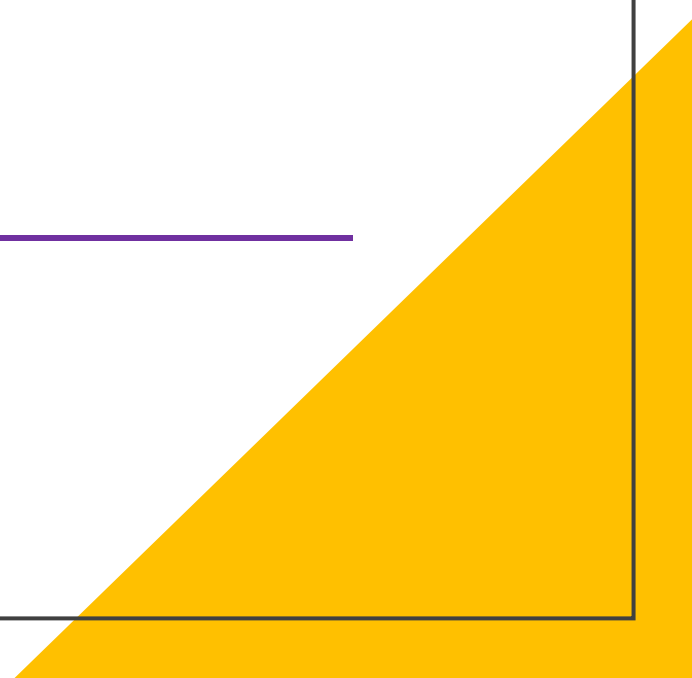

Quality Assurance Office Hours: Great Lakes Environmental Justice Thriving Communities Grantmaking Program (TCGM)

Why is QA Required?

December 19, 2024

Kelly Rodibaugh, EPA Region 5
Laboratory and Applied Science Division
Science and Quality Assurance Branch 1

A large yellow triangle is positioned in the bottom right corner of the slide, pointing towards the top right.

