

EPA's Consideration of Coliphage as a Potential New Rec.1 Criteria

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WHAT ARE COLIPHAGES

- **Viruses that infect E. coli and other coliforms**
- **Non-pathogenic to humans**
- **Consistently present in high numbers in human sewage**



WHY NOT STICK WITH ENTEROCOCCUS

- **False Positives – when source of bacteria is non-fecal, non-human**
- **False Negatives – FIB below action values, but viral pathogens still present**

WHY MEASURE COLIPHAGE INSTEAD OF HUMAN VIRUSES?

- **Human viruses are hard to measure**
 - Require special equipment and skill set
 - May take weeks or even a month to get results

- **Human viruses are a rare target in the environment**
 - Need to filter hundreds to thousands of liters of water

- **Coliphage is already approved for other applications**
 - EPA Groundwater Rule
 - Shellfish bed monitoring

IS THERE A TECHNICAL FOUNDATION FOR USING COLIPHAGES?

- **Similar survival to human viruses in treatment processes and the environment**
- **When measured, equal or better relationship with GI illness than *Enterococcus* in epidemiology studies**

EPA IS MOVING FAST

- **April, 2015 – EPA published *Review of Coliphages as Possible Viral Indicators for Fecal Contamination for Ambient Water Quality***
- **March, 2016 – Coliphage Experts Workshop**
- **April, 2016 – Coliphages a focus at EPA Recreational Water Conference**
- **May, 2017 – Presented new coliphage measurement methods at national conference**

CURRENT STATUS

- **EPA has recently completed validations for two coliphage measurement methods for ambient water**
 - Plans to publish them this year
- **Aim to publish DRAFT criteria for coliphage in 2018**
- **Remains unclear when and where EPA may recommend monitoring for coliphage**

WHAT IS SCCWRP DOING?

- **Have included coliphage in all our major studies**
 - 5 epidemiological studies
 - Source identification studies

- **Standing by to test the new methods at our beaches when of coliphage criteria seems more likely**
 - Laboratory training and intercalibration studies
 - Incorporation into regional monitoring program