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UNITED STATES OF AMERICA 115 FERC ¶62,197
FEDERAL ENERGY REGULATORY COMMISSION

City of Norway, Michigan Project No. 2720-039

ORDER MODIFYING AND APPROVING INVASIVE PLANT MONITORING PLAN PURSUANT TO ARTICLE 406

(Issued May 18, 2006)

On July 5, 2005, Mead & Hunt, Inc. filed an invasive plant monitoring plan (plan) on behalf of the City of Norway, Michigan (licensee), pursuant to article 406 of the license [1] for the Sturgeon Falls Hydroelectric Project (FERC No. 2720). The project is located on the Menominee River in Dickerson County, Michigan and Marinette County, Wisconsin. [2]

BACKGROUND

Article 406 requires the licensee to file, for Commission approval, an invasive plant monitoring plan to monitor purple loosestrife and Eurasian water milfoil in project waters. The plan is to be prepared after consultation with the Michigan Department of Natural Resources (MDNR) and the U.S. Fish and Wildlife Service (FWS).

The plan is to include, at a minimum: (1) the criteria used to determine and list which invasive plant species are at the project; (2) the results of baseline field surveys, in which data should be logged, mapped, and photographed to determine the presence/absence of invasive species; (3) follow-up methods of monitoring, the frequency of monitoring, and a schedule for monitoring invasive species; (4) a description of the licensee's measures to increase public awareness of invasive species, and management practices to prevent the spread of these species; (5) a description of the criteria that will be used to determine when control measures are needed and a description of the specific control measures that will be implemented to control/eliminate each nuisance species

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[1] 110 FERC ¶ 62,011 (2005).

[2] The Sturgeon Falls Project is located on the Menominee River, at river mile 82, a stretch of the river the Commission found to be a navigable waterway of the United States. Wisconsin Michigan Power Co. See 3 FPC 449, 457 (1943).

found at the site; (6) recommended procedures for obtaining technical assistance from the MDNR, and FWS; and (7) a schedule for filing monitoring reports with the MDNR, the FWS, and the Commission for review.

The licensee is to include with the invasive plant monitoring plan documentation of agency consultation, including copies of agency comments and recommendations on the draft plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee is to allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

Article 406 reserves the Commission the right to require changes to the plan. The invasive plant monitoring plan must not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

DESCRIPTION OF THE PLAN

Invasive Plant Identification

Based on the results of botanical resource assessment surveys conducted by the licensee's environmental consultants,[3] a single plant of purple loosestrife (*Lythrum salicaria*),[4] and numerous occurrences of Eurasian water milfoil (*Myriophyllum spicatum*) were identified within the project boundary. The purple loosestrife was cut, securely bagged, and disposed of in a landfill to prevent seed dispersal. Eurasian water milfoil was found in limited numbers, typically associated with other aquatic plants.[5] No other invasive species were identified as established populations within the project area.

Control Measures

The licensee's plan outlines the control methods that can be used to manage the spread of purple loosestrife and Eurasian water milfoil. Young purple loosestrife plants can be hand-pulled if flowering is yet to occur, while older plants can be dug out or loosened with a hand cultivator. The licensee states that removal by hand is a labor-intensive control method that is only cost effective on very small infestations. Chemical

[3] These surveys were conducted in 2000.

[4] Found on a small island located 100 feet from the Wisconsin shoreline in Niagara.

[5] See appendix C of the plan, map sheets 2, 3, 4, 6, and 8.

control of purple loosestrife involves the spot or spray application of glyphosate, under the trade names of Rodeo and Roundup. Lastly, leaf-feeding beetles (*Galerucella spp.*) could also be used as a form of biological control. A minimum of 2,000 beetles should be released into an affected area to be effective.

The chemical application of floridone, or 2, 4-Dichlorophenoxyacetic acid (2, 4-D) can be used to contain Eurasian water milfoil populations. The licensee states that the MDNR prefers the application of 2, 4-D in early spring before littoral temperatures reach 60 degrees Fahrenheit. Further 2, 4-D treatment is recommended in the fall after native plants have died. The chemical should be sprayed 15 to 20 feet around the bed to help kill runners and smaller plants not visible from the boat. Follow-up treatments or hand-pulling may also be necessary.

