

UNITED STATES OF AMERICA 83 FERC 62,097  
FEDERAL ENERGY REGULATORY COMMISSION

Western Massachusetts )  
Electric Company ) Project No. 2334-010

ORDER APPROVING AND MODIFYING MINIMUM FLOW MONITORING PLAN  
(Issued May 4, 1998)

On March 31, 1998, Western Massachusetts Electric Company (licensee), filed a plan to augment minimum flows and to monitor the required flows at the Gardners Falls Hydroelectric Project. The plan was filed pursuant to Article 402 of the project license  
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and the order issued June 30, 1997, modifying Article 402. The purpose of the plan is to ensure compliance with the minimum flow requirements of Article 401. The Gardners Falls Hydroelectric Project is located on the Deerfield River in Franklin County, Massachusetts.

#### LICENSE REQUIREMENTS

License Article 402 as amended requires the licensee to file for Commission approval a plan to augment minimum flows from storage and to monitor the required flows. Article 402 requires that the monitoring plan include: (1) a schedule for installing the monitoring equipment; (2) the proposed location, design, and calibration of the equipment; (3) the method of data collection; (4) methods of maintaining flow records; (5) a schedule for consulting with federal and state agencies concerning the monitoring results; and (6) filing the results of agency comments and the licensee's response to these comments, with the Commission.

Article 402 also requires that the plan be prepared after consultation with the Massachusetts Division of Fisheries and Wildlife (MDFW) and the U.S. Fish and Wildlife Service (FWS). The licensee is required to include with the plan documentation of consultation and specific descriptions of how the agencies' comments are accommodated by the plan. If the licensee does not adopt a recommendation, the filing must include the reasons, based on project-specific information.

#### LICENSEE'S PLAN

The licensee proposes to install the necessary monitoring equipment at the time of construction of the new minimum

flow/fish passage gate which is scheduled for completion during the summer/fall of 1998. Operation of the gate would be controlled by a Programmable Logic Controller (PLC) located in the powerhouse. The PLC would be remotely monitored and would be

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calibrated by the manufacturer so that flows can be verified as a function of the hydraulic head of the gate. The PLC would record time, pond elevation, and gate crest elevation. From this data the hydraulic head on the gate can be used to compute the flow passed by the gate. The licensee would review the flow data periodically and would take actions necessary to ensure that the flow requirements are being met. If revisions to the monitoring plan are necessary, the licensee would prepare a revised plan and consult with the FWS and MDFW prior to filing the plan with the Commission.

The licensee proposes to install a fish passage/minimum flow gate in the crest of the dam. The gate would be designed to pass the required minimum flow of 150 cfs as the level of the reservoir rises or falls. The depth of the gate would be set to release 150 cfs or inflow which would always be at least 100 cfs. The 100 cfs inflow to the project impoundment is the guaranteed release from the upstream Deerfield No. 3 Development of Project No. 2323. To meet the minimum flow requirement of 150 cfs when inflow is less than 150 cfs but greater than 100 cfs the licensee proposes to use available storage up to 37 acre-feet. After this quantity of water is depleted to maintain the 150 cfs release, at least 100 cfs would continue to be released through the gate.

## RESOURCE AGENCY CONSULTATION

By letter dated January 28, 1998, the licensee submitted the draft minimum flow monitoring plan to the FWS and MDFW for review and comment. The FWS responded by letter dated February 27, 1998. In regard to the monitoring plan, FWS requested that it be notified in the event of a minimum flow violation. The FWS commented that inflow to the project impoundment would always be 100 cfs and that upon a power loss the gate should be set to open 3 feet or to elevation 330 feet to pass 100 cfs and not to a setting of elevation of 332.19 feet as proposed by the licensee. At this latter elevation only 13.5 cfs would be released through the gate which would not be adequate for downstream habitat protection and for passage of salmon smolts. Further, the FWS

stated that the operations protocol for the gate should consider the fact that minimum inflows to the impoundment would always be at least 100 cfs.

## DISCUSSION AND CONCLUSION

The licensee's plan to monitor the minimum flows described above satisfies the requirements of Article 402. The plan includes a description of how the required minimum flow release would be augmented from reservoir storage when needed.

The FWS recommended that it be notified in the event of a minimum flow violation. The licensee's plan should be modified

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to include notification of the FWS along with the MDFW in the event of violation of the minimum flow requirements.

In regard to FWS's concerns for the continuous release through the new gate of the 100 cfs guaranteed inflow during a power loss, the licensee's proposed gate design and mode of operation would provide for the release of flows in the range of 100 to 150 cfs from the dam. In the event of a power loss the FWS recommends that the gate be set to open to a depth of 3 feet which would allow the passage of 100 cfs during the salmon smolt passage season. The license required minimum flow is 150 cfs or inflow if less; inflow to the Gardners Falls impoundment would always be 100 cfs. Therefore, in order to meet downstream fish resource needs and comply with the license, the licensee upon a power loss during the salmon smolt passage season should set the gate so that it would open to pass 150 cfs but no less than the guaranteed inflow of 100 cfs.

The licensee's plan to monitor minimum flows required in Article 401 and to augment minimum flows from reservoir storage fulfills the requirements of Article 402 and should contribute to the protection of fish and other aquatic resources in the Deerfield River. The licensee's plan as modified should be approved.

The Director orders:

(A) The licensee's plan, filed March 31, 1998, that provides for the monitoring of minimum flows and for augmenting minimum flows from reservoir storage, required by Article 402 as amended, and as modified by paragraphs B and C, is approved.

(B) In the event of a deviation from the required minimum flow release, the licensee shall include the U.S. Fish and Wildlife Service in its notification.

(C) In the event of a power loss during the salmon smolt passage season the minimum flow release gate shall be set to discharge the 150 cfs minimum flow but not less than the guaranteed inflow of 100 cfs.

(D) This order constitutes final agency action. Request for rehearing by the Commission may be filed within 30 days from the date of issuance of this order, pursuant to 18 CFR 385.713.

Carol L. Sampson  
Director  
Office of Hydropower Licensing