

99 FERC ¶ 62, 225
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Wisconsin Power and Light Company

Project No. 11162-002

ORDER ISSUING ORIGINAL LICENSE
Major Project

(June 27,2002)

INTRODUCTION

1. On April 29, 1994, the Wisconsin Power and Light Company (WPLC) filed a license application under Part I of the Federal Power Act (FPA)¹ to continue to operate and maintain the existing 29-megawatt (MW) Prairie du Sac Hydroelectric Project located on the Wisconsin River, a navigable waterway of the United States,² in Sauk and Columbia Counties on the Wisconsin River, about 90 miles upstream of the Mississippi River. WPLC proposes no construction or new capacity at the project. The project generates approximately 151,800 megawatthours (MWh) of electricity annually. The Wisconsin River is a navigable waterway of the United States. This order issues an original license for the project.

BACKGROUND

2. Notice of the application was published on August 11, 1994. The Commission issued a Public Notice on December 31, 1996, stating that the license application was ready for environmental analysis. The U.S. Department of the Interior (Interior), the State of Wisconsin Department of Natural Resources (WDNR), and the Izaak Walton League of America filed timely motions to intervene. In addition, the River Alliance of Wisconsin filed an untimely petition to intervene on March 26, 1997, which was granted on June 13, 1997. None of the interventions were in opposition. The motions to intervene and comments received from interested agencies and individuals have been fully considered in determining whether and under what conditions to issue this license.

¹16 U.S.C. §§ 791(a) - 825(r).

²The Commission determined that the Prairie du Sac Project is required to be licensed. 52 FERC ¶ 62,294 (1990), reh'g denied 55 FERC ¶ 61,169 (1991).

3. A draft environmental assessment (DEA) for the Prairie du Sac Project was issued on June 23, 1998. The staff analyzed and considered all the comments filed on the DEA in preparing the final environmental assessment (FEA). Staff issued an FEA on November 8, 2000.

PROJECT DESCRIPTION

4. The 29-MW Prairie du Sac Hydroelectric Project provides average annual generation of 151,800 MWh when operated in run-of-river mode. WPLC has operated the project in a run-of-river mode since 1978 and proposes to continue to do so.

5. The Prairie du Sac Project consists of a 9,180-acre reservoir at the normal pool elevation, a powerhouse containing eight turbine/generating units having a total rated capacity of 29 MW, two 69-kV transmission lines about 400 feet long, and appurtenant facilities. A more detailed project description is contained in ordering paragraph (B)(2).

WATER QUALITY CERTIFICATION

6. Under Section 401(a)(1) of the Clean Water Act (CWA),³ the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency either has issued a water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the State certification shall become a condition on any Federal license or permit that is issued.⁴

7. The WDNR received WPLC's request for Section 401 water quality certification for the Prairie du Sac Project on August 11, 1992, but the WDNR never denied or issued water quality certification. The WDNR failed to act within one year of the request, and therefore, certification was deemed waived.

COASTAL ZONE MANAGEMENT PROGRAM

8. The Prairie du Sac Project is not located in the state of Wisconsin's coastal zone boundary designated by the Coastal Zone Management Program. It is our assessment that no coastal zone consistency certification is needed for this project.

³33 U.S.C. § 1341(a)(1).

⁴33 U.S.C. § 1341(d)

SECTION 18 OF THE FEDERAL POWER ACT

9. Section 18 of the FPA provides that the Commission shall require a licensee, at its own expense, to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.⁵ By letter dated February 25, 1997, the Secretary of the Interior requested that a reservation of authority to prescribe the construction, operation, and maintenance of appropriate upstream and downstream fishways be included in any license issued for the Prairie du Sac Project. Article 406 reserves such authority.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES UNDER FPA SECTION 10(j)

10. Section 10(j) of the FPA⁶ requires the Commission, when issuing a license, to include license conditions based on the recommendations of the federal and state fish and wildlife agencies, submitted pursuant to the Fish and Wildlife Coordination Act,⁷ to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

11. On February 27, and March 24, 1997, the FWS and WDNR, respectively, submitted Section 10(j) recommendations for the project. Of the 34 recommendations that were submitted, staff determined that 13 were not within the scope of Section 10(j).⁸ Of the 21 recommendations that properly fall within the scope of Section 10(j), this order includes conditions consistent with 18 of them. Staff made a preliminary determination that the remaining 3 recommendations for: 1) run-of-river operating criteria, monitoring, and gaging; 2) fish entrainment protection and mitigation for fish losses; and 3) upstream fish passage for paddlefish and lake sturgeon were inconsistent with purposes and requirements of the FPA.

