

# LOW IMPACT HYDROPOWER INSTITUTE

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## LOW IMPACT HYDROPOWER QUESTIONNAIRE

[Excerpted from Part VI, Section E of the Low Impact Hydropower Certification Program. Words in italics are defined in Part VI, Section C, and line-by-line instructions are available in Section D of the program, available on-line in PDF format at <http://www.lowimpacthydro.org>.

### E. LOW IMPACT HYDROPOWER QUESTIONNAIRE

<b>Background Information</b>	
1) Name of the <i>Facility</i> .	Rice Rips Hydroelectric Station
2) Applicant's name, contact information and relationship to the Facility. If the Applicant is not the Facility owner/operator, also provide the name and contact information for the Facility owner and operator.	Messalonskee Stream Hydro LLC (owner) c/o Essex Hydro Associates 55 Union Street, 4 <sup>th</sup> Floor Boston, MA 02108 Attn: Richard A. Norman, President V: 617-367-0032 F: 617-367-3796 <a href="mailto:ran@essexhydro.com">ran@essexhydro.com</a> & <a href="mailto:sjh@essexhydro.com">sjh@essexhydro.com</a>
3) Location of Facility by river and state.	Messalonskee Stream, Oakland, ME
4) Installed capacity.	1.6 MW
5) Average annual generation.	5.6 GWh

6) Regulatory status.	FERC No. 2556 – ME (see Appendix 1)
7) Reservoir volume and surface area measured at the high water mark in an average water year.	Surface Area: 87 Acres Gross Reservoir Volume: 435 Acre-Feet Net Storage Capacity: 0 (run-of-river)
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	Less than 16 Acres
9) Number of acres inundated by the Facility.	Approximately 87 Acres
10) Number of acres contained in a 200-foot zone extending around entire impoundment.	Approximately 80 acres
11) Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.	Please see Appendix 2
12) Please attach a description of the Facility, its mode of operation (i.e., peaking/run of river) and a map of the Facility.	Please see Appendix 3
<p><b>Questions for For “New” Facilities Only:</b></p> <p>If the Facility you are applying for is “new” i.e., an existing dam that added or increased power generation capacity after August of 1998 please answer the following questions to determine eligibility for the program</p>	
13) When was the dam associated with the Facility completed?	
14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.	
15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?	
16) Did the added or increased capacity include or require a change in water flow through the facility that worsened conditions for fish, wildlife, or water quality, (for example, did operations change from run-of-river to peaking)?	

<p>17 (a) Was the existing dam recommended for removal or decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity?</p> <p>(b) If you answered “yes” to question 17(a), the Facility is not eligible for certification, unless you can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.</p>		
<p>18 (a) If the increased or added generation is not yet operational, has the increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the facility is not eligible for consideration; and</p> <p>(b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.</p>		
<b>A. Flows</b>	<b>PASS</b>	<b>FAIL</b>
<p>1) Is the Facility in <i>Compliance with Resource Agency Recommendations</i> issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?</p>	YES (see Appendix A)	
<p>2) If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or “good” habitat flow standards calculated using the Montana-Tennant method?</p>	N/A	
<p>3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately</p>	N/A	

protective of fish, wildlife, and water quality?		
<b>B. Water Quality</b>	<b>PASS</b>	<b>FAIL</b>
1) Is the Facility either:  a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or  b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?	<b>Yes (see Appendix B)</b>	
2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?	<b>No</b>	
3) If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?	<b>N/A</b>	
<b>C. Fish Passage and Protection</b>	<b>PASS</b>	<b>FAIL</b>
1) Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?	<b>Yes (see Appendix C)</b>	
2) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area ( <i>e.g.</i> , because passage is blocked at a downstream dam or the fish run is extinct)?  a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?	<b>N/A</b>	

<p>b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?</p>		
<p>3) If, since December 31, 1986:</p> <p>a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?</p>	<p>N/A</p>	
<p>4) If C3 was not applicable:</p> <p>a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or</p> <p>b) If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource?</p>	<p>NA</p>	

5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of <i>Riverine</i> fish?	None prescribed.	
6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	None prescribed.	
<b>D. Watershed Protection</b>	<b>PASS</b>	<b>FAIL</b>
1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline	See Appendix D	
2) Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1., and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?	N/A	
3) Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has state and federal resource agencies agreement an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)	see Appendix D	
4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.	N/A	
<b>E. Threatened and Endangered Species Protection</b>	<b>PASS</b>	<b>FAIL</b>
1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?	No (see Appendix E)	
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision,	N/A	

is the Facility in Compliance with all recommendations in the plan relevant to the Facility?		
3) If the Facility has received authority to incidentally <i>Take</i> a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?	N/A	
4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:  a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or  b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or  c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or  d) The recovery plan under active development will have no material effect on the Facility's operations?	N/A	
5) If E.2. and E.3. are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?	N/A	
<b>F. Cultural Resource Protection</b>	<b>PASS</b>	<b>FAIL</b>
1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?	<b>YES (see Appendix F-1)</b>	

2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or <i>Native American Tribe</i> , or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?	N/A	
<b>G. Recreation</b>		
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?	YES (See Appendix G)	FAIL
2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?	N/A	
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	Yes	
<b>H. Facilities Recommended for Removal</b>		
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	NO	



APPENDIX 1-2

FERC Order Issued October 12, 2000

93 FERC ¶ 61,047

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: James J. Hoecker, Chairman;  
William L. Massey, Linda Breathitt,  
and Curt Hébert, Jr.

FPL Energy Maine Hydro LLC

Project Nos. 2556-016  
2557-013  
2559-014

ORDER ON REHEARING

(Issued October 12, 2000)

On July 28, 1999, the Commission issued a new license to FPL Energy Maine Hydro LLC (FPL Hydro) for the continued operation of the 5.9-megawatt (MW) Messalonskee Project No. 2556, located on the Messalonskee Stream, a tributary of the Kennebec River, in Kennebec County, Maine.<sup>1</sup> On August 27, 1999 FPL Hydro filed a request for rehearing of the Commission's order. FPL Hydro contends that certain minimum flow requirements imposed in the license are inconsistent with the Commission's comprehensive development standard and are not supported by substantial evidence. For the reasons indicated in this order, we grant rehearing on this issue and will modify the flow requirements. We also address several less substantive requests for modification of other license articles.

BACKGROUND

The Messalonskee Project consists of four hydropower developments. Messalonskee Lake is a storage reservoir located at the beginning of Messalonskee Stream. Releases from Messalonskee Lake dam are designed to provide flows for generation at FPL Hydro's other three hydropower developments, which, proceeding downstream, are the Oakland, Rice Rips, and Union Gas developments, as well as at the

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<sup>1</sup>88 FERC ¶ 61,122.

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Kennebec Water District's Automatic Project No. 2555, located between the Rice Rips and Union Gas developments.<sup>2</sup>

Section 10(j)(1) of the Federal Power Act (FPA) requires the Commission, when issuing a license, to include conditions based upon recommendations of federal and state fish and wildlife agencies, submitted pursuant to the Fish and Wildlife Coordination Act, for the protection of, mitigation of damages to, and enhancement of, fish and wildlife. If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, Section 10(j)(2) requires the Commission to attempt to resolve any such inconsistency with the recommending agency.

The U.S. Department of the Interior submitted Section 10(j) recommendations for the Messalonskee developments, including Kennebec Water District's Automatic Project.<sup>3</sup> As pertinent here, Interior recommended that the licensee discharge an instantaneous flow of 100 cubic feet per second (cfs) or inflow, whichever is less, from the Messalonskee Lake dam and from each of the four downstream developments, and discharge 25 cfs of those flows from the Rice Rips dam into the bypass reach at that development. These recommendations were advanced primarily to improve habitat for brown trout below the Union Gas dam and in the Rice Rips bypass reach.

In a January 1996 Draft Environmental Impact Statement (EIS) prepared for the Messalonskee and Automatic Projects, as well as for several other projects in the Kennebec River Basin, Commission staff made a preliminary finding that Interior's 100-cfs minimum flow would be inconsistent with the comprehensive development standard of Sections 10(a)(1) and 4(e) of the FPA and with the Maine Department of Environmental Protection's (Maine DEP) water quality certification condition that 15 cfs be released through all of the project developments at all times. The Draft EIS concluded

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<sup>2</sup>The Oakland, Rice Rips and Union Gas developments of the Messalonskee Project were originally licensed as separate projects, Project Nos. 2559, 2557, and 2556. Messalonskee Lake was included in the Oakland Project. The developments were consolidated into one project in the order issuing new license, but all three project numbers are listed in the title of this order because the request for rehearing was filed in all three dockets. A subsequent license for the Automatic Project was also issued on July 28, 1999. 88 FERC ¶ 61,117.

<sup>3</sup>At the time, the Oakland, Rice Rips, Automatic, and Union Gas developments were owned and operated by Central Maine Power Company, which had filed a single relicensing application for these projects before transferring them to the present owners.

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that the 15-cfs minimum flow, which was also the flow release proposed by the license applicant for each development, including the Rice Rips bypass reach, would provide an acceptable degree of habitat enhancement for brown trout below the Union Gas dam and in the Rice Rips bypass reach. Subsequent discussions at a Section 10(j) meeting of Commission staff, Interior, and other interested entities failed to resolve this flow dispute.

In the Final EIS, issued in July 1997, staff continued to maintain that the 15-cfs minimum flow release would be preferable to Interior's flow releases. Nevertheless, staff recommended adoption of Interior's minimum flow recommendations as not inconsistent with applicable law. In October 1998, Commission staff held a technical conference to determine whether mutually agreeable flows could be determined for both the Union Gas and Rice Rips reaches. Although the licensee, Interior, and the Maine agencies stated that they would continue discussions on appropriate minimum flow requirements, no resolution of the issue was reached.

In issuing the new license, we adopted the recommendation of the Final EIS and required Interior's minimum flows in Article 401. Our decision to adopt Interior's flows, despite the staff's evaluation that the 15-cfs flows would be adequate, was based on several factors. Following the Section 10(j) meeting, Maine DEP notified the Commission that it found no conflict between Interior's minimum flows and its water quality certification, as long as its 15-cfs minimum flows were released regardless of inflow into Messalonskee Lake. Concerns expressed by the staff with regard to the effect of the higher Interior flows on water quality and temperature appeared to be satisfied by subsequent developments or information.<sup>4</sup> Staff had been unwilling to recommend Interior's more costly flow measures for what had been an experimental trout fishery below the Union Gas development; however, the fishery later became established and not

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<sup>4</sup>Staff had been concerned that, because flows would be too low to permit generation at the developments for most of the summer if Interior's minimum flows had to be released, the absence of periodic high generation flows to flush water through the Rice Rips impoundment would negatively affect water quality. However, Maine DEP concluded, based on a technical analysis conducted by its staff, that, under any operating scenario, sufficient flushing would be provided at the Rice Rips impoundment to meet water quality standards. Maine DEP also concluded that Interior's flow would probably benefit water quality, especially in the summer months. Staff had been concerned that Interior's high minimum flows could displace cool water in the trout habitat below Union Gas dam with warmer water from the Union Gas impoundment. At the technical conference held after issuance of the Final EIS, the license applicant, Interior, and the Maine resource agencies agreed that there would not be a significant difference in water temperature.

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merely experimental. Finally, we concluded that Interior's flows, in comparison to the proposed flows, would provide an increase in available brown trout habitat with a relatively small reduction in power benefits.

On rehearing, FPL Hydro argues that Interior's recommended minimum flows are inconsistent with the FPA's comprehensive development standard,<sup>5</sup> under which the Commission must ensure that 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 for all beneficial public uses. FPL Hydro contends that the recommended flows would not provide significantly greater fish habitat during much of the year than the flows proposed in the license application, and that any such increases in habitat would be considerably outweighed by the loss of generation from adopting the recommended flows and by the costs to the licensee of this generation loss. FPL Hydro also argues that the recommended minimum flows are not supported by substantial evidence, because there has been no demonstration that those flows would produce any measurable benefit, beyond FPL Hydro's own proposed flows, in providing needed habitat or meeting the management goals for the brown trout fishery.

## DISCUSSION

### 1. Minimum flows.

In our license order, we concluded that Interior's flow regime was consistent with the comprehensive development standard in light of the importance of the brown trout fishery in Messalonskee Stream and of the relatively modest loss in power benefits that adopting these flows would entail. FPL Hydro challenges that conclusion in several respects.

Maine Department of Inland Fish and Wildlife (Maine DIFW) manages the brown trout fishery in the Union Gas tailwater to maximize fishing opportunity for brown trout from May 1 to June 15 and during the latter half of September. In adopting Interior's flows, we determined that a 100-cfs flow release would provide the maximum habitat, or maximum weighted usable area (WUA), for brown trout in the Union Gas tailwater. FPL Hydro states that, according to the record, the proposed 15-cfs minimum flow would provide 76 percent of the maximum brown trout habitat in the tailwater. FPL Hydro argues that the expected increase in brown trout habitat from adopting Interior's, rather than its own, flows will not be fully realized. FPL states that, from March through June, flows through the developments are so high that only 73 percent or less of the maximum

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<sup>5</sup>Section 10(a)(1).

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WUA for adult brown trout is available in the Union Gas tailrace.<sup>6</sup> In addition, the average inflows into Messalonskee Lake during July, August and September are only 31, 22, and 20 cfs, respectively. Since only inflow would be released under those conditions, Interior's minimum flows would thus typically result in an actual flow increase through the four developments of only 16, 7, and 5 cfs for those three months, respectively, over a minimum flow of 15 cfs.

Brown trout stocked by Maine DIFW are probably present in the Rice Rips bypass reach from May to mid-June and from mid-September through October. The Final EIS determined that adult brown trout habitat in the bypass reach would be maximized at a flow of 27 cfs; thus, Interior's recommended 25-cfs flow would provide nearly the maximum available habitat. The EIS also determined that, at a flow of 16 cfs, 94 percent or more of the maximum brown trout habitat would be available. Under the original license, the bypass reach received leakage flows of 12 to 15 cfs during non-generation periods. FPL Hydro asserts that the Article 401 flows of 25 cfs for this bypass reach are unnecessary, because the leakage flows, roughly equivalent to the flows proposed in the application, were sufficient to allow the establishment of a brown trout fishery and would provide most of the necessary habitat.

FPL Hydro argues that the cost of Interior's minimum flows greatly outweighs any possible benefits. Citing figures from the Final EIS, FPL Hydro states that, while adopting the 15-cfs minimum flow would reduce project generation on Messalonskee Stream by only 0.848 gigawatt hours (GWh), adopting the 100-cfs minimum flow, with the 25-cfs flow in the Rice Rips bypass reach, would reduce annual project generation by 3.484 gigawatt hours (GWh). Adopting Interior's minimum flows would also increase the annual cost of lost generation to \$66,200, as opposed to \$20,500 using the 15-cfs minimum flows. FPL Hydro notes that this would represent a 310 percent annual increase in generation losses and a 222 percent annual increase in the value of lost generation, and that adoption of Interior's flows would result in a 70 percent decrease in summer generation on the stream.<sup>7</sup> FPL Hydro asserts that Interior's recommended flows would result in a 22 percent loss of kilowatt hours of the combined power generation at all of the developments on the stream. In respect to Rice Rips, FPL Hydro, again citing the EIS, states that the higher, 25-cfs, minimum flow in the bypass reach would result in an increase in annual lost generation at that development, over the 15-cfs flow, from

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<sup>6</sup>While 100-cfs flows would provide the maximum WUA, the WUA would decrease as flows either increase or decrease from that level.

<sup>7</sup>These figures include generation losses and lost generation costs at the combined Messalonskee developments, including the Automatic Project.

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0.295 GWh to 0.355 GWh, and an increase in the annual cost of lost generation from \$5,800 to \$6,900. Because the proposed 15-cfs minimum flow would provide most of the maximum brown trout habitat in the Rice Rips bypass and the Union Gas tailwater, FPL Hydro asserts that the habitat increases in these reaches using Interior's minimum flows are not justified by the disproportionate costs.

In adopting the recommended flows, we were aware of the circumstances, including the habitat gains and generation losses, to which FPL Hydro draws our attention, inasmuch as they were documented in the EIS. FPL Hydro is correct that, because flows are generally low from July through September, the maximum WUA for brown trout will usually not be attainable during these months. We also recognize that the 15-cfs flow regime would provide most of the available habitat for brown trout in both reaches. We acknowledge that adopting Interior's flow regime would reduce project generation, especially in the summer, and that this loss in generation would reduce the average annual value of the project's power.

However, as noted in the license order, Commission staff determined that the annual cost of providing Interior's 100-cfs minimum flow at all of the Messalonskee developments (including the Automatic Project) would be only 5.3 percent of the annual power value.<sup>8</sup> The staff also determined that, while the combined Messalonskee developments would be able to generate only about 3 percent of the time during the summer with a release of 100 cfs, they would be able to generate only about 10 percent of the time under existing conditions, which approximate the release of FPL Hydro's proposed flows. FPL's assertions, which mainly restate circumstances we have already considered, do not alter the fact that some gains in available habitat could be achieved with a loss of a relatively small percentage of the project's power benefits.

FPL Hydro also asserts that release of the required flows during the summer months will severely restrict its ability to accomplish a partial refill of Messalonskee Lake during low inflow periods. Although Maine DEP has stated that Interior's minimum flows would not conflict with the water quality certification minimum flow condition, FPL Hydro argues that it may not be able to maintain the level of Messalonskee Lake required by the certification if it must release not only the 15 cfs required by the

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<sup>8</sup>As noted, FPL Hydro asserts that Interior's flows would result in a 22 percent loss of kilowatt hours of generation. FPL Hydro contends that this figure (its own estimate), rather than staff's 5.3 percent, represents the cost of lost generation. However, the figures are not comparable. Staff estimated the percent loss in power value, while FPL Hydro estimated the percent loss of generation.

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certification at all times, but also Interior's higher minimum flows when they are available.<sup>9</sup>

We acknowledge that, if FPL Hydro is required to release 100 cfs or inflow during the summer months, inflow that could have been used for partial refill of Messalonskee Lake will have to be released through all project developments. Since FPL Hydro is also required by the water quality certification to release 15 cfs from Messalonskee Lake even when inflow is lower, its inability to refill the lake when somewhat higher inflows occur could cause the lake to drop below the levels specified in the certification. It is unclear how often this situation might actually be encountered. However, the water quality certification appears to provide relief from this conflict by requiring that the lake levels be maintained "[e]xcept as temporarily modified by . . . (2) inflows to the project area." This indicates that, if there is insufficient inflow to keep the lake at the specified levels while the licensee is releasing the 15 cfs required by the certification, the state would not consider the licensee to be in violation of the certification conditions.

Although we do not find FPL Hydro's arguments persuasive on the points discussed above, we agree with FPL Hydro that the recommended flows are not supported by substantial evidence. This lack of support also alters our evaluation of the recommendations' consistency with the FPA's comprehensive development standard.

As noted, Maine DIFW's management goal for the Union Gas tailrace is to maximize fishing opportunity for brown trout from May 1 through June 15, and for the latter half of September. FPL Hydro argues that our license order does not explain what the needs of a recreational brown trout fishery are at different times of the year, and why maximization of brown trout habitat can be achieved only by requiring 100-cfs minimum flows at all times throughout the year. FPL Hydro particularly questions the need for these higher flows in light of the progression of the fishery from an experimental to an established one under the existing flow regime. Further, FPL Hydro contends that there is no evidence that providing maximum habitat rather than 75 percent habitat is required to support a fishable population of brown trout in the tailrace, especially considering that current fishing access sites are at less than 25 percent capacity even though a fishable trout population exists. As to the fishery in the Rice Rips bypass reach, FPL Hydro states

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<sup>9</sup>The certification provides that the licensee must maintain Messalonskee Lake within 0.5 foot of full pond from June 1 through August 31 and within 1.0 foot of full pond from September 1 through May 31, and that the licensee shall use the top 0.5 foot of Messalonskee Lake to augment natural flows to meet the 15-cfs minimum flow requirement.



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that there is no substantial evidence that increasing the minimum flow from 15 to 25 cfs will have any significant beneficial impact on the trout fishing opportunity.

Reviewing the record, we find that we have no convincing responses to FPL Hydro's arguments. Interior's recommendations were grounded almost wholly on the premise that, according to the licensee's flow study, 100-cfs and 25-cfs flows would provide the maximum habitat for brown trout in the Union Gas tailrace and Rice Rips bypass reach, respectively. While there is no dispute that this study accurately determined the extent of habitat that would be produced if these flows were available, we can find no evidence that these fisheries would actually benefit from this additional habitat. The fisheries in both the tailrace and the bypass reach are managed by Maine DIFW to maximize brown trout availability at particular times of the year. The record demonstrates that fisheries have in fact developed in these reaches under existing flow conditions. Recreational use of the fishery appears to be limited, as use of unimproved recreation sites at both Union Gas and Rice Rips are at 25 percent or less capacity on weekends during the recreational season.<sup>10</sup> The establishment of the existing fishery and the limited use of the fishery suggest that the modest additional habitat that would be produced under Interior's flow regime is not warranted. The substantial evidence test is not met merely by the general assumption that additional habitat is beneficial for fish.

Because the recommendations lack substantial evidence, the balancing of benefits and costs that underlay our adoption of Interior's recommendations no longer applies. Although the reduction of generation under Interior's flow regime would result in the loss of a relatively small percentage of the total project power benefits, this loss of generation and power benefits would not be inconsequential. There is no justification for imposing these costs if there are no demonstrable benefits to outweigh them. Therefore, we also find that Interior's recommended flows are inconsistent with the comprehensive development standard of Section 10(a)(1) of the FPA.<sup>11</sup>

Because Interior's recommendations entail costs that outweigh any benefits to fish and are not reasonably related to the goal of maintaining or enhancing the fisheries in the

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<sup>10</sup>Final EIS at pp. 3-153 to 154.

<sup>11</sup>We note that, in its Section 10(j) recommendations, Interior stated that the 1,900-foot reach between the Messalonskee Lake dam and the Oakland impoundment would also benefit from the increased minimum flow. This statement does not alter our conclusions, as we can find no evidence in the record to indicate that any fishery in that reach would be improved by the higher releases.

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Messalonskee Stream,<sup>12</sup> we will modify Article 401 to require that a minimum flow of 15 cfs be released at all times from all of the project developments and from the Rice Rips bypassed reach.

