

Susquehanna River Basin Commission Information Sheet

Morrison Cove Water Resources Availability Study - Assessing a Potentially Stressed Watershed -



Background – The Susquehanna River Basin Commission (SRBC) has identified eight Potentially Stressed Areas (PSAs) within the Susquehanna River Basin, including the Roaring Spring area in the Morrison Cove in Bedford and Blair Counties, Pennsylvania.



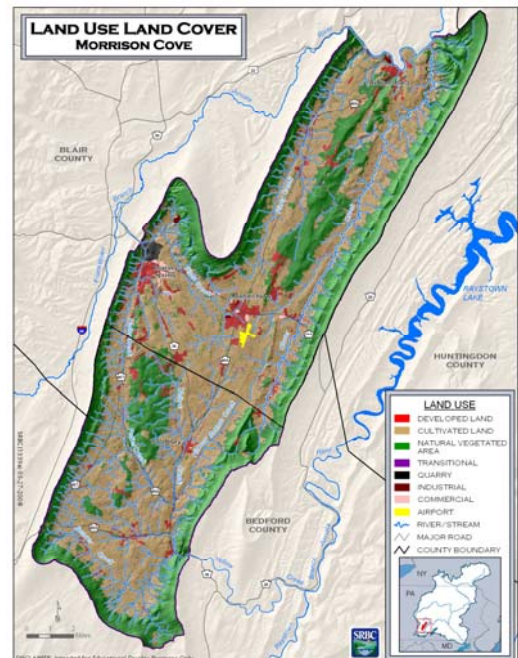
PSAs are areas where the demand for and use of water resources are potentially approaching or have exceeded the sustainable limit, and they generally meet two or more of the following criteria: diminished yields, declining water levels, diminishing stream or spring flows, expanded dry stream reaches, a water budget analysis indicating that withdrawals within a groundwater basin exceed the recharge during a 1-in-10-year average annual drought, and known withdrawals for rapidly developing areas exceeding 50 percent of the recharge during a 1-in-10-year average annual drought.

The Roaring Spring area was identified by SRBC in its 2005 update of the “*Groundwater Management Plan for the Susquehanna River Basin.*” The identification was based on: (1) known stresses on groundwater resources during the severe droughts in 2001 through 2002, (2) indications that groundwater resources were being utilized at the full 1-in-10-year drought recharge rate, and (3) that the demand for water was increasing due to substantial industrial, commercial and residential growth.

Study Purpose – As funding permits, SRBC conducts detailed assessments of the PSAs to gain a more detailed picture of water resource availability and their utilization.

Using funding from the Pennsylvania Department of Environmental Protection, SRBC initiated the “*Morrison Cove Water Resources Study*” in early 2009 to assess the extent of the water resource challenges and potential conflicts in the Morrison Cove. The study is projected to take about two years, and will include an active stakeholder process to ensure that local interested persons and groups have opportunities to share information and data, and to provide input to SRBC’s final report.

Study Area – Morrison Cove is a 186-square-mile valley surrounded by mountain ridges. The valley floor is underlain by folded Cambrian and Ordovician age carbonates. The ridges surrounding the valley consist of resistant sandstones, with minor interbedded siltstones and shales of late Ordovician and Silurian age.



Study Area (continued) – The Morrison Cove valley contains four large watersheds: Halter, Yellow, Clover, and Piney Creeks. The largest population centers in the Cove are the boroughs of Roaring Spring and Martinsburg. The dominant land use in the Morrison Cove valley is agriculture (55 percent), followed by forested land (about 40 percent). Developed areas make up slightly more than one percent of the entire valley.

Study Goals and Benefits – The goal of this study is to provide local government, industry, and recreational users with the information needed to make informed decisions and plans for the sustainable utilization of water resources. The study will quantify the amount of groundwater available in the Morrison Cove area, identify areas with greater and lesser amounts of groundwater, and provide recommendations for their management and development.

Study Process – The main elements and activities associated with this study include:

- (1) Continuously monitoring all major outflows from Morrison Cove for a period of one to two years.
- (2) Taking a one-time measurement of groundwater levels in wells during a dry season.
- (3) Taking a one-time measurement of stream flows on the trunk streams and all major tributaries.
- (4) Producing a report summarizing the study methods and results, the analysis with respect to water resource availability, and recommendations for local management and planning for water resource development.
- (5) Seeking and incorporating stakeholder input throughout the study.

Study Status – The following activities have been conducted as of May 2009:

- (1) Preliminary work in 2008:
 - Identified potential stream and spring monitoring points.
 - Created field maps and completed field reconnaissance.
 - Created maps of geology, water use, land use, soils, and vegetation.
 - Obtained flow and chemistry data from the Pennsylvania Fish and Boat Commission.
 - Took a series of streamflow measurements and water samples for baseline data on discharge and water chemistry.
 - Obtained landowner permission to install continuous flow monitoring equipment at key locations.
 - Tabulated initial geologic data and completed mapping efforts of key watershed components.
- (2) Work in 2009:
 - Finalized the selection of sampling and monitoring locations and installed monitoring equipment.
 - Began collecting streamflow and groundwater level data.
 - Developed potential stakeholders list, including representatives of federal, state and local elected officials, water authorities, county planning, conservation districts, environmental and conservation organizations, and major water users.
 - Scheduled first stakeholders meetings for May 14 in Martinsburg.

Contacts – For more information on this study or to share information and data with SRBC on the Morrison Cove, please contact:

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