

6th Annual Potomac Watershed Trash Summit

October 19, 2011

8:30 a.m. – 4:30 p.m.



CLEAN LAND.
SAFE WATER.
HEALTHY LIVES.

Founder's Hall

George Mason University

3351 Fairfax Drive, Arlington, VA 22201

In-Stream Trash Reduction Technologies

How are they Working?

Roundtable Notes

Focus: To achieve a Trash Free Potomac, we must have behavior change, source reduction policies, and increased enforcement. All of these programs will take time to show results. What are the trash reduction technologies that will keep the trash out of the water while we establish the long term change? Are these technologies effective? How much do they cost?

Moderator: Laura Chamberlin, Program Manager, Alice Ferguson Foundation

Presenters:

- Masaya Maeda, Water Quality Specialist, Anacostia Watershed Society
- Dennis Chestnut, Executive Director, Groundwork Anacostia DC
- Brian Schilpp and Molly Williams, Back River Restoration Committee

Key Questions:

- What types of trash reduction technologies are being used? How are they maintained?
- What types are not being used? Why are they not being used?
- What are the challenges/obstacles of various types of stormwater technologies?
- Is there any room for collaboration amongst jurisdictions? What types of tracking, reporting, and monitoring can be utilized? How are results being incorporated into MS4 Implementation Plans?

Action Items:

1. Multi-Tiered Approach- including Economic objectives, structured approach, and education
2. Share data for bottle bill outreach.
3. Education: for other parts of Potomac Watershed, youth education –programs in schools, field trips to affected areas, outreach (longevity of impacts)
4. Organics: ideas for management of the woody debris. Collobrate with organics taskforce.
5. Enforcement: Activist groups/communities fill court rooms-to pressure judges, explore ways for funds to be designated as revenue stream
6. Share data for all activities among general public-websites, ex. Share Case Studies-mechanism needed

Masaya Maeda: Anacostia Watershed Society-Water Quality Specialist

DDOE funds Nash Run Trash Trap-Farmount Heights, .7 sq mile.

- Trash Trap Installation-> Trash Collection-> Sorting 47 categories,
- Trash Characterization: Weight, number, volume,

- Food wrappers 19.4%, misc plastic trash 19.2%, 67.7% trash by piece non floatable Trash Boom can capture a lot of trash, but only around 30% of trash
- Greatest Weight-Juice Bottles 8.7%, Construction Materials, 7.6%
- Greatest Volume: 45% of Trash Bottles/Cans, then Styrofoam, then others.
- Impractical to remove all types/sizes of trash pieces in trash traps-transitional measures

Ultimate/comprehensive solutions are needed:

- Education, law enforcement, low impact development (LID)
- Must also deal with stormwater runoff. Expensive and difficult to strain trash out of streams
- If we had a bottle deposit bill, A ban on Styrofoam, 67% of trash would be eliminated
- Deer Park-Nestle: produces 60% of plastic water bottle trash Greater DC residents use 539 million bottles, nationally only 10% of plastic water bottles are recycled

Discussion and findings:

- All surveyed trash categories were dominated by only a handful of companies
- Bottle/Can Deposit Bill? Bottling industry can hire lobbyists
- If we introduce a Bottle Deposit Bill in all jurisdictions for consecutive 5 years in the Potomac or Chesapeake Bay watershed, we can water down the Bottle Industry's financial resources to lobby against the bill. Hire a few people who can draft bottle bill that can be introduced into different legislations

Q: Water bottles largest number of trash-bottle bill might not address the problem.

A: Laura, AFF: New bottle bills include water bottles

Q: UMary Washington-Drinking fountains that provide filtered water-public buildings? To refill bottles so water tastes better. Would this be a good solution?

A: Maeda: Only concerned people use the filtered alternatives to bottled water and those people are already not trashing.

Q: Data taken twice a month, when happens when it rains?

A, Maeda: has to go clean things out-all based on weather and hard to get volunteers

Q: Trap Designed to capture High Flow? Any problem with flooding in residential areas?

A, Maeda: Yes, but it really high flows it can get by.

Q: Are there any current middle school and high school student partnerships for the trap?

A, Maeda: Difficult, because of the danger and irregularity of storm events

Q: Is this practical for one stream-.7 sq miles

Q: Styrofoam-lightweight

Q: Lobbyists and Municipalities biggest opposition to bottle bill: interfere with recycling.

