

Cutler Hydroelectric Project Relicensing Workshop

February 13, 2019 – Riverwoods Conference Center – Logan, UT

1:15 – 1:30pm	Workshop introduction
1:30 – 2:00pm	Cutler Project overview
2:00 – 2:30pm	FERC licensing process overview
2:30 – 2:45pm	<i>break</i>
2:45 – 5:00pm	Breakout sessions
5:00 – 5:15pm	Workshop closing, wrap-up, and next steps
5:15pm	<i>adjourn</i>



Cutler Hydroelectric Project

Welcome and Introductions

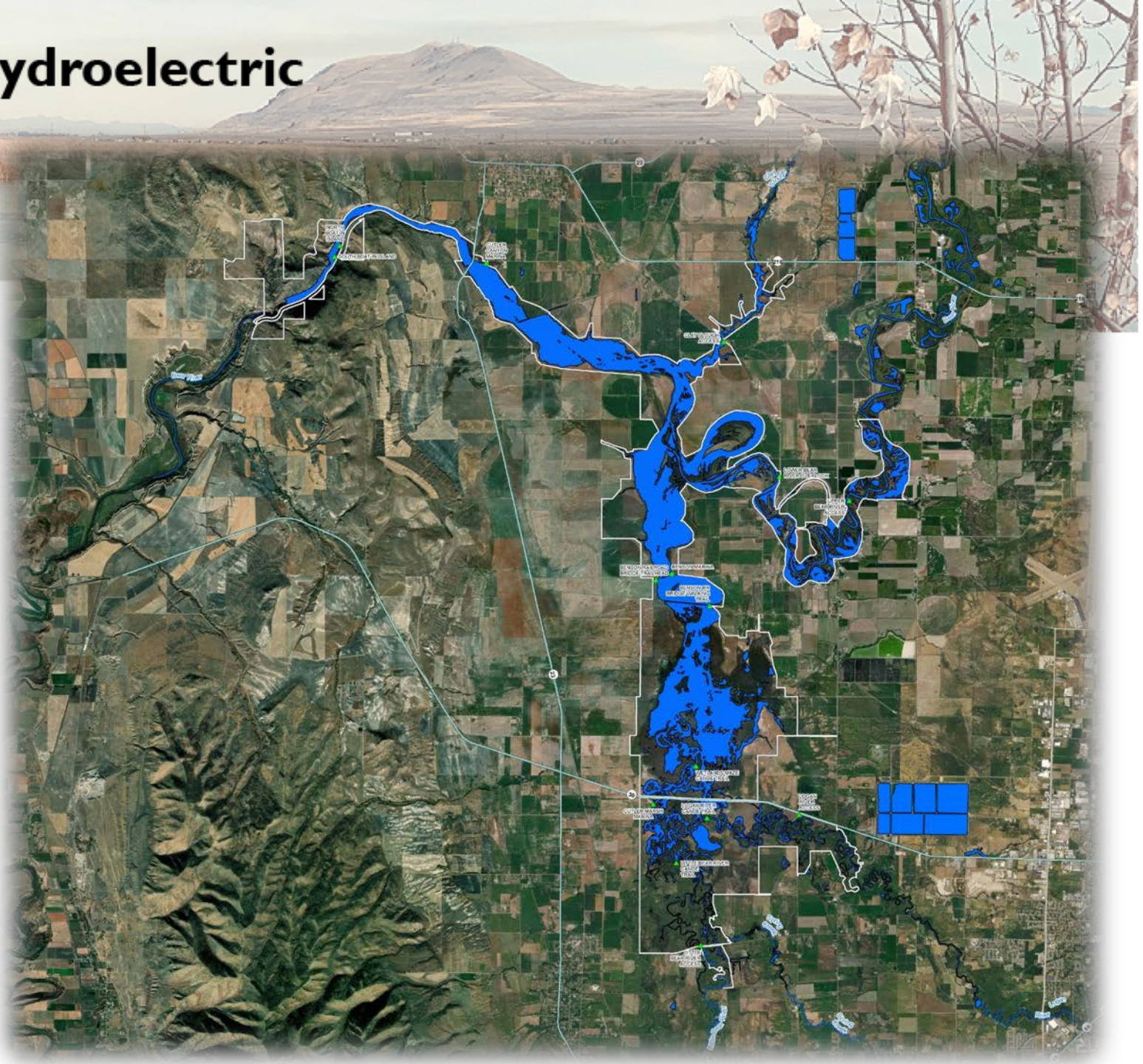
- Welcome and Safety Moment
- Introductions
- Workshop Purpose
 - Provide stakeholders with information about the Cutler Project and the Federal Energy Regulatory Commission (FERC) relicensing process
 - Get initial input from stakeholders about interests with respect to the Cutler Project



Cutler Hydroelectric Project

Cutler Overview *Project Area*

- Approximately 5,000 acres each of water and PacifiCorp lands in the FERC Project Boundary.

