

Rockton Hydroelectric Project (P-2373)

Dixon Hydroelectric Project (P-2446)

December 10, 2019



Agenda

1. Welcome and Introductions
2. Review of FERC Traditional Licensing Process and Schedule
3. Overview of the Project Features and Operations
4. Overview of Information Provided in the Pre-Application Document (PAD) and other sources
5. Public Utility Regulatory Policies Act (PURPA) benefits
6. Proposed Resource Studies
7. Next Steps
8. Comments
9. Site visit

Review of Traditional Licensing Process (TLP) and Schedule “Three Stage Process”

➤ TLP First Stage

- Applicant issues NOI, PAD, request to use TLP, and newspaper notice;
- Commission approves use of TLP (within 60 days of filing NOI);
- Applicant conducts joint agency/public meeting and site visit (within 30 to 60 days of TLP Approval/Notice of Commencement);
- Resource Agencies and tribes provide written comments and study requests (no later than 60 days following the meeting); and
- Only if necessary, agencies, tribes or Applicant request dispute resolutions.

Review of FERC TLP Process and Schedule

“Three Stage Process”

➤ TLP Second Stage

- Applicant completes reasonable and necessary studies (usually 1-2 field seasons – spring through fall);
- Applicant provides Draft License Application (DLA) and study results to resource agencies and tribes (usually a few months after the last study season);
- Resource agencies and tribes comment on DLA (no later than 90 days after receipt of DLA); and
- Only if necessary, the Applicant conducts a joint meeting if substantive disagreements exist.

➤ TLP Third Stage

- Applicant files Final License Application with Commission and sends copies to agencies and tribes (no later than 2 years prior to license expiration).

