

**Upper Roanoke River (Roanoke and Botetourt Counties, Cities of Roanoke and Salem, Town of Vinton)**  
**TMDL Implementation (Cleanup) Plan Development**

**Business Working Group – Meeting 1**

Thursday June 20, 2013, 2 P.M.

Virginia Department of Environmental Quality, 3019 Peters Creek Rd., Roanoke, VA

**Attendance:**

- Angela Nielan - Virginia Department of Environmental Quality (DEQ)
- Paula Nash - Virginia Department of Environmental Quality (DEQ)
- Mary Dail - Virginia Department of Environmental Quality (DEQ)
- Heather Longo - Virginia Department of Conservation and Recreation (DCR)
- Scott Shirley - Western Virginia Water Authority (WVWA)
- Chris Flannagan – Louis Berger Group
- Nick Tatalovich – Louis Berger Group
- Erin Hagan – Louis Berger Group
- Tori Williams – Roanoke Region Chamber of Commerce
- Shane Sawyer – Roanoke Valley Alleghany Regional Commission
- Kip Foster - Virginia Department of Environmental Quality (DEQ)
- Megan Daily – Roanoke County
- Wendy Jones – Williamson Road Area Business Association
- Doug Phillips- Southeast Rural Community Assistance Project (SERCAP)
- Liz Belcher – Roanoke Valley Greenways

**Welcome and Introductions**

Meeting guidelines were established and each participant shared their expectations for the meeting.

**TMDL Implementation Plan Discussion**

Mary Dail provided some project background and explained the Cleanup Plan process

**Sewer Overflow and On-Site Sewage Disposal Discussion**

- There was discussion concerning the different regulations between VDH vs DEQ
- Grease is a problem in the interceptors. Building Codes allow under sink units to be installed County wants in ground systems. The highest amounts of overflows are related to grease.

***Sewer Overflows***

- Most of valley is sewerred
- Some pockets that have septic systems
- 500 septic loads/month
- Grandin-manhole overflows (extreme rainfall)
- Mudlick-interceptor project: a 36” interceptor was installed in Mudlick area

- There are some other manholes that overflow or show remnants of overflows.

### **Roanoke WWTP**

- Dry Flow 28-29MGD
- Phosphorus is the lowest in the state
- High flows lately 137 MGD
- They are still able to meet their limits.
- 170-180 MGD should be their maximum capacity
- It would cost 150 million to upgrade the system, Relief Sewer in Tinker Creek.
- 17 million at the WWTP. Work needs to be done on the James River Interceptor. The system can now meet the 5-year storm event pretty easily.

### **Pet Waste Discussion**

Question was asked to the group: Are there businesses (pet stores, vet offices, kennels) where we could reach out to pet owners regarding the impacts of pet waste and the importance of picking up after pets?

- Suggestion was made to reach out to the Association of Vets, animal control personnel, Mill Mountain Zoo, and SPCA
- Suggested that Vets and Pet Stores could print “Please use this bag for picking up pet waste” (or similar) on the shopping bags about picking up poop.
- Talk to homeowner associations about educating residents their housing development
- Suggestion to work with localities to pass ordinances to require picking up pet waste
- Suggestion to target the people who don’t take their pets to the vet/kennel

### **Stormwater Discussion**

- The group was asked: Does the business community/Home Builders comply with Erosion and Sediment Control regulations? Do you feel there is room for additional education regarding E&S?
  - Local government seems to be monitoring the E&S better
  - There are storm drain problem areas, Williamson Road still needs more inlets
- Question to the group: Do you feel that the term stormwater is recognized by members of the business community?
  - “stormwater” is associated with the fee
  - Roanoke City has discussed implementing a stormwater fee charged per square foot of impervious surface (the fee schedule and details have not been finalized)
    - This approach causes concern for absentee rental property
    - Also a concern for larger properties like the Roanoke Airport
  - Stormwater management fees happening at the same time is a fear of business community
  - Money, TMDL and the Implementation Plan- Need to make sure that people are educated about the correlation.

- Question to the group: Have any of you implemented stormwater BMPs on your property to deal with run-off? Do you know of other businesses who have implemented stormwater BMPs on their property?
  - There is a green roof company
  - Meridian
  - 2 Firehouses that have recently done work (Fire station #3)
  - There is a problem with rain leader disconnects and sump pump inspections when homes are sold in Roanoke city. (Sewer Systems)
  - Roanoke Regional Chamber of Commerce can provide a list of businesses that have installed BMPs
  - Rainwater Management company in Salem
  - Suggestion was made to have a BMP symposium where local businesses could present their experiences with BMPs
  - The Plan needs to build in opportunities for education regarding Low Impact Development (LID) techniques
  - Retrofits needed in Williamson Road area because it is completely built out
  - Roanoke County has not had any LID projects in recent years

### **Outreach**

- We need to include educational components in the Clean Up Plan
- Need education to how to LID established businesses
- Home Builders Association AECF Expo - 1<sup>st</sup> week of November
- Energy conservation
- Home Show
- Programs that recognize businesses for excellence in environmental management practices
  - Cool Green BIZ- Roanoke County
  - Clean and Green- Roanoke City

### **General Questions and Concerns:**

Q: Who came up with the TMDL numbers?