Physical control for Eurasian water milfoil can be conducted using mechanical harvesters, underwater rototillers, and cultivators. This technique may be used to open small high-use areas (e.g. boat launches and marinas) but is not recommended for the entire impoundment. Biological control for this species is still being researched; however, a native weevil (*Euhrychioppsis lecontei*) appears to be a prominent agent for long-term suppression. If weevils are stocked, a large number of weevils should be released to achieve a density of 10 per square meter within the treatment area. Other methods include water drawdown and the use of physical barriers.

The licensee states that the need for control measures would be evaluated based on a determination of whether the nuisance species are increasing in abundance and dominance, as well as on the availability of suitable control measures. The licensee intends to utilize the control methods outlined above, or other suitable measures that may become available. Any control measures that are planned for implementation by the licensee would be determined in consultation with the MDNR, the Michigan Department Environmental Quality (MDEQ), and the FWS, as appropriate.

Follow-Up Monitoring and Reporting

The licensee proposes to conduct annual monitoring of invasive species through 2010, and would monitor every two years thereafter during even-numbered years. Monitoring would be conducted between the third full week of July and the end of the first full week in August. The schedule for monitoring would be coordinated with resources agencies, and adjusted depending on the plants' blooming status.

The project shoreline would be surveyed using a shallow-draft motorboat, or like craft, to be supplemented by pedestrian surveys, if necessary. The surveys would include:

- Wetlands, as well as shoreline areas of wet soil habitat (as shown in the plan's botanical resource maps).
- The presence of purple loosestrife and Eurasian water milfoil, to be marked on maps in the field.
- Any damage to Eurasian water milfoil caused by weevils.
- Sightings of additional species of concern that may be identified by the MDEQ, Office of Great Lakes.[6]
- The area, percent of cover, and average plant density of each purple loosestrife stand.
- The stand perimeter, relative mat density, and average mat thickness of all identified invasive plants.

The results of monitoring would be transmitted to the FWS and the MDNR within 45 days of the survey date. The report would contain an evaluation of trends in density, relative abundance, and overall density. Survey results would be mapped using Geographic Information System technology (GIS) and these data maps would also be included in the report. A summary of weevil-damage observations and incidental sightings of additional species of concern would also be described in the monitoring reports.

Prevention and Public Awareness

To prevent the spread of purple loosestrife and Eurasian water milfoil, the licensee would inspect, rinse, and otherwise clean equipment used in the impoundment to remove plant fragments. In addition, if small groups of purple loosestrife are located on project lands, they would be removed by hand-pulling. The licensee plans to increase public awareness of the weed problem by posting informational signage, as provided by the MDEQ, at the project tailwater boat launch. The licensee would also make invasive or noxious plant information available for public procurement at the City of Norway's City Hall.[7]

[6] This information would be included in the survey on the condition that the resource agencies alert the licensee of the identification of new exotic species of concern prior to the start of the survey.

[7] This information would also be provided by the MDEQ.

AGENCY CONSULTATION

A draft of the plan was distributed to the appropriate agencies on May 18, 2005. The MDNR submitted several comments in response to the plan by letter dated June 13, 2005. The MDNR states that it defines small infestations of both purple loosestrife and Eurasian water milfoil as stands/patches with less than 100 plants, as opposed to the licensee's definition (areas with 2 to 5 plants). The MDNR recommends that small patches of Eurasian water milfoil (i.e. areas with fewer than 100 plants) be hand pulled by scuba divers, or by surveyors in boats. The MDNR encourages the licensee to determine if the native milfoil weevil is present in the impoundment, and if found, make efforts to ensure overwinter survival (including drawdown of the reservoir, and increased leaf litter along the shoreline). Lastly, the MDNR requests that the licensee implement control measures for invasive species as recommended by the resource agencies. No comments were received from the FWS.

