



28 September 2020

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20426.0002

Re: Preliminary Permit Application
New Cumberland Locks and Dam Hydroelectric Project

Dear Secretary Bose,

On behalf of Current Hydro Project 19, LLC, please find enclosed a completed preliminary permit application for the New Cumberland Locks and Dam Hydroelectric Project. Current Hydro created the application document according to 18 CFR Section 4.32 of the Commission's regulations.

If you should have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

Joel Herm, CEO

joel@currenthydro.com
917.244.3607



New Cumberland Locks and Dam Hydroelectric Project

Application for Preliminary Permit
Before the Federal Energy Regulatory Commission

Submitted to Federal Energy Regulatory Commission
888 First Street, NE, Washington, D.C. 20426

Prepared by Current Hydro LLC

Applicant Current Hydro Project 19, LLC
Post Office Box 224, Rhinebeck NY, 12572

Date September 28, 2020

SECTION 4.32 (A) VERIFICATION STATEMENT

This Application for Preliminary Permit is executed in the State of New York, County of Dutchess, by:

Joel Herm, Principal
Current Hydro Project 19, LLC
Post Office Box 224
Rhinebeck NY, 12572

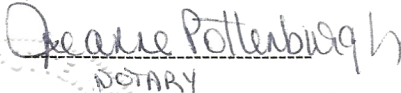
being duly sworn, depose(s) and say(s) that the contents of this application are true to the best of (his or her) knowledge or belief.

The undersigned applicant has signed the Application this 28th day of September 2020.



Joel Herm, CEO
Current Hydro Project 19, LLC

On this 28th day of September 2020, I certify that Joel Herm before me, the undersigned Notary Public, personally appeared, proved to me through satisfactory evidence of identification, which was a New York Driver's License, to be the person whose name appears on the attached document in my presence.



NOTARY
JEANNE POTTENBURGH
Notary Public, State of New York
Reg. #01PO5020151
Residing in Dutchess County
My Commission Expires Nov. 8, 2021

SECTION 4.81 (A) INITIAL STATEMENT

(1) Statement of Application

Current Hydro Project 19, LLC applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed New Cumberland Locks and Dam Hydroelectric Project, as described in the attached exhibits. The Applicant may secure and maintain priority of licensing for the project under Part 1 of the Federal Power Act while obtaining the data and performing the required actions to determine the project's feasibility and support an application for the license.

(2) The location of the proposed project is:

State: Ohio and West Virginia
County: Jefferson County, OH and Hancock County, WV
Nearby Town: Stratton, OH and New Cumberland, WV
Body of Water: Ohio River

(3) The exact name, business address, and telephone number of the Applicant are:

Current Hydro Project 19, LLC
Post Office Box 224, Rhinebeck NY, 12572
Phone: 917-244-3607

The exact name, address, and telephone number of persons authorized to act as agent for the Applicant in this application are:

Joel Herm, Current Hydro, LLC / Joel@currenthydro.com
Jan Borchert, Current Hydro, LLC / Jan@currenthydro.com

both at
Current Hydro, LLC
Post Office Box 224
Rhinebeck NY, 12572
Phone: 917-244-3607

(4) Preference under Section 7(a) of the Federal Power Act

Current Hydro Project 19, LLC is a domestic limited liability company and does not claim a preference under section 7(a) of the Federal Power Act.

(5) Term of Permit

The proposed term of the requested permit is 48 months.

(6) Existing Dams or Other Project Facilities

The project will use the existing New Cumberland Locks and Dam structure, located on the Ohio River, approximately two miles upstream of New Cumberland, West Virginia, in Stratton, Ohio. The project facilities are owned and operated by the U.S. Army Corps of Engineers (USACE) Pittsburgh District. The address for both the district and local offices are:

U.S. Army Corps of Engineers
Pittsburgh District
2200 William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Corps of Engineers, New Cumberland Locks and Dam
P.O. Box 159
Stratton, OH 43961-0159

SECTION 4.32 (A) INFORMATION

(1) Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

Current Hydro Project 19, LLC is the only entity that intends to obtain proprietary rights necessary to construct, operate, or maintain the proposed project. It will maintain those rights for the 48-month permit term.

