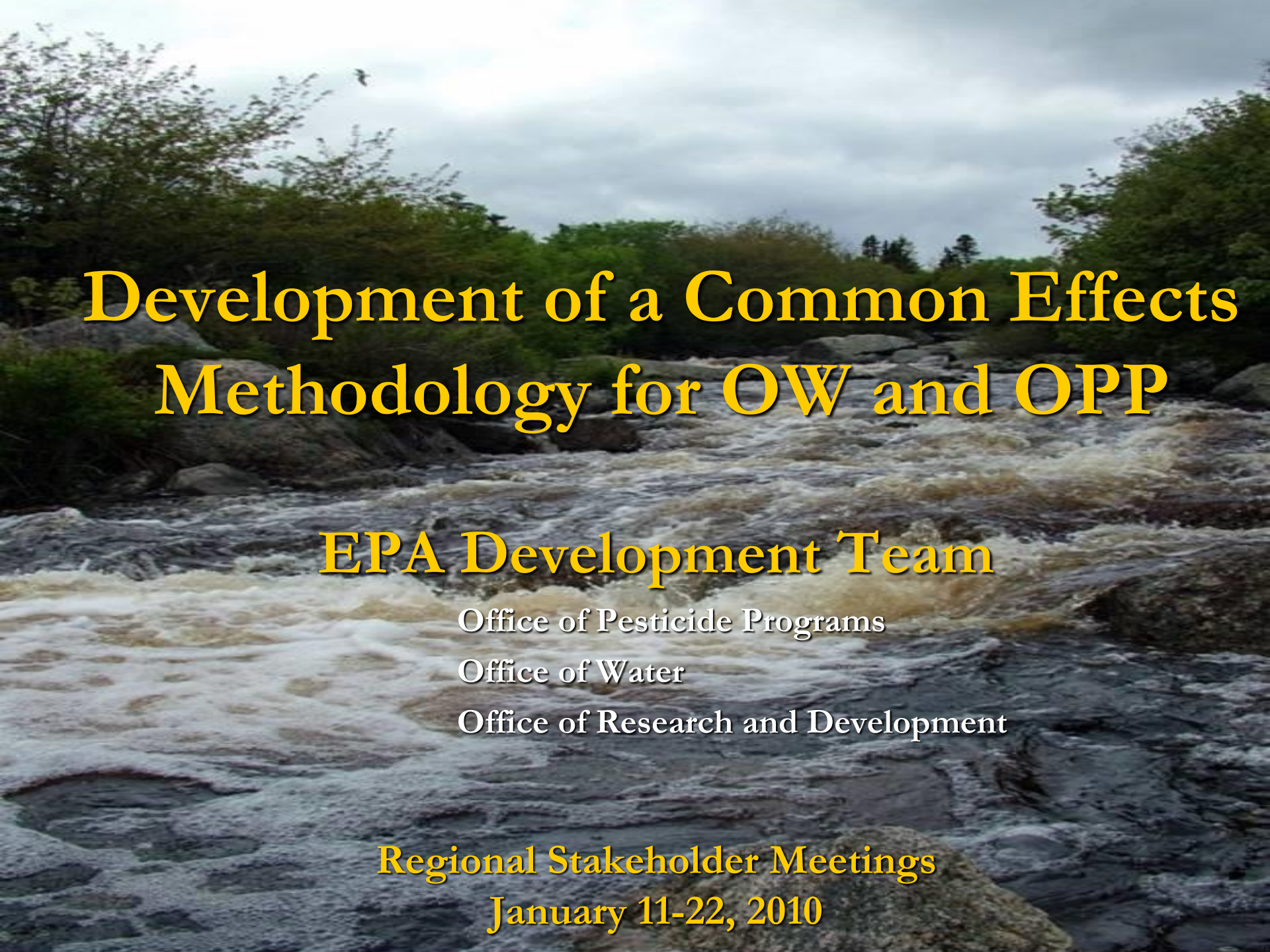

Development of a Common Effects Methodology for OW and OPP

EPA Development Team

Office of Pesticide Programs

Office of Water

Office of Research and Development

Regional Stakeholder Meetings

January 11-22, 2010

Outline

- Background
- Goals, Milestones, and Commitments
- Next Steps


EPA's mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends.

