Environmental Information Management System (EIM)

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Outline

• EIM overview
• Data types
• Management considerations
• Capabilities and limitations
• Expenses
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EIM overview

- EIM is Ecology's main database for environmental monitoring data
- EIM contains records on physical, chemical, biological, and habitat analyses and measurements
- EIM centers on three main elements:
  - Study
  - Locations
  - Results
    - Discrete Samples & Measurements
    - Well Water Levels
    - Time-Series
    - Bioassay
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Data Types

- Environmental data (samples, measurements, & observations)
  - Surface water
  - Storm water*
  - Bioassays
  - Animal tissue
  - Ground water
  - Sediments
  - Air/gas
  - Toxics cleanup

- No lab QA data (no PCB blanks)
- No source tracing
- No product analyses

*influent & effluent as separate locations however interpretation is required of the user
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Management considerations

- QA required prior to submission
- Data input has a learning curve
  - coordinators there to help
- Data output through search tool
  - more complex querying available through MyEIM
  - Time series plotting
- Software: spreadsheets (like Excel) & web browser (like IE)
- Permanent repository for data
- Tracking of BMP implementation or load reduction by downloading and analyzing
- Measurable progress only documented if there are data demonstration compliance with PCB standards
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Capabilities and limitations

• Capabilities:
  – Store a nearly limitless variety of environmental data
  – More complex results queries in MyEIM
  – Minor changes can be handled quickly (hours to days)
  – Queried locations mapped online
  – Adjustable time series plots
  – Chart well data by parameter
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### Location
- **Location ID**: 
- **Location Name**: 
- **Well Tag ID**: 
- **Location Setting**: -Any- 
- **WRIA**
  - 54 - Lower Spokane
  - 55 - Little Spokane
  - 56 - Hangman
  - 57 - Middle Spokane
- **County**
  - ADAMS
  - ASOTIN
  - BENTON
  - CHELAN
- **Wells only**: 

### Field Collection

### Result
- **Result Parameter**: beta_Endosulfan
- **Result Parameter Group**: -Any- 
- **Result Method**: Example: EPA365.3M
- **Result Taxon**: Example: Trichoptera
- **Sample Matrix**: -Any- 
- **Sample Source**: -Any- 
- **Sample Taxon**: Example: Micropterus salmoides
- **Taxon Group**: 

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**Search Data**  |  **Clear**
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  – **Adjustable time series plots**
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Well Water Level Hydrograph

Location 2024MW2T9 has the following parameters. Select one or more parameters and click the 'View Graph' button to generate the selected charts.

Available Parameters
- Benzene (ug/L)
- Diesel Range Organics (mg/L)
- Gasoline Range Organics (ug/L)
- Heavy Fuel Oil (mg/L)
- Lube Oil (mg/L)

Chart Options
- Chart Type: Line

View Graph
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**Chart Options**
- Chart Type: Line

View Graph

![Well 2024MW2T9](chart.png)
Capabilities and limitations

• Capabilities:
  – Store an inexhaustible variety of environmental data – publicly
  – More complex results queries in MyEIM
  – Minor changes can be handled quickly (hours to days)
  – Queried locations mapped online
  – Adjustable time series plots
  – Chart well data by parameter

• Limitations:
  – No lab QA data
  – No auto-reporting
  – No graphs of homolog patterns
  – No positive matrix identification
  – Major changes cannot be handled quickly (weeks to never)
  – Tracking of BMP implementation/load reduction only by downloading and analyzing
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Expenses

• Cost to use is $0

• Cost for software is $0 (if you already have a basic computer)

• Costs staff time to:
  – get accustomed to data loading process
  – track BMP implementation / load reduction
  – analyze data to graph homolog patterns / positive matrix factorization
    • additional software that will do this will likely cost $
Summary

• EIM is excellent for archiving data for public access

• Cannot actively manage your data in EIM- finalized datasets only!

• Low cost but requires staff time

• Handles wide range of environmental data types but not lab QA

• Some built-in abilities for data visualization and complex querying, but no analysis tools
Thank you!