

Rivanna River Basin Commission
**Technical Advisory Committee
Planning Retreat**

January 12, 2010



The RECAP

Where have we been?

Where we are we now?

(And where are we going?)

Sam Austin, Chair, RRBC TAC

January 12, 2010

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**The role of the RRBC TAC
is to provide data, information, and
technical advice to the Commission**

*so that (the Commission) may provide guidance
and make recommendations to local, state, and
federal legislative and administrative bodies
regarding the use, stewardship, and enhancement
of the Basin's water and other natural resources.*

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2007 Threat Assessment and Analysis

Consensus:

**Altered hydrology and associated
sedimentation.**

*Departures from the naturally occurring pathways,
quantities, and rates of water flow
are the "over-arching" threat,
and these drive other threats.*

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2007 Threat Assessment and Analysis

Replicating the hydrologic regime of a forested Rivanna watershed.

Identified as a goal condition helpful in minimizing the impacts of altered hydrology.

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2008 - More Questions

- What is the relation between stormwater flow and excess sedimentation?
- How much sediment enters our streams from
 - (1) overland sources and
 - (2) in-stream sources?
- How does "legacy sediment" contribute to overall sedimentation in our streams?
- How can we better understand these processes so that we can target conservation and restoration activities?
- What kind of monitoring or data gathering do we need?

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2008 - Created the TAC subcommittees

- A Watershed Modeling Subcommittee
- A Rainwater Harvesting Subcommittee
- A Monitoring Subcommittee
- A Workshops Subcommittee, that meets on an ad-hoc basis

The Watershed Modeling Subcommittee is beginning to look into the relative impact of various land uses on altered hydrology and streams.

The Land Cover Map will help RRBC TAC assess and prioritize conservation and protection efforts.

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2009 - A Transition Year

- We recommended to the RRBC practical recommendations for localities to adopt volume-reducing BMPs
- We supported RRBC staff in NFWF grant proposal and beginning to implement the NFWF projects, including:
 - Implementing **quantity-reducing** stormwater management practices on government facilities in the four localities,
 - Monitoring each of these demonstration sites to verify practice effectiveness,
 - Undertaking an inventory of additional government facilities where retrofits can be installed,
 - Convening workshops and a symposium to educate the development community and local planning and resource management staff about these innovative strategies, and
 - Developing an incentive program in each locality to spur the implementation of these practices on private property.

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We are poised to...

Do Something.



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*provide guidance and make recommendations to
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stewardship, and enhancement of the Basin's
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so that (the Commission) may provide guidance and make recommendations to local, state, and federal legislative and administrative bodies regarding the use, stewardship, and enhancement of the Basin's water and other natural resources.

Notes:

- "Advice and input"
- Does "provide data" imply collection of data?
- Leave "provide data" as is, which allows more flexibility
- Does this make it sound like TAC sets the agenda for the RRBC? Use "...information and technical advice ... in support of the Commission's directive..."

See previous slide for final version

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What are the TAC's external constraints, opportunities and influences?

How should the TAC support the RRBC and its mission?

What scientific data and research is needed to help the TAC fulfill its mission?

Question

Thinking about the mission of the RRBC and mission of the TAC,

what are the TAC's external constraints, opportunities and influences?

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What are the TAC's external constraints, opportunities and influences?

Composition of the RRBC

- The nature of RRBC and its ability to give direction/communication, extent to which commissioners convey info to elected bodies
- Regularly changing commission members
- Bottom-up composition allows TAC to help influence direction of RRBC and community
- TAC waits for direction from RRBC – will RRBC go in directions suggested by TAC?
- TAC also includes staff representatives of local government
- Constraint: commissioners not clear on commissioner role.
- Challenge: limited RRBC staff
- RRBC is an entity of local government

Economy:

- Politics/economy that affect RRBC – price of lumber, cattle, land, housing (drives landowners and policy/rules)
- Constraint: current focus on economy
- Constraints: funding, staffing
- Opportunity: hiatus for development, chance for collection of data

What are the TAC's external constraints, opportunities and influences?

Community:

- Opportunity: when local issue arises, local gov't can turn to RRBC, and in turn to the TAC, for recommendations (ex: stormwater utility fee)
- Opportunity to share information between localities.
- Maintain and expand partnerships
- Community and locality support
- Advisory boards
- Opportunity: coordinate expertise among TAC members to study issues, university assets
- DOF evaluation of Rivanna Exchange – tying urban water users with rural landowners
- Opportunity: increased awareness in community/nation/international re: water resources (climate change)
- Community's water and wastewater management needs

Priorities/Implementation

- Time to conceptualize the problem, implement, monitor – immediate problems vs. long-term issues. Chasing rabbits – local, state and federal "rabbits"
- Use mission to decide which "rabbits" to chase
- Time delays between cause and effect – needs vs. time to address the needs; installation of BMPs vs. time to detect changes.

What are the TAC's external constraints, opportunities and influences?

