



Low-Impact Hydropower Institute Recertification Application

Collins Hydroelectric Project
Ludlow, Massachusetts
FERC Project No. P-6544
LIHI Certificate # 88

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1 Introduction

This is an application to the Low Impact Hydropower Institute (LIHI) for recertification of the Collins Hydroelectric Project ("Collins"), relative to a previous LIHI certification that is to expire May 3, 2017.

There have been no material changes in the facility design or operation since the most recent LIHI review that was concluded in July 2012 (referred to as "previous LIHI review").¹ There also have been no material changes in the environmental conditions in the project vicinity since that most recent LIHI review. The only material changes that have occurred recently are in the revised LIHI certification criteria described in the 2016 version of LIHI's certification handbook. Note as well that Collins is under new ownership (Ampersand Collins Hydro LLC), as of December 31, 2014.

The information provided in this recertification application provides an update to support a new LIHI certification.

2 Facility Description

2.1 Information Table

Table B-1. Facility Description Information for Collins Hydroelectric Project (LIHI #88)

<i>Information Type</i>	<i>Variable Description</i>	<i>Response (and reference to further details)</i>
Name of the Facility	Facility name (use FERC project name if possible)	Collins Hydroelectric Project
Location	River name (USGS proper name)	Chicopee River
	River basin name	Collins
	Nearest town, county, and state	Ludlow, Hampden, MA
	River mile of dam above next major river	
	Geographic latitude	42.1569
	Geographic longitude	-72.4227

¹ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

Facility Owner	Application contact names (IMPORTANT: you must also complete the Facilities Contact Form):	Ian Chow
	- Facility owner (individual and company names)	Ampersand Collins Hydro LLC
	- Operating affiliate (if different from owner)	
	- Representative in LIHI certification	Ian Chow
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates	P-6544
	FERC license type or special classification (e.g., "qualified conduit")	FERC Exempted 02-09-1984
	Water Quality Certificate identifier and issuance date, plus source agency name	N/A due to FERC exemption
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	https://elibrary.ferc.gov/IDMWS/search/fercgensearch.asp
Power Plant Characteristics	Date of initial operation (past or future for operational applications)	1984
	Total name-plate capacity (MW)	1.3
	Average annual generation (MWh)	5,265 (1997-2016)
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	2 ESAC bulb turbines, 650 kW each, maximum hydraulic capacity at the site is 555 cfs and the minimum is 111 cfs
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Run of River
	Dates and types of major equipment upgrades	N/A
	Dates, purpose, and type of any recent operational changes	N/A
	Plans, authorization, and regulatory activities for any facility upgrades	N/A
Characteristics of Dam,	Date of construction	1984
	Dam height	14 ft ²
	Spillway elevation and hydraulic capacity	219.1 ft ³

² FERC. 2011-2014 Dam Safety Inspection Report. 2/18/2015.

³ Ibid.

Diversion, or Conduit	Tailwater elevation	no spill elevation of 206.73 ft above sea level ⁴
	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	N/A
	Dates and types of major, generation-related infrastructure improvements	N/A
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power
	Water source	Chicopee River
	Water discharge location or facility	Chicopee River
Characteristics of Reservoir and Watershed	Gross volume and surface area at full pool	Gross vol. approx 378 ac-ft, area approx. 72 acres ⁵
	Maximum water surface elevation (ft. MSL)	222.1 ft ⁶
	Maximum and minimum volume and water surface elevations for designated power pool, if available	Maximum reservoir elevation 222.1 ft, minimum reservoir elevation 219.1 ft ⁷
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Red Bridge (Essential Power, 10676)
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Putts Bridge (Essential Power, 10677), Indian Orchard (Essential Power, 10678), Chicopee Falls (Chicopee Electric Light, 6522), Dwight (Essential Power, 10675)
	Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation	N/A
	Area inside FERC project boundary, where appropriate	1.1 acres
Hydrologic Setting	Average annual flow at the dam	11,200 CFS
	Average monthly flows	930 CFS
	Location and name of relevant stream gauging stations above and below the facility	USGS 01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA
	Watershed area at the dam	Impoundment of 72 acres
	Number of zones of effect	2

⁴ Swift River. *Collins Minimum Flow Discharge Monitoring Plan*. September 26, 2012

⁵ FERC. *2011-2014 Dam Safety Inspection Report*. 2/18/2015.