(2) (i) Identify: Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located:

Jefferson County, Ohio
Jefferson County Clerk
301 Market Street
Steubenville, OH 43952-2133
(740) 283-4111

Hancock County, West Virginia
Hancock County Clerk
P.O. Box 367
New Cumberland, WV 26047-0367
(304) 564-3311

(2) (ii) (A) Identify: Every city, town, or similar local political subdivision: In which any part of the project, and any Federal facilities that would be used by the project, would be located:

Stratton, Ohio
136 2nd Avenue
Stratton, OH 43961
(740) 537-1534

New Cumberland, West Virginia
New Cumberland City Building
104 N Court Street
New Cumberland, WV 26047
(304) 564-3383

(2) (ii) (B) Identify: Every city, town, or similar local political subdivision: That has a population of 5,000 or more people located within 15 miles of the project dam:

East Liverpool, Ohio

East Liverpool Chamber of Commerce
529 Market Street
East Liverpool, OH 43920
(330)385-0845

Steubenville, Ohio

Steubenville City Council
123 South 3rd Street
Steubenville, OH 43952
(740) 283-6000 Ext. 2100

Toronto, Ohio

Toronto Area Chamber
214 Main Street
Toronto, OH 43964
(740) 537-4355

Weirton, West Virginia

City of Weirton
200 Municipal Plaza
Weirton, WV 26062
(304) 797-8500

(2) (iii) Identify: Every irrigation district, drainage district, or similar special purpose political subdivision:

There are no irrigation districts, drainage districts, or similar special-purpose political subdivisions in any part of the project or any Federal facilities that would be used by the project, nor any that own, operate, maintain, or use any project facilities, or any Federal facilities, that would be used by the project.

(2) (iv) Identify: Every other political subdivision in the general area of the project that there is a reason to believe would likely be interested in, or affected by, the application:

Ohio Senators:

Senator Robert Portman

338 Russell Senate Office Building
Washington, DC 20510

Senator Sherrod Brown

713 Hart Senate Office Building
Washington, DC 20510

West Virginia Senators:

Senator Shelley Wellons Moore Capito

172 Russell Senate Office Building
Washington, DC 20510

Senator Joe Manchin III

303 Hart Senate Office Building
Washington, DC 20510

(2) (v) Identify: All Indian Tribes that may be affected by the project:

The applicant has identified the following Indian Tribes that may potentially have an interest or be affected by the project using publicly available information and data contained in the FERC eLibrary:

Bureau of Indian Affairs

1849 C Street N.W., MS 2624 MIB
Washington DC 20240

Little Traverse Bay Bands of Odawa Indians

Tribal Historic Preservation Officer
7500 Odawa Circle
Harbor Springs, MI 49740

Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee OK 74801

Catawba Indian Nation
Catawba Cultural Preservation Officer
611 East Main Street
Rock Hill, SC 29730

Cherokee Nation
Cultural Resource Specialist
P.O. Box 948
Tahlequah, OK 74465

Delaware Nation
Kerry Holton, President
170 North East Barbara
Bartlesville, OK 74006

Delaware Tribe of Indians
Chief, Chet Brooks
170 North East Barbara
Bartlesville, OK 74006

Eastern Band of Cherokee Indians
P.O. Box 455
Qualla Boundary
Cherokee, NC 28719

Eastern Shawnee Tribe of Oklahoma
Tribal Historic Preservations Officer
P.O. Box 350
Seneca, MO 64865

Seneca-Cayuga Tribe of Oklahoma
Chief
P.O. Box 1283
Miami, OK 74355

Shawnee Tribe
Tribal Historic Preservation Officer
P.O. Box 189
Miami, OK 74354

Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
Chairperson
P.O. Box 218
Dorr, MI 49323

Miami Tribe of Oklahoma
Tribal Historic Preservation Officer
P.O. Box 1326
Miami, OK 74355-1326

Nottawaseppi Huron Potawatomi
Tribal Environmental Director
2221 One Half Mile Road
Fulton, MI 49025

Ottawa Tribe of Oklahoma
P.O. Box 110
Miami, OK 74355

Pokagon Band of Potawatomi Indians
Chairperson
P.O. Box 180
Dowagiac, MI 49047

Prairie Band of Potawatomi Nation
Steve Ortiz, Chairman
16281 Q Road
Mayetta, KS 66509-8970