The licensee responded to the MDNR's comments stating that it believes the classification of 2 to 5 plants as a small infestation is appropriate in the context of the submitted plan. The licensee believes that hand-pulling these species can be extremely labor intensive. Purple loosestrife plants can have extensive root systems and the likelihood of fragment release tends to increase. The licensee states that the potential of fragment release is even greater for Eurasian water milfoil, and often the removal of even a few plants increases turbidity that interferes with the ability of workers to collect plant fragments.

The licensee believes that conducting formal studies to identify the presence of the native milfoil weevil are outside the scope of article 406. In lieu of formal studies, the licensee proposes to examine milfoil plants for weevil damage, and include any observations in the annual report. Since the project's riparian zone is almost entirely forested, the licensee believes that increasing leaf litter is neither necessary nor practical. The licensee also states that the project license does not permit the alteration of impoundment levels to encourage weevil overwintering.

The licensee believes that basing the control measures on the abundance and increasing dominance of nuisance species more appropriately reflects the intent of article 406. Finally, the licensee does not believe that implementing control measures should be based solely on future recommendations by the resource agencies.

DISCUSSION AND CONCLUSION

The plan meets most of the requirements in article 406, with the exception of including a description of the specific control measures that the licensee would implement to control/eliminate the nuisance species that occur on project lands. While the licensee provides a list of the measures that could potentially be used to control the species mentioned above, the licensee fails to identify which measures it specifically intends to implement.

Based on staff's review of the plan, the licensee may need to acquire more current information on the status of the project's invasive plant populations in order to make an informed decision on the implementation of control measures. Therefore, the licensee should include in its first monitoring report the specific measures that it intends to implement for the control of purple loosestrife and Eurasian water milfoil. Prior to submitting the report, the licensee should consult with the MDNR and the FWS on this issue, and consider all comments and recommendations regarding the most reasonable and effective control measures available.

The licensee proposes to submit the annual monitoring reports to the FWS and the MDNR within 45 days of the survey date. Article 406 also requires the licensee to file these reports with the Commission for review. To meet this future filing requirement, the licensee should submit the monitoring reports to the MDNR and FWS as proposed; however, the Commission would like to review these reports after their evaluation by the resource agencies. The agencies should be given 30 days to comment on the monitoring reports. Therefore, the licensee should file its monitoring reports with the Commission by December 1 of every monitoring year. The filing should also include copies of all agency comments and recommendations.

Many of the comments submitted by the MDNR were minor or editorial in nature, and the majority were appropriately addressed and/or incorporated into the plan, though a few outstanding issues remain.

The purpose of article 406 is to monitor and document the presence of purple loosestrife and Eurasian water milfoil in project waters, and to implement measures to control these invasive species. Monitoring and controlling the spread of these species is a new license requirement that will take time to perfect. Many of the comments submitted by the MDNR failed to provide ample evidence that their suggestions would be more effective or beneficial than those proposed by the licensee. The explanations given by the licensee in response to the MDNR's comments do, however, exhibit the licensee's willingness to work cooperatively with the agencies to properly address invasive plant

issues. Based on the information presented in the plan, we agree with the licensee's justification, and therefore, propose no changes to the plan at this time, other than those discussed above. As the process for monitoring and controlling purple loosestrife and Eurasian water milfoil is just beginning, there may be aspects of the plan that can be modified over time to optimize the licensee's efforts. In accordance with article 406, the Commission reserves the right to require modifications to this plan.

The plan fulfills the filing requirements of article 406, and contains measures to provide for the proper monitoring and control of invasive plant species in project waters. Therefore, this plan should be approved with the changes discussed above.

The Director orders:

(A) The invasive plant monitoring plan for the Sturgeon Falls Hydroelectric Project, filed on July 5, 2005, is approved as modified by ordering paragraph (B) and (C) below:

(B) The licensee shall identify in its first monitoring report the specific measures that it intends to implement to control/eliminate each nuisance species found at the project (e.g. manual pulling, chemical application, biological controls).

(C) The licensee shall file its monitoring reports with the Commission no later than December 1, of each monitoring year. The reports shall include documentation of agency consultation, including copies of agency comments and recommendations on the reports and specific descriptions of how the agencies' comments are accommodated. The licensee is to allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the reports with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

(D) This order constitutes final agency action. Requests 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.

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Administration and Compliance