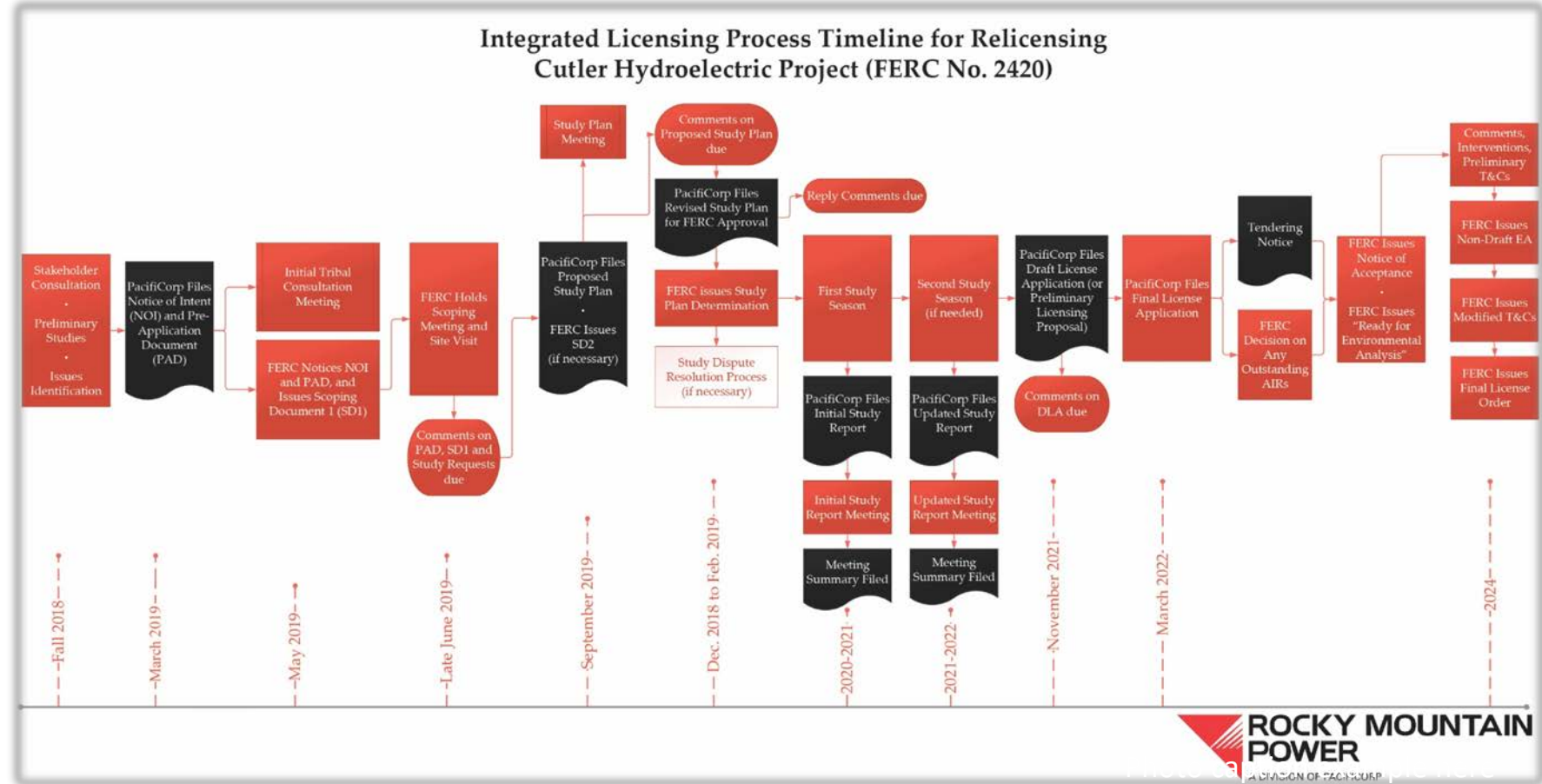




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Cutler Overview *FERC License*

