

6/23/93

DOCKET NO. D-77-20 CP (REVISION NO. 2)

DELAWARE RIVER BASIN COMMISSION

**Modifications To The Schedule Of Release Rates From
Pepacton and Neversink Reservoirs
Delaware and Sullivan Counties, New York**

PROCEEDINGS

This is an application submitted by the New York State Department of Environmental Conservation (NYS DEC) for approval of a revised schedule of augmented conservation release rates from Pepacton and Neversink Reservoirs to be tried on an experimental basis for up to three years (June 1993 - May 1996).

The current schedule of augmented conservation release rates from Cannonsville, Pepacton and Neversink Reservoirs was added to the Comprehensive Plan and approved by the Delaware River Basin Commission (DRBC) pursuant to Section 3.8 of the Compact on November 30, 1983 by Docket No. D-77-20 CP (Revision). The current release rates were established on an experimental basis first, and later made permanent by the DRBC and parties to the 1983 Good Faith Agreement. "Proceedings" leading to such actions are described in Docket No. D-77-20 CP (Revised). This application (including the Proposed Augmented Conservation Release rates) was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 of the Delaware River Basin Compact. A public hearing on this project was held by the DRBC on June 23, 1993.

RESERVOIR RELEASE PROGRAMS

A. Proposed Conservation Releases.

In order to further protect and enhance the recreational use of waters affected by releases from the Pepacton and Neversink Reservoirs, and based on the experience gained since the augmented reservoir release regulations were implemented, the following revisions to the current release rates are proposed for an experimental period of three years (June 1993 - May 1996):

TABLE 1

<u>Reservoir and Operative Dates</u>	<u>Column 1 Basic Conservation Release</u>	<u>Column 2 Current Augmented Conservation Release</u>	<u>Column 3 Proposed Augmented Conservation Release</u>
<u>Pepacton</u>			
1/1 - 3/31	6 cfs	50 cfs	45 cfs
4/1 - 4/7	6	70	45
4/8 - 4/30	19	70	45
5/1 - 5/31	19	70	70
6/1 - 8/31	19	70	95
9/1 - 9/30	19	70	70
10/1 - 10/31	19	70	45
11/1 - 12/31	6	50	45
<u>Neversink</u>			
1/1 - 3/31	5 cfs	25 cfs	25 cfs
4/1 - 4/7	5	45	25
4/8 - 4/30	15	45	25
5/1 - 9/30	15	45	53
10/1 - 10/31	15	45	25
11/1 - 12/31	15	25	25
<u>Cannonsville</u>			
4/1 - 4/15	8 cfs	45 cfs	Same as Column 2. Outlet Works Facility currently has release valve limitations.
4/16 - 6/14	23	45	
6/15 - 8/15	23	325	
8/16 - 10/31	23	45	
11/1 - 11/30	23	33	
12/1 - 3/31	8	33	

B. Basic Montague Release.

At all times, New York City would be required to make such releases as directed by the River Master designed to maintain a minimum basic flow of 1,750 cfs at the Montague gaging station, or the excess release rate during the seasonal period, as already required by the 1954 U.S. Supreme Court Decree.

C. Special Thermal Stress Releases.

Special releases may be made from one or more of the reservoirs in order to relieve thermal stress conditions which pose a threat to fisheries. The total volume of such releases shall not exceed 6,000 cfs-days from all reservoirs. As set forth in Docket No. D-77-20 CP (REVISION), thermal releases, with a one-day lead time, would be made whenever the maximum water temperature in designated downstream areas as determined from measurements at Callicoon, Bridgeville, Woodbourne, or Hale Eddy is projected to exceed a maximum of 75° F, or a 72° F daily average. If the 6,000 cfs-days reserve is not used by October 31 of any year, it will not be used thereafter. No releases for relieving thermal stress would be required from November 1 to April 30 of any year. Releases for purposes of relieving thermal stress shall be at the direction of NYS DEC.

D. Drought Warning and Drought Conditions.

The augmented conservation release will be reduced to the basic conservation release (shown in Table 1, Column 1) during drought warning and drought periods as defined by the attached reservoir storage curves entitled "Operation Curves for Cannonsville, Pepacton, and Neversink Reservoirs" (Figure 1) except that when the Delaware River Master directs releases according to the provisions in the basinwide drought plan as adopted in DRBC Resolution 83-13, New York City shall make such releases from Cannonsville, Pepacton, and Neversink Reservoirs as are necessary and sufficient to maintain the constant minimum flows (specified in Table 1, Column 3) on the West Branch Delaware River, East Branch Delaware River, and the Neversink River, and provided that the total amount of water released from the three reservoirs does not exceed the amount directed by the Delaware River Master. If the amount of directed releases by the River Master is not sufficient to maintain the augmented releases from all reservoirs, the releases from each reservoir will be determined at the discretion of NYS DEC and New York City-Department of Environment Protection (NYC DEP).