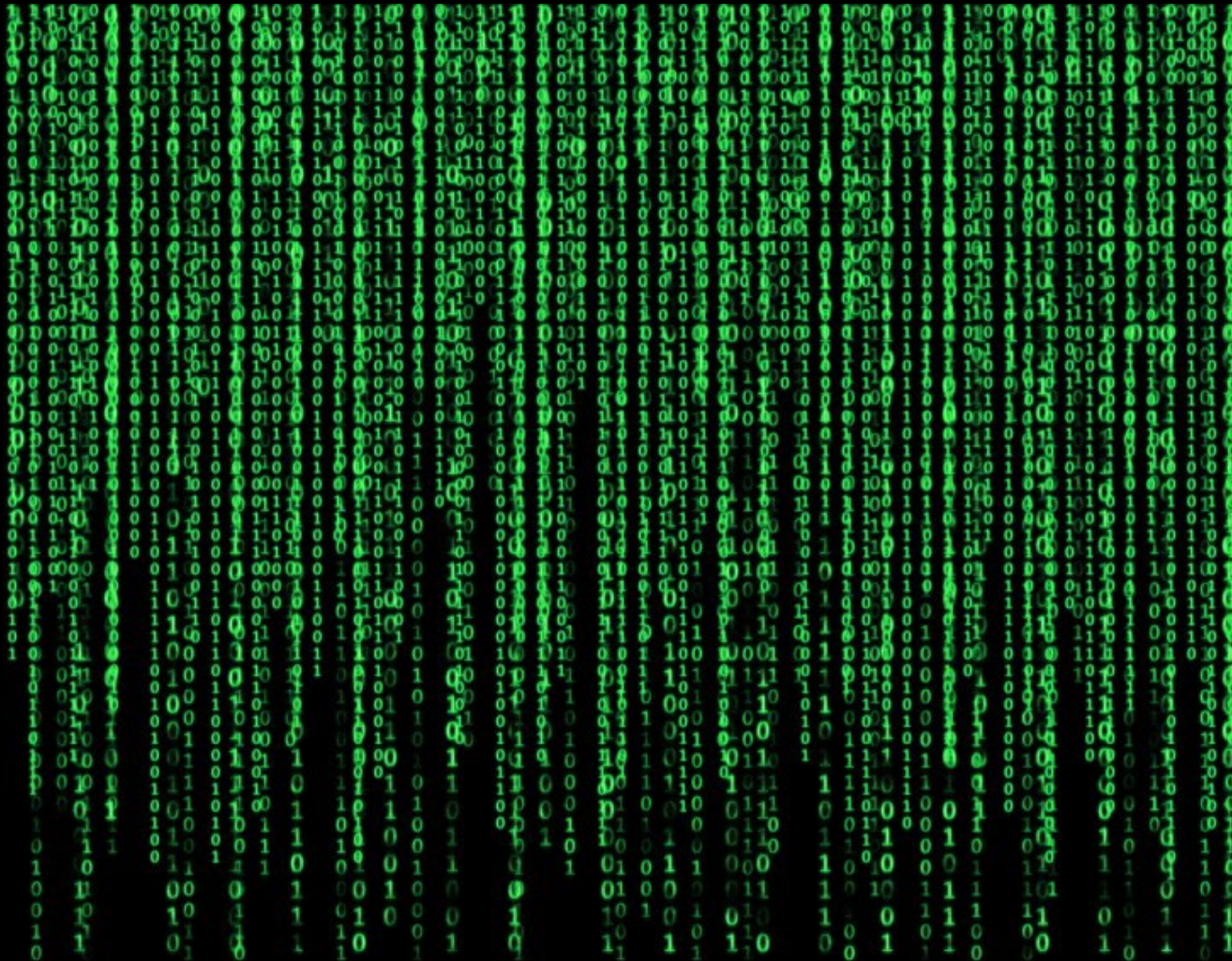


Why Is QA Required?

How many
people feel
about QA



Why do we need QA?



EPA Environmental Information Quality Policy CIO 2105.3 defines the minimum requirements for the **Quality Program supporting EPA environmental programs**. Environmental programs encompass the collection, production, evaluation, or use of environmental information **by or for EPA** and the design, construction, operation or application of environmental technology by EPA. Collectively these activities are referred to as Environmental Information Operations, or EIO.

Why do we need QA?

It's required.

But that's a supremely
unsatisfying reason.



It says so. Right here in the EPA Environmental Information Quality Policy CIO 2105.

Better Living Through Quality Assurance

1. Communicates information/data quality expectations
2. Organizes project planning in terms of project success
3. Establishes guard rails to keep us focused and on track - no project can be everything to everyone, scope creep is real
4. Pick your metaphor: road map, recipe, orchestral composition... quality assurance allows us to organize our project planning around the goals of the project and the desired outcome, which is to **collect, aggregate, design, or implement environmental information of the type and quality needed and expected for the particular decision or use specified.**





EPA Quality Program



USEPA Quality Program

- The primary goal of the Quality Program is to ensure that our **environmental information are of sufficient quantity and quality to support the data's intended use**. Under the EPA Quality Program, EPA organizations develop and implement supporting quality programs. Similar specifications may also apply to contractors, grantees, and other recipients of financial assistance from EPA.

From <https://www.epa.gov/quality/about-epas-quality-program>

The Graded Approach

The “graded approach” is defined as the process of basing the level of details and comprehensiveness of quality documentation applied to environmental operations/programs according to the intended use of the results and the degree of confidence needed in the quality of results.

EPA's policy is to use the graded approach to ensure that the required quality documentation fits the project needs and intended use of the environmental information.

The graded approach does not include eliminating any required QAPP elements.