Sac and Fox Nation of Missouri
305 N. Main Street
Reserve, KS 66434

Sac and Fox Nation of Oklahoma
Rt 2, Box 246
Stroud, OK 74079

Sac and Fox Tribe of the Mississippi in Iowa
Chairman
349 Meskwaki Road
Tama, IA 52339-9629

Tuscarora Nation

Chief
2006 Mt. Hope Road
Lewistown, NY 14092

United Keetoowah Band of Cherokee Indians

Chief
P.O. Box 189
Parkhill, OK 74451

Hannahville Indian Community

Kenneth Meshiguad, Chairperson
N14911 Hannahville B1 Road
Wilson, MI 49896-9728

Kickapoo Tribe in Kansas

Chairman
P.O. Box 271
Horton, KS 66439

Kickapoo Tribe of Oklahoma

Chairman
P.O. Box 70
McCloud, OK 74851-0070

Little River Band of Ottawa Indians

Tribal Historic Preservation Officer
375 River Street
Manistee, MI 49660

Saginaw Chippewa Indian Tribe of Michigan

Chief
7070 East Broadway Road
Mt. Pleasant, MI 48858

Santee Sioux Tribal Council

Chairman
108 Spirit Lake Avenue
West Niobrara, NE 68760

Seneca Nation of Indians

Tribal Historic Preservation Officer
P.O. Box 231
Salamanca, NY 14779

Tonawanda Band of Seneca

Chief
7027 Meadville Road
Basom, NY 14013

Wyandotte Tribe of Oklahoma

Chief
64700 E. Highway 60
Wyandotte, OK 74370

Peoria Tribe of Indians of Oklahoma

John P. Froman, Chief
P.O. Box 1527
Miami, OK 74355-1527

SECTION 4.81 (B) EXHIBIT 1 – GENERAL DESCRIPTION

(1) General Configuration and Information

The proposed project will be located at the New Cumberland Locks and Dam on the Ohio River at river mile 54.4, which is boarded by Jefferson County, Ohio, and Hancock County, West Virginia. The Project will utilize the United States Army Corps of Engineers (USACE) locks and dam. USACE commissioned the facility in 1959. The Ohio River navigation system, operated by the USACE, currently has six locks and dams that create a stepped pool channel.

The existing New Cumberland Locks and Dam (the dam) is of reinforced concrete construction, with a gated dam and two navigational locks. The following table presents its primary physical elements:

New Cumberland Locks and Dam	
Year Placed Into Operation	1959
Location	Stratton, OH
Water Body Ohio River	Ohio River
Latitude	40° 31'41.57 "N
Longitude	80° 37'32.67 "W
Structural Height	64 feet
Gates	11 - Tainter
Gate Dimensions	110 by 21.5 feet
Main Lock Dimensions	(1) 110 by 1,200 feet
Auxiliary Lock Dimensions	(1) 110 feet by 600 feet
Overall Length	1,315 feet
Storage Capacity	74,000 acre-feet

There are no existing hydroelectric facilities at the proposed project site.

The site's proposed development involves constructing a new 21.1 MW hydropower facility at the eastern end (West Virginia side) of the dam. The Project will consist of the following major elements:

Existing Dam – The existing USACE facility consists of two operational locks and a reinforced concrete dam with eleven (11) Tainter Gates, as described in the table above. This type of spillway permits increased control over the water level in the dam's navigation pool upriver. The upstream pool is maintained at a relatively constant level for an authorized depth of at least 9 feet throughout its length by raising and lowering the. However, dam operations do not control flood flows.

Existing Locks – The site utilizes two operational locks. The primary lock is 1,200 feet long and 110 feet wide, and the auxiliary lock is 600 feet long and 110 feet wide. The walls and floors of the locks are of reinforced concrete construction. Located at each end of the locks chambers are two miter gates. A central control building containing office space, electrical controls, and other equipment related to the locks and dam's operation is adjacent to the primary lock.

Intake – A new forebay will be located immediately downstream of the existing dam and will convey flow from the two most eastern gates to the powerhouse. The forebay/intake with reinforced concrete walls and unlined floor will measure approximately 250 feet wide by 150 feet long in plan.

Powerhouse – A new reinforced concrete powerhouse, 250 feet by 170 feet in plan, will be constructed downstream of the new forebay along the left bank facing downstream. The powerhouse will contain the turbine-generators, switchgear, controls, ancillary systems, and shop and storage space.

