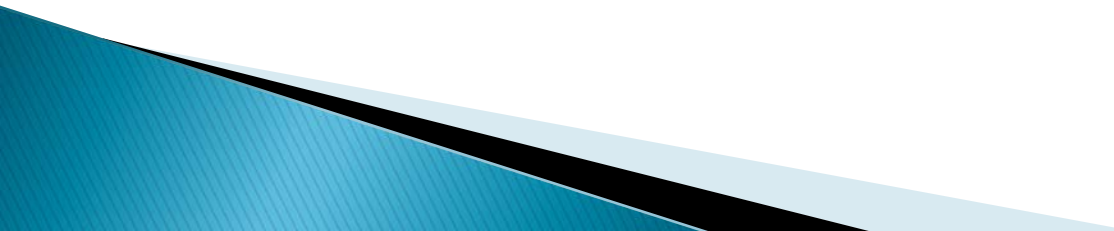
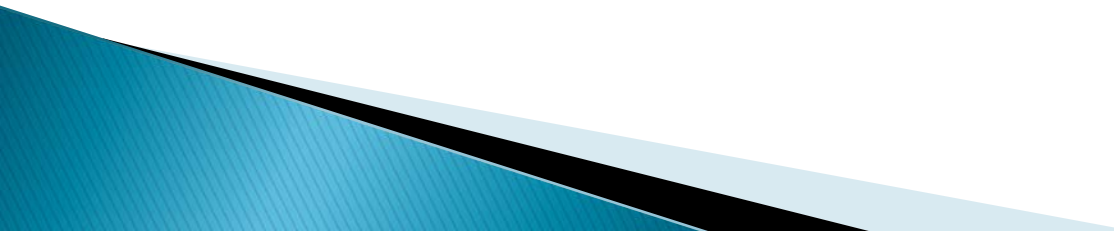


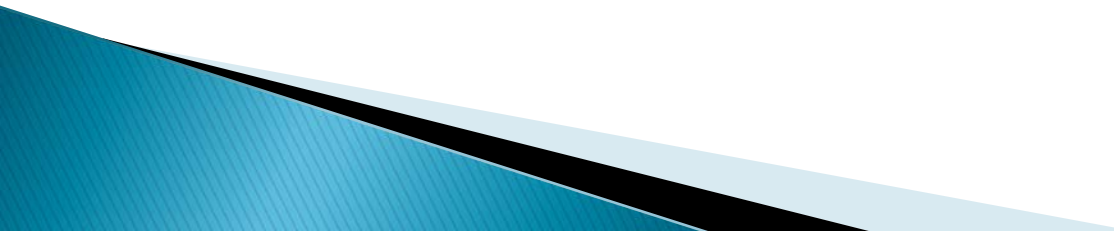
Wet Weather Assessment

\$100K from Cincinnati MSD


- ▶ Resulted from ORSANCO's involvement in consent decree negotiation.
 - ▶ Funds to be used for pathogen-related issues.
 - ▶ Three-pronged approach for FY11 beginning July 1.
- 

- ▶ Comprehensive assessment and report of all ORSANCO bacteria data.
 - ▶ Funds predominantly for staff time which partially contributed to not having to cut a position this year.
 - Will support bacteria TMDL.
 - Look at trends, explanatory variables such as flow, stage & precipitation, and more in-depth focus on sources.
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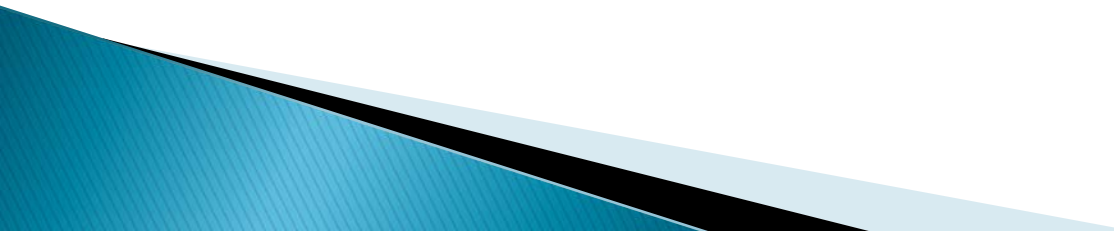
Cincinnati MSD's Recreation Management Tool

- ▶ Predictive model of bacteria levels based on predictions of precipitation, stage, and flow.
 - ▶ Used to inform public of potential risks from contact recreation several days into the future.
 - ▶ Public use for planning purposes to make informed decisions.
- 

ORSANCO's Contribution

- ▶ ORSANCO provided the baseline work for this project through the Cincinnati Wet Weather Study completed in 2000.
 - ▶ Staff will be collecting bacteria samples at 9 x-sections in the Cincinnati area on Tuesdays & Fridays through October (we are already on the river on Tuesdays conducting ORSANCO's recreation season monitoring program).
 - ▶ Data will be used to verify/calibrate the model.
 - ▶ Samples being analyzed by Cinti MSD.
 - ▶ Will compare Cinti MSD samples to ORSANCO samples where overlapping to see if we can reduce ORSANCO analytical costs.
- 

Effort with USEPA on Rapid Test Methods for Bacteria

- ▶ EPA looking at rapid methods for potential new indicators.
 - ▶ ORSANCO working cooperatively with EPA folks developing the rapid methods for potential new criteria.
 - ▶ EPA able to look at sensitivity in environmental samples.
 - ▶ ORSANCO looking at side-by-side comparisons of traditional methods to rapid methods.
 - ▶ This will be third year of project.
- 

Laboratory Analysis

▶ ORSANCO

- E.coli by Colilert Method
- Enterococcus by Enterolert Method

▶ EPA

- Enterococcus by qPCR Method using Entero1 assay
- E.coli by qPCR method using UidA assay, RodA, EC23S assay, and EPA23S assay

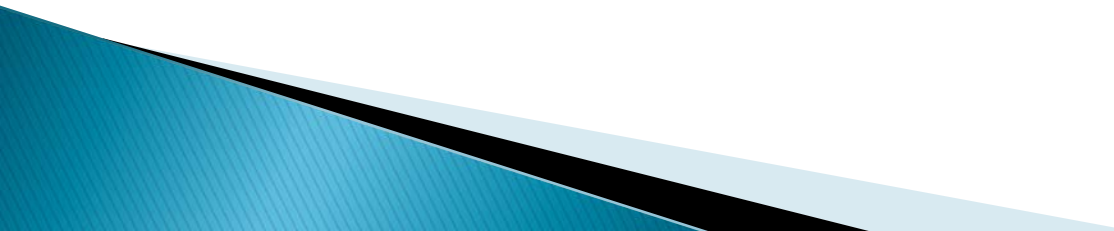
▶ Cardinal Laboratory

- E.coli and Fecal Coliform by Membrane Filtration

EPA Laboratory



Benefits of Combining Efforts

- ▶ ORSANCO providing the conventional data to investigate relationships between conventional and rapid indicators.
 - ▶ EPA provided qPCR training, some supplies, laboratory space, and equipment for this study.
 - ▶ Allows EPA to look at sensitivity and repeatability of multiple rapid methods using real environmental samples.
 - ▶ Information generated will be used in EPA's method development.
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Questions?