Quality Assurance Project Plans

- A QAPP (kwapp, kwopp, q-a project plan, q-a-p-p) provides guidance defining:
 - **WHAT** do we want to know (what question is being asked)
 - **WHY** is our project important to us
 - **WHERE** are we conducting our project
 - **HOW** information/data will be collected
 - **HOW** information/data will be analyzed
 - **HOW** information/data will be determined “of sufficient quality” (i.e. “good enough”) to answer the original question
 - **WHO** is responsible for each task
 - **WHO** is responsible for **WHAT**
 - **WHEN** to do **WHAT**



Project Scope and Quality Documentation

A large, bright full moon is the central focus of the background image. It is surrounded by several black silhouettes of bats in flight, scattered across the dark, cloudy night sky. The bottom of the image shows the dark silhouettes of trees and branches.

- TLDR: If a project involves environmental information operations (EIO), a QAPP is required.
- A project that includes Environmental Information Operations (EIO) is valuable. A project that doesn't include EIO is valuable. Please don't let the spectre of writing a QAPP dissuade you from including EIO in your project plan!

Don't let QAPPs scare you!

What is Environmental Information?

Data and information that describe environmental processes or conditions which support EPA's mission of protecting human health and the environment.

Direct measurements of environmental parameters or processes

Analytical testing results of environmental conditions (e.g., geophysical or hydrological conditions)

Data/information on physical parameters or processes collected using environmental technologies

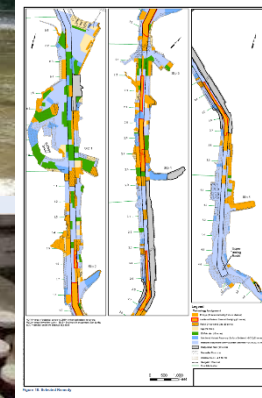
Calculations or analyses of environmental data/information

Data/information provided by models

Data/information compiled or obtained from databases, software applications, decision support tools, websites, existing literature, and other sources

Development of environmental software, tools, models, methods and applications

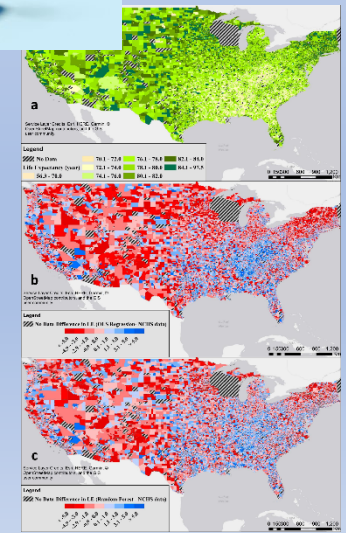
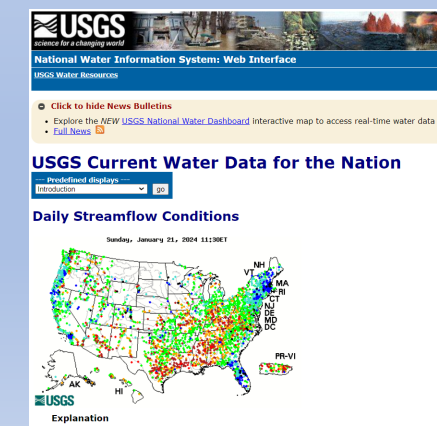
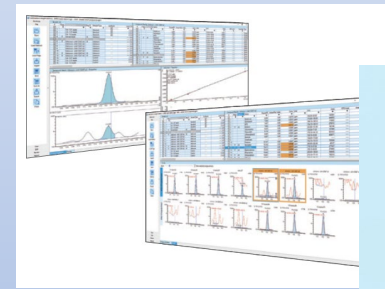
Design, construction, and operation or application of environmental technology.



Sample ID: 111095-01 Sample: Oct-21-09-20 Matrix: Water

Sample Name: L-12 Sample Location/Comments: Stream L-1, Ditch-10

Analyte	Hold time (days)	Expire	Comments
Alkalinity	14	Nov-04-09 09:20	
Ammonia N DA, Distilled	28	Nov-04-09 09:20	pH = 2
Ammonia by IC	28	Nov-04-09 09:20	
BOD	2	Oct-29-09 09:20	
Cu ICP (W)	180	Apr-25-10 09:20	pH = 2
Hardness by calc	180	Apr-25-10 09:20	pH = 2
Manganese ICP-MS (w)	180	Apr-25-10 09:20	pH = 2
Mg ICP (W)	180	Apr-25-10 09:20	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	Nov-04-09 09:20	pH = 2
pH	1	Oct-29-09 09:20	
Sulfate, TDS	7	Nov-04-09 09:20	



What is Environmental Technology for Environmental Justice Projects*?

