

Welcome to our Stakeholder Webinar Series

The Cooperative Water Program is hosting the third in a webinar series on **March 7th at 1:00 p.m. Eastern Standard Time**. Expected duration is 1 hour and 15 minutes.

The featured science presentation, by USGS Hydrologist Jennifer Krstolic in the Virginia Water Science Center, is on ecological flows in the Shenandoah River Valley, Virginia.

USGS partners and cooperators—such as with the Central and Northern Shenandoah Valley Regional Commissions—will speak to the relevance of the science in their day-to-day management of the river system.

Discussion and questions will follow.

Webinar Logistics to view and listen to the presentation Power Point:

Webex Link: <https://doilearn.webex.com/doilearn/tc>

Click on “join” next to: Environmental Flows in Shenandoah Region
Date and Time: Thursday, March 7th, 2013, 1:00 p.m., Eastern Standard Time (you can join 5-10 minutes before the scheduled time)

Password: flows

Teleconference:

For those located in the USGS National Center in Reston, VA: **x4848**.

For those located in DOI facilities outside of National Center: **1-703-648-4848**

For those located in “non-DOI” facilities may dial Toll Free: **1-855-547-8255**

You will be asked for a code: **58494#**

Note: The toll free number is blocked at DOI facilities, due to the fact that is it less expensive to dial (703)-648-4848 over FTS at these sites. If you are unable to connect with the toll free number for any reason, please use the 703-648-4848 number instead.

Presentation Background

The South Fork Shenandoah River and its counterpart, the North Fork Shenandoah River, join to form the Shenandoah River, which drains a large region that many in Virginia refer to as “the Valley” (located west of Shenandoah National Park). As population growth continues, agriculture continues to thrive, and new industries increase in the Valley, competition for clean water is a concern for policy makers, managers, planners, and citizens who recognize the need to protect streamflow as a resource for water supply, recreation, and ecological habitat for aquatic life. In 2005, USGS, in cooperation with the Central Shenandoah Valley Planning District

Commission, the Northern Shenandoah Valley Regional Commission, and Virginia Commonwealth University, began an investigation to examine the instream flow needs of aquatic organisms of the South Fork as a companion study to an instream flow study on the North Fork. The two studies were similarly designed, and thereby provide consistent model output for Valley planners and water-resource managers. A range of scenarios are presented to provide managers and planners with information regarding current and future water resources in the basin, the availability of water for fish habitat, recreation, and the potential effects of withdrawals and conservation measures on fish populations. (Studies available at: <http://pubs.usgs.gov/sir/2012/5081> and [http://pubs.usgs.gov/sir/2006/5025/.](http://pubs.usgs.gov/sir/2006/5025/))

Key finding from the recent USGS study in the South Fork:

- Findings suggest that for normal or wet years, increased water withdrawals are not likely to correspond with extensive habitat loss for game fish or nongame fish. During drought years, however, a 20- to 50-percent increase in water withdrawals may result in below normal habitat availability for game fish throughout the river and nongame fish in the upper and middle sections of the river. These simulations of rare historic drought conditions, such as those observed in the Valley in 2002 serve as a baseline for development of ecological flow thresholds for drought planning.

Publications:

Krstolic, J.L., and Ramey, R.C., 2012, South Fork Shenandoah River habitat-flow modeling to determine ecological and recreational characteristics during low-flow periods: U.S. Geological Survey Scientific Investigations Report 2012–5081, 64 p. (Also available at <http://pubs.usgs.gov/sir/2012/5081> .)

Krstolic, J.L., Hayes, D.C., and Ruhl, P.M., 2006, Physical Habitat Classification and Instream Flow Modeling to Determine Habitat Availability During Low-Flow Periods, North Fork Shenandoah River, Virginia: U.S. Geological Survey Scientific Investigations Report 2006–5025, 64 p. (Also available at <http://pubs.usgs.gov/sir/2006/5025/> .)

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