- Current 1994 license expires at the end of March 2024

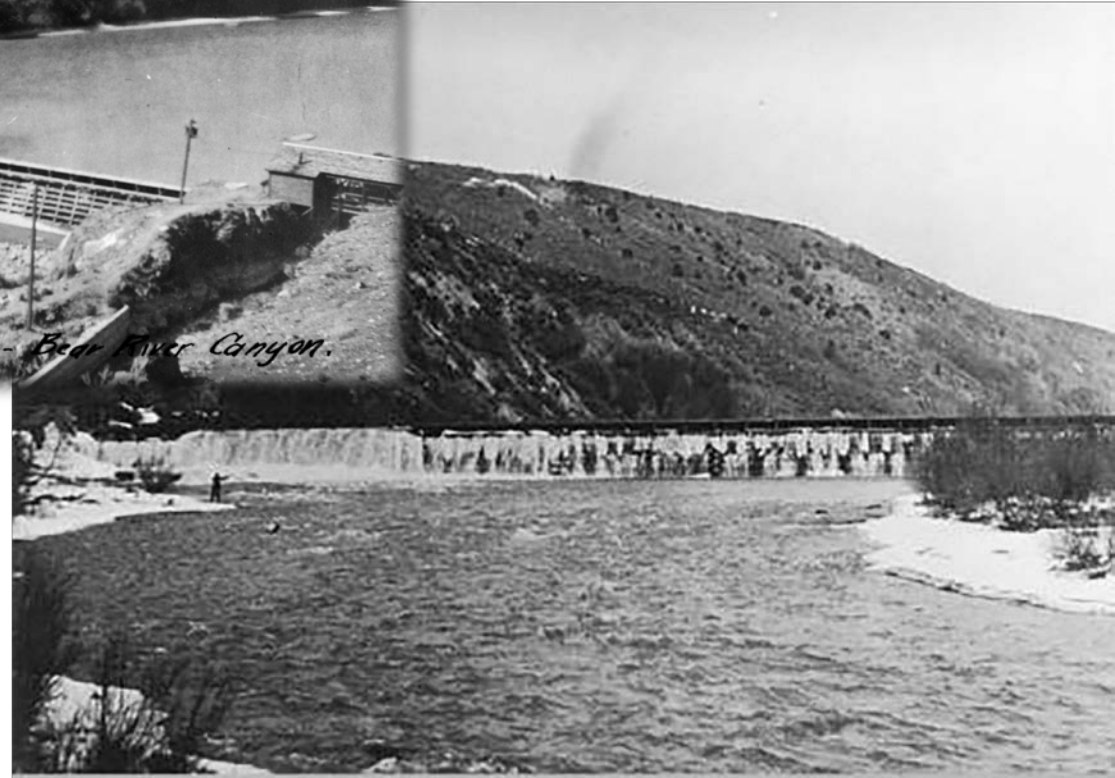




Cutler Hydroelectric Project



145-General - Utah Sugar Co's Dam - Bear River Canyon.