Green Infrastructure

- Use of filtration, infiltration and evapotranspiration to treat and soak up rain water where it falls



Environmental Restoration

- Surveying, water/soil sampling, engineering, earthwork to address beneficial use impairments



***This is NOT an exhaustive summary of all the environmental technology possible for EJ projects.**

Communities

- Provide education and outreach, water and air quality monitoring, critical clean water infrastructure
- Such as: distribution of educational materials, replacement of water service lines



- Improvement of waterways
- Such as: Dam removal, culvert replacement



When is a QAPP required?

- Per QAPP Standard, “All work performed by or on behalf of EPA involving the collection, production, evaluation, or use of environmental information including the design, construction, operation, or application of environmental technology must be documented in a QAPP.”
- Are you unsure if your project includes environmental information and/or environmental technology?
 - EPA QA can help you figure this out!

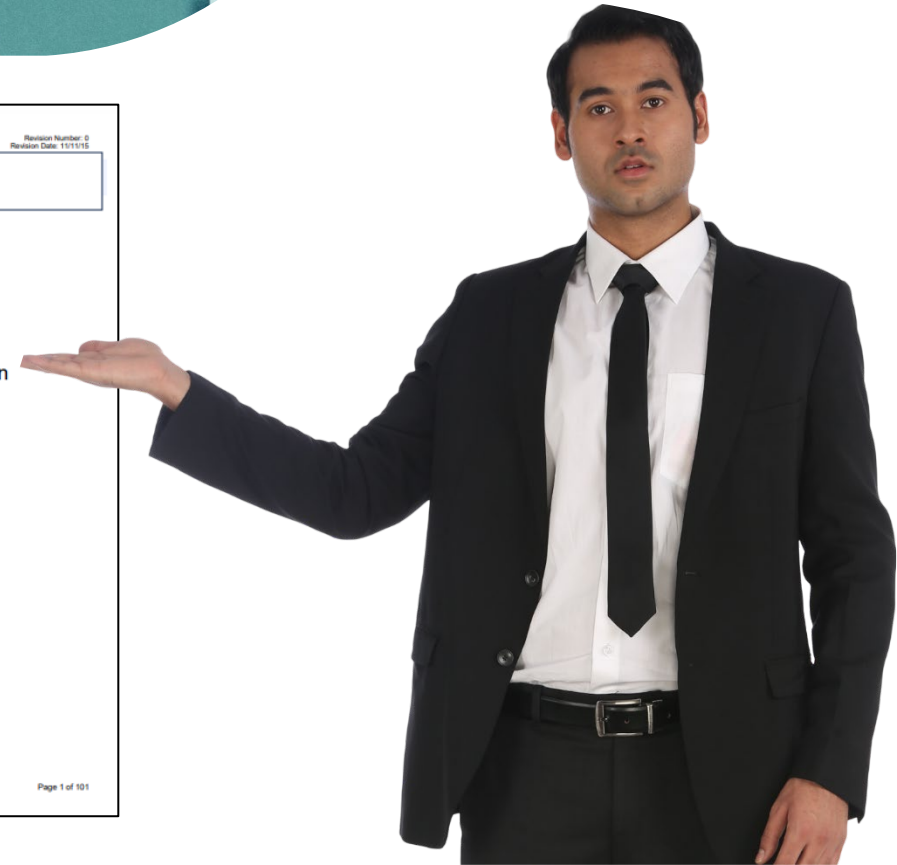


Quality Assurance Project Plan for OUI Remedial Investigation
Pueblo, Colorado

Revision Number: 0
Revision Date: 11/11/15

Uniform Federal Policy
Quality Assurance Project Plan
For
Remedial Investigation at
Pueblo, Pueblo County, Colorado
November 11, 2015

Document Control Number: OUI R UFP QAPP Page 1 of 101



When is a QAPP NOT required?

