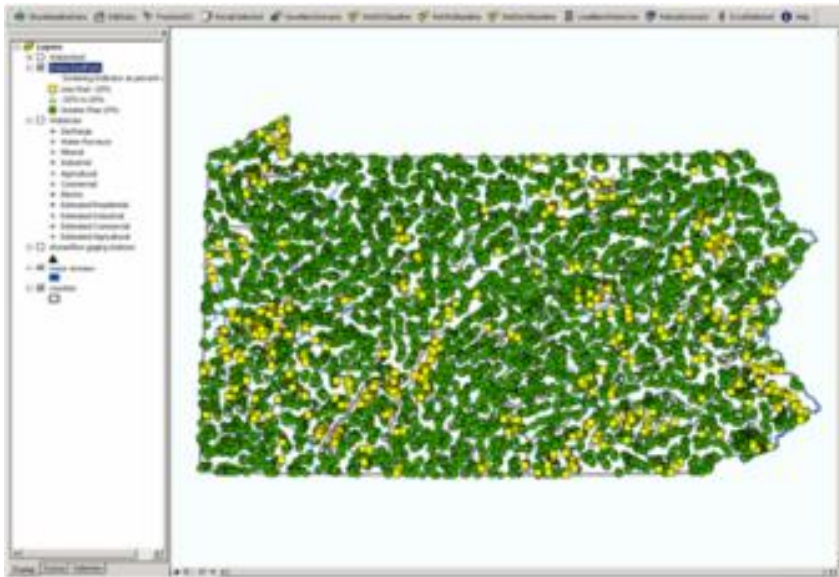


2.5 Critical Water Planning Areas

2.5.1 Designation of Critical Water Planning Areas

Act 220 established a process to designate Critical Water Planning Areas (CWPAs). CWPAs are areas where existing or future water demands exceed or threaten to exceed water availability. Act 220 also authorized the preparation of Critical Area Resource Plans (CARPs) for any watershed or watersheds within a CWPA. During the State Water Plan update in 2009, considerable work was done to "screen" the entire state for CWPAs.



Opening screen of the WAST displaying over 10,000 pour points

A GIS model named the Water Analysis Screening Tool (WAST) was built for The Department of Environmental Protection (DEP) by the USGS to accomplish this screening. The WAST compares net water withdrawals (withdrawals minus discharges) against designated criteria (percentage of the 7-day, 10-year low flow (7Q10)). It measures the influence of net withdrawals on aquatic resources at over 10,000 mouth-of-the-watersheds or "pour-points" across the state.

The specific requirements for identifying a CWPA are outlined in a DEP Technical Guidance Document 392-2130-014, "Guidelines for Identification of Critical Water Planning Areas."¹

Results from the WAST and consultation with regional committees narrowed the potential CWPA candidates to 32 watersheds selected for verification of data and further technical review before continuing the process of CWPA designation. After the verifications, the regional committees nominated 23 watersheds to the statewide committee for designation consideration. More information on the screening process is available in the State Water Plan Principles document of 2009². From the 23 regional committee-selected watersheds, the statewide committee recommended four watersheds for CWPA designation. On December 20, 2010, these four watersheds were officially designated CWPAs by the Secretary of DEP: Marsh and Rock Creeks, Adams County (Potomac Region); Back Creek, Fayette

¹Guidelines for Identification of Critical Water Planning Areas 392-2130-014

www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4670

² State Water Plan Principles, 2009

files.dep.state.pa.us/Water/Division%20of%20Planning%20and%20Conservation/StateWaterPlan/StateWaterPlanPrinciples/3010-BK-DEP4222.pdf

County (Ohio Region); and Laurel Hill Creek, Fayette and Somerset counties (Ohio Region). Interactive maps showing all these watersheds' locations are available in the Water Use and Planning section of the updated State Water Plan Atlas³.

2.5.1.1 Marsh and Rock Creeks CWPA⁴

The Marsh and Rock Creek watersheds are located in Adams County. They have a combined drainage area of approximately 143 square miles. The watersheds were combined into one CWPA because the populated area surrounding the Borough of Gettysburg lies in both Marsh Creek and Rock Creek watersheds. The major water supplier in the Gettysburg area has groundwater withdrawal wells in both watersheds and a surface water withdrawal on Marsh Creek.