Tailrace Area – The new tailrace will assist conveying water exiting the powerhouse back into the river downstream. The approximate 300-foot wide by 300-foot long tailrace area will be an unlined excavation with stone riprap placed in higher velocity areas to prevent scour and erosion where necessary. Construction teams will lay back, or install concrete retaining walls, to transition the channel to existing shoreline grades to prevent scour or interfere with adjacent site features.

Retaining Wall – A new concrete retaining wall totaling approximately 300 feet in length will be constructed downstream of the powerhouse to protect the bank from erosion and scour.

Turbine-Generators – Four (4) identical pit turbine-generators, each rated at 5.275 MW, will be installed in the new powerhouse for a total Project installed capacity of 21.1 MW.

Substation – A three-phase step-up transformer will be located in a new substation and adjacent to the powerhouse. The new substation will be 60 feet wide by 60 feet long. The substation will also contain high side and low side disconnects and will be surrounded by a containment dike and a security fence.

Access Roads – Powerhouse access will be provided by extending an existing road branching from Highway 2 by about 1,200 LF.

Transmission Line – See (3) for a description of the proposed transmission line.

(2) Reservoirs

The New Cumberland Locks and Dam form an impoundment pool that spans river miles 54.4 through 31.7 on the Ohio River for an approximate total of 22.7 miles. This pool extends from the New Cumberland Locks and Dam in Stratton, Ohio, upstream to the Montgomery Locks and Dam near Beaver, Pennsylvania. At a normal pool elevation of 664.5 feet MSL, the impoundment's surface area is approximately 3,646 acres with a maximum storage capacity of 74,000 acre-feet.

The reservoir is typically referred to as a navigational pool. The dam and its associated pool are controlled and operated by the USACE, Pittsburg District. The Project operator will employ a run-of-river mode to maintain the navigation channel at all times. There is no available storage capacity to be used for hydro generation purposes with this operational regime.

(3) Transmission Lines

The applicant has identified existing transmission infrastructure in the proposed project area. The applicant will evaluate these during the permit period through field investigations and discussions with the local utility. The project will most probably utilize a single overhead three-phase, 36.7kV line, which

is approximately 0.3 miles in length, extending from the substation to the proposed interconnection point just north of the project.

(4) Energy and Capacity

Four (4) horizontal pit turbine-generators, each with an installed nameplate capacity of 5.275 MW, will be used at the project for a total installed capacity of 21.1 MW. The estimated average annual energy production is 151 GWh. The hydraulic head used for estimating capacity and energy output is 19.1 feet. The project will use newly manufactured turbines and generators.

(5) Lands within the United States

The New Cumberland Locks and Dam Hydroelectric Project is partially located on Federal property controlled by the USACE. The majority of the project will be situated in the New Cumberland Locks and Dam property bounds. Lands of the United States, included in the project boundary, have been identified on a completed land description form (FERC Form 587) attached to this filing.

The applicant will send a copy of the form to the Bureau of Land Management state office:

BLM Eastern States State Office
20 M Street S.E., Suite 950
Washington, DC 20003

(6) Development, Conservation, and Utilization of Water Resource

New Cumberland Locks and Dam Hydroelectric Project involves the environmentally responsible, low impact development and utilization of a currently unused renewable energy source that will provide a clean source of electrical energy to help meet the region's energy capacity needs. The project design will provide baseload energy generation; a valuable asset providing reliable renewable energy.

SECTION 4.81 (C) EXHIBIT 2 – DESCRIPTION OF STUDIES

Upon issuance of a Preliminary Permit, the applicant proposes to conduct detailed studies to determine the ultimate feasibility of the project and potentially support the preparation of a License application, as detailed below.

In preparation for this application, the applicant has reviewed and considered past filings and public documents related to the New Cumberland Locks and Dam and included some aspects within this filing.