2. Other requests.

In a letter accompanying the request for rehearing, FPL Hydro requested several other actions.<sup>13</sup>

FPL Hydro asks that we modify the language of Article 402 to conform to the language contained in the water quality certification issued for the project. Article 402 pertains to maintenance of pond levels and allows for the maximum drawdown limits to be "temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement" among the licensee and specified resource agencies. The water quality certification provides that the pond water levels shall be maintained "except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicant's control [definition omitted], (4) flashboard failure, or (5) upon mutual agreement" between FPL Hydro and Maine DEP.

The water quality certification appears to offer greater flexibility in modifying the drawdown limits than does Article 402. Since water quality certification conditions are mandatory license conditions, we would not apply Article 402, even with its present wording, to restrict those situations in which the licensee may modify the drawdown

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<sup>12</sup>See City of Centralia, Washington v. FERC, 213 F.3d 742 at 750 (2000).

<sup>13</sup>Some of these actions have already been taken by Commission staff pursuant to delegated authority. FPL Hydro indicated that it would be requesting an amendment of the license to reflect changes to the project facilities and lands that had been incorporated into the original license, but that had not been reflected in the order issuing a new license. It requested a stay of the requirement to file aperture cards of approved exhibits and drawings contained in Article 204 until after Commission action on the proposed application for amendment. It also requested the deletion of the Article 204 requirement to file Form FERC-587, relating to federal or public lands, with the aperture cards, since the Messalonskee Project includes no such lands. In addition, FPL Hydro asked for an extension of time to file the minimum flow release plan required by Article 405, since it was requesting rehearing of the minimum flow requirement. In an order issued October 13, 1999, the Chief, Engineering Compliance Branch, granted these requests. 89 FERC ¶ 62,022.

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limits under the certification. Nevertheless, to avoid any confusion in administering the license, we will modify Article 402 to encompass the certification's conditions for deviation from the pond levels.

We will make one other change, not requested by the licensee, to Article 402. Article 402 relates the drawdown requirements to a full pond elevation of 235.9 feet mean sea level (msl). Although this figure was referred to in the EIS and represented the full pond elevation of the lake at one time,<sup>14</sup> later reconstruction of the Messalonskee Lake dam resulted in a normal full pond elevation of 235.4 feet msl.<sup>15</sup> We will modify Article 402 to correct this inaccuracy.

FPL Hydro also asks that Article 404 be modified to remove language relating to the provision of notice to resource agencies prior to drawdowns of up to eight feet for flood control. The Messalonskee Project would have no flood storage drawdown of this magnitude. This language was inadvertently included in Article 404, and we will remove it.

FPL Hydro also asks that we modify Articles 409 and 411 by removing the requirement to consult with the Natural Resources Conservation Service (NRCS) regarding recreation plans, because FPL Hydro has not heard of the NRCS, and because the NRCS has never been involved with the project. The NRCS is an agency within the U.S. Department of Agriculture that administers programs dealing with wetlands, buffers, and other watershed protection programs. The NRCS has expertise which may be useful in preparing the recreation plans. Accordingly, we will not remove the requirement to consult with the NRCS from Articles 409 and 411.

For the reasons stated above, we grant FPL Hydro's request for rehearing of the minimum flow requirement in Article 401. We are also modifying Article 402 to conform with the language of the water quality certification and Article 404 in accordance with our discussion in this order.

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<sup>14</sup>See Central Maine Power Company, 21 FERC ¶ 62,481(1982).

<sup>15</sup>Revised exhibits reflecting this change were approved in Central Maine Power Company, 65 FERC ¶ 62,075 (1993). The text of the water quality certification also refers to a full pond elevation of 235.4 feet msl, although the certification conditions themselves do not specify a full pond elevation figure.

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The Commission orders:

(A) The request for rehearing filed by FPL Maine Hydro LLC in this proceeding is granted to the extent indicated in this order.

(B) Article 401 of the license issued July 28, 1999 for this project is modified to read as follows:

Article 401. Within 60 days of the installation of water level and streamflow monitoring devices required by Article 404, the licensee shall release minimum flows for the protection and enhancement of water quality and aquatic resources in Messalonskee Stream and the Kennebec River.

The licensee shall release instantaneous minimum flows of 15 cfs from Messalonskee Lake and from the Oakland, Rice Rips, and Union Gas developments as measured in the Union Gas tailrace immediately downstream of the Union Gas dam, and an instantaneous minimum flow of 15 cfs to Messalonskee Stream as measured immediately downstream of the Rice Rips dam.

Minimum flow releases from the developments may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, and the Maine Department of Environmental Protection. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

(C) Article 402 is modified to read as follows:

Article 402. Within 60 days of installation of water level and streamflow monitoring devices required by Article 404, the licensee shall manage impoundment fluctuation levels for the protection and enhancement of water quality and aquatic resources in Messalonskee Stream and the Kennebec River.

The licensee shall limit the maximum draw-down of water levels in Messalonskee Lake to within 0.5 foot from June 1 to August 31, and 1.0 foot for the remainder of the year, of full pond elevation of 235.4 feet mean sea level. The top 0.5 foot of Messalonskee Lake shall be managed to provide the guaranteed 15-cfs minimum flows required in Article 401 of this license. The licensee shall limit the maximum draw-down of water levels in the Oakland impoundment to 1.0 foot of full pond elevation of 207.1 feet mean sea level. The licensee shall limit the maximum draw-down of water levels in the Rice Rips impoundment to 1.0 foot of full pond elevation of 139.1 feet mean sea

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level. The licensee shall limit the maximum drawdown of water levels in the Union Gas impoundment to 1.3 foot of full pond elevation of 69.1 feet mean sea level.

The maximum drawdown limitations may be temporarily modified if required by operating emergencies beyond the control of the licensee, approved maintenance activities, inflows to the project area, flashboard failure, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, and Maine Department of Environmental Protection. If the drawdown limitations are so modified, the licensee shall notify the Commission as soon as possible, but no later than ten days after each such incident. Notification of drawdowns that exceed the restriction for Messalonskee Lake or any of the three impoundments from ice-out through and including July 31 shall include the reason for the drawdown and documentation of prior consultation with the Maine Department of Inland Fisheries and Wildlife.

(D) Article 404 is modified to read as follows:

Article 404. Within six months of license issuance, the licensee shall file for Commission approval a plan to install, operate, and maintain water level and streamflow monitoring equipment necessary to monitor and record compliance with the minimum flows required by Article 401, impoundment drawdown limits required by Article 402, and downramping at Union Gas required by Article 403.

The plan shall include, but need not be limited to: a schedule for installing the monitoring equipment; the proposed location, design, and calibration of the monitoring equipment; the method of data collection; and a provision for providing the data to the consulted agencies, within 30 days from the date of the agencies' request for the data. This plan may incorporate existing monitoring equipment as long as it meets the standards of the U.S. Geological Survey.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Geological Survey, Maine Department of Inland Fisheries and Wildlife, Maine Department of Marine Resources, and Maine Department of Environmental Protection.

The licensee shall include with the plan documentation of agency 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 30 days for the agencies to comment and to make recommendations before filing the plan

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with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific information.

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

By the Commission.

( S E A L )

  
David P. Boergers,  
Secretary.

APPENDIX 1-3

Order Modifying and Approving Minimum Flow Release  
Issued June 1, 2001

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

FLP Energy

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Project No. 2556-030 &amp;-035

ORDER MODIFYING AND APPROVING MINIMUM FLOW RELEASE AND  
MONITORING PLANS UNDER ARTICLES 405 AND 404, RESPECTIVELY

(Issued June 1, 2001)

FLP Energy (licensee) filed, on April 3, 2000, and supplemented on April 17, 2000, under article 405 of the original license,<sup>1</sup> its plan to release minimum flows required by article 401, for the Messalonskee Project. The April 2000 filings also included the licensee's plan filed under amended article 404,<sup>2</sup> to monitor the flow releases, impoundment drawdown limits, and downramping requirements, required by amended articles 401 and 402,<sup>3</sup> and 403 of the original license, respectively. The project is located on Messalonskee Stream, a tributary of the Kennebec River in Kennebec County, Maine.

Article 405 required the licensee to file for Commission approval a plan to release the minimum flow required by article 401. The plan is to include the method for flow release at each development, specific measures to ensure that the minimum flow would be met at all times, an explanation of any modifications to existing facilities necessary to release the minimum flows, and design drawings, hydraulic calculations, and technical specifications for any modifications necessary to meet the minimum flow requirements.

Article 404 required the licensee to file for Commission approval a plan to install, operate, and maintain water level and streamflow monitoring equipment necessary to monitor and document compliance with the minimum flow requirement of article 401.<sup>4</sup>

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<sup>1</sup> Order Issuing New License, issued July 28, 1999, 88 FERC ¶ 61,122.

<sup>2</sup> Article 404, requiring the licensee to file a flow monitoring plan, was amended by the October 12, 2000, Order on Rehearing, 93 FERC ¶ 61,047.

<sup>3</sup> Articles 401 and 402 were amended by the October 12, 2000, Order on Rehearing, 93 FERC ¶ 61,047.

<sup>4</sup> Amended article 401 requires the licensee to release an instantaneous minimum flow of 15 cfs from Messalonskee Lake and from the Oakland, Rice Rips, and Union Gas

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with the impoundment drawdown limits of article 402,<sup>5</sup> and with the article 403<sup>6</sup> downramping requirement for the Union Gas development. The plan is to include a schedule for installing the monitoring equipment, the proposed location, design and calibration for the monitoring equipment, the method of data collection, and a provision to provide monitoring data to the consulted agencies within 30 days of the request for data. The licensee is to prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), U.S. Geological Service (USGS), Maine Department of Inland Fisheries and Wildlife (DIFW), Maine Department of Marine Resources (DMR), and the Maine Department of Environmental Protection (DEP), and documentation of consultation is to be included in the filing.

## BACKGROUND

The Messalonskee Project consists of four developments. These are, from upstream to downstream, Messalonskee Lake dam, and the Oakland, Rice Rips, and Union Gas developments. The Messalonskee Lake dams serves to control flows into the stream below; it has no generating facilities. The dams at each of the three developments downstream have one generating unit. The units are normally set to pass 570 cubic feet per second (cfs). The units do not operate below a flow of 300 cfs. Each of the developments has one or more manually operated gates at the dam. Only one gate, a taintor gate at Messalonskee Lake, can be operated remotely. Generation and pond levels can be monitored remotely.

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Union Gas dam, and an instantaneous minimum flow of 15 cfs into Messalonskee Stream as measured immediately downstream from the Rice Rips dam.

- 5 Amended article 402 requires the licensee to limit the maximum drawdown of Messalonskee Lake water levels to 0.5 ft below the full pond elevation of 235.4 ft mean sea level from June 1 through August 31, and to 1.0 ft the rest of the year. The top 0.5 ft is to be managed to provide the required 15 cfs continuous minimum flow. The licensee is to limit the maximum drawdown of the Oakland impoundment to 1.0 ft below the full pond elevation of 207.1 ft mean sea level. The licensee is to limit the maximum drawdown of the Rice Rips impoundment to 1.0 ft below the full pond elevation of 139.1 ft mean sea level
- 6 Article 403 requires the licensee to restrict the rate at which the wicket gates at the Union Gas development are closed, to prevent fish stranding. Closures from 70 percent open to 40 percent open are to occur over a fixed 30-minute period, resulting in a gradual gate reduction of one percent closing per minute. No restrictions apply to wicket gate closings from 100 percent open to 70 percent open, or from 40 percent open to completely closed.

The decision to operate the system is wholly dependent on inflow to Messalonskee Lake from upstream lakes, which are managed for recreational water levels. If there is adequate flow for operation, an operator visits each development in the morning, opening or checking gates at Messalonskee Lake, and proceeds downstream to start or check the units. The same sequence is followed at the end of the generating shift(s), to shut the units down. Only the Union Gas development can be started and stopped remotely. Further, Union Gas cycles automatically, based on a pond level sensor, which starts the unit at full pond and shuts it off when the pond is lowered by 1.3 feet (ft).

Article 401 of the original license required the licensee to maintain a continuous minimum flow of 100 cfs from Messalonskee Lake through the project's developments. The October 12, 2000 Order on Rehearing amended article 401 to require a continuous minimum flow of 15 cfs from Messalonskee Lake through the project's developments (see footnote 4). A further Order on Rehearing issued April 2, 2001<sup>7</sup> upheld the amended minimum flow requirement of 15 cfs.

#### LICENSEE'S MINIMUM FLOW RELEASE PLAN UNDER ARTICLE 405

Currently, at Messalonskee Lake, a single taintor gate can be opened remotely; a slide gate and a second taintor gate are set manually on site. A single manually operated radial gate exists at the Oakland development. The licensee proposes to install a new spillway gate at the Rice Rips development. At the Union Gas development, there are three manually-operated deep release gates.

The licensee proposed to open one of two taintor gates at the Messalonskee Lake dam, to maintain the required minimum flow during periods of non-generation. One of the two gates can be operated remotely from the project control center at Weston Station. Switching between generation and non-generation modes would require changing the opening of the taintor gate from the setting for effective generation to the setting necessary to pass inflow, or the minimum flow, whichever is greater.

At Messalonskee Lake, passing the minimum flow will require reading the pond level hourly and controlling the opening of a taintor gate to keep a constant pond level, to assure that inflow is passed. At a point when the inflow and release becomes less than 15 cfs, the pond level would be allowed to drop as necessary to supplement inflow to maintain minimum flows, until the pond reaches 0.5 ft below full pond in summer or 1.0 ft below full pond during the remainder of the year. At the time the pond reaches the

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<sup>7</sup> 95 FERC ¶ 61,016.

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drawdown limit, the gate would be closed to maintain pond level within the required limit.

At the Oakland development, the licensee proposed to pass the minimum flow through the generating unit during periods of generation. Because this pond is very small and is normally operated near full, the flow would quickly begin passing over the spillway whenever generation stops. There is also a gate at the dam, which can be opened manually, if necessary. The gate is capable of passing 100 cfs at its fully open position.

At the Rice Rips development, the licensee would install two new gates at the dam in order to consistently pass the minimum flow into the bypassed reach. The new gates would be installed in the dam bay where, currently, a set of hinged steel flashboards exist. One gate will be remotely adjustable to accommodate varying headpond levels or inflow volumes. The gate's maximum capacity would be 100 cfs at fully open with the headpond one foot below full. During periods of generation the minimum flow would be passed through the generating unit. During periods of non-generation, the gate would be opened to pass minimum flow or inflow, whichever is greater.

At the Union Gas development, the minimum flow would be passed through the generating unit during periods of generation. During periods of non-generation, the minimum flow would be passed through a deep gate. There are three motor-operated deep gates at the dam, each capable of releasing 100 cfs at an opening of 0.75 ft with the pond at 1.3 ft below full pond. One gate would be modified to be opened remotely when the generating unit shuts down.

The licensee stated it has a preliminary design for the Rice Rips gates, which requires the removal of the existing hinge boards from the sluiceway, modification of the concrete sill, and installation of the new gates and supporting steel. The design calls for two gates, one 4 ft, six inches wide, the other 8 ft, 8 inches wide. The smaller gate would pass 25 cfs when open 0.75 ft, and 90 cfs when fully open; the larger gate would pass 50 cfs when open 0.75 ft, and 180 cfs when fully open. One of the gates would be remotely adjustable to allow the licensee to accommodate varying headpond elevations and inflows.

The licensee proposed to implement the plan following its approval by the Commission.

## LICENSEE'S MONITORING PLAN UNDER ARTICLE 404

The licensee proposed to record the minimum flows (required by article 401) and pond levels (required by article 402) using a computer system which manages the project's automated functions. This recorded data would be used to document compliance with the minimum flow and pond level requirements at the project. The computer system currently records headpond elevation (except for Rice Rips) and generator output for the developments of the project. The licensee proposed to install additional monitoring equipment, with data from the additional equipment to be recorded by the computer system.

The minimum flow release at Messalonskee Lake would be documented by recording gate openings at the developments, and converted to flow volume with calculated capacity curves for the gate opening settings. The Union Gas and Rice Rips developments' gate settings would be similarly read and recorded. The gate setting would be recorded any time the gate opening is changed.

Each development would have a pond level sensor (transducer) monitor on the intake structure headwall. The sensors read water pressure and convert the data to pond level. Pond level sensors currently exist at the Messalonskee Lake, Oakland, and Union Gas developments. A sensor would be installed at the Rice Rips development. The existing sensors would be calibrated against staff gages at the dams and replaced if necessary. The sensor reading would be transmitted to the licensee's computer system continuously. The readings would be recorded hourly. The record would be maintained in electronic form for 45 days, and would be printed in hard copy daily.

The computer system will send an alarm signal to the control center anytime pond levels or minimum flows are not being met. A gate would be remotely opened and/or an operator sent to the site to take corrective action, as necessary.

The licensee proposed to control the ramping rate at the Union Gas development using a programmable logic controller. This controller would be programmed to close the generating unit gate at a rate in compliance with the ramping requirements of article 403. Alteration of the ramping rate would require a manual override of the controller system. Should the manual override of the programmed ramping rate ever be used, a record of the event would be entered in the project log, and reported as required.

The licensee stated the monitoring equipment would be in place, programmed and operational within 18 months of the plan's approval by the Commission.

**RESOURCE AGENCIES' COMMENTS AND LICENSEE'S RESPONSES**

The licensee consulted with resource agencies in preparation of the plans. The FWS commented on the licensee's minimum flow release and monitoring proposals in a March 27, 2000 letter to the licensee. The FWS stated that it generally concurred with the licensee's minimum flow release and monitoring proposals, but made additional recommendations, as follows.

The FWS recommended that, at Messalonskee Lake, at the Rice Rips and Union Gas developments, the remotely operated taintor gate be designated as the minimum flow release gate, and that its setting be automatically recorded along with the hourly pond level readings. The computer software could then, if it has the capability, automatically calculate and record the hourly minimum flow.

The licensee plans to provide minimum flows at the Oakland development during non-generation periods by allowing the water to overtop the spillway. The FWS noted that this would result in an interruption of the minimum flow during the time that the headpond rises to a level which would provide the required flow following generation shutdown. The FWS recommended that the manually operated gate always be opened when generation ceases to ensure that the minimum flow is continuously provided.

The FWS also recommended that the licensee develop a standard operating procedure that would ensure that the required minimum flow is maintained throughout the Messalonskee project at all times. It suggested that all project operator should be familiar with the procedure, including temporary and interim operators, and that copies of the procedure should be available at each development as a reference for the operators.

The NMFS, USGS, DIFW, DEP, and DMR, did not comment on the plan.

**DISCUSSION AND CONCLUSIONS**

The licensee's proposed minimum flow release plan should maintain the continuous minimum flow through the project's developments, as required by article 401, with the exception of the Oakland development. The licensee's proposal to maintain minimum flow during non-generation periods by allowing the water to rise to overtop the spillway when generation ceases would result in a period of flows below the required minimum, until the headpond rises to a level sufficient to spill 15 cfs. At the Oakland development, the licensee should either install equipment to remotely open the gate, or manually open the gate, whenever generation ceases, to ensure that the minimum flow is continuously provided. The licensee should inform the resource agencies and the Commission of which method it will use to open the gate to ensure that the minimum

flow requirement is continuously met at the Oakland development within 60 days of this order.

The FWS recommended that the remotely operated gates at Messalonskee Lake dam and at the Rice Rips and Union Gas developments should be designated as the minimum flow release gate at each of the developments. It also recommended that the remotely adjusted gate settings be automatically recorded along with the hourly pond level readings, and the computer software could then automatically calculate and record the hourly minimum flow. Implementation of these recommendations would provide the licensee with more complete operations information and provide a useful management tool. The licensee should routinely use the remotely controlled gates to release the minimum flow. Manually operated gates should be used only when the the remotely operated gates cannot be used, for whatever reason.

The licensee stated it would implement its plan to release the minimum flow upon Commission approval. The licensee's minimum flow release plans also includes plans to install new gates in the place of the current flashboards at the Rice Rips development, and to install equipment to allow remote operation of gates at the Rice Rips and the Union Gas developments. The licensee did not propose a schedule for installing the new equipment and project features. Pursuant to paragraphs 12.4, 12.11, and 12.40 of the Commission's regulations, a plans and specifications package should be submitted to the Commission's Regional Director. Authorization to start construction activities will be given by the Regional Director after all preconstruction requirements are satisfied. Within 90 days of completion of the new gates at the Rice Rips development, the licensee should file for Commission approval revised as-built drawings reflecting the change in project facilities.

The licensee proposed to have the monitoring equipment in place, programmed and operational within 18 months of the plan's approval by the Commission. This is an unusually long period of time to delay the documentation of project operations. The licensee should have the monitoring equipment in place, programmed and operational at each of the project developments within 60 days of its completion of the installation of new flow release equipment and facilities at that development. Within 60 days of the date of this order, the licensee should file with the Commission a schedule for the installation of the monitoring equipment at Messalonskee Lake and at each of the project's developments.

The licensee's proposed plan to monitor minimum flow releases, impoundment elevation, down ramping, as required by article 401, 402, and 403, should allow the licensee to document project operations and compliance with the license requirements.

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The licensee's proposed minimum flow release and monitoring plans, with the discussed modifications, should allow the licensee meet the license requirements and, therefore, be approved.

The Director Orders:

(A) The licensee's minimum flow release and monitoring plans, filed on April 3, 2000, and supplemented on April 17, 2000, under articles 405 and 404, respectively, as modified by paragraphs (B) through (G), are approved.

(B) The licensee shall, at the Oakland development, either install equipment to remotely open the gate or manually open the gate, whenever generation ceases, to ensure that the minimum flow is continuously provided. The licensee shall submit to the resource agencies and file with the Commission the details of the method it will use to open the gate to ensure that the minimum flow requirement is continuously met at the Oakland development within 60 days of this order.

(C) The licensee shall designate the remotely operated gates at Messalonskee Lake and at the Rice Rips and Union Gas developments as the minimum flow release gate at each of the developments. The licensee shall routinely use the remotely controlled gates at each of the developments to release the minimum flow.

(D) Pursuant to paragraphs 12.4, 12.11, and 12.40 of the Commission's regulations, the licensee shall submit a plans and specifications package to the Commission's Regional Director, prior to starting construction activities to install new gates in the place of the current flashboards at the Rice Rips development, and to install equipment to allow remote operation of gates at Messalonskee Lake dam and the Union Gas development.. Authorization to start construction activities will be given by the Regional Director after all preconstruction requirements are satisfied.

\* ~~(E) Within 90 days of completion of the new gates at the Rice Rips development, the licensee shall file for Commission approval revised exhibit drawings to describe and show the gates as built.~~

(F) The licensee shall have the monitoring equipment in place, programmed and operational at each of the project developments within 60 days of its completion of the installation of new flow release equipment and facilities at that development. Within 60 days of the date of this order, the licensee shall file with the Commission a schedule for the installation of the monitoring equipment at Messalonskee Lake and at the Oakland, Rice Rips, and Union Gas developments.