- USGS reports pesticides measured in US waters
  - 100% of streams
  - 33% shallow ground water
  - 90% fish
  - Typically more than one pesticide found at a time

Concerned citizens

EPA Office of Pesticide Programs

Environmental groups

EPA Office of Water

Pesticide companies

EPA Office of Research and Development

Beginnings

- SFIREG writes letter to OW-OPP September 1, 2006
- EPA sends response to SFIREG November 3, 2006
- OPP makes aquatic benchmarks web-available March 7, 2007
- SFIREG raised issues at bi-annual meeting (availability of benchmarks, differences in methodology, etc.) 2008
- Directors of Office of Water and Office of Pesticide Programs pledge joint effort to harmonize effects characterization methodologies at 6/23/2008 SFIREG meeting.

Goals

- Build on the substantial high quality science developed and used by both programs and make ecological effects assessment methodologies consistent.
- Enable OW, OPP, and stakeholders to make consistent and best use of available data, with focus on chemicals with smaller data sets than those currently used to derive AWQC.
- Improve communications on consistency of EPA effects assessments.

Scope

- Focus on ecological effects assessment methodologies.
- Focus on studies using well-established population relevant endpoints (survival, growth and reproductive endpoints)
- Based on available effects data.
- Potential for later application in NPDES permits for interpreting narrative toxics criteria.
- Approaches will augment and enhance existing OW *Guidelines* and the current taxa-specific OPP assessment methodologies rather than replace them.

Milestones

- Common effects characterization methodology project outlined at the "PREP", a workshop for state regulators 9/2008.
- EPA sends letter to stakeholders describing the goals for this project and the important role of stakeholders (11/08).
- OW and OPP issued a "Scoping Document" (4/09)
- Steering committee and workgroup established with participants from OW, OPP, ORD (7/09)
- OPP-OW-ORD Expert workshop held (8/09) – developed draft outlines for white papers
- Initial outreach efforts (SFIREG, PPDC, WQSMA)

Status – Recent Activities

- Consensus decision made at OPP-OW-ORD Expert Workshop to develop three white papers:
  - Development and Evaluation of **Predictive Tools** for use in Derivation of "Community Level Benchmarks"
  - Development of **Aquatic Life Community Level Benchmarks** with Datasets that do not Conform to the "1985 Guidelines"
  - Methods for Incorporating **Aquatic Plant** Effects into Community Level Benchmarks

Commitments

- Regional stakeholder meetings to solicit public comment on the approaches (January 2010)
  - EPA Region 1, 2, 3 (Edison, NJ)
  - EPA Region 4 (Atlanta, GA)
  - EPA Region 5 (Chicago, IL)
  - EPA Region 7 , 6 (Kansas City, KS)
  - EPA Region 10 (Seattle, WA)
  - EPA Region 9 (San Francisco, CA)
- A national multi-stakeholder meeting in DC to solicit further public comment on the approaches (Spring/Summer 2010-TBD)
- An SAB-SAP on the proposed approaches (Fall/Winter 2010 - TBD)

Tools and Approaches Will

- Continue to be based on sound science and utilize available data
- Be legally defensible under statutory mandates
- Be based on methodologies that are as consistent and practical as possible
- Be implementable at the federal and state level
- Be developed as quickly as possible, and
- Reflect stakeholder input and comments

What we hope to achieve

- Provide a common basis for the characterization of aquatic effects of pesticides under the CWA and FIFRA resulting in effects assessments that are consistent with both statues.
- The community benchmarks generated for protection of aquatic wildlife and plants may be adopted:
  - by states for standards, permitting, 303(d)
  - for assessment of monitoring data
  - by OPP in addition to other benchmarks in risk assessment.
- The tools developed for generating toxicity values can be used
  - to develop species sensitivity distributions for characterizing interspecies variability
  - for bridging data
  - to characterize uncertainty
- Methodologies are identified for using aquatic plant data in deriving community-level benchmarks.

Presentation Topics

- Development & Evaluation of Ecotoxicity Predictive Tools
- Methods for Developing Community Level Benchmarks For Aquatic Animals
- Methods for Incorporating Aquatic Plant Effects into Community Level Benchmarks