

IMPLEMENTATION OF
THE WATER RESOURCES PROTECTION ACT
WEST VIRGINIA CODE, ARTICLE 22-25

2004 PROGRESS REPORT

Stephanie R. Timmermeyer, Cabinet Secretary

West Virginia Department of Environmental Protection
601 57th Street
Charleston, West Virginia 25304

December 30, 2004

IMPLEMENTATION OF THE WATER RESOURCES PROTECTION ACT WEST VIRGINIA CODE, ARTICLE 22-25

2004 PROGRESS REPORT

DECEMBER 30, 2004

The Water Resources Protection Act (“Act” or “WRPA”), W.Va. Code §§22-25-1 *et seq.*, enacted March 13, 2004, authorized the establishment of a Joint Legislative Oversight Commission on State Water Resources. The West Virginia Department of Environmental Protection (DEP), the implementing agency for the Act, is required to submit a yearly progress report to the Commission (§22-25-5(b)). This report summarizes the Department’s actions taken to implement the Act from April through December 2004.

MAJOR TASKS

The WRPA addresses water use in West Virginia, and focuses on three major tasks: 1) preparation and implementation of a survey of persons who withdraw and/or consume more than 750,000 gallons of water in any calendar month for the calendar years 2003, 2004, or 2005; 2) preparation of a final report, due December 31, 2006, that must address ten major topics related to water use, including recommendations from the DEP on additional actions that should be taken to implement a water quantity management strategy, if needed; and 3) implementation of a registration program for large water users beginning in 2006.

During 2004 the DEP concentrated on activities necessary to address the first two tasks. Those primary activities are discussed below.

THE SURVEY

The DEP began its initial design of a survey/registration form based on a review of forms and registration programs from other states and based on input from the United States Geological Survey (USGS) and West Virginia Geologic and Economic Survey (WVGES). At the same time, the agency met with representatives of the WVGES and the USGS. Both WVGES and USGS have previously published survey reports on water use for West Virginia. Eventually these meetings led to cooperative agreements with both agencies regarding work needed for implementation of various aspects of the Act.

The DEP has executed a contract with WVGES for \$10,000 for assistance with developing the survey and interpreting the survey results. Jane McColloch, a geologist with WVGES, had considerable input into the prior reports authored by the USGS on water use in West Virginia. She has provided valuable input regarding the survey design.

The USGS and DEP entered into a cooperative cost sharing agreement to provide estimates of water use by businesses in the state and assist with other aspects of preparation of the final report. DEP has contributed \$93,000 and USGS has provided \$76,500 in matching funds (Total: \$170,000) for project funding. The first deliverable was for water use estimates for businesses in the state. DEP will use these estimates to identify persons who must complete the survey.

The water use estimates prepared by USGS are calculated using SIC and NAICS codes to determine the type of business, the number of employees at the facility, and a water use coefficient that has been derived by prior research. The required data for each facility was obtained from the Harris Survey, a marketing research tool developed by Harris Interactive, Inc. The estimate is for average water use throughout the year, not the maximum water use during any particular month. Therefore, when determining which businesses should complete the survey, DEP will actually be contacting businesses that are below the average 750,000 gallon estimate, but which may have exceeded 750,000 gallons during any month of the year.

The Harris Survey listed 6,875 businesses in West Virginia. Preliminary results indicate that 807 are estimated to have average water use above 750,000 gallons per month. Water use estimates for 170 facilities could not be calculated because water use coefficients have not been determined for their particular SIC code. Use of alternate water use coefficients has resulted in another 100 to 200 facilities being classified as large quantity users. Therefore, the total number of large quantity water users in the state, based on the Harris Survey, may be as high as 1,200.

Although the Harris Survey falls far short of listing every business in West Virginia (estimated at 40,000), DEP believes that the USGS estimates have captured the large quantity users in the state. DEP is pursuing agreements with the Rahall Appalachian Transportation Institute and the WV Bureau of Employment Programs to obtain data on the remaining businesses.

