# EPA Regulatory Authority and PPCPs

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August 23, 2005

# Presentation Outline

- EPA's Enabling Legislation
- Office of Water's Major Legislative Authorities
  - Safe Drinking Water Act
  - Clean Water Act
- OW PPCP related work
- Opportunities for Collaboration

# EPA's Enabling Legislation

- Is a very mixed bag of laws
- Dictate how we do our business
- Are not always consistent with one another
- Often require science-based decisions
  - e.g. SDWA 1996 requires use of best publicly available, peer reviewed science

# Legislative Authorities for Water

- Safe Drinking Water Act (1974), amended 1986, 1996
  - Requires EPA to set maximum levels for contaminants in water delivered to users of public water systems.
- Clean Water Act (1977)
  - Sets water quality criteria and guidelines and technology-based standards for ambient waters
- Food Quality Protection Act (1996)

# SDWA 1996

- Contaminant Candidate List (CCL)
  - EPA publishes its regulatory agenda
  - There are no PPCPs on the current CCL – they could be added to CCL3
- The Six Year Review -- of existing NPDWR
  - There are no existing PPCP regulations; if they were developed would need to consider the following.
- Use of best available, peer reviewed, publicly available science
- Emphasis on protecting sensitive populations
- Neither SDWA nor CWA allow EPA to require that effects data be generated or submitted.

# Regulation under SDWA

**Does the contaminant adversely affect public health?**

**Is the contaminant known or likely to occur in PWSs with a frequency and at levels posing a threat to public health?**

**Will regulation of the contaminant present a meaningful opportunity for health risk reduction?**

**Regulate with NPDWR**

# Clean Water Act Framework Protecting, Restoring U. S. Waters

Set Standards

**Technology-Based Approach**

- Effluent limitation guidelines for point sources (available, affordable technology)

**Water Quality-Based Approach**

- EPA develops water quality criteria guidance
- States develop enforceable water quality standards using criteria

Implement Programs

NPDES Permits

Nonpoint Source Program

Restoring Polluted Waters - TMDLs

Funding & Technical Assistance

Wetlands Protection

Watershed Approaches

# Clean Water Act – WQ Approach

- Water Quality Standards
  - States designate use for water
  - Water Quality Criteria (conditions supporting designated uses); EPA publishes national criteria (risk assessments)
    - Chemical criteria
    - Biological Criteria (apply to aquatic life designated uses)
  - States set standards; EPA approves
  - Antidegradation (keeping good-quality waters in good condition)

# Other CWA Approaches

- Effluent Guidelines for the Regulation of point sources (more on this)
- Combined Animal Feeding Operations Rule
  - Rule deals with nutrients – but results in less overall contamination of surface waters
  - Discharge permits required for “large” CAFOs
- Fish Advisory program
- Guidance, voluntary programs

# Effluent Guidelines & PPCPs -1

- Pharmaceutical Manufacturing Industry (1998)
  - Includes
    - Mfg of pharmaceutically active ingredients as defined by FDA
    - Only cosmetics containing pharmaceutically active ingredients
  - Regulation is based on performance of treatment / control technologies (rather than risk)
  - Limits on Biochemical Oxygen Demand, Chemical Oxygen Demand, Volatile Organic Contaminants, Total Suspended Solids, pH

# Effluent Guidelines & PPCPs -2

- Aquaculture (2004)
  - Covers large facilities
    - Flow through, re-circulating or net pens
    - Directly discharge waste water
    - Produce 100,000 lbs fish / year
  - Requirements include
    - Best Management Plans
    - Prevent discharge of spilled drugs and pesticides; minimize discharge of feed
    - Limit discharge of wastewater from harvest or transport

# OW PPCP Related Work

- Drinking water project with USGS
  - Susan Glassmeyer (EPA/ OGWDW Cincinnati)
  - Use of PPCPs as indication of fecal contamination
  - PPCPs are found many miles downstream from POTWs – hope to measure efficacy of drinking water treatment
  - FY 06, USGS beginning in-house development of methods for PPCPs not covered in current capabilities