The WAST identified a significant number of negative Screening Indicator Percentage (SIP) values within Marsh Creek. Negative SIP values indicate potential water imbalances (higher net withdrawals than streamflow) under extreme low flow conditions. Water is withdrawn from Marsh and Rock Creeks by the Gettysburg Municipal Authority and discharged outside the watershed in Rock Creek. In Rock Creek, negative SIP values were indicated in the upper third of the watershed, primarily driven by agricultural water withdrawal estimates and public water supply withdrawals. In 2003, withdrawals for estimated water users (groundwater and surface water) were 1.44 million gallons per day (Mgal/d) and accounted for 47.9 percent of the total. Registered groundwater withdrawals accounted for 1.57 Mgal/d (52.1 percent) of the total, and there were no registered surface water withdrawals.

2.5.1. 2 Back Creek CWPA⁵

Back Creek watershed has a drainage area of 11.4 square miles, located in Fayette County, and is a tributary of Indian Creek. This watershed was designated as a CWPA primarily due to the potential situations in which water demand exceeds supply. Three of the four negative SIP values in the Indian Creek watershed occur in the Back Creek watershed, partly due to public supply withdrawals from groundwater sources totaling approximately 0.5 Mgal/d in 2003.

2.5.1.3 Laurel Hill Creek CWPA⁶

Laurel Hill Creek is an approximately 125 square mile watershed located in Somerset and Fayette counties. The watershed is predominately undeveloped, with most of its area forested or within agricultural land use. Within the developed portions of the watershed are ski resorts and a quarry operation. As of 2009, there were 32 dams in the Laurel Hill Creek watershed, including two with a conservation release and one with a minimum pass-by requirement. All reported and estimated

³ Insert URL

⁴ Supporting Documentation Marsh Creek and Rock Creek, Adams County, Nomination for Critical Water Planning Area Under Pennsylvania State Water Plan, September 2009
<files.dep.state.pa.us/Water/Division%20of%20Planning%20and%20Conservation/StateWaterPlan/CWPA/Marsh%20Rock%20Creeks%20Report.pdf>

⁵ Indian Creek, Fayette and Westmoreland Counties Nomination for Critical Water Planning Area Under Pennsylvania State Water Plan August 2009
<files.dep.state.pa.us/Water/Division%20of%20Planning%20and%20Conservation/StateWaterPlan/CWPA/Indian%20Creek%20Report.pdf>

⁶ Laurel Hill Creek, Somerset and Fayette Counties Nomination for Critical Water Planning Area Under Pennsylvania State Water Plan August 2009
<files.dep.state.pa.us/Water/Division%20of%20Planning%20and%20Conservation/StateWaterPlan/CWPA/Laurel%20Hill%20Report.pdf>

withdrawals in the Laurel Hill Creek watershed were 2.27 Mgal/d in 2003. Nineteen of the 26 pour points in the watershed had negative SIP values, primarily due to water supply withdrawals exported outside the watershed.

2.5.2 Critical Area Resource Plans

Act 220 requires that for each designated CWPA the regional committee shall form a critical area advisory committee (CAAC) which assists in guiding the development of a CARP. DEP is responsible for drafting the CARP although the regional committee may recommend that DEP engage county or regional agencies or expert consulting firms to assist them.

A CARP shall be subject to review and adoption through the same process as a regional plan. However, before final recommendation by the regional committee to the statewide committee, a copy of the proposed CARP shall be submitted to each county's and municipality's official planning agency and governing body in the designated CWPA for comment, as to consistency with other plans and programs affecting the CARP. These planning agencies along with relevant state agencies, shall be provided 45 days to offer comments.

The review and adoption process is outlined in DEP Technical Guidance Document 392-2130-015 "Guidelines for Development of Critical Area Resource Plans." ⁷

⁷ Pennsylvania Department of Environmental Protection,
www.depgreenport.state.pa.us/elibrary/GetDocument?docId=7902&DocName=GUIDELINES%20FOR%20DEVELOPMENT%20OF%20CRITICAL%20AREA%20RESOURCE%20PLANS.PDF

2.5.2 Status of Critical Area Resource Plans

All of the following major components for the Marsh and Rock Creek, Laurel Hill Creek, and Back Creek CARPs (as described in Chapter 2, "Developing Critical Area Resource Plan Elements" of the above reference guidance) have been drafted.

- Verification and Statement of Problems
- Existing and Future Reasonable and Beneficial uses
- Water Availability Evaluation
- Quantity of Water Available and Required for Future Water Uses
- Assessment of Water Quality Issues
- Stormwater and Floodplain Management
- Adverse Impacts and Conflicts
- Supply-side and Demand-side Alternatives
- Recommendations

Below is a table from Chapter 4, "Process for Reviewing and Adopting a Critical Area Resource Plan" identifying the process steps, status, and actions.