(1) (i) General Description of Proposed Studies

- a. Information Review:** The applicant will compile and review publicly available general information. This effort will include engineering and "as-built" records from the original construction of the existing dam, local survey data, utility distribution and transmission data, and materials submitted to FERC from earlier development initiatives. The applicant will also review existing studies and

surveys concerning the dam structure, the upstream pool, and the waterway's reach.

b. Hydrologic Studies: Publicly available USGS and USACE gaging station record data will be used to develop detailed daily streamflow forecasts at the project site. USACE operational information for the gates will be incorporated to determine actual flows available for generation. Historic USACE data records for upper and lower pool elevations and field data will be gathered and used to develop head data for the proposed turbine location. The applicant will use a combination of flow and stage data to model hydraulics and support energy production calculations.

c. Develop and Review Alternatives: Project layout and sizing alternatives will be developed and evaluated to minimize environmental impacts, maximize financial project viability, and otherwise select the optimal project to ensure the best possible use of resources.

d. Preliminary Engineering and Design: The applicant will incorporate information generated in prior studies into an optimized design suitable for a definitive estimate of project cost and feasibility.

e. Energy Generation and Cost Estimates: The flow and head data created in Task (b) coupled with the selected project design alternatives from Tasks (c) and (d) will allow modeling of project energy generation. The applicant team will determine the daily forecast energy generation with typical, wet, and dry year-generation estimates. Initial budgetary development and construction costs will be developed. The applicant will define a permitting and construction schedule.

f. Feasibility Analysis: The previous work will be compiled into a final feasibility analysis and data gathered on then-current and forecast wholesale power prices, financing costs, and O&M costs to determine the economic feasibility of the project. If the feasibility analysis result is positive, activities g-j will occur during the remaining preliminary permit term to support the Licensing and development of the project.

g. Informal Stakeholder Consultation and Discussions

h. Develop a Notice of Intent (NOI)

i. Develop Pre-Application Document (PAD)

j. Begin Scoping Activities

It is anticipated tasks (a) through (f) will be completed within 15 months of the permit issuance. Tasks (g) through (j), if undertaken, will be performed during the remaining permit term.

(1) (ii) General Description of New Road Construction

Access for all field surveys will be via existing roads. No new roads are required to conduct the above studies.

(2) Work Plan for New Dam Construction

The proposed project is located at the existing New Cumberland Locks and Dam and will not require new dam construction.

(3) Waiver

The Applicant is not proposing to construct a new dam and requests that the Commission waives the requirements of paragraph (c)(2).

(4) (i) Statement of Estimated Costs:

The applicant estimates the total cost for completing tasks (a) through (f) at \$100,000. The applicant estimates the cost will not exceed \$750,000 if tasks (g) through (j) are undertaken.

(4) (ii) Statement of Expected Sources of Financing:

The Applicant will finance the studies.

SECTION 4.81 (D) EXHIBIT 3 – MAPS

The attached figures contain maps displaying the relevant project parameters as described:

(1) General Location of Proposed Project

Figure 1 shows the general location of the proposed project on the Ohio River, about 30 miles east of Pittsburgh, PA. The map displays the relevant counties in Hancock County, WV, Jefferson County, OH, and one of the larger cities in the area, Weirton, WV. A more detailed view of the vicinity is in Figure 2.

(2) Project Features

Figures 3 and 4 show the relative locations and physical interrelationships of the principal project features identified in the general description.

(3) Proposed Boundary

Figure 2 shows the proposed project boundary and the relative location of Stratton, OH.

(4) National Wild and Scenic Rivers Systems

No areas in the project vicinity are included (or are known to have been designated for study for inclusion) in the National Wild and Scenic Rivers System. Hence no attached figure/map.

(5) Designated Wilderness Areas

There are no designated wilderness areas within the project boundary, nor are any areas known to be recommended for wilderness designation.

