SUPPLEMENTAL TO THE PRE-APPLICATION DOCUMENT

CHRISTINE FALLS PROJECT

PROJECT NO. 4639

APPLICANT: AMPERSAND CHRISTINE FALLS HYDRO LLC

DATE: DECEMBER 7, 2018.

§ 5.6 (d)(1) - Process plan and schedule.

(Supplemental)

The Scoping Meeting is projected to be held On January 9, 2019 at the Fire Department in the village of speculator (2859 NY-30, Speculator, NY 12164, USA). The time and date were chosen after surveying availability of key stakeholders (DEC, APA, Trout unlimited, Hamilton county, Village of speculator, town of wells, fish and wildlife service to name a few). A detailed schedule and directions to each site, along with an agenda, will be included in the invitation letters sent to interested parties and published in the newspaper no later than 14 days before the due date. In the table below, we present a tentative process plan of the licensing process under the TLP.

Figure 1. Preliminary process plan

	Date	Responsibility	Step Description	Requested Time (Relative To Prior Step, unless Otherwise Indicated)
Pre-filing activities	Sep. 20, 2017	Licensee	Notice of Intent (NOI), Pre-Application Document (PAD), and Request to Use TLP	5-5.5 years before license expiration
	Sep. 21, 2018	FERC	Public Notice of NOI, PAD, and TLP Request to affected resource agencies, tribes, and interested public	Notification to be issued by FERC
	Oct. 20, 2018	FERC and stakeholders	Comments on NOI, PAD, and TLP Request	30 days from filing date
	Nov. 2, 2018	FERC	Approval of TLP/Notice of commencement	60 days from filing date
	Dec.10, 2018	Licensee	Formally Notify FERC and stakeholders of Scoping meeting	(at least 14 days in advance of meeting)
	Jan. 9, 2019	**Licensee**	**Public meeting/Joint Consultation with agencies, tribes, and the public**	**30-60 days following notice of commencement**
	Mar. 9, 2019	Stakeholders	Comments; Study Requests	60 days (interested parties may request an additional 60-day extension for Comments)
	TBD	Licensee	Study Plans	Following comments received
	TBD	Licensee	Draft License Application and Study Results	TBD
	TBD	Stakeholders	Comments on Draft Application	90 days
	TBD 2020	Licensee	Final Application	no later than Sep. 30, 2020 *(2 years before license expiration)*

§ 5.6 (d)(2) - Project location, facilities, and operations. The potential Applicant must include in the Pre-Application Document:

ii) **(Supplemental)**See Exhibit E for a map of Project lands and Boundaries

iii) C)
(Supplemental)
Both units are horizontal Francis turbines. Turbine 1 and Turbine 2 are rated at 275 kW and 575 kW respectively

§ 5.6 (d)(3)(i) - Existing environment and resource impacts. A potential Applicant must, based on the existing, relevant, and reasonably available information, include a discussion with respect to each resource that includes:

(A) Description of existing environment (See 5.6 (d)(3)(ii)-(xiii) below)
(B) Summaries (with references to sources of information or studies) of existing data or studies regarding the resource (Include here or incorporate into resource sections 5.6 (d)(3)(ii)-(xiii)

below)

(C) A description of any known or potential adverse impacts and issues associated with the construction, operation or maintenance of the proposed project, including continuing and cumulative impacts (Include here or incorporate into resource sections 5.6 (d)(3)(ii)-(xiii) below)

(D) A description of any existing or proposed project facilities or operations, and management activities undertaken for the purpose of protecting, mitigating impacts to, or enhancing resources affected by the project, including a statement of whether such measures are required by the project license, or were undertaken for other reasons. The type and amount of the information included in the discussion must be commensurate with the scope and level of resource impacts caused or potentially caused by the proposed project. Potential license Applicants are encouraged to provide photographs or other visual aids, as appropriate, to supplement text, charts, and graphs included in the discussion. (Include here or incorporate into the resource sections ii-xiii below)

Vegetative Cover (Supplemental):

The forests surrounding the project are dominated by sugar maple, beech, birch, basswood, and rock elm; characteristic species of the region. All of which indicate rich well-aerated soils.[1] The grade at the region is quite steep, and ecotones vary with the elevation.

The most prevalent trees and shrubs in the area include the following:

Paper birch	Northern white cedar
Black cherry	willow
Hemlock	White pine
Balsam fir	White spruce
Red mulberry	Sugar maple
Alder	Rock elm
Mapleleaf ash	
American basswood	

Other types of groundcover found in the area are as follows

Yarrow	Vetch
Golden rod	Butter and eggs
Common plaintain	Mullein
Common ragweed	Dandelion, daisy and rue in the meadow
Aster (stiff, bushy, small flowered white, New York, panicled, and white wood)	Black-eyed susan, wood sorrel, phlox and hawkeye
Knapweed	chicory
Touch me not	Red colver and virginia creeper
Queen Anne's Lace	Grape vine

Source: Application for license by the Long Lake Energy Corporation for the Christine Falls water project, 1981

The Sacandaga River is a noted recreational fishery. Of the various types of sport fish, brook and brown trout are the most sought after. It is worth noting that the NYSDEC maintains a trout stocking program on

1 Braun, 1950; Gleason and Cronquist, 1963.

the Sacandaga River (including Hamilton county both upstream and downstream of the Project area[2]). A brief survey[3] of species in the area revealed that there are no anadromous or migrating fish at the project site. Based on the field reconnaissance[4], it was apparent that the only fish which would be found in the Project area were those which came downstream from the lakes (Lake Pleasant) above the small impoundment of the dam. No upstream fish passage below the existing powerhouse is likely and none is possible in the cascading falls between the powerhouse and the dam. In fact, most of the river between the powerhouse and the dam consists of shallow rapids and 1-3 ft high falls. It is unsuitable for most fish species; only two pools (each about 10 yards across and 3 ft deep) appear to be suitable fish habitat. Nonetheless, the Project site remains a popular spot for fishing.

Rare, threatened, and endangered species (Supplemental):
The Northern long-eared bat is the principal federally (or state)-listed threatened or endangered species that can occur in the Project area. In section **5.6 (d)(3)(vii)**, we provide a detailed description of the Northern long-eared bat and discuss the migratory bird species, which, although may not appear within the vicinity of the Project, are of conservation concern for the Hamilton county and beyond.

Bird Species observed at the site include the following:
Swallow, sparrows, purple finch, hairy woodpecker, black capped chickadee, white breasted nuthatch, Cape May Warbler, Commons merganser, robin, bobwhite, starling, redwing blackbird, common crow, rufled grouse and gold finch. Other songbirds and raptors would be present seasonally and in migration, and various waterfowl are known to migrate through the area.

Land and Water Uses (Supplemental): We do not foresee that the continuous operation of the Project will have any adverse impact on existing water uses in the basin. The Project has enhanced the public access to recreational activities; we do not expect any of this access to be reduced following the continuous operation of the facility.

§ 5.6 (d)(3)(iii) - Water resources. A description of the water resources of the proposed project and surrounding area. This must address the quantity and quality (chemical/physical parameters) of all waters affected by the project, including but not limited to the project reservoir(s) and tributaries thereto, bypassed reach, and tailrace. Components of the description must include:

(A) Drainage area

(Supplemental)

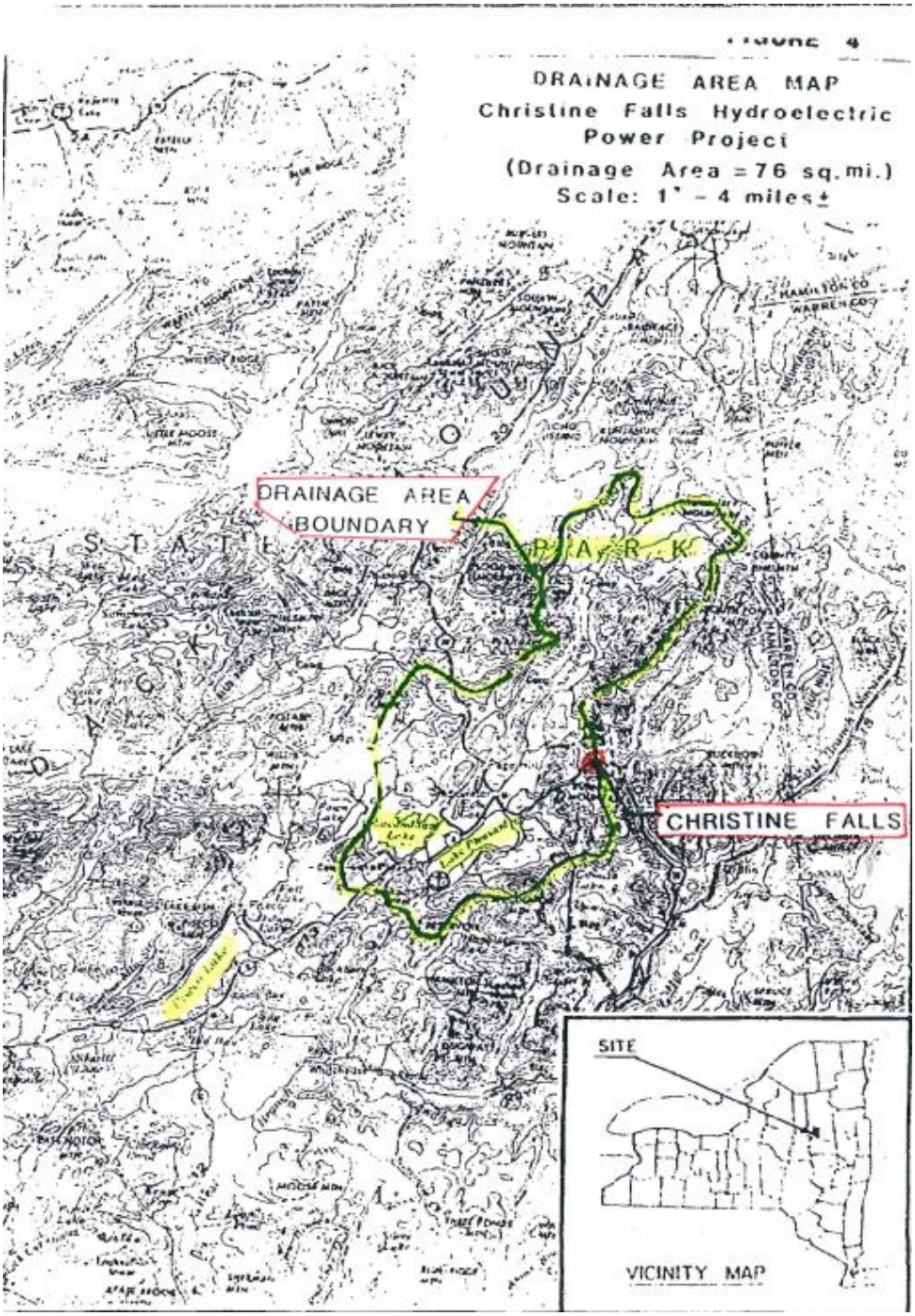
The Sacandaga River at Christine Falls drains an area of about 76 square miles. We included below the drainage area as presented in the original application (1981). It is characterized by many steep-sided hills and mountains

[2] Spring 2018 Trout Stocking for Hamilton County

[3] July 21 1984

[4] Two pools and the small impoundment were sampled for about 2 hours by hook and line n July 21 and 25, 1984.

Figure 2. Drainage area



Credit: Original application (1981)

(B) The monthly minimum, mean, and maximum recorded flows in cubic feet per second of the stream or other body of water at the powerplant intake or point of diversion, specifying any adjustments made for evaporation, leakage, minimum flow releases, or other reductions in available flow.

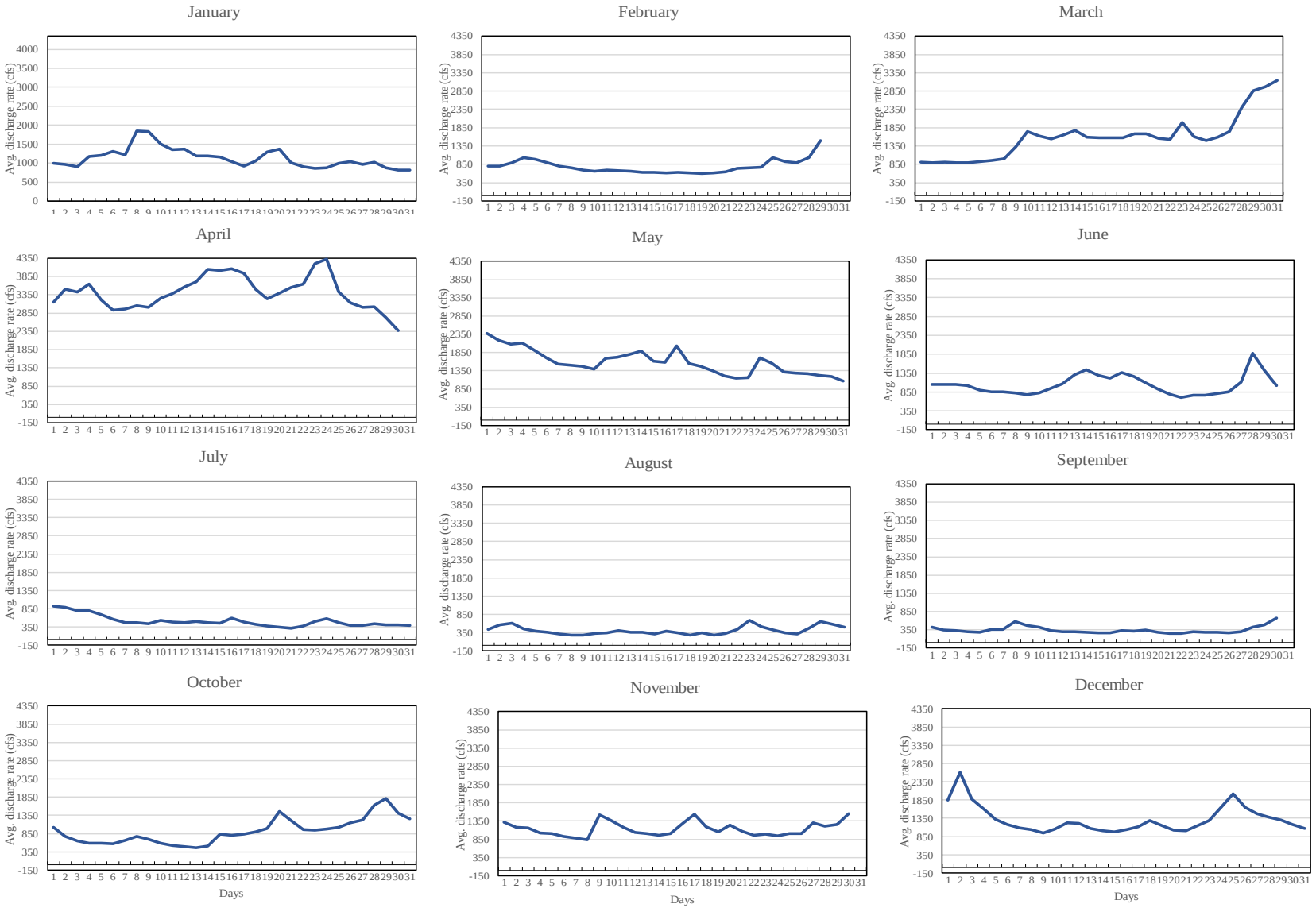
(Supplemental)

Figure 3. historical average daily discharge rate (1986-2016)

	Average discharge rate cubic ft/s											
Days	January	February	March	April	May	June	July	August	September	October	November	December
1	997	810	913	3142	2382	1047	916	440	429	1018	1319	1850
2	965	800	895	3505	2189	1053	884	563	349	778	1183	2612
3	905	892	911	3424	2076	1046	804	609	331	647	1159	1879
4	1173	1026	902	3644	2106	1025	804	461	306	586	1028	1596
5	1212	984	895	3214	1905	900	686	399	290	591	1009	1321
6	1306	899	924	2928	1707	848	568	363	362	578	929	1181
7	1218	807	964	2959	1540	863	478	317	364	658	878	1091
8	1852	750	1006	3053	1503	819	475	280	583	776	831	1034
9	1825	695	1334	3009	1471	786	446	277	473	692	1515	945
10	1501	656	1740	3258	1391	833	540	324	424	589	1363	1061
11	1358	695	1622	3373	1684	946	494	353	338	528	1181	1218
12	1373	674	1551	3566	1727	1059	477	402	297	487	1041	1215
13	1193	668	1656	3703	1798	1305	508	365	295	460	1009	1076
14	1186	635	1771	4045	1889	1449	473	356	278	509	967	1013
15	1163	628	1592	4021	1619	1296	453	315	268	833	1000	974
16	1042	616	1573	4067	1589	1217	592	385	270	810	1288	1037
17	919	631	1574	3938	2035	1368	487	351	331	836	1536	1112
18	1053	613	1580	3506	1556	1258	423	291	318	899	1193	1289
19	1298	599	1690	3245	1473	1101	376	342	352	989	1060	1141
20	1369	624	1680	3391	1356	938	353	291	280	1452	1241	1016
21	1003	642	1559	3545	1205	788	311	329	253	1206	1073	1002
22	902	734	1529	3639	1144	706	380	441	247	966	959	1153
23	862	755	1991	4207	1167	761	502	685	304	950	996	1285
24	874	771	1604	4322	1712	771	584	511	289	971	945	1660
25	991	1039	1502	3429	1555	809	478	420	286	1021	1012	2021
26	1039	918	1592	3136	1319	850	395	342	267	1151	1007	1644
27	962	900	1753	3010	1291	1108	392	319	304	1218	1295	1474
28	1025	1031	2399	3016	1275	1870	436	478	418	1631	1209	1377
29	872	1502	2858	2727	1225	1421	408	651	489	1808	1262	1309
30	819		2968	2377	1193	1018	403	587	680	1413	1546	1176
31	810		3136		1069		389	498		1255		1074

Source: USGS – period 1986-2016; Gage 01321000 near Hope, NY

Figure 4. Illustration of discharge rates monthly profiles (USGS – period 1986-2016); Gage 01321000 near Hope, NY

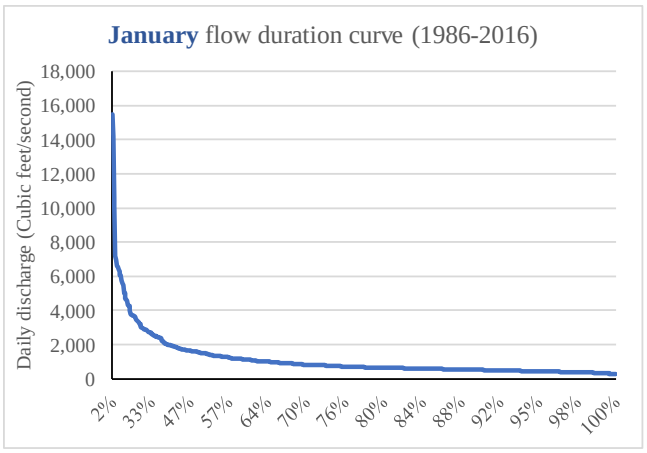


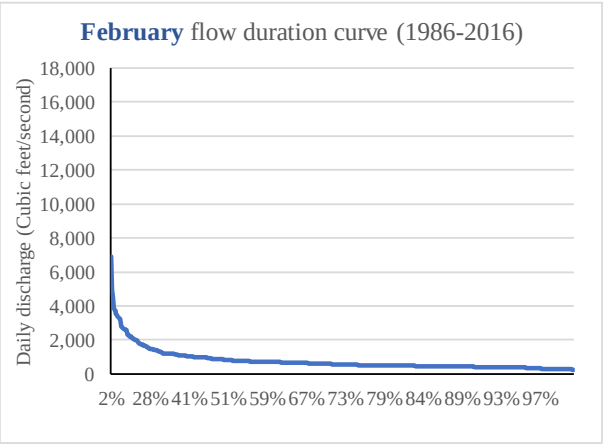
Source: USGS daily discharge means over a 30-year period.

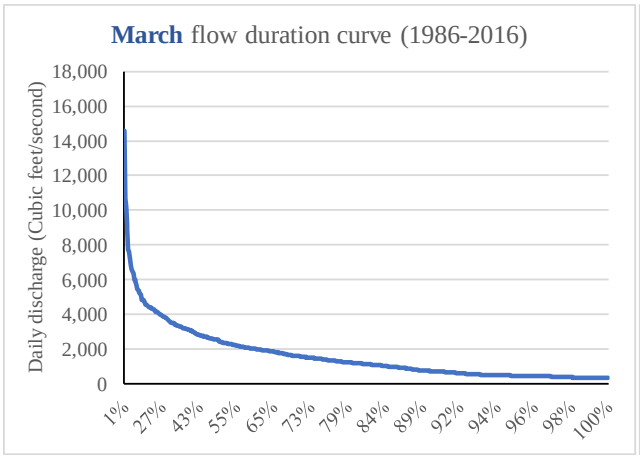
(C) A monthly flow duration curve indicating the period of record and the location of gauging station(s), including identification number(s), used in deriving the curve; and a specification of the critical streamflow used to determine the project's dependable capacity

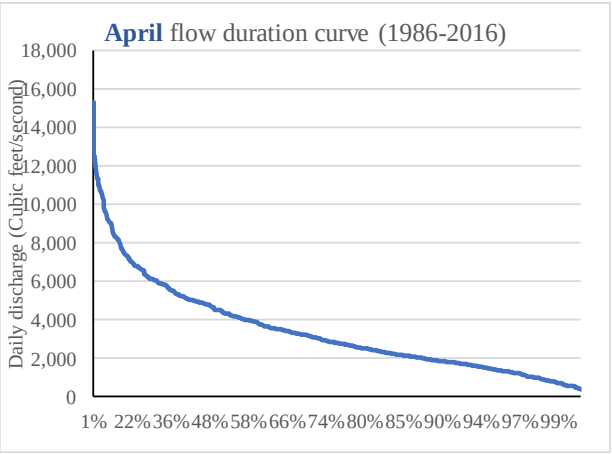
(Supplemental)

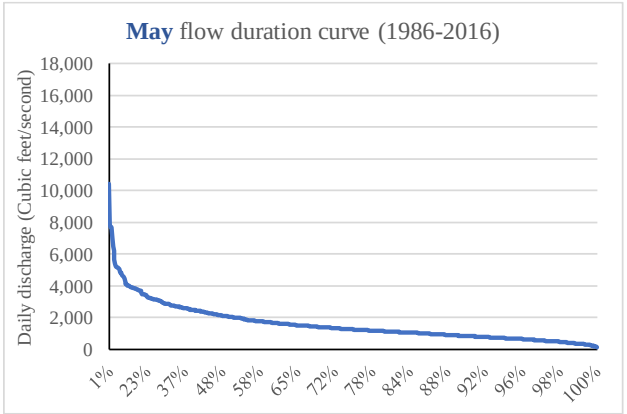
Figure 5. Flow duration curves – monthly profiles

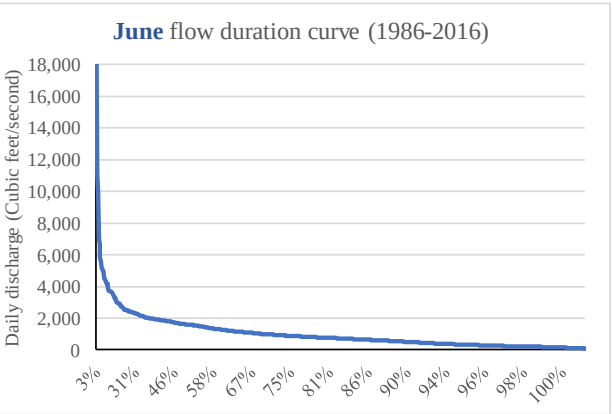


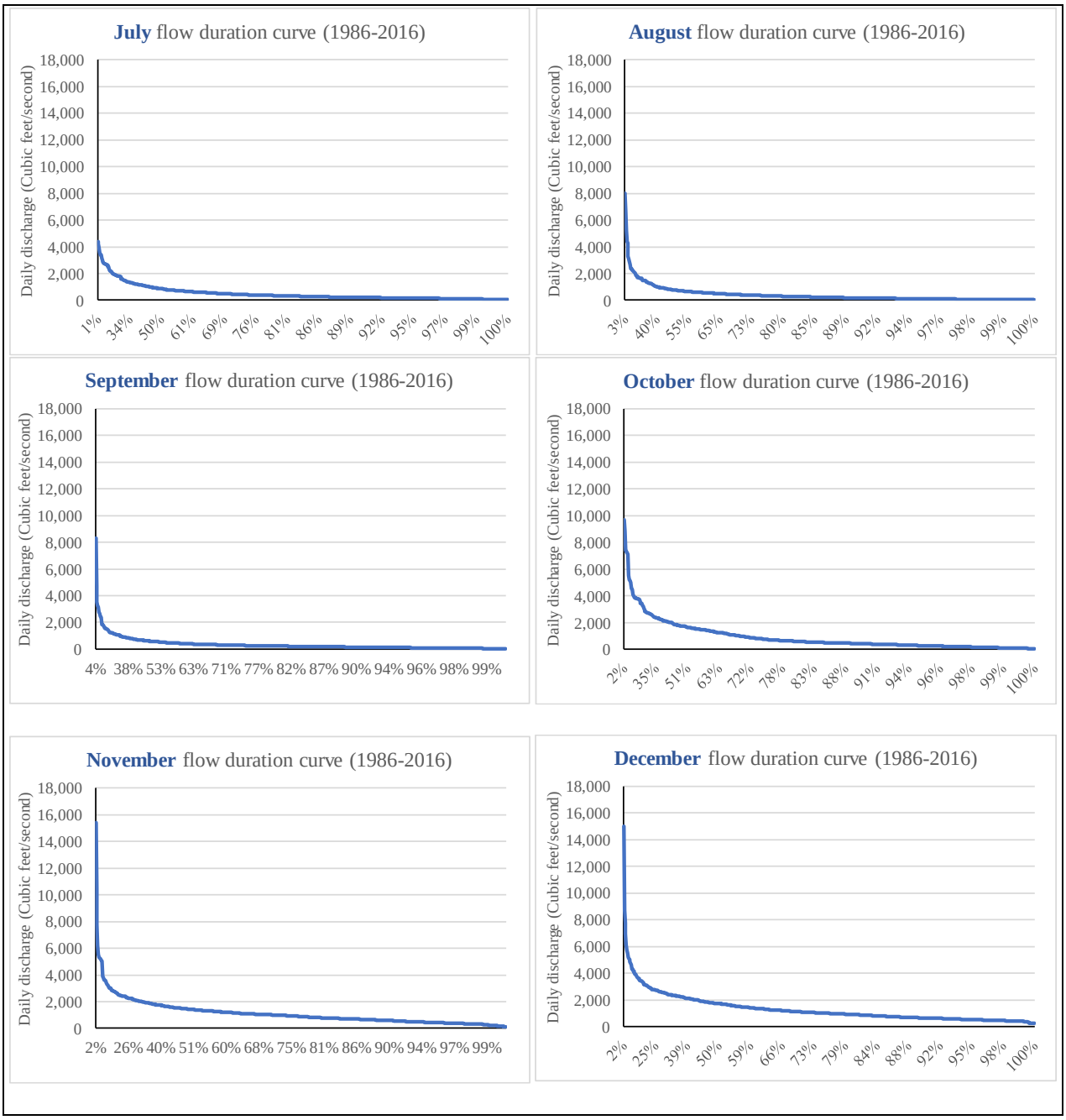












(F) Relevant federally-approved water quality standards applicable to project waters

Water samples were collected from 20 domestic wells in the Upper Hudson River Basin (north of the Federal Dam at Troy, New York) in New York in August 2012 to characterize groundwater quality in the basin. The samples were collected and processed using standard U.S. Geological Survey procedures and were analyzed for 148 physiochemical properties and constituents, including dissolved gases, major ions, nutrients, trace elements, pesticides, volatile organic compounds (VOCs), radionuclides, and indicator bacteria. The Upper Hudson River Basin covers 4,600 square miles in upstate New York, Vermont, and Massachusetts; the study area encompasses the 4,000 square miles that lie within New York, including

Hamilton county, the Sacandaga River and per extension the Project area.[5]

The methods used in this study, including (1) well-selection criteria, (2) sampling methods, and (3) analytical methods, were designed to maximize data precision, accuracy, and comparability. Groundwater-sample collection and processing followed standard USGS procedures as documented in the National Field Manual for the Collection of Water-Quality Data (U.S. Geological Survey, variously dated).

In the table below, we present a sample of the results of the analysis conducted with the water sample taken in the Project area ("H201") within the Hamilton county (see Exhibit F for more details on the study). The following table provides a sample of the results, for a complete set of the 2012 study results, see Exhibit F.

Figure 6. Sample of physiochemical properties analyzed

Sample of physiochemical properties	DEC's standards	Sample H201 (bedrock sample)
Color,platinum -cobalt units(00080)	15	<1
pH,field,standard units(00400)	6.5-8.5	7.6
Specific conductance,field,µS/cm @ 25°C(00095)	--	4,250
Water temperature,field,degrees Celsius(00010)	--	10.2
Hydrogen sulfide odor,field(71875)	--	M
Dissolved oxygen, mg/L	--	<0.3
Escherichia coli,defined substrate, unfiltered,CFU/100mL(84385)	--	<1
Fecal coliform,membrane filtration,unfiltered,CFU/100mL(61215)	--	<1

Source: US Environmental Protection Agency Secondary Drinking Water Standard

(H) *The following data with respect to any existing or proposed lake or reservoir associated with the proposed project; surface area, volume, maximum depth, mean depth, flushing rate, shoreline length, substrate composition*

(Supplemental)

The surface area of the reservoir is 1.1 acre; the reservoir elevation is 1699.7 feet (with 3 feet flashboard). The reservoir storage capacity is 4 acre-feet

§ 5.6 (d)(3)(ii) - Geology and soils. Descriptions and maps showing the existing geology, topography, and soils of the proposed project and surrounding area. Components of the description must include:

(C) Description of reservoir shorelines and streambanks, including

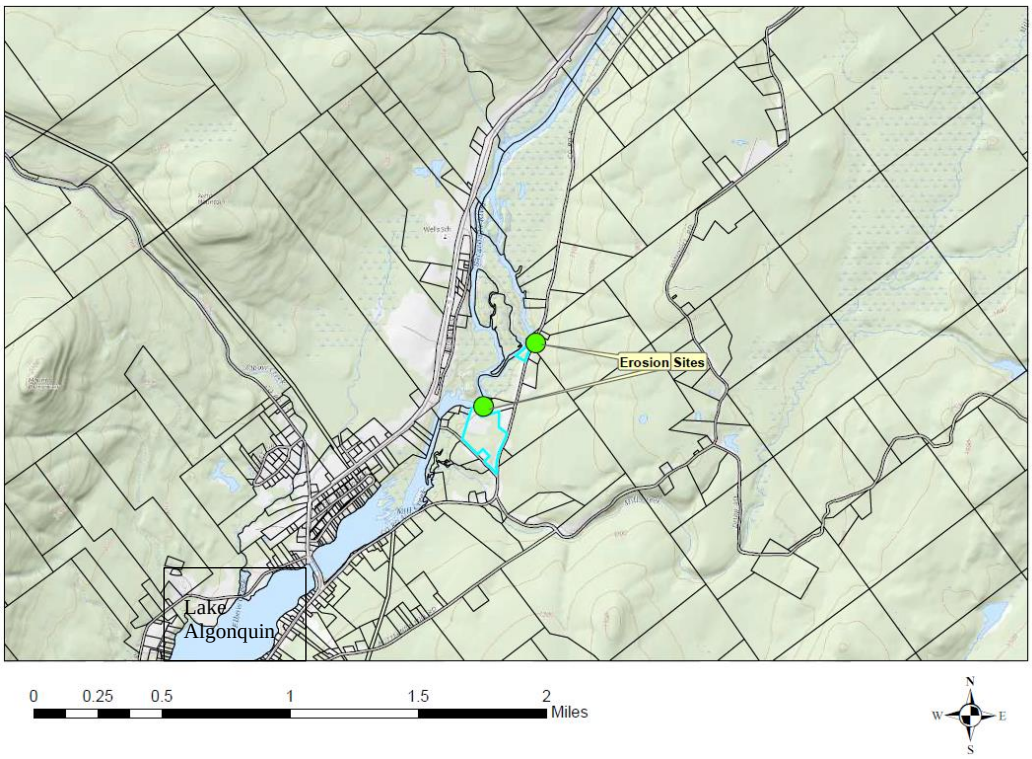
(1) Steepness, composition (bedrock and unconsolidated deposits), and vegetative cover

(2) Existing erosion, mass soil movement, slumping, or other forms of instability, including identification of project facilities or operations that are known to or may cause these conditions

Shoreline mainly consists of undeveloped forestland. From our conversation with the Hamilton County Soil and Water Conservation District, there are two main locations on the Sacandaga River where erosion has occurred/is occurring. It is very hard to tell however whether the erosion is caused by hydropower generation but rather by the normal morphology of the river (natural forces). Erosion is the result of forces (wind, wave, gravity, or ice) acting upon materials with varying abilities to resist the destructive powers of those forces. It is worth noting that none of these locations are immediately downstream of the Project but rather several miles down to the town of Wells,

[5] Groundwater Quality in the Upper Hudson River Basin, New York, 2012, Tia-Marie Scott and Elizabeth A. Nystrom.

Figure 7. Shoreline erosion on the Sacandaga River



Source: Hamilton Council Soil and Water Conservation District

§ 5.6 (d)(3)(iv) - Fish and aquatic resources. A description of the fish and other aquatic resources, including invasive species, in the project vicinity. This section must discuss the existing fish and macroinvertebrate communities, including the presence or absence of anadromous, catadromous, or migratory fish, and any known or potential upstream or downstream impacts of the project on the aquatic community. Components of the description must include:

(A) *Identification of existing fish and aquatic communities*

(B) Identification of essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act and established by the National Marine Fisheries Service

(C) Temporal and spatial distribution of fish and aquatic communities and trends with respect to:

(1) Species life stage composition

(2) Standing crop

(3) Age and growth data

(4) Spawning run timing

(5) Extent and location of spawning, rearing, feeding, and wintering habitat

Additional species to the ones presented in the original PAD include the following:
Fish and aquatic resources (Supplemental)

<u>Sunfish</u>

- **Pumpkinseed (Lepomis gibbosus)**
  Pumpkinseed inhabits lakes and streams with submerged aquatic vegetation, and it is known in all 18 watersheds. It has been introduced to many upland ponds of the Adirondacks but documentation of its non-native status is generally lacking. This species was found in surveys 508933 (year 2008), 50246 (year 2002) (see Exhibit M)

North American Catfish

- **Stonecat (Noturus flavus)**

  Stonecat lives in the lower reaches of streams with rocks and moderate current. It is native to 13 watersheds outside the south and eastern watersheds of the Chemung, Susquehanna, Delaware, Newark Bay and Long Island. There are no recent records from Lower Hudson since the 1950s. Field identifications have sometimes been cursory, and its possible replacement or displacement by Margined Madtom has gone unnoticed. This species was found in the survey# 50246 (year 2002) – see Exhibit M.

- **Margined Madtom (Noturus insignis)**
  Margined Madtom lives in the lower reaches of streams with rocks and moderate current. The three Atlantic slope watersheds where it is native are in the southeast and south central regions. It has become established in 11 other watersheds, or in all but Erie, Allegheny, Champlain and Long Island. There are no recent records from Genesee since 1970, so it may have failed to become established there. Field identifications have sometimes been cursory, and its possible replacement or displacement of stonecat has gone unnoticed. Range expansion and increase in frequency occurrence have been substantial.

Perch:

- **Walleye**
- **Tessellated Darter (Etheostoma olmstedi)**
  Tessellated Darter lives in streams and ponds with sand or mud bottoms. In some streams that are also inhabited by Johnny Darter, the two have some separation by Tessellated being more downstream and in areas with sandy bottoms. It inhabits all New York watersheds except Erie and Allegheny. It is generally widespread Walleye lives in lowland streams and lakes and spawns on gravel. It is found in all watersheds, but is native to only the Great Lakes and Allegheny watersheds. It has been introduced to many lakes where annual stocking continues to supplement poor natural reproduction. Many records came from stocking that was not sustained (see for instance results of survey #511005 – Exhibit M). Stocking of this species has recently occurred during the summer, in the town of Lake Pleasant in both Sacandaga Lake and Lake Pleasant waterbodies (source: NY State Fish stocking Lists (Actual)).
  in all but western NY. There are more frequent catches in recent times in many streams. This is partially caused by advantages of modern sampling gear

Minnow and carp

- **Fallfish (Semotilus corporalis)**
  Fallfish inhabits medium-sized and larger streams and is often associated with sandy bottoms. It ranges through all the Atlantic slope watersheds and only part of the Great Lakes and Saint Lawrence watersheds. It is generally found east of the Genesee River. In the narrow band with tributaries along the south shore of Lake Ontario, the range extends west, but only to the Oswego River. They are non-native in upland Adirondack lakes and streams. In western NY, they have become established in upper Tonawanda Creek. This species has been found in all surveys discussed in Exhibit M.

- **Creek chub (semotilus atromaculatus)**
  Creek Chub lives in medium-sized streams and upland lakes and is tolerant of degraded environments. Its native range extends through all watersheds, except not to areas where it is found at higher elevations of the Adirondacks. Also, it is still absent from the part of the Long Island watershed east of the mainland.

Common minnows:

- **Northern Redbelly Dace**
  Limited in range in New York, northern redbelly dace are mostly found in the Adirondacks. They occur in boggy lakes, creeks, and ponds where the water is often dark brown. In streams, redbelly dace prefer quiet areas with a bottom of silt or decaying vegetation.
  Redbelly dace are dark brown or black on the back and yellow to red on the belly. Two dark stripes run the length of the upper body. They have small mouths and large eyes. Redbelly dace are small minnows, rarely growing larger than two inches.
  Redbelly dace spawn in late spring. Eggs are deposited in algae mats and then left unguarded. Adult fish feed on plant materials and some zooplankton and insects. Although they are used as a baitfish in some parts of Canada, redbelly dace are rarely used for bait by people in New York State. Northern Redbelly Dace were found in the latest survey of DEC (see survey # 516909 of Exhibit M).
- **Eastern Blacknose Dace (Rhinichthys atratulus)**

  Eastern Blacknose Dace inhabits smaller streams with gravel bottoms and some lakes, particularly in the Adirondacks. It is found in all watersheds east of the Genesee and west of Long Island. The range of the closely related Western Blacknose Dace overlaps with Eastern Blacknose Dace in tributaries of Lake Ontario near Wolcott. Mudge Creek has both species and Salmon Creek of Maxwell Bay is the farthest west of records for Eastern Blacknose Dace. The taxonomists have questioned the splitting of this species into an eastern and western species, and we use the Latin name, R. atratulus as applied to the Eastern Blacknose Dace only.

The information on fish species was gathered from a series fo surveys conducted between 1997 and 2016. We presented below a key information on the surveys consulted. For more information on individual survey, **please consult Exhibit M.**

Survey number: 597079 (year 1997)
Water body: Sacandaga River
Purpose: Catch Rate Oriented Trout Stocking Program
Town: Wells
County: Hamilton
Date: 7/30/1997
Site1: Lake Luzerne, 2000 feet upstream of trib 35
Site2: Lake Luzerne, 500 feet downstream of trib 38
Site3: Lake Luzerne, 2,000 feet downstream of trib 39
Site4: Across former river channel off point south of Elbow Creek
General Comments: N/A

Survey number: 50246 (year 2002)
Water body: Sacandaga River
Purpose: Catch Rate Oriented Trout Stocking Program
Town: Wells
County: Hamilton
Date: 8/12/2002
Site2: End of old NY Rt 30.
Site2: 1000 feet downstream of Algonquin Lake Dam.
Site3: State parking area on Rt 30.
Site4: North end of state campground.
General Comments: Stonecats positively identified in the field. It is interesting to note that West Branch Sacandaga which drains to the Sacandaga River was surveyed this same time period (see 502047) and contained margined madtoms, but no stonecats.

Survey number: 508933 (year 2008)
Water body: Sacandaga River
Purpose: General Biological Survey
Town: Multiple
County: Hamilton
Date: 7/09/2008
Site2: town of Benson, near mouth of West Stony Kill.
Site2: town of Wells, East of Speculator, 1 mile below dam at T39.
Site3: town of Lake Pleasant, Upstream of Kunjamuk Creek, 1.1 miles above dam at T39
Site4: town of Wells, above West Branch Sacandaga River, below dam, at DEC Campground
General Comments: No stonecats were positively identified in the field in this survey.

Survey number: 511005 (year 2011)
Water body: Lake Algonquin
Purpose: General Biological Survey
Town: Wells
County: Hamilton
Date: 6/01/2011
Site1: Near dam right off handicapped fishing platform. Chem site

Site2: Deep channel near fishing platform very close to site 1
Site3: Near end of point just north of dam
Site4: Across former river channel off point south of Elbow Creek
Site5: East shore to SE of Elbow Creek.
Site6: Between the two southern points.
Site7: At mouth of culvert under CR5. Pond there is cutoff part of lake
Site8: Edge of weeds off mouth of Elbow Creek.
Site9: Northeast of Rt 30 Bridge.
Site10: Along east shore upstream from bridge to the Rt 30 bridge - end at 557886E 4805818N.
Site11: Elbow Creek to mouth of next - trib south end at 557074E 4805456N.
Site12: All of southern bay- then to site 1 then Butttermilk Hill Rd to just south bridge.
General Comments: Evaluating walleye stocking of 4,400 fingerlings annually from 2002-2006. No walleye caught or seen. Very few reported by local anglers. Stocking obviously unsuccessful. Collected 30 bass and 60 yellow perch for national fish health survey and shipped them fresh overnight to USFWS lab in Lamar PA. Collected chain pickerel and yellow perch for Eric Paul's mercury study and will send to Rome lab. Recent dredging has benefitted bass. Largemouth bass were large and so were some chain pickerel. Virtually no young bass seen. Woody habitat lacking along shoreline. Lake would benefit from bass stocking.

Survey number: 516909 (year 2016)
Water body: Sacandaga River
Purpose: General Biological Survey
Town: Wells
County: Hamilton
Date: 7/19/2016
Site: Brussel Road above Algonquin Reservoir
General Comments: Tissue samples from suckers were preserved to compare MDNA to other late spawning suckers. No results are expected in near future.

MACROINVERTEBRATE COMMUNITIES (Supplemental)

The macroinvertebrate community is a diverse array of clean-water mayflies, stoneflies, caddisflies.[6] Biological (macroinvertebrate) assessments of the Sacandaga River near Hope were conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Species richness was low and aquatic worms dominated the sample, indicating possible organic waste. This site was previously assessed as non-impacted in 1993.

[6] NYSDEC Rotating Integrated Basin studies (Sacandaga River in Wells (at Route 8), 2002.

§ 5.6 (d)(3)(v) - Wildlife and botanical resources. A description of the wildlife and botanical resources, including invasive species, in the project vicinity. Components of this description must include:

(*A) Upland habitat(s) in the project vicinity, including the project's transmission line corridor or right-of-way and a listing of plant and animal species that use the habitat(s)*

Botanical

Terrestrial upland habitat has relatively limited wetlands in the vicinity of Christine Falls project, as discussed in 5.6(d)(3)(vi), due to steep shoreline slopes and the lack of major tributary streams and associated shallow nearshore areas

Wildlife

Forest species include white-tailed deer, red fox, gray fox, gray squirrel, red squirrel, eastern chipmunk, eastern cottontail rabbit, raccoon, beaver, bobwhite quail, ruffed grouse, goldfinch, hairy woodpecker, white-breasted nuthatch, and common crow. Reptile and amphibian use is restricted to species such as wood frog, redback salamander, American toad, northern dusky salamander, painted turtle and snapping turtle[7].

§ 5.6(d)(3)(vi) Description of floodplains, wetlands, riparian, and littoral habitat. A description of the floodplain, wetlands, riparian habitats, and littoral in the project vicinity. Components of this description must include:

(1) A list of plant and animal species, including invasive species, that use the wetland, littoral, and riparian habitat

(2) Map of wetlands, riparian and littoral habitat

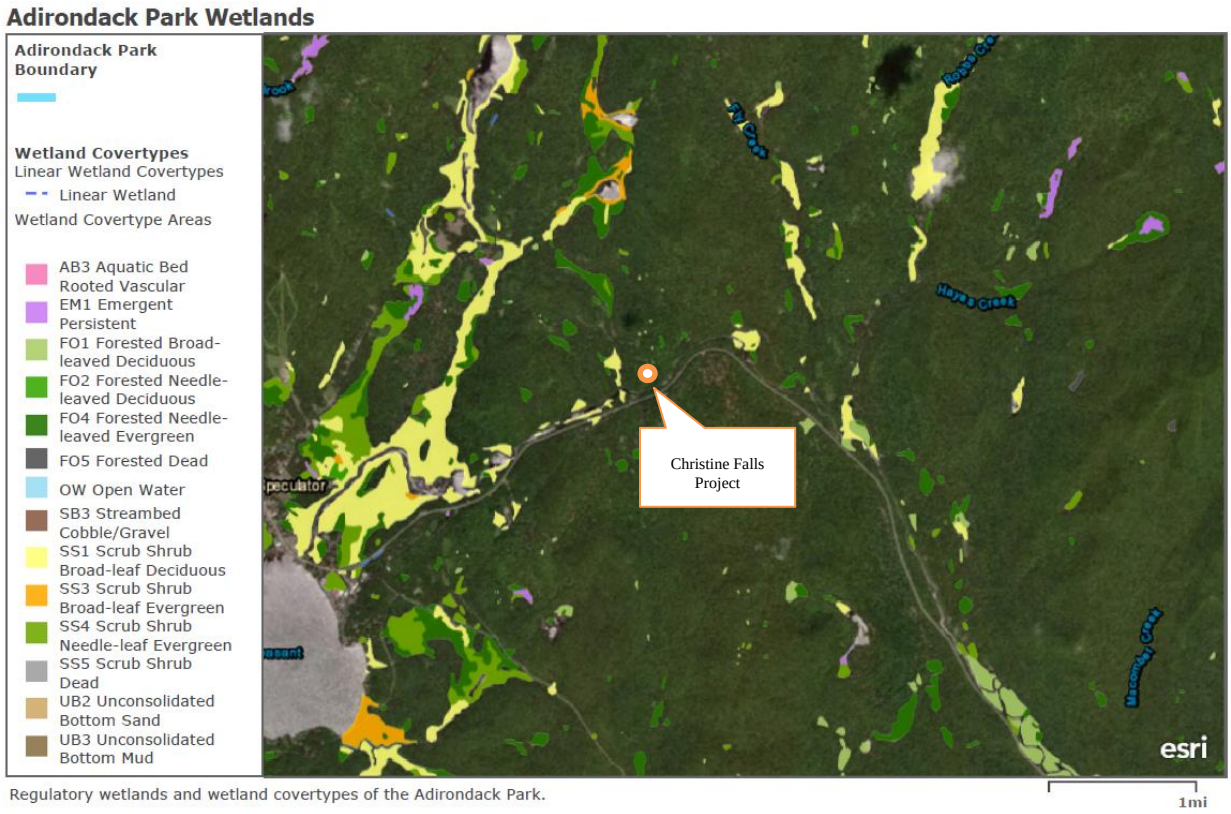
(3) Estimates of acreage for each type of wetland, riparian, or littoral habitat, including variability in such availability as a function of storage at a project that is not operated in run-of-river mode

Wetlands[8] (Supplemental): The Christine falls project will continue to be operated as a run-of-river facility. There will be no changes to historic river levels upstream of the Project. The aerial view of wetlands illustrated by **Error! Reference source not found.** underlines the absence of wetlands within the vicinity of the Project (within 500 feet and up to half a mile radius). However, in **Figure 8** we map out in detail the class of wetlands in existence in the Project surroundings.

[7] Credit to the Stewarts Bridges project license application, Environmental Impact Statement, Upper Hudson River Projects, 2001.

[8] Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water less than 6.6 ft deep. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (wetland plants); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season.

Figure 8. Map of Adirondack wetlands (Project area)



The type of wetland around the Project area and largely in the Adirondack is the Class Scrub-shrub**,** which includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. All water regimes except subtidal are included.[9]

Description. Scrub-Shrub Wetlands may represent a successional stage leading to Forested Wetland, or they may be relatively stable communities. They occur only in the Estuarine and Palustrine Systems, but are one of the most widespread classes in the United States (Shaw and Fredine 1956). Scrub-Shrub Wetlands are known by many names, such as shrub swamp (Shaw and Fredine 1956), shrub carr (Curtis 1959), bog (Heinselman 1970), and pocosin (Kologiski 1977). For practical reasons we have also included forests composed of young trees less than 6 m tall.

The Project area is dominated by broad-leaved Deciduous (both upstream and downstream). The first scrub shrub broad-leaved Deciduous are found about 0.3 miles upstream. Downstream within a mile of the project can be found scrub shrub broad-leaved Deciduous and forested needle-leaved evergreen. Further down a little bit over a mile forested broad-leaved Deciduous can be found mixed up with scrub shrub broad-leaf and forested needle-leaved evergreen.

- ***Broad-leaved Deciduous.*** -- In Estuarine System Wetlands the predominant deciduous and broad-leaved trees or shrubs are plants such as sea-myrtle (*Baccharis halimifolia*) and marsh elder (*Iva frutescens*). In the Palustrine System typical Dominance Types are alders (*Alnus* spp.), willows

[9] NY – Fish and Wildlife service: https://www.fws.gov/wetlands/documents/classwet/scrbshrb.htm

(*Salix* spp.), buttonbush (*Cephalanthus occidentalis*), red osier dogwood (*Cornus stolonifera*), honeycup (*Zenobia pulverulenta*), spirea (*Spiraea douglasii*), bog birch (*Betula pumila*), and young trees of species such as red maple (*Acer rubrum*) or black spruce (*Picea mariana*).

- ***Needle-leaved Evergreen.*** -- The dominant species in Needle-leaved Evergreen Wetlands are young or stunted trees such as black spruce or pond pine (*Pinus serotina*).

- ***Needle-leaved Deciduous.*** -- This Subclass, consisting of wetlands where trees or shrubs are predominantly deciduous and needle-leaved, is represented by young or stunted trees such as tamarack or bald cypress (*Taxodium distichum*).

In the following tables, we provided a list of species using the wetlands within Hamilton county. We created two tables to separate endangered and rare species (see Rank S1, S2 and S3 in the tables) from species "demonstrably secured" in NY state (see Ranks S4 and S5 in the tables). The tables were extracted from the NY Flora Atlas. We only selected species occurring always under natural conditions in wetlands (see OBL in Wetland Indicator Status (WIS) column), those usually occurring for the largest part in wetlands, but occasionally found in nonwetlands (see FACW in WIS column) and the species that are equally likely to occur in wetlands and nowetlands (see FAC in WIS column).

Figure 9. List of endangered and rare species in Hamilton county wetlands

Plant_ID	Scientific_Name	Common_Name	Status_State	WIS	State_Rank	Category	Growth_Habit	Duration
2330	Calamagrostis pickeringii	Pickering's reed grass	Rare-State	FACW	S3	Vascular	Graminoid	Perennial
951	Carex capillaris	hair-like sedge	Endangered-State	FACW	S1	Vascular	Graminoid	Perennial
967	Carex cryptolepis	small yellow sedge	Rare-State	OBL	S3	Vascular	Graminoid	Perennial
1145	Carex oligosperma	few-seeded sedge	Rare-State	OBL	S3	Vascular	Graminoid	Perennial
396	Erigeron hyssopifolius	hyssop-leaved fleabane	Endangered-State	FACW	S1	Vascular	Forb/herb	Perennial
1580	Myriophyllum farwellii	Farwell's water milfoil	Threatened-State	OBL	S2	Vascular	Forb/herb	Perennial
1926	Najas marina	spiny water nymph, spiny naiad	Endangered-State	OBL	S1	Vascular	Forb/herb	Annual
2501	Potamogeton confervoides	alga pondweed	Rare-State	OBL	S3	Vascular	Forb/herb	Perennial
1108	Rhynchospora fusca	sooty beak sedge	Rare-State	OBL	S3S4	Vascular	Graminoid	Perennial
2897	Saxifraga oppositifolia ssp. op	purple mountain saxifrage	Endangered-State	ACU-, FA(	S1	Vascular	Forb/herb	Perennial

Source: NY Flora Atlas and Preliminary List of Species Native Within the Adirondack Park (updated 10.23.2016)

Figure 10. List of other species in Hamilton county wetlands

Plant_ID	Scientific_Name	Common_Name	WIS	State_Rank	Category	Growth_Habit	Duration
558	Anchistea virginica	Virginia chain fern	OBL	S5	Vascular	Forb/herb	Perennial
1330	Andromeda polifolia var. latifo	bog rosemary	OBL	S5	Vascular	Shrub	Perennial
652	Brasenia schreberi	watershield	OBL	S5	Vascular	Forb/herb	Perennial
134	Calla palustris	wild calla	OBL	S5	Vascular	Forb/herb	Perennial
2584	Caltha palustris	marsh marigold	OBL	S5	Vascular	Forb/herb	Perennial
671	Campanula aparinoides	marsh bellflower	OBL	S5	Vascular	Forb/herb	Perennial
942	Carex bebbii	Bebb's sedge	OBL	S5	Vascular	Graminoid	Perennial
979	Carex echinata ssp. echinata	star sedge	OBL	S5	Vascular	Graminoid	Perennial
956	Carex exilis	meager sedge	OBL	S4	Vascular	Graminoid	Perennial
937	Carex flava	large yellow sedge	OBL	S5	Vascular	Graminoid	Perennial
1182	Carex leptalea	bristle-stalked sedge	OBL	S5	Vascular	Graminoid	Perennial
1184	Carex limosa	mud sedge	OBL	S5	Vascular	Graminoid	Perennial
987	Carex magellanica ssp. irrigua	bog sedge	OBL	S4	Vascular	Graminoid	Perennial
1136	Carex michauxiana	Michaux's sedge	OBL	S4	Vascular	Graminoid	Perennial
1148	Carex pauciflora	few-flowered sedge	OBL	S5	Vascular	Graminoid	Perennial
1155	Carex prasina	elegant drooping sedge	OBL	S5	Vascular	Graminoid	Perennial
1156	Carex pseudocyperus	cyperus-like sedge	OBL	S5	Vascular	Graminoid	Perennial
1218	Carex scabrata	rough sedge	OBL	S5	Vascular	Graminoid	Perennial
1228	Carex stipata var. stipata	awl-fruited sedge	OBL	S5	Vascular	Graminoid	Perennial
1189	Carex stricta	tussock sedge	OBL	S5	Vascular	Graminoid	Perennial
1203	Carex vesicaria	lesser bladder sedge	OBL	S5	Vascular	Graminoid	Perennial
1199	Carex vulpinoidea	fox sedge	OBL	S5	Vascular	Graminoid	Perennial
2841	Cephalanthus occidentalis	buttonbush	OBL	S5	Vascular	Tree, Shrub	Perennial
2933	Chelone glabra	white turtlehead	OBL	S5	Vascular	Forb/herb	Perennial
2901	Chrysosplenium americanum	golden carpet	OBL	S4	Vascular	Forb/herb	Perennial
76	Cicuta bulbifera	bulb-bearing water hemlock	OBL	S5	Vascular	Forb/herb	Perennial
1055	Cladium mariscoides	twig rush	OBL	S5	Vascular	Graminoid	Perennial
2697	Comarum palustre	marsh cinquefoil	OBL	S4	Vascular	Herbaceous	Perennial
1241	Drosera intermedia	spatulate-leaved sundew	OBL	S4	Vascular	Forb/herb	Perennial
6379	Drosera rotundifolia	round-leaved sundew	OBL	S4	Vascular	Forb/herb	Perennial
1072	Dulichium arundinaceum var. a	three-way sedge	OBL	S5	Vascular	Graminoid	Perennial
1292	Elatine minima	lesser waterwort	OBL	S4	Vascular	Forb/herb	Annual
1031	Eleocharis erythropoda	red-footed spike rush	OBL	S5	Vascular	Graminoid	Perennial
1034	Eleocharis palustris	common spike rush	OBL	S5	Vascular	Graminoid	Perennial
1599	Elodea nuttallii	Nuttall's waterweed	OBL	S5	Vascular	Forb/herb	Perennial
2410	Elymus riparius	eastern riverbank wild rye	FACW	S5	Vascular	Graminoid	Perennial
1956	Epilobium palustre	marsh willowherb	OBL	S4	Vascular	Forb/herb	Perennial
1302	Equisetum fluviatile	river horsetail	OBL	S5	Vascular	Forb/herb	Perennial
1045	Eriophorum tenellum	rough cotton grass	OBL	S5	Vascular	Graminoid	Perennial
1046	Eriophorum virginicum	tawny cotton grass	OBL	S5	Vascular	Graminoid	Perennial
2819	Galium palustre	marsh bedstraw	OBL	S5	Vascular	Forb/herb	Perennial
1317	Gaultheria hispidula	snowberry	FACW	S5	Vascular	ubshrub, Shru	Perennial
2135	Glyceria borealis	northern manna grass	OBL	S5	Vascular	Graminoid	Perennial
2126	Glyceria canadensis	rattlesnake manna grass	OBL	S5	Vascular	Graminoid	Perennial
2244	Glyceria melicaria	slender manna grass	OBL	S5	Vascular	Graminoid	Perennial
2241	Glyceria striata	fowl manna grass	OBL	S5	Vascular	Graminoid	Perennial
2926	Gratiola aurea	golden hedge hyssop	OBL	S4	Vascular	Forb/herb	Perennial
2931	Gratiola neglecta	northern clammy hedge hyssop	OBL	S5	Vascular	Forb/herb	Annual
85	Hydrocotyle americana	American marsh pennywort	OBL	S5	Vascular	Forb/herb	Perennial
864	Hypericum boreale	northern St. John's wort	OBL	S5	Vascular	Forb/herb	Perennial
863	Hypericum canadense	lesser Canadian St. John's wort	FACW	S5	Vascular	Forb/herb	Annual
854	Hypericum fraseri	Fraser's marsh St. John's wort	OBL	S5	Vascular	Forb/herb	Perennial
853	Hypericum virginicum	Virginia marsh St. John's wort	OBL	S5	Vascular	Forb/herb	Perennial
128	Ilex mucronata	mountain holly	OBL	S5	Vascular	Tree, Shrub	Perennial
522	Impatiens pallida	pale jewelweed, pale touch-me-n	FACW	S4	Vascular	Forb/herb	Annual
1610	Iris versicolor	blue flag	OBL	S5	Vascular	Forb/herb	Perennial
1666	Juncus articulatus	jointed rush	OBL	S5	Vascular	Graminoid	Perennial
1661	Juncus brevicaudatus	narrow-panicled rush	OBL	S5	Vascular	Graminoid	Perennial
1658	Juncus canadensis	Canada rush	OBL	S5	Vascular	Graminoid	Perennial
1670	Juncus militaris	bayonet rush	OBL	S4	Vascular	Graminoid	Perennial
1648	Juncus pelocarpus	brown-fruited rush	OBL	S5	Vascular	Graminoid	Perennial
2080	Larix laricina	tamarack	FACW	S5	Vascular	Tree	Perennial
2250	Leersia oryzoides	rice cut grass	OBL	S5	Vascular	Graminoid	Perennial
1780	Lemna minor	common duckweed	OBL	S5	Vascular	Forb/herb	Perennial
666	Lobelia dortmanna	water lobelia	OBL	S4	Vascular	Forb/herb	Perennial
665	Lobelia inflata	Indian tobacco	FACU-, FAC	S5	Vascular	Forb/herb	Annual
664	Lobelia kalmii	Kalm's lobelia	OBL	S5	Vascular	Forb/herb	Perennial
1686	Lycopus americanus	American bugleweed, American	OBL	S5	Vascular	Forb/herb	Perennial
1735	Lycopus uniflorus	northern bugleweed, northern wat	OBL	S5	Vascular	Forb/herb	Perennial
2528	Lysimachia terrestris	swamp candles	OBL	S5	Vascular	Forb/herb	Perennial
1282	Matteuccia struthiopteris var.	ostrich fern	FACW	S4	Vascular	Fern	Perennial
2908	Mimulus ringens	Allegheny monkey flower	OBL	S5	Vascular	Forb/herb	Perennial
1924	Myrica gale	sweetgale	OBL	S5	Vascular	Shrub	Perennial
1570	Myriophyllum humile	low water milfoil	OBL	S5	Vascular	Forb/herb	Perennial
1572	Myriophyllum tenellum	slender water milfoil	OBL	S4	Vascular	Forb/herb	Perennial
1927	Najas flexilis	common water nymph, common n	OBL	S5	Vascular	Forb/herb	Annual
1281	Onoclea sensibilis	sensitive fern	FACW	S5	Vascular	Fern	Perennial
435	Packera aurea	golden ragwort	FACW	S5	Vascular	Forb/herb	Perennial

Source: NY Flora Atlas and Preliminary List of Species Native Within the Adirondack Park (updated 10.23.2016)

§ 5.6 (d)(3)(vii) - Rare, threatened, and endangered species. A description of any listed rare, threatened and endangered, candidate, or special status species that may be present in the project vicinity. Components of this description must include:

(A) Description of listed rare, threatened and endangered, candidate, or special status species in the project vicinity.

(B) Identification of habitat requirements
(C) References to known biological opinion, status reports, or recovery plans pertaining to a listed species
(D) Extent and location of federally-designated critical habitat or other habitat for listed species in the project area
(E) Temporal and spatial distribution of the listed species within the project vicinity

Threatened and Endangered Species (Supplemental): In the following table, we present endangered species known to occur within the project location.10

Northern Long-eared Bat

Status	Threatened; A species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
Description	The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species' range includes 37 states. White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. Although the disease has not yet spread throughout the northern long-eared bat's entire range (white-nose syndrome is currently found in at least 25 of 37 states where the northern long-eared bat occurs), it continues to spread. Experts expect that where it spreads, it will have the same impact as seen in the Northeast.
Critical habitat	No critical habitat has been designated for this species.

In addition to the Northern long-eared bat, there are 7 migratory birds of conservation concern that are expected to occur in this location.

Level of Concern	This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
Description	A large raptor, the bald eagle has a wingspread of about 7 feet. Adults have a dark brown body and wings, white head and tail, and a yellow beak. Juveniles are mostly brown with white mottling on the body, tail, and undersides of wings. Adult plumage

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	usually is obtained by the 6th year. In flight, the Bald Eagle often soars or glides with the wings held at a right angle to the body. As in most other raptors, females are larger than males; sexes otherwise similar in appearance.

Black-billed Cuckoo

Level of Concern	This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
Description	The Black-billed Cuckoo is a slender and long-tailed cuckoo bird generally measuring 28-31 cm iyn length and 45-55 g in weight. This bird has a moderately long and curved bill, marked by a hooked tip on the upper-mandible of the darkly colored bill. Plumage on the upper part of the head and body are a grayish-brown while the under-plumage areas are a dull weight. The ring around the pupil of the eye is generally a bright orange-red color (Bent 1940, Oberholser 1974, Nolan 1975, National Geographic Society 1983, Pyle 1995, 1997). Life History information provided for the Black-billed Cuckoo is summarized from the Birds of North America Online (http://bna.birds.cornell.edu/bna/).

Canada Warbler

level of concern	This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cape May Warbler

Level of Concern	This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Olive-sided Flycatchers

Level of Concern	This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
Description	Olive-sided Flycatchers are large with a relatively short tail, and have a white center on their breast which contrasts sharply with gray sides, giving a vested appearance. Juveniles are similar to adults, however, their upperparts are more brownish and wing feather edges washed buff.

Rusty blackbird

Level of Concern	This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood thrush

Level of Concern	This is a bird of conservation concern (bcc) throughout its range in the continental USA and Alaska.

Anadromous Species: To the Applicant's knowledge, there are no immediate plans to restore any species of Salmon to the Upper branch of the Sacandaga River.

§ 5.6 (d)(3)(viii) - Recreation and land use. A description of the existing recreational and land uses and opportunities within the project boundary.

(F) A discussion of whether the project is located within or adjacent to a:

(2) A state-protected river segment

(Supplemental)
The project site is under the planning jurisdiction of the Adirondack Park Agency (APA). Currently, the Agency classifies a large square of land north of Lake Pleasant (including the site), as "Resource Management" land. This indicates that care is taken to protect the natural character of these private lands. the most suitable uses "Resource Management" include agriculture, forests, and outdoor recreation pursuits. Most development activities in resource management areas will require an Agency permit; compatible uses include residential uses, agriculture, and forestry. Special care is taken to protect the natural open space character of these lands. The area surrounding the proposed project is forested and currently used for a variety of daytime outdoor pursuits including fishing, hiking, picnicking, camping, snowmobiling and hunting. Access is via New York State Route 8 to the south, and the Old New York State Route 8 to the north, paralleling the river near the project.

The Sacandaga River is listed in the Wild, and Recreational River System by the APA (mainly owed to its value as recreational resource) and is considered a state-protected river segment. The NY State policy is to preserve designated rivers in a free flowing condition, protecting them from improvident development and use. This policy is intended to preserve the enjoyment and benefits derived from these rivers for present and future generations. DEC's regulations implementing the Wild Scenic and Recreational Rivers Act affect management, protection, enhancement, and control, of land use and development on all designated river areas in New York State, excluding those on private lands within the Adirondack Park. Segments of rivers on private land such as Christine Falls are subject to separate provisions pertaining only to lands within the Adirondack park (9 NYCRR Part 577). The Project site currently provides significant access to recreational activities (hiking, fishing, camping and hunting, to name the most popular), we do not expect the continuous operation of the project to impact in any way, recreational activities in the area.

§ 5.6 (d)(3)(ix) – Aesthetic Resources. A description of the visual characteristics of the lands and waters affected by the project. Components of this description include a description of the dam, natural water features, and other scenic attractions of the project and surrounding vicinity. Potential Applicants are encouraged to supplement the text description with visual aids.

(Supplemental)
After its confluence with Kunjamuk River, the Sacandaga River flows through a narrow river valley between Burnham and Pine Mountains and falls 740 feet between Lake Pleasant and lake Algonquin, a 15 mile stretch. The river is particularly steep in the area of Christine Falls where it falls 100 feet in elevation within 3,000 horizontal feet. The narrow valley and steep terrain result in a series of rapids and cascades. In high water, the water is a torrent, roaring down the valley to the confluence of the river with the east branch of the Sacandaga, 2 miles downstream of Christine Falls. It is an attractive white water reach of river and is framed by the mature stands of pines and maples. The main access to the river and the primary vista of the river lies several hundred yards downstream of the project at a NYSDEC maintained picnic area.

The wilderness nature of the site is somewhat abated by the proximity of Route 8 on both sides of the river: old Route 8 to the northeast, and the larger, new Route 8 to the southwest. At Christine Falls itself, inaccessible from the west and accessible only after a walk of several hundred yards from the east, the

closeness of the trees, the ruins of the old hydropower development, and the riparian vegetarian of the former floodplain detract from the attractiveness of the proposed site. Nonetheless, the site is endowed with the sense of remoteness and untamed beauty that is characteristic of wilderness areas. At the powerhouse, the upstream and particularly downstream view of the white water on the river is attractive. In compliance with our license, the applicant has been maintained a minimum flow of 10 cfs in the river at all times, to preserve the aesthetic integrity of the site.

We do not expect the continuous operation of the site as a run-of-river to negatively affect the aesthetic nature of the area.

§ 5.6 (d)(3)(x) - Cultural Resources. A description of the known cultural or historical resources of the proposed project and surrounding area. Components of this description include:

(A) Identification of any historic or archaeological site in the proposed project vicinity, with particular emphasis on sites or properties either listed in, or recommended by the State Historic Preservation Officer or Tribal Historic Preservation Officer for inclusion in, the National Register of Historic Places

(B) Existing discovery measures, such as surveys, inventories, and limited subsurface testing work, for the purpose of locating, identifying, and assessing the significance of historic and archaeological resources that have been undertaken within or adjacent to the project boundary

(C) Identification of Indian tribes that may attach religious and cultural significance to historic properties within the project boundary or in the project vicinity; as well as available information on Indian traditional cultural and religious properties, whether on or off of any Federally-recognized Indian reservation. Do not disclose any information that would create a risk of harm, theft, or destruction of archeological or Native American cultural resources or to the site at which the resources are located, or would violate any Federal law, including the Archaeological Resources Protection Act and the National Historic Preservation Act.

Christine Falls was named after Christine daughter of successful New York lawyer, John Hill. Hill owned one of the first camps on nearby Lake Pleasant, which is located some 3 miles to the southwest. Lake Pleasant was quite popular during the 1920's as *a* resort area, and names like Camp Agaming, Sacandaga Camp, and Camp of the Woods mark the early campsites. Today, the lake is as popular as ever, as evidenced by the cottages and camps that line the northern shoreline.

The Falls were first developed for hydroelectric power generation around 1927, after the town of Wells granted permission to the Village of Speculator to construct a dam, penstock and powerhouse. On July 12, 1927, the Lake Pleasant Power and Light Corporation was formed. The powerplant was a success, and requests were accepted to sell power to several communities outside of Speculator. In 1931, New York Power and Light Corporation extended their service to the Lake Pleasant area and offered to purchase the facilities at lake Pleasant. The facility was eventually sold for $90,000. The facility vas subsequently operated by the Niagara Mohawk Power Corporation before being retired in January 1953.

The current Project is a restoration of the abandoned dam similar to the original development. There is no other development in the vicinity of the falls. Much of the preceding information was obtained through communication with Ted Aber, former Hamilton County Historian.[11]Consultation with the Hamilton County Historian revealed no historical or archaeological sites in the Project vicinity. Further, as discussed There are no listings in the National Register of Historic Places for the Town of Wells, the village of Speculator and Hamilton County.

11 Communication established in 1981 between previous owner and Mr. Aber.

As previously discussed, consultation (by the previous owner[12]) with the State Historic Preservation Officer (SHPO) at the New York State Department, Division of Historic Preservation, concluded with no determination of historical and archeological resources of significance.

§ 5.6 (d)(3)(xi) - Socio-economic Resources. A general description of socio-economic conditions in the vicinity of the project. Components of this description include general land use patterns (e.g., urban, agricultural, forested), population patterns, and sources of employment in the project vicinity.

(Supplemental)
The Project is located in a sparsely populated rural area. We could assume that the use of the land is limited to conservation, forestry and recreation. Nevertheless, we believe the continuous enablement of recreational activities around the site is ground for sustained economic activities in the village of speculator and neighboring towns.

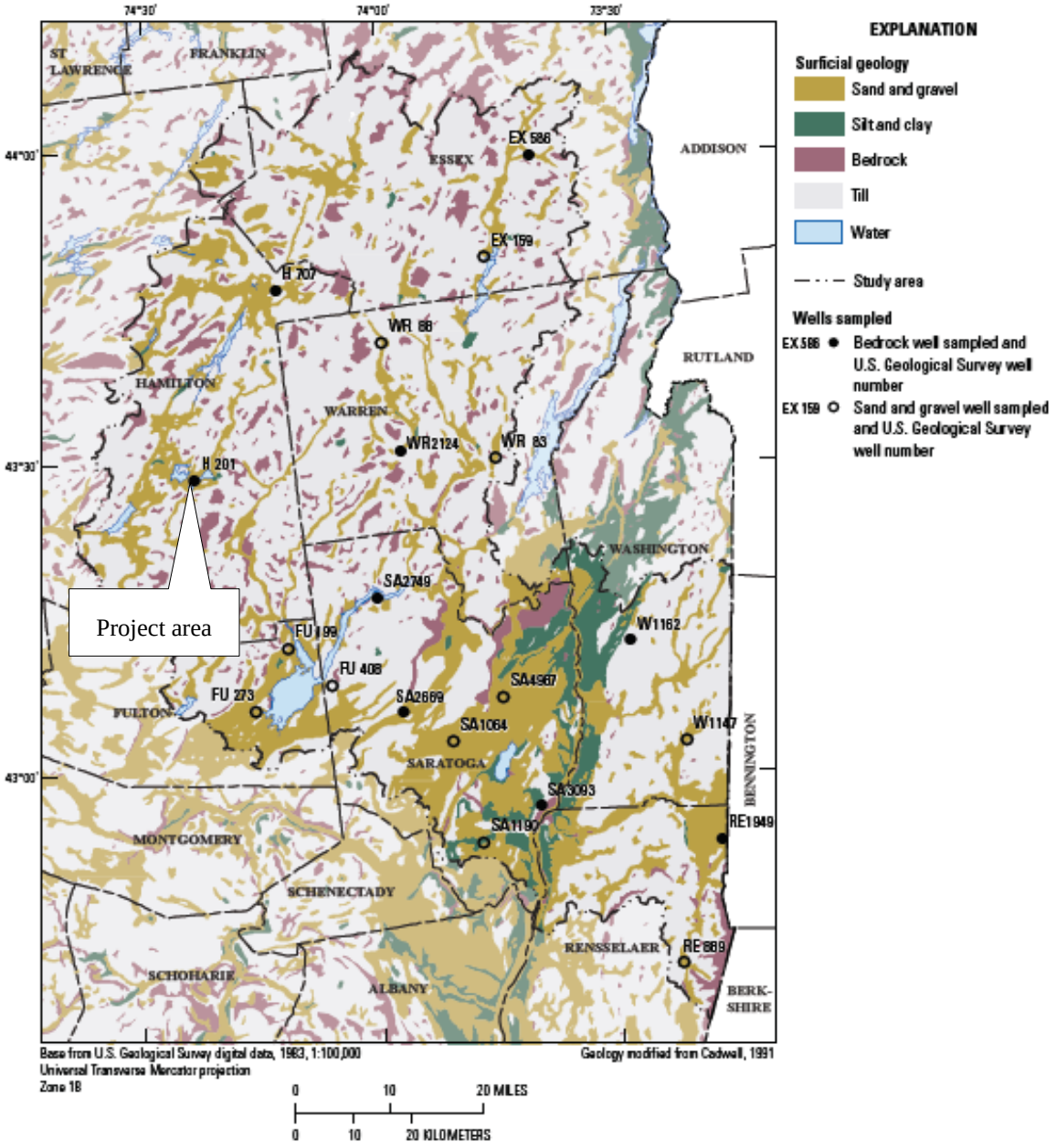
§ 5.6 (d)(3)(xiii) – River Basin Description. A general description of the river basin or sub-basin, as appropriate, in which the proposed project is located, including information on:

(A) Area of river basin and sub-basin and length of stream reaches
(B) Major land and water use in project area
(C) All dams and diversion structures in the basin or sub-basin, regardless of function
(D) Tributary rivers and streams, the resources of which are or may be affected by project operations

(Supplemental)
As demonstrated in Figure 11, surficial geology around the project site is mainly composed of sand and gravel with traces of silt and clay.[13] The bedrock geology is largely composed of crystalline as illustrated in Figure 12.

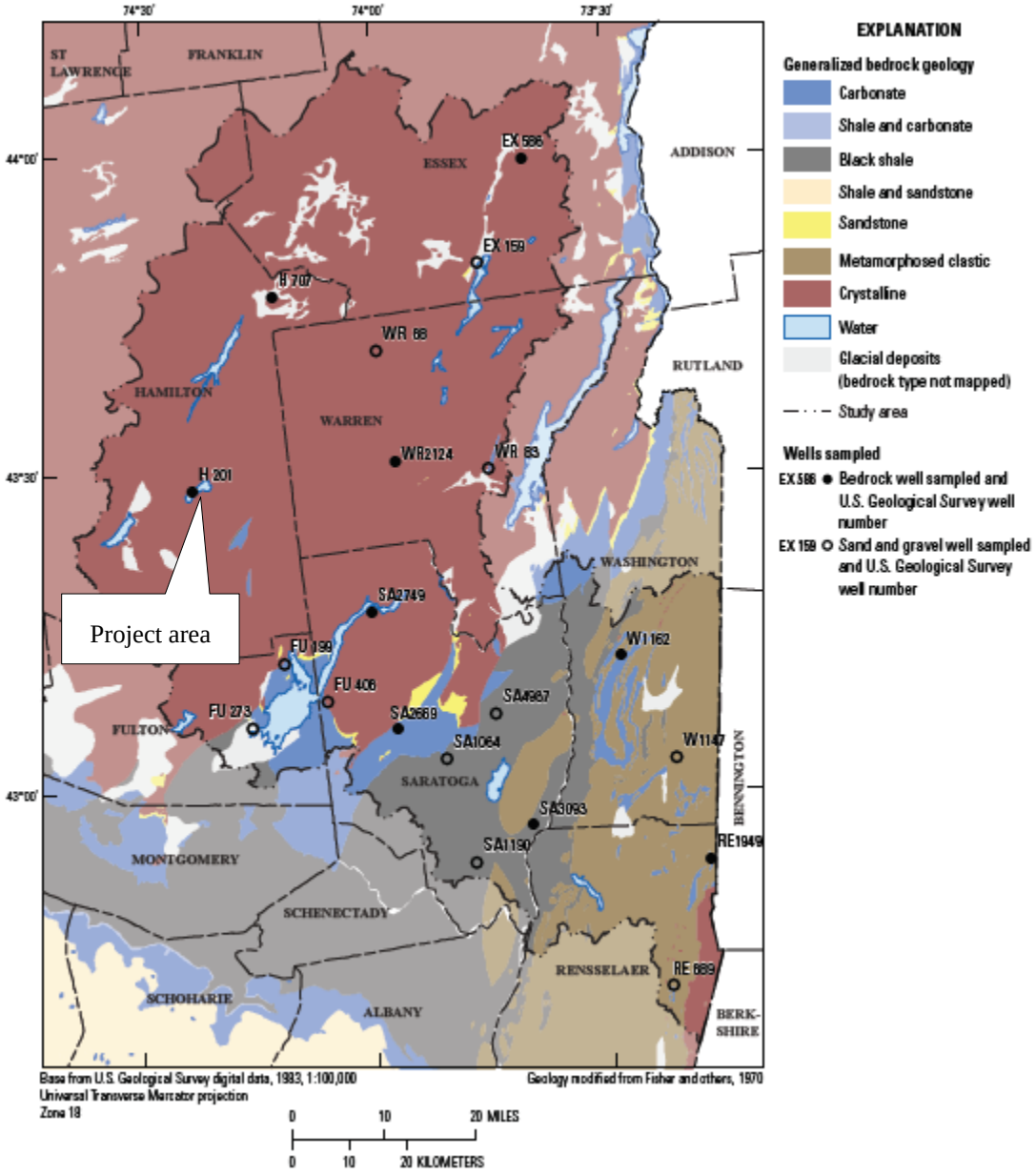
12 As documented in original application (1981)

Figure 11. Generalized surficial geology of the Upper Hudson River Basin, New York, and locations of wells sampled in 2012.



Source: Groundwater Quality in the Upper Hudson River Basin, New York, 2012

Figure 12. Generalized bedrock geology of the Upper Hudson River basin, NY



Source: Groundwater Quality in the Upper Hudson River Basin, New York, 2012

Exhibit D – Upper Sacandaga River Upper watershed

Exhibit E – Project lands and boundaries

Exhibit F– Ground water quality

Exhibit G– IPaC_Resources

Exhibit H– Letter from FWS

Exhibit I– WQC

Exhibit J– Upper Branch Scorecard

Exhibit K– 1983 FERC License

Exhibit L– Instream Flow Studies

Exhibit M– Fish surveys