

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Nora Mead Brownell, and Suedeen G. Kelly.

WPS New England, Inc.

Project No. 2368-040

ORDER ON REHEARING

(Issued July 25, 2005)

1. WPS New England, Inc. (WPS) has requested rehearing of an April 26, 2005 Commission staff order<sup>1</sup> modifying and approving WPS' recommendations regarding fish habitat enhancement and water quality monitoring under Articles 402 and 408 of the license (and implementing orders) for WPS' Squa Pan Project No. 2368.

**Background**

2. The 1.5-megawatt Squa Pan Project is located on Squa Pan Stream, a tributary of the Aroostook River, in the town of Masardis, in Aroostook County, Maine.

3. The Commission issued a new license for the project in 1991.<sup>2</sup> Article 402 of the license requires WPS to file, for Commission approval, a plan to provide structural habitat enhancements in Squa Pan Stream for the protection and enhancement of aquatic habitat. Article 408 of the license requires WPS to file, for Commission approval, a monitoring plan to determine the effectiveness of WPS' habitat enhancement measures and of project operation requirements in achieving state water quality standards for aquatic life.

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<sup>1</sup> 111 FERC ¶ 62,096.

<sup>2</sup> 57 FERC ¶ 62,178.

4. In 1997, the Commission staff approved WPS' plan under Article 402 to install structural habitat enhancements in Squa Pan Stream.<sup>3</sup> The plan required WPS to install initial enhancement structures, and to monitor their effectiveness beginning one year after installation and then every three years. The results of the monitoring would be used to determine future enhancement sites and measures.
5. In 1998, the Commission staff issued an order modifying and approving WPS' Article 408 plan to monitor the effectiveness of WPS' operational requirements and habitat enhancements in meeting state water quality standards in Squa Pan Stream.<sup>4</sup>
6. In 2000, WPS installed the initial fish habitat enhancements required by staff's 1997 order.
7. On February 27, 2004, and March 21, 2005, respectively, WPS filed a report and supplemental report under Articles 408 and 402 on the results of its monitoring. The reports, which included data collected in 2003 on fish communities, water temperatures, and dissolved oxygen (DO) levels in Squa Pan Stream, provided recommendations on future monitoring and modification to existing habitat enhancement structures. Based on the water temperature data, WPS concluded that warm summer water temperatures at the project limit the abundance of salmonids (Atlantic salmon and brook trout) and that habitat enhancement structures thus would not improve salmonid production. It therefore proposed to stop monitoring the habitat enhancement structures and to not install any additional structures.
8. On April 26, 2005, the Commission staff issued an order modifying and approving WPS' recommendations. Questioning the validity of the report's assertion that water temperatures would limit project habitat use by salmonids,<sup>5</sup> the order required WPS to continue phased installation of additional habitat enhancement structures and monitoring and reporting on the effects of installed enhancements every three years.

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<sup>3</sup> 80 FERC ¶ 62,220.

<sup>4</sup> 84 FERC ¶ 62,093.

<sup>5</sup> The April 26, 2005 order pointed out that the 17.6 degrees centigrade (°C) to 19.9 °C water temperatures reported by the WPS are well within the temperature range acceptable to trout. *See* 111 FERC ¶ 61,233 at 64,214.

The order further directed WPS to include in its next monitoring report data describing diurnal and summer-season variations in both water temperature and DO levels.<sup>6</sup>

9. On May 24, 2005, WPS filed its request for rehearing of the April 26, 2005 order, objecting to the requirement that it monitor DO levels.

### **Discussion**

10. WPS argues that Article 408 does not explicitly require DO data collection and that water temperature data alone is a sufficient basis for determining fish habitat suitability in Squa Pan Stream. We disagree.

11. Water quality is dependent on a number of factors, including water temperature and DO concentrations, which rise and fall in a daily cycle tied to water temperature and other factors such as plant and animal biomass in the stream.<sup>7</sup> Collection of DO and water temperature data together is therefore a standard practice, and is usually performed using the same equipment. The Commission cannot determine whether the project meets Maine water quality standards, nor can it assess the effect of water quality variables on salmonid populations, without a full view of diurnal and seasonal variations in water temperature and DO concentrations. We therefore deny rehearing on this issue.

12. As the April 26, 2005 order points out, WPS' submitted water temperature data are deficient because the data were derived from three measurements taken over a four-day period, and they thus give no indication of daily temperature variations over the entire summer. Accordingly, this order clarifies that WPS shall collect water temperature and DO data once a week at specific periods of the day from June 15 to September 15, 2006.<sup>8</sup>

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<sup>6</sup> Squa Pan Stream is classified by Maine as a class C stream in which DO may be not less than 5 parts per million or 60% of saturation, whichever is higher. See Title 38 Maine Revised Statutes Annotated, §§ 465(4)(B) and 467(15)(C)(2)(j) (2004).

<sup>7</sup> DO concentrations fluctuate in a daily cycle, reaching a low at about dawn, after all organisms in the stream have consumed oxygen for respiration during the night. DO reaches a high in mid-afternoon, the period of maximum photosynthetic plant activity. See H. B.N. Hynes, *The Ecology of Running Waters* (Liverpool University Press, 1970) at 41.

<sup>8</sup> In addition, as requested by WPS, we are correcting the April 26 Order to specify that the next monitoring effort will take place in 2006 instead of 2007.

The Commission orders:

(A) The May 24, 2005 request for rehearing of the April 26, 2005 Order in this proceeding is granted to the extent set forth below, and is denied in all other respects

(B) Ordering Paragraph (C) of the April 26, 2005 order in this proceeding is revised to read as follows:

The licensee in its next monitoring effort in 2006 shall, one day per week from June 15 to September 15, 2006, collect dawn and mid-afternoon dissolved oxygen and water temperature data from a pool habitat in Squa Pan Stream at the Squa Pan Project for the purpose of describing diurnal and summer variations in water quality.

By the Commission.

( S E A L )

Magalie R. Salas,  
Secretary.