June 16, 2014

Experts Forum on Public Health Impacts of Blending

AGENDA

1:00 p.m. – 5:30 p.m Thursday June 19, 2014
8:30 a.m. – 4:00 p.m. Friday June 20, 2014

10306 Eaton Place, Suite 340
Fairfax, VA 22030

Facilitator: Rob Greenwood, Ross Strategic

Public Health experts:	Engineering experts:
Dr. Joan Rose	Dr. Julian Sandino
Gregory Goblick	Dave Wagner
Dr. Anwar Huq	Jim Fitzpatrick
Dr. Joseph Jacangelo	Dr. Donald Gray
Dr. Adam Olivieri	Dr. Kati Bell
Dr. Betsy Reilley	
Dr. Samuel Dorevitch	
Dr. Charles Gerba	

Day 1 - Thursday June 19, 2014

Welcome

1:00 p.m. – 1:10 p.m. Dr. Andrew Sawyers – Director, Office of Wastewater Management, Office of Water

- Welcome
- Purpose of forum
- Charge to the public health experts and engineers

1:10 p.m. – 1:20 p.m. Rob Greenwood – Facilitator

- Introductions
- Purpose of forum
- Agenda Review
- Logistics and Ground Rules

Expert Discussion

1:20 p.m. – 2:40 p.m. Blending and Wet Weather Operations: An Engineering Perspective
(*A complete outline of this session is available at the end of the agenda.)*

- Executive summary
- The challenge of managing wet weather flows in POTWs
- Wet weather flow management options
- Recent case studies of wet weather flow management
- Recent guidance documents
- Conclusions

2:40 p.m. – 2:50 p.m. 10 minute break

2:50 p.m. --3:45 p.m. Discussion Session 1: What is known about health risks of exposure to surface water impacted by wet weather flows (overall or for specific treatment approaches)? Where are the major areas of uncertainty and knowledge gaps in the literature about health risk of wet weather flows?

- This is an introductory session that will provide some initial thoughts about how the available literature addresses the topics in the various discussion sessions below. This is an underlying theme for the forum, and may be revisited in different discussion sessions.

3:45 p.m. – 4:30 p.m. Discussion Session 2: Characterization of Pathogens and Pollutants and Associated Impacts

- In addition to pathogens, what are the major classes of pollutants of concern for human health associated with wet weather flows/blending at POTW?

4:30 p.m. – 5:15 p.m. Discussion Session 3: Key Factors Affecting the Human Health Risks of Wet Weather Discharges from POTWs

- What are the key factors that affect public health risk associated with the discharge of these pathogens and pollutants (e.g., frequency of discharge, duration, use of auxiliary wet weather treatment, receiving water uses, exposure pathways, temperature, climate, etc.)?
- What emerges as high risk scenarios?
- What emerges as low risk scenarios?

5:15 p.m. – 5:30 p.m. Observer Comments/Questions

Day 2 - Friday June 20, 2014

8:30 a.m. – 9:30 a.m. Continue Discussion Session 3

9:30 a.m. – 10:30 a.m. Discussion Session 4: Understanding the Public Health Risks of Blended Discharges (much of this will fall into the category of knowledge gaps, since there is so little information available in the epidemiologic literature to answer these questions)

- How do the health risks from blended discharges without auxiliary wet weather treatment compare to the health risks of blended discharges with auxiliary wet weather treatment?
- How do the health risks from blended discharges (with and without auxiliary wet weather treatment) compare to the health risks of discharges that occur under wet weather conditions from facilities that provide conventional biological treatment followed by disinfection?
- How do the health risks from blended discharges (with and without auxiliary side stream treatment) compare to the health risks of other wet weather discharges from non-point sources (rural, agricultural and urban runoff) and POTWs (e.g. collection system overflows, bypasses that are discharged directly without blending)?

10:30 a.m. – 10:40 a.m. 10 minute break

10:40 a.m. – 11:40 a.m. Continue Discussion Session 4

11:40 a.m. – 12:50 p.m. Lunch

12:50 p.m. – 1:10 p.m. Observer Comments/Questions

1:10 p.m. – 2:40 p.m. Discussion Session 5: Using Indicators to Evaluate Human Health Risks

- Are the 2012 Recreational Water Quality Criteria appropriate indicators for the bacteria/pathogen risks to human health associated with blending? Can these indicators be used to characterize an acceptable risk of blending? Is the 2012 RWQC approach of establishing targeted risk levels relevant to protecting the health of the public from exposure to wet weather flows? Does it matter if the blending scenario includes auxiliary treatment?
- Are permit limits based on the secondary treatment regulations appropriate indicators?
- What representative monitoring locations (e.g. end-of-pipe, prior to blending) and what parameters are adequate for characterizing and evaluating the risks to human health of blended discharges?

2:40 p.m. – 2:45 p.m. 5 minute Break

2:45 p.m. – 3:35 p.m. Discussion Session 6: Additional data needs

- When evaluating a facility that blends, what representative site-specific data would help to evaluate the health risks associated with the facility's blended discharges?
- What national level data would give a better picture of blending?

3:35 p.m. – 3:50 p.m. Observer Comments/Questions

3:50 p.m. – 4:00 p.m. Summary / Wrap-Up

4:00 p.m. Adjourn

The forum is open to the public to attend as observers. Because the seating will be limited, members of the public who wish to attend the forum must pre-register at www.epa.gov/npdes/peakflowsforum.

A call-in phone number will be provided to interested parties to allow off-site observers listen to the forum. If you would like to listen in, please email Adam Orndorff (adam.orndorff@tetratech.com) to obtain a call-in number.

Complete session outline for Blending and Wet Weather Operations: An Engineering Perspective (Day 1, 1:20 p.m. – 2:50 p.m.)

- Executive summary
- The challenge of managing wet weather flows in POTWs
  - Non-point vs. point sources
  - Flows resulting from I/I often exceed existing treatment capacity
  - Why established dry weather flow management approaches are not applicable
  - The dynamic nature of wet weather events
    - Receiving waters: low-flow vs. high-flow, chronic vs. acute risks
    - Defining influent flows, loads and concentrations: continuous vs. intermittent, steady-state vs. dynamic
  - Defining treatment objectives
  - Sustainable infrastructure investments
- Wet weather flow management options
  - Reducing peak flows through collection system improvements and storage
  - Maximizing use of existing treatment facilities
    - Limitations and risks to biological processes
    - Blending
  - Providing auxiliary treatment capacity
    - Overview of effluent disinfection processes and technologies
    - Overview of clarification processes and technologies
- Recent case studies of wet weather flow management
  - Milwaukee MSD Enhanced Clarification and Disinfection Demonstration Program (2006)

    - Impact of Wet-Weather Peak Flow Blending on Disinfection and Treatment: A Case Study at Three Wastewater Treatment Plants – Interstate Environmental Commission (IEC 2010)
    - Characterizing the Quality of Effluent and Other Contributory Sources during Peak Wet Weather Events- EBMUD (WERF 2009)
    - Akron, OH BioActiflo Testing Program (2012)
    - City of Toledo Pathogen Study (2013)
    - City of Lawrence, KS Wet Weather Flow Management and Performance (2014)
    - Draft Summary of Blending Practices and the Discharge of Pollutants for Different Blending Scenarios (EPA 2014)
- Recent guidance documents
- Conclusions