

South River Science Team Meeting

February 11, 2013

Web-meeting

Welcome: *Don Kain, DEQ*

Recap of Oct 2012 SRST end-of-meeting open discussion: *Don Kain, DEQ*

- Don led recap/discussion of the items brought up at the Expert Panel Meeting back in October. Subjects discussed are as follows:
 - Dredging – Dredging riverbed as a remedial option would be destructive and generally not favored as a remedial option
 - Habitat Monitoring – Long term monitoring is needed to ensure that remediation does not destroy or degrade habitat and cause further impairment.
 - Pilot Studies and other options – Bank stabilization, soil/sediment amendment practices and reductions at plant site are viewed as being viable options for pilot studies and/or implementation in the near future. Other options seem to be much lower on priority list, but need to be fully explored.
 - Discrete Mercury Sources – How do we segregate different sources? Important to be able to treat and monitor each source separately in a manner that allows measurable progress to be quantified. Elimination of the continuing releases of mercury from the former DuPont plant site to the river should be a top priority. It's not just a legacy source, but continues to be a current source. The effectiveness of other remedial measures cannot be clearly measured if mercury continues to enter the river from plant site.
 - Remedies – We want to ensure we don't "kill the patient to cure it". We need "no regret" options. We need consensus and remedies need to be less disruptive or less invasive.
 - Effective Targets and Goals – Can we achieve 0.3 ppm Hg in fish? Is 0.3 ppm more likely in South Fork Shenandoah than South River?
 - Monitoring – A monitoring task team is needed and has been created. It is headed by Will Clements. Contact Will if interested in joining team.
 - Technologies – We need to be open-minded to innovative approaches. Are there technologies we should revisit? Can we influence methylation without causing harm elsewhere? We need to take advantage of all the resources we can access (data and observational technologies such as GIS).
 - Land Use and Ownership – Most of floodplain is in private ownership, so we do not have "free rein". This causes challenges and constraints.
 - Meeting Format – There has been a recommendation to call next year's meeting a "program review" instead of "expert panel" meeting. Are there any other format options members think would be effective?
 - Anything Else? – Contact Don, Ralph or Mike

SRST Task Team Updates

- **Monitoring sub-team: *Ralph Stahl, DuPont***
 - Goals of this sub-team are to provide peer-review and technical guidance on short and long-term monitoring programs for the South River and South Fork Shenandoah.
 - Objectives are to seek to insure that the monitoring programs:
 - Mesh well with one another and are not duplicative.
 - Focus on collecting data that provide both short and long-term information useful for assessing overall ecological health of the aquatic system and effectiveness of remedial actions.
 - Secure data in formats and in organizations that will maintain their integrity, longevity and allow public access
 - Next Steps:
 - Keep working on concept. Next meetings:
 - March 7th 10 am (phone/web mtg)
 - April 9th 8:30 am (in person mtg Harrisonburg)
- **Program Integration Task Team: *Mike Liberati, DuPont***
 - Is there a single regulatory program that can be administered to satisfy all drivers (regulatory and legal)?
 - Administrative Options:
 - Existing RCRA Corrective Action Permit (3008h)
 - RCRA CA Permit for the off-site mercury component
 - Consent Order with VA (difficult to give control to EPA)
 - 7003 Order with EPA (Imminent and substantial endangerment)
 - Superfund Alternative Approach
 - Preferred Administrative Options
 - Existing RCRA Permit (3008h)
 - Currently addresses on-site only; can “chase” Hg to river. DEQ offered offsite permit.
 - VA authority, currently administered by EPA
 - VA administration for remedial action phase
 - Amend permit to add separate off-site component
 - Transfer on-site component to Invista upon remediation completion
 - Superfund Alternative Approach
 - Same processes and standards as sites listed on National Priority List
 - Site must be eligible for listing, but is not actually listed
 - Administered by EPA through AOC’s and CD’s. It would be different group within EPA, not Jacobi et al. EPA already started ranking approach.

- Not a widely used program, 49 agreements as of Jan 2012 (2000+ NPL sites)
 - Some agreements have similarities with the South River situation
 - Timing: DuPont's desire is to have something in place before NRDC remediation report in September.
- **Remedial Options Programs Task Team: *Nancy Grosso, DuPont***
 - University Studies Focus for 2013:
 - Characterize properties of the system that will affect selection of a remedial alternative
 - Test potential treatment materials or treatment deployment methods
 - Assess potential adverse affects of remedy
 - Field Studies and Pilots for 2013:
 - Floodplain amendment lead (Bill Bertie) has left DuPont. Project delayed.
 - Continue monitoring of Bank Pilot and Pond Amendment Pilot
 - Develop plan for floodplain soil treatment pilot
 - Remediation Efforts for 2013:
 - Continue Plant site interim remedial measures
 - Identify high priority banks for remediation from RRM 0 to 5
 - Conduct modified BEHI from RRM 0 to 5
 - Conduct targeted bank sampling to fill data gaps RRM 0 to 2
 - Prepare and submit Remediation Proposal (Sep 27)
 - Conceptual Approach – April 9 SRST ROPs Mtg
 - ROPs Task Team Co-Leads (Robert Brent and Nancy Grosso)
 - University Studies (Scott Brooks and Rich Landis)
 - Field Testing and Pilots (Robert Brent and Jim Dyer)
 - Remediation Efforts (Robert Brent and Nancy Grosso)
 - ROPs Mtgs for 2013
 - Feb 12
 - Apr 9
 - Jul 16
 - Oct 8
- **Human Exposure Task Team: *Annette Guiseppi-Elie, DuPont***
 - Presentation given at SETAC on the use and misuse of screening levels
 - Currently evaluating turtle data
 - Calculations completed for consumptions rates of various wildlife data.
 - Working on livestock study logistics (plan has been finalized)
 - Working on on-site risk assessment for both human and ecological and then will proceed to floodplain. This will lead into a risk management program.
 - Letters about ready to go to landowners concerning data collected on floodplain ponds and extra floodplain soil testing.