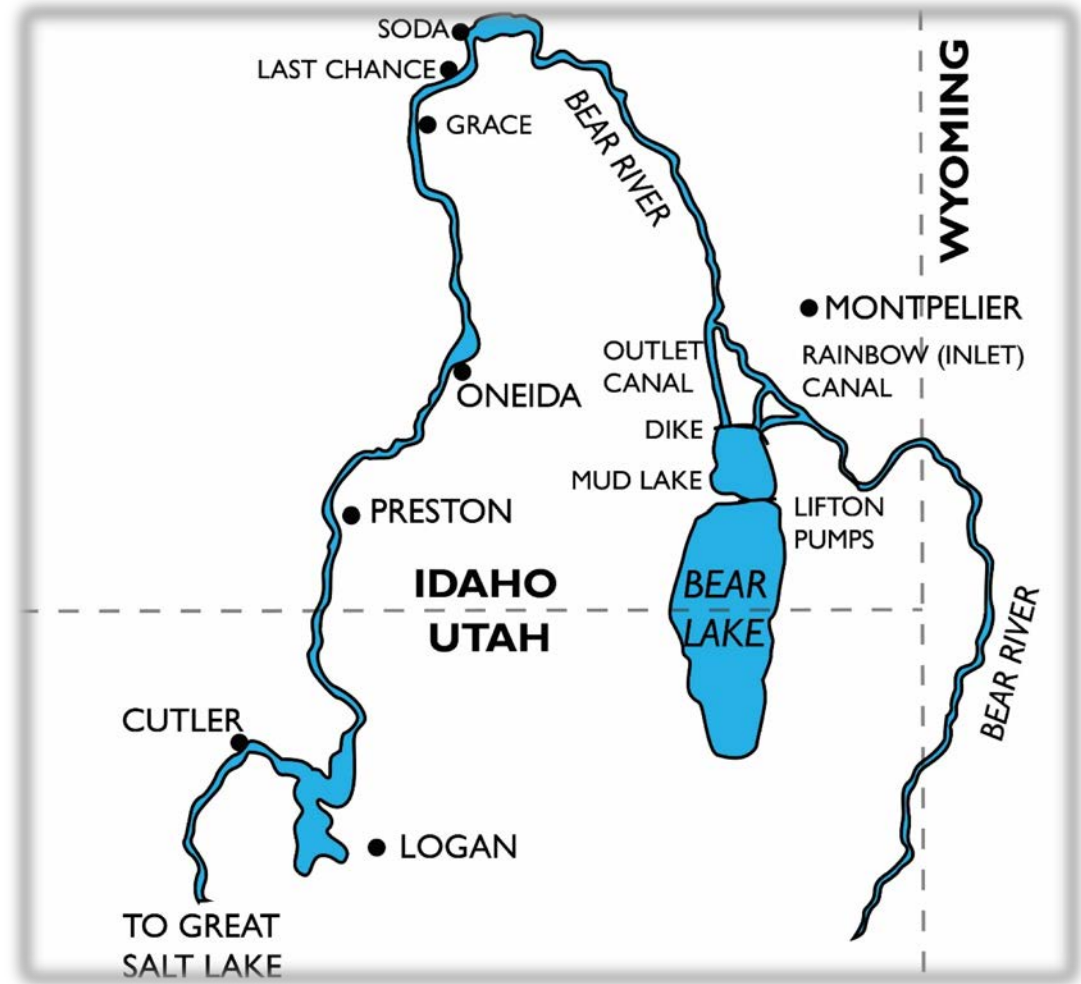
Cutler Overview Historic Wheelon Dam

Courtesy of USU Special Collections, Merrill-Cazier Library and the Library of Congress, HAER UTAH, 2-FIELD, 2-1.