Larger Scale Influences:

- Near Term: Change in administration (state level)
- Stormwater Regs
- Current technology
- The actual condition of the resource, the inherited realities, the known relationships (such as land use and stream conditions)
- Multiple federal, state and local water quality goals
- Obstacle: Mandates, Opportunity – understand processes and guide state and local decision makers
- Climate change likely to lead to excessive rainfall/drought – accelerate processes that have been identified as problems
- Population growth
- Chesapeake Bay TMDL, sediment recognized as a pollutant

“Science” Question

Thinking about the mission of the TAC and our previous discussion, what scientific data and research is needed to help the TAC fulfill its mission?

“Structure” Question

Thinking about our previous conversations and understanding of the RRBC, how should the TAC support the RRBC and its mission to provide guidance and recommendations?

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- How should the TAC support the RRBC and its mission? (Structure)

Structure Notes:

- Translate science for commissioners to help them to understand issues
- Make policy recommendations to RRBC based on science, formal paper documentation (based on current economic climate). May be specific by topic, or more broad
- Tracking list of topics (broad to specific) that RRBC would like TAC to consider, and that TAC would like RRBC to consider
- Prioritize the needs for data with mission in mind
- How to keep TAC, RRBC and Staff in the loop with each other?
- What science can/should RRBC collect, and how can the RRBC encourage UVA or other outside groups to conduct studies?
- RRBC become a political force to empower studies (UVA students/classes often need guidance about projects)
- Keep scientists involved
- Let science inform policy recommendations – be more bold in making policy recommendations
- Seek funding sources that will lead to priority actions; let priorities lead grant applications (ex NFWF grant)
- Pursue funding for operational costs of RRBC, strategize funding so that it helps operation and science/policy – unrestricted grants, funds from state legislature, etc

- How should the TAC support the RRBC and its mission? (Structure)

Structure Notes Cont...

- Continue to pursue funding other than grants or state funds – look within our own region and tap private sources. (challenge: RRBC is an entity of local government)
- How can RRBC/TAC become most supportive/efficient/effective of local gov't so that the RRBC is valued by local gov't?
- Assess current staffing situation, craft projects around the available workforce (challenge: limited staff)
- Bring in other resources and focus on partnerships – based on priorities
- TAC can help develop priorities and fill in gaps of data, not just act as a clearinghouse or thinktank

- What scientific data and research is needed to help the TAC fulfill its mission? (Science)

- Understanding rates, timing, quantity and delivery pathways of water and sediment
- Prioritize projects and then fill in missing data using UVA, SW, students, etc.
- State of the Basin report update/checkup (ex: check bank pins)
- Build on data collection, ex: TNC canoe study
- Literature search on hydrology and sedimentation
- UVA grad students and professors
- Summarize external influences – determine overlapping and complementary influences, suggest subcommittee
- Pinpoint sources, identify specific stressors (CADDIS, Impact Source ID)
- Stormflow aerial photography
- Sediment cores
- Streamwalks
- Flow and ambient water quality monitoring (25 auto samplers)
- Study buffer and livestock exclusion effectiveness OR before and after studies (work with landowners)
- Channel erosion monitoring, BEHI
- Revisit Ken Hyer's sedimentation work (continuous monitoring of turbidity)
- Test a list of hypotheses to help drive studies and RRBC advice
- Assemble all data that are collected by TAC members, pull together a story, develop some policy recommendations

From 09Jul14 TAC meeting:

- Conduct historic analysis of channel change in the watershed
- List BMP locations and types, prioritize for monitoring
- Sub-watershed measurements at key locations
- Work with UVA GIS classes to create class projects
- Collect data to understand how river reached its current state

- What scientific data and research is needed to help the TAC fulfill its mission? (Science) WITH PRIORITIES

- *** State of the Basin report update/checkup (ex: check bank monuments, update with land cover data) AND/OR revisit the recommendations that were listed in the State of the Basin report
- *** Generate and test a list of hypotheses to help drive studies and RRBC advice
- ** Prioritize projects and then fill in missing data using UVA, SW, students, etc.
- ** Review and synthesize existing data and reports – identify gaps and data needs
- ** Study buffer and livestock exclusion effectiveness OR before and after studies (work with landowners) Can include effectiveness in general (including review of literature)
- * Streamwalks
- * Revisit Ken Hyer's sedimentation work (continuous monitoring of turbidity)
- * Assemble all data that are collected by TAC members, pull together a story, develop some policy recommendations
- * Historic analysis – GIS analysis, update on monument/bank erosion
- * Develop a whole watershed multisite sediment/water quality/flow monitoring design

**Brainstorming Next Steps
(Next TAC meeting: Feb 16, 9am – noon,
Albemarle County office building 5th St Ext Room A)**

Notes:

- Gather more science AND make recommendations using what we know now
- TJPDC may undertake an update of the State of the Basin report
- An update could be a statement of the current state of the basin; report card; list of changes since last report, and what those changes mean. Need to clarify what the update would be
- Sam to brief RRBC during meeting next Thursday; Robbi can also convey the results of this meeting to the RRBC
- At next TAC meeting, revisit prioritization and begin to implement – decide what we know and what we need, hypothesize and also make recommendations on what we know now.
- Use John's spreadsheet, add more of what we know.

-Homework: What data are you in charge of? What do we know?

- Sam and Alyson to decide if facilitation is needed at next meeting
- Goal for 2/16 meeting: priority list and at least 2 hypotheses.
- Let these guide policy recommendations.

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