

NO. 83-13

A RESOLUTION to amend the Comprehensive Plan relating to criteria for defining drought warning and drought conditions, and to a schedule of phased reductions in diversions, releases and flow objectives during such periods.

WHEREAS, the allowable diversions out of the Delaware River Basin to New York City and northeastern New Jersey, as well as downstream releases from the City's upper basin reservoirs, are prescribed under the provisions of the 1954 amended decree of the United States Supreme Court; and

WHEREAS, the Commission has declared a drought emergency condition on two occasions in 1965 and 1981 pursuant to Section 3.3(a) and Section 10.4 of the Delaware River Basin Compact; and

WHEREAS, the adoption of criteria in advance as to what constitutes drought conditions warranting emergency action will be useful to water users and the general public, as well as to water management officials of the parties; and

WHEREAS, the experience during these emergencies has shown the value of a drought operation formula setting forth diversion rates and streamflow objectives for guidance of reservoir operation; and

WHEREAS, the Commission has held public hearings on May 25, June 2, and June 3, 1983 on the proposed criteria and schedule recommended by the parties to the amended 1954 decree of the United States Supreme Court, and has received and considered testimony from water users and other interested parties; now therefore,

BE IT RESOLVED by the Delaware River Basin Commission:

1. The Comprehensive Plan and Article 2 of the Water Code of the Delaware River Basin are hereby amended by the addition of new Sections 2.5.3 and 2.5.4 to read as follows:

2.5.3 Schedule of Phased Reductions in Diversions, Releases and Flow Objectives During Drought

A. Criteria Defining Conditions

For purposes of water management pursuant to Section 3.3 and Article 10 of the Compact, diversions of water from the Delaware River Basin by the City of New York and State of New Jersey, compensating reservoir releases from the New York City Delaware Basin Reservoirs, reservoir releases from Beltzville Reservoir, Blue Marsh Reservoir, and other reservoirs under the jurisdiction or control of the Commission, and streamflow objectives at the USGS gaging stations located at Montague, New Jersey, and Trenton, New Jersey, shall be governed by a schedule based upon a differentiation among "normal", "drought warning", and "drought" conditions defined by the combined storage in the Cannonsville, Pepacton and Neversink Reservoirs as set forth in Figure 1 entitled "Operation Curves for Cannonsville, Pepacton and Neversink Reservoirs". The division of the drought-warning zone into upper and lower halves shall be defined as a physically equal division, or 20 billions of gallons in each zone.

B. Schedule of Reductions

The schedules of phased reductions set forth in Tables 1 and 2 shall govern (1) the maximum allowable rates of diversion of waters from the Delaware River Basin by the City of New York and State of New Jersey; (2) the minimum compensating releases to be made by the City of New York from its reservoirs in the upper Delaware Basin; and the streamflow