12. On October 22, 1998, a 10(j) meeting was held with the WDNR and FWS in attempt to resolve these issues. With the exception of fish entrainment and upstream fish

⁵16 U.S.C. § 811.

⁶16 U.S.C. § 803(j).

⁷16 U.S.C. § 661 et seq.

⁸These recommendations were considered under Section 10(a) of the FPA and were, for the most part adopted as conditions of the license.

passage, these issues were resolved and conditions have been included in the license, as appropriate.

13. Pursuant to section 10(j)(2)(B), I find that the conditions included in this license comply with the requirements of section 10(j)(1).

14. With respect to fish entrainment, staff determined that there is no need to install the recommended fish protection devices, because there is no evidence that fish entrainment and turbine mortality at the project are adversely affecting the Wisconsin River fish populations, and the installation of expensive protection devices would unduly affect developmental resources. We recommend instead that WPLC develop, submit, and implement an aquatic resources enhancement plan in consultation with the agencies, which could include measures to supplement or otherwise enhance the reservoir's fish population (article 408).

15. With respect to upstream fish passage, staff determined in the FEA that an immediate commitment to implement upstream fish passage measures would not be necessary to adequately protect the fishery, and that it is uncertain that such measures would be technically feasible. We recommend instead that WPLC develop, submit, and implement an aquatic resources enhancement plan in consultation with the agencies, which could include experiments or research regarding upstream fish passage (article 408).

16. In a letter dated January 4, 2002, the WDNR reiterated their desire for upstream fish passage facilities to be installed at the Prairie du Sac Project. The WDNR cited new information that 4 dams located on the Baraboo River have been removed opening up an additional 120 miles of river upstream of the Prairie du Sac dam. Section IV.C.3 of the FEA evaluates fish passage options at the Prairie du Sac dam. Staff evaluated the installation of a conventional fish ladder and rehabilitation of the inoperable navigation lock located at the dam. Staff's evaluation indicates that neither a conventional fish ladder nor a rehabilitated navigation lock would be suitable for passage of the species of concern.

17. Staff found that most resident species such as walleye, northern pike, bass, and other gamefish do not make extensive use of conventional fishways of the length and height that would be necessary at the Prairie du Sac dam. Further, there is little indication that lake sturgeon or paddlefish would make effective use of a conventional fishway.

18. As for rehabilitation of the navigation lock, currently the downstream floor of the lock chamber is 3 to 4 feet above the normal tailwater elevation at the Prairie du Sac dam. Therefore it would be necessary to construct a pool-weir-type of structure to enable fish to enter the lock chamber. Staff determined that bottom-oriented species such as catfish, walleye, saugar, sturgeon, and suckers, would be reluctant to swim towards the surface to surmount the 20-foot-tall concrete wall supporting the upstream lock gates and that removing the wall and reconfiguring the lock would cost several millions of dollars. Additionally, attraction flows of about 50 cfs through the lock would be less than 0.1 percent of river flow. However, increasing flows through the lock to increase attraction to the lock chamber would result in high flow velocities which may prevent fish from accumulating in the lock chamber. Based on the high capital cost of fish passage, \$546,000 for a conventional fishway and about \$3,000,000 for rehabilitation the navigation lock, combined with the uncertainty of passage success for the various species of concern, staff concluded that neither the lock nor a conventional fishway should be required.

19. We conclude that construction of a conventional fishway or rehabilitation of the navigation lock would not be in the public interest because of the dubious chance for success and the high cost associated with the construction of a conventional fishway or rehabilitation of the navigation lock. However, should new information in the future indicate a different finding, we have reserved Interior's authority to prescribe fishways at the Prairie du Sac Project, in article 406 of this license.

20. Thus I conclude that our recommendations adequately and equitably protect, mitigate damage to, and enhance fish and wildlife resources affected by the project, and that the fish and wildlife measures required in this license comply with the requirements of section 10(j) of the FPA.

