7th Annual Potomac Watershed Trash Summit
November 7, 2012
8:30 a.m. – 4:30 p.m.

TRASH FREE POTOMAC WATERSHED
ALICE FERGUSON FOUNDATION

CLEAN LAND.
SAFE WATER.
HEALTHY LIVES.

Monitoring:
Watch It!

Overview:

Focus: Litter is highly visible, making it easy to engage people to work toward solutions on this issue. However, monitoring litter has proved to be difficult. Determining an effective mechanism for monitoring litter is a critical component to determining the effectiveness of litter reduction strategies, as well as identifying new opportunities for litter management. This session will work to establish a set of tools for monitoring litter that are both effective and realistic to implement. Several different protocols being utilized both regionally and around the world will be examined during this session. We will also explore how to utilize volunteers for data collection and how to track and share data with volunteers, nonprofit stakeholders, and agency partners.

Presenters:

- Keith Jones, District of Columbia Office of the Clean City-- Monitoring city-wide hotspots and exploring methods used to collect this data, as well as how this information is shared with other agencies within the District.
- Sherry Lippiatt, Marine Debris Specialist, NOAA Marine Debris Program / IMSG, Office of Response and Restoration-- Exploring NOAA's new shoreline and boat protocol and how it might be used in the Potomac Watershed.
- Laura Chamberlin, Program Manager, Alice Ferguson Foundation-- Engaging, training, and retaining volunteer monitors and using National Geographic's Fieldscope for tracking and sharing data.

Key Questions:

- Why do we need monitoring? Who needs the data?
- Can volunteers provide good data? If so, how?
- How do we train and engage volunteers for monitoring?

Action Items:

- Investigate whether or not the Office of the Clean City can share it's protocol.
- Develop a protocol for counting plastic bags.
- Ensure that volunteers make a 2 year commitment.
- Develop a standard protocol, no matter the method for collection.
- Develop a system for providing rewards or credentials for volunteers. It may include a test for volunteers to increase validity or performance.
- AFF will host at least 2 volunteer monitoring trainings.
- District of Columbia will consider a RFA for outfall monitoring.

Full Session Notes:

Moderator Introduction:
It is recognized that we need to have monitoring in order to track the effectiveness of our work, support advocacy, ensure targeted resources, and increase engagement. However, finding a technique for monitoring that is both efficient and effective can be challenging. In particular, the use of volunteers is often considered, but this comes with an additional set of challenges.

1st Speaker: **Keith Jones**

Mr. Jones gave an overview of the District of Columbia's Clean City which includes serving as the central point of contact to initiate evaluate, educate, and communicate with communities in effort to improve neighborhoods. One program is the Adopt a Block program which gives citizens an active role of keeping the city clean with four cleanups a year. There are currently 68 Adopt-A- Blocks, they want to get up to 100.
The second major program is the City-wide Cleanliness Assessment. With this program every 3 months, the city's cleanliness level (on publicly owned property)is rated utilizing a ratings system of 1-5. Volunteers and city staff are utilized to complete the survey. The city is put into blocks and all sites are mapped.

The Scale for Rating

1- Clean-no litter, waste, vegetation/growth, graffiti
2- Moderately clean-small/moderate amount of litter, overflow of trash, minimal overgrowth of vegetation, posters (1 illegal)
3- Dirty-requires a substantial amount of cleaning. Scattered trash that interferes with sewers, 2-4 overflowing cans, excessive vegetation growth, 4 or more pieces of graffiti, fading street signs
4- Impending Hazard (OMG we need to clean this now!)-rapid response. Rat/rodent infestation, vegetation obstructs traffic, posters/graffiti everywhere

All problem areas are reported to relevant agency for tracking and follow-up. The ratings are conducted four times per year. When possible the Office of the Clean City, does follow-ups of hot spots. Reports are published on their website. Volunteers are usually seniors or school/college students.

Comment: The Clean City Ratings are for urban blight, not just litter.

Q from Groundwork Anacostia: How can we get involved in this? Do you go out on Saturdays?
A: It can be challenging to work on Saturdays, but there may be opportunities to work together.

1st Speaker: **Sherry Lippiatt**

Ms. Lippiatt began with an overview of the Marine Debris Program whose goal is to free coasts and global ocean from debris through research, assessment, removal, prevention, and outreach/education. One major goal is to document degree of debris and look at most prevalent debris (material type and concentration), and the document sources.

Two Main Surveys:

- Shoreline survey: Four random 5m wide transects surveyed at low tide. Surveyors count all debris that is greater than 2.5 cm. This is a rapid assessment surveyor, 20% of site sampled at one time.