- No QAPP Required
 - The project does not involve environmental information operations.
 - Projects that **may not** need a QAPP include public outreach, environmental education, trash removal, or property acquisition.
 - How do you know if the project requires a QAPP? Talk to EPA QA!





Summary

“Environmental information... of the type and quality needed and expected for the particular decision or use specified.”



YOUR LOGO Groundwater Monitoring Field Data Form
Site: Valero of Fremont

MW-1

Date	06/20/2016	Weather Conditions	Cloudy	Depth to Water (ft bmg)	14.95
Project Number	SEA00042016	Water Quality Meter	YSI	Measured Well Depth (ft bmg)	25.56
Address	39932 Fremont Blvd Fremont, CA 94538	Casing Material	PVC	Water Column in Well (ft bmg)	10.81
Purge Method	Low Flow - Peristaltic Pump	Casing Diameter (in)	2	Gallons in Well	1.72
Purge Volume Units	M	Pump Intake Depth (ft bmg)	20	Total Volume to Remove	
Sampling Type	Low Flow				

Comments

Field Parameters

Time	Cum Vol Purged	Temp °C	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Remarks
12:54	600	15.6	7.36	517.3	-58.9	1.08	2	15.39	
12:57	1200	15.4	7.31	522.7	-59.6	0.83	2	15.20	
13:00	1800	15.2	7.31	529.1	-71.1	0.59	1	15.21	
13:03	2400	15.4	7.29	531.3	-74.7	0.51	1	15.22	
13:06	3000	15.2	7.28	535.1	-77.2	0.43	1	15.21	

Sampling Summary

Sample Date	06/20/2016	Order No.	
Sample Time	13:02	Analysis	NO3PH-GX, NH4PH-GX, SWR3003, SWR270C-SIM, SWR108, SWR002
Sample ID	MW-1-Q3016	COC	
Duplicate Sample ID		Botes	Gx 2x 40 ml - HCL, BTEX 3x of 40 ml - HCL, Lead 1x 250 ml poly, HClO4 Dissolved Lead 1x 250 ml poly, Unpreserved 1 - 250ml Poly with HNO3, (Distillation) 1 - 250ml poly, Unpreserved 2 - 1L amber, Unpreserved 2 - 1L amber Unpreserved 2 - 1L amber Unpreserved
Dup Sample Time			

Remarks

Yes	No	NA	Notes
X			Round 12"
X			
X			
X			

1 / 10 Powered by:



Sample ID: [2111092-02](#) Sample: [04-27-21 09:20](#) Matrix: [Water](#)

Sample Name: [L-1D](#) Sample Location/Comments: [Stream L-1 Duplicate](#)

Sample Comments:

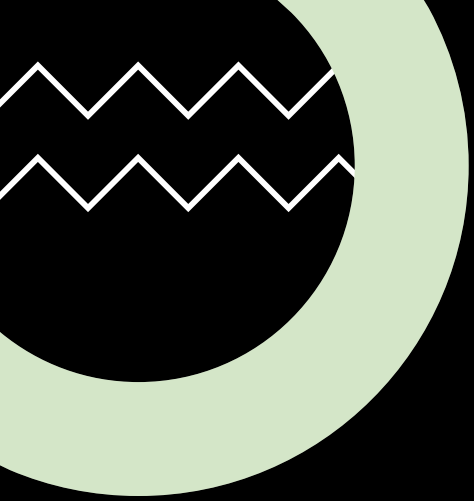
Analysis	Hold time (days)	Expires	Comments
Alkalinity	14	Nov-16-21 09:20	
Ammonia N DA, Distilled	28	Nov-24-21 09:20	pH = 2
Anions by IC	28	Nov-24-21 09:20	
BOD	2	Oct-29-21 09:20	
Ca ICP (W)	180	Apr-25-22 09:20	pH = 2
Hardness by calc	180	Apr-25-22 09:20	pH = 2
Metals ICP-AES (w)	180	Apr-25-22 09:20	pH = 2
Mg ICP (W)	180	Apr-25-22 09:20	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	Nov-24-21 09:20	pH = 2
pH	1	Oct-26-21 09:20	
Solids, TDS	7	Nov-03-21 09:20	
Solids, TSS	7	Nov-03-21 09:20	
Total Phosphorus DA	28	Nov-24-21 09:20	pH = 2