OPERATION CURVES FOR  
CANNONVILLE, PEPACTION AND NEVERSINK RESERVOIRS

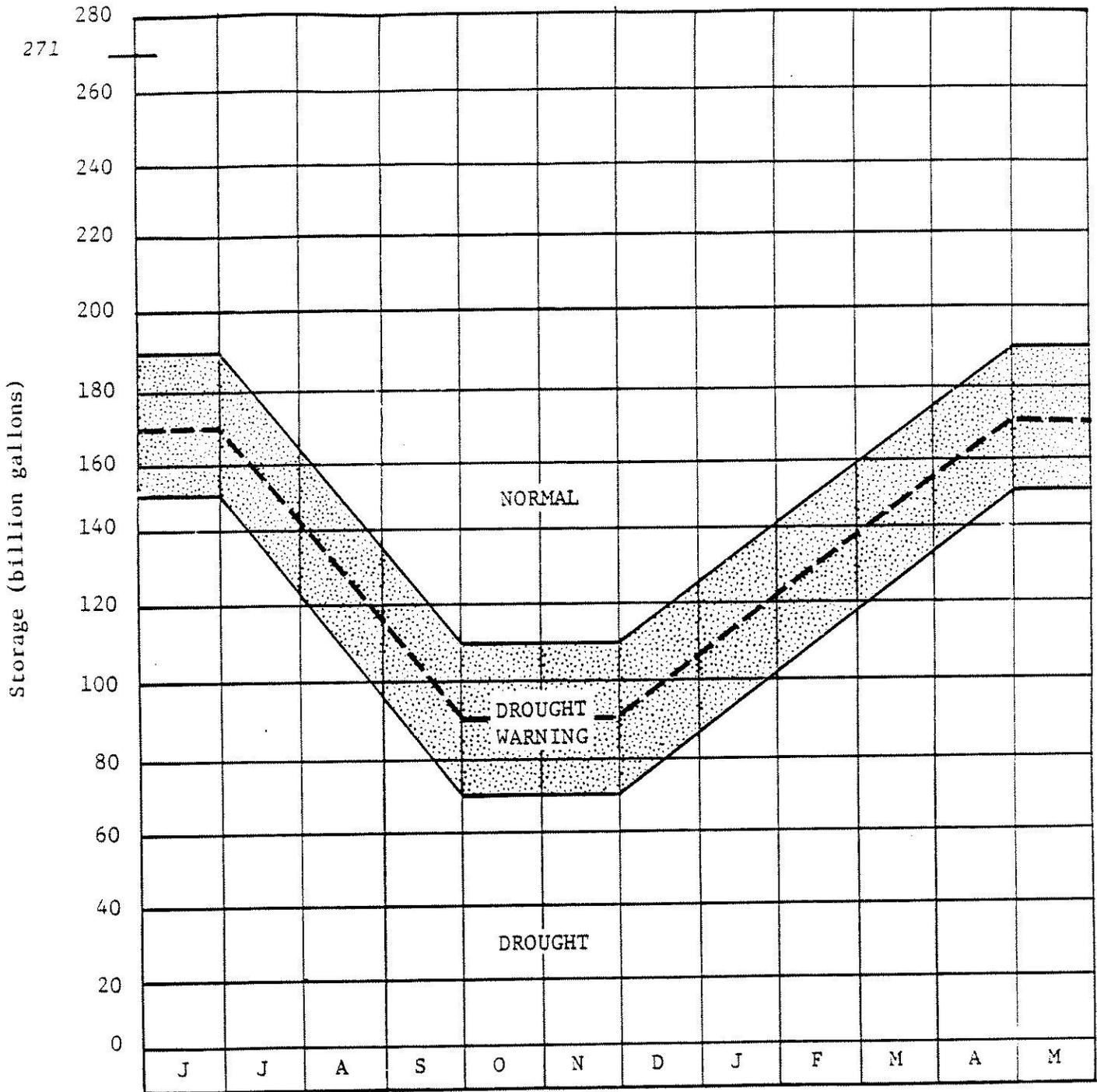


FIGURE 1

TABLE 1

Interstate Operation Formula for Reductions  
In Diversions, Releases, and Flow Objectives  
During Periods of Drought

NYC Storage Condition	NYC Div. mgd	NJ Div. mgd	Montague Flow Objective cfs	Trenton Flow Objective cfs
Normal	800	100	1750	3000
Upper Half-- Drought Warning	680	85	1655	2700
Lower Half-- Drought Warning	560	70	1550	2700
Drought	520	65	1100-1650*	2500-2900*
Severe Drought (to be negotiated based on conditions)				

\*Varies with time of year and location of salt front as shown on Table 2.

TABLE 2

Flow Objectives for Salinity Control  
During Drought Periods

Seven-day Average Location of "Salt Front," River-mile*	Flow Objective, Cubic Feet Per Second At:					
	Montague, N.J.			Trenton, N.J.		
	Dec-Apr	May-Aug	Sept-Nov	Dec-Apr	May-Aug	Sept-Nov
Upstream of R.M. 92.5	1600	1650	1650	2700	2900	2900
Between R.M. 87.0 and R.M. 92.5	1350	1600	1500	2700	2700	2700
Between R.M. 82.9 and R.M. 87.0	1350	1600	1500	2500	2500	2500
Downstream of R.M. 82.9	1100	1100	1100	2500	2500	2500

\*Measured in statute miles along the navigation channel from the mouth of Delaware Bay.

objectives at the USGS gaging stations located at Montague, New Jersey and Trenton, New Jersey.

During "drought" conditions as defined by Figure 1, the streamflow objectives at the Montague and Trenton gaging stations shall be established as set forth in Table 2, in accordance with the seven-day average location of the 250 mg/l isochlor (the "salt front") in the Delaware Estuary.

C. Diversion Allowances and Release Requirements

(1) The City of New York may divert waters from the Delaware Basin at maximum rates equivalent to the quantities set forth in Table 1.

(2) The State of New Jersey may divert waters from the Delaware River Basin, from the Delaware River or its tributaries in New Jersey, at maximum rates equivalent to the quantities set forth in Table 1.

(3) The City of New York shall release water from one or more of its storage reservoirs in the upper Delaware Basin in quantities designed to maintain the minimum basic rates of flow at the USGS gaging station located at Montague, New Jersey, as set forth in Tables 1 and 2.

D. Computation of Diversions

(1) Diversions by the City of New York during "normal" conditions, as defined by Figure 1, shall be computed as provided in Section III.A.4. of the Amended Decree of the U. S. Supreme Court in New Jersey v. New York, 347 U.S. 995 (1954). At no time during a twelve-month period of the Water Year, commencing June 1, shall the aggregate total quantity diverted by the City of New York, divided by the number of days elapsed since the preceding May 31, exceed the maximum permitted rate of diversion.