⁶ Ibid.

⁷ Ibid.

Designated Zones of Effect	Upstream and downstream locations by river miles	Facility dam creates an impoundment with a length of about 9,690 feet
	Type of waterbody (river, impoundment, by-passed reach, etc.)	Impoundment, downstream riverine zones
	Delimiting structures	Dam
	Designated uses by state water quality agency	N/A
Additional Contact Information	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See Section 6 Contacts
	Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders	See Section 6 Contacts
Photographs and Maps	Photographs of key features of the facility and each of the designated zones of effect	See Section 2.2 Photographs and maps
	Maps, aerial photos, and/or plan view diagrams of facility area and river basin	See Section 2.2 Photographs and maps

2.2 Photographs and maps

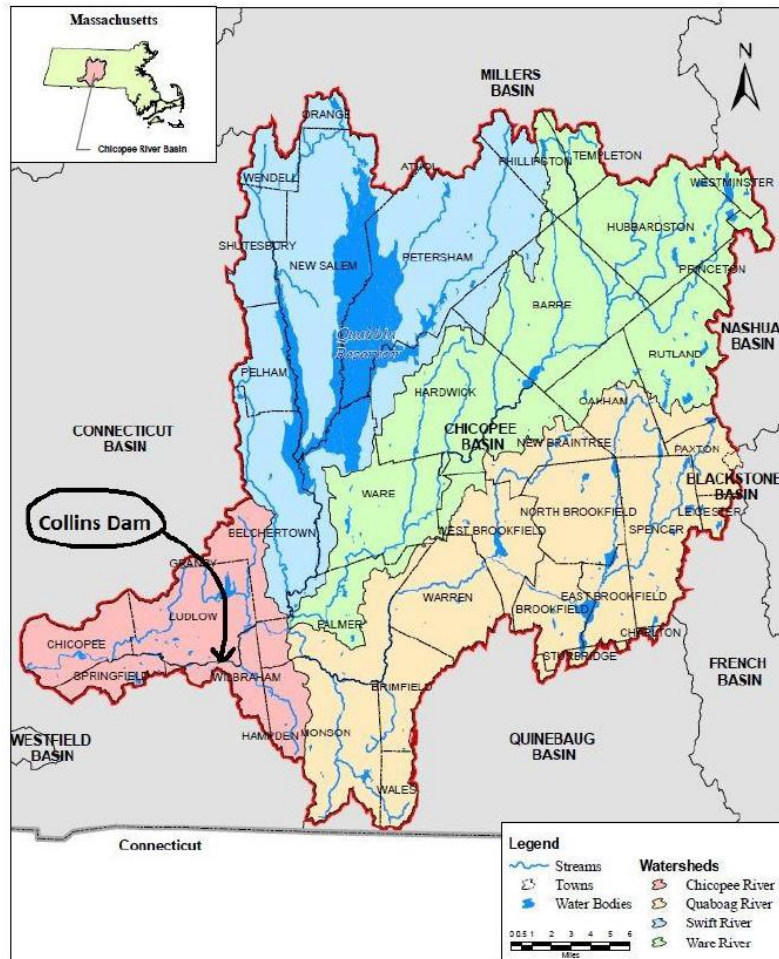


Figure 1 Chicopee River basin showing its three major subwatersheds. (Chicopee River Basin Five-Year Watershed Action Plan, Mass. Executive Office of Environmental Affairs, 2005)



Figure 2 Aerial photo of Collins Dam (Source: 2014 FERC inspection report)