Does my project require
a QAPP?



EPA QA is here to help!
Please reach out.



Don't Be Scared of QAPPs!

A project that includes Environmental Information Operations (EIO) is valuable.

A project that doesn't include EIO is valuable.

Please don't let the spectre of writing a QAPP dissuade you from including EIO in your project plan!



References and Links

EPA Quality Program

- <https://www.epa.gov/quality>

FAQ's about EPA's Quality Program

EPA Environmental Information Policy, Procedures and Standards

- <https://www.epa.gov/quality/agency-wide-quality-program-documents>

Including:

- **CIO 2105.1**, March 2021 – Environmental Information Quality Policy
- **CIO 2105-P-01.1**, March 2021 – Environmental Information Quality Procedure
- **CIO 2105-P-02.0**, September 2014 – EPA QA Field Activities Procedures
- **CIO 2105-P-03.0**, August 2020 – CIO Notification Procedure for Environmental Data Quality Issues



References and Links

Specific to Region 5:

- [EPA Region 5 Quality Management Plan](#)
- [Region 5 Science and Quality Assurance Branch \(SQAB\) Website](#)
- [Example QMP - Great Lakes Fishery Commission QMP](#)
- [EPA Region 3 Environmental Justice Thriving Communities Grantmaking Program QMP](#)