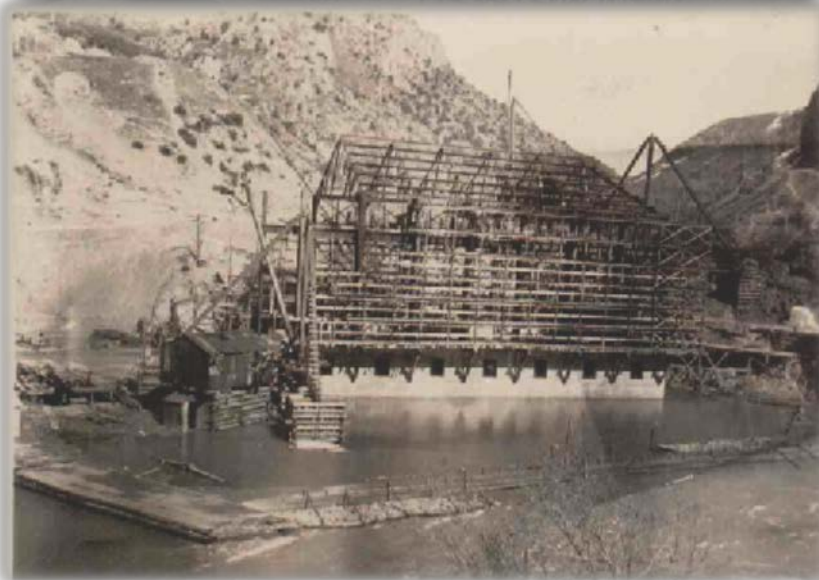
Cutler Hydroelectric Project

Cutler Overview *Bear River Development*





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Cutler Overview

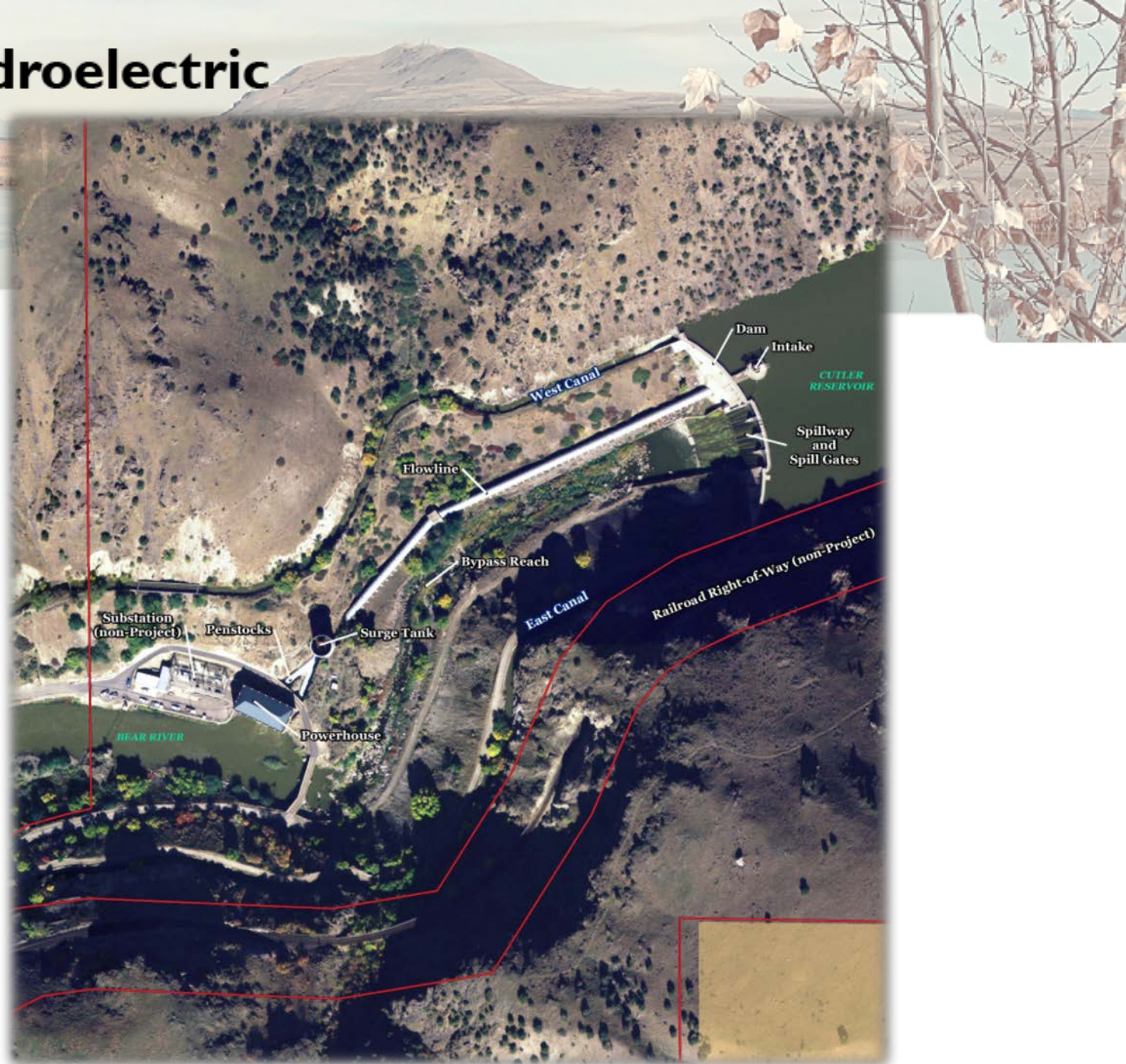
Cutler Historic Photos

*Courtesy of J. Willard Marriott Library Special Collections
Division, University of Utah and PacifiCorp.*



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Cutler Overview Project Location and Components