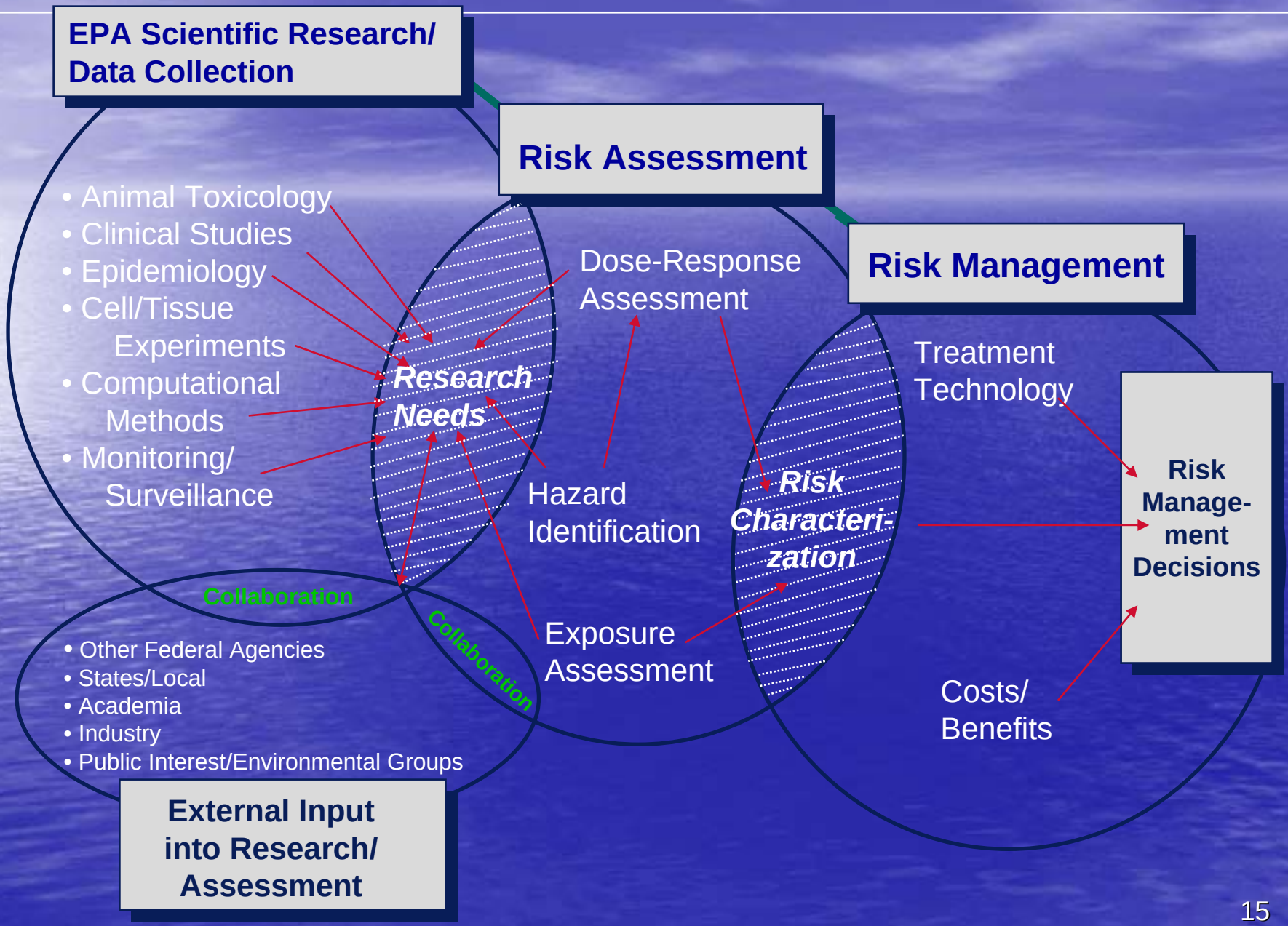
# OW PPCP Related Work

- Literature Database being undated
  - Peer-reviewed articles (1970's – present)
  - Searchable by author, title, keyword
  - Contains over 400 citations
  - Hard copies of articles cataloged
  - Short summaries available for each article

# Future Opportunities for Collaboration

- Data sharing with various agencies (e.g.- USGS, CDC, FDA, USDA)
  - Occurrence and health effects data
    - To develop water quality standards/criteria
    - To develop drinking water regulations
    - To assess increasing antibiotic resistance
    - To develop effluent guidelines
- Technology sharing
  - Methods development
  - Treatment
- External input into EPA assessments

# Research ⇄ Assessment ⇄ Management



# Future Opportunities for Collaboration

- Collaboration within EPA (program offices and regions)
  - To develop EPA approved methods for detection
  - To determine additional research needs
  - To develop guidance on how to move forward until risk assessments for these types of contaminants are available