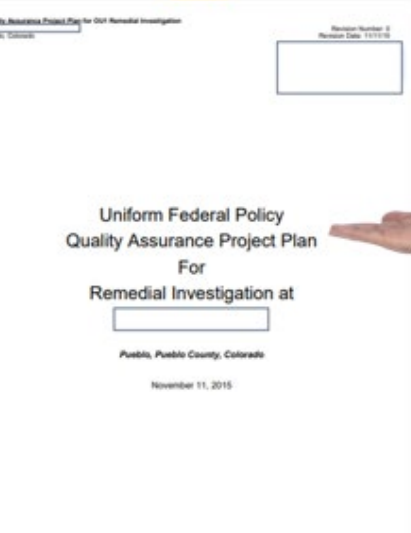
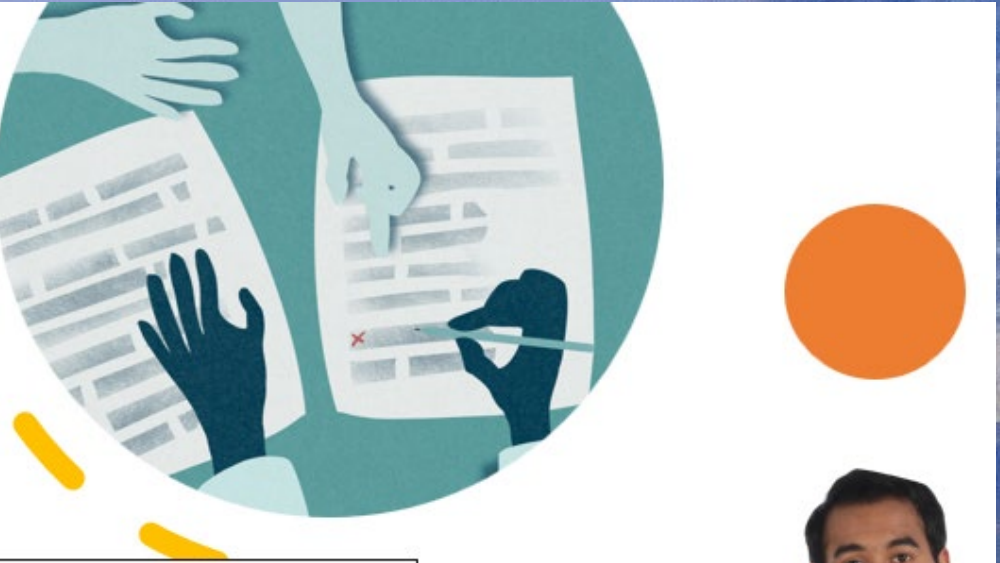
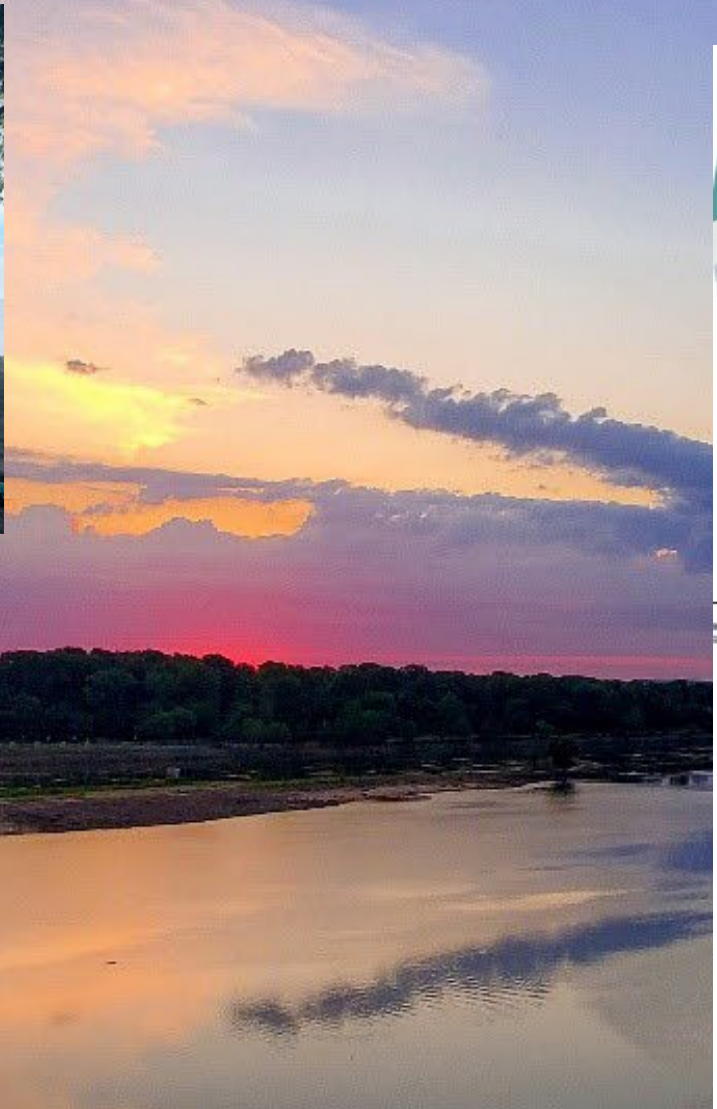
QA Document Requirements:

- [EPA Quality Management Plan Standard CIO 2105-S-01 \(QA/S-1\)](#)
 - [QMP Checklist](#)
- [Quality Assurance Project Plan Standard CIO 2105-S-02 \(QA/S-2\)](#)

More QA Presentations:

- [OMS Presentation - QAPP Workshop for EJ Grant Recipients](#)
 - [Presentation slides](#)
- [QCIX Presentation - Graded Approach to Combine QMP and QAPP](#)
 - Slides 5-8
- [Preparing Quality Assurance Project Plans for Your Tribal Wetland Program](#)





Kelly Rodibaugh
 EPA Region 5 Quality Assurance Manager
rodibaugh.kelly@epa.gov
 (312) 886-2935

Thank You!

Questions? Ideas? Want to discuss quality assurance? Please reach out!

