

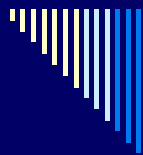
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## The Path Forward for New Recreational Water Quality Criteria

Update for Stakeholders and  
Opportunity for Input

February 20, 2008  
Washington, DC

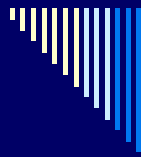
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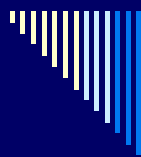
### Why are we here?

- We have come a long way since last year; time to update stakeholders on progress and timelines
  - Opportunity to explain what's in CPSP
  - Educate on role of QMRA
  - Once again solicit stakeholder input in key areas
    - Substantive issues
    - Process issues
  - Not here to discuss ongoing litigation
-



## Where were we this time last year?

- We knew additional research & studies were needed.
- We had obtained stakeholder input on the key questions to bring to the technical experts regarding what additional science or research was needed.
- We were preparing to hold the “Experts Scientific Workshop” to assess the current state of the science and to identify research needs.



## What did you tell us in December 2006?

- For Pellston Workshop
  - Ask the right questions
  - Consider 5 year time line
  - Don't neglect high priority long term issues
  - Determine relationship between fecal indicators and pathogens
  - Scientific needs for secondary contact criteria
  - Validate and standardize methods
  - Criteria need to be for all CWA purposes; different criteria and different methods may be needed (toolbox)
  - Investigate role of modeling
- Consider how to make policy decisions with incomplete information
- Keep implementation issues in mind



## What has happened since?

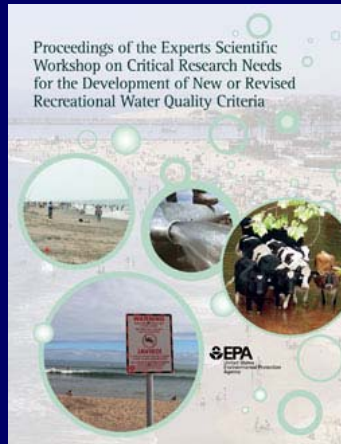
- Experts Workshop March 26-30, 2007
- Report from Experts Workshop published June 2007
- Freshwater Enterococcus QPCR method validation trials
- Marine epidemiological studies “done” in Rhode Island and Alabama
- EPA Grant to SCWRRP for Avalon Beach epidemiological study
- Issuance of CPSP and CDP in August 2007
- Initiated project to define data elements for QMRA work
- Three literature reviews completed for relative risk for different sources, animal pathogens, and indicator behavior in tropical climates in December 2007
- Work continuing to develop human markers for fecal indicators
- Initial scoping of issues and possible approaches to criteria
- Actively tracking, collaborating, and engaging in discussions with other researchers



## Experts Workshop

- Convened group of 43 national and international scientific and technical experts on March 26-30, 2007 to obtain expert input on critical path science and research needs for development of new/revised recreational water criteria.
- Focused on near-term research (to be completed within 3 years) but also captured longer term needs
- Key charge questions
  - Assess the state of the science with regard to developing new or revised recreational water quality criteria.
  - Identify the critical path research needs that must be completed in the next 2-3 years, understanding that the criteria must:
    - Be scientifically sound and protect the designated use
    - Applicable for broad Clean Water Act (CWA) purposes
    - Advance public health protection
    - Be issued within 5 years

Report of the Experts Scientific Workshop on Critical Research Needs for the Development of New or Revised Recreational Water Quality Criteria Report (June 15, 2007; EPA 823-R-07-006)