(2) Diversions by the State of New Jersey during "normal" periods, as defined by Figure 1, shall be computed as provided in Section V.B. of the amended Decree of the U.S. Supreme Court in *New Jersey v. New York*, 347 U.S. 995 (1954). The total diversion by the State of New Jersey shall not exceed an average of 100 mgd as a monthly average, with the diversion on any day not to exceed 120 million gallons, and its total diversion without compensating releases shall not exceed 100 mgd during any calendar year.

(3) Diversions by the City of New York and State of New Jersey set forth in Table 1 during "drought warning" and "drought" conditions as defined by Figure 1, shall be computed as a daily running average, commencing on the day such drought warning or drought operations become effective, as provided in subsection E of this Section. If the allowable diversion for any condition period following entry into drought warning operations is not fully used, the unused portion may not be credited or used during subsequent periods.

(4) Upon return to normal condition operations, following a period of drought warning or drought operations, diversions by the City of New York and State of New Jersey shall be computed as averages commencing upon the date of return to normal operations.

E. Effective Period for Drought Operating Schedule

(1) The schedule of diversions, releases and streamflow objectives for "drought warning" operations as provided in Subsection B shall go into effect automatically whenever the combined storage in the New York City Delaware Basin Reservoirs declines below the drought

warning line, defined in Figure 1 and remains below that line for five consecutive days.

(2) The schedule of diversions, releases and streamflow objectives for "drought" operations as provided in Subsection B shall go into effect immediately whenever the combined storage in the New York City Delaware Basin reservoirs declines below the drought line defined in Figure 1, and remains below that line for five consecutive days.

(3) When the combined storage in the New York City Delaware Basin reservoirs (including the projected water runoff equivalent of actual snow and ice within the watersheds tributary to the reservoirs) reaches a level 15 billion gallons above the drought warning line, as defined in Figure 1, and remains above that level for five consecutive days, the drought warning and drought operations schedules set forth in Subsection B shall automatically terminate, and normal operations shall be resumed as provided in the Amended Decree of the U. S. Supreme Court in *New Jersey v. New York*, 347 U.S. 995 (1954).

(4) Pursuant to Section 3.3(a) of the Compact, the Parties to the U. S. Supreme Court Decree in *New Jersey v. New York*, 347 U.S. 995 (1954), have given their unanimous consent to adoption and implementation by the Commission of the drought operation schedules provided in this section. The Parties have agreed that the drought operation formula will go into effect automatically, and be binding on parties for not less than 180 days following the triggering of drought warning operations, unless terminated automatically by improved storage conditions as provided in Subsection E.3. During the 180-day period following triggering of drought warning operations, authorized representatives of the City of

New York, States of Delaware, New Jersey, and New York, and Commonwealth of Pennsylvania, as parties to the U. S. Supreme Court Decree, shall convene no less frequently than once each month to review current conditions, and they may extend, modify, or extend as modified the schedules provided in this section. If no unanimous agreement as to a continuing drought operation formula is reached within the 180-day period, all Parties shall be released from the terms of the formula and schedules and may pursue their rights and obligations under the Delaware River Basin Compact and the U. S. Supreme Court Decree.

2.5.4 Drought Emergency Actions

A. Criteria Defining Conditions

For purposes of water management pursuant to Section 3.3 and Article 10 of the Compact, the determination of drought warning and drought conditions shall be based upon the combined storage in the Cannonsville, Pepacton and Neversink Reservoirs, in accordance with Figure 1, entitled "Operation Curves for Cannonsville, Pepacton and Neversink Reservoirs". The division of the drought-warning zone into upper and lower halves shall be defined as a physically equal division, or 20 billions of gallons in each zone.

B. Drought Emergency Declaration

It is the policy of the Commission that a drought emergency will be declared for purposes of imposing mandatory in-basin conservation measures and other appropriate actions whenever combined storage in the New York City Delaware Basin reservoirs falls into the drought zone as defined in Figure 1 for five consecutive days. Termination of a drought emergency will be considered by the Commission whenever combined storage in the New York City Delaware Basin reservoirs reaches a level 40 billion

gallons above the drought warning line as defined in Figure 1 and remains above that line for 30 consecutive days. The drought emergency will be terminated by the Commission whenever the combined storage in the New York City Delaware Basin reservoirs reaches 40 billion gallons above the drought warning line defined in Figure 1 and remains above that line for 60 consecutive days, unless the Commission unanimously agrees to extend the emergency.

Effect of Policy

This policy is not intended to extend, impair, or conflict with the Commission's authority under the Compact to declare or terminate a drought emergency or water-shortage emergency in the Basin, or subregion thereof, in other instances as conditions may require.

/s/ R. Timothy Weston  
R. Timothy Weston, Chairman pro tem

/s/ Susan M. Weisman  
Susan M. Weisman, Secretary

ADOPTED: June 29, 1983