A: These numbers were determined when the TMDL was developed. The TMDL process is much like the Clean Up plan process with opportunities for public input. The TMDL numbers are calculated using water quality monitoring data, watershed modeling, permitted facility data, land use information and stakeholder input. The MS4 is not part of this Implementation plan as far as funding is concerned because the MS4 permittees are required to implement practices to address their wasteload allocations through their permits. The Clean Up plan addresses the entire watershed. The MS4 areas are part of the watershed and will be captured in the Clean Up Plan through the landuse analysis.

S: There was a statement at the public meeting about these practices being voluntary.

R: There was a discussion about the fact that businesses do not have the ability to voluntarily participate. Businesses must do what the MS4 asks of them. This is confusing to the public.

Q: What criteria make a waterbody impaired?

A: DEQ explained that an exceedence of the water quality standard for bacteria greater 10.5% of the time causes impairment. The bacteria water quality standard is 235 CFU/100ml. Virginia also has narrative standards which protect aquatic communities. The sediment impairment on the Roanoke River was identified due to impaired aquatic invertebrate communities.

Q: How many miles are dirty in VA? Percentage Impaired?

A: This question depends on the pollutant. A map was shown of the impaired streams and the associated pollutants (where the cause of impairment is known). Roughly 23% of streams monitored are considered impaired.

**Action Item: Need to get a slide with this information for presentations in the future.**

Q: Besides animals what would be a source of bacterial pollution?

A: Pets, Livestock, humans (via failing septic Systems, broken pipes, straight pipes)

Q: Are all the waters that DEQ monitors leading to impaired waters?

A: Quite a few are impaired. There are unimpaired waters, even pristine waters that citizens work hard to preserve.

Q: Are water quality standards ever changed?

A: In 1992, 126 toxics were put into standards. Yes, standards are reviewed and changed periodically. DEQ conducts a triennial review to evaluate the effectiveness of standards.

Q: Describe WLA, LA, MOS

A: WLA is wasteload allocation, which is the portion of a pollutant load allotted to permit-holding entities. The LA, or Load Allocation, is the portion of a pollutant load assigned to runoff from land-based sources. The MOS, or Margin of Safety, accounts for any errors or unforeseeable conditions overlooked during development of a Total Maximum Daily Load (TMDL) study. A TMDL a Pollution Diet or Pollution Budget (i.e. the maximum amount of pollution a waterbody can handle and still be considered "healthy").

S: If you have less water in the river, wouldn't that be a reason that you would have more bacteria.

A: A smaller waterbody can only handle so much bacteria and still be considered "healthy" and that level of bacteria is less than what a larger river can handle. Bacteria data vary.

Q: What happens in extended drought conditions?

A: The watershed model used to calculate pollutant loads in a TMDL study takes into consideration different extremes in the precipitation. Usually a ten year window of climate data is utilized to calibrate the model and, in theory, this window captures a variety of climate conditions. The idea is to make

TMDLs very protective. There is often a time gap between the TMDL and the IP. Hopefully the merger between DEQ and DCR will alleviate this lapse in time between the plans.

Q: Carvin's Creek is all forested; what can be done to reduce that load?

A: The contributing load is likely from the wildlife within the forest and recreational users with pets. We have to acknowledge all sources of bacteria identified in the TMDL. The Clean Up plan addresses the load associated with humans first. If there is a nuisance wildlife problem, we may work with DGIF to control nuisance wildlife.

Q: Are there any TMDLs that allow a certain Wildlife load as baseline?

A: Not that DEQ is aware of; however, DEQ will look into this question.

The dam at Carvin's Cove acts as a sediment trap. Wildlife loads are estimates based on available habitat in proximity to the stream. The modelers use a fecal tool to account for how much fecal matter is produced by the different animals to estimate their loads. A comment was made that this approach will make undeveloped land look the worst. Empirical monitoring data is used to validate the model. It is infeasible to monitor every foot of every stream, so best available tools are used to estimate loads.

S: From a business point, people who love wildlife are a significant boon to the economy. If we tell businesses that when you clean up the water then that generates more money for businesses. A cost benefit for the benefits would be great. The Clean Up Plan, so far, is missing the boat on recreational interests. Recreational interests could be used to provide support for the Clean Up Plan. Pete at Roanoke Outside has given presentations on economics and recreation; it was suggested that he be contacted for support. Roanoke Outside has data on the economic advantage of putting in BMPs.

S: All of the BMPs are being put on the backs of the businesses.

S: The IP process has cost benefits in each watershed. Roanoke City Council is more interested in giving credits to the residents and not to the businesses.

S: Dialogue regarding stormwater utility is taking place in a vacuum. There needs to be discussions with stormwater utility to express concerns.

S: Final decisions on implementation of the Roanoke City stormwater utility fee have not been determined.