

# STANDARD OPERATING PROCEDURE (SOP)

## FLOOD CONTROL REGULATION

### BARRE FALLS DAM

PHASE	24-Hour Rainfall ON		BARRE FALLS DAM	RISING RIVER INDEX STATIONS (EXISTING OR EXPECTED STAGE IN FEET)					REGULATION INSTRUCTIONS	
	SNOW COVERED, WET, OR FROZEN GROUND	DRY GROUND		RISING POOL STAGE (NGVD)	WARE RIVER		CHICOPEE RIVER	CONNECTICUT RIVER		
					BARRE PLAINS 115 sq mi.	GIBBS CROSSING 199 sq mi.	INDIAN ORCHARD 688 sq mi.	MONTAGUE CITY 7865 sq mi.		HARTFORD 10480 sq mi.
<b>INITIAL REGULATION</b>	2.0" OR AS INSTRUCTED	3.0"	As Instructed	Season Growing 1.0 Non-Growing 2.5	4.0	8.0	-	-	Discharge reduced as per RCC	
<b>II-CONTINUATION OF REGULATION</b>	3.0" OR AS INSTRUCTED	4.0"	As Instructed	Season Growing 2.0 Non-Growing 3.2	5.0	10.0	26.0	18.0	Restrict Outflow to minimum releases (0.1 - 0.2)	
<b>III-EMPTYING THE RESERVOIR</b>	STORM HAS ABATED		<b>APPROXIMATE NON-DAMAGING DOWNSTREAM CHANNEL CAPACITY * AT BARRE FALLS DAM</b> 1000 CFS NON-GROWING SEASON 500 CFS GROWING SEASON * Subject to MWRA water supply diversion at Coldbrook intake (see notes below).							

**EMERGENCY OPERATION PROCEDURE (EOP) DURING COMMUNICATION FAILURE WITH RRT**

Go to Gate Settings/Releases as follows for the following Conditions:

24-Hour Rainfall	2.0"	<u>Minimum Release</u> 30 cfs
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Rising Stage at

Barre Plains

-Growing Season	1.5'	30 cfs
-Non Growing	3.0'	30 cfs

**NOTES:**

1. Emptying the reservoir shall not be initiated until contact has been established with RRT.
2. Rate of increase of discharge should not exceed 150 cfs/hour up to 600 cfs; then 50 cfs/hour.
3. Maximum rate of reservoir drawdown per 24-hours should not exceed five feet.
4. Reservoir roads should be barricaded when a rising pool is expected to exceed 783.5 ft. NGVD.
5. Coldbrook Diversion notes:
  - A. Normal Diversion period 1 Dec. to 31 May, all flows in excess of 132 cfs.
  - B. Diversion period extended 15 Oct. to 15 June with permission from MWRA/MDC.
  - C. No diversion from 15 June to 15 Oct.
6. Maximum Non-Damaging Channel Capacities at Controlled River Index Stations:

	River Stage	Approximate Flow
<b>Ware river:</b>	Barre Plains	- 4.0 ft. = 1,020 cfs (non growing season) - 2.5 ft. = 530 cfs (growing season)
	Gibbs Crossing	- 5.5 ft. = 2,410 cfs
	<b>Chicopee River:</b>	Indian Orchard
<b>Connecticut River:</b>	Montague City	- 30.0 ft. = 89,500 cfs
	Hartford	- 22 ft. = 112,500 cfs

**DUTIES DURING EACH PHASE**

**FLOOD CONTROL PROJECT MANAGER**

**PHASE I**  
 1. Collect and report rainfall and stage data to RRT.  
 2. Operate according to instructions from RRT.

**PHASE II**  
 1. Operate according to instructions from RRT.  
 2. Note any unusual conditions at dam, in downstream channels or at index stations.

**PHASE III**  
 1. Check downstream channel and damage areas.  
 2. Report to RRT for further instructions.

**PROJECT REGULATOR**

**PHASE I**  
 1. Compile data.  
 2. Plan and coordinate next instruction to Project Manager.  
 3. Restrict outflow to maintain safe downstream channel capacities.

**PHASE II**  
 1. Continue regulation instructions to Project Manager.

**PHASE III**  
 1. Collect data from Project Manager.  
 2. Check downstream conditions for allowable releases.  
 3. Continue regulation instructions to Project Manager.