ENDANGERED SPECIES ACT

21. Section 7(a)(2) of the Endangered Species Act of 1973⁹ requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally-listed threatened and endangered species, or result in the destruction or adverse modification of their critical habitat.

22. One federally-listed species, the bald eagle (*Haliaeetus leucocephalus*; threatened), occurs in the vicinity of the project. This license includes measures to

⁹16 U.S.C. § 1536(a).

protect the bald eagle and their habitat at the project, consistent with Interior's recommendations. (Article 409)

COMPREHENSIVE PLANS

23. Section 10(a)(2) of the FPA¹⁰ requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.¹¹ Of the 66 comprehensive plans filed with the Commission, staff identified and reviewed 8 plans relevant to the Prairie du Sac Project.¹² No inconsistencies were found.

WATER QUALITY MONITORING

24. Water quality monitoring conducted by WPLC indicates that dissolved oxygen (DO) concentration levels in summer months (primarily July and August) can be as low as 2 to 3 milligrams per liter (mg/l) at the intake and in the tailrace. WPLC investigated the use of the turbine vacuum breakers to raise DO concentrations in the turbine discharge. However, staff concluded that because the investigation was not rigorously controlled, the potential use of the vacuum breakers could not be ruled out as a potential method for increasing DO concentrations in the turbine discharge. Therefore, I have included article 404, which requires WPLC to monitor DO concentrations during low flow and high temperatures periods, and to re-evaluate the use of the vacuum breakers to increase DO concentrations in the turbine discharge.

¹⁰16 U.S.C. § 803(a)(2)(A).

¹¹Comprehensive plans are defined at 18 C.F.R. § 2.19 (2001).

¹²The Fish and Wildlife Service's (FWS') Fisheries USA: the Recreational Fisheries Policy of the U.S. Fish and Wildlife Service, undated; the FWS' and Canadian Wildlife Service's (CWS') North American Waterfowl Management Plan, 1986; the FWS' and CWS' North American Wildlife Management Plan, 1986; the National Park Service's The Nationwide Rivers Inventory, 1982; the Wisconsin Department of Natural Resources' (WDNR's) Final Environmental Impact Statement for Proposed Lower Wisconsin State Riverway, 1988; the WDNR's Statewide Comprehensive Outdoor Recreation Plan, 1991-1996, 1991; the WDNR's Upper Wisconsin River Southern Sub-basin Water Quality Management Plan, 1992; and the WDNR's Wisconsin Water Quality Assessment Report to Congress, 1994.

HISTORIC PROPERTIES

25. On June 26, 2002, the Wisconsin State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation and the Commission executed a Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Wisconsin State Historic Preservation Officer, for Managing Historic Properties That May Be Affected by a License Issuing to Wisconsin Power and Light Company for Continued Operation and Maintenance of the Prairie du Sac Project in Wisconsin. This served to satisfy the Commission's responsibilities under Section 106 of the National Historic Preservation Act.¹³

COMPREHENSIVE DEVELOPMENT

26. Sections 4(e) and 10(a)(1) of the FPA,¹⁴ respectively, require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

27. In determining whether a proposed project will be in the public interest, the Commission considers the economic benefits of project power. As was articulated in Mead Corp.,¹⁵ staff employs an analysis that uses current costs to compare the costs of the project and likely alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the analysis is to provide general estimates of the potential power benefits and costs of a project, and reasonable alternatives to project power. The Commission considers the project power benefits both with the applicant's proposed mitigation and enhancement measures and with the Commission's modifications and additions to the applicant's proposal.

¹³16 U.S.C. § 470s.

¹⁴16 U.S.C. §§ 797(e) and 803(a)(1)

¹⁵72 FERC ¶ 61,207 (1995).

28. The Prairie du Sac Project, as proposed by WPLC and with staff-recommended measures, would produce a total average of 150,000 MWh of energy annually at an annual cost of about \$3,359,400, or 22.4 mills per kilowatt-hour (mills/kWh). Based on the cost of replacing the project's power with combined-cycle gas turbines, which staff considers the most likely alternative power source for these projects, the current annual value of the project's power would be about \$ 3,704,600 (about 24.7 mills/kWh). To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the value of the power it produces. Based on current costs, the project over a 30-year license term, would have a positive annual net economic benefit of about \$345,200 or 2.3 mills/kWh.