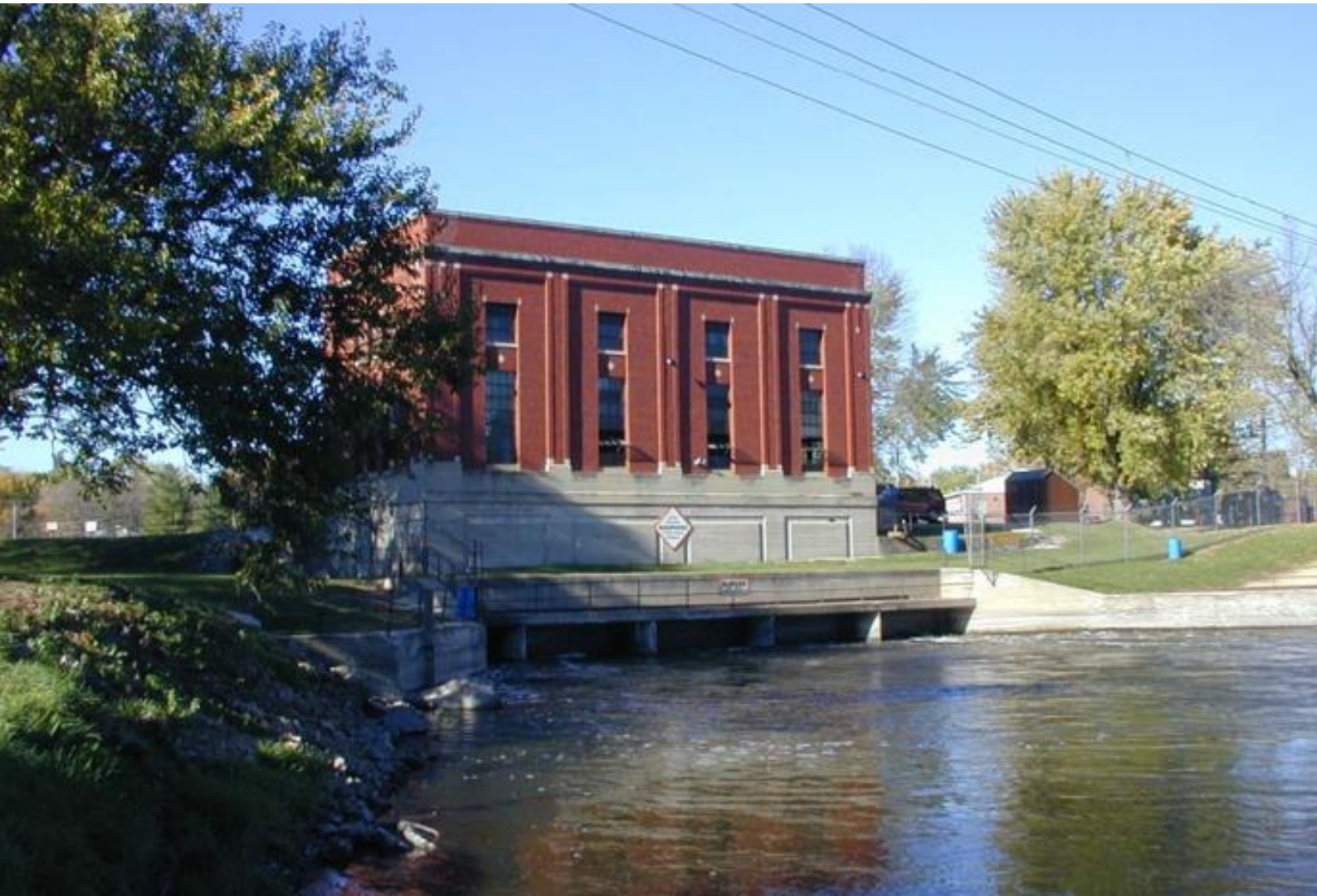
TLP Schedule

TLP Steps	Timelines	Due Date
Initial Activities		
Licensee Submits PAD, NOIs, and TLP Requests	5 years before the license expiration date	8/30/2019
Stakeholders provide comments regarding TLP	Within 30 days after the request	9/29/2019
FERC approval of TLP	Within 60 days after the request	Issued October 16, 2019
Stage 1 Consultation		
Licensee conducts Joint Meeting and site visits with potential stakeholders	30 to 60 days after the TLP approval	12/10/19 & 12/11/19
Stakeholders submit comments on PAD/Study Requests	Comments and study requests due 60 days after Joint Meeting	2/10/2020
Stage 2 Consultation		
Licensee's Study, Year 1	Begins after receipt of study requests	2020
Licensee's Study, Year 2, if necessary	Begins after completion of Study Year 1	2021
Licensee Submits Draft License Application	Begins after completion of Study Year 2 (soft deadline)	3/31/2022
Stakeholders and FERC provide comments on the Draft Application	Within 90-days after receipt of Draft License Application	6/29/2022
Stage 3 Consultation		
Licensee Files Final Application	At least two years prior to license expiration	8/31/2022
FERC issues Public Notice of Application	Within 14 days of FLA submittal	9/14/2022
Current License Expires		8/31/2024

Dams in Rock River Watershed



- 8 State Regulated
- 8 FERC Regulated
 - 4 FERC Licenses
 - Janesville
 - Beloit
 - **Rockton**
 - **Dixon**
 - 4 FERC Exemptions
 - Upper Watertown
 - Lower Watertown
 - Upper Sterling
 - Sears

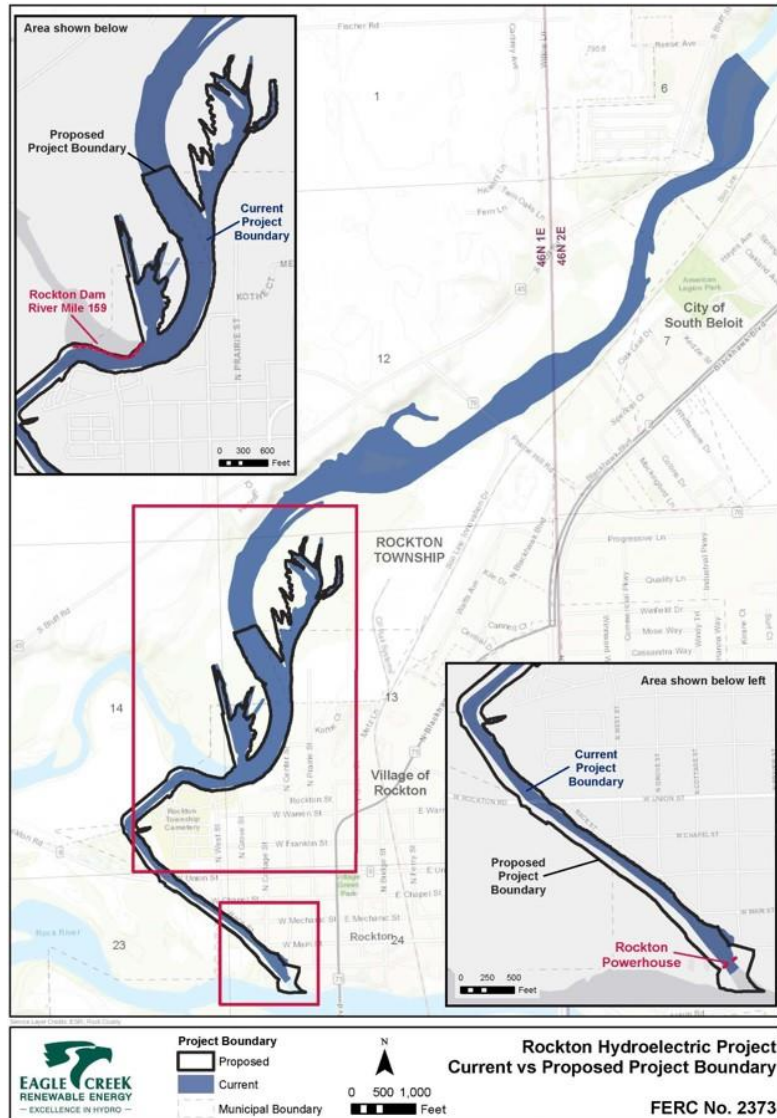


Rockton Hydroelectric Project (P-2373)

Rockton Project Location

- **Rock River**
 - Located in Village and Town of Rockton in Winnebago County, Illinois
 - Rockton dam is approximately at River Mile 159
 - 8th of 16 dams on the Rock River and the 4th hydroelectric project (from downstream)
 - Approximately 4 river miles downstream of Beloit Hydroelectric Project (P-2348)
 - Approximately 22 river miles upstream of the Fordham Dam in Rockford

