Trace Pharmaceutical Contaminants In Wastewater
Where do they come from and what should be done about them?

Ambiguities and challenges

- Mutant or inter-sex fish
  - Found in the Potomac River and Boulder Creek.
- Suspected Sources: Endocrine-disrupting and –mimicking chemicals in pharmaceutical and personal care products (PPCPs).
  - The link has not been definitively established.
- Lack of research = lack of evidence
  - Environmental and health impacts on ecosystems and humans are uncertain.
- Linking trace contaminants to their sources: point or non-point
  - Challenge to determine sources and relative contributions
  - Improving analytical capabilities are making detection of more trace contaminants possible.
- Treatment options
  - Effective economic alternatives are not currently available.
  - Need to determine what works now; what can be improved

Pollution prevention!

- Diversity of points of discovery suggests trace contamination is a pervasive condition.
- Pollution prevention:
  Win-win approach; economical and effective
- Effective pollution prevention depends on objective of project and source of contaminants.

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Existing treatment options or regulations to address trace contaminants in wastewater?

- Current wastewater treatment methods remove some trace contamination.
  - Which process is it that removes trace contamination?
- No effective treatment method that specifically addresses trace contaminants
- Regulations, treatment standards, and analytical methods: challenges to effective pollution control

Institute for Environmental Solutions - Proposed Strategy and Involvement

- Create an accessible database of scientific research along with regulatory information.
- Convene an independent forum of stakeholders to develop effective pollution prevention strategies.
  - Apply same methods to determine effective testing treatment, methods, and standards.
- Provide educational outreach to concerned citizens and organizations.
- Collaborate with public, private, and non-profit organizations to discover new approaches to the study of this issue.
  - Use collaboration to develop mitigation methods.

IES welcomes your support and participation!

- **Stakeholder involvement**
- **Funding and resources**
- **Graduate and student intern positions**
- **Professional associate opportunities**

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