



INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

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Cooperative Water Supply Operations on the Potomac River

Residents of the Washington, D.C., metropolitan area generally have the luxury of turning on the tap for cheap, pure water without worrying or even thinking about it. The reality would be much different without decades of drought planning and preparation by the metropolitan area's water utilities and the ICPRB Section for Cooperative Water Supply Operations on the Potomac (CO-OP). The CO-OP works with the utilities to ensure the region has adequate raw water supplies from the Potomac, even in the face of growing demands.

Cooperative water supply management in the metropolitan area began in the early 1960s, when projected growth in demand for Potomac water exceeded available supply. In the 1960s, the U.S. Army Corps of Engineers proposed construction of 16 large multi-purpose reservoirs in the Potomac River basin. The plan was met with strong public resistance, and only Jennings Randolph Lake, on the Potomac's North Branch, was completed in 1981.

In addition to the proposed multipurpose reservoirs, other structural solutions were examined. Interbasin transfers were studied, a pilot estuarine treatment plant was constructed and tested, and an emergency estuarine pumping station was constructed. Concurrently, a study was being conducted that treated the combined distribution areas of the three major Washington metropolitan-area water utilities as a single regional demand center, and investigated the coordinated operation of all the resources then available. The three utilities are the Fairfax County Water Authority, Washington Suburban Sanitary Commission, and the Washington Aqueduct Division of the Corps of Engineers. The study showed that coordinated management of the water resources from a systems perspective led to gains in reliability of the water resource. The results of the latter analysis and its lower cost non-structural features led to the adoption of its results with the signing of the Water Supply Coordination Agreement (WSCA) in 1982.



ICPRB CO-OP Deputy Director Erik Hagen lowers an electronic probe into an observation well along the Potomac as he explains the process to WAMU radio correspondent David First.

The ICPRB CO-OP was designated by the WSCA to be responsible for coordination of water resources during times of low flow. The management objectives embodied in the agreement and practiced by CO-OP are to keep the off-Potomac reservoir resources balanced while meeting environmental requirements and municipal demands for water.

The coordinated operations of the resources allows the utilities to meet demands without imposing mandatory restrictions through the year 2015 even under a repeat of the drought of record. This is possible because of synergistic gains in total yield realized under the cooperative management strategies. Each of the three utilities gives up a small measure of autonomy in order to gain the substantial benefits of reduced capital costs through coordinated cooperative operations of their individually and jointly owned resources. As an independent interjurisdictional organization, ICPRB is particularly well suited to engage in multi-state coordinated cooperative functions.

The Washington DC metropolitan water supply system is tested each year through an annual drought preparedness exercise. CO-OP typically involves the local utilities and the Baltimore District of the Corps of Engineers in a seven-day simulation of drought conditions to practice drought operations. The drought exercise allows for new personnel to be trained in drought procedures in advance of the summer, ensuring that drought operations run smoothly.

In order to avoid the possibility of withdrawing all the flow of the river, Maryland Department of Natural Resources conducted the Potomac River Environmental Flow-By Study (1981). The parties to the Potomac River Low Flow Allocation Agreement (1978) agreed to abide by the study's recommendations for the maintenance of instream flows to meet minimum aquatic habitat requirements.

The management of the cooperative water resource systems' operations is overseen by a committee of the water utilities. The water utilities provide the funding for these activities at the Interstate Commission on the Potomac River Basin.

Created with an interstate compact by an Act of Congress in 1940, the Interstate Commission on the Potomac River Basin (ICPRB) is composed of commissioners representing the federal government, the states of Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia. The ICPRB mission is to enhance, protect, and conserve the water and associated land resources of the Potomac River basin and its tributaries through regional and interstate cooperation.

ICPRB accomplishes this mission through a variety of actions to conduct, coordinate, and cooperate in studies and programs in the areas of water quality, water supply, living resources, and land resources. The Section for Cooperative Water Supply Operations on the Potomac River (CO-OP), a special section of the Commission, was created as a technical operations center for management and coordination among the regional water utilities to avoid water supply shortages in Metropolitan Washington during droughts.

For additional information contact the Interstate Commission on the Potomac River Basin at 301-984-1908, or visit our website at <http://www.potomacriver.org>