



**Science to Achieve Results: VIRAL
PATHOGEN AND SURROGATE APPROACHES
FOR ASSESSING TREATMENT PERFORMANCE
IN WATER REUSE**

Informational Webinar for Applicants

EPA STAR RFA

November 17, 2020

- Review application information for the EPA STAR RFA:
“VIRAL PATHOGEN AND SURROGATE
APPROACHES FOR ASSESSING TREATMENT
PERFORMANCE IN WATER REUSE”
- Provide guidance for eligibility, submission, technical aspects of application process
- Answer questions about the application process



Webinar Ground Rules

- Please hold your questions until all EPA presentations have been made.
- You may type your questions in the comments box. 
- No specific research project or idea can be discussed but clarifying questions regarding what is written in the RFA announcement may be answered.
- These slides are posted on the RFA webpage.
- Please keep yourself muted during the presentation. 



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- **Eligibility Contact:** Ron Josephson, Eligibility & Peer Review Officer (josephson.ron@epa.gov); phone: 202-564-7823
- **Electronic Submissions:** Debra M. Jones, Administrative Officer (jones.debram@epa.gov); phone: 202-564-7839

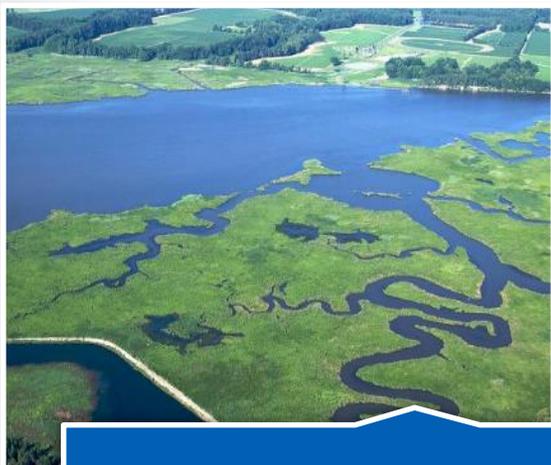




Overarching Research Topics SSWR PROGRAM

Clean Water Act

Safe Drinking Water Act



Watersheds



**Nutrients and
Harmful Algal
Blooms**



**Water Treatment
and Infrastructure**

SAFE AND SUSTAINABLE WATER RESOURCES RESEARCH PROGRAM



RFA & Award Information

- Estimated Number of Awards: 5
- Anticipated Funding Amount: \$1,240,000 per award
- Proposed budget must not exceed \$1,240,000.
- RFA will close on Jan 6, 2021, at 11:59:59 pm Eastern Time

Read the RFA very carefully, all necessary information is provided



Research Areas:

1. **Research Area #1 – Viral Surrogates for Assessing Treatment Performance**
2. **Research Area #2 – Identifying Quantitative Reductions of Viral Pathogens and Surrogates across Unit Treatment Processes and Full Treatment Trains for Water Reuse Applications**

There are two distinct areas of research covered by this solicitation. Applicants should address at least one of the two research areas. Applications may respond to one research area in detail or integrate across the two research areas. Proposals that address more than one of the research areas below will not necessarily be rated more highly than those that address just one of the areas.

Research Area 1 – Viral Surrogates for Assessing Treatment Performance

Viral surrogates are needed for assessing and monitoring risk-based treatment performance during treatment for water reuse applications.

More research is needed to identify, characterize and validate suitable surrogates for pathogenic enteric viruses.

Research Area 1 – Viral Surrogates for Assessing Treatment Performance

Topics of interest include:

- Identifying and characterizing appropriate candidate surrogates for viral enteric pathogens in wastewater and during water reuse treatment; and
- Understanding the impacts of source water type, treatment trains, end use, and/or the scale of implementation on surrogate applicability.

Research Area 2 – Identifying Quantitative Reductions of Viral Pathogens and Surrogates across Unit Treatment Processes and Full Treatment Trains for Water Reuse Applications

Methods are needed to establish and verify viral pathogen log-reduction values for individual unit treatment processes and through treatment trains, with successful surrogates demonstrating representative or conservative reductions relative to viral reference pathogens.

This requires both targeted measurement techniques and scalable approaches for LRV validation and monitoring in real-world systems.



Research Area 2 Cont'd

Research Area 2 – Identifying Quantitative Reductions of Viral Pathogens and Surrogates across Unit Treatment Processes and Full Treatment Trains for Water Reuse Applications

Topics of interest include:

- Analytical methods for detecting and measuring viral pathogens and surrogates in wastewater matrices and across treatment, including infectious viruses
- Comparing densities and reductions of viral pathogens and surrogates in untreated wastewaters, across relevant water reuse treatment processes, and/or in reclaimed effluents
- Technical frameworks for determining and validating treatment process LRVs, unit treatment log-reduction credits, and/or monitoring ongoing treatment performance.



Example Outputs

- Outputs expected from this solicitation may include publications of research results in peer-reviewed journals, guidance documents, standard operating procedures (SOPs), decision support tools, demonstration and case studies, reports, and presentations.
- The outputs should demonstrate potential for translational impacts such as practical application to real-world water reuse treatment systems.
- Tangible products contributing to a toolbox approach for water reuse treatment assessment.
- May include novel surrogates, analytical methods for viral reductions across treatments, improved log reduction targets (or credits) for viruses, information on viral inactivation (via infectivity measures), and scalable approaches to performance validation and monitoring.



Expected Outcomes

- New information on novel and existing surrogates for detecting and monitoring human enteric viral pathogens in wastewater* that will result in a better understanding of treatment performance assessment tools for water reuse that will support different scenarios.
- Developed surrogates and methods should advance the science of applied water reuse by providing necessary tools to validate and monitor treatment performance under risk-based specifications.
- Facilitate practical implementation of fit-for-purpose water reuse approaches, promoting further development of water reuse resources while maintaining protection of public health.

*Stormwater is not within the scope of the RFA



Eligibility Information

Eligible to Apply:

Public and private nonprofit institutions/organizations

Public and private institutions of higher education and hospitals located in the U.S.

State and local governments, Federally Recognized Indian Tribal Governments, and U.S. territories or possessions

Profitmaking firms and individuals are NOT ELIGIBLE to apply

Foreign collaborators, data collection or use is allowed

- International Budget needs to be justified, reviewed, and approved

Please refer to the following RFA sections for additional information:

IV. Application And Submission Information

- Required application package materials including:
 - EPA Human Subjects Research Statement (HSRS)
 - Scientific Data Management Plan (SDMP)

V. Application Review Information

- Peer Review Criteria
- Relevancy Review Criteria



Application Materials

- To apply under this solicitation, use the application package available at **Grants.gov**
- For further submission information see: **RFA Section IV.F. “Submission Instructions and other Submission Requirements”**
- Note: All necessary forms are included in the electronic application package, with the exception of the current and pending support form, available at: **Research Funding Opportunities: How to Apply and Required Forms**

Make sure to include the current and pending support form in your Grants.gov submission



Agency Contacts



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Interested in becoming a Peer Reviewer?

Contact Meta Bonner (bonner.meta@epa.gov)

Thank you!