LICENSE TERM

29. Section 6 of the FPA,¹⁶ provides that original licenses for hydropower projects shall be issued for a term not to exceed 50 years. The Commission's license term policy when issuing original licenses for existing projects that should have been licensed earlier is set forth in City of Danville.¹⁷ We issue a 30 year license for projects with little or no redevelopment, new construction, or new environmental mitigation and enhancement measures; a 40 year license for projects with a moderate amount of such activities, and a 50 year license for projects with extensive measures.

30. This license authorizes a relatively modest amount of new environmental mitigation measures and new construction. Consequently, a 30-year term of license for the Prairie du Sac Project is appropriate.

SUMMARY OF FINDINGS

31. The FEA contains background information, analysis of effects, support for related license articles, and the basis for a finding that the project will not result in any major long-term adverse environmental impacts. The design of this project is consistent with the engineering standards governing dam safety. The project would be safe if operated and maintained in accordance with the requirements of this license.

¹⁶16 U.S.C. § 808(e).

¹⁷58 FERC ¶ 61,318 (1992) at pp. 62,020-21.

32. Based on the review and evaluation of the project, as proposed by the applicant, and with the additional staff-recommended environmental measures, I conclude that the continued operation and maintenance of the project in the manner required by the license, will protect and enhance fish and wildlife resources, water quality, recreational, aesthetic, and cultural resources. The electricity generated from this renewable water power resource will be beneficial because it will continue to offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution. I conclude that the Prairie du Sac Project, with the conditions and other special license articles set forth below, will be best adapted to the comprehensive development of the Wisconsin River for beneficial public uses.

The Director orders:

(A) This license is issued to the Wisconsin Power and Light Company (licensee), for a period of 30 years, effective the first day of the month the license is issued, operate and maintain the Prairie du Sac Hydroelectric Project as conditioned in this license. This license is subject to the terms and conditions of the Federal Power Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All land, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by exhibit G filed on April 29, 1994:

<u>Exhibit G</u>	<u>FERC Drawing No.</u>	<u>Showing</u>
Sheets 1 through 4	11162-11 through 11162-14	Project Boundary

(2) The 29-MW Prairie du Sac Hydroelectric Project provides average annual generation of 151,800 MWh and is operated in the run-of-river mode.

The Prairie du Sac Project consists of (1) a reservoir with a normal surface area of 9,180 acres and a storage volume of 119,950 acre-feet at the normal operating water surface elevation of 744.4 feet NGVD; (2) the East dike, which is 1,775 feet long with an average height of 20 feet and top width of 8 feet at a crest elevation of 781.0 feet NGVD, constructed of sand with a clay core wall having a top width of 3 feet at elevation 770.4 feet NGVD; (3) a 1,010-foot-long, pile-supported concrete hollow ogee spillway with a crest elevation of 760.4 feet NGVD, 41 radial gates, each 20 feet wide and 14 feet high, two traveling electric hoists, and a concrete walkway at elevation 781.4 feet NGVD; (4)

an unused concrete navigation lock 211 feet long, 35 feet wide, and 47 feet high; (5) a 329-foot-long pile-supported powerhouse, with a concrete substructure, a masonry superstructure, containing eight turbine/generating units having a total rated capacity of 29 MW; (6) eight 4-runner horizontal Francis turbines 64 inches in diameter with a rated head of 32 feet, installed between 1914 and 1922 (five are rated at 4,050 horsepower, two at 5,600 horsepower, and one at 5,000 horsepower); (7) eight horizontal Allis-Chalmers generators operating at 120 rpm, with a power factor of 0.8 (four are rated at 4,375 kVA, two at 6,000 kVA, one at 3,525 kVA, and one at 2,590 kVA); (8) two 69-kV transmission lines about 400 feet long; (9) accessory equipment, including relays, switchboards, sensors, panels, cubicles, synchronizing units, supervisory control equipment, lighting, station service power, plumbing, ventilating systems, and a compressed air system; and (10) maintenance buildings, offices, and equipment.

