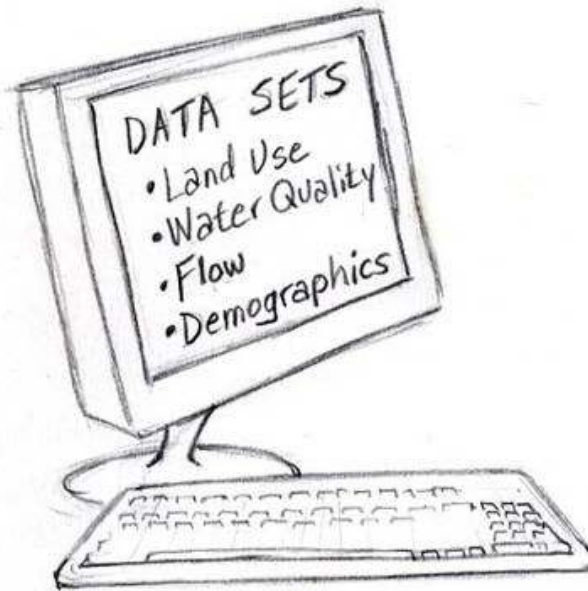


Accessing Existing & Web-based Data



- Collection of existing data,
- Creation of a data inventory, and
- Identification of important gaps

are essential early steps in the process of watershed planning and monitoring

See what's already been done

- Avoid duplication and repetition
- Use existing knowledge
- Build on experience to design monitoring program
 - 305(b) and 303(d)
 - TMDL reports
 - Source water assessments
 - Past watershed projects

Sample Data Sources

- **Watershed Coverages:**
 - 8-digit: <http://water.usgs.gov/GIS/huc.html>
 - 14-digit:
www.ncgc.nrcs.usda.gov/products/datasets/watershed
 - EPA Reach Files - 3 versions RF1, RF2, RF3-Alpha (most detailed)
 - www.epa.gov/waterscience/ftp/basins/gis_data/huc/
- **Elevation Data**
 - USGS: <http://edc.usgs.gov/geodata>
 - GIS data depot: <http://data.geocomm.com>
- **Land Use/Population**
 - USGS: <http://edc.usgs.gov/geodata>
 - EPA: www.epa.gov/nrlc/nlcd.html
- **BLM Management Plans**
 - www.blm.gov/planning/plans.html



Other Data Sources

- State 303 (d) lists and TMDL reports
 - www.epa.gov/owow/tmdl
- Point source discharge permits
 - www.epa.gov/enviro/html/pes/index.html
- Agricultural Statistics
 - <http://www.nass.usda.gov/index.asp>
- Septic tank use
 - <http://quickfacts.census.gov/>



Federal

- Geodata portal

<http://gos2.geodata.gov/wps/portal/gos>



Federal



USEPA

- Environmental Data Registry
<http://www.epa.gov/edr/>
- Surf your watershed
<http://cfpub.epa.gov/surf/locate/index.cfm>
- STORET
<http://www.epa.gov/storet/>

Federal



USDA

Geospatial Data Gateway

<http://datagateway.nrcs.usda.gov/>

- Ortho imagery
- Land use/land cover, cropland data
- Hydrologic units
- Topo, elevation
- Soils
- Climate

Federal



USFWS <http://www.fws.gov/data/datafws.html>

- Geospatial Data Inventory
<http://www.fws.gov/data/index.html>
- NWI <http://www.fws.gov/nwi/>
- Biological Data <http://www.fws.gov/data/gisbio.html>
- Regional ecosystem coverages
<http://www.fws.gov/stand/standards/allshape.html>

Federal



USGS

- NAWQA Data Warehouse

<http://infotrek.er.usgs.gov/traverse/f?p=NAWQA:HOM E:1077806720594134922>

- Real time streamflow data

<http://waterdata.usgs.gov/nwis/rt>

IDEM

Indiana Water Quality - Indiana's Integrated Water Monitoring and Assessment Report