A. Review of CARP	Status/Action to Be Taken		
	Marsh/Rock	Laurel Hill	Back Creek
1. In cooperation with the CAAC, the regional committee shall hold at least one combined public meeting and hearing within the watershed(s) to solicit input on the draft of the initial CARP. The regional committee should provide for a public comment period to receive written comments, including soliciting comments from those entities identified in paragraph 3 below.	A combined public hearing and meeting was held in Gettysburg on December 12, 2012. This process will be repeated for the updated CARP.	To be completed.	To be completed.
2. A copy of the draft CARP shall be submitted to the official planning agency and governing body of each municipality in the watershed(s), the appropriate county planning agency(s), and regional planning agencies for review and comment as to consistency with other plans and programs affecting the watershed(s) and relevant state agencies. Each such agency and governing body shall be provided forty-five (45) days to provide comments.	A comment period for the Marsh and Rock Creeks CARP was held for 45 days upon publication of notice in the PA Bulletin on October 12, 2012. This process will be repeated for the updated CARP.	To be completed.	To be completed.
3. Following public participation and the combined public meeting and hearing required under Paragraph 1, above, and following the receipt of comments from appropriate planning agencies and municipal governing bodies of each municipality in the watershed, the regional committee, in consultation with the CAAC, shall select by a majority vote the planning alternatives and provisions to be recommended as part of the CARP.	To be completed.	To be completed.	To be completed.

B. Recommendation of CARP to Statewide Committee and Secretary of DEP	Marsh/Rock	Laurel Hill	Back Creek
1. Each Regional Committee may, by majority vote, recommend the CARP to the Statewide Committee.	To be determined.	To be determined.	To be determined.
2. If the regional committee fails to transmit the CARP to the statewide committee, the statewide committee shall, after providing ninety days' written notice to the regional committee, proceed to act on the CARP per Section C, below.	To be determined.	To be determined.	To be determined.
C. Approval of CARP and inclusion in State Water Plan	Marsh/Rock	Laurel Hill	Back Creek
1. Upon receipt of the CARP, the statewide committee or the DEP Secretary may direct modification of the CARP, in whole or in part, upon finding: <ul style="list-style-type: none"> a. The planning or management alternatives are inconsistent with the regional plan. b. The CARP is inconsistent with the statute; federal or state laws or regulations, or officially adopted policies or plans; or compacts or other interstate agreements and plans. c. The CARP is inconsistent with or conflicts with the provisions or objectives of the overall State Water Plan. d. The CARP fails to conform to the CARP elements in Chapter 2 or other requirements established by this policy. 	To be determined.	To be determined.	To be determined.
2. Following consultation with the regional committee, the statewide committee shall, by majority vote, approve and recommend to the DEP Secretary approval and adoption of the CARP as a component of the State Water Plan.	To be completed.	To be completed.	To be completed.
3. Within ninety days of submission of the CARP, the DEP Secretary shall in writing either approve the CARP or disapprove the CARP if the DEP Secretary finds:	To be completed.	To be completed.	To be completed.

<ul style="list-style-type: none"> a. The planning and management alternatives are inconsistent with the regional plan; b. The CARP is inconsistent with the statute; federal or state laws or regulations, or officially adopted policies or plans; or compacts or other interstate agreements and plans; c. The CARP is inconsistent with or conflicts with the provisions or objectives of the overall State Water Plan; d. The CARP fails to conform to the CARP elements in Chapter 2 or other requirements established by this policy. 			
<p>4. Upon disapproval of the CARP, the DEP Secretary shall advise the statewide committee and the affected regional committee, in writing, of the reasons for disapproval.</p>	To be determined.	To be determined.	To be determined.
<p>5. Upon receiving notice of disapproval, the statewide committee, the affected regional committee, and DEP shall undertake expeditious and diligent efforts to confer and resolve the issues identified as the reasons for disapproval.</p>	To be determined.	To be determined.	To be determined.
<p>6. Within ninety days of receiving any disapproval notice, the statewide committee shall recommend a revised plan addressing and resolving the issues.</p>	To be determined.	To be determined.	To be determined.
<p>7. Upon adoption of the CARP, DEP shall publish notice of the amendment of the State Water Plan in the Pennsylvania Bulletin and on the DEP website.</p>	To be determined.	To be determined.	To be determined.
<p>8. The CARP shall be construed as a component of the State Water Plan and may be implemented voluntarily.</p>	To be determined.	To be determined.	To be determined.