The project works described above are specifically shown in exhibit F listed below:

Exhibit F: The following exhibit F filed on April 29, 1994:

<u>Exhibit F Drawing</u>	<u>FERC Drawing No.</u>	<u>Description</u>
Sheet 1 of 10	11162-1	Prairie du sac General Layout
Sheet 2 of 10	11162-2	Prairie du Sac Powerhouse Cross Section
Sheet 3 of 10	11162-3	Prairie du Sac Powerhouse Sectional
Sheet 4 of 10	11162-4	Prairie du Sac Powerhouse Sectional
Sheet 5 of 10	11162-5	Prairie du Sac Plant Elevations
Sheet 6 of 10	11162-6	Prairie du Sac Plant Elevations
Sheet 7 of 10	11162-7	Prairie du Sac Spillway Sections

Sheet 8 of 10	11162-8	Prairie du Sac Spillway Sections
Sheet 9 of 10	11162-9	Prairie du Sac Lock Sections
Sheet 10 of 10	11162-10	Prairie du Sac Dike Sections

(3) All of the structures, fixtures, equipment, or facilities used to operate or maintain the project and located in the project boundary, all portable property that may be employed in connection with the project, all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The exhibits G and F described above are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-3 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges as determined by the Commission, effective the first day of the month in which this license is issued for the purpose of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 29,000 kilowatts. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge.

Article 202. Within 45 days of the date of issuance of the license, the licensee shall file an original set and two duplicate sets of aperture cards of the approved drawings. The set of originals must be reproduced on silver or gelatin 35mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number (Exhibit G, 11162-11 through 14, and Exhibit F, 11162-1 through 10) shall be shown in the margin below the title block of the approved drawing. After mounting, the Commission Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project

Number, Commission Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards must be filed with the Secretary of the Commission, ATTN: OEP. The remaining duplicate set of aperture cards shall be filed with the Commission's Chicago Regional Office.

Article 203. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 204. If the licensee's project is directly benefited by the construction work of another licensee, a permittee, or of the United States of a storage reservoir or other headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the Commission's regulations.

Article 401. Upon approval of the plan required in Article 403, the licensee shall operate the project in a run-of-river mode for the protection of aquatic resources in the Wisconsin River. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream of the project tailrace, approximate the sum of inflows to the project reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods of time upon mutual agreement between the licensee, Wisconsin Department of Natural Resources (Wisconsin DNR), and the U.S. Fish and Wildlife Service (FWS). If the flow is so modified, the licensee shall notify the Commission, the Wisconsin DNR, and the FWS as soon as possible, but no later than 10 days after each such incident.

Article 402. Upon approval of the plan required in Article 403, the licensee shall maintain a reservoir surface elevation of 774.4 ± 0.3 ft. National Geodetic Vertical Datum (NGVD) for the protection of fish and wildlife resources.

This target reservoir surface elevation may be temporarily modified if required by operating emergencies beyond the control of the licensee or for short periods upon mutual agreement between the licensee, the Wisconsin Department of Natural Resources (Wisconsin DNR), and the U.S. Fish and Wildlife Service (FWS). If the reservoir water surface elevation is so modified, the licensee shall notify the Commission, the Wisconsin DNR, and the FWS as soon as possible, but no later than 10 days after each such incident.

Article 403. Within 180 days from the date of issuance of this license, in order to monitor the operating mode and impoundment elevations required in articles 401 and 402, respectively, the licensee shall develop, in consultation with the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service, an operations compliance monitoring plan, for Commission approval. This plan must include, but is not limited to, an implementation schedule and provisions to: (1) install and maintain staff gages visible to the public on or near Prairie du Sac dam; (2) maintain water level sensors to continuously record the headpond and tailwater elevations; (3) record and maintain daily operating records, including headpond and tailwater elevations, hourly powerhouse and spillway discharge, and turbine operations; and (4) provide the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service operating records upon request.

The licensee shall include with the operational compliance monitoring plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the operational compliance monitoring plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule. The licensee shall provide these monitoring data to the Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, and the Commission within 30 days of receiving a written request for such information.

Article 404. Within 180 days from the date of issuance of this license, in order to monitor and enhance dissolved oxygen (DO) concentrations immediately downstream of the project, the licensee shall develop a DO monitoring and enhancement plan, in consultation with the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service, for Commission approval. This plan must include, but is not limited to, an implementation schedule, provisions to monitor DO concentrations immediately downstream of the project, provisions for an evaluation of the vacuum breakers using air and/or oxygen injection to increase DO concentrations in the project discharge during low-flow high-temperature periods, such as may occur during June, July, and August, and a schedule to provide the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service DO monitoring results.

