Volunteer Monitoring from a Local Government Perspective

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JCC MS4 Minimum Standards

- Outreach & Education
  - Encourage involvement
- Public Involvement & Participation
  - Volunteer Monitoring, Advisory Committee
- TMDL Requirements
  - Must eliminate pollutants in impaired waterways – outfall reconnaissance
Water Quality Monitoring

• Determine baseline conditions
• Identify watersheds needing attention
• Identify appropriate management practices
• Provide program visibility
JCC Volunteer Choices

- Benthic macroinvertebrates
- Coliscan Easygel
- Stream walks
- Plantings
  - BMPs
  - Streams
Benthic Macro-invertebrates?

- live on the bottom (benthic),
- lack a backbone (invertebrate) and
- are visible to the eye (macro).

Includes insects in their larval or nymph stages, crustaceans (such as crayfish), and mollusks (such as clams)
Benthic Macroinvertebrates...

- Good indicators of water quality
- Vary in their ability to withstand pollution.
- Are relatively easy to monitor.
Coliscan Easygel for E. coli

- Several streams with bacterial pollution
- We need to find the “hot spots”
- Method is easy & inexpensive screening tool

Photo by James Beckley, VA DEQ
Why use volunteers?

- Engage citizens
- Encourage a sense of ownership
- Gather trend data for capital program
- Pre- and post-project differences
Why use volunteers?

- Support TMDL implementation plans
- Serve the education & outreach goals
- Save money!

C. Ritchie Photography ©2009
Volunteers aren’t employees!

- Volunteers are **independent**
  - Need to meet volunteers where they are
  - Weather-sensitive, some people are seasonal
  - Interested in what they’re interested in
- So....need a dedicated half-time person to organize volunteers
Accountability

We believe data should be

- Comparable across the region
- Comparable from year to year

So, we selected methods that are consistent state-wide

Virginia Citizen Water Quality Monitoring Program
Methods Manual, October 2007
A Coordinator is important!

- Scouting sites & matching volunteers to the right monitoring location
- Establishing an internal set of protocols
- Establishing a rapport with volunteers, attending to their particular needs
- Need to find the right staff person for the job!
Finding Volunteers

- Local interest groups: Master Gardeners, Master Naturalists, “Friends of” groups, HOA groups
- Field biology teachers & their students
- Newspapers, social networking, county website
  http://www.youtube.com/watch?v=xrupojQ1Y2E
- Local government television channel
We provide...

- Training & certification
- Equipment
- Technical support
- Quality assurance
- Sense of satisfaction
Volunteers provide...

- 2-4 hours, 3 times a year or 2 hrs/mo
- Quality assured data for County planning
- A sense of ownership – this is “your “ waterway!
VA SOS Training & Certification

Field Sessions are FUN

- Need to attend at least 2 sessions
- Can attend more sessions for practice
- Virtual training online [http://www.vasos.org/virtualsosdemonstration/vasostraining.htm](http://www.vasos.org/virtualsosdemonstration/vasostraining.htm)
- Wear clothes that can get dirty – you will be in a stream!

Field Sessions are Relaxed

- Bring (if you have them)
  - Clip board
  - Sunscreen / Insect repellent
  - Waterproof boots or waders
  - Snack or lunch
- Certification test is OPEN BOOK 😊
Training Tips

• Identify and field proof training sites
• Spend time on set-up,
  • Easy access, quality results
• Small groups work best – 6 works well
• Have sufficient equipment
• Frequent training sessions
• Weekends and weeknights

Flexibility is key!!
Post Training Time is Critical

Follow up immediately!!
Grab folks up as quickly as possible and get them into the field
Keep citizens engaged
Offer events, Clean the Bay Day, World Monitoring Day
Invent a special day
Future Ideas

• Facebook group for updated information
• Annual Water Quality report – “State of the County”
• Resolving technical issues
  • Look at how to get a more effective sampling; assistance with local colleges
• Time to get an adequate record of monitoring events
• Stream walks
Stream Walks

- To gather data on the channel and riparian areas
- Can identify locations for further investigation
- Can identify potentially illicit discharges
- Can help with TMDL implementation
- Coming in 2010….or so...

Photo from VA DEQ 2007 Volunteer Water Quality Monitoring Methods Manual
How Much Does it Cost?

- One-time: $20-$25K initial supplies, kits
- Annual: $10-$20K staff (part-time)
- Annual: $5-10K to VA SOS (QAQC), supplies, food for volunteer events, etc

- Compare annual costs of $15-30K to a consultant at $120/hour
What have we learned so far...

- Septic tank failures aren’t a cause of some of our bacteria TMDLs so we are looking at causes of sanitary sewer overflows.
- Sanitary sewer issues seem to stem from fats, oils, and grease.
- We need to do more public education in this area.
What have we learned so far...

Before Stream Restoration
--few bugs, little diversity

After Restoration
--more diversity, better bugs
We work in partnership with all citizens to achieve a quality community

Questions?
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