Uses of Stream Team Data in Missouri

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Missouri Dept. of Conservation
Established In 1989

- Education
- Stewardship
- Advocacy
The Partners

CFM

MDC

DNR

MISSOURI STREAM TEAM
MO Stream Team Program

- It is a comprehensive program offering over 30 types activities
  - Litter pickups, WQM, Photo Point Monitoring, Adopt-an-Access, and more!

- ST Academy Wks.

- Nearly 4200 Teams
  - Nearly 140,000 hours
  - >$2.5 million of labor
Volunteer WQM

- One of the Stream Team activities
  - Second only to Litter Pickups
  - Began in 1993
- Only activity requiring training (5 levels)
  - Introductory Level
  - Level 1
  - Level 2
  - Level 3
  - CSI/Special Projects
Introductory Level
(Nearly 3,500 volunteers)

- Entry level of monitoring
  - Watersheds
  - Stream Discharge
  - Biological Monitoring

Cambarus maculatus

The “real” Missouri
Level 1
(Over 2,700 volunteers)

- Includes chemical and physical monitoring (visual survey)
- Class in which they qualify to receive chemical equipment

- Standard parameters:
  - Temp
  - DO
  - Cond.
  - pH
  - Nitrate
  - Turbidity
  - Other parameters:
    - Chlorides
    - Hardness
    - Alkalinity

Ladue Middle School ST #76
Level 2
(Over 700 volunteers)

- QA/QC workshop
- Check chemical equipment/methods against known standards
- Invertebrate exam
  - ID 75% of bugs
  - Miss no more than 2 EPT
- Qualify for colorimeters
  - (if appropriate)
Level 3
(Approx 90 volunteers)

- QA/QC “audit” on-site with ST Program Personnel
- Meet accuracy limits on 5/5 chem parameters
- ID 90% of inverts (100% EPT)
CSI
(Cooperative Stream Investigator)

- Level 2 and 3 Vol. Monitors performing sampling for special projects
- E. coli
  - Collect baseline data **prior to** and sampling **throughout** a stream restoration project
  - Must also attend DNR Basic Sampling Class
- Temp monitoring on coldwater streams
- Sampling plan
- Approx 20 volunteers

Turkey Creek, Madison Co.
Special Projects

- CSI ‘light’
- List of streams/locations of concern/priority to sponsoring agencies
- Three year commitment
- Sampling plan
Data Uses

- What it all boils down to... is the VWQM Program about the data or about the education??

- YES!!

Ladue Middle School ST #76

ST #2000
Data Uses

- Inform and educate
- Gather baseline information
- Locate emerging problems
- Identify long term trends
- Supplement other agency data
- Supplement sponsoring agency data
  - Level 2, Level 3, Special Project, CSI
Data Uses
(Inform and Educate)

- Implemented into curriculum
- ST #432 Reeds Spring H. S.
- ST #903 Farmington H. S. Eco-Rats
- ST #218 Waynesville M. S. & ST #779 Chillicothe M. S. Exchange Program
- Dominoes!
Data Uses
(Gather Baseline Information)

- MO has about 110,000 mi. of streams
- Recently added a “Fish Present” check box to all data sheets
Data Uses
(Locate Problems)

- ST #346 Francis Howell H. S. Env’t Studies discovered a sewer line break
- ST #2893 The Clark Family Farm discovered the local pool draining
- ST #1012 discovered several barrels dumped in the stream
- Several volunteers have discovered and reported fish kills
Data Uses
(Locate Problems)

- Kansas City requested all volunteer data within city limits
- Planning by local agencies, such as zoning regulations
Data Uses
(Identify Long-Term Trends)

- Data from one location over long period of time
- 50+ volunteers
- Goal vs. reality, hah!
  - 4.75 FTE’s
Data Uses
(Supplement Other Agency Data)

- Army Corps of Engineers
  - Biological data
  - Environmental statement
- MODOT
  - Biological data
  - Env’t. Impact Stmt.
- US Forest Service
  - All data
- 319 and SALT projects
  - As monitoring component
Data Uses (MDC)

- Aquatic education
- Related projects
- Sensitive watersheds?
- Aquatic COA’s
Data Uses (DNR)

- Intro and Level 1 – screening data
- Level 2 & 3, and CSI data – treated as agency collected data
- Evaluate Best Management Land Use Practices (BMPs)
- Planning and Permitting

Caddisfly (Limnephilidae sp.)

Delwin Johnson ST #1549
Data Uses (DNR)

- **303(d) list of impaired waters**
  - Listing and delisting
  - Discharge data used for TMDL modeling

- **305(b) report to EPA**
  - Stream classification and designated use

Fenton Stream Cleaners ST #1857
Data Not Used For (DNR)

- Enforcement

- Use Attainability Assessments (but have input w/ survey on ST Website)
Sunset