Shortly after reviewing other states' water use program requirements, and meeting with various state agencies, DEP began developing the Internet based survey form. The form, and associated Oracle database, began alpha testing on November 22, 2004. The Survey was presented to Appalachian Electric Power, Arch Coal and West Virginia American Water on December 10, 2004. These three companies have agreed to be the beta testers for the survey. The target date for completion of the beta test is January 21, 2005. The target date for release of the survey to the public is March 31, 2005.

FINAL REPORT

The first step in developing the final report was to survey and assess existing data from other state agencies. DEP met with representatives from the following agencies:

Department of Agriculture

Department of Health and Human Resources
Department of Natural Resources
Public Service Commission
Office of Emergency Services
West Virginia Conservation Commission
West Virginia Development Office
Rahall Appalachian Transport Institute

A meeting was held on November 18, 2004 between all of the individuals responsible for their agency's databases to begin to collect and assimilate the information needed to prepare the final report. As proprietary data will be collected, DEP has also met with the Department of Military Affairs and Public Safety regarding confidentiality and homeland security issues. DEP is in the process of developing data sharing agreements and security guidelines for the data to be collected pursuant to the Act. Once the data is collected, various GIS mapping techniques will be used to begin evaluation for each of the required report elements.

To better understand the issues associated with collecting data for the survey, DEP met with the following industry representatives:

West Virginia Farm Bureau
West Virginia Rural Water Association
West Virginia American Water
West Virginia Chamber of Commerce
West Virginia Manufacturers' Association
West Virginia Coal Association
(A meeting is also scheduled with the Independent Oil and Gas
Association of West Virginia on January 6, 2005)

Discussions with these representatives have been extremely helpful in refining the design of the survey, identifying water that is to be counted in the survey, and clarifying the definition of consumptive use.

WEST VIRGINIA UNIVERSITY AND MARSHALL UNIVERSITY

West Virginia University ("WVU") and Marshall University ("MU") were specifically authorized to enter into interagency agreements with DEP to assist with implementation of the Act. WVU and MU have jointly formed the West Virginia Center for Water Resources Management (WVCWRM) to channel funding to projects designed to support DEP in its efforts to effectuate the Act.

The DEP expects finalization of a Memorandum of Understanding with WVU and MU, through the Water Research Institute and the Center for Environmental and Geotechnical Studies respectively, by the end of January 2005. The MOU will identify those elements of the final report that will be addressed by the Universities. West

Virginia University will assist in preparing the following report sections: Historic and Current Conditions That Indicate Low Flow and Flood/Drought Conditions (Report Item 4); An Evaluation of Current or Potential In-Stream or Off-Stream Uses that Contribute to or are Likely to Exacerbate Natural Flow Conditions to the Detriment of the Water Source (Report Item 5); and Practices to Reduce Water Withdrawals (Report Item 9). Marshall University will assist in preparing the report section on Potential Growth Areas Where Competition for Water Resources May Be Expected (Report Item 7), and assist with the data warehouse and general GIS applications.

CHALLENGES

The primary challenge is to provide meaningful analysis of datasets that are frequently incomplete or where the data has never been collected. Two broad categories of data will present the greatest challenges to completion of the final report: 1) lack of sufficient subsurface data to evaluate the groundwater resource, and 2) lack of information for businesses that are not surveyed and are also not on a public water supply.

Of the two, the second will probably be the least difficult to overcome. The Rahall Transportation Institute's recently completed 911 Addressing Project may be invaluable in identifying businesses and individuals that would otherwise not be evaluated.

The lack of subsurface data may be overcome by GIS mapping techniques and statistical analysis of existing data that may provide reasonable estimates of groundwater location and availability. DEP has established a three-person work group to address this challenge.

Determination of the volume of surface water is a minor challenge. Report Item 1 calls for the "location and quantity of all surface water . . . in the state." Surface waters are an ever-changing resource that will be difficult to measure, but will still be possible to estimate.

STATUS

DEP believes implementation of the requirements of the Act is on schedule.