Dennis Chestnut, Groundwork Anacostia: Bandalong Litter Trap in Watts Branch

Groundwork Anacostia: Launched in Ward 7, affiliate of Groundwork USA, network of trusts built on partnerships located in or around urban waterways. EPA pilots startups of these organizations

Mission: sustained regeneration, improvement, and management of physical environ. Human Capital joint focus. Increase capacity of residents and stakeholders.

DC has combined overflow sewer system which releases nearly 2 billion gal of raw sewage and trash into river each year. Storm water also washes estimated 70,000 tons of trash into the river yearly. Jobs in Anacostia-if it were cleaner, use for recreation. Almost every distressed community has an equally distressed stream or river.

Bandalong River Trap- Watts Branch- Working with DDOE, Anacostia Riverkeeper, and NPS

- Manufactured by Stormwater Systems: continuously operates 365 days a year w/o mechanical assistance
- Two sizes, constructed of aluminum and high density polyethylene
- Effective in rivers streams, creeks, lakes, drainage culverts with tidal basins,
- Anchored into place for maximum efficiency
- Patented gated prevents litter and debris from exiting trap

Total weight removed = 5071, Plastic Bottles 29 % (see full data in ppt)

Groundwork services the trap once a week, after every rain event.

Q: Cost of a trap?

A: Stream specific: 75k for longevity of 25 years, multiple ways to clean it out-various fixtures or additions for the system

Q: How can you fund it?

A: Federal Grants? Green advertising-corporations, (local), bag bill

Q: What is the economic component here?

A: American made, recyclables are tradeable goods/commodities-recovery/separation: jobs,

Q: What was the 60% organic matter

A: tree stumps, weight. (Vaughn Perry)

Q: What kind of youth programs do you have?

A: Testimonies-youth leadership dev program.

- Connect young people to outdoors, intro them to issues that affect them where they live
- “Green Team”: 9-12 graders-intro enviro concepts, local HS, local projects, get them on the river, appreciate as an asset, work with young adults-wider basis.
- Green Jobs-training young people on the process of data collection, edu, where trash goes when it leaves, etc.

Q: What do you about liability in working with kids?

A: Insurance-must get parental liability waiver signed. Done safely-carry sharps containers: adults retrieve dangerous materials

Q: How many traps are set up in DC area?

A: Watts Branch, Nash Creek, Mt Rainier area in 2012, Hickey Run, near NY Ave (Trash and Toxins)

Brian Schlipp and Molly Williams, Project Managers: Back River Restoration Committee

Back River trash boom: It is the end of pipe for 30 sq. miles

Channel: Boom Installed in 2010.

Proven that they can do it cheaper and better than the private contractor.

Baltimore County Grant: worked with a lot of retired blue collar workers for the design and trash removal design.

Total 113.75 tons removed (organics included)

Sorted every piece to do trash data analysis (see ppt for full analysis)

Where does the organics go since the composting facilities won't accept it?

Data analysis/Conclusions

- Back River watershed highly urbanized, streams are extremely damaged
- Is it worth it? 8 lbs removed for every \$1 spent: County billed exactly for what is spent to clean
- Geology of area has been changing: sediment hitting and tracking out
- Historical Dumping Is an issue, but modern items are also found.
- Illegal dumping-enforcement: Speed cameras, red light ticket: fine for dumping is at least \$1000, so revenue maker?
- SAV growing: physically pulling it out of trash? Separating scraps SAV

Boom put in by Baltimore City Gov., so environmental permits through them. Total initial investment: materials cost 80k, contractor managing: 4k a month

Q: How is the maintenance? And what about education?

A: Trash Increasing: Aging communities, communication with education, Tidal environment increases the challenges. Rocky Point is where the edu piece takes place, positive experience.

Q: What are you doing with the Organic Matter?

A: Some of it can't be accepted by the composting facility. Sell Trees if they are in decent conditions, contracted with a couple mills in the area. Sold items some materials back to construction site.

Q: What are the environmental justice issues here , as related to stormwater and trash.

A: Get neighborhoods involved: trash cans would be more effective: improving quality of life and stormwater issues.

Q: Have you tracked property values?

A: Not yet, but if improved this could provide incentive