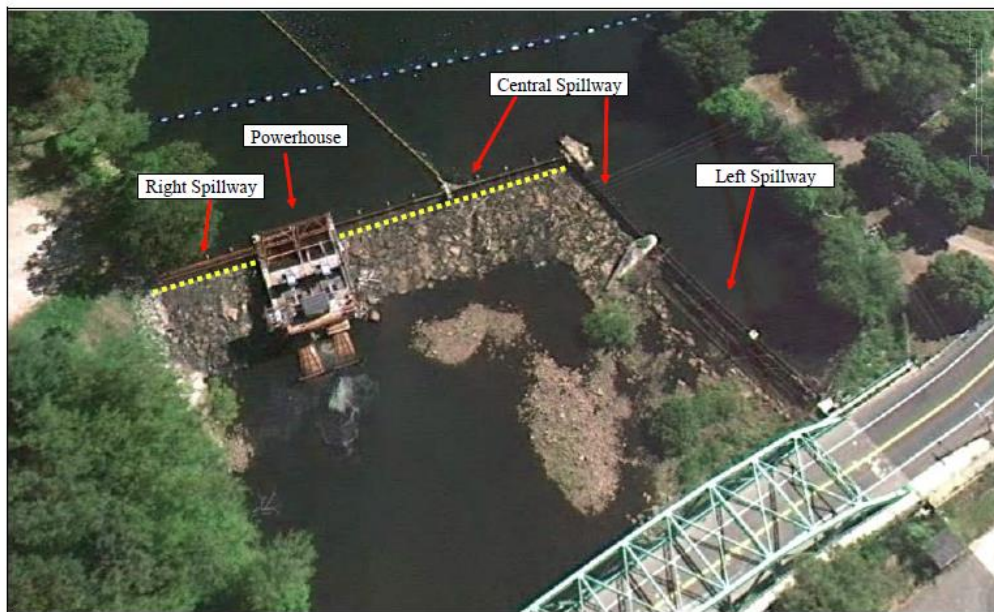


Figure 3 Project layout. (Source: 2014 FERC inspection report)



Figure 4 View of dam and impoundment from power station, showing boat safety barrier.
(Source: 2001 FERC inspection report)



Figure 5 View of the right spillway, powerhouse and central spillway (Source: 2014 FERC inspection report)

3 Standards Selection

3.1 Zone of Effect: Riverine Zones Downstream of Dam

Criterion		<i>Alternative Standards</i>				
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Plus</i>
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				

3.2 Zone of Effect: Impoundment Zone Upstream of Dam

Criterion		<i>Alternative Standards</i>				
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Plus</i>
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			

4 Supporting Information

4.1 Downstream

4.1.1 Flows

Criterion	Standard	Instructions
A	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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.

- LIHI concluded in its previous review the following. These points continue to be true and support a Not Applicable or De Minimis Effect (NA/DE) Standard:⁸
 - “Facility is operated strictly run-of-river with a minimum flow of 332 cfs”
 - “Under exemption terms set by the USFWS, the Project maintains a minimum flow of 332 cfs, or the summer Aquatic Base Flow per the USFWS New England Flow Policy (1981). Since the station is integral with the dam, no bypass flows are necessary for habitat support. Further, based on available data, MassDEP believes that spillage for

⁸ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 11 <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

reaeration and maintenance of dissolved oxygen standards is unnecessary.”

- As stated in FERC’s 2013 Environmental Inspection Report,⁹ “Exemptee has installed an automatic operating system using pressure transducers in the headpond, behind the trashrack and in the tailrace to monitor river levels and adjust output accordingly to maintain minimum flow release and stable flows through the project”
- In the previous review, LIHI requested a flow monitoring and record keeping plan – this was filed with FERC,¹⁰ and found to be satisfactory by LIHI in 2012.¹¹ The plan requires Collins to “notify FERC within ten days of any violation of its 4 inch impoundment fluctuation limit or its minimum flow discharge requirements”, however no reports have been required.

4.1.2 Water Quality

Criterion	Standard	Instructions
B	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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. • Explain rationale for why facility does not alter water quality characteristics below, around, and above the facility.

- LIHI concluded in its previous review the following. Note that the 2003 Water Quality Assessment from the MassDEP remains the most recent,^{12,13} and therefore these points continue to be true and support a NA/DE Standard:¹⁴
 - “Because this project was granted an exemption by FERC, there is no state water quality certification”
 - “MassDEP, based the 2003 assessment data and its knowledge of the river and Project operations, is reasonably assured that the Project

⁹ FERC. *Environmental Inspection Report*. 7/19/2013 < <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13309941> >

¹⁰ FERC. *Run of River Operation and Minimum Flow Monitoring Plan*. 9/26/2012. < <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13072468> >

¹¹ LIHI. *Collins Hydro Project, LIHI Certificate No. 88 Annual Billing and Compliance*. Feb 2, 2016. P. 2.

¹² MassDEP. *Water Quality Assessments*. Accessed 4/10/2017. <<http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html#3>>

¹³ While the title reads 2003, the report was updated in 2008.

¹⁴ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 13. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

complies with water quality standards and has not requested that further sampling be completed”

- “Project vicinity is currently listed as a Category 2 water (attaining some uses and others not assessed) in the 2010 303(d) list. Aquatic life, Primary and Secondary contact recreation and Aesthetic uses are considered met”

4.1.3 Upstream Fish Passage

Criterion	Standard	Instructions
C	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

- Dr Caleb Slater of Massachusetts Division of Fisheries and Wildlife has provided a letter October 3, 2016 stating that “Division can confirm that the current upstream and/or downstream passage prescriptions are still valid and that no fish passage facilities have been requested at the Collins Hydroelectric project to date”.¹⁵
- LIHI did not request any upstream fish passage in its previous review. These points continue to be true and support a NA/DE Standard:¹⁶
 - With respect to anadromous species
 - “Several anadromous species continue to run the Connecticut River but are blocked from moving up the Chicopee River at Dwight Dam. There is limited spawning habitat in the lower portion of the Chicopee basin and several impassable dams currently block passage to the upper watershed”
 - “it is likely that lower dams on the Chicopee will need passage facilities in the near future, although Red Mill (and presumably Collins) are unlikely to need to have passage in place for a number of years (email from Melissa Grader for the Red Mill Project, October 13, 2011).”

¹⁵ Slater, C. *Collins Hydroelectric Project FERC No. 6544*. October 3, 2016

¹⁶ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 14. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

- With respect to catadromous species
 - “Despite the lack of upstream passage facilities, eel are capable of moving upstream past dams with some, albeit diminished, success”¹⁷
- “The agencies have had an opportunity to prescribe fish passage as a reserved right under the exemption terms and conditions but have not done so to date.”
- ACH has confirmed with Essential Power that their downstream projects have not installed and do not have commitments to install upstream fish or eel passage, thus supporting selection of standard C-1¹⁸

4.1.4 Downstream Fish Passage

See Section 4.2.4 Downstream Fish Passage

4.1.5 Watershed Protection

Criterion	Standard	Instructions
E	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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.

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:¹⁹
 - “No protected buffer zones have been created along the riverine impoundment through a settlement agreement or the federal exemption.”
 - “There are neither recommendations nor a shoreline management plan related to the exemptee’s Facility”

¹⁷ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 14. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

¹⁸ Marsili, Kim. *Email: Essential Power LIHI statement*. 4/21/2017

¹⁹ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 17-18. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

4.1.6 Threatened/Endangered Species

Criterion	Standard	Instructions
F	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:²⁰
 - "There is no record of federally listed threatened and endangered species in the Facility area"²¹

4.1.7 Cultural Resources

Criterion	Standard	Instructions
G	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:²²

²⁰ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 18. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

²¹ Federally listed endangered and threatened species in Massachusetts. P 2. Accessed 8/17/2016. <<http://www.fws.gov/newengland/pdfs/MA%20species%20by%20town.pdf>>

²² LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 19. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

- "There is no evidence of conflicts with respect to cultural resources protection."
- See Appendix H of the previous application for Massachusetts Historical Commission letter

4.1.8 Recreation

Criterion	Standard	Instructions
H	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none"> • Document that the facility does not occupy lands or waters to which public access can be granted and that the facility does not otherwise impact recreational opportunities in the facility area.

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:²³
 - "very limited recreational use occurs at the Project. Anglers are allowed access to the tailrace"

4.2 Impoundment

4.2.1 Flows

Criterion	Standard	Instructions
A	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none"> • 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.

²³ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 19. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:²⁴
 - “Collins station operates in a run-of-river mode over a range of flows up to 1,200 cfs”
- Red Bridge upstream has implemented modified run-of-river operation, which has significantly reduced fluctuations noted by previous owner

4.2.2 Water Quality

Criterion	Standard	Instructions
B	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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. • Explain rationale for why facility does not alter water quality characteristics below, around, and above the facility.

- Please refer to Section 4.1.1 Flows

4.2.3 Upstream Fish Passage

- See Section 4.1.3 Upstream Fish Passage

4.2.4 Downstream Fish Passage

Criterion	Standard	Instructions
D	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these

²⁴ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 11 <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

Criterion	Standard	Instructions
		<p>populations or to their access to habitat necessary for successful completion of their life cycles.</p> <ul style="list-style-type: none"> • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

- As stated in the previous application, "Currently the Collins Hydroelectric facility does not have anadromous and catadromous fish movement because of dams downstream of the Collins facility on the Chicopee River including (from downstream) Dwight Dam, Chicopee Falls Dam, Indian Orchard Dam, and Putts Bridge Dam that do not have fish passage facilities."²⁵
- Dr Caleb Slater of Massachusetts Division of Fisheries and Wildlife has provided a letter October 3, 2016 stating that "Division can confirm that the current upstream and/or downstream passage prescriptions are still valid and that no fish passage facilities have been requested at the Collins Hydroelectric project to date".²⁶
- Regarding the current state of the project, the Collins Hydroelectric facility does not yet have permanent eel passage facilities. Nighttime shutdowns during rainy nights from August 15 to November 15 are a part of the operating regime at ACH.²⁷
- As a new owner, Ampersand Collins Hydro would like for LIHI to reconsider this requirement. Specifically with respect to catadromous species it should be highlighted that:
 - **The American Eel is not a protected species** – "U.S. Fish and Wildlife Service has reviewed the status of the American eel in 2007 and in 2015, finding both times that Endangered Species Act protection for the American eel is not warranted"²⁸
 - **There is no requirement for downstream eel passage at Red Bridge, the dam immediately upstream of Collins** – "fish passage

²⁵ Swift River Hydro. *Collins Hydroelectric Project Application Backup Documentation*. 3/15/2012. P. 2. <
<http://www.lowimpacthydro.org/assets/files/collins/Appendix%20A%20Collins%20LIHI%20application%20backup.pdf>>

²⁶ Slater, C. *Collins Hydroelectric Project FERC No. 6544*. October 3, 2016

²⁷ For example, November 9th, 2016, the plant was shut down in the evening at 5pm.

²⁸ US FWS. *The American Eel*. <<https://www.fws.gov/northeast/americaneel/>>

for neither anadromous nor catadromous species are required at this point of time at the Red Bridge Project.”²⁹

- ACH has confirmed with Essential Power that Red Bridge has not installed downstream fish or eel passage since 2012³⁰
- **There is no migratory fish management within the local watershed** - “there are no active migratory fish management efforts within the Chicopee River Watershed”.³¹
- Although upstream and downstream dam’s lack similar passage, ACH is willing to work with LIHI and other agencies to determine appropriate and scientifically justified solutions for fish passage

4.2.5 Watershed Protection

Criterion	Standard	Instructions
E	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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.