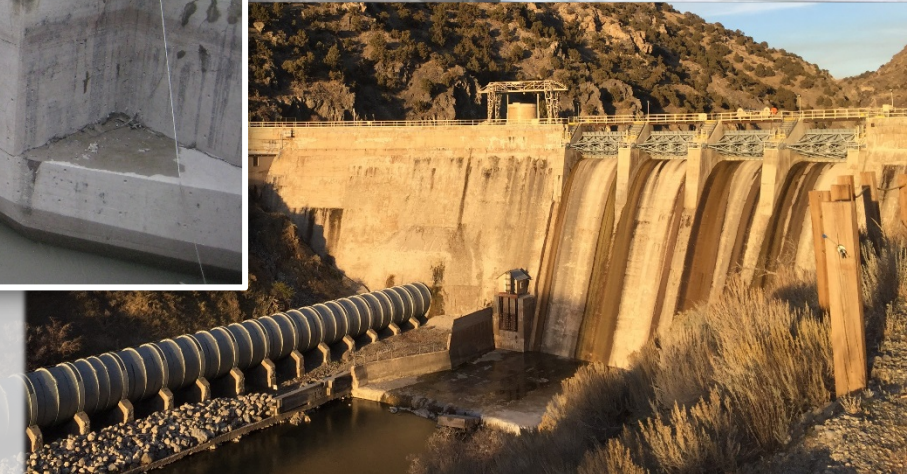




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Cutler Overview *Project Dam and Spillway Gates*

- Concrete gravity arch dam 545 feet by 109 feet, completed in 1927
- A gated-overflow spillway with four 30-foot-wide by 14-foot-high radial gates
- Spillway crest elevation at 4,394.5 feet above mean sea level*
- Top of gates at 4,408.5 feet





Cutler Hydroelectric Project

Cutler Overview *Powerhouse and Flowline/Penstocks*

- 1,160-foot-long by 18-foot-diameter steel flowline
- 81-foot-high by 45-foot-diameter surge tank
- Two 118-foot-long by 14-foot-diameter steel penstocks
- Powerhouse: 3-story steel frame and brick curtain wall, 130 feet long by 74 feet wide
- Maximum discharge flow of approximately 3,600 cfs