\* DELETED by IP(C) of ORDER AMENDING ORDER MOD/APPR ... 404 AND 405 RESPECTIVELY: FEB. 21, 2002. see Order.

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(G) If the minimum flow, as measured by the approved gage, falls below the 15 cfs minimum flow required flow under amended article 401, and inflows exceed the required minimum flow, the licensee shall file a report with the Commission within 30 days of the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with article 401; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(H) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

The Secretary  
Federal Energy Regulatory Commission  
Mail Code: DHAC, PJ-12.3  
888 First Street, NE  
Washington, DC 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

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

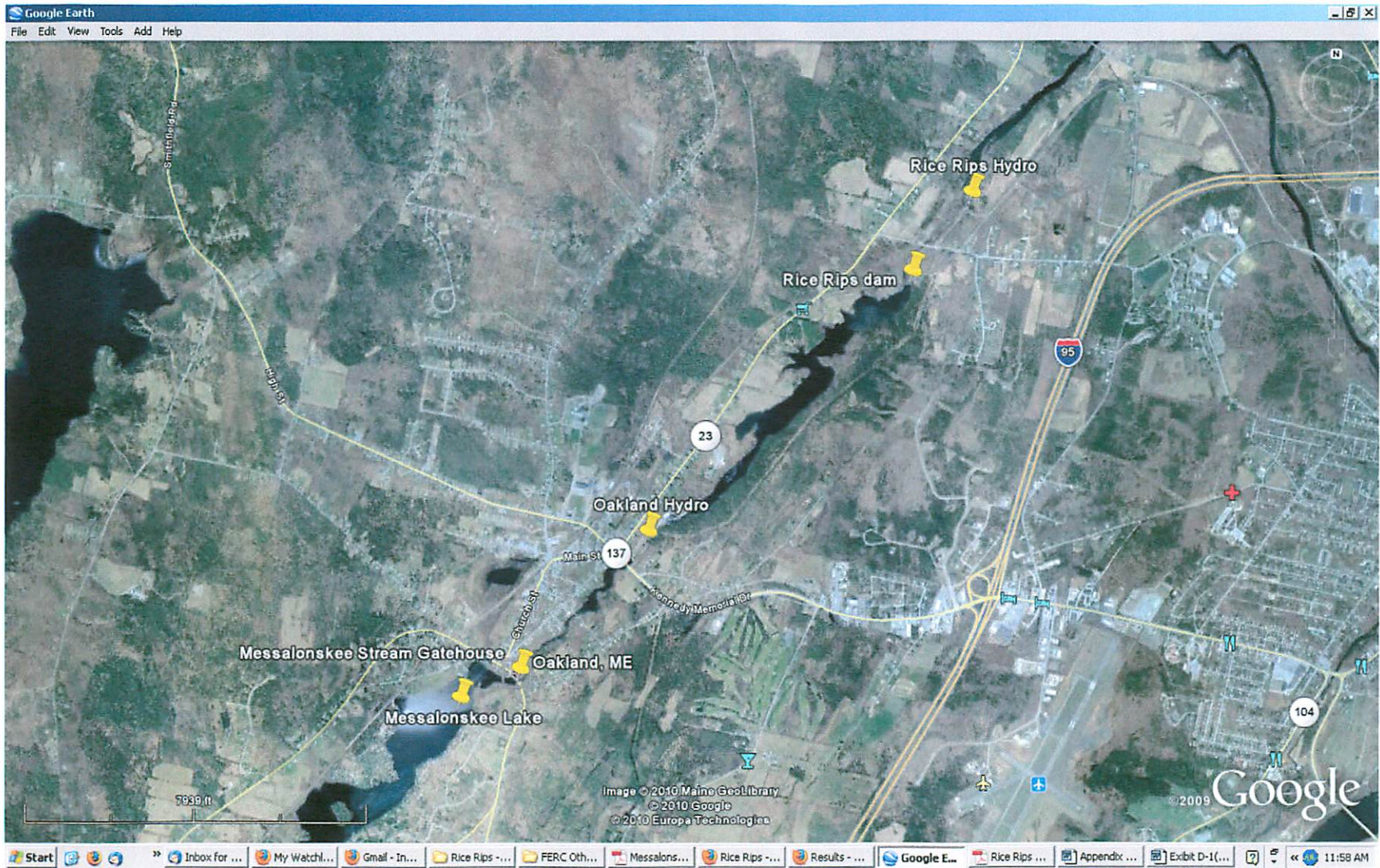
  
George H. Taylor  
Group Leader  
Division of Hydropower Administration  
and Compliance



APPENDIX 3-1

Rice Rips Hydroelectric Station

# RICE RIPS HYDROELECTRIC FACILITY



APPENDIX 3

Rice Rips Hydroelectric Project  
Location and Operations

## Appendix 3

### Rice Rips Hydroelectric Project

#### Location and Operations

The Rice Rips hydroelectric facility (the Rice Rips Facility) is located 2.3 miles downstream of the Messalonskee Lake on the Messalonskee Stream in the town of Oakland, Maine (see Appendix 3-1). The hydroelectric station was constructed at the site of the existing Rice Rips dam. Project works consist of a 220-foot-long dam with 5-foot-high flashboards; a 10-foot diameter wood stave penstock which is 2,292-feet long and empties into a surge pond that is 150 feet in diameter; a powerhouse containing one 1.6-MW generator; and a 1.6-mile-long impoundment with a gross storage capacity of 1,000 acre-feet.

Operation of the Rice Rips Facility is dependent on inflow to Messalonskee Lake and discharge from the upstream Oakland Hydroelectric project. When inflow to Messalonskee Lake is greater than approximately 570 cfs, the Rice Rips project is operated as a run-of-river project. When inflow is less than approximately 570 cfs the project is cycled. 15 cfs is discharged at all times through the Rice Rips bypass. All additional water that does not go through the turbines is passed first through a minimum flow discharge gate set to discharge 15 cfs and then surplus water is discharged over the spillway. MSH utilizes the top 0.5 feet of Messalonskee Lake as storage for generation during the summer months (1.0 foot during the winter months). The applicant only utilizes the top 0.5 feet because the lake is regulated and operated for recreational purposes. During the summer months, if the lake level is reduced by more than 0.5 feet camp owners on the lake complain because of the effect on their docks. The top 0.5 feet of lake provides roughly 1,500 acre-feet of storage.

APPENDIX A-1

State of Maine Department of Environmental Protection  
Water Quality Certification



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE HOUSE STATION 17                      AUGUSTA, MAINE 04333

(AUTOMATIC DEVELOPMENT)  
(SUBSEQUENTLY TRANSFERRED)

DEPARTMENT ORDER

IN THE MATTER OF

CENTRAL MAINE POWER COMPANY	)	
SIDNEY, BELGRADE, OAKLAND, WATERVILLE)	)	MAINE WATER QUALITY PROGRAM;
KENNEBEC COUNTY, MAINE	)	FEDERAL CLEAN WATER ACT
MESSALONSKEE PROJECT	)	
#L-17585-33-D-N	)	WATER QUALITY CERTIFICATION
#L-17585-32-D-N                      (APPROVAL)	)	

Pursuant to the provisions of 38 M.R.S.A. Section 464 et seq. and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of CENTRAL MAINE POWER COMPANY with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

- a. Application: The applicant proposes the continued operation of the existing Messalonskee Project, located on Messalonskee Stream in the Towns of Sidney, Belgrade, Oakland, and the City of Waterville, Kennebec County, Maine (See Exhibit 1).
- b. Existing Project Features: The project consists of a water storage dam and 4 discrete hydroelectric generating facilities. The only commonality between the projects is that they are all operated to utilize flow provided by the uppermost dam, the Messalonskee Lake Dam.

Messalonskee Lake Development: The Messalonskee Lake Dam was rebuilt in 1992. The dam consists of a 54-foot long, 7-foot high concrete spillway dam with a crest elevation of 231.9 feet, plus 3.5 foot high flashboards, and a gatehouse section containing two 12-foot wide, 10.75 foot high, taintor gates (See Exhibit 2). The normal full pond level of Messalonskee Lake is at elevation 235.4 feet, has a surface area of 3,600 acres and an estimated 3,400 acre-ft of usable storage at a 1 foot drawdown. This dam is operated to maintain the level of Messalonskee Lake and provide storage for the 4 downstream hydro stations.

Oakland Development: Oakland consists of a dam, intake structure, penstock, powerhouse, and impoundment (See Exhibit 3). The dam is a gravity structure measuring 115 feet in length which includes a spillway and a gated section. The total head of the dam is 67.3 feet. The crest of the spillway is at elevation 207.1 feet. The intake is integral with the dam and has trashracks upstream of the gates. Water flows through the intake and into a 10-foot-diameter fiberglass and steel penstock. The concrete surge tank is 21 feet high. The powerhouse is a concrete structure measuring 38 feet 10 inches square. The powerhouse contains a single vertical Francis turbine rated at 2,800 kW at a head of 67.3 feet. The maximum hydraulic capacity of the unit is 590 cfs. The impoundment formed by the dam is 1,900 feet long, has a normal surface elevation of 207.1 feet, and has a surface area of 10 acres. The bypass reach that is created by the penstock is approximately 500 feet long and the substrate is exposed ledge.



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Rice Rips Development: Rice Rips is located 1.9 miles downstream from Oakland. It consists of a dam, an intake structure, penstock, surge pond, powerhouse, and impoundment (See Exhibit 4). The dam is a concrete Ambursen dam measuring 220 feet in length and has an intake section, a hinged flashboard section, an overflow spillway section, and two earthen embankments. The flashboards are 5 feet high with a crest elevation of 139.1 feet. The concrete intake section is integral with the dam and conveys water to the 10-foot-diameter penstock of wood stave construction. The penstock is 2,292 feet long and empties into a surge pond that is 150 feet in diameter. Water flows from the surge pond into the concrete powerhouse which measures 42.5 feet by 30.5 feet. The powerhouse contains a single, vertical Francis turbine rated at 1,600 kW at a head of 42.4 feet. The maximum hydraulic capacity of the unit is 630 cfs. The impoundment formed by Rice Rips dam is approximately 1.6 miles long, has a normal surface elevation of 139.1 feet, and has a surface area of 87 acres. The bypass that is created by the penstock is approximately 2400 feet in length and consists of coarse and cobble/gravel substrate.

Automatic Development: Automatic is approximately 5 miles downstream of Rice Rips and consists of a dam with integral powerhouse and an impoundment (See Exhibit 5). The dam is a concrete gravity structure measuring 80 feet in length. The dam has a spillway section, a gated section, and a non-overflow section. The dam is also equipped with flashboards that are 1.9 feet high. The crest of the spillway is at elevation 92.4 feet. The powerhouse contains 1 horizontal Francis turbine rated at 800 kW at a head of 23 feet. The maximum hydraulic capacity of the turbine is 615 cfs. The impoundment formed by Automatic is approximately 4.5 miles long, has a normal surface elevation of 94.3 feet, and has a surface area of approximately 68 acres.

Union Gas Development: Union Gas is the furthest downstream of the Messalonskee Project generating facilities (See Exhibit 6). Union Gas consists of a dam, an adjacent powerhouse, and an impoundment. The dam has an earthen section and a stone masonry structure consisting of a non-overflow section, a gated section, a spillway and an intake section. Total length of the dam is 343 feet. The spillway has a crest elevation of 67.6 feet. The dam is equipped with flashboards that are 1.5 feet in height. The powerhouse contains a single vertical Francis turbine rated at 1,500 kW at a head of 37.8 feet. The maximum hydraulic capacity of the unit is 660 cfs. The impoundment formed by Union Gas is approximately 1.5 miles in length, has a normal surface elevation of 69.1 feet, and a surface area of 25 acres. The usable storage of the impoundment is estimated to be 30 acre-feet at a 1.3 foot drawdown.

- c. Existing Project Operation: As previously discussed, the Messalonskee Project consists of a water storage dam and four hydroelectric generating facilities. The Messalonskee Lake water storage development is operated to provide water releases of approximately 570 cfs to the four downstream hydro stations. This is the most efficient flow for overall generation at the four stations. Once flow is released from Messalonskee Lake, each station is manually brought on-line by a traveling operator. During the summer months the 570 cfs is passed downstream until Messalonskee Lake is

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drawn down by 0.5 foot; at that lake level, the gates are closed and the lake begins to refill with inflow. During the winter months the lake is drawn down by 1.0 foot. Water flow from the upstream lakes is controlled by DEP water level order L-11097-36-A-N, dated October 30, 1985. Historically, during periods when generation flows were not being released, only leakage flows were passed downstream from Messalonskee Lake. Leakage was estimated at 12-15 cfs. In 1992 the Messalonskee Lake Dam was rebuilt and two new gates were installed. The gates are capable of passing the historical leakage flow.

When inflow to Messalonskee Lake is greater than 570 cfs, the projects are essentially operated run-of-river. All water that does not go through the turbines is passed as spillage.

When inflow to Messalonskee Lake is less than 570 cfs, the project cycles. Generation releases will generally occur daily from mid-September through early June. For the first part of this period, September through February, the generation cycle usually lasts either 8 or 16 hours per day. From February into June, the cycles are usually longer, lasting either 16 or 24 hours. During the remainder of the year, mid-June through mid-September, there may only be sufficient inflow to generate for a single 8-hour cycle per week. These generation periods are dependent upon inflow into Messalonskee Lake. After the generation flow ceases, the four generation stations are taken off-line. The first three hydro stations below Messalonskee Lake operate run-of-river, with outflow equaling inflow. The fourth project, Union Gas Development, has a computer controlled water level management system which automatically brings the station on-line when its impoundment level is full and automatically goes off-line when the impoundment has been drawn down 1.3 feet. When Messalonskee Lake is cycled, the lake level fluctuates by 0.5 feet during the summer months and 1.0 foot during the winter months.

d. Summary of Proposal: The applicant proposes to operate the project in accordance with several measures for the protection or enhancement of, or mitigation of impacts on, public resources. These measures include:

- Maintaining water levels in each of the project impoundments to within one foot of full pond elevation, except Messalonskee Lake which will be limited to a 6-inch fluctuation during the summer months, 1.0 foot during the winter, and Union Gas impoundment which will fluctuate up to 1.3 feet below normal full pond elevation;
- Providing a year-round minimum flow of 15 cfs through the Project including the Rice Rips bypass;
- Initiating a new downramping sequence at the Union Gas Development;
- Implementing the provisions of the "Messalonskee Lake Waterfowl Management Plan";
- Developing a new improved picnic site/day use area below the Messalonskee Lake Dam;



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- Installing an informational/interpretive sign at the Oakland Development, and installing project identification signs at all of the projects;
- Investigating the need for establishing a "green belt/multi use" area along the east side of Messalonskee Stream between the Oakland Development and the Rice Rips Development;
- Improving parking at the Rice Rips Development;
- Evaluating the feasibility of creating a carry-in access site to the Rice Rips impoundment;
- Developing a carry-in access at Colby College; and
- Installing a hard surface boat ramp on the Kennebec River.

## 2. JURISDICTION

Water Quality Certification. The proposed continued operation of the project qualifies as an "activity...which may result in (a) discharge into the navigable water (of the United States)" under the Clean Water Act (CWA), 33 UC 1251 et seq. Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity obtain a certification that the activity will comply with applicable State water quality standards.

All the projects were originally licensed as water power projects under the Federal Power Act (Oakland, including the Messalonskee Lake Dam, Project No. 2559; Rice Rips, Project No. 2557; Automatic, Project No. 2555; and Union Gas, Project No. 2556). All project licenses were issued with an effective date of May 1, 1965, and an expiration date of December 31, 1993. On February 10, 1990, the Federal Energy Regulatory Commission (FERC) granted approval for the licensee to license the four projects as a single project including five hydraulically related developments. FERC assigned the Messalonskee Project FERC No. 2555. The licensee has filed an application to continue to operate the Messalonskee Project. This application is currently pending before FERC. In accordance with FERC Relicensing Regulations, the project developments are currently operating under annual licenses which will be automatically renewed each year until a relicensing decision is made.

The Department of Environmental Protection has been designated by the Governor of the State as the certifying agency for issuance of Section 401 Water Quality Certification for hydropower projects located in whole or in part in organized municipalities subject to the Department's regulatory jurisdiction. The Messalonskee Project is located in whole in the Towns of Sidney, Belgrade, Oakland, and the City of Waterville, which are organized municipalities subject to the Department's jurisdiction.

## 3. APPLICABLE WATER QUALITY STANDARDS

- a. Classification: The waters of the Messalonskee Project are currently designated as follows:

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Messalonskee Lake - Class GPA. 38 M.R.S.A. §465-A.

From the outlet of Messalonskee Lake to its confluence with the Kennebec River, including all impoundments except Rice Rips Lake - Class C. 38 M.R.S.A. §467(4)(E)(1)(a).

Rice Rips Lake - Class GPA. 38 M.R.S.A. §465-A.

- b. Designated Uses: Class GPA waters shall be of such quality that they are suitable for the designated uses of drinking water after disinfection, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation and navigation and as habitat for fish and other aquatic life. The habitat shall be characterized as natural. 38 M.R.S.A. §465-A(1)(A).

Class C waters shall be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, and navigation; and as habitat for fish and other aquatic life. 38 M.R.S.A. §465(4)(A).

- c. Numeric Standards: Class GPA waters do not have numeric standards for dissolved oxygen (DO).

The dissolved oxygen content of Class C waters shall be not less than 5 parts per million or 60% of saturation, whichever is higher. 38 M.R.S.A. §465(4)(B).

- d. Narrative Standards: Class GPA waters shall be described by their trophic state based on measures of the chlorophyll "a" content, Secchi disk transparency, total phosphorous content and other appropriate criteria. Class GPA waters shall have a stable or decreasing trophic state, subject only to natural fluctuations and shall be free of culturally induced algal blooms which impair their use and enjoyment. 38 M.R.S.A. §465-A-(1)(B)

Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. 38 M.R.S.A. § 465(4)(C).

- e. Antidegradation: The Department may only approve water quality certification if the standards of classification of the waterbody and the requirements of the State's antidegradation policy will be met. The Department may approve water quality certification for a project affecting a waterbody in which the standards of classification are not met if the project does not cause or contribute to the failure of the waterbody to meet the standards of classification. 38 M.R.S.A. § 464(4)(F).

#### 4. DISSOLVED OXYGEN

- a. Existing Conditions: The water quality in Messalonskee Stream is characterized as poor. Point source and non-point source discharges provide phosphorous loading to the stream which in turn results in

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algal blooms. The Oakland waste water treatment facility is the major point source for phosphorous loading into Rice Rips Lake. The bacterial decomposition of dead algae causes significant depletion of dissolved oxygen in the lower levels of the lake. The levels of dissolved oxygen observed have in many instances violated State water quality standards. Water quality problems in Messalonskee Stream and Rice Rips Lake are exacerbated by the existence of the dams which reduce flushing rates and natural reaeration of the water. These reduced flushing rates enhance the residence time of phosphorus which accumulates in bottom sediments. Phosphorus that is in bottom sediments can internally recycle itself, perpetuating phosphorus loading and algal blooms in the stream.

The applicant conducted a study entitled "Hydrologic Analysis of the Messalonskee Stream Drainage". The purpose of the analysis was to provide an understanding of the watershed and examine the availability of water in Messalonskee Stream. This report can be found in Appendix E-V of the application.

The Messalonskee Stream drainage is 210 mi<sup>2</sup> at its mouth. The headwaters of the stream are formed by the Belgrade Lakes. They are North Pond, East Pond, Salmon Lake, Great Pond, Long Pond, and Messalonskee Lake. The drainage area at the outlet of Messalonskee Lake is 177 mi<sup>2</sup>. 68% (121 mi<sup>2</sup>) of the drainage is above Messalonskee Lake at the Wings Mills Dam, which is the outlet dam on Long Pond.

Operation of the Messalonskee Lake hydro developments is dependent on inflow to Messalonskee Lake. As described under Existing Project Operation (pg. 2), the applicant utilizes the top 0.5 feet of Messalonskee Lake as storage for generation during the summer months (1.0 foot during the winter months). The applicant only utilizes the top 0.5 feet during the summer because camp owners on the lake complain when the water goes lower than that. The top 0.5 feet of lake provides roughly 1,500 acre-feet of storage, which is the equivalent of 25 cfs for one month (exclusive of evaporation).

The hydrologic analysis first estimated flow duration characteristics of Messalonskee Stream in an unregulated state. This was accomplished by reviewing flow information from the Nezinscot and Sheepscot Rivers. Both rivers are unregulated, in close proximity, and have similar drainage areas. The flow duration curves that were developed estimate the unregulated August median inflow to Messalonskee Lake to be 44 cfs. The analysis then accounted for evaporation. The evaporation rate was calculated to be a net loss of 0.7 inches during the month of August. This represents the loss of over 1,100 acre-feet of water, or 18 cfs of continuous flow. Applying this evaporation rate, the estimated unregulated median inflow to Messalonskee Lake in August is 26 cfs.

Once the unregulated flow into Messalonskee Lake was estimated, the effect of the DEP water level order on the availability of flows was examined. The order governs the operation of the dams at Salmon Lake, Great Pond, and Long Pond and requires that all lake levels above Long Pond be maintained as close to their respective spillway crests as possible between June 1 and Labor Day. Because the order maintains water levels for recreational purposes, there is literally no capacity to store the runoff during significant precipitation

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events. Based on flow duration curves, the median August flow from the exit of Long Pond is anticipated to be about 15 cfs. However, the order only requires a minimum flow of 8 cfs from the Wings Mills Dam; the rest of the flow is used to maintain stable water levels that may drop due to evaporation. Considering the additional 56 mi<sup>2</sup> of drainage area between Long Pond and Messalonskee Lake and the regulation of flows by the DEP Order, the adjusted August median inflow to Messalonskee Lake is estimated to be 22 cfs. This is the amount of flow available into Messalonskee Lake during the critical summer months.

The 1990 DEP report "Messalonskee Stream Summary", discusses several options for improving the water quality of Messalonskee Stream. These options included increasing minimum flows from Messalonskee Lake; complete source elimination of effluent from the Oakland treatment plant; rerouting the effluent discharge to a location downstream of Rice Rips Lake; and removal of effluent during the summer months. Complete source elimination and rerouting the effluent were ruled out as being too expensive.

The Oakland waste water treatment plant is proposing to seasonally land apply the majority of its discharge on land owned by the applicant. CMP is leasing approximately 60 acres of land to Oakland in order to greatly reduce the amount of effluent that would otherwise be discharged into the Rice Rips impoundment. Based on calculations performed by the Department, it is estimated that approximately 56,000 gallons of waste water can be applied to each acre of land per week. The treatment facility is currently licensed to discharge 480,000 gallons/day.

- b. Applicant's Proposal: The applicant proposes to pass a year-round minimum flow of 15 cfs below all four developments and in the Rice Rips bypass.
- c. Discussion: The DEP Division of Environmental Assessment (DEA) comments that implementation of a minimum flow of 15 cfs, in combination with the proposed seasonal land application of effluent from the Oakland Waste Water Treatment Plant, should allow Messalonskee Stream to meet Class C dissolved oxygen standards; however, water quality sampling should be conducted in Messalonskee Stream to document attainment of standards.

The Town of Oakland has a pending application with the Department to renew the Town's discharge license for the Oakland Waste Water Treatment Plant. As a condition of that license renewal, the Department is assigning the Town responsibility for conducting water quality sampling in Rice Rips Lake. As a condition of this certification, the Department is assigning the applicant the responsibility for sampling dissolved oxygen in Messalonskee Stream. Based on a review of dissolved oxygen sampling performed by the applicant and the sampling performed by the Town of Oakland, the Department reserves the right, after notice and opportunity for hearing, and upon consideration of the joint responsibility of the Town of Oakland and the applicant, to require structural and/or operational changes at the Oakland Waste Water Treatment Plant and/or the Messalonskee Developments as necessary to meet Class C dissolved oxygen standards.

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There is a reasonable assurance that Class C dissolved oxygen standards in Messalonskee Stream will be met if the applicant passes a minimum flow of 15 cfs through all project developments, including the Rice Rips bypass, provided the applicant monitor water quality in Messalonskee Stream. The top 0.5 feet of Messalonskee Lake shall be used for generation flows and to augment natural flows during the summer months as necessary.

5. TROPHIC STATE

- a. Existing Conditions: The only significant point source discharge to project waters occurs in Rice Rips Lake. The Oakland waste water treatment plant is licensed to discharge 480,000 gallons per day into the impoundment. Currently the plant is providing the equivalent of tertiary treatment for phosphorus removal.

A September 1992 report prepared by Department biologist Jeff Dennis, indicates the Rice Rips impoundment is not meeting classification as a result of algal blooms in the impoundment. The algal blooms are a result of high phosphorus loading from the Oakland treatment plant, internal recycling of phosphorus from the bottom sediments within the impoundment, reduced flushing due to the presence of dams, and algal washout from Messalonskee stream flow (partially controlled by the applicant), and phosphorus loading from urban and agricultural sources in the direct watershed of the impoundment.

Rice Rips Lake does not meet its GPA classification due to eutrophication from phosphorus loading. The eutrophication results in an increasing trophic state. DEA comments that the only other project water classified GPA, Messalonskee Lake, has a stable or decreasing trophic state.

- b. Applicant's Proposals: The applicant proposes to provide a minimum flow of 15 cfs through the Project including the Rice Rips bypass.
- c. Discussion: Department staff comments a minimum flow of 15 cfs should be provided below each of the Messalonskee Stream projects in order to increase the flushing in Rice Rips Lake. This minimum flow should also minimize the effect of internal recycling of phosphorus in Rice Rips Lake. It is likely that implementation of a minimum flow of 15 cfs from the Messalonskee Lake Dam, in combination with the proposed seasonal land application of effluent from the Oakland Waste Water Treatment Plant, will allow Rice Rips Lake to meet its assigned GPA classification.

The Town of Oakland has a pending application with the Department to renew the license for the Oakland Waste Water Treatment Facility. As discussed in Section 4, Dissolved Oxygen, the Town of Oakland is proposing to seasonally land apply the majority of its waste water on land owned by the applicant. As a condition of that license renewal, the Department will be requiring the Town to conduct water quality sampling of Rice Rips impoundment to ensure that Class GPA standards are being met. Sampling shall consist of seasonal sampling of temperature, dissolved oxygen, total phosphorus, chlorophyll a, and Secchi depth. Based on the results of this sampling, the Department reserves the right, after notice and opportunity for hearing, and

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upon consideration of the joint responsibility of the Town of Oakland and the applicant, to require structural and/or operational changes at the Oakland Waste Water Treatment Plant and/or the Messalonskee Developments as necessary to meet Class GPA standards.

Therefore, in order to meet class GPA narrative standards, a year-round minimum flow of 15 cfs shall be maintained at the outlet of Messalonskee Lake and from each of the downstream developments. The top 0.5 feet of Messalonskee Lake shall, in addition to being used for generation flows, be used to augment natural flows during the summer months as necessary.

## 6. FISH RESOURCES

- a. Existing Resources: Messalonskee Stream has a warm water fish population which includes black bass, pickerel, perch, and sunfish. The stream also has brown trout which were introduced into the waterway as an experiment by the Maine Department of Inland Fisheries and Wildlife (DIF&W). There are no Federally listed threatened or endangered fish species known to occur within the project area. American shad, an anadromous specie can be expected to utilize some of the habitat in the Union Gas Development tailwater. These fish move up from the Kennebec River where the Maine Department of Marine Resources (DMR) stocks them.

Messalonskee Lake contains the same composition of fish species as Messalonskee Stream with the addition of northern pike, landlocked salmon, and rainbow smelt.

There are no upstream or downstream fishways located at any of the hydroelectric developments along Messalonskee Stream. At the outlet of Messalonskee Lake there is a fish screen installed which prevents fish from passing down into Messalonskee Stream. The screen is owned by the Town of Oakland. The applicant periodically cleans the screen when it becomes clogged with leaves and other debris. When the screen becomes clogged it affects flows into Messalonskee Stream and therefore affects generation. The applicant proposes to continue cleaning the screen as needed.

Based on requests from state fisheries agencies, the applicant conducted several studies aimed at evaluating impacts of project flows and flow fluctuations and impoundment water level practices on fish habitat.

"Fishery Resources of the Messalonskee Project" is presented in Appendix E-IX of the application. Surveys of the impoundments and free flowing stretches of stream were conducted at all five developments. Three sections of the stream noteworthy of discussion are the Rice Rips bypass, the Automatic impoundment, and the stretch of stream below the Union Gas Development. The Rice Rips bypass is approximately 2,400 feet long and receives only leakage flows (estimated at 12-15 cfs) from the dam. The rest of the flow from the dam passes through a penstock prior to reaching the Rice Rips powerhouse. Automatic impoundment is a 4.5 mile riverine stretch which starts below the Rice Rips powerhouse. The stretch below the Union Gas Development is approximately 5,000 feet long before it enters the Kennebec River. All of these areas have been targeted by

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the Maine Department of Inland Fisheries and Wildlife as providing suitable habitat for adult brown trout. The Automatic impoundment is used by trout during the summer months when water temperatures are too high in the Rice Rips bypass. The area below Union Gas has also been identified by DMR as having habitat for various life stages of American shad.

"Rice Rips Bypass Channel Habitat Based Flow Study" is presented in Appendix E-X of the application. The study evaluated adult brown trout habitat in the 2,400 foot stretch of Messalonskee stream below the Rice Rips Development. Currently the bypass receives only leakage flows from the Rice Rips dam estimated at 12-15 cfs. As discussed below under Existing Management Plans, DIF&W wants to provide flows to optimize adult brown trout habitat during the spring (April 1 - June 15) and fall (Sept 15 - Sept 30) fishing seasons.

Due to the lack of habitat and unsuitable nature of the Oakland Development bypass reach, this area was not studied and no recommendations from the fisheries agencies to provide flows into this reach were made.

By linear measurement, the bypass consists of the following types of habitat: 56.5% riffle; 21.5% pool; and 32.0% riffle/run. The study team evaluated three flows in the bypass: 16.7 cfs, 27 cfs, and 51 cfs. Habitat for this study was based on Weighted Area (WA) which considers both quality and quantity of habitat. Although the study concluded that adult brown trout habitat is maximized at 27 cfs, 16.7 cfs provides approximately 94% of the maximum habitat for adult brown trout.

"Union Gas Instream Flow Study" is presented in Appendix E-XI of the application. The study incorporated the following components: Instream Flow Incremental Methodology (IFIM) study of the free flowing reach below the Union Gas dam; an assessment of habitat duration; and a ramping study. The IFIM assessed the uppermost 1,300 feet of the reach below the dam under a full range of flows (15 cfs-610 cfs). Adult brown trout and spawning and juvenile shad habitat were examined. The IFIM study concluded that adult brown trout habitat below the project was optimized at a flow of 100 cfs.

The ramping study evaluated impacts operational flows were having on fish and other aquatic life below the Union Gas dam. Changes in flow between 100% and 70% gate settings have little impact during both start-up and shut down. However, flow changes between 70% and 0% gate openings during operating shutdown result in an abrupt change in flow with rapid declines in water levels below the project. An area approximately 1/3 acre in size becomes dewatered once the project is shutdown.

- b. Existing Management Plans: Since 1986, DIF&W has managed the waters of the Messalonskee Project for an accessible urban brown trout fishery. The two locations of specific interest to DIF&W are the Rice Rips bypass and the Union Gas development tailwater. The program is only experimental and natural reproduction of brown trout is not anticipated in Messalonskee Stream. An evaluation of the program will be conducted by DIF&W in the near future.

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c. Applicant's Proposals: The applicant proposes the following measures to mitigate impacts to or otherwise enhance the fisheries resources of the Messalonskee Project.

- Providing a year-round minimum flow of 15 cfs below Messalonskee Lake Dam and through all four projects including the Rice Rips bypass;
- Restricting water level fluctuations of Messalonskee Lake (with cycling) to within 0.5 feet of full pond during the period June 1-August 31, and within 1.0 foot of full pond during the remainder of the year;
- Maintaining water levels in the Oakland, Rice Rips and Automatic impoundments (operated run-of-river) within 1.0 foot of full pond, year-round; and maintaining water levels in the Union Gas Development (with cycling) to within 1.3 feet of full pond elevation;
- Continuing to clean the fish screen at the outlet of Messalonskee Lake; and
- Implementing a new downramping sequence at the Union Gas Development.

d. Discussion: Based on the results of the bypass study and the IFIM, DIF&W recommends a minimum flow of 25 cfs through the Rice Rips bypass and a minimum flow of 100 cfs or inflow, whichever is less, below each of the projects. DIF&W comments that brown trout will utilize Rice Rips bypass during the spring, early summer, and fall months when water temperatures are cooler. During the summer months the brown trout will probably move into the Automatic impoundment where there is suitable year-round habitat.

As previously discussed in Sections 4 & 5, a minimum flow of 15 is necessary to enhance and maintain chemical water quality in Messalonskee Stream and Rice Rips Lake. It is staff's finding that a flow of 15 cfs is also adequate to protect fish resources in the bypass. It is also staff's finding that a minimum flow does not need to be provided in the Oakland Development bypass.

The Union Gas Project currently operates with a leakage flow of approximately 15 cfs and a maximum flow of 610 cfs. At 15 cfs (leakage) 76% of the peak Weighted Usable Area (WUA) for brown trout is available and at 600 cfs (maximum station discharge) 73% is available. American shad habitat is optimized at a flow of approximately 300 cfs. During normal station operation, 73% to 100% of WUA for brown trout is realized at all times. This percentage of WUA will increase with the implementation of a 15 cfs minimum flow during the summer months.

The applicant's proposals to maintain water levels in Messalonskee Lake, Rice Rips Lake, and the Oakland, Automatic, and Union Gas impoundments will be beneficial to the fish resources of the project waters.



CENTRAL MAINE POWER COMPANY	12	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
#L-17585-32-D-N (APPROVAL) )		

The applicant reviewed the results of the downramping study that was conducted below the Union Gas development and has proposed to implement a new downramping sequence at the project. As inflow to the Union Gas impoundment decreases, the wicket gate openings close from 100% open to 70%. The gates are held at 70% until the pond drops 0.7 feet. At this level, the unit gradually downramps at 1% gate closure/minute, from 70% down to about 40% while the pond drops the additional 0.6 feet. This sequence allows ample time for fish moving in the area to redistribute themselves while water levels decrease in the tailrace. State fisheries agencies agree with the applicant's proposal. DMR and DIF&W are in agreement that this new sequence will minimize fish stranding.

The applicant's proposals to provide a minimum flow of 15 cfs below all of the project developments, including 15 cfs in the Rice Rips bypass, restrict water level fluctuations in Messalonskee Lake, Rice Rips Lake, and the Oakland, Automatic, and Union Gas impoundments, and to implement a new downramping sequence at the Union Gas development appear to be adequate to achieve and maintain suitability of the project waters affected by the project as habitat for fish and other aquatic life.

7. WETLANDS AND WILDLIFE

- a. Existing Resources: In January of 1991, the applicant prepared a report entitled "Wetlands, Botanical and Wildlife Resources of the Messalonskee Project". This report is presented in Appendix E-VII of the application. The purpose of the study was to document the presence of these resources within the project, evaluate the effects of water level management on those resources, and evaluate opportunities for resource enhancement.

The most significant resources identified within the project area are in and surrounding the wetlands at the southern end of Messalonskee Lake. There are approximately 700 acres of inland deep water marsh and approximately 500 acres of oligotrophic lakeside bog. Loons, mink, river otter, muskrat, and beaver all utilize these wetlands for food and nesting habitat. The wetland is also recognized as a valuable migratory resting and staging area for waterfowl. The southern end of the lake is a Registered Critical Area due to the presence of the uncommon black tern. It is reported that this area is the largest and only continuously used nesting site in Maine for this bird.

The only rare plant species documented during the study was the rush aster. This was also found at the southern end of Messalonskee Lake.

- b. Applicant's Proposals: Under normal operating conditions, the applicant proposes to restrict water level fluctuations in Messalonskee Lake to within 0.5 feet of full pond during the summer months and within 1.0 foot of full pond the remainder of the year to provide flood control benefit.

The Oakland, Rice Rips, and Automatic impoundments will continue to be operated to restrict water level fluctuations to within 1.0 foot of full pond. Union Gas will continue to be operated to restrict water level fluctuations to within 1.3 feet of full pond elevation.

CENTRAL MAINE POWER COMPANY	13	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
#L-17585-32-D-N . (APPROVAL) )		

- c. Discussion: DIF&W's overriding concern is providing and maintaining stable water levels to insure maximum waterfowl nesting and production. Of primary concern are the wetlands and water levels in Messalonskee Lake. DIF&W has also raised questions regarding the apparent loss of emergent marshland and whether declines in uncommon black tern numbers are related.

In response to DIF&W's comments, the applicant has prepared the "Messalonskee Lake Waterfowl Management Plan". The plan provides for management and maintenance of waterfowl nesting and brood-rearing habitat within the project area. The plan includes a specific survey of black tern use in Messalonskee Lake and provisions for consulting with state and federal resource agencies. The applicant proposes to conduct wetland assessments and waterfowl surveys within 2 years of the issuance of a new FERC license for the project. DIF&W agrees with the applicant's proposed Waterfowl Management Plan.

The applicant's proposals to restrict water level fluctuations in all the project impoundments and manage waterfowl through the "Messalonskee Lake Waterfowl Management Plan" appear to be adequate to protect and maintain wetlands and wildlife in Messalonskee Lake and all other project impoundments.

## 8. RECREATION IN AND ON THE WATER

- a. Existing Facilities and Use: Messalonskee Lake receives the most recreational use of any of the other water bodies within the project boundaries. Existing recreational facilities include various hard-surface boat launch facilities on Messalonskee Lake; day-use sites; unimproved fishing sites along Messalonskee stream; a carry-in boat access facility at North Street Park in Waterville; several informal carry-in access sites along the stream; two nature trails below the Automatic project; and the Couture Field Boat Launch, a hard-surface boat ramp installed by the applicant in 1989 on the Kennebec River near the Union Gas Development.

Recreational use in the project area is significant. Throughout the year the waters of the project receive use by boaters, swimmers, water skiers, fisherman, snowmobilers, cross county skiers, ice fishermen, hunters, and trappers.

- b. Existing Management Plans: In 1989, the applicant developed a Comprehensive Recreational Facilities Plan which was designed to meet current and anticipated public recreational needs at CMP-owned hydro and water storage projects. The plan analyzes recreational needs on a local and regional basis.

The Maine Bureau of Parks and Recreation's 1988 Statewide Comprehensive Outdoor Recreation Plan (SCORP), has identified unmet recreational needs in this area of the state. Some of those needs include horseback riding, camping, ski touring, picnicking, bicycling, inland swimming, nature interpretation, and boat access.

CENTRAL MAINE POWER COMPANY	14	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
#L-17585-32-D-N (APPROVAL) )		

c. Applicant's Proposals: The applicant proposes the following recreational enhancements to the project area:

- Maintaining the water level of Messalonskee Lake to within 0.5 feet of full pond throughout the summer recreation season, and to within 1.0 feet during the winter months;
- Providing a minimum flow of 15 cfs through the Rice Rips bypass to support DIF&W's efforts to develop a recreational fishery for adult brown trout;
- Developing a new improved picnic site/day use area below the Messalonskee Lake Dam (Site 5 on Exhibit 7);
- Installing an informational/interpretive sign at the Oakland Development, and installing project identification signs at all of the projects;
- Investigating the need for establishing a "green belt/multi use" area along the east side of Messalonskee Stream between the Oakland Development and the Rice Rips Development;
- Developing a carry-in site at Colby College (Site 8 on Exhibit 7);
- Evaluating the feasibility of creating a carry-in access site to the Rice Rips impoundment; and
- Installing a hard surface boat ramp on the Kennebec River (Site 12 on Exhibit 7). This was completed by the applicant in 1989.

d. Discussion: The Maine Department of Conservation (DOC) comments that the applicant's recreational proposals will enhance public use opportunities within the project area. DOC also comments the applicant should monitor water oriented public use and review recreation development potential needs with DOC in accordance with FERC Form 80 requirements.

The applicant's proposals, as outlined above, appear to be adequate to achieve and maintain suitable use of waters affected by the project for recreation in and on the water, provided a minimum flow of 15 cfs is maintained in the Rice Rips bypass during the period June-September to establish a recreational fishery for brown trout.

## 8. HYDROELECTRIC POWER GENERATION

- a. Existing Energy Generation: The project generates an average of 22,999,000 kilowatt-hours (kWh) of electricity annually. This is equivalent to the energy that would be produced by burning 43,807 barrels of oil or 10,657 tons of coal each year. Project power is fed into the transmission and distribution system of the applicant for use by its customers.
- b. Existing Energy Policies/Plans: The State of Maine has developed a comprehensive energy plan (Final Report of the Commission on Comprehensive Energy Planning, May 1992) with the goal of meeting the State's energy needs with reliable energy supplies at the lowest possible cost, while ensuring that energy production and use are

CENTRAL MAINE POWER COMPANY	15	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
#L-17585-32-D-N (APPROVAL) )		

consistent with a healthy environment and a vibrant economy. Specifically, the Plan establishes the following targets for Maine's energy future:

- Reduce the State's level of dependence on oil from 50 percent to at least match the national average of 43 percent by the year 2000, with further reductions to at least the 30 percent level by 2010;
- Increase the percentage of renewable energy resources in the State's primary energy mix from 30 percent to 40 percent by the year 2000, and to at least 50 percent by 2010;
- Increase statewide energy efficiency relative to 1990 levels by 25 percent by the year 2000 and by at least 50 percent by 2010; and
- Work to stabilize long-term energy prices, in balance with Maine's other energy-related goals, with a specific emphasis on enhancing Maine's competitive position relative to New England and the U.S.

With respect to renewable energy, the Plan recommends that Maine actively encourage the development of wind and solar energy resources and support the continued utilization and further development, where appropriate, of the State's renewable, indigenous hydro and biomass energy resources.

- c. Applicant's Proposal: The applicant proposes to provide a year-round minimum flow of 15 cfs below each of the project developments including the area known as the Rice Rips bypass. The agency recommended year-round minimum flow of 100 cfs or inflow below each of the projects would result in a 22% loss in generation annually.
- d. Discussion: As proposed, the Messalonskee Lake Project will continue to provide cost-effective indigenous renewable electricity to the customers of Central Maine Power Company.

BASED on the above Findings of Fact, and the evidence contained in the application and supporting documents, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The continued operation of the project will result in the affected surface waters being suitable for all Class GPA and Class C designated uses provided that:
  - i. A minimum flow of 15 cfs is passed from the Messalonskee Lake Dam and all other downstream developments, including 15 cfs in the Rice Rips bypass;
  - ii. Water levels in Messalonskee Lake are maintained within 0.5 feet of full pond during the period June 1-August 31 and within 1.0 feet during the remainder of the year (with cycling); water levels in Oakland, Rice Rips, and Automatic impoundments are maintained within 1.0 foot of their respective full pond elevations (operated as run-

CENTRAL MAINE POWER COMPANY	16	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )	)	FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )	)	
MESSALONSKEE PROJECT )	)	
#L-17585-33-D-N )	)	WATER QUALITY CERTIFICATION
#L-17585-32-D-N (APPROVAL) )	)	

of-river); and water levels in the Union Gas impoundment are maintained within 1.3 feet of full pond elevation (with cycling );

- iii. The new downramping sequence is implemented below the Union Gas development;
  - iv. The "Messalonskee Lake Waterfowl Management Plan" is implemented; and
  - v. Recreational facility improvements/enhancements are made in accordance with the applicant's proposals.
2. The continued operation of the project will result in Class C dissolved oxygen standards being met in the affected waters provided that a minimum flow of 15 cfs is passed from all project developments, and the applicant conduct dissolved oxygen sampling in Messalonskee Stream.
  3. The continued operation of the project will result in Class GPA and Class C narrative standards for aquatic life being met provided that a minimum flow of 15 cfs is provided below all project developments including 15 cfs in the Rice Rips bypass, water levels in Messalonskee Lake are maintained within 0.5 feet between June 1-August 31, Oakland, Rice Rips, and Automatic impoundments are maintained within 1.0 feet of their full pond elevations, and Union Gas is maintained within 1.3 feet of full pond elevation.
  4. The continued operation of the project will comply with the State's antidegradation policy provided that the project is modified and operated in accordance with the conclusions reached above.

THEREFORE, the Department GRANTS certification that there is a reasonable assurance that the continued operation of the Messalonskee Project, as described above, will not violate applicable water quality standards, SUBJECT TO THE FOLLOWING CONDITIONS:

1. MINIMUM FLOWS

- A. Except as temporarily modified by approved maintenance activities, emergencies beyond the applicant's control, as defined below, or upon mutual agreement between the applicant and Department, the applicant shall discharge an instantaneous minimum flow of 15 cfs through all project developments, including the Rice Rips bypass, at all times.

The top 0.5 feet of Messalonskee Lake shall, in addition to being used for generation flows, be used to augment natural flows to meet the 15 cfs minimum flow requirement.

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other abnormal condition, and orders from local, state, or federal law enforcement or public safety authorities.
- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and

CENTRAL MAINE POWER COMPANY	17	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
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monitoring the minimum flows required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

## 2. WATER LEVELS

- A. Except as temporarily modified by (1) approved maintenance activities (2) inflows to the project area, (3) by operating emergencies beyond the applicant's control, as defined below, (4) by flashboard failure, or (5) upon mutual agreement between the applicant and Department, the following water levels shall be maintained:

Messalonskee Lake (cycling)	Within 0.5 feet of full pond from 6/1-8/31 and within 1.0 feet from 9/1-5/31;
Oakland, Rice Rips, <del>and</del> <del>Automatic</del> (run-of-river)	Within 1.0 feet of full pond elevations;
Union Gas (cycling)	Within 1.3 feet of full pond elevation.

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other temporary abnormal condition, and orders from local, state, or federal law enforcement or public safety authorities.
- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and monitoring the water levels in each of the project impoundments as required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

## 3. WATER QUALITY SAMPLING

- A. The applicant shall sample dissolved oxygen, temperature, and chlorophyll a in Messalonskee Stream. The applicant shall also record flow out of the Messalonskee Lake dam and identify periods of generation during sampling. The Department will review the results of this sampling in conjunction with sampling being performed by the Oakland Waste Water Treatment Plant in Rice Rips Lake.
- B. Within 6 months following the issuance of a new FERC license for the project, the applicant shall submit a water quality sampling plan to the Department for review and approval.
- C. If it is determined, based on a review of the sampling discussed in Part A of this condition and the sampling performed by the Oakland Waste Water Treatment Plant, that Messalonskee Stream is not meeting Class C standards for dissolved oxygen or Rice Rips Lake is not meeting Class GPA standards for trophic state, the Department reserves the right, after notice and opportunity for hearing, and upon consideration of the joint responsibility of the Town of Oakland and the applicant, to require such reasonable structural and/or operational changes to the Oakland Waste Water Treatment Plant or the Messalonskee Project as are deemed necessary to meet applicable Class C or Class GPA standards, except that no changes to the Messalonskee

CENTRAL MAINE POWER COMPANY	18	MAINE WATER QUALITY PROGRAM;
SIDNEY, BELGRADE, OAKLAND, WATERVILLE )		FEDERAL CLEAN WATER ACT
KENNEBEC COUNTY, MAINE )		
MESSALONSKEE PROJECT )		
#L-17585-33-D-N )		WATER QUALITY CERTIFICATION
#L-17585-32-D-N (APPROVAL) )		

Project will be required until at least 5 years have passed from the effective date of a new FERC license for the project.

4. DOWNRAMPING

The applicant shall implement the new downramping sequence at the Union Gas development as outlined in the supporting documentation for the application for 401 certification.

5. WATERFOWL NESTING

- A. The applicant shall implement the provisions of the "Messalonskee Lake Waterfowl Management Plan" and begin conducting wetland assessments and waterfowl surveys within 2 years of the issuance of a new FERC license for the project.
- B. The applicant shall consult with the Maine Department of Inland Fisheries and Wildlife regarding the findings of the wetland assessments and waterfowl surveys. The results of these assessments and the applicant's proposals for maintaining or enhancing wetlands and waterfowl nesting shall be submitted to the DEP Bureau of Land and Water Quality. After reviewing the results, any applicant proposals, and DIF&W comments, the Department shall order such continuation or modification of water levels established by this approval as is deemed necessary and appropriate to protect nesting waterfowl.

6. RECREATIONAL FACILITIES

- A. The applicant shall maintain and improve recreational facilities and public access within the project boundaries including: installing project identification signs at all projects, evaluating the feasibility of a 'green belt/multi use' area between the Oakland and Rice Rips Development, improving parking at the Rice Rips Development, evaluating the feasibility of creating a carry-in access site to the Rice Rips impoundment, and ~~improving parking at the Automatic Development.~~
- B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit a schedule for implementing Part A of this condition. This schedule shall be reviewed by the Department of Conservation and the DEP Bureau of Land and Water Quality and must be approved by the DEP Bureau of Land and Water Quality.

7. LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. All variances from the plans and proposals contained in said documents are subject to the review and approval the Department prior to implementation.

8. COMPLIANCE WITH APPLICABLE LAWS

CENTRAL MAINE POWER COMPANY 19 MAINE WATER QUALITY PROGRAM;  
SIDNEY, BELGRADE, OAKLAND, WATERVILLE } FEDERAL CLEAN WATER ACT  
KENNEBEC COUNTY, MAINE )  
MESSALONSKEE PROJECT )  
#L-17585-33-D-N ) WATER QUALITY CERTIFICATION  
#L-17585-32-D-N (APPROVAL) )

The applicant shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the operation of the project.

9. EFFECTIVE DATE

This water quality certification shall be effective on the date of issuance of a new hydropower project license by the Federal Energy Regulatory Commission (FERC) and shall expire with the expiration of the FERC license.

DONE AND DATED AT AUGUSTA, MAINE, THIS 28<sup>th</sup> DAY OF AUGUST, 1995.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

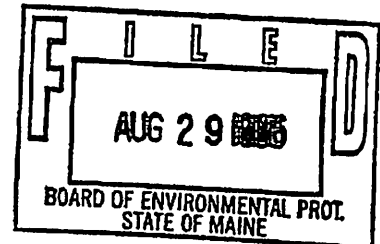
By:

Edward O. Sullivan  
EDWARD O. SULLIVAN, Commissioner

PLEASE NOTE ATTACHED SHEET FOR APPEAL PROCEDURES

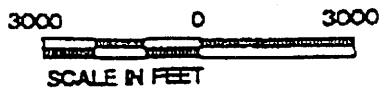
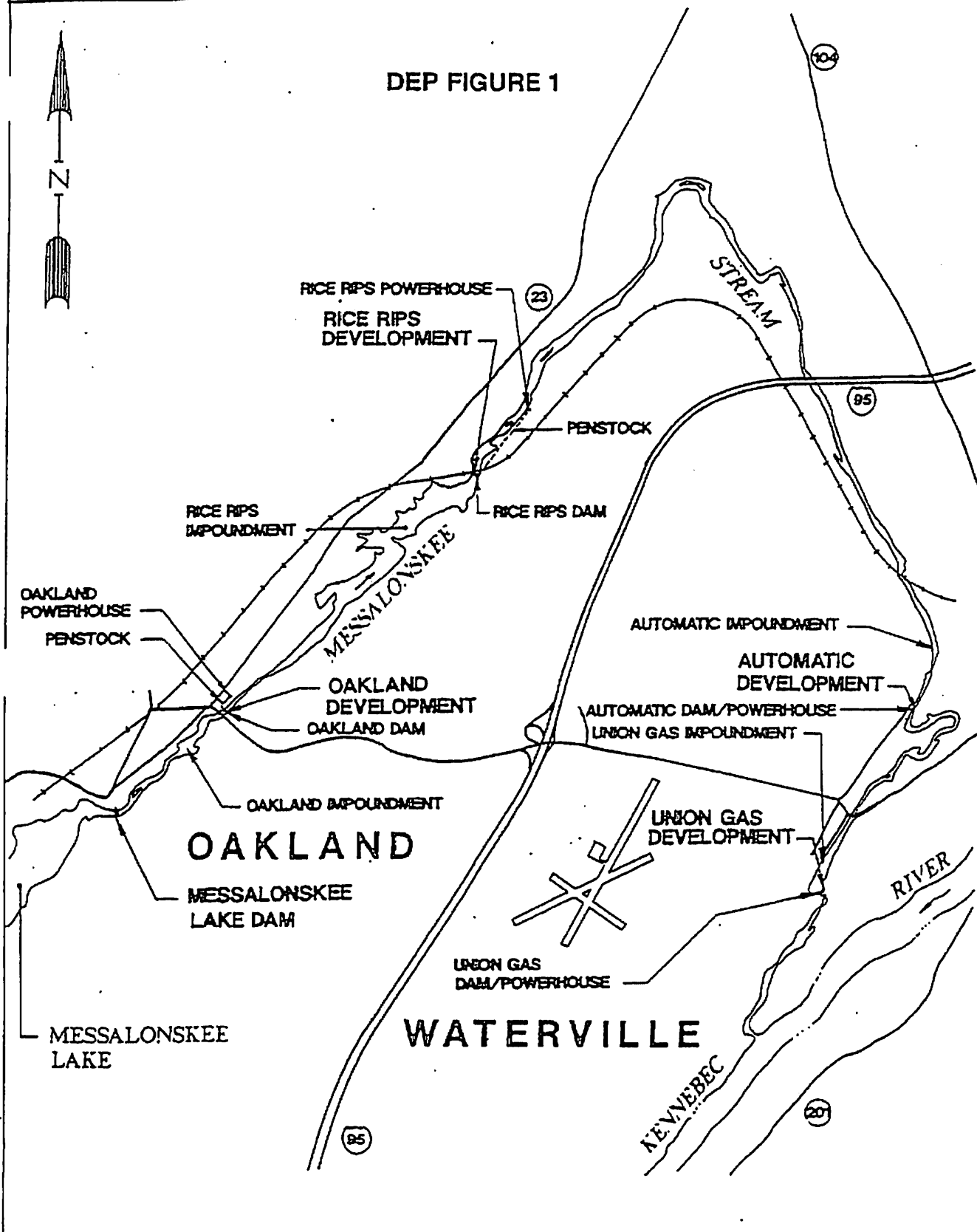
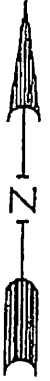
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Last date application withdrawn and refiled 11/16/94.  
Date application accepted for processing 11/16/94.

Date filed with the Board of Environmental Protection

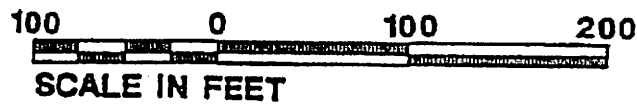
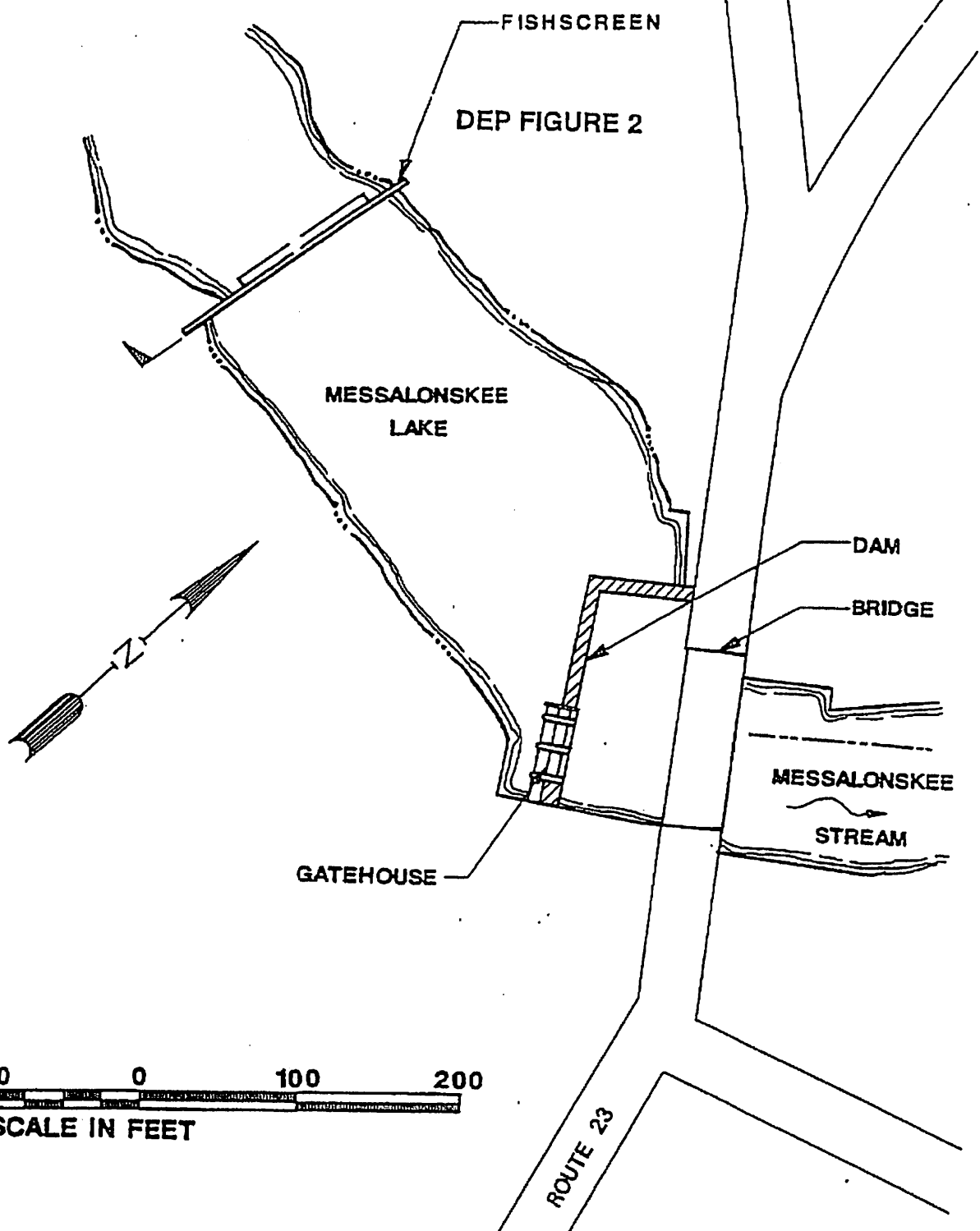




DEP FIGURE 1

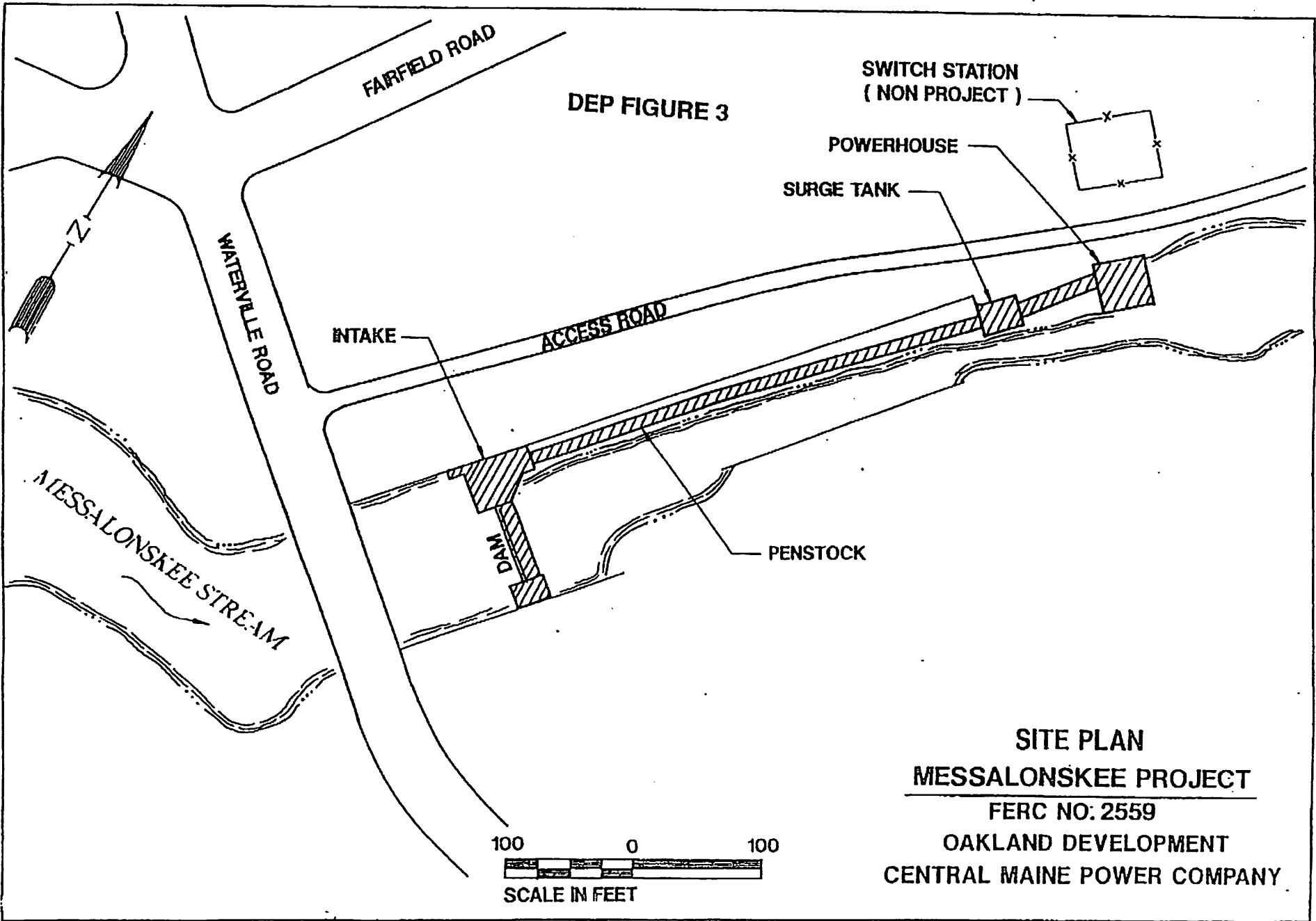


LOCATION MAP  
CENTRAL MAINE POWER COMPANY



SITE PLAN  
MESSALONSKEE PROJECT  
FERC NO: 2559  
MESSALONSKEE LAKE DAM  
CENTRAL MAINE POWER COMPANY

DEP FIGURE 3



SWITCH STATION  
(NON PROJECT)

POWERHOUSE

SURGE TANK

INTAKE

ACCESS ROAD

DAM

PENSTOCK

FARFIELD ROAD

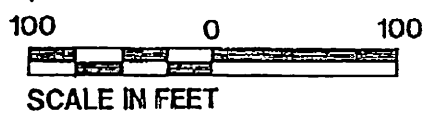
WATERVILLE ROAD

MESSALONSKEE STREAM

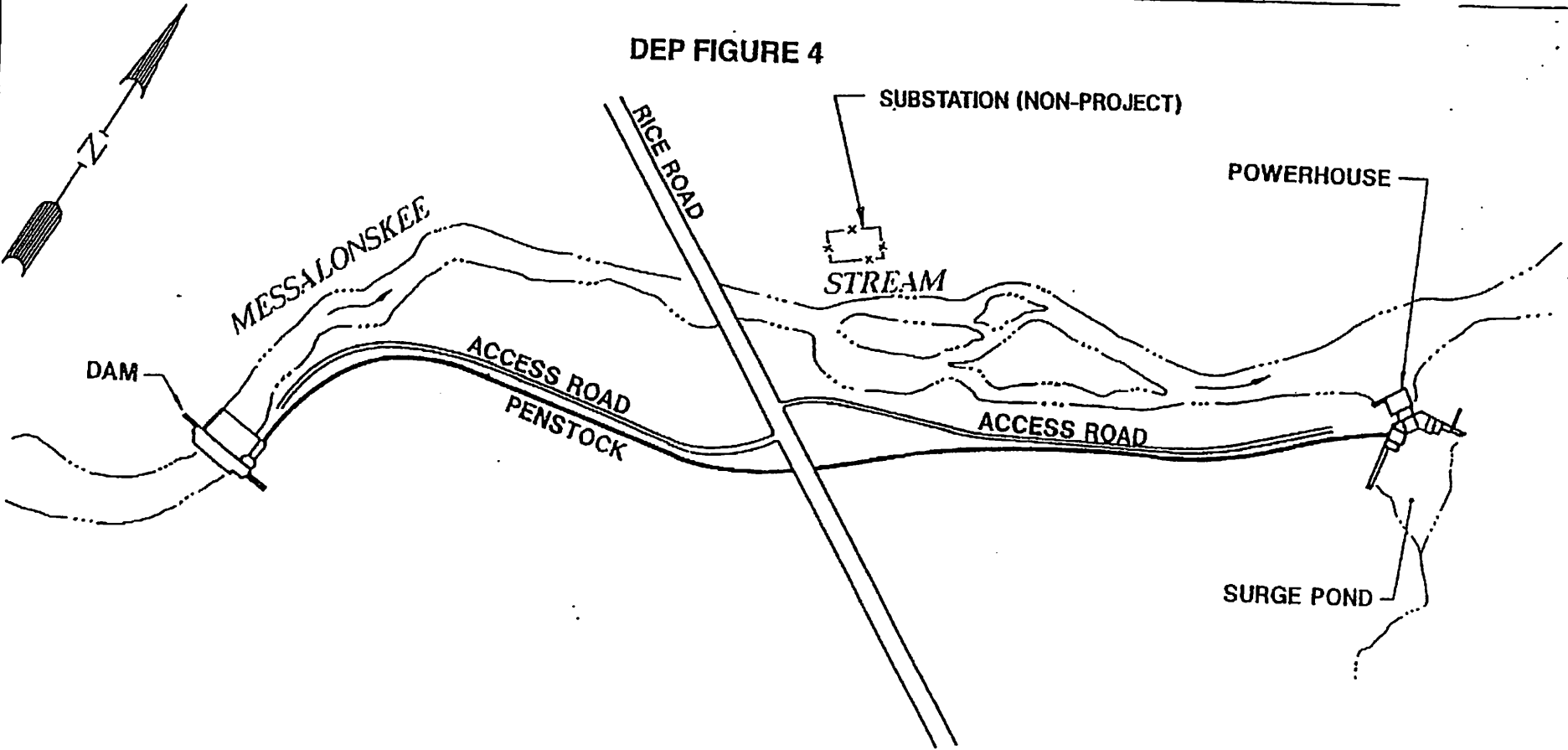
**SITE PLAN**  
**MESSALONSKEE PROJECT**

FERC NO. 2559

OAKLAND DEVELOPMENT  
CENTRAL MAINE POWER COMPANY



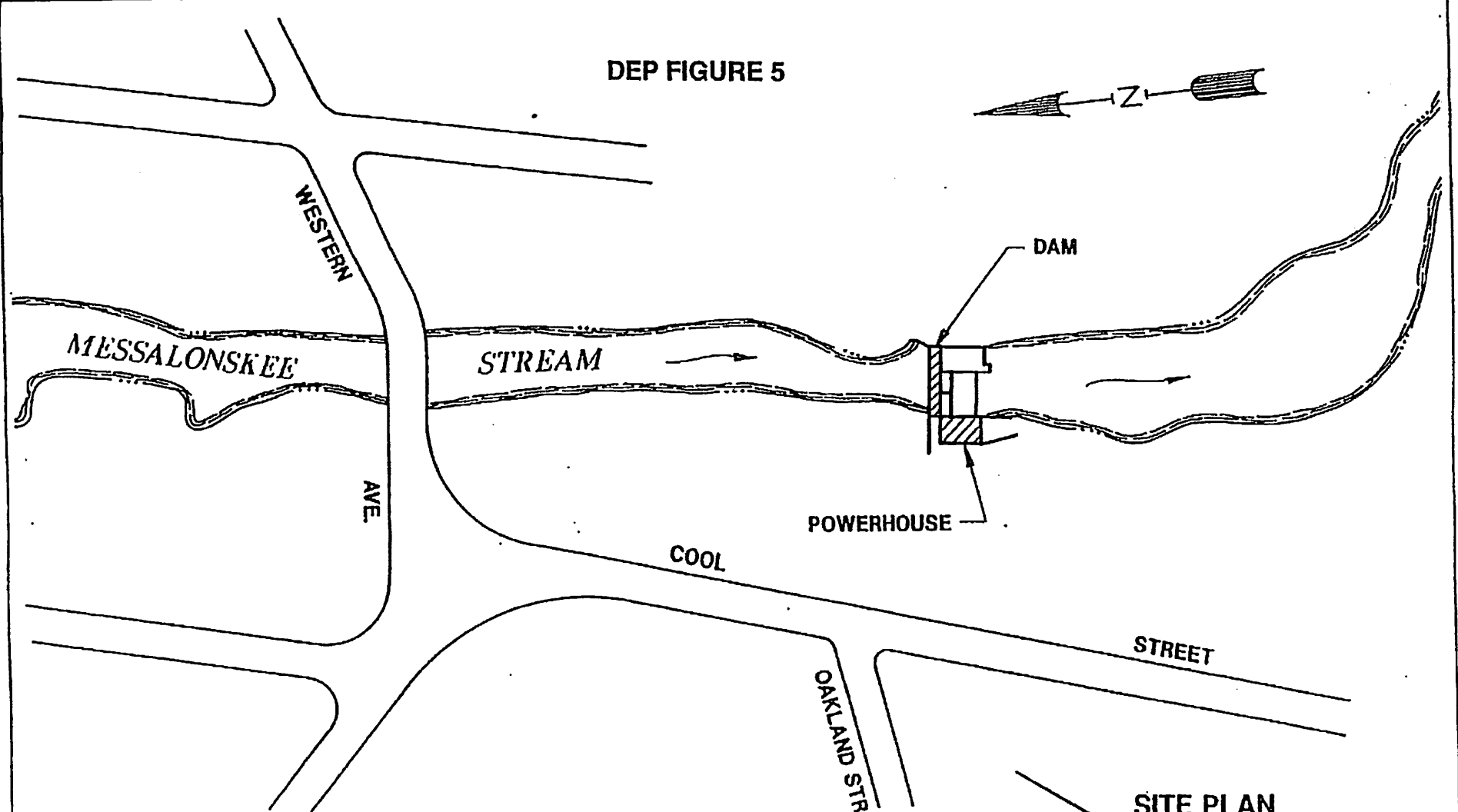
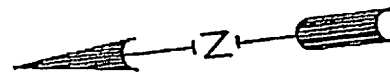
DEP FIGURE 4



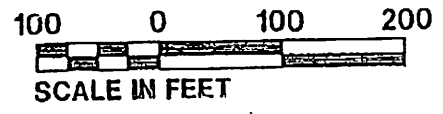
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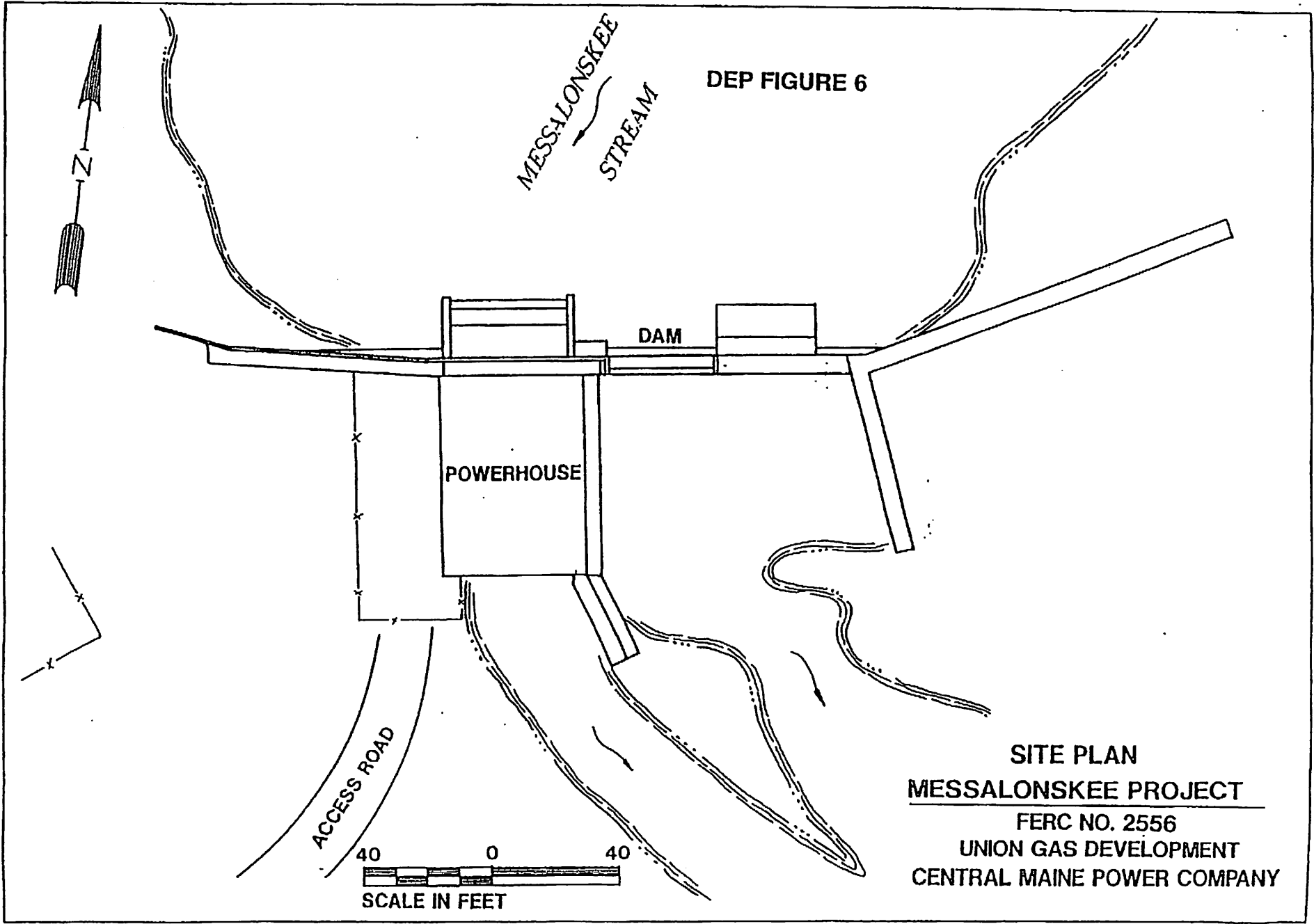
SITE PLAN  
MESSALONSKEE PROJECT  
FERC NO. 2557  
RICE RIPS DEVELOPMENT  
CENTRAL MAINE POWER COMPANY

DEP FIGURE 5



**SITE PLAN**  
**MESSALONSKEE PROJECT**  
FERC NO. 2555  
AUTOMATIC DEVELOPMENT  
CENTRAL MAINE POWER COMPANY





DEP FIGURE 6

MESSALONSKEE  
STREAM

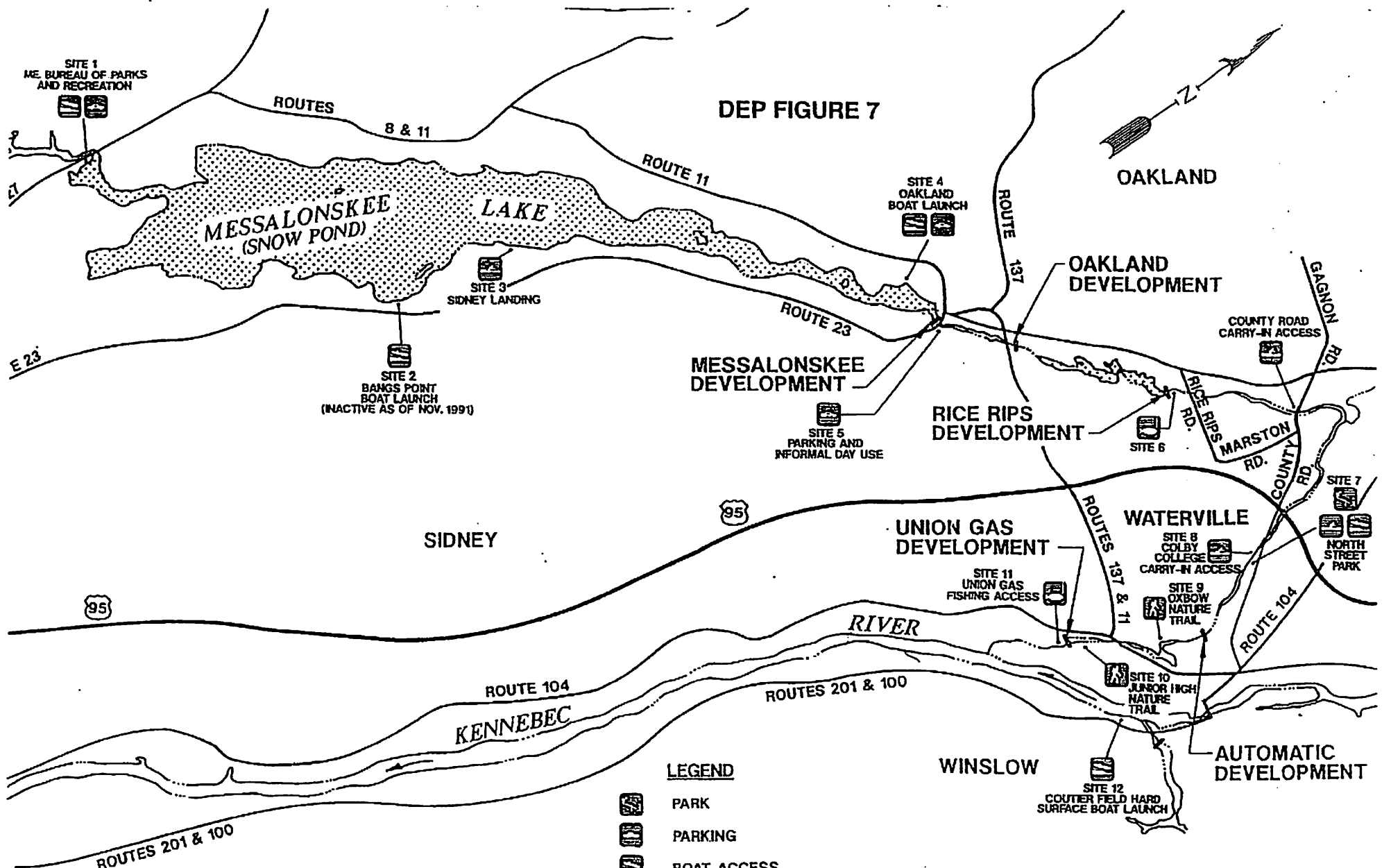
DAM

POWERHOUSE

ACCESS ROAD

40 0 40  
SCALE IN FEET

SITE PLAN  
MESSALONSKEE PROJECT  
FERC NO. 2556  
UNION GAS DEVELOPMENT  
CENTRAL MAINE POWER COMPANY



DEP FIGURE 7

OAKLAND

MESSALONSKEE LAKE  
(SNOW POND)

OAKLAND DEVELOPMENT

MESSALONSKEE DEVELOPMENT

RICE RIPS DEVELOPMENT

SIDNEY

UNION GAS DEVELOPMENT

WATERVILLE

AUTOMATIC DEVELOPMENT

WINSLOW

ROUTE 104  
KENNEBEC RIVER

ROUTES 201 & 100

**LEGEND**

- PARK
- PARKING
- BOAT ACCESS
- CARRY-IN BOAT ACCESS
- FISHING
- NATURE TRAIL



RECREATION MAP  
MESSALONSKEE PROJECT

CENTRAL MAINE POWER COMPANY

APPENDIX B

Rice Rips Hydroelectric Project  
Water Quality



## Appendix B

### Rice Rips Hydroelectric Project

#### Water Quality

The Project received a 401 Water Quality Certificate (WQC) from the State of Maine Department of Environmental Protection (“MDEP”) on August 29, 1995 (see Appendix A-1). The WQC noted that waters from the outlet of the Messalonskee Lake to its confluence with the Kennebec River including all waters within the parameters of the Rice Rips Project are currently designated Class C by the MDEP. Class C waters are of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, and navigation; and as habitat for fish and other aquatic life. The project is required to maintain a minimum flow of 15 cfs below the project and through the Rice Rips’s bypassed reach in order to minimize the effect of internal recycling of phosphorus and maintain suitable habitat for brown trout in the tailrace of the downstream Union hydroelectric station.

The Project received a Maine Pollutant Discharge Elimination System Permit and Maine Waste Discharge License from the Department of Environmental Protection, Bureau of Land and Water Quality on January 23, 2009 (Permit No. ME0001252) and remains in compliance with all terms and conditions of said permit (see appendix B-1).

## APPENDIX C

### Rice Rips Hydroelectric Project Fish Passage and Protection

## Appendix C

### Rice Rips Hydroelectric Project

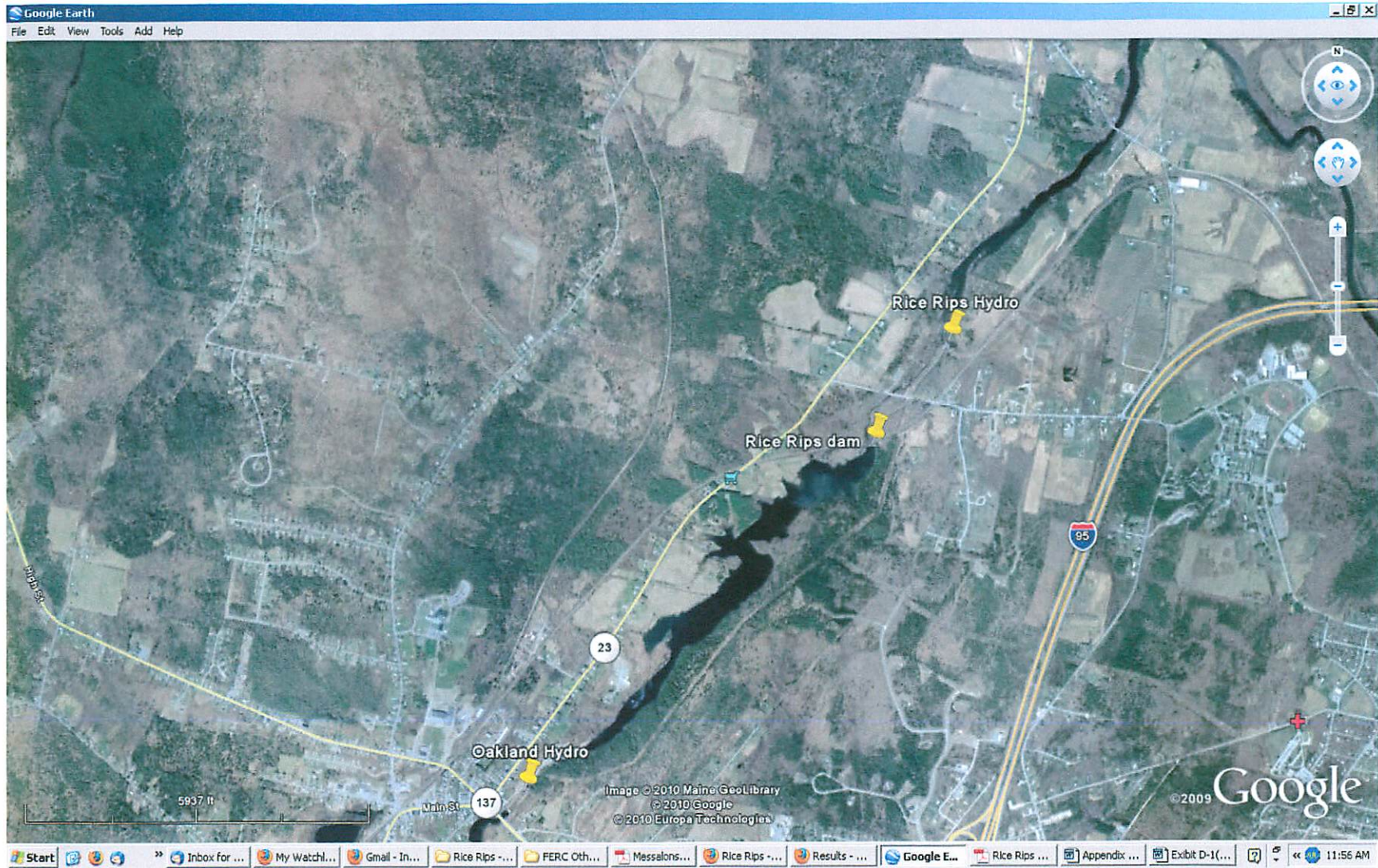
#### Fish Passage and Protection

There have been no recommendations made by any fishery agency to provide fish passage facilities at the project. As a condition of issuance, the FERC License requires the Rice Rips project to comply with any subsequent terms and conditions that Federal and State fish and wildlife agencies determine appropriate for the project. The FERC reserved the right to revoke the license if any term or condition of the license is violated.

APPENDIX D-1

Rice Rips Impoundment

# RICE RIPS IMPOUNDMENT



APPENDIX E-1

Maine Department of Inland Fisheries and Wildlife response to Threatened and Endangered Species inquiry to be forwarded to the Low Impact Hydropower Institute upon receipt.

APPENDIX E-2



**U.S. Fish and Wildlife response to Threatened and Endangered Species inquiry to be forwarded to the Low Impact Hydropower Institute upon receipt.**

APPENDIX F

Rice Rips Hydroelectric Project  
Cultural Resources

## Appendix F

### Rice Rips Hydroelectric Project

#### Cultural Resources

The Messalonskee Project is required to maintain an archaeological site-monitoring program that was first undertaken in 2000 to assess whether Precontact period archaeological resources reported within the Messalonskee Project were being impacted by the ongoing operation of the Messalonskee Project. The Maine Historic Preservation Commission indicated that as of January 21, 2010 none of the sites that had been identified as requiring monitoring had shown evidence of emergency erosion status in the last few monitoring reports (see Appendix F-1).

The Messalonskee Project is required to submit its next archaeological report by the end of 2010.

APPENDIX G-1

FERC Recreation Report

Federal Energy Regulatory  
Commission (FERC)  
FERC Form 80

## Licensed Hydropower Development Recreation Report

Form Approved  
OMB No. 1802-0106  
Expires: 08/30/2010  
Burden 3.0 hours

This form collects data on recreational resources at projects licensed by the Federal Energy Regulatory Commission under the Federal Power Act (16 USC 791a-825r). This form must be submitted by licensees of all projects except those specifically exempted under 18 CFR 8.11 (c). Submit this form on or before April 1, 2009. Submit subsequent filings of this form on or before April 1, every 6th year thereafter (for example, 2015, 2021, etc.). Submit an original and two copies of the form to the Commission's Regional Office (specified in the cover letter to this form). The public burden estimated for this form is three hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. Please send your comments about this burden estimate, or any other aspect of this collection of information, including suggestions to reduce the burden, to: Director, Division of Hydropower Administration and Compliance, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20428 and the Office of Information and Regulatory Affairs, Desk Officer-FERC, Office of Management and Budget, Washington, D.C. 20503.

Failure to comply with this collection of information will not result in a penalty, if you were unaware that a valid control number assigned by the Office of Management and Budget must be displayed on this collection of information.

**Instructions:**

- a. All data reported on this form must represent recreational facilities and services located within the development/project boundary.
- b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
- c. Report actual data for each item. If actual data are unavailable, then please estimate.

**Schedule 1. General Information**

<p>1. Licensee Name: <u>Synergics</u></p> <p>2. Project Name: <u>Oakland</u></p> <p>3. Project Number: <u>2556</u></p> <p>4. Development Name: <u>Messalonskee Lake</u></p> <p>States Development/Project Traverses (List state with largest area within the development/project boundary first):</p> <p>5. State #1: <u>ME</u></p> <p>6. State #2: _____</p> <p>7. Type of Project License: Major <input checked="" type="checkbox"/> (check one) Minor <input type="checkbox"/></p>	<p>8. Reservoir Surface Area at Normal Pool (acres): <u>3,800.00</u></p> <p>9. Shoreline Miles at Normal Pool: <u>33.00</u></p> <p>10. Percent of Shoreline Safely Accessible to the General Public by Land Travel without Trespassing: <u>40.00</u></p> <p>11. Data Collection Methods (enter percent for each method used; total must equal 100%):</p> <p><u>30.00</u> traffic count/trail count</p> <p>_____ attendance records</p> <p><u>70.00</u> staff observation</p> <p>_____ visitor assessment</p> <p>_____ estimate</p>	
<p><i>For the previous calendar year, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the corresponding annual recreational revenues.</i></p>		
<p>Licensee's Annual Recreation Costs and Revenues (In Whole Dollars)</p>		
	Construction, Operation and Maintenance Costs	Recreation Revenues for Calendar Year
12. Dollar Values	\$3,500.00	\$0.00
<p>13. Length of Recreation Season</p> <p>Summer: From (MM/DD) <u>05/23</u> To <u>09/07</u> Winter: From (MM/DD) <u>12/01</u> To <u>04/01</u></p>		
<p>Number of visits to all recreational areas at development/project (in Recreation Days)</p>		
	Annual Total	Peak Weekend Average
14. Daytime	82,828.00	1,309.00
15. Nighttime	0.00	0.00

Respondent Certification: The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

<p><u>ARTHUR HAGOOD</u> Legal Name</p> <p> Signature</p>	<p><u>VICE PRESIDENT</u> Title</p> <p><u>3-27-09</u> Date Signed</p>	<p><u>410-268-8820</u> Area Code/Phone No.</p> <p>_____ Reporting Year Ending</p>
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Title 18 U.S.C.1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.

Licensed Hydropower Development  
 Recreation Report

**Schedule 2. Inventory of Recreational Resources**

16. Enter data for each Recreational Resource Type (a). For Facility Capacity (f), of total available resources (b) + (c), compare the average total amount of weekend use (during the recreation season reported on Schedule 1, Item 13) with the total combined capacity of these resources to handle such use and enter a percentage that indicates their overall level of use. Do not consider peak weekend use (see Glossary). For example, if all available Boat Ramps are used to half capacity during non-peak weekend days, enter 50%. For all available Boat Ramps that are used beyond their combined capacity, enter the appropriate percentage above 100.

Recreational Resource Type (a)	No. of Available Resources			Total Miles/Acres (e)	Facility Capacity (percent) (f)
	User Free (b)	User Fee (c)	No. FERC Approved Resources (d)		
<b>Access Areas. (No Facilities).</b> Unimproved but well-known/popular sites which can be used to reach development/project waters (including waters below a dam) without trespassing on other property. Such areas can be used for launching boats, fishing, swimming, or other water recreational purposes.	1				25
<b>Boat Launch Areas.</b> Improved areas having one or more boat launching lanes and (a) are usually marked with signs, (b) have compacted gravel or concrete surfaces, and (c) usually have adjacent parking lots.	3		2		75
<b>Boat Launch Lanes.</b> The number of lanes are determined by the total number of boats that can be launched easily at the designated boat launch areas at one time.	3		2		75
<b>Marinas.</b> Public and Private facilities on or adjacent to the development/project waters for the docking, fueling, repair and storage of boats, and which may rent boats and equipment, or sell bait or food.				Acres	
<b>White Water Boating.</b> Access areas below a dam that can be used for rafting/kayaking.					
<b>Canoe Portages.</b> Site located above and below a dam, diversion, or other obstruction where persons can launch and take out canoes; and the improved, designated, and maintained trails connecting such sites.				Miles	
<b>Tailwater Fishing Facilities.</b> Platforms, walkways, or similar structures to facilitate below-dam fishing.					
<b>Fishing Piers.</b> Structures which are installed and maintained in development/project waters specifically for fishing. This code excludes tailwater fishing facilities.					
<b>Parks.</b> Designated areas which usually contain multiple use facilities (e.g., picnic sites, playgrounds, swimming beaches, and boat ramps). Individual facilities within each park should be reported under the appropriate resource type (e.g. playground areas, picnic areas, etc.)	1		1	Acres	75
<b>Playground Areas.</b> Have playground equipment, game courts/fields, jogging tracks, etc.	1		1	Acres	75
<b>Trails.</b> Improved pathways used for non-automobile recreational travel which (a) can be located on a reference map, and (b) are designated according to type of use (hiking, bridle, trail bikes, snow mobiles, cross-country skiing). This category excludes canoe portages.				Miles	
<b>Swimming Areas.</b> Sites providing access to development/project waters where swimming facilities (bath houses, designated swim areas, parking, and sanitation facilities) are available.	1		1	Acres	75
<b>Picnic Areas.</b> Areas designated and maintained for picnicking and which contain one or more picnic sites, each of which includes a picnic table and in some cases cooking grills, trash receptacles, and a parking area.	1		1	Acres	75
<b>Wildlife Areas.</b> Natural areas and reserves specifically created and managed for the protection and propagation of wildlife and the viewing of wildlife in their natural habitat.				Acres	
<b>Visitor Centers.</b> Facilities located in a kiosk, pavilion or similar structure from which persons may obtain information about the development/project, its operation, recreational facilities, and related items of interest.					
<b>Interpretive Displays.</b> Facilities (exhibits and museums) which describe or explain archaeological, historic, or prehistoric objects, structures, sites, areas, activities, artifacts, and materials.					
<b>Overlooks.</b> Public areas to view natural areas/project features (e.g., pull-offs or vistas).				Acres	
<b>Hunting Areas.</b> Public or private areas open to the general public for hunting.	1			3600 Acres	10
<b>Golf Courses.</b> All types of golf areas, except miniature golf.				Acres	
<b>Cottage/Cabin Sites.</b> Recreational dwellings which are seasonally rented by the public for recreational purposes.					
<b>Camping Areas/(Campgrounds).</b> Areas containing two or more campsites, tent sites, or trailer/recreational vehicle (RV) sites which accommodate overnight camping. This category does not include group camps.				Acres	
<b>Tent/Trailer/RV Sites.</b> The total number of sites within Camping Areas that have been specifically developed for tent, trailer, or RV use. This category does not include sites within group camps.				Acres	
<b>Organizational Camps.</b> Camping areas that are maintained and operated by a specific entity but which may be used by other persons or groups (scout camps, military base recreation camps, church camps, handicapped children camps).				Acres	
<b>Group Camps.</b> Camping areas which are equipped with facilities to accommodate use by the general public. These areas usually require registration or advance reservation.				Acres	
<b>Winter Sports.</b> Any facility or site providing sports like skiing, sledding, ice skating, or ice fishing.	3		2		50
<b>Other - such as informal/dispersed camping areas, unimproved trails, etc. (specify):</b>					

Licensed Hydropower Development  
Recreation Report

## Glossary of FERC Form 80 Terms

**Available Resources.** Quantifies the availability of natural or man-made property or facilities for given recreational resource type. This includes all recreational resources available to the public within the development/project boundary. The resources are broken into the following categories:

**User Free** (Schedule 2, column b) - Those resources within the development/project that are free to the public;

**User Fee** (Schedule 2, column c) - Those resources within the development/project where the licensee/facility operator charges a fee;

**FERC Approved Resources** (Schedule 2, column d) - Those resources within the development/project that are FERC approved. This includes specific recreation amenities, facilities, or sites required by the Commission in the license or license amendment document, including an approved recreation plan or report. This number does not necessarily have to equal the sum of user free and user fee resources.

**Development.** The portion of a project which includes:

- (a) a reservoir; or
- (b) a generating station and its specifically-related waterways.

**Exemption from Filing.** Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

**General Public.** Those persons who do not have special privileges to use the shoreline for recreational purposes, such as waterfront property ownership, water-privileged community rights, or renters with such privileges.

**Licensee.** Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where*:

- (a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form;
- or
- (b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

**Peak Use Weekend.** Weekends when recreational use is at its peak for the season (July 4th weekend and other holiday weekends). On these weekends, recreational use may exceed the capacity of the area to handle such use.

**Major License.** A license for a project of more than 2,000 horsepower (1.5 megawatts) installed capacity.

**Minor License.** A license for a project of 2,000 horsepower (1.5 megawatts) or less installed capacity.

**Recreation Day.** Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

**Revenues.** Income generated from recreation facilities at project development. Includes fees for access or use of area.

Federal Energy Regulatory  
Commission (FERC)  
FERC Form 80

## Licensed Hydropower Development Recreation Report

Form Approved  
OMB No. 1902-0106  
Expires: 09/30/2010  
Burden 3.0 hours

This form collects data on recreational resources at projects licensed by the Federal Energy Regulatory Commission under the Federal Power Act (16 USC 791a-825r). This form must be submitted by licensees of all projects except those specifically exempted under 18 CFR 8.11 (c). Submit this form on or before April 1, 2009. Submit subsequent filings of this form on or before April 1, every 6th year thereafter (for example, 2015, 2021, etc.). Submit an original and two copies of the form to the Commission's Regional Office (specified in the cover letter to this form). The public burden estimated for this form is three hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. Please send your comments about this burden estimate, or any other aspect of this collection of information, including suggestions to reduce the burden, to: Director, Division of Hydropower Administration and Compliance, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426 and the Office of Information and Regulatory Affairs, Desk Officer-FERC, Office of Management and Budget, Washington, D.C. 20503.

Failure to comply with this collection of information will not result in a penalty, if you were unaware that a valid control number assigned by the Office of Management and Budget must be displayed on this collection of information.

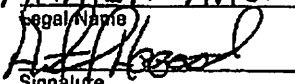
**Instructions:**

- a. All data reported on this form must represent recreational facilities and services located within the development/project boundary.
- b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
- c. Report actual data for each item. If actual data are unavailable, then please estimate.

**Schedule 1. General Information**

<p>1. Licensee Name: <u>Synergics</u></p> <p>2. Project Name: <u>Oakland</u></p> <p>3. Project Number: <u>2556</u></p> <p>4. Development Name: <u>Oakland</u></p> <p>States Development/Project Traverses (List state with largest area within the development/project boundary first):</p> <p>5. State #1: <u>ME</u></p> <p>6. State #2: _____</p> <p>7. Type of Project License: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/></p>	<p>8. Reservoir Surface Area at Normal Pool (acres): <u>10.00</u></p> <p>9. Shoreline Miles at Normal Pool: <u>1.00</u></p> <p>10. Percent of Shoreline Safely Accessible to the General Public by Land Travel without Trespassing: <u>3.00</u></p> <p>11. Data Collection Methods (enter percent for each method used; total must equal 100%):</p> <p>_____ traffic count/trail count</p> <p>_____ attendance records</p> <p><u>100.00</u> staff observation</p> <p>_____ visitor assessment</p> <p>_____ estimate</p>	
<p><i>For the previous calendar year, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the corresponding annual recreational revenues.</i></p>		
<p>Licensee's Annual Recreation Costs and Revenues (In Whole Dollars)</p>		
Item	Construction, Operation and Maintenance Costs	Recreation Revenues for Calendar Year
12. Dollar Values	<u>\$900.00</u>	<u>\$0.00</u>
<p>13. Length of Recreation Season                  Summer: From (MM/DD) <u>05/23</u> To <u>09/07</u> Winter: From (MM/DD) <u>12/01</u> To <u>04/01</u></p>		
Period	Number of visits to all recreational areas at development/project (in Recreation Days)	
	Annual Total	Peak Weekend Average
14. Daytime	<u>3,058.00</u>	<u>98.00</u>
15. Nighttime	<u>0.00</u>	<u>0.00</u>

Respondent Certification: The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

ARTHUR HAZARD  
Legal Name  
  
Signature

VICE PRESIDENT  
Title  
3-27-09  
Date Signed

410-268-8820  
Area Code/Phone No.  
 \_\_\_\_\_  
Reporting Year Ending

Title 18 U.S.C. 1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.



Licensed Hydropower Development  
 Recreation Report

**Schedule 2. Inventory of Recreational Resources**

16. Enter data for each Recreational Resource Type (a). For Facility Capacity (f), of total available resources (b) + (c), compare the average total amount of weekend use (during the recreation season reported on Schedule 1, Item 13) with the total combined capacity of these resources to handle such use and enter a percentage that indicates their overall level of use. Do not consider peak weekend use (see Glossary). For example, if all available Boat Ramps are used to half capacity during non-peak weekend days, enter 50%. For all available Boat Ramps that are used beyond their combined capacity, enter the appropriate percentage above 100.

Recreational Resource Type (a)	No. of Available Resources			Total Miles/Acres (e)	Facility Capacity (percent) (f)
	User Free (b)	User Fee (c)	No. FERC Approved Resources (d)		
<b>Access Areas. (No Facilities).</b> Unimproved but well-known/popular sites which can be used to reach development/project waters (including waters below a dam) without trespassing on other property. Such areas can be used for launching boats, fishing, swimming, or other water recreational purposes.	1				20
<b>Boat Launch Areas.</b> Improved areas having one or more boat launching lanes and (a) are usually marked with signs, (b) have compacted gravel or concrete surfaces, and (c) usually have adjacent parking lots.					
<b>Boat Launch Lanes.</b> The number of lanes are determined by the total number of boats that can be launched easily at the designated boat launch areas at one time.					
<b>Marinas.</b> Public and Private facilities on or adjacent to the development/project waters for the docking, fueling, repair and storage of boats, and which may rent boats and equipment, or sell bait or food.				Acres	
<b>White Water Boating.</b> Access areas below a dam that can be used for rafting/kayaking.					
<b>Canoe Portages.</b> Site located above and below a dam, diversion, or other obstruction where persons can launch and take out canoes; and the improved, designated, and maintained trails connecting such sites.				Miles	
<b>Tailwater Fishing Facilities.</b> Platforms, walkways, or similar structures to facilitate below-dam fishing.	1				20
<b>Fishing Piers.</b> Structures which are installed and maintained in development/project waters specifically for fishing. This code excludes tailwater fishing facilities.					
<b>Parks.</b> Designated areas which usually contain multiple use facilities (e.g., picnic sites, playgrounds, swimming beaches, and boat ramps). Individual facilities within each park should be reported under the appropriate resource type (e.g. playground areas, picnic areas, etc.)				Acres	
<b>Playground Areas.</b> Have playground equipment, game courts/fields, jogging tracks, etc.				Acres	
<b>Trails.</b> Improved pathways used for non-automobile recreational travel which (a) can be located on a reference map, and (b) are designated according to type of use (hiking, bridle, trail bikes, snow mobiles, cross-country skiing). This category excludes canoe portages.				Miles	
<b>Swimming Areas.</b> Sites providing access to development/project waters where swimming facilities (bath houses, designated swim areas, parking, and sanitation facilities) are available.				Acres	
<b>Picnic Areas.</b> Areas designated and maintained for picnicking and which contain one or more picnic sites, each of which includes a picnic table and in some cases cooking grills, trash receptacles, and a parking area.				Acres	
<b>Wildlife Areas.</b> Natural areas and reserves specifically created and managed for the protection and propagation of wildlife and the viewing of wildlife in their natural habitat.				Acres	
<b>Visitor Centers.</b> Facilities located in a kiosk, pavilion or similar structure from which persons may obtain information about the development/project, its operation, recreational facilities, and related items of interest.					
<b>Interpretive Displays.</b> Facilities (exhibits and museums) which describe or explain archaeological, historic, or prehistoric objects, structures, sites, areas, activities, artifacts, and materials.	1		1		20
<b>Overlooks.</b> Public areas to view natural areas/project features (e.g., pull-offs or vistas).				Acres	
<b>Hunting Areas.</b> Public or private areas open to the general public for hunting.				Acres	
<b>Golf Courses.</b> All types of golf areas, except miniature golf.				Acres	
<b>Cottage/Cabin Sites.</b> Recreational dwellings which are seasonally rented by the public for recreational purposes.					
<b>Camping Areas/(Campgrounds).</b> Areas containing two or more campsites, tent sites, or trailer/recreational vehicle (RV) sites which accommodate overnight camping. This category does not include group camps.				Acres	
<b>Tent/Trailer/RV Sites.</b> The total number of sites within Camping Areas that have been specifically developed for tent, trailer, or RV use. This category does not include sites within group camps.				Acres	
<b>Organizational Camps.</b> Camping areas that are maintained and operated by a specific entity but which may be used by other persons or groups (scout camps, military base recreation camps, church camps, handicapped children camps).				Acres	
<b>Group Camps.</b> Camping areas which are equipped with facilities to accommodate use by the general public. These areas usually require registration or advance reservation.				Acres	
<b>Winter Sports.</b> Any facility or site providing sports like skiing, sledding, ice skating, or ice fishing.					
<b>Other - such as Informal/dispersed camping areas, unimproved trails, etc. (specify):</b>					

Licensed Hydropower Development  
Recreation Report

## Glossary of FERC Form 80 Terms

**Available Resources.** Quantifies the availability of natural or man-made property or facilities for given recreational resource type. This includes all recreational resources available to the public within the development/project boundary. The resources are broken into the following categories:

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**Development.** The portion of a project which includes:

- (a) a reservoir; or
- (b) a generating station and its specifically-related waterways.

**Exemption from Filing.** Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

**General Public.** Those persons who do not have special privileges to use the shoreline for recreational purposes, such as waterfront property ownership, water-privileged community rights, or renters with such privileges.

**Licensee.** Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where*:

- (a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form;
- or
- (b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

**Peak Use Weekend.** Weekends when recreational use is at its peak for the season (July 4th weekend and other holiday weekends). On these weekends, recreational use may exceed the capacity of the area to handle such use.

**Major License.** A license for a project of more than 2,000 horsepower (1.5 megawatts) installed capacity.

**Minor License.** A license for a project of 2,000 horsepower (1.5 megawatts) or less installed capacity.

**Recreation Day.** Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

**Revenues.** Income generated from recreation facilities at project development. Includes fees for access or use of area.

Federal Energy Regulatory  
Commission (FERC)  
FERC Form 80

## Licensed Hydropower Development Recreation Report

Form Approved  
OMB No. 1902-0108  
Expires: 09/30/2010  
Burden 3.0 hours

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**Instructions:**

- a. All data reported on this form must represent recreational facilities and services located within the development/project boundary.
- b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
- c. Report actual data for each item. If actual data are unavailable, then please estimate.

**Schedule 1. General Information**

<p>1. Licensee Name: <u>Synergios</u></p> <p>2. Project Name: <u>Rice Rips</u></p> <p>3. Project Number: <u>2556</u></p> <p>4. Development Name: <u>Rice Rips</u></p> <p>5. State #1: <u>ME</u></p> <p>6. State #2: _____</p> <p>7. Type of Project License: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/></p>	<p>8. Reservoir Surface Area at Normal Pool (acres): <u>87.00</u></p> <p>9. Shoreline Miles at Normal Pool: <u>4.00</u></p> <p>10. Percent of Shoreline Safely Accessible to the General Public by Land Travel without Trespassing: <u>28.00</u></p> <p>11. Data Collection Methods (enter percent for each method used; total must equal 100%):</p> <p><u>20.00</u> traffic count/trail count</p> <p>_____ attendance records</p> <p><u>80.00</u> staff observation</p> <p>_____ visitor assessment</p> <p>_____ estimate</p>	
<p>States Development/Project Traverses (List state with largest area within the development/project boundary first):</p>		
<p>For the previous calendar year, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the corresponding annual recreational revenues.</p>		
Item	Licensee's Annual Recreation Costs and Revenues (In Whole Dollars)	
	Construction, Operation and Maintenance Costs	Recreation Revenues for Calendar Year
12. Dollar Values	\$4,000.00	\$0.00
13. Length of Recreation Season	Summer: From (MM/DD) <u>05/23</u> To <u>09/07</u> Winter: From (MM/DD) <u>12/01</u> To <u>04/01</u>	
Period	Number of visits to all recreational areas at development/project (In Recreation Days)	
	Annual Total	Peak Weekend Average
14. Daytime	10,551.00	209.00
15. Nighttime	0.00	0.00

Respondent Certification: The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

ARTHUR HAGOOD  
Legal Name  
[Signature]  
Signature

VICE PRESIDENT  
Title  
3-27-09  
Date Signed

410-268-8820  
Area Code/Phone No.  
\_\_\_\_\_  
Reporting Year Ending

Title 18 U.S.C.1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.

Licensed Hydropower Development  
Recreation Report

Schedule 2. Inventory of Recreational Resources

16. Enter data for each Recreational Resource Type (a). For Facility Capacity (f), of total available resources (b) + (c), compare the average total amount of weekend use (during the recreation season reported on Schedule 1, Item 13) with the total combined capacity of these resources to handle such use and enter a percentage that indicates their overall level of use. Do not consider peak weekend use (see Glossary). For example, if all available Boat Ramps are used to half capacity during non-peak weekend days, enter 50%. For all available Boat Ramps that are used beyond their combined capacity, enter the appropriate percentage above 100.

Recreational Resource Type (a)	No. of Available Resources			Total Miles/Acres (e)	Facility Capacity (percent) (f)
	User Free (b)	User Fee (c)	No. FERC Approved Resources (d)		
<b>Access Areas.</b> (No Facilities). Unimproved but well-known/popular sites which can be used to reach development/project waters (including waters below a dam) without trespassing on other property. Such areas can be used for launching boats, fishing, swimming, or other water recreational purposes.	3		1		15
<b>Boat Launch Areas.</b> Improved areas having one or more boat launching lanes and (a) are usually marked with signs, (b) have compacted gravel or concrete surfaces, and (c) usually have adjacent parking lots.	1		1		15
<b>Boat Launch Lanes.</b> The number of lanes are determined by the total number of boats that can be launched easily at the designated boat launch areas at one time.					
<b>Marinas.</b> Public and Private facilities on or adjacent to the development/project waters for the docking, fueling, repair and storage of boats, and which may rent boats and equipment, or sell bait or food.				Acres	
<b>White Water Boating.</b> Access areas below a dam that can be used for rafting/kayaking.					
<b>Canoe Portages.</b> Site located above and below a dam, diversion, or other obstruction where persons can launch and take out canoes; and the improved, designated, and maintained trails connecting such sites.				Miles	
<b>Tailwater Fishing Facilities.</b> Platforms, walkways, or similar structures to facilitate below-dam fishing.					
<b>Fishing Piers.</b> Structures which are installed and maintained in development/project waters specifically for fishing. This code excludes tailwater fishing facilities.					
<b>Parks.</b> Designated areas which usually contain multiple use facilities (e.g., picnic sites, playgrounds, swimming beaches, and boat ramps). Individual facilities within each park should be reported under the appropriate resource type (e.g. playground areas, picnic areas, etc.)				Acres	
<b>Playground Areas.</b> Have playground equipment, game courts/fields, jogging tracks, etc.				Acres	
<b>Trails.</b> Improved pathways used for non-automobile recreational travel which (a) can be located on a reference map, and (b) are designated according to type of use (hiking, bridle, trail bikes, snow mobiles, cross-country skiing). This category excludes canoe portages.	1		1	Miles 3	50
<b>Swimming Areas.</b> Sites providing access to development/project waters where swimming facilities (bath houses, designated swim areas, parking, and sanitation facilities) are available.				Acres	
<b>Picnic Areas.</b> Areas designated and maintained for picnicking and which contain one or more picnic sites, each of which includes a picnic table and in some cases cooking grills, trash receptacles, and a parking area.				Acres	
<b>Wildlife Areas.</b> Natural areas and reserves specifically created and managed for the protection and propagation of wildlife and the viewing of wildlife in their natural habitat.				Acres	
<b>Visitor Centers.</b> Facilities located in a kiosk, pavilion or similar structure from which persons may obtain information about the development/project, its operation, recreational facilities, and related items of interest.					
<b>Interpretive Displays.</b> Facilities (exhibits and museums) which describe or explain archaeological, historic, or prehistoric objects, structures, sites, areas, activities, artifacts, and materials.					
<b>Overlooks.</b> Public areas to view natural areas/project features (e.g., pull-offs or vistas).				Acres	
<b>Hunting Areas.</b> Public or private areas open to the general public for hunting.	1			87 Acres	25
<b>Golf Courses.</b> All types of golf areas, except miniature golf.				Acres	
<b>Cottage/Cabin Sites.</b> Recreational dwellings which are seasonally rented by the public for recreational purposes.					
<b>Camping Areas/(Campgrounds).</b> Areas containing two or more campsites, tent sites, or trailer/recreational vehicle (RV) sites which accommodate overnight camping. This category does not include group camps.				Acres	
<b>Tent/Trailer/RV Sites.</b> The total number of sites within Camping Areas that have been specifically developed for tent, trailer, or RV use. This category does not include sites within group camps.				Acres	
<b>Organizational Camps.</b> Camping areas that are maintained and operated by a specific entity but which may be used by other persons or groups (scout camps, military base recreation camps, church camps, handicapped children camps).				Acres	
<b>Group Camps.</b> Camping areas which are equipped with facilities to accommodate use by the general public. These areas usually require registration or advance reservation.				Acres	
<b>Winter Sports.</b> Any facility or site providing sports like skiing, sledding, ice skating, or ice fishing.					
<b>Other - such as informal/dispersed camping areas, unimproved trails, etc. (specify):</b>					

Licensed Hydropower Development  
Recreation Report

## Glossary of FERC Form 80 Terms

**Available Resources.** Quantifies the availability of natural or man-made property or facilities for given recreational resource type. This includes all recreational resources available to the public within the development/project boundary. The resources are broken into the following categories:

**User Free** (Schedule 2, column b) - Those resources within the development/project that are free to the public;

**User Fee** (Schedule 2, column c) - Those resources within the development/project where the licensee/facility operator charges a fee;

**FERC Approved Resources** (Schedule 2, column d) - Those resources within the development/project that are FERC approved. This includes specific recreation amenities, facilities, or sites required by the Commission in the license or license amendment document, including an approved recreation plan or report. This number does not necessarily have to equal the sum of user free and user fee resources.

**Development.** The portion of a project which includes:

- (a) a reservoir; or
- (b) a generating station and its specifically-related waterways.

**Exemption from Filing.** Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

**General Public.** Those persons who do not have special privileges to use the shoreline for recreational purposes, such as waterfront property ownership, water-privileged community rights, or renters with such privileges.

**Licensee.** Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where*:

- (a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form;
- or
- (b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

**Peak Use Weekend.** Weekends when recreational use is at its peak for the season (July 4th weekend and other holiday weekends). On these weekends, recreational use may exceed the capacity of the area to handle such use.

**Major License.** A license for a project of more than 2,000 horsepower (1.5 megawatts) installed capacity.

**Minor License.** A license for a project of 2,000 horsepower (1.5 megawatts) or less installed capacity.

**Recreation Day.** Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

**Revenues.** Income generated from recreation facilities at project development. Includes fees for access or use of area.

Federal Energy Regulatory  
Commission (FERC)  
FERC Form 80

## Licensed Hydropower Development Recreation Report

Form Approved  
OMB No. 1902-0106  
Expires: 09/30/2010  
Burden 3.0 hours

This form collects data on recreational resources at projects licensed by the Federal Energy Regulatory Commission under the Federal Power Act (16 USC 791a-825r). This form must be submitted by licensees of all projects except those specifically exempted under 18 CFR 8.11 (c). Submit this form on or before April 1, 2009. Submit subsequent filings of this form on or before April 1, every 6th year thereafter (for example, 2015, 2021, etc.). Submit an original and two copies of the form to the Commission's Regional Office (specified in the cover letter to this form). The public burden estimated for this form is three hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. Please send your comments about this burden estimate, or any other aspect of this collection of information, including suggestions to reduce the burden, to: Director, Division of Hydropower Administration and Compliance, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426 and the Office of Information and Regulatory Affairs, Desk Officer-FERC, Office of Management and Budget, Washington, D.C. 20503.

Failure to comply with this collection of information will not result in a penalty, if you were unaware that a valid control number assigned by the Office of Management and Budget must be displayed on this collection of information.

**Instructions:**

- a. All data reported on this form must represent recreational facilities and services located within the development/project boundary.
- b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
- c. Report actual data for each item. If actual data are unavailable, then please estimate.

**Schedule 1. General Information**

<p>1. Licensee Name: <u>Synergics</u></p> <p>2. Project Name: <u>Union Gas</u></p> <p>3. Project Number: <u>2556</u></p> <p>4. Development Name: <u>Union Gas</u></p>	<p>8. Reservoir Surface Area at Normal Pool (acres): <u>25.00</u></p> <p>9. Shoreline Miles at Normal Pool: <u>3.00</u></p> <p>10. Percent of Shoreline Safely Accessible to the General Public by Land Travel without Trespassing: <u>30.00</u></p>
<p>States Development/Project Traverses (List state with largest area within the development/project boundary first):</p> <p>5. State #1: <u>ME</u></p> <p>6. State #2: _____</p> <p>7. Type of Project License: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/> (check one)</p>	<p>11. Data Collection Methods (enter percent for each method used; total must equal 100%):</p> <p><u>40.00</u> traffic count/trail count</p> <p>_____ attendance records</p> <p><u>60.00</u> staff observation</p> <p>_____ visitor assessment</p> <p>_____ estimate</p>
<p><i>For the previous calendar year, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the corresponding annual recreational revenues.</i></p>	
Item	Licensee's Annual Recreation Costs and Revenues (in Whole Dollars)
	Construction, Operation and Maintenance Costs      Recreation Revenues for Calendar Year
12. Dollar Values	\$1,600.00      \$0.00
<p>13. Length of Recreation Season                  Summer: From (MM/DD) <u>05/23</u> To <u>09/07</u>      Winter: From (MM/DD) <u>12/01</u> To <u>04/01</u></p>	
Period	Number of visits to all recreational areas at development/project (in Recreation Days)
	Annual Total      Peak Weekend Average
14. Daytime	20,208.00      207.00
15. Nighttime	0.00      0.00

**Respondent Certification:** The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

ARTHUR HANCOCK  
 Page Name  
[Signature]  
 Signature

VICE PRESIDENT  
 Title  
3-27-09  
 Date Signed

410-268-8820  
 Area Code/Phone No.  
 \_\_\_\_\_  
 Reporting Year Ending

Title 18 U.S.C. 1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.

Licensed Hydropower Development  
Recreation Report

Schedule 2. Inventory of Recreational Resources

16. Enter data for each Recreational Resource Type (a). For Facility Capacity (f), of total available resources (b) + (c), compare the average total amount of weekend use (during the recreation season reported on Schedule 1, Item 13) with the total combined capacity of these resources to handle such use and enter a percentage that indicates their overall level of use. Do not consider peak weekend use (see Glossary). For example, if all available Boat Ramps are used to half capacity during non-peak weekend days, enter 50%. For all available Boat Ramps that are used beyond their combined capacity, enter the appropriate percentage above 100.

Recreational Resource Type (a)	No. of Available Resources			Total Miles/Acres (e)	Facility Capacity (percent) (f)
	User Free (b)	User Fee (c)	No. FERC Approved Resources (d)		
Access Areas. (No Facilities). Unimproved but well-known/popular sites which can be used to reach development/project waters (including waters below a dam) without trespassing on other property. Such areas can be used for launching boats, fishing, swimming, or other water recreational purposes.	1				20
Boat Launch Areas. Improved areas having one or more boat launching lanes and (a) are usually marked with signs, (b) have compacted gravel or concrete surfaces, and (c) usually have adjacent parking lots.	1		1		20
Boat Launch Lanes. The number of lanes are determined by the total number of boats that can be launched easily at the designated boat launch areas at one time.	1		1		20
Marinas. Public and Private facilities on or adjacent to the development/project waters for the docking, fueling, repair and storage of boats, and which may rent boats and equipment, or sell bait or food.				Acres	
White Water Boating. Access areas below a dam that can be used for rafting/kayaking.					
Canoe Portages. Site located above and below a dam, diversion, or other obstruction where persons can launch and take out canoes; and the improved, designated, and maintained trails connecting such sites.				Miles	
Tailwater Fishing Facilities. Platforms, walkways, or similar structures to facilitate below-dam fishing.	2		1		20
Fishing Piers. Structures which are installed and maintained in development/project waters specifically for fishing. This code excludes tailwater fishing facilities.					
Parks. Designated areas which usually contain multiple use facilities (e.g., picnic sites, playgrounds, swimming beaches, and boat ramps). Individual facilities within each park should be reported under the appropriate resource type (e.g. playground areas, picnic areas, etc.)				Acres	
Playground Areas. Have playground equipment, game courts/fields, jogging tracks, etc.				Acres	
Trails. Improved pathways used for non-automobile recreational travel which (a) can be located on a reference map, and (b) are designated according to type of use (hiking, bridle, trail bikes, snow mobiles, cross-country skiing). This category excludes canoe portages.				Miles	
Swimming Areas. Sites providing access to development/project waters where swimming facilities (bath houses, designated swim areas, parking, and sanitation facilities) are available.				Acres	
Picnic Areas. Areas designated and maintained for picnicking and which contain one or more picnic sites, each of which includes a picnic table and in some cases cooking grills, trash receptacles, and a parking area.				Acres	
Wildlife Areas. Natural areas and reserves specifically created and managed for the protection and propagation of wildlife and the viewing of wildlife in their natural habitat.				Acres	
Visitor Centers. Facilities located in a kiosk, pavilion or similar structure from which persons may obtain information about the development/project, its operation, recreational facilities, and related items of interest.					
Interpretive Displays. Facilities (exhibits and museums) which describe or explain archaeological, historic, or prehistoric objects, structures, sites, areas, activities, artifacts, and materials.					
Overlooks. Public areas to view natural areas/project features (e.g., pull-offs or vistas).				Acres	
Hunting Areas. Public or private areas open to the general public for hunting.				Acres	
Golf Courses. All types of golf areas, except miniature golf.				Acres	
Cottage/Cabin Sites. Recreational dwellings which are seasonally rented by the public for recreational purposes.					
Camping Areas/(Campgrounds). Areas containing two or more campsites, tent sites, or trailer/recreational vehicle (RV) sites which accommodate overnight camping. This category does not include group camps.				Acres	
Tent/Trailer/RV Sites. The total number of sites within Camping Areas that have been specifically developed for tent, trailer, or RV use. This category does not include sites within group camps.				Acres	
Organizational Camps. Camping areas that are maintained and operated by a specific entity but which may be used by other persons or groups (scout camps, military base recreation camps, church camps, handicapped children camps).				Acres	
Group Camps. Camping areas which are equipped with facilities to accommodate use by the general public. These areas usually require registration or advance reservation.				Acres	
Winter Sports. Any facility or site providing sports like skiing, sledding, ice skating, or ice fishing.					
Other - such as informal/dispersed camping areas, unimproved trails, etc. (specify):					

## Licensed Hydropower Development Recreation Report

### Glossary of FERC Form 80 Terms

**Available Resources.** Quantifies the availability of natural or man-made property or facilities for given recreational resource type. This includes all recreational resources available to the public within the development/project boundary. The resources are broken into the following categories:

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**FERC Approved Resources** (Schedule 2, column d) - Those resources within the development/project that are FERC approved. This includes specific recreation amenities, facilities, or sites required by the Commission in the license or license amendment document, including an approved recreation plan or report. This number does not necessarily have to equal the sum of user free and user fee resources.

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- (a) a reservoir; or
- (b) a generating station and its specifically-related waterways.

**Exemption from Filing.** Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

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**Licensee.** Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where*:

- (a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form;
- or
- (b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

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**Minor License.** A license for a project of 2,000 horsepower (1.5 megawatts) or less installed capacity.

**Recreation Day.** Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

**Revenues.** Income generated from recreation facilities at project development. Includes fees for access or use of area.



APPENDIX G-3

FERC Order Approving Recreation Monitoring Report  
Issued February 9, 2004

CC:Whittier, Patton, DeLuca, Wiley, Campbell  
Reference Notebook File: MESS. ENG 10-4-8

UNITED STATES OF AMERICA 106 FERC ¶ 62, 135  
FEDERAL ENERGY REGULATORY COMMISSION

FPL Energy Maine Hydro LLC

Project No. 2556-049

ORDER APPROVING RECREATION MONITORING REPORT  
PURSUANT TO ARTICLE 412

(Issued February 19, 2004)

On September 30, 2003, FPL Energy Maine Hydro LLC (licensee) filed a Recreation Monitoring Report (report) pursuant to article 412 of the license for the Messalonskee Hydroelectric Project<sup>1</sup>, FERC Project No. 2556. There are three hydroelectric generation developments (Oakland, Rice Rips, and Union Gas) and one storage development (Messalonskee Lake) that comprise the project. The project is located on the Messalonskee Stream in Kennebec County, Maine.

BACKGROUND

Article 412 of the project license required that within three months of the effective date of the license, the licensee shall create a plan to monitor recreational use of the Oakland, Rice Rips, and Union Gas developments to determine whether existing and new access facilities were meeting public use demands without harm to wetlands and wildlife. The order approving the recreation monitoring plan for the Messalonskee Project was issued on June 21, 2000. Every six years a report is to be filed in conjunction and in the same time frame as the FERC Form 80. An order issued August 12, 2003<sup>2</sup>, changed the due date for the monitoring reports to September 30 to make them consistent with the reports for the licensee's other projects. The monitoring report should include the following information: (1) annual recreation use figures; (2) a discussion of the adequacy of the recreation facilities; (3) a discussion regarding the need for additional recreation facilities at the project site; (4) if there is a need for additional facilities, a recreation plan; and (5) documentation of consultation with a specific description of how the agencies' comments are accommodated by the report.

The Order Modifying and Approving Recreation Plan issued June 26, 2000, required the licensee to reevaluate the need for fishing access for people with disabilities

<sup>1</sup> Order Issuing New License (Major Project) 88 FERC ¶ 61,122 (1999)

<sup>2</sup> Order Amending License Articles to Change Reporting Schedule 104 FERC ¶ 62,117 (2003)

Project No. 2556-049

2

at the Union Gas development during the Form 80 recreation monitoring. The results of the monitoring are to be included with the report pursuant to article 412. The order also required the licensee to designate a "greenbelt" or multiple use area along the Rice Rips development impoundment pursuant to article 410 of the project license. The recreation monitoring report should contain an update on the land designation. Subsequent to the filing of the recreation monitoring report the licensee has filed information for the completion of the requirements associated with article 410. Therefore, this issue will be addressed in a separate order<sup>3</sup>.

The licensee shall prepare the report after consultation with the U.S. Fish and Wildlife Service (FWS), the Maine Department of Conservation (MDOC), the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the National Park Service (NPS). The licensee shall include with the plan documentation of consultation, copies of comments and recommendations, and specific descriptions of how the agencies' comments are accommodated by the plan. A minimum of 30 days is required for the agencies to comment and to make recommendations before filing the plan with the Commission.

DESCRIPTION OF REPORT

The recreation monitoring report includes recreational use figures, methodology of data collection, a discussion on the facilities' adequacy, a reevaluation of the need for fishing access for people with disabilities at the Union Gas development, an update on the "greenbelt" at the Rice Rips development, and documentation of consultation.

Data was collected using four methods. Spot counts were conducted during the recreation season (March-October) at least twice during the week and once each weekend. Winter and nighttime collection did not occur. Spot counts recorded number of vehicles, boats, and people at a facility. Calibration counts occurred at the same places as spot counts, but for time periods ranging from one to three hours. An employee recorded number of people, observed activities, number of vehicles, time in and time out. Traffic counts were conducted using mechanical traffic counters designed to record the number of vehicles accessing boat ramps during six hour increments. Finally, the licensee interviewed several people that live and work in the area to determine percent capacity use as observed by those individuals.

At the Messalonskee Lake and Oakland developments only summer data was collected. Traffic counters were installed at the Oakland and Belgrade Boat Ramps. At the Rice Rips development data was collected in the spring, summer, and fall. No traffic counters were used since there are no boat ramps at this site. At the Union Gas

<sup>3</sup> Letter filed December 19, 2003. Pending approval.

development summer and fall counts were taken, and spring was assumed to be the same as fall. During the summer season, a traffic counter was in use at the Waterville Boat Ramp.

The data revealed that summer is the most popular time for recreation use at all of the project developments. Boating and swimming are the most popular activities. Messalonskee Lake and the Oakland development have four recreation areas. The most highly used at around 75% of capacity are the Oakland and Belgrade Boat Launches. The MDOC day-use park and the tailwater fishing area are used between 20 and 25% of capacity. Fishing is the most popular activity at the Oakland development and at Messalonskee Lake.

The Rice Rips development has one recreation area with a parking lot. The fishing area in the bypass is used at about 15% of capacity. Fishing is the most popular activity at the development.

At the Union Gas development a nature trail maintained by the City of Waterville is not regularly monitored by the licensee because it is outside the project boundary. Those interviewed for the purpose of collecting data believe that the trail does not receive much use and parking may be an issue. The tailrace fishing area receives low to moderate use. The Waterville Boat Launch is mostly used in the spring fishing season at about 20% of capacity. Sight-seeing is the most popular activity at the development.

The licensee has included as part of the report an update on the recreation facilities at the developments. Of importance is that at the Belgrade Boat Launch at Messalonskee Lake has been closed for use unless state inspectors are onsite in order to control the spread of milfoil, an invasive species. The MDIFW is experimenting with herbicides, but believes this precaution is necessary until matters are fully resolved.

The need for handicap-accessible fishing access at the Union Gas development has been reevaluated by the licensee. Data collected for this report show that there appears to be little angling interest in the area below the powerhouse. None of the consulting agencies have expressed a need for the fishing access. Therefore, based on these findings, the licensee does not propose installing a fishing platform at this time, and will continue to evaluate the need for one as part of its FERC Form 80 recreational monitoring.

## AGENCY CONSULTATION

On April 16, 2002, the licensee submitted a preliminary consultation letter to FWS, MDOC, MDIFW, City of Waterville, NPS, and the Town of Oakland. No comments were received regarding the initial consultation letter. A copy of the draft monitoring report was sent to the above agencies and to the Maine Department of Environmental Protection (MDEP) and the Maine State Historic Preservation Officer (SHPO). A separate letter concerning the agreement between the licensee and the Town of Oakland and the Rice Rips carry-in boat access was also sent to all of the above-mentioned agencies. FWS provided written comments concurring with the methods and results in the report.

The MDOC replied with a comment about a graph label used in the report. MDOC suggested clarifying winter use data by writing "winter not sampled", deleting the winter label, or having the label read "Winter <X%". The licensee deleted the winter label and clarified in the report that winter data was not collected.

The SHPO responded to the letter concerning the Rice Rips carry-in boat access. No effects on historical resources should occur from the construction of the carry-in.

## DISCUSSION AND CONCLUSION

The plan fulfills the requirements of article 412. The boat launches at Messalonskee Lake appear to be the most popular recreation sites; however, they are not close to reaching capacity. The licensee should continue to monitor the situation at the Belgrade Boat Launch and alert the Commission if the site is forced to close entirely. It is understood that invasive species must be controlled; however, the licensee has the responsibility to provide the public with access to the impoundment.

The licensee believes a handicap-accessible fishing platform at the Union Gas development is not needed at this time based on the low use of the site in general. Commission staff agrees that the current recreation facilities are adequate, and the licensee should reevaluate the need for the fishing platform during data collection for the next monitoring report. None of the other sites are in need of improvements or expansion based on the data collected for the report. The recreation monitoring report should be approved. The next recreation monitoring report is due on or before September 30, 2009.

Project No. 2528-067

-5-

The Director orders:

(A) The recreation monitoring report filed September 30, 2003, pursuant to article 412 of the project license is approved.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of this order, pursuant to 18 C.F.R. 385-713.

John E. Estep  
Division of Hydropower Administration  
and Compliance

104 FERC ¶ 62,109  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

FPL Energy Maine Hydro LLC

Project Nos. 2519-044,  
2528-066, and 2556-047

ORDER AMENDING ARTICLES TO CHANGE REPORTING SCHEDULE

(Issued August 12, 2003)

On June 20, 2003, FPL Energy Maine Hydro LLC, licensee for the North Gorham, Cataract, and Messalonskee Hydroelectric Projects, filed a request for a permanent article amendment concerning the schedules for filing reports on the results of recreation monitoring, as required by the licenses for these projects.<sup>1</sup> The articles require the licensee to monitor annual recreation use of the project areas to determine whether existing recreation facilities are meeting recreation demand. The North Gorham Project is located on the Presumpscot River in the Cumberland County, the Cataract Project on the Saco River in York County, and the Messalonskee Project on the Messalonskee Stream in Kennebec County, all in Maine.

The articles require that reports on the monitoring results be filed in conjunction with the FERC Form 80.<sup>2</sup> The licensee states that it needs additional time following the Form 80 filing to analyze and accurately describe the monitoring results for the North Gorham and Cataract Projects. It requests a permanent amendment of the articles to allow 6 months after the Form 80 is due to file its reports on the monitoring results for these two projects. In order for the data analysis and reporting for the Messalonskee Project to be consistent with the other two projects, the licensee requests that the April 1, 2004, deadline for that project be changed to September 30, 2003.

The reasons advanced by the licensee in support of the requested changes in due date are reasonable and justify the changes. The additional time will allow the licensee to

<sup>1</sup>65 FERC ¶ 62,154 (1993), article 407; 47 FERC ¶ 62,296 (1989), article 407; and 88 FERC ¶ 61,122 (1999), article 412, respectively. The licensee's request to extend the due date for all three projects until September 30, 2003 was approved by *Order Granting Extension Of Time To Report Results Of Recreation Monitoring* issued July, 17, 2003.

<sup>2</sup>Form 80's are due April 1 of every sixth year, e.g., April 1, 2003 and April 1, 2009. Article 412 establishes April 1, 2004, as the deadline for the first Form 80 and monitoring report for the Messalonskee Project.

File: Cataract -OR 6-9  
No. Gorham Cor 6-9  
Messalonskee  
Cor 6-9

Project Nos. 2519-044 et al

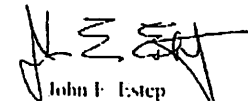
- 2 -

more accurately analyze the monitoring results and to determine if existing recreational facilities are adequate

The Director orders:

(A) The deadlines for filing the reports on the results of recreation use monitoring, as required by article 407 of the licenses for Project Nos. 2519 and 2528, and by article 412 for Project No. 2556, are changed to six months after the due date of the Form 80 for each project

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of this order, pursuant to 18 C.F.R. 385.213.



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