- See Section 4.1.5 Watershed Protection

4.2.6 Threatened/Endangered Species

Criterion	Standard	Instructions
F	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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.

²⁹ Wright-Pierce. *APPLICATION REVIEW FOR LOW IMPACT HYDROPOWER INSTITUTE CERTIFICATION of the RED BRIDGE PROJECT NO. 10676*. July 26, 2012. P. 14 < <http://lowimpacthydro.org/wp-content/uploads/2013/07/FinalReport-1.pdf>>

³⁰ Marsili, Kim. *Email: Essential Power LIHI statement*. 4/21/2017

³¹ Grader, M. *Email: LIHI certification for the Red Bridge Project FERC No. 10676*. October 13, 2011.

		<ul style="list-style-type: none"> If the facility is making significant efforts to reintroduce an extirpated species, describe the actions that are being taken.
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- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:³²
 - "There is no record of federally listed threatened and endangered species in the Facility area".³³
- The Triangle Floater mussel, which was identified as a state-listed rare species in the previous application, no longer has state or federal status as of 2/27/2012.³⁴

4.2.7 Cultural Resources

Criterion	Standard	Instructions
G	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none"> 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.

- See Section 4.1.7 Cultural Resources

4.2.8 Recreation

Criterion	Standard	Instructions
H	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none"> 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.

³² LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 18. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

³³ Federally listed endangered and threatened species in Massachusetts. P 2. Accessed 8/17/2016. <<http://www.fws.gov/newengland/pdfs/MA%20species%20by%20town.pdf>>

³⁴ Mass FWS. Triangle Floater. Accessed 4/11/2017. <<http://www.mass.gov/eea/docs/dfg/nhosp/species-and-conservation/nhfacts/alasmidonta-undulata.pdf>>

- LIHI concluded in its previous review the following. These points continue to be true and support a NA/DE Standard:³⁵
 - Recreational use in the reservoir is discouraged “due to security concerns related to a gas storage area and pipeline (Columbia Gas of Massachusetts) on the north side of the impoundment.”
 - Previous owner noted FERC inspectors encouraged operators to “restrict use of the impoundment for recreation” because of these security reasons”
- As stated in FERC’s 2013 Environmental Inspection Report,³⁶ “primary access to the project is a private road owned by a natural gas energy services company which is not generally opened to the public. This would limit access to the tailrace area”
- In the previous review, LIHI requested a Recreation Needs Assessment – this was satisfied in 2013
 - “5/8/13, Owner filed a Recreational Needs Assessment Report with FERC, who acknowledged receipt on 7/8/13, with no comment”³⁷
- Consultation with Columbia Gas Supervisor of System Operations has confirmed that Columbia Gas “must maintain the highest security standards and **restrict access as much as possible** due to the sensitive nature of the materials and equipment on site”.³⁸ Therefore, only the following actions have been taken at ACH:
 - ACH has made efforts to clear the pathway of the informal portage
 - Signage and fencing around the site direct people around the dam, as shown in Figure 6

³⁵ LIHI. *Review of Application for Certification of Collins Hydroelectric Project*. July 16, 2012. P. 19. <<http://lowimpacthydro.org/wp-content/uploads/2012/07/CollinsCertificationFinalReport16July2012.pdf>>

³⁶ FERC. *Environmental Inspection Report*. 7/19/2013 <<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13309941>>

³⁷ LIHI. *Collins Hydro Project, LIHI Certificate No. 88 Annual Billing and Compliance*. Feb 2, 2016. P. 2

³⁸ Thomas, Mark. *Email: Columbia Gas security concerns*. 4/21/2017.



Figure 6: Signage at Collins

5 Sworn Statement and Waiver

As an Authorized Representative of Ampersand Collins Hydro LLC, the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The undersigned further acknowledges that if certification of the applying facility is issued, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The undersigned Applicant further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.