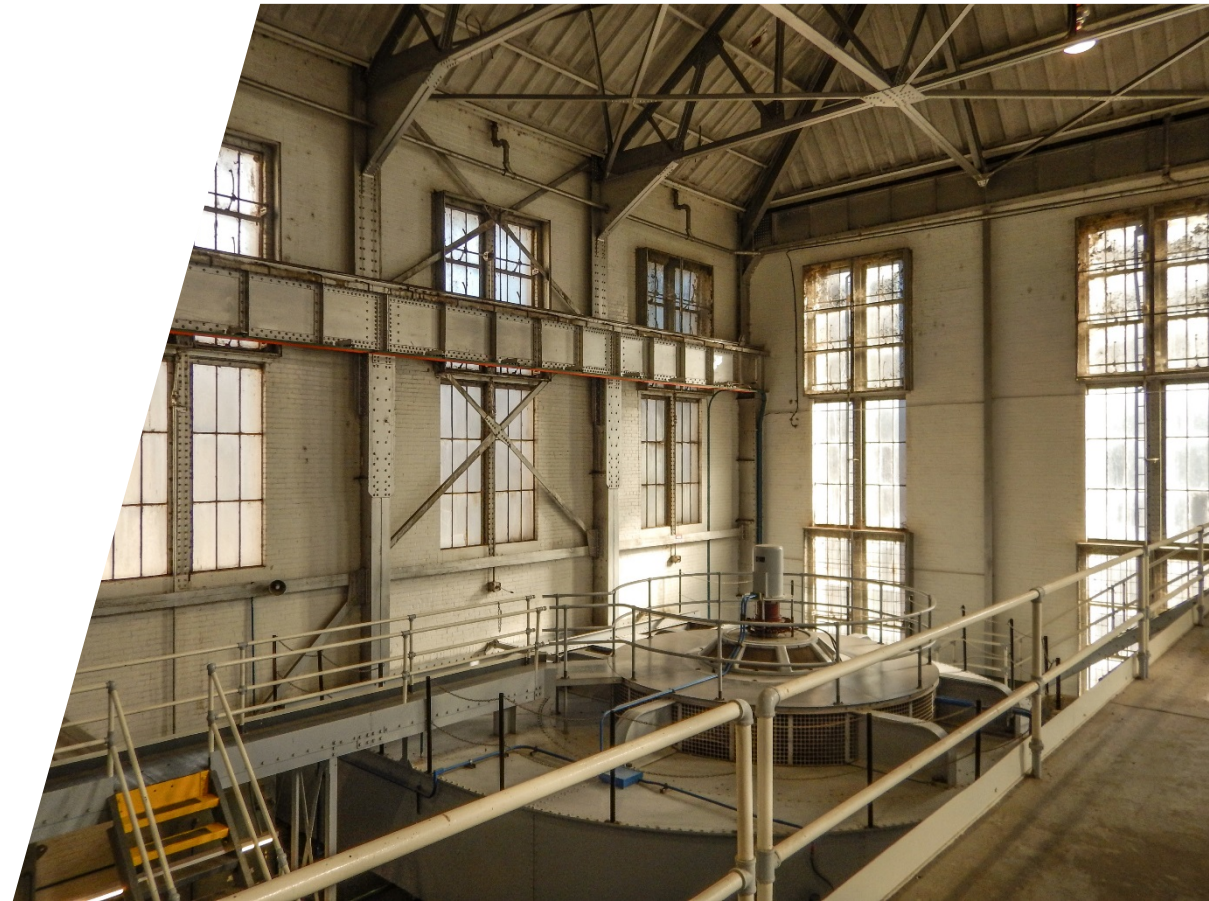




Cutler Hydroelectric Project

Cutler Overview *Project Powerhouse*

- In operation since 1927
- Nameplate rating of 30 megawatts (MW)
- Two 15MW, 150 revolutions per minute (rpm) vertical Francis turbines: Unit 1 with 23,602 horsepower (hp) and Unit 2 with 21,180 hp
- Two General Electric generating units with a total installed capacity of 30 MW
- Average annual power generated by the Cutler Project is 71,424 megawatt-hours (MWh)





Cutler Hydroelectric Project

Cutler Overview *Project Operation*

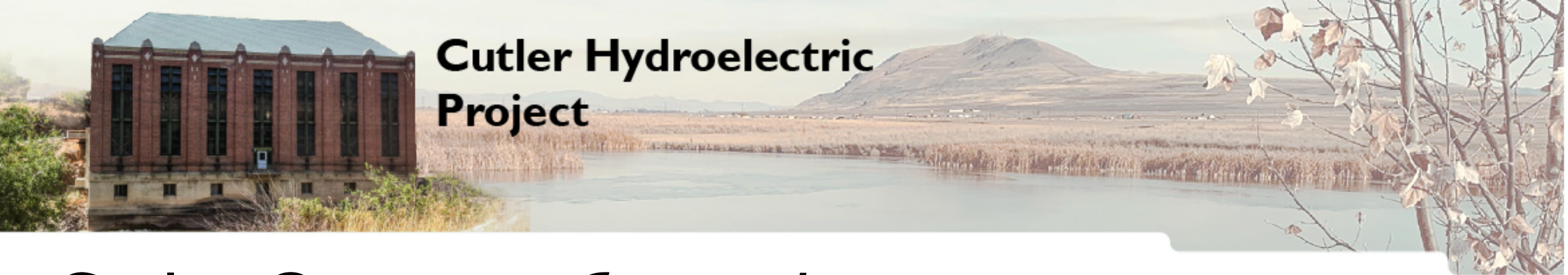




Cutler Hydroelectric Project

Cutler Overview *Project Operation*

- System operated to meet largest in-priority water rights on the river, diverted at Cutler Dam (900 cfs)
- Governed by Bear River Compact, water rights, and supplemental water contracts
- PacifiCorp holds multiple water rights including storage in Bear Lake
- Required to operate the Bear River to meet needs of 1) flood control, 2) irrigation, 3) hydropower generation
- Typically run-of-river, by schedule that meets current license requirements – allows 1 foot total of elevation variation (4407.5-4406.5) March-Dec and 1.5 feet (4407.5-4406.0) in winter
- Reservoir surface area of ~5,460 acres at maximum normal elevation (4407.5 feet), with storage of approximately 13,200 acre-feet (reservoir averages less than 4 feet deep; less than 2 feet deep in the southern half)
- Typically no generation during later irrigