PART I. FACILITY DESCRIPTION

This project was certified by LIHI May 28, 2011 and is applying for recertification.
There are no material changes to project operations that should be noted during recertification.

The Automatic Project, (FERC No. 2555) is located in Kennebec County, Maine, on the Messalonskee Stream which flows from Messalonskee Lake (Snow Pond) in Oakland and empties into the Kennebec River in Waterville, 2.3 miles below the Waterville-Winslow bridge. The project dam is located within the city limits of Waterville at stream mile 2.6. There are three other hydro projects on this stream owned and operated by Messalonskee Stream Hydro, LLC. They are Oakland (FERC No. 2556), Rice Rips (FERC No. 2556), located upstream, and Union Gas (FERC no. 2556), located downstream. All four projects are operated as run-of-river since there is no significant storage behind any of the project dams.

The project works consist of: (1) an 81-foot-long, 33-foot-high concrete gravity dam with (a) a 30-foot-long non-overflow section, (b) a 20-foot-long by 2-foot-wide gated section with one Taintor gate, 14 feet high by 16 feet wide, (c) a 30-foot-long spillway section topped with 2-foot-high flashboards, (d) an intake section beneath the spillway and (e) an earthen section containing a 30-foot-long retaining wall; (2) a concrete and brick powerhouse, 63 feet high by 19 feet wide by 31 feet long, housing one horizontal Francis turbine and General Electric generator combination with a rated capacity of 800 kW; (3) a 4.5-mile-long impoundment with a gross storage capacity of 900 AF; and (4) appurtenant facilities.

For a history of ownership status of the project, please refer to Appendix 1 "Ownership/Regulatory Status" of the initial 2011 certification application, which is posted on the LIHI website under Automatic Project files. There have been no changes to ownership status since this project was certified in 2011.

Table B-1. Facility Description Information for Automatic Hydroelectric Project (LIHI #00072).

Information Type	*Variable Description*	*Response(and reference to further details)*
Name of the Facility	Facility name (use FERC project name if possible)	Automatic Hydroelectric Project
Location	River name (USGS proper name)	Messalonskee Stream
	River basin name	Kennebec River Basin
	Nearest town, county, and state	Kennebec County, Maine, Waterville
	River mile of dam above next major river	2.6 stream miles above the confluence with the Kennebec River
	Geographic latitude	44°32'50.47"N
	Geographic longitude	69°38'35.37"W
Facility Owner	Application contact names:	
	- Facility owner (individual and company names)	Jeffrey LaCasse, General Manager/Superintendent, Kennebec Water District
	- Operating affiliate (if different from owner)	N/A
	- Representative in LIHI certification	Elise Anderson, Regulatory Analyst, Essex Hydro
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates	FERC Project No. P-2555 issued July 28, 1999, Expires 2036
	FERC license type or special classification (e.g., "qualified conduit")	Subsequent Major License
	Water Quality Certificate identifier and issuance date, plus source agency name	#L-17585-33-D-N Signed 8/28/1995, Effective date of License Issue Maine Department of Environmental Protection
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	FERC Order Issuing Subsequent License (7/28/99): **Appendix 1** FERC Order (1/3/95): **Appendix 2** WQC: **Appendix 3**
Power Plant Character-istics	Date of initial operation (past or future for operational applications)	1924
	Total name-plate capacity (MW)	0.800 MW
	Average annual generation (MWh)	2.7 GWh
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	• 1 horizontal Francis turbine with a General Electric generator • Hydraulic capacity: max. 615 and min. 535 cfs
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Run-of-river
	Dates and types of major equipment upgrades	We have done no major generation improvements to dam since 2011, although we have added some operational and monitoring improvements including an eel passage structure. The addition of basic components to operate and monitor station

		functions remotely were added in the past two years.
	Dates, purpose, and type of any recent operational changes	The addition of basic components to operate and monitor station functions remotely were added in the past two years.
	Plans, authorization, and regulatory activities for any facility upgrades	N/A
Character-istics of Dam, Diversion, or Conduit	Date of construction	1924
	Dam height	81-foot-long, 33-foot-high dam with 2-foot-high flashboards
	Spillway elevation and hydraulic capacity	92.4 feet, 615 cfs
	Tailwater elevation	70 feet
	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	Automatic has no penstock.
	Dates and types of major, generation-related infrastructure improvements to dam	None
	Designated facility purposes (e.g., power, navigation, flood control, water suppy, etc.)	Power generation
	Water source	Messalonskee Stream
	Water discharge location or facility	Messalonskee Stream
Charact-eristics of Reservoir and Watershed	Gross volume and surface area at full pool	**Gross Reservoir Volume:** 900 Acre-Feet **Surface Area:** 68 Acres
	Maximum water surface elevation (ft. MSL)	94.3 feet
	Maximum and minimum volume and water surface elevations for designated power pool, if available	Within 1.0 feet of full Automatic (run-of-river) pond elevations
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	• Automatic is the third in a string of four hydroelectric projects located on the Messalonskee Stream in Oakland and Waterville, Maine. • The furthest upstream Oakland hydroelectric project (FERC Project No. 2556, LIHI Certificate No. 60) at stream mile 9.42; • The immediately upstream Rice Rips hydroelectric project (FERC Project No. 2556, LIHI Certificate No. 59) at stream mile 7.2; • Both Rice Rips and Oakland are owned by Messalonskee Stream Hydro, LLC.
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Union Gas hydroelectric project (FERC Project No. 2556, LIHI Certificate No. 58) is immediately downstream at stream mile 0.93; owned by Messalonskee Stream Hydro, LLC.

	Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation	Operating Agreement with Messalonskee Stream Hydro: See **Appendix 11**
	Area inside FERC project boundary, where appropriate	
Hydrologic Setting	Average annual flow at the dam	406 cfs
	Average monthly flows	January 395 February 305 March 464 April 635 May 356 June 325 July 179 August 269 September 272 October 439 November 370 December 483
	Location and name of relevant stream gauging stations above and below the facility	Kennebec River at North Sidney, Maine USGS 01049265 (Below the Automatic Project)
	Watershed area at the dam	Messalonskee Lake: 177 square miles
Designated Zones of Effect	Number of zones of effect	**Zone 1** – Impoundment & **Zone 2** – Tailrace/Regulated Riverine Reach
	Upstream and downstream locations by river miles	**Zone 1** – The impoundment is 4.5-mile-long with a gross storage capacity of 900 Acre Feet. Impoundment begins at stream mile 2.6 and ends at stream mile 7.1. **Zone 2** – The regulated riverine reach (tailrace) consists of stream that is impounded by the downstream Union Gas project. This zone is located between Union Gas at stream mile 0.93 and the Automatic Dam at stream mile 2.6. This zone is approximately 1.6 miles of stream.
	Type of waterbody (river, impoundment, by-passed reach, etc.)	Impoundment and stream
	Delimiting structures	**Zone 1** – Dam to end of project boundary at stream mile 7.1 **Zone 2** – Automatic Dam to Union Gas Dam
	Designated uses by state water quality agency	**Class C Waters**: Suitable for 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 a habitat for fish and other aquatic life.

Additional Contact Information	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See "PART IV: FACILITY CONTACTS FORM"
	Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders	None
Photographs and Maps	Photographs of key features of the facility and each of the designated zones of effect	**See Appendix 10 - Photos**
	Maps, aerial photos, and/or plan view diagrams of facility area and river basin	**See Appendix 4-1 through 4-4**

* Hyperlinks to facility FERC records on FERC e-library website are preferred whenever possible.

PART II. STANDARDS MATRICES

Zone of Effects #1 - Impoundment

		Alternative Standards Applied				
	Criterion	***1***	***2***	***3***	***4***	***Plus***
A	**Ecological Flow Regimes**	X				
B	**Water Quality**		X			
C	**Upstream Fish Passage**		X			
D	**Downstream Fish Passage**		X			
E	**Watershed and Shoreline Protection**	X				
F	**Threatened and Endangered Species Protection**	X				
G	**Cultural and Historic Resources Protection**	X				
H	**Recreational Resources**		X			

Shading indicates that some standards are not available for some criteria.

Zone of Effects #2 – Regulated Riverine Reach

		Alternative Standards Applied				
	Criterion	***1***	***2***	***3***	***4***	***Plus***
A	**Ecological Flow Regimes**		X			
B	**Water Quality**		X			
C	**Upstream Fish Passage**		X			
D	**Downstream Fish Passage**		X			
E	**Watershed and Shoreline Protection**	X				
F	**Threatened and Endangered Species Protection**	X				
G	**Cultural and Historic Resources Protection**	X				
H	**Recreational Resources**		X			

PART III. SUPPORTING INFORMATION

III.A.1 Ecological Flows

ZoE #1 - Impoundment

A	1	Not Applicable / De Minimis Effect: • Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. • If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained. • In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. • For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – ***NOTE:*** this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.

Supporting Information:

The Automatic impoundment is a 4.5 mile riverine stretch which starts below the Rice Rips powerhouse and extends to the Automatic Dam. The Automatic powerhouse sits directly adjacent to the dam structure and does not have a bypassed reach. Automatic has no penstock. (See project maps and schematics, **Appendix 4-1 through 4-4**)

The Automatic Project is operated as a run-of-river facility, maintains a relatively constant headpond (within 1.0 foot of full pond elevation) and has a negligible usable storage capacity. Article 401 of the project license defined the project minimum flows (**Appendix 1**), stating that "the project shall release a minimum flow of 100 cfs, or project inflows, whichever is less (except at no time shall minimum flows drop below fifteen cfs)." Following the 1999 license order for the other three Messalonskee projects containing this 100 cfs minimum flow requirement, the licensee requested a rehearing of FERC's order, arguing that the State-ordered flow rate of 15 cfs is adequate to protect fish resources in the Messalonskee. In 2000, FERC agreed and modified the three licenses to reduce the minimum flow regime to 15 cfs from 100.

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 by the Maine Department of Inland Fisheries and Wildlife ("DIF&W"). The Automatic impoundment is used by trout in the summer months when water temperatures are too high in the Rice Rips bypass. There are no federally listed threatened or endangered species known to occur within the project area. As a condition of issuance, the FERC License requires compliance with any terms and conditions that the Federal or State fish and wildlife agencies have

determined appropriate to prevent loss of, or damage to, fish and wildlife resources. There have been no deficiencies noted by any agency with jurisdiction for the plant.

III.A.2 Ecological Flows

ZoE #2 – Regulated Riverine Reach

A	*2*	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Supporting Information:

Operation of Automatic is dependent on inflow to Messalonskee Lake and discharge from the upstream Oakland and Rice Rips Hydroelectric projects. When inflow to Messalonskee Lake is greater than approximately 570 cfs, Automatic is operated as a run-of-river project. When inflow is less than approximately 570 cfs the project is cycled. This is the most efficient flow for overall generation at each of the four stations. Fifteen cfs is discharged at all times through the Automatic project as well as the upstream Oakland and Rice Rips hydroelectric projects and the downstream Union Gas hydroelectric project. All additional water that does not go through the turbines is discharged over the spillway.

This mode of operation is the result of agency recommendations from the Maine Department of Environmental Protection ("DEP"), as described in the 401 Water Quality Certificate ("WQC") (#L-17585-33-D-N, Issued 8/28/1995) which is included as **Appendix 3**. As part of the application for the WQC, the applicant conducted a study entitled "*Hydrologic Analysis of the Messalonskee Stream Drainage.*" The purpose of this study was to provide an understanding of the watershed and examine the availability of water in Messalonskee Stream. The water quality in Messalonskee Stream was characterized as poor, since the levels of dissolved oxygen observed had in many instances violated state water quality standards. The cause of this dissolved oxygen impairment was determined to be phosphorus loading from the Oakland wastewater treatment facility, existing dams and hydroelectric facilities, and algal blooms. The 1990 DEP report "*Messalonskee Stream Summary*", discussed several options for improving the water quality of the 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 to implement. The MDEP Division of Environmental Assessment commented in the WQC that "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 fifteen cfs through all project developments, including the Rice Rips bypass, provided the applicant monitor water quality in Messalonskee Stream."

The Water Quality Monitoring Plan, dated March 30, 2001 (see **Appendix 5-2**) states that "monitoring will continue (for up to 5 years) until sufficient data has been obtained to confirm that water quality standards are met throughout the stream during extended periods of minimum flow release (fifteen cfs) and high water temperature conditions." These studies were carried out by FPL Energy and sufficiently demonstrated that water quality standards for dissolved oxygen are met throughout the stream.

Included in the Application for the WQC was a study entitled "*Fishery Resources of the Messalonskee Project*", which documented surveys of the impoundments and free flowing stretches of stream at all five developments. Based on a review of these studies, MDEP recommended that a minimum flow of fifteen cfs below all of the project developments would also be adequate to achieve and maintain suitability of the project waters affected by the project(s) as habitat for fish and other aquatic life.

Due to the fact that the Automatic Project is a run-of-river facility and the project impoundment is relatively small (900 acre-feet), the licensee cannot significantly increase or decrease the streamflow in the Messalonskee Stream. Flow moves downstream from the Messalonskee Lake through the Oakland (FERC No, 2556), Rice Rips (FERC No. 2556), Automatic (FERC No. 2555), and Union Gas (FERC No. 2556) projects before it enters the Kennebec River. Streamflow levels as reported from these facilities are logged daily. After consultation with the MDEP, the FERC determined that the licensee would not be required to monitor flow at the M4 Automatic facility because there is no water storage capacity at the facility, no control over the overall flow, and no way for the licensee to significantly impact the flow if licensed headwater levels were maintained.

III.B.1 Water Quality

ZoE #1 - Impoundment

B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate, including the date of issuance. • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

Supporting Information:

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 3**). 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 Automatic 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. As discussed above in the flows sections, the project is required to maintain a minimum flow of fifteen cfs at all times in order to minimize the effect of phosphorus loading and to maintain suitable habitat for fish and other aquatic life.

Pursuant to articles 403 and 404 of the Automatic Project's FERC License, on August 9, 2000 the project filed for and received Commission approval of its streamflow monitoring and minimum flow release plans (see **Appendix 5-1**). This order describes how the impoundment level is maintained at the top of the spillway through operation of a pond level control system. The headwater level in the impoundment is monitored on a continuous basis with a supervisory control and data acquisition (SCADA) system. Headwater levels are measured by a submerged 1-5 psi pressure sensor with an eleven foot range. This sensor is located just inside the powerhouse. There is also an ultrasonic transmitter on the upstream side of the project dam, which records continuously-monitored pond levels.

There have been no changes in the regulatory status of the project since 2011 nor have there been any agency comments noting deficiencies in the project's compliance with various conditions contained in the documents related to the FERC license and agency review of the project.

III.B.2 Water Quality

ZoE #2 – Regulated Riverine Reach

B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate, including the date of issuance. • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

Supporting Information:

See: **Section III, Table B1** and **Appendix 3; Appendix 5**

III.C.1 Upstream Fish Passage

ZoE #1 - Impoundment

C	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

There is no available evidence supporting historic presence of anadromous species in any portion of Messalonskee Stream and there is a very limited quantity of meaningful rearing and spawning habitat upstream of the dams for anadromous species. The catadromous American eel are present in Messalonskee stream.

As a condition of its certification by the Low Impact Hydropower Institute in 2011, the Kennebec Water District ("KWD") was required to reach an agreement with the Maine Department of Marine Resources ("MDMR") and the US Fish and Wildlife Service ("USFWS") regarding the final design, construction, operations, and maintenance of safe, timely, and effective upstream and downstream passage for American eel at the Automatic facility. A similar agreement was executed between the agencies at the other developments along Messalonskee Stream. American eel that are in the impoundment of the Automatic project are able to continue their journey upstream via eel ramps that have been installed at the Rice Rips dam since 2014. A copy of the 2015 Rice Rips upstream eel passage report is included as **Appendix 6-5**.

III.C.2 Upstream Fish Passage

ZoE #2 – Regulated Riverine Reach

C	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

The KWD and Messalonskee Stream Hydro retained the services of Skip Zink to design, pilot and monitor an upstream ladder passage system for American eel at the Automatic Project dam. Mr. Zink's proposal for the Automatic Station was submitted to USFWS and MDMR for comment and approval on January 26, 2012. A permanent passage design was developed once an entrance site was determined after night time observations were conducted. This location took into consideration where the largest amount of eels are attempting to pass, ease of access to monitor and maintain system, and location that allows passage over the widest range of environmental conditions. The proposed design was approved by the agencies in July 2014 (**Appendix 6-3**).

Initial operation began in 2012 but, because the Automatic Station was out of service that year for an extended portion of the normal eel migration period, a definitive accounting of the effectiveness of the eel passage system was not available until the next summer. The ladder is made operable during the normal annual upstream migration period, typically May through June. The system as implemented was deemed successful following the 2014 monitoring period.

See Also: **Section III, Table C.1**

III.D.1 Downstream Fish Passage

ZoE #1 - Impoundment

D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

Since the Automatic Project is one of 4 hydroelectric stations on Messalonskee Stream, passage through the Automatic Project needed to be coordinated with passage through the other projects. Rather than implementing costly and impactful downstream passage components at each of the Messalonskee Stream projects, the process for downstream passage involves manual collection of adult eels at the Snow Pond prior to entry into Messalonskee Stream, trucking of the fish downstream past all the hydroelectric projects, and release of the fish into the Kennebec River. The silver eel numbers are so low that USFWS and DMR approved this as an effective means of downstream passage. Eel passage provides a boost to the ecosystem of the stream in the Automatic Project impoundment. Although eels are not themselves sportfish, theoretically, the stream food chain will be fortified and the stream should become a better fishery.

III.D.2 Downstream Fish Passage

ZoE #2 – Regulated Riverine Reach

D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Supporting Information:

See **Section III, Table D.1**

III.E.1 Watershed and Shoreline Protection

ZoE #1 - Impoundment

E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

There have been no shoreline management plans or similar protection requirements for the facility. The Automatic facility has no control over the down-ramping conditions upstream that may affect wetlands and waterfowl. The FERC license contains no provisions on the applicant for additional watershed specific protection measures.

The primary watershed area for the Automatic project is the Messalonskee Lake, which is impounded by the Lord's South dam located in the village of Oakland, Maine. The Messalonskee Lake has a total drainage area of 177 square miles. From the Messalonskee Lake to the limits of the watershed, the landscape is forested and rural with small towns scattered throughout. The bedrock of the Messalonskee Lake watershed is made up of a mixture of sand, silt, clay, gravel and granite. All of the land in the immediate vicinity of the Automatic dam is urban in character, developed and privately owned (see **Appendix 4-1** and **Appendix 4-4**).

The river banks in the area are either well armored against erosion with banks that consist of gravel and cobbles or are well vegetated. The 68-acre Automatic impoundment is about 4.5 miles long and relatively narrow (average width of about 160 feet) with typical depths of 5 to 10 feet. The substrate in the lower and middle impoundment is mostly silty sand with some clay, mud, and organic debris. The upper impoundment substrate is more a mixture of sand and gravel with a short (500-foot) cobble ad boulder run at the upper end just below the Rice Rips powerhouse.

Land use along Messalonskee Stream varies from dense residential and commercial use in Waterville and Oakland to agricultural and forestry use in Oakland. There is a sizeable park and natural area along the stream oxbow in the Union Gas impoundment adjacent to downtown Waterville. CMP's transmission line corridors and MCRR rights-of-way travel through the project area frequently parallel to the shorelines and crossing Messalonskee Stream at several locations.

Physical attributes of Messalonskee Stream, such as its high gradient, steep banks, and several constrictions, encouraged its early development as a mill stream. Use of water resources played a key role in the industrial development that exists in both the Oakland and Waterville areas. Waterville is the major industrialized center in the project area.

As a condition of issuance, the FERC License requires compliance with any terms and conditions that the Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. There have been no deficiencies noted by any agency with jurisdiction for the plant and no changes in operation since the project was certified by LIHI in 2011.

III.E.2 Watershed and Shoreline Protection

ZoE #2 – Regulated Riverine Reach

E	1	<u>Not Applicable / De Minimis Effect:</u> • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

Supporting Information:

See **Section III, Table E1**

III.F.1 Threatened and Endangered Species

ZoE #1 - Impoundment

F	1	Not Applicable / De Minimis Effect: • Document that there are no listed species in the facility area or affected riverine zones downstream of the facility. • If listed species are known to have existed in the facility area in the past but are not currently present, explain why the facility was not the cause of the extirpation of such species. • If the facility is making significant efforts to reintroduce an extirpated species, describe the actions that are being taken.

Supporting Information:

There are no federally listed threatened or endangered species that occur in the vicinity of the Automatic project other than occasional transient bald eagles and peregrine falcons. Requests were submitted to the Maine Department of Inland Fisheries and Wildlife and U.S. Fish and Wildlife Service for a comprehensive list of all threatened or endangered species in the Waterville, ME region. There are no known nesting sites or vegetation in the vicinity of the project that are adversely impacted by the facility. The responses from the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Service are included as **Appendix 7-1** and **Appendix 7-2**.

The FERC License requires compliance with any terms and conditions that the Federal or State fish and wildlife agencies have determined appropriate to prevent loss of, or damage to, fish and wildlife resources. The Automatic project operates within FERC and Federal or State Fish and Wildlife Agency guidelines. The project's License is subject to termination if the facility is found to be out of compliance. There have been no deficiencies noted by any agency with jurisdiction for the Automatic project.

III.F.2 Threatened and Endangered Species

ZoE #2 – Regulated Riverine Reach

F	1	Not Applicable / De Minimis Effect: • Document that there are no listed species in the facility area or affected riverine zones downstream of the facility. • If listed species are known to have existed in the facility area in the past but are not currently present, explain why the facility was not the cause of the extirpation of such species. • If the facility is making significant efforts to reintroduce an extirpated species, describe the actions that are being taken.

Supporting Information:

See **Section III, Table F1**

III.G.1 Cultural and Historic Resources

ZoE #1 - Impoundment

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

There are no known sites of historic or archaeological significance within the project boundary.

Article 409 of the project license states that the licensee shall implement the "*Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine State Historic Preservation Officer for the Management of Historic Structures and Eligible Archeological Sites that may be Affected by New Licenses Issuing to Central Maine Power Company and Kennebec Water Power Company for Ten Hydroelectric or Storage Projects in Maine*" executed on September 29, 1993, including but not limited to the Cultural Resources Management Plan (CRMP) for the Automatic Project. If the Programmatic Agreement is terminated, the licensee shall obtain approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the project's areas of potential effect.

A response from Dr. Arthur Spiess with the Maine Historic Preservation Commission (MSHPC) is included in **Appendix 8**. His response confirms that the licensee is in compliance with a programmatic agreement from 1993 which requires submission of information for a 106 review for all non-routine maintenance projects proposed for the powerhouse.

III.G.2 Cultural and Historic Resources

ZoE #2 – Regulated Riverine Reach

G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Supporting Information:

See **Section III, Table G.1**

III.H.1 Recreational Resources

ZoE #1 - Impoundment

H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

The Automatic project is in Compliance with the recreational access, accommodation and facilities conditions of its FERC License issued on July 28, 1999 (see **Appendix 1**). Article 408 requires monitoring of the recreational needs and facilities at the Project every six years in conjunction with and on the same time frame as the FERC Form 80 compliance requirements.

Article 407 requires that:
The Kennebec Water District files with the Commission "a plan showing existing recreational development and indicating the entities responsible for operation and maintenance of the facilities for the Automatic Project. The plan shall also provide for construction improvements to the parking area at the North Street Park, or for an alternate access location, and for monitoring and reporting recreation use. The plan shall provide for, but need not be limited to: (1) final site plans for facilities sited above; (2) erosion and sediment control during construction; and (3) an implementation schedule."

Article 408 requires that:
"The licensee shall prepare a plan to monitor recreational use of the Automatic Project to determine whether the existing access facilities and the new facilities required in Article 407 are meeting public use demands without harm to wetlands and wildlife. The plan shall provide for monitoring the effects of recreational use at the project and filing a monitoring report concurrently with the Form 80, Recreation Report, starting with the Form 80 report due in 2004".

Pursuant to Article 407 of the License, on May 30, 2000 the Kennebec Water District (the licensee) filed with the Federal Energy Regulatory Commission (the Commission) its proposed Recreation Plan (the Plan) for Commission approval (see **Appendix 9-2**). The Plan included a description of the project and its recreational use as well as improvements to the existing carry-in boat access at the North Street Park. The licensee stated in the Plan that the existing carry-in boat launch was adequate in size for the level of activity but it needed to upgrade the parking to provide safe access. KWD proposed to construct a paved lot to accommodate five vehicles, which would be wide enough to allow vehicles to turn freely.

The licensee also described in the Plan its proposal to monitor recreation facilities pursuant to articles 407 and 408. The proposed monitoring program included a description of the frequency the facilities will be monitored, the activities that will be monitored, personnel, and the monitoring methods. The licensee proposed to compile the data and file a report in conjunction with the FERC Form 80.
In accordance with the Order Approving Recreation Plan issued by the FERC on August 24, 2000 (see Appendix 9-3), the Commission determined that: (1) the licensee's proposal met the requirement of article 407 and that the improved parking at the North Street Park would provide adequate safe access

for boaters; and (2) the licensee's monitoring program will provide the information needed to assess whether facilities are meeting the recreational needs.

Pursuant to the Order Approving Recreation Plan (**Appendix 9-3**) issued by the FERC on August 24, 2000, construction of the parking lot was completed in the fall of 2000 and the first recreation report was filed with the Commission prior to April 1, 2004. Subsequent reports were completed for 2009 and 2015 and submitted to FERC on May 26, 2016, along with Form 80s for 2008 and 2014 (**Appendix 9-1**). The licensee continues to monitor recreational use and is in compliance with the recreational access, accommodation and facilities conditions of its FERC License.

In 2013, the Kennebec Water District in cooperation with the City of Waterville Parks and Recreation Department and some private citizens participated in the addition of a floating dock at the carry-in access on North Street in Waterville.

III.H.2 Recreational Resources

ZoE #2 – Regulated Riverine Reach

H	2	<u>Agency Recommendation:</u> • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

Supporting Information:

See **Section III, Table H.1**