Company Name: Ampersand Collins Hydro LLC

Authorize Representative Name: Ian Chow

Title: Asset Manager

State of _____)

County of _____)

On this, the _____ day of _____, 20____, before me a notary public, the undersigned officer, personally appeared _____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained. In witness hereof, I hereunto set my hand and official seal.

Notary Public _____

6 Contacts

6.1 Facility

Project Owner: Ampersand Collins Hydro LLC	
Name and Title	
Company	Ampersand Collins Hydro LLC
Phone	
Email Address	
Mailing Address	717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA
Project Operator:	
Name and Title	Matt Goulding, Operator
Company	Ampersand Collins Hydro LLC
Phone	857-274-8073
Email Address	mgoulding55@gmail.com
Mailing Address	
Agent for LIHI Program /Compliance Contact	
Name and Title	Ian Chow, Asset Manager
Company	Ampersand Collins Hydro LLC
Phone	(416)643-6616
Email Address	ian@ampersandenergy.com
Mailing Address	717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA
Party responsible for accounts payable:	
Name and Title	Ian Chow, Asset Manager
Company	Ampersand Collins Hydro LLC
Phone	(416)643-6616
Email Address	ian@ampersandenergy.com
Mailing Address	717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA

6.2 Agencies

Applicant must identify the most current and relevant state, federal, provincial, and tribal resource agency contacts

Agency Contact (Check area of responsibility: Flows <u>x</u> , Water Quality <u>x</u> , Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation <u>x</u>):

Agency Name	Federal Energy Regulatory Commission
Name and Title	Noel Aglubat Civil Engineer
Phone	(212)273-5907
Email address	Noel.Aglubat@ferc.gov
Mailing Address	New York Regional Office 19 W 34th Street, Suite 400 New York, NY 10001-3006

Agency Contact (Check area of responsibility: Flows x, Water Quality __, Fish/Wildlife Resources x, Watersheds x, T/E Spp. __, Cultural/Historic Resources __, Recreation __):

Agency Name	Massachusetts Division of Fisheries and Wildlife
Name and Title	Caleb Slater, Ph.D. Anadromous Fish Project Leader
Phone	(508) 389-6331
Email address	caleb.slater@state.ma.us
Mailing Address	1 Rabbit Hill Road. Westborough, MA 01581

Agency Contact (Check area of responsibility: Flows x, Water Quality __, Fish/Wildlife Resources x, Watersheds x, T/E Spp. x, Cultural/Historic Resources __, Recreation __):

Agency Name	US Fish and Wildlife
Name and Title	Melissa Grader Fish and Wildlife Biologist
Phone	413-548-8002 ext 8124
Email address	melissa_grader@fws.gov
Mailing Address	103 East Plumtree road Sunderland, MA 01375

Agency Contact (Check area of responsibility: Flows __, Water Quality x, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):

Agency Name	Massachusetts Department of Environmental Protection
Name and Title	Robert Kubit Division of Water Quality
Phone	508-767-2854
Email address	Robert.Kubit@state.ma.us
Mailing Address	67 Main Street, 2nd Floor Worcester, MA 01608

Agency Contact (Check area of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. x, Cultural/Historic

Resources __, Recreation __):	
Agency Name	US Fish and Wildlife
Name and Title	Misty-Anne R. Marold Senior Endangered Species Review Biologist
Phone	(508) 389-6356
Email address	misty-anne.marold@MassMail.State.MA.US
Mailing Address	1 Rabbit Hill Road, Westborough, MA 01581

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources <u>x</u> , Recreation __):	
Agency Name	Town of Ludlow Conservation Commission
Name and Title	Jason Martowski -chairperson
Phone	(413) 583-5600 x1285
Email address	conservation@ludlow.ma.us
Mailing Address	488 Chapin Street Ludlow, MA 01056