Figure 1 - General Location of Proposed Project

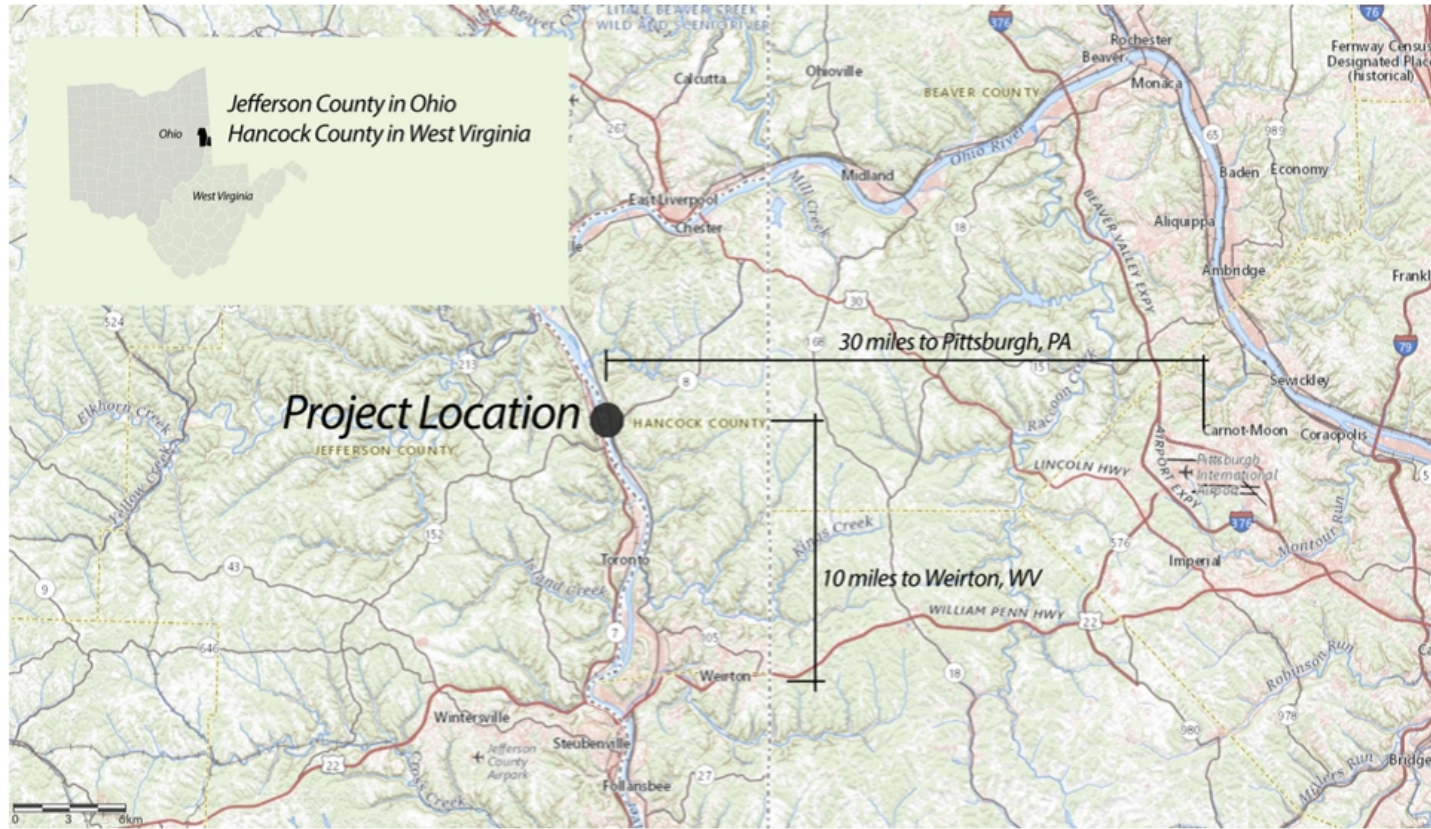


Figure 1 General Location of Proposed Project
New Cumberland Locks and Dam Hydroelectric Project

