

## FACT SHEET

**PROJECT NAME AND AREA DESCRIPTION:** The Rappahannock River, VA Comprehensive Watershed Evaluation. The Rappahannock River is approximately 195 miles (314 km) in length. It traverses the entire northern part of the state, from the Blue Ridge Mountains in the west, across the Piedmont, to the Chesapeake Bay, south of the Potomac River. The river drains an area of 2,848 square miles (7,380 km<sup>2</sup>), approximately 6% of Virginia. Much of the watershed is rural and forested, but it has experienced increased development in recent decades principally due to the southward expansion of the Washington, D.C. suburbs. The watershed is a significant tributary to the larger Chesapeake Bay watershed.

**AUTHORIZATION:** This initiative is authorized by Section 22 of the Water Resources Development Act of 1974 (Public Law 93-251), as amended. Under this authority, the Corps of Engineers can provide states, local governments, other non-Federal entities, and eligible Native American Indian tribes assistance in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources. Typical studies are only planning level of detail; they do not include detailed design for project construction. The program can encompass many types of studies dealing with water resources issues. Types of studies conducted in recent years under the program include the following: water supply/demand, water conservation, water quality, environmental/conservation, wetlands evaluation/restoration, dam safety/failure, flood damage reduction, coastal zone protection, and harbor planning. The following map displays the general geographic boundaries of the Rappahannock River Basin.



**EFFORTS TO DATE:** The U.S. Army Corps of Engineers (USACE), the Rappahannock River Basin Commission (RRBC), the Rappahannock-Rapidan Regional Commission (RRRC), and the Commonwealth of Virginia (Commonwealth) have received inputs from a number of stakeholder groups with respect to water resources challenges that are present in the basin. To date, the inputs have been

focused largely on the upper and middle basin; the following items have been identified by one or more stakeholder groups (as of July 2012):

- The Water Resources Plan should focus on the upper river basin, as it directly impacts the rest of the watershed and has not received as much attention as the lower river basin.
- Data collection is sorely needed particularly in the upper river basin. In Rappahannock County, there are serious issues with wells, springs, etc. going dry and there has been a lack of data in the upper basin.
- Stream channel instability in the western portion should be examined in the Water Resources Plan. It was suggested that it begin with the Hughes River and work south to Swift Run in Green County and those streams affected by the 1995-1996 flood.
- The Water Resources Plan should examine regional ground water recharge in the upper basin. The underlying geology of the upper basin is much different than that of the lower basin; this difference also relates to the surface water issues. Ground water sustainability should be reviewed as well.
- USACE should include the National Park Service as a stakeholder for this initiative, because the headwaters are located in Shenandoah National Park and the Park Service may have long-term data to share.
- Data should be collected above and below water quality cost-share project sites so that change can be documented. An inventory of NRCS investments would be very useful. It would be important information for landowners as well, if a positive impact can be documented. The data could be used in a positive, instead of punitive way, to help improve water quality and serve as an example.
- Public access and recreational use should be considered in the plan. Public use of the river enables users to be active observers of the state of the river and can encourage users to have a vested interest in it, which can ultimately result in better water quality.
- RappFLOW conducted a comprehensive analysis of sub-watersheds in Rappahannock County. It identified several specific kinds of needs and goals with a water quality focus. It was recommended that the Water Resources Plan incorporate the results of the analysis, and also local water analysis and water supply plans.
- The Water Resources Plan should be shared with local Boards of Supervisors, because many Supervisors have limited knowledge of ground water issues. This information may be better received coming from USACE rather than local government staff.
- The plan should examine grey water use. Currently there is no infrastructure for grey water use, but it could be used during droughts. It was recommended that water conservation programs be included in the plan.
- Committee members voiced their strong support for the request for funds from the General Assembly to support data collection/gauges.
- Sediment in the Rappahannock River, particularly in vicinity of the City of Fredericksburg.
- Can future navigation projects be planned in a way that helps address other goals including water quality improvement?
- Ecosystem restoration.

- Aquatic habitat restoration.
- Riparian buffer creation.
- Ground water concerns.
- Water quality concerns.
- The need for more effective and integrated flood warning systems that would create a synchronized network of stream gauges, rainfall gauges, and water quality gauges to better inform water resources decision makers.
- What is the value that farm ponds add to TMDL's and what should the appropriate regulatory role be?
- How do conservation easements contribute to reductions in TMDL's?
- Take a look at the water supply plans of the localities of the basin and determine if there are any conflicts.
- Document where local water quality issues exist so that localities can consider excluding those segments from eligibility for the nutrient trading program – as allowed in the new law.
- Consideration of the aquaculture industry as a potential BMP, and other alternative BMPs as potential strategies.
- Consideration of floating wetlands as a potential BMP.
- Identify targets for water nutrient management plans to be used to determine storm water retrofits and streams.
- Oyster restoration (wild stock, aquaculture, harvest management areas, and sanctuaries) in the lower Rappahannock (e.g. aligning environmental and economic sustainability).
- Water supply reservoir, water supply intake, and dredging.
- A-forestation in easements under a term contract.
- Bioenergy and biomass.
- Financing systems that ensure perpetuity for term credits.
- Inventory of what restorations and mitigations have transpired in the watershed.
- Biosolids applications.

**FUTURE EFFORTS:** Development of a programmatic decision document which would (1) take advantage of existing information in order to not duplicate any existing documents, (2) be developed in a short time period, and (3) be cost-shared by the USACE, the Commonwealth, and the RRBC. The effort would outline a programmatic process and strategy for water resources support to include development of a long term funding stream designed to implement comprehensive solution sets across environmental, flood risk management, navigation, and water supply business lines. It is expected that the programmatic document would provide a tool for public policy decision makers to implement comprehensive and

integrated water resources initiatives, each of which would be facilitated by planning, design, and construction cost sharing agreements with the U.S. Army Corps of Engineers.