The licensee shall include with the DO monitoring and enhancement plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the DO monitoring and enhancement plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The licensee may not implement the plan until it has been notified that the Commission has approved

the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule.

Upon completion of the vacuum breaker evaluation and according to the approved schedule in the plan, the licensee shall file with the Commission the results of the vacuum breaker evaluation, including the licensee's recommendations for enhancing DO concentrations in the project discharge and the associated costs of enhancing DO concentrations in the project discharge.

Prior to filing the vacuum breaker evaluation with the Commission the licensee shall provide the evaluation to the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service requesting their comments and recommendations. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the vacuum breaker evaluation with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

Article 405. At least 30 days prior to any planned impoundment drawdown, the licensee shall file with the Commission, for approval, an impoundment drawdown plan and schedule developed in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the drawdown plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The licensee shall also include in the drawdown plan a provision to notify the public of any planned impoundment drawdown proposed by the licensee.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule.

Article 406. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior pursuant to Section 18 of the Federal Power Act.

Article 407. Within 180 days of license issuance, the licensee shall file for Commission approval a plan, developed in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service, for the passage of large woody

debris that collects near the project intake into the reach of river below the project dam to improve fish habitat downstream of the project dam.

The licensee shall allow a minimum of 60 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 shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 408. Within one year of license issuance, the licensee shall file for Commission approval an aquatic resources enhancement plan, developed in consultation with the Wisconsin Department of Natural Resources, the U.S. Fish and Wildlife Service, and the River Alliance of Wisconsin. The purpose of the plan is to identify specific measures to enhance the fish and other aquatic species populations of Lake Wisconsin and the Wisconsin River in the vicinity of the project. The plan shall include, but not be limited to, an implementation schedule and provisions for re-establishment of adult monkeyface and fawnsfoot mussels upstream of the Prairie du Sac impoundment either through provisions for passage or other means as stocking or physical transplantation of individuals.

The licensee shall include with the aquatic resources enhancement plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 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 shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The licensee may not implement the plan until it has been notified that the Commission has approved the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule.

Article 409. Within one year of license issuance, the licensee shall file with the Commission, for approval, a plan to protect the bald eagle (*Haliaeetus leucocephalus*) in the project area.

The plan shall incorporate state and federal management guidelines. The plan shall also include a schedule for implementing the plan. The plan shall be submitted to the Commission, for approval, along with the wildlife management plan required by Article 411.

The licensee shall prepare the plan in consultation with Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 60 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 shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 410. Within 180 days of license issuance, the licensee shall, in consultation with Wisconsin Department of Natural Resources (WDNR) and U.S. Fish and Wildlife Service (FWS), develop a plan to monitor purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) in project waters. The purpose of the plan is to assist the WDNR and FWS in controlling the spread of these two nuisance species. The plan shall include, but not be limited to: (a) the method of monitoring, (b) the frequency of monitoring, (c) a provision to cooperate in the control/elimination of these vegetative species if deemed necessary by the agencies, and (d) documentation of transmission of monitoring data to WDNR and FWS.

The licensee shall include documentation of consultation with WDNR and FWS before preparing the plan, copies of the agencies' comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments were accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

Article 411. Within one year of license issuance, the licensee shall file with the Commission, for approval, a wildlife management plan. The purpose of the plan is to protect and enhance wildlife habitat and wildlife populations in the project area including protection of high quality and retention of high quality habitat.

The plan shall include, but not be limited to, the following:

(1) provisions for annual consultation among the licensee, Wisconsin Department of Natural Resources (WDNR), and U.S. Fish and Wildlife Service (FWS) on the status of wildlife habitat and wildlife populations in the project boundaries and the measures to be performed to protect and enhance wildlife populations that includes the protection of high quality habitat and retention of these project lands; and

(2) provisions for Federally-listed threatened and endangered species that shall include, but not be limited to the following: implementing the Bald Eagle Management Plan in accordance with the guidelines identified in the Bald Eagles in Wisconsin, Management Guidelines for Breeding Areas of the Northern States Bald Eagle Recovery Plan, and Bald Eagle Winter Management Guidelines; and providing annual updates to the agencies of bald eagle nest locations on project land.