- Surface Water Protocol: Three 15 minute tows at 2 knots. Trough nets are utilized.

Monthly samplings were conducted in the Chesapeake Bay in 2011. Debris was categorized by types and abundance of debris including: Plastic, metal, glass, rubber, processed lumber, cloth/fabric, other. Analysis of these surveys was also based on surrounding land use with four categories: Urban, Mixed, Rural/agricultural.

Results:

- Found: Plastics > 94%
- Lower debris loads at suburban and rural sites
- Influenced by episodic events (Tropical Storm Lee in 9/2011)
- Rural shoreline is significantly different from two urban sites.

Conclusions:

- Episodic events skew results.
- Types and abundance appear to correlate with watershed land use.

Ms. Lippiatt also shared another case study: On the West Coast, the shoreline protocol is being utilized to monitor debris from the Japanese Tsunami. There are 30 partners 100 sites. Monitoring sites are looking for a shift in abundance or types of debris.

Ms. Lippiatt discussed the importance of monitoring and establishment of protocol that helped to frame the larger focus of the session:

- Knowing what's there is the key to evaluation of effectiveness of policies.
- Monitoring can guide prevention solutions.
- It can be used to quantify the impacts of debris (species, economic costs).
- It can be used as an outreach tool (can debris be linked to specific behaviors?).

It is also important to standardize protocols, decide what story you're trying to tell, and the potential management action (policy implications).

NOAA is available for collaboration. The protocols discussed are available for use and data collected can be shared through their online database.
For more information:
md.monitoricng@noaa.gov
www.marinedebris.noaa.gov

3rd Speaker: **Laura Chamberlin**

Ms. Chamberlin began with a brief reminder of the Trash Free Potomac Watershed Initiative and the framework: Policy, Regulation, Enforcement, Market-Based Approaches, and Public Education. While Monitoring is not included in this it is still an essential part of the Trash Initiative, helping to track progress. Currently there are three types of monitoring: Annual Cleanup, Visual Trash Monitoring, and Photo Monitoring.

The Cleanup continues to be a valuable way to monitor the presence of trash in the watershed. The new Trash Network and the National Geographic's Fieldscope program will be an improved way to track trash, make it available to stakeholders, and conduct analysis of the data (*for more details see in the Creative Engagement session*).

In 2008, The Visual Trash Monitoring (VTS) protocol was created to get more precise data for the composition of litter in the watershed. This protocol has the surveyor count and categorize all litter

over a 200 feet long by 20 feet wide transect. This is a land-based survey and can be utilized in a wide range of land uses. While it provides detailed data- it is time consuming, difficult to complete, and difficult to retain volunteers for continuous completion of monitoring.

In an effort to continue to collect data from volunteers, but in a less rigorous way then the VTS method, AFF developed a protocol for conducting photo monitoring based on what Heal the Bay, in San Francisco was using. Volunteers are asked to take photos at regular locations and over a regular interval of time. Photos can be utilized to show that trash exists in a waterway, or in the case of the Trash TMDL- still is present. This can show that the waterway is polluted and further action needs to be taken.

Discussion:

Q for the group: How would you count plastic bags that are ripped/torn, caught on branches?
Suggestions:

Jim Collier- At the beginning, have to actually count the bags and after a few times you get a feel for how to estimate how many bags are in a big clump.
Masaya Maeda, Anacostia Watershed Society- We count if the bag is 90% intact.

Comment: Volunteers need to have consistent standards to prevent bias. It is important to have an overall protocol for the volunteers so that there is consistent data collection.

Q for Keith: Is the Office of the Clean City ratings system available/being used by other jurisdictions?
A: Not right now. But it might be interesting to see if this is possible. As a follow-up on an earlier question, Mr. Jones states that the ratings system might be feasible on weekday afternoons and training done on the weekends.

Government entities want to be able to incorporate volunteer monitoring data with their reporting, but a standard protocol or a Quality Assurance Protocol Plan (QAPP) must be prepared. Ms. Chamberlin stated the VTS does have a QAPP that can be utilized.

Q for Sherry: How are you successfully retaining volunteers?
A: Partly it is because the Tsunami debris is an extraordinary circumstance, but they also ask for a 2 year commitment.
Comments: It is difficult to retain volunteers. Trainings may help to make sure that volunteers have buy-in and are collecting accurate data. Another suggestion is having a reward or credentials after the volunteers complete the training. They could also be required to take a 'test'. This may help them to feel like they are special and unique, and ensure that they continue to monitoring.