Following a drought, a return to the proposed augmented conservation release rates shown in Column 3 of Table 1 shall not be made unless and until combined storage in the three reservoirs reaches 25 billion gallons above the drought warning level, as shown in Figure 1, and remains at or above that level for 15 consecutive days.

E. Plans Concerning Cannonsville Release Rates.

Installation of a new release valve for the Cannonsville reservoir is scheduled to be completed before the end of 1994 and should provide the needed flexibility in making releases to enhance fisheries management.

During the first year of the experimental period, conservation releases from Cannonsville reservoir, which are considered inadequate by NYS DEC, would continue to be made at the current release rates. However, as part of this experimental program, releases from the thermal stress bank will be varied for short periods to study the impact of such releases in mitigating thermal stress conditions at Hale Eddy, Hancock, Lordville, Hankins, Long Eddy and Callicoon. Such operations are designed to conserve the available thermal stress bank and enable NYS DEC to improve fisheries management in the Delaware River.

Ryan thermal gages would be installed at 20 strategic locations below the reservoirs to supplement the existing USGS gaging stations. Data collected would be used to fine tune the water temperature models being developed by NYS DEC in cooperation with NYC DEP and USGS. Experience gained from the above experimental program should lead to improved management of the thermal stress bank.

During the first year of the experimental period, alternative release schemes would be evaluated jointly by NYS DEC and NYC DEP using the existing monthly reservoir simulation model (MRSM) to maximize the use of the new valve. The resulting scheme would be the basis for implementation of an experimental program at Cannonsville.

FINDINGS

During the proposed experimental period, increases in augmented conservation release rates during the summer months will be offset with decreases during other months with no changes in the total releases on a yearly basis.

DRBC staff has operated the daily flow model for the critical drought years, 1961 through 1964, using the modified augmented release schedule as proposed (Table 1, Column 3) and determined that the period of drought warning would be increased by one day in 1961 and one day in 1962, with no changes in 1963 and 1964. Accordingly, application of the Proposed Augmented Conservation Release rates specified in the experimental program should not have a significant impact on drought management in the Basin.

As documented in Docket No. D-77-20 CP (REVISION), the NYS DEC evaluations, to date concerning the monitoring program, indicate that the augmented conservation release program has improved and extended fisheries downstream from the three New York City reservoirs, and other water-related recreational activities have shown increases since the initiation of the experimental program in 1977.

The project does not conflict with or adversely affect the Comprehensive Plan. It provides beneficial use of the water resources and does not adversely influence the present or future use and development of the water resources of the Basin.

DECISION

I. The project, as described above, with modifications specified hereinafter, is hereby added to the Comprehensive Plan.

II. The project is approved pursuant to Section 3.8 of the Compact, subject to the following conditions:

a. Monthly summaries of reservoir operations submitted by NYC DEP to NYS DEC shall also be submitted to the DRBC.

b. Detailed operational records of each reservoir, maintained by both the City and State Reservoir Release Managers, shall be available to the DRBC upon request.

c. The provisions of the reservoir release program approved herein shall not be applicable to any action taken by NYC DEP or NYS DEC with regard to the operation of the Cannonsville, Pepacton, or Neversink Reservoirs in any emergency situation where there is a threat to the continued existence or safe operation of the dams or tunnels or to any appurtenant structures or to the public health or safety. Any emergency action shall continue only for such time as is necessary to avert the threat and is subject to the approval of the Executive Director of the DRBC.

d. Increases in the augmented conservation release levels may not be made except in accordance with the allowances provided for in the Stipulation of Discontinuance in The City of New York vs. The State of New York Department of Environmental Conservation, Index No. 5840-80, and shall be subject to approval by the DRBC.

e. Releases under emergency conditions. The Commission retains its power under Section 3.3(a) and Article 10 of the Compact to declare a drought emergency after consultation with the River Master, in order to conserve the waters in the Delaware River and its tributaries and in the reservoirs of the Upper Delaware River Basin, in order to protect water supply, health, and safety of the residents of the Delaware River Basin and its service area. The River Master retains all of his powers under the Decree including the powers under Article VII, B.1 of the 1954 Decree to conserve the waters in the river, its tributaries, and in reservoirs owned by the City of New York, or in reservoirs developed by other parties to the Decree after 1954.

f. A progress report describing the results of the experimental program shall be submitted by August 1 of each year, beginning August, 1994.

BY THE COMMISSION

DATED: June 23, 1993


Consent to Action by
Delaware River Basin Commission

Consent of the parties to the U.S. Supreme Court Decree in New Jersey vs. New York, 347 U.S. 995 (1954) to the action of the Delaware River Basin Commission in adopting Docket No. D-77-20 CP (Revision No. 2) amending the Comprehensive Plan with respect to experimental modifications to the schedule of release rates from Pepacton and Neversink Reservoirs.


State of New Jersey


State of New York


State of Delaware


Commonwealth of Pennsylvania


City of New York