<http://www.epa.gov/waterscience/criteria/recreation/expertsWorkshop.pdf>

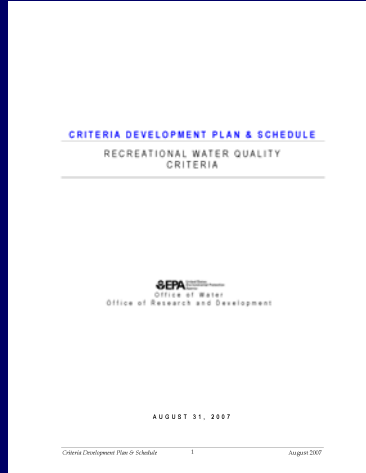
## Critical Path Science Plan

- Details EPA's scientific rationale for developing new/revise recreational water quality criteria.
- An integrated approach to answering key scientific questions necessary to develop scientifically sound criteria.
- Goals
  - Assess human health risk
  - Develop indicators
  - Develop methods
  - Extrapolate research results
- High priority research areas
  - Pathogen indicators and indicators of fecal contamination
  - Human health impacts from different sources of fecal contamination
  - Indicators and methods for measuring fecal contamination
  - Risk levels of vulnerable subpopulations
  - Climatic, geographic, and temporal variability
  - Modeling applications to criteria development and implementation





## Criteria Development Plan & Schedule Recreational Water Quality Criteria Report (August 31, 2007)

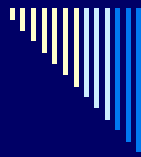


Available on EPA website soon



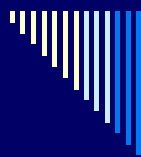
## Criteria Development Plan

- Ongoing scientific research (July 2007 – December 2010)
- Analysis and synthesis of data and peer review of results (January 2011–March 2011) .
- EPA development of options for overall structure of criteria and preliminary decision-making on options (Spring 2011).
- External expert peer review of initial draft criteria document (Fall 2011).
- Inter-agency review of draft criteria document and revisions based on review (Winter 2011/Spring 2012).
- Release draft criteria document for public comment (Spring 2012).
- Publish criteria document (or publish notice of availability) in the Federal Register (December 2012).



## Epidemiological Studies at Goddard Beach, Rhode Island and Fairhope, Alabama

Marine beach impacted by POTWs



## Status of Goddard and Fairhope Epidemiological Studies

- Collected data in summer of 2007
- Analyses of results underway
  - Relationship between indicators and illness in swimmers (both GI and non-GI)
  - Differences in illness rates
    - Swimmers versus non-swimmers
    - Adults versus children
  - Best indicator for predicting illness
  - Exposure-response curves for criteria development
- Complete data analysis, then peer review and publish results.

## Epidemiological study at Avalon Beach, California

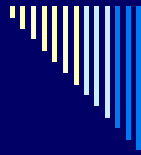
- Marine beach impacted by mixed sources of fecal contamination including bird droppings, urban runoff, and leaking sanitary sewers
- In collaboration with the Southern California Coastal Water Research Project (SCCWRP)



## Status of Avalon Epidemiological Study

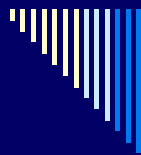
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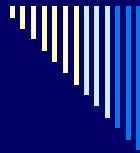
## Other work we are aware of

- Epidemiological study at Doheny Beach, California
  - In collaboration with the Southern California Coastal Water Research Project (SCCWRP)
  - Marine beach impacted by storm water runoff
  - Stopped in 2007 due to lack of rainfall
- Epidemiological study at Tampa Bay, Florida in design
  - University of South Florida
  - Impacted by storm water runoff
  - Tropical marine and freshwater beaches
- Epidemiological study at Miami Beach, Florida, underway
  - University of Miami and others as partners
  - Tropical marine beach
  - Non-point source urban runoff



## Interested in your input on some key issues and on process for ongoing stakeholder involvement

- Stakeholder input on specific research direction for inland waters.
- Stakeholder input on new/revised criteria: what would you like the criteria “to do for you”?
- Stakeholder input on options for stakeholder involvement through 2012.



- EPA is ready, willing, and wants to collaborate
  - Technical expertise
  - Research partnerships
  - Value added opportunities
- EPA is committed to continuing engagement throughout next 4 and 1/2 years
  - Criteria will not “pop” out in December 2012 and scream “surprise!”
  - Want to ensure timely and appropriate opportunities for stakeholders to offer input