NRDAR Status: Anne Condon, US Fish & Wildlife

- Goal = Restoration
 - To compensate the public for injuries to natural resources caused by a release of a hazardous substance.
 - Compensation must restore, replace, or acquire the equivalent of lost resources/resource services (restoration).
- Currently finished with the preassessment stage, nearing the end of the injury assessment stage and beginning the restoration planning stage.
- Avian dosing study preliminary conclusions:
 - Memory – severe disruption
 - Flight – possible effect
 - Molt – earlier
 - Song – lower pitch/simpler
 - Parenting – no effect
 - Testosterone – no effect
 - Corticosterone – suppression
 - PHA immune response – no effect
 - B-cell immune response – reduced
- Turtle summary: Report just finished.
 - Captured and tagged a lot of turtles!
 - Developed tissue relationships for sustainable monitoring (blood & nail to muscle & egg)
 - Possible consumption risk from South River turtles (0.399 – 7.652 ppm THg wwt, Ave: 2.638 ppm wwt)
 - Reproductive effects (hatch success):
 - *C. serpentine*: 12 % reduction at average egg THg (25% at upper range)
 - *C. picta*: 10 % reduction at average egg THg (21% at upper range)
 - *S. odoratus*: no reduction in hatching success
 - *P. rubriventris*: not enough gravid females for analysis (but Hg low)
- Restoration Planning and Implementation
 - Public involvement in restoration planning.
 - Informal briefings and restoration scoping.
 - Public review and comment on Restoration Plan.
 - Restoration Plan required
 - Trustee Council must remain the final decision maker.
 - All restoration must be closely related to the actual injuries (nexus).
 - Consistency with all laws, Trustee policy, management goals and objectives.
 - Not already planned or funded, or otherwise required by law or permit.
- Wilson Ornithological Mtg being held at William and Mary March 7 – 12, 2013. Dan and students will be presenting several papers related to South River.

2012 South River fish tissue results: Calvin Jordan, DEQ

- Fish have all been analyzed. Data is in. Calvin cannot retrieve all the data out of system. There are some programming/data management issues that DEQ is trying to resolve and hopefully he can get all of the data by next week. Meanwhile, the few stations he was able to retrieve show similar mercury concentrations as the fish sampled in 2007.

Promotores de Salud – Update and next steps: *Joanna Jensen, Blue Ridge Health AHEC*

- Waynesboro 40 Hour Training
 - 5 graduates
 - 4 drop-ins
 - Came from Waynesboro, Verona, Grottoes (representing Mexico and Honduras)
 - 4 females, 1 male
 - 500 Health Contacts
- Other Activities
 - Website
 - Common Threads
 - Tomando Control
 - Teen Health Fairs
 - Annual Regional Gathering of Promotores
 - Community Health Services Fair
- Expansion into Other Cultures
 - History of refugee resettlement in the Shenandoah Valley
 - Russian, Arabic and Kurdish speaking communities
- Local Refugees
 - 1980 Refugee Resettlement Act
 - Church World Service
 - Within 100 miles: Afghanistan, Azerbaijan, Belarus, Bosnia, Burma, Columbia, Congo, Croatia, Cuba, Eritrea, Iran, Iraq, Kazakhstan, Kosovo, Russia, Rwanda, Serbia, Sierra Leone, Sudan, Tajikistan, Ukraine and Uzbekistan
 - 3 different South-east Asia languages spoken in Waynesboro
- Middle East
 - 2000 – 3500+ Arabic and Kurdish Speakers in Charlottesville area
 - Challenges
 - Honoring differences while addressing the larger community
 - Introducing a new concept
 - “Why are you helping us?”
- Former Soviet Union
 - 1988
 - 1500+ Russian Speakers
 - Challenges
 - Insulated community
 - Distrust of external entities

- Noncompliance
- Strengths
 - Well educated
 - Community oriented
 - Religious community
 - Reports of Russian men fishing all day and bring fish home to share with family and community.
- Next Steps:
 - Leadership
 - Buy-in and Ownership ahead of time

Communications and Outreach Update: *Mike Liberati, DuPont*

- Communications
 - “Update” Newsletter for 2nd half 2012
 - Adaptive Management Tool
 - Watershed Management Approach
 - Promotores Training
 - Monarch Caterpillar School Project
 - Wilson Ornithological Society Meeting, March 7 – 10
 - 125th Anniversary, hosted by College of William and Mary
 - 12 South River research presentations
 - SRST Website Redesign
 - Will launch this month
- Outreach
 - Promotores Program
 - Expansion into Waynesboro
 - Launch Russian and Arabic Language Programs
 - Riverfest “Year of the Rock Bass” Saturday April 27th
 - www.riverfestwaynesboro.org
 - No Admission Fees – Stream Safari, Canoe Rides, Nature Exhibits, Music, Native Plant Sale, Rubber Ducky Race, Reptile Show, etc.
 - “Kids Day” – Thursday April 25th for Kate Collins Middle School Students
 - New SRST Office Exhibits
 - Center for Coldwater Restoration Trout Hatchery Demonstration
 - Virginia Museum of Natural History Exhibit
 - National Parks Exhibit

Wrap Up

- Next meeting April 10, 2013 in Harrisonburg