<http://www.in.gov/idem/programs/water/305b/index.html>

- Monitoring strategy
- Methods
- Schedules
- Reports (305(b))
- Summary data

303d list

<http://www.in.gov/idem/programs/water/303d/index.html>

IDEM

Surface Water Quality Assessment Program

Probabilistic Monitoring Program

5-yr rotating targeted basins; >38 sites randomly selected in basin

E. coli, water chemistry, chlorophyll a, fish, macroinvertebrates, habitat

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IDEM

Surface Water Quality Assessment Program

Surveys Section

- Fixed Station Monitoring Program,
- Trace Metals Sampling Program,
- Source Identification Program,
- *E. coli* Sampling Program,
- Nutrients Sampling Program,
- Special Projects Sampling Program

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Surface Water Quality Assessment Program

Surveys Section

Current reports

<http://www.in.gov/idem/programs/water/quality/surveys/index.html>

examples:

2000 Williams Ditch Low Dissolved Oxygen and Impaired Biotic
Community Source Identification Study

2001 Blue Creek (Adams County) Elevated *E. coli* Counts Source
Identification Study

IDEM

Surface Water Quality Assessment Program

Fish community sampling program

5-yr rotating targeted basins

Fish community assemblage data for the Index of Biotic Integrity (IBI), Qualitative Habitat Evaluation Index (QHEI), in-situ water chemistry, and other parameters determined necessary (land use, etc.).

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Surface Water Quality Assessment Program

Fish Tissue Contaminant Monitoring Program

5 yr rotating basin targeting of sites on rivers, lakes, and reservoirs; emerging problem areas of the state; and water bodies never before monitored; regular revisit to 20 designated CORE river locations and near shore Lake Michigan; based on a probabilistic draw in wadable streams

Chemical contaminant levels in fish flesh – metals, pesticides, organics

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Surface Water Quality Assessment Program

Fish consumption risk assessment

Advisory tables for Hg, PCBs for fish in IN rivers and streams, lakes, and Lake Michigan tribs/Ohio River

2007 Indiana Fish Consumption Advisory

http://www.ai.org/isdh/dataandstats/fish/2007/advisory_groups.htm#group5

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IDEM

Surface Water Quality Assessment Program

Lake Water Quality Assessment

State: 500-600 lakes on 5 – 6 yr rotation

Volunteers: >100 additional lakes

Physical: transparency, temperature, cond, SS

Chemical: DO, P, N

Biological: chlorophyll a, algae)

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IDEM

Surface Water Quality Assessment Program

Macroinvertebrate Community Assessment Program

Sampling of wadeable streams and rivers at 890 sites on over 500 different rivers and streams including 90 of 92 counties to establish reference conditions.

Concurrent aquatic habitat assessments conducted to either site specific habitat degradation or water quality causes.

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IDEM

Surface Water Quality Assessment Program

Sediment Contamination Monitoring Program

5 year rotating basins

Chemical contaminant levels in composite grabs of surficial aquatic sediments from river, stream, reservoir and lake sediments. Many of the contaminants analyzed for may bioaccumulate in fish.

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Indiana Spatial Data Service

<http://www.indiana.edu/~gisdata/>

Statewide aerial photos

Topo maps, DEMs

Municipal data

Links to USFWS and USGS spatially-referenced data

Indiana GIS Atlas



http://129.79.145.7/arcims/statewide_mxd/index.html

Interactive maps and GIS downloads, e.g.,

- Ag census, crops
- Soils
- Geology
- Aquifers, karst
- Land use/land cover
- Impervious surfaces
- Brownfield, LUST, Superfund sites

Indiana Water Quality Atlas

<http://149.166.110.236/IWQA/>

Collaboration of IDEM,
Indiana Geographic Information Council (IGIC),
Indiana Land Resources Council (ILRC),
Upper White River Watershed Alliance (UWRWA), and
Natural Resources Conservation Service (NRCS).



Access to a wide variety of spatially and temporally referenced data through a common interface.

Tools to combine, analyze, and display multi-dimensional data from a wide array of disciplines, e.g., spatial and attribute queries, on-line geocoding, and custom mapping.