

## CURWENSVILLE LAKE WATER STORAGE PROJECT Storing Water For Low Flows

*"The commission shall have power to acquire, construct, operate, and control projects and facilities for the storage and release of waters for the regulation of flows and supplies of surface and ground waters of the basin, for the protection of public health, stream quality control, economic development, improvement of fisheries, recreation, dilution and abatement of pollution, the prevention of undue salinity, and other purposes."*

-- Section 4.2(a) of the Susquehanna River Basin Compact, P.L. 91-575; 84 Stat. 1509 et seq.

### **Where is Curwensville Lake and what benefits does it provide?**

Curwensville Lake is a reservoir behind the Curwensville Dam on the West Branch Susquehanna River in Clearfield County, Pa. The dam is 2,850 feet long and 25 feet wide at the top. The reservoir, at the spillway, has a storage capacity of 124,200 acre-feet and extends 14 miles upstream.

The facility was constructed in 1965 by the U.S. Army Corps of Engineers at a cost of \$20.4 million primarily for flood control--protecting the communities of Curwensville, Clearfield, Renovo, Lock Haven and Williamsport. In addition to flood protection, the reservoir offers recreational opportunities and helps minimize the effects of acid mine pollution on the West Branch River.

### **What is the Curwensville Lake Water Storage Project?**

In September 1989, SRBC asked the Corps of Engineers to consider reallocating a portion of the total storage at Curwensville Lake to SRBC so that water can be released to compensate for consumptive water uses during times of low flows, commonly called droughts. (See back page for explanation of SRBC's consumptive water use requirements.)

Before the Corps would agree to the reallocation project, it had to conduct detailed feasibility studies and prepare an environmental impact statement to

determine, among other factors, if this water storage project would have an impact on downstream flood control. SRBC and two private firms--Pennsylvania Electric Company and the Lancaster County Solid Waste Municipal Authority--paid 50 percent of the Corps' feasibility study costs.

The Corps' feasibility and impact studies were released in March 1992. They showed that the proposed water storage project would have negligible impact on the reservoir's flood control capabilities and would have minor environmental impacts. These results paved the way for the Corps to approve SRBC's request.

On September 30, 1994, SRBC signed the agreement with the Corps to purchase 5,360 acre-feet of storage, which is about 4.3 percent of Curwensville Lake's total storage capacity.

On May 23, 1996, SRBC gave the Corps the final approval to proceed with the project. The Corps began making the changes to the recreation areas surrounding the reservoir in September 1996 and be completed the project by August 1997. No changes to the dam or outlet works were needed.

### **How will SRBC return money to the federal government from this project?**

As part of the water storage project, the Corps assessed SRBC a portion of the federal government's original cost to construct the Curwensville facility and requires SRBC to pay a portion of the annual operation and maintenance (O&M) costs for the project. To date, SRBC has repaid the federal government \$6 million toward the construction costs and pays about \$30,000 annually for the O&M costs. This is new money the federal government would not have received if SRBC had not initiated this water storage project.

SRBC also paid the federal government \$85 million in construction costs for another existing water storage project at the Cowanesque Reservoir in Tioga County, Pa. For the two water storage projects combined, SRBC has paid the federal government \$91 million, and pays an additional \$900,000 annually toward O&M.

### **What are SRBC's consumptive water use requirements?**

SRBC's regulations on consumptive water uses (section 803.42) require large water users, who consume more than 20,000 gallons of water per day, to compensate for their water uses during times of low flows--by terminating water usage, reducing water usage or replacing the usage from storage.

Consumptive water use is defined by SRBC as ground or surface water that is withdrawn from the Susquehanna River Basin but not returned to the basin. Ways that water is lost to the basin include: evaporation from cooling towers; transpiration through irrigated crops; incorporation into manufactured products; and diversion to other river basins.

### **How does the Curwensville Lake Water Storage Project help companies meet the consumptive use requirement?**

SRBC monitors the water flows of the Susquehanna River Basin. When SRBC determines that flows have reached a critical level during droughts, it directs the Army Corps to release a specific quantity of water according to a predetermined water storage plan. Rather than developing their own water replacement storage, most consumptive water users pay a fee to SRBC to have the water released on their behalf. This allows the water users to continue operating at full capacity, while satisfying SRBC's consumptive water use make-up requirement.

By requiring large water users to compensate for their water use, SRBC insures that fresh water will be available for many uses, including: (1) downstream users; (2) habitat preservation; and (3) maintaining flows to the Chesapeake Bay.

### **Why can't private enterprises secure water directly from the U.S. Army Corps?**

Private enterprises can not contract directly with the Army Corps because a 1958 federal law, the Water Supply Act, allows only non-federal public agencies to purchase water storage at federally-owned reservoirs. Because of specific language in SRBC's compact (shown at top of page 1 in italics), SRBC is able to acquire water storage for private entities at federally-owned reservoirs.