Proposed Rockton Project Boundary



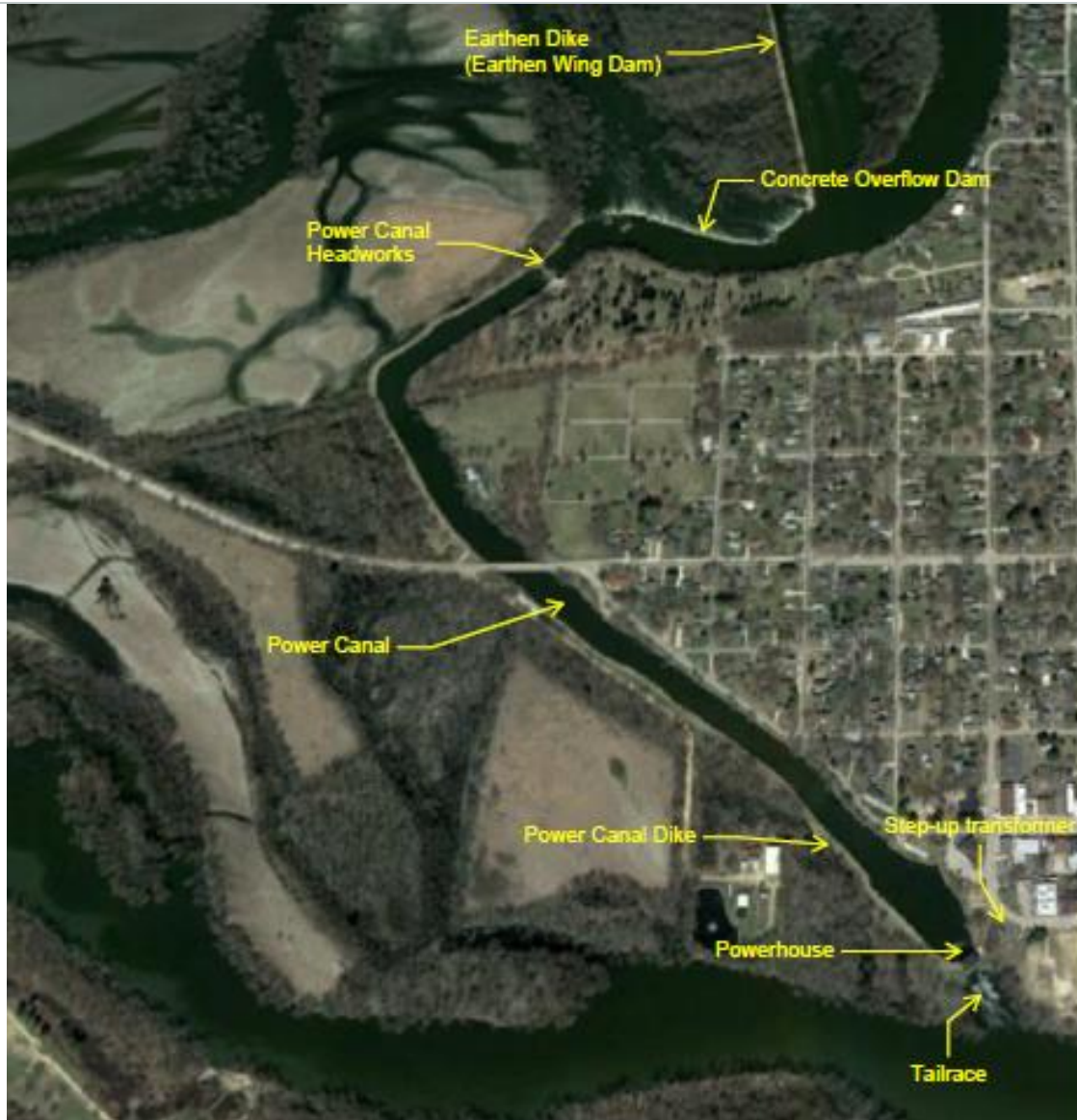
- **Proposed Boundary**
 - Follows elevation contour of 725.48 feet NGVD
- **Exceptions and Changes**
 - Addition of all lands and waters below 725.48-foot contour
 - Removal of lands and waters above 725.48-foot contour
 - Extended to include tailrace, the entire power canal dike, and the downstream bank fishing area

Rockton Project Reservoir



- **Rock River at River Mile 159 (at Dam)**
- **Drainage Area 3,711 square miles**
- **Existing** (as shown in existing Exhibit G maps)
 - 155 acres
 - 1,031 acre-feet of storage
- **Proposed** (at surface elevation of 725.48 ft NGVD)
 - 54 acres
 - 270.5 acre-feet of storage

Rockton Project Primary Features



- Power Canal Headworks (84 ft)
- Concrete Overflow Dam (1,000 ft)
- Earthen Dike/Wing Dam (1,600 ft)
- Power Canal (5,000 ft)
- Power Canal Dike (5,000 ft)
- Powerhouse
- Tailrace
- Step-up transformer

Rockton Project Primary Features (continued)



Rockton Project Overview



- **Licensee-Midwest Hydro LLC**
- **Average Annual Calendar Year River Flow of 2,314 cfs**
- **River flow ranges from 630 cfs to 5,752 cfs**
- **Minimum hydraulic capacity for each turbine is 350 cfs**
- **Maximum capacity for each turbine is 810 cfs**
- **Total Powerhouse hydraulic capacity of 1,620 cfs**

Rockton Project Electrical Equipment



- Unit 1 – 600 kW
- Unit 2 – 500 kW
- Total Plant Capacity – 1,100 kW
- Step-up Transformer (substation)

Rockton Project Operations



- **Run of River**
- **Minimum flow 300 cfs or inflow, whichever is less, to bypassed reach**
- **Reservoir elevation operated at 725.48 feet**
- **At river flows of less than 650 cfs, all flows are released over dam**

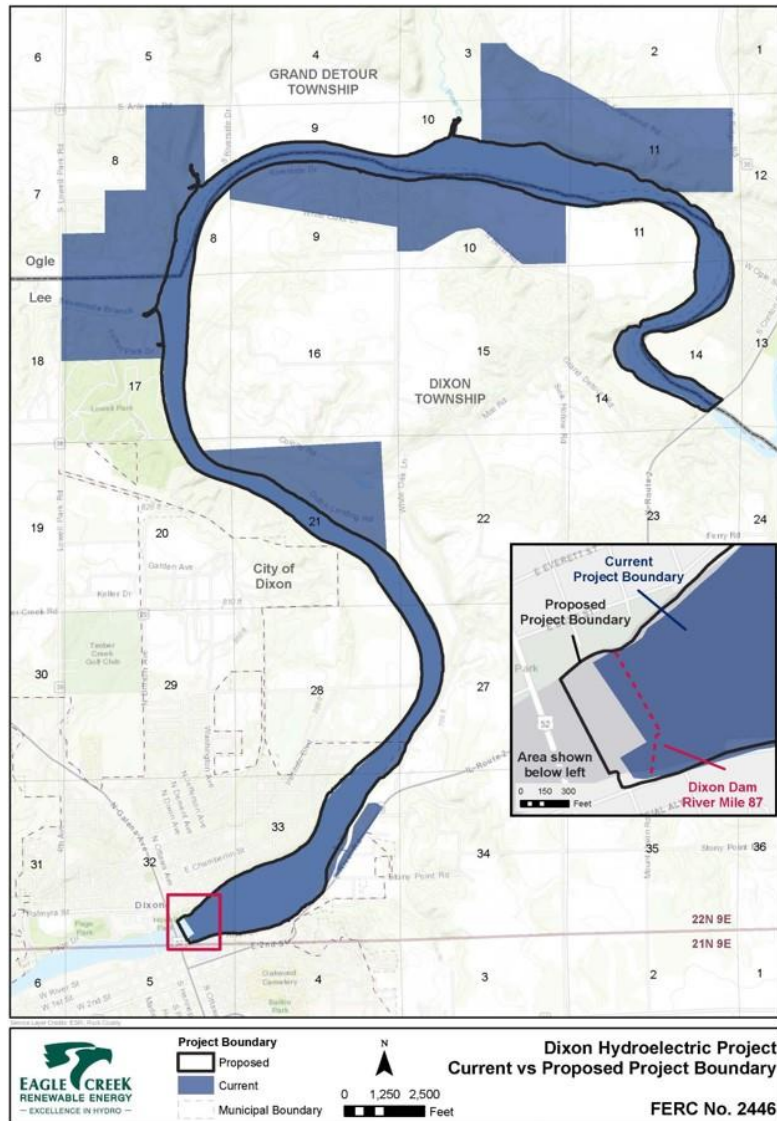


Dixon Hydroelectric Project (P-2446)

Dixon Project Location

- **Rock River**
 - Located in towns of Dixon in Lee County and Grand Detour in Ogle County, Illinois
 - Dixon Dam is approximately at River Mile 87
 - 5th of 16 dams on the Rock River and the 3rd hydroelectric Project (from downstream)
 - Approximately 22 river miles downstream of the Oregon Dam
 - Approximately 13 river miles upstream of the Upper Sterling Hydroelectric Project (P-7004)

Proposed Dixon Project Boundary



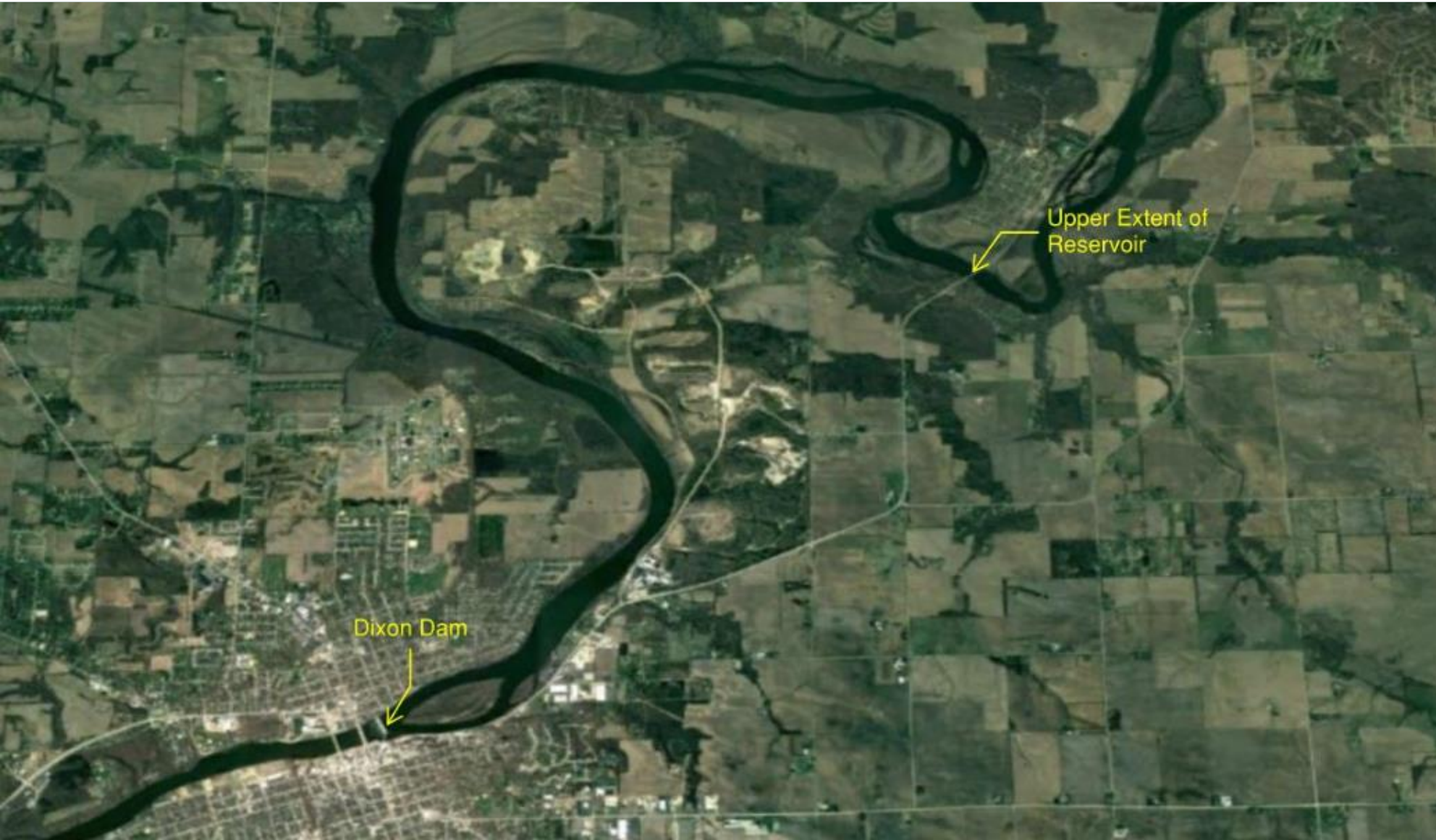
- **Proposed Boundary**

- Follows elevation contour of 647.08 feet NGVD (the normal surface elevation with a one-inch veil of flow over the crest of the dam with flashboards installed)

- **Exceptions and Changes**

- Removal of lands above 647.08-foot contour (1,551.7 acres)
- Extended to include 400-foot buffer downstream of dam

Dixon Project Reservoir



- **Rock River at River Mile 87 (at Dam)**
- **Drainage Area 8,614 square miles**
- **Existing** (as shown in existing Exhibit G maps)
 - 800 acres
 - 4,000 acre-feet of storage
- **Proposed** (at normal surface elevation of 647.08 ft NGVD)
 - 1,057 acres
 - 5,285 acre-feet of storage

Dixon Project Primary Features



- Forebay
- Powerhouse
- Overflow Dam (600 ft)
- Tailrace
- Step-up transformer (substation)

Dixon Project Overview



- **Licensee-STS
Hydropower LLC**
- **Average Annual
Calendar Year River
Flow of 6,007 cfs**
- **River flow ranges
from 2,035 cfs to
13,956 cfs**
- **Each turbine has a
minimum hydraulic
capacity of 800 cfs**
- **Each turbine has a
maximum hydraulic
capacity of 1,100 cfs**
- **Maximum
powerhouse
hydraulic capacity is
5,500 cfs**

Dixon Project Electrical Equipment



- Unit 1 – 640 kW
- Unit 2 – 640 kW
- Unit 3 – 640 kW
- Unit 4 – 640 kW
- Unit 5 – 640 kW
- **Total Plant Capacity – 3,200 kW**
- Step-up transformer in adjacent utility substation

Dixon Project Operations



- **Run of River**
- **Minimum 1-inch veiling flow over spillway (50 cfs or inflow, whichever is less)**
- **Normal reservoir elevation 647.08 feet**



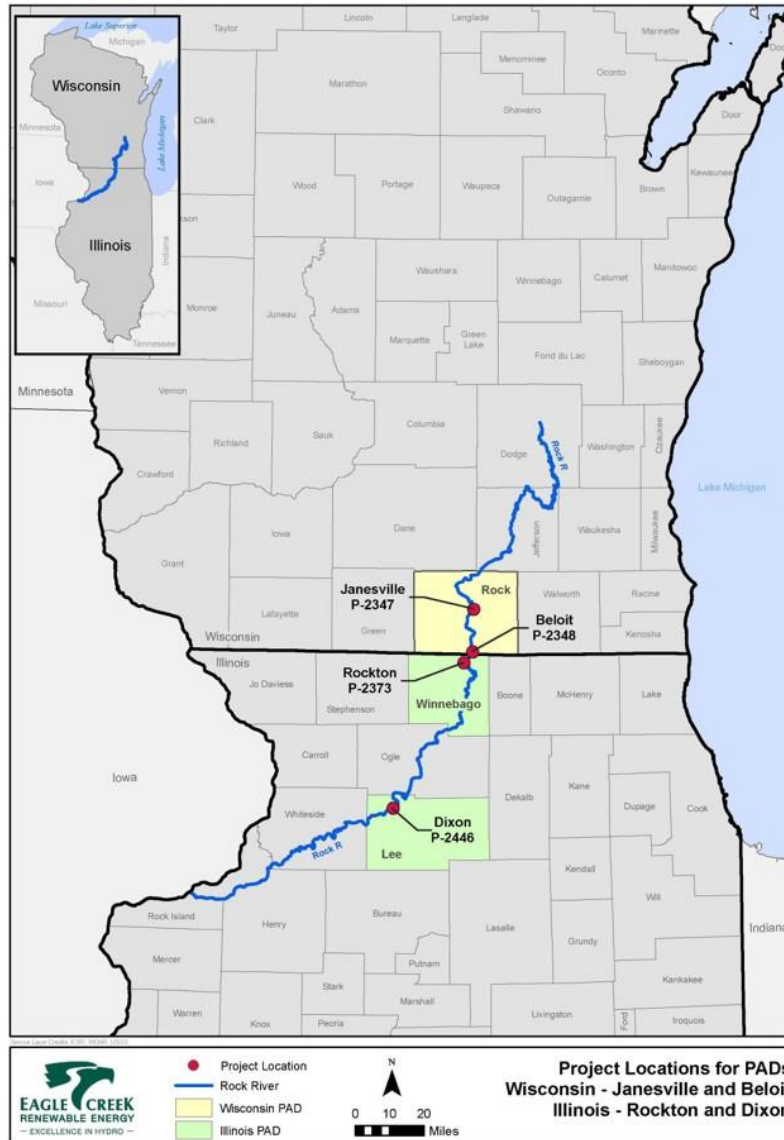
Resource Information

Geology and Soils



- **Mixture of armored and vegetated shorelines**
- **Moderately erodible soils**
- **All Licensee-owned shorelines stabilized**
- **Winnebago County Surface Water Management Ordinance and Lee and Ogle County Floodplain Zoning Ordinances limit ground disturbance**

Water Quality



Rock River Impaired at both Projects (303d list)

- Fish Consumption (both Projects)
 - Mercury
 - PCBs
- Aquatic Life (both Projects)
 - Fecal coliform
 - Other flow regime causes
 - Unknown causes
- Primary Contact (Rockton)
 - Fecal coliform
 - Other flow regime causes
 - Unknown causes

Water Quality (continued)

Water Quality & Testing



Dissolved Oxygen Monitoring

- 1989, 1990, 1996, 1999
- Levels consistently above 6.0 mg/l

Fish and Aquatics



- **Periodic fish surveys from 2003 to 2018**
- **53 fish species identified in Rock River Basin**
 - Spotfin shiner
 - Shorthead redhorse
 - Channel catfish
 - Smallmouth bass
 - Freshwater drum
 - Bullhead minor
 - River carpsucker
 - Common carp
 - Golden redhorse
 - Gizzard shad

2016 Mussel Survey



1. Black Sandshell



2. Elktoe



3. Fragile Papershell



4. Giant Floater



5. Mucket



6. Pimpleback



7. Pistolgrip



8. Plain Pocketbook



9. Round Pigtoe



10. Three-ridge

Botanical Species

- Common Tree Species

- Sugar and silver maple, white and green ash, basswood, black willow, cottonwood and swamp white oak



- Common Wetland Species

- Cattails, bulrushes, common reed and sedges



Wildlife Species

- Common Mammal Species
 - Chipmunk, cottontail rabbit, gray squirrel, raccoon, white-tailed deer, and woodchuck
- Common Bird Species
 - American robin, Canadian goose, great blue heron, mallard, red-tailed hawk, and wood duck
- Common Reptile Species
 - American toad, common gartersnake, eastern box turtle, leopard frog, northern water snake, and western chorus frog



Invasive Species

Early Detection and Distribution Mapping System (EDDS)

- Buckthorn (W,O,L)
- Bush Honeysuckles (W,O,L)
- Japanese Knotweed (W,O,L)
- Multiflora Rose (W,O,L)
- Oriental Bittersweet (O)
- Poison Hemlock (O,L)
- Purple Loosestrife (W,O)



Threatened and Endangered Species

- Information Planning and Conservation (IPaC) Resource List
- Federally Protected Species Likely to Occur in Vicinity of Projects
 - Indiana Bat
 - Northern Long Eared Bat
 - Eastern Fringed Prairie Orchid
 - Prairie Bush Clover



Threatened and Endangered Species (continued)

- Environmental Compliance Assessment Tool (EcoCAT)
- State Protected Fish Species Likely to Occur in Vicinity of the Projects



American Brook Lamprey



Brassy Minnow



Gravel Chub



Iowa Darter



Lake Sturgeon

Threatened and Endangered Species (continued)

- State Protected Animal Species Likely to Occur in Vicinity of the Projects
 - Black Sandshell Mussel
 - Ornate Box Turtle
 - Smooth Softshell Turtle



Threatened and Endangered Species (continued)

- State Protected Plant Species Likely to Occur Within Projects
 - Kitten Tails
 - Meadow Horsetail
 - Yellow Birch



Rockton Project Recreation Resources



Recreation Resources in FERC Project Boundary

- Rockton Canoe Portage (Licensee owned)
- Overflow Dam/Power Canal Bank Fishing (Licensee owned)
- Tailrace Bank Fishing Area (Licensee owned)
 - ADA fishing platform & benches
- Rock River National Water Trail

Rockton Project Recreation Resources (continued)

Other Recreation Resources in Project Vicinity

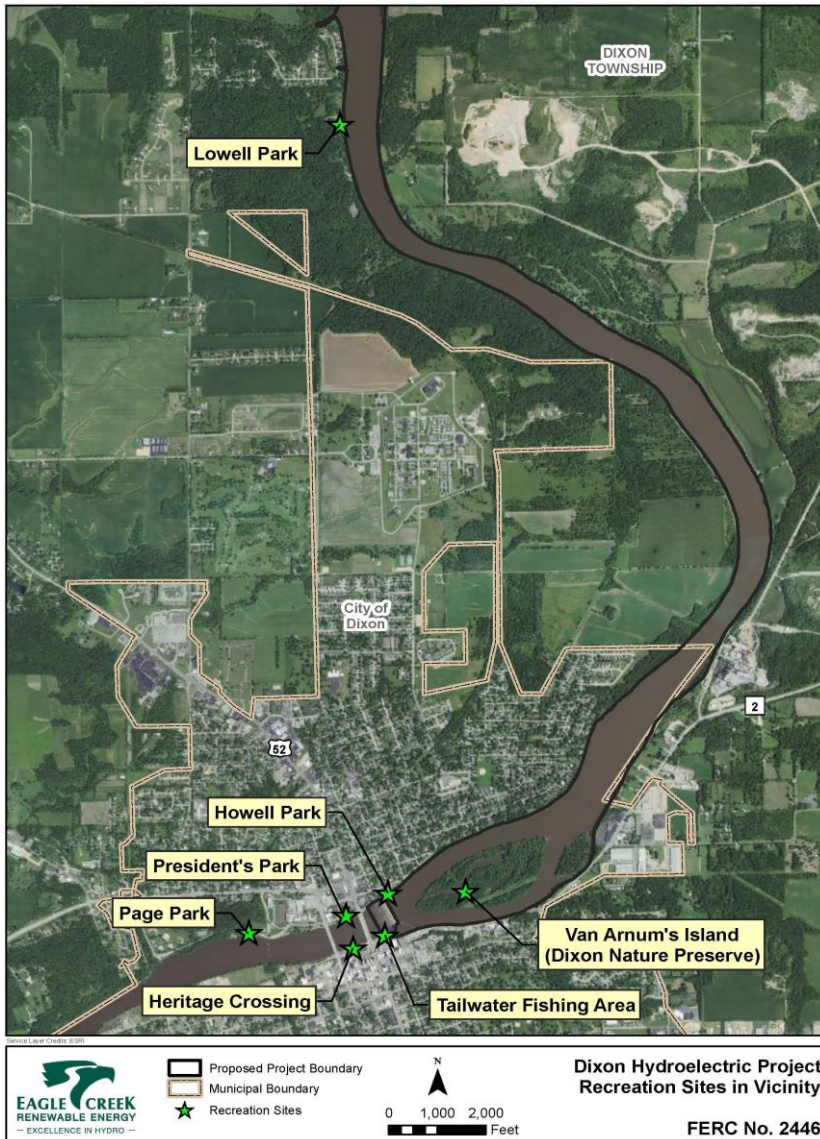
- J Norman Jensen Forest Preserve
 - Hiking trails, picnic areas
- Millrace Isle Forest Preserve
 - No amenities
- Macktown Forest Preserve
 - Golf course, boat launch, hiking trails, historic site, picnic areas
- Settlers Park (Village of Rockton)
 - Green space, basketball court, ball field
- Rockton Athletic Fields (Village of Rockton)
 - Tennis courts, basketball courts, softball fields
- Hononegah Forest Preserve
 - Campground, boat launch, picnic areas, hiking paths



Dixon Project Recreation Resources

Recreation Resources in FERC Project Boundary

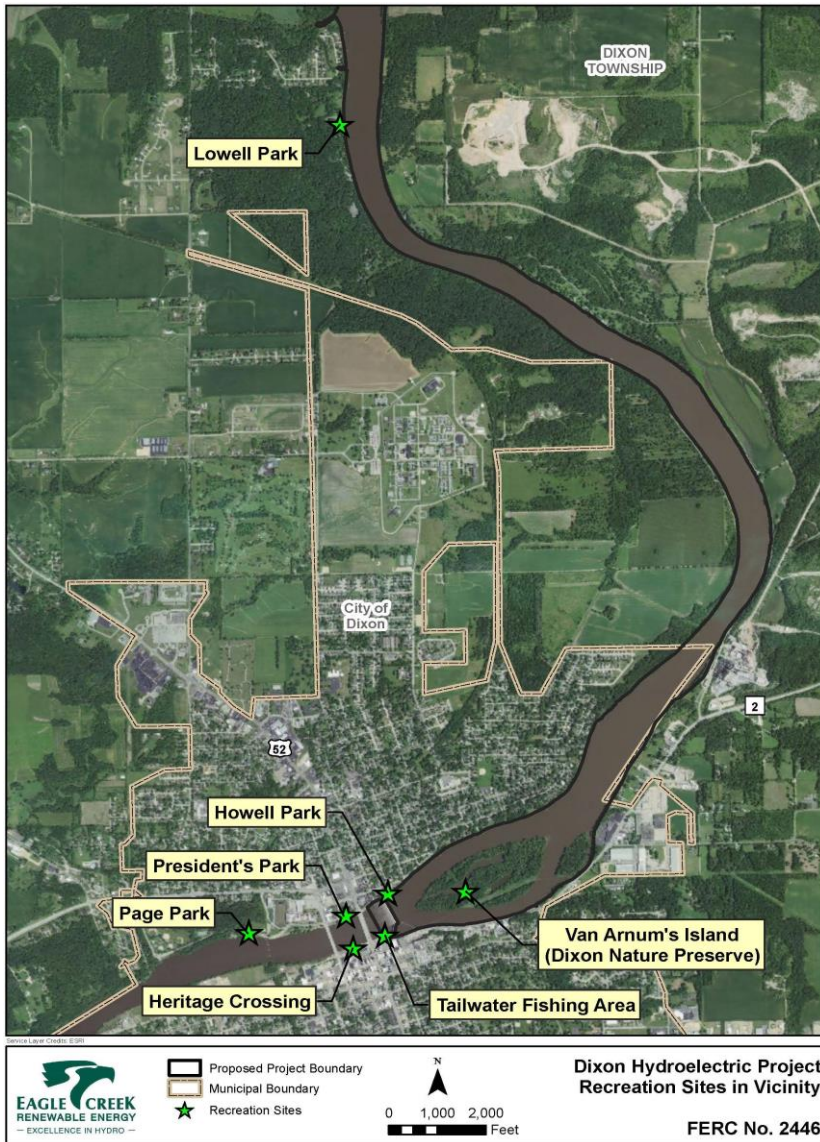
- Lowell Park (Dixon Park District)
 - Nature center, bank fishing, boat launch*, hiking paths, playground, picnic areas
- Van Arnum's Island (Licensee owned)
 - Leased to Dixon Park District as a nature preserve
- Howell Park (Dixon Park District)
 - Boat launch*, hiking/biking paths, bank fishing
- Dixon Tailwater Fishing Area (Licensee owned-partial)
- Rock River National Water Trail



Dixon Project Recreation Resources (continued)

Other Recreation Resources in Project Vicinity

- President's Park (Dixon Park District)
 - Historic sites, hiking path
- Heritage Crossing (City of Dixon)
 - Hiking/biking paths, 4-slip boat dock, riverfront parking and access
- Page Park (Dixon Park District)
 - Ball fields, tennis courts, basketball courts, picnic area, hiking/biking paths, boat launch, bank fishing



Cultural and Historical Resources



- Rockton - evaluate Project structures for eligibility to NRHP
- Dixon - eligible for NRHP, has existing Programmatic Agreement (known sites part of current license)
- Shoreline surveys proposed for both Projects

Public Utility Regulatory Policies Act (PURPA)

- What are PURPA benefits?
 - Benefits under section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) requires electric utilities to purchase electricity from, and to sell electricity to, qualifying facilities, which may include hydroelectric projects.
- Midwest Hydro and STS Hydro have exercised their rights to PURPA benefits and reserve the right to continue to do so in the future.

Proposed Resource Studies



- Cultural Resources
 - Licensee is proposing to consult with SHPO regarding need for evaluations for NRHP eligibility for the Rockton Project.
 - Licensee is proposing to conduct shoreline surveys at each Project to search for previously unidentified archaeological sites.
- Geology and Soils
 - Licensee is not proposing any studies specific to geologic or soil resources, but the cultural resources shoreline survey proposed above will identify any eroding shoreline areas at each Project.
- No other resource studies proposed

Next Steps

- **NEXT STEPS**

- Submit Comments and/or study requests to FERC with a courtesy copy to Eagle Creek Renewable Energy and Mead & Hunt within 60 days – **by February 10, 2020**

- ***Use FERC study request criteria to facilitate better study requests:***

1. Describe goals and objectives of each study proposal and information to be obtained;
2. Explain the relevant resource mgmt. goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
3. If the requestor is not a resource agency, explain any relevant public interest considerations;
4. Describe existing information concerning the subject of the study proposal and the need for additional information;
5. Explain any nexus between project operations and effects on the resource to be studied and how the study results would inform the development of license requirements;
6. Explain how any study methodology is consistent with generally accepted practice in the scientific community;
7. Describe consideration of level of effort and costs, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

Thank you

Comments or Questions

PLEASE SEND ANY COMMENTS OR QUESTIONS TO:

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Site Visits

Rockton



- There are two Site Visits after today's meeting
- Rockton Site Visit – immediately following meeting at 202 Hawick St, Rockton
- Dixon Site Visit – after Rockton site visit completed using personal transportation to the site at 201 E. River Rd, Dixon

Dixon