The licensee shall include documentation of consultation with WDNR and FWS before preparing the plan, copies of the agencies' comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments were accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

Article 412. Within one year of the issuance date of this license, the licensee shall file with the Commission, for approval, a land management plan (LMP) for all licensee-owned lands within the project boundary.

The intent of the plan will be to establish policies for existing and future management of the shoreline buffer and project lands. The plan shall include, at a minimum:

- (1) provisions for threatened and endangered species habitat protection;
- (2) provisions ensuring forest management practices, recreational use, and recreation development are compatible with wildlife management;
- (3) provisions to retain project lands and procedures if lands are to be removed from the project boundary.
- (4) establishment of policies for existing and future management of the shoreline buffer and project lands; and
- (5) provisions to distribute the LMP to riparian owners within the project boundary.

The plan shall be prepared in consultation with Wisconsin Department of Natural Resources (WDNR) and U.S. Fish and Wildlife Service (FWS). The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 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 shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 413. Within 1 year from the issuance of this license, the licensee shall file with for Commission approval a project recreation plan. The purpose of the plan is to protect and enhance recreational use at the project.

The plan shall include, at a minimum, the following:

- (1) a list identifying all recreation facilities that are project related;

(2) a provision to improve the universal accessibility of the tailwater area to include, at a minimum, an upgraded ramp from the parking area to the tailwater and a fishing platform at the river's edge with the ramp and the fishing platform designed to provide barrier-free access to the tailwater for wheelchair-bound recreationists;

(3) provisions for consultation with the Natural Resources Conservation Service and the Wisconsin Department of Natural Resources in designing and implementing appropriate erosion and sediment control measures to be included in the final plans for recreational site enhancements and new recreation site development;

(4) provisions for implementing guidelines for universal accessibility at appropriate recreational facilities, including a discussion of how the design of the facilities takes into account the national standards established by the Architectural and Transportation Barriers Compliance Board pursuant to the Americans with Disabilities Act of 1990;

(5) a schedule for implementing the recreation site enhancements;

(6) a description of the proposed operation and maintenance of each the licensee's existing and new recreational facilities, including the responsible entity;

(8) provisions for improving the public information system regarding recreational resources on both reservoirs, to also include a provision that the licensee continue to operate its toll-free telephone number to provide daily flow conditions to the general public;

(9) provisions for monitoring recreation use of the project area to determine whether existing recreation facilities are meeting future recreation needs, and for consulting with appropriate National Park Service, Wisconsin Department of Natural Resources, Columbia County, Sauk County, and local government staff and recreational interest groups in preparing a report on the monitoring to be filed along with the FERC Form 80, required by Section 8 of the Commission's Regulations (18 CFR 8.11). The report shall describe the results of the monitoring, discuss whether existing recreation facilities are meeting recreation needs, and describe any proposed action necessary to adequately maintain or enhance recreational use;

(10) provisions for setting aside project land for future recreation needs; and

(11) provisions for updating the recreation plan with the Commission in the event of proposals for major recreational enhancements not required by the original license.

The licensee shall prepare the recreation plan after consultation with the Wisconsin Department of Natural Resources, and the Natural Resources Conservation Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the draft plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations prior to filing the final plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No ground disturbing or land-clearing activities for new or improved recreation facilities shall begin until the licensee is notified the plan is approved. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 414. The licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Wisconsin State Historic Preservation Officer, for Managing Historic Properties That May Be Affected by a License Issuing to Wisconsin Power and Light Company for Continued Operation and Maintenance of the Prairie du Sac Project in Wisconsin" executed on June 26, 2002, including but not limited to the Historic Resources Management Plan for the project. In the event that the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved Historic Resources Management Plan. The Commission reserves the authority to require changes to the Historic Resources Management Plan at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the Historic Resources Management Plan, the licensee shall obtain Commission approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the Project's area of potential effect.

Article 415. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a

permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction; (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site; and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water

intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved exhibit R or approved report on recreational resources of an exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

- (1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

- (2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.
- (3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.
- (4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of public lands and reservations of the United States included within the project boundary.

(E) The licensee shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this Order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

J. Mark Robinson
Director
Office of Energy Projects