09/27/20



Figure 3 - Project Features within Boundary

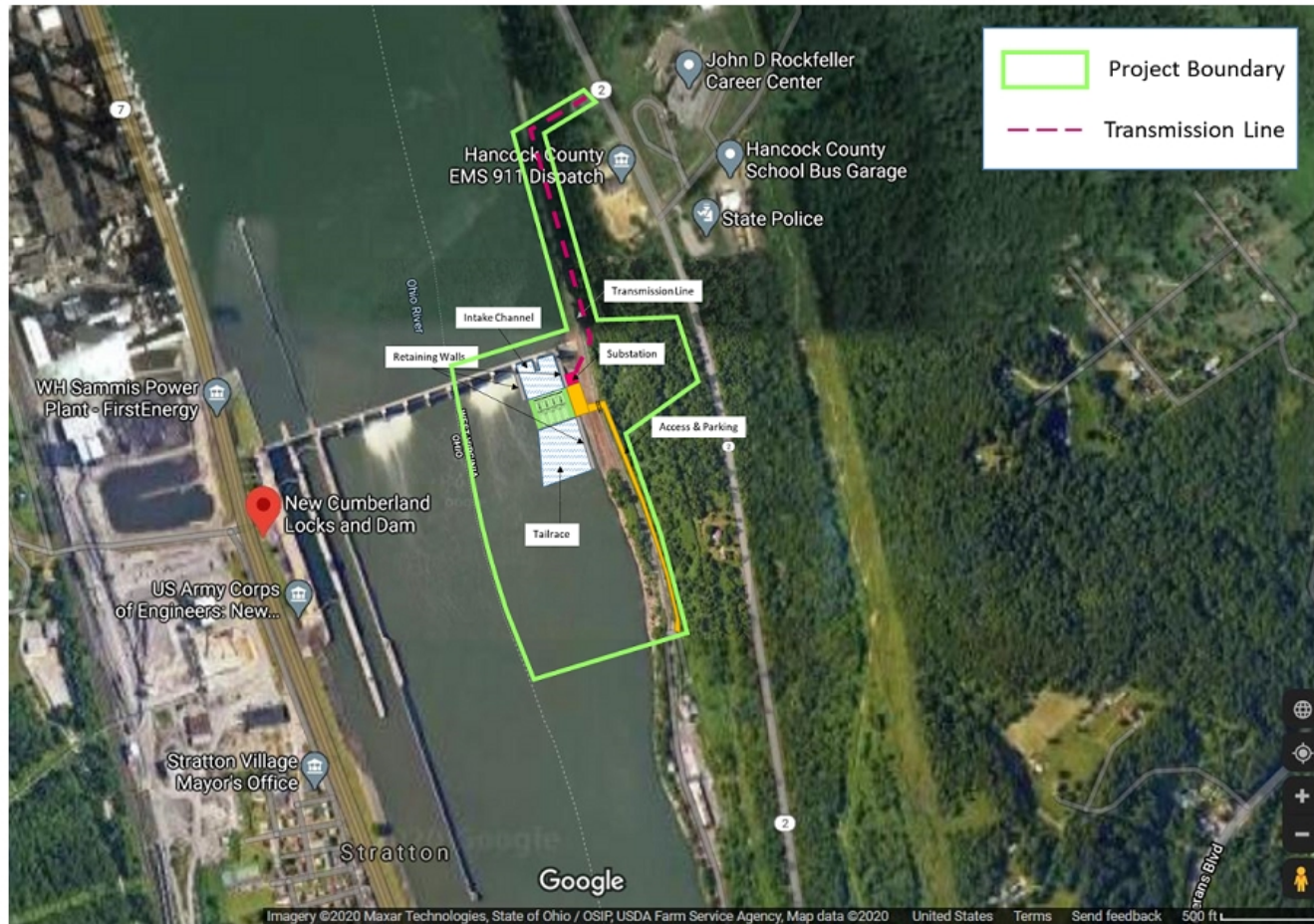


Figure 3 Project Features within Boundary

New Cumberland Locks and Dam Hydroelectric Project

09/27/20



Figure 4 - Project Features Enlarged



Figure 4 Project Features - enlarged

New Cumberland Locks and Dam Hydroelectric Project

09/27/20



LAND DESCRIPTION
Public Land States
(Rectangular Survey System Lands)

1. STATE Ohio 2. FERC PROJECT NO. Not assigned
 3. TOWNSHIP 004 North RANGE 001 West MERIDIAN 38 (Ohio River Base)

4. Check one: Check one:
 License Pending
 Preliminary Permit Issued

If preliminary permit is issued, give expiration date: Not issued yet

5. EXHIBIT SHEET NUMBERS OR LETTERS

Section 6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
				Figures 2,3,4	

6. contact's name Joel Herm
 telephone no. (917.244.3607)

LAND DESCRIPTION

**Non-Public Land States
(and Non-Rectangular Survey System Lands in Public Land States)**

1. STATE West Virginia 2. FERC PROJECT NO. Not assigned

3. FEDERAL RESERVATION: n/a

4. FEDERAL LAND HOLDING AGENCY: Army Corps of Engineers

5. Counties: Hancock

6. Check one:
 License
 Preliminary Permit

Check one:
 Pending
 Issued

If preliminary permit is issued, give expiration date:

Not issued yet

7. Federal Tract(s) Identification

New Cumberland L&D Tract #D-400
(US Fee lands)

8. Exhibit Sheet Number(s) or Letter(s)

Figures 2,3, and 4

9. contact's name Joel Herm

telephone no. (917.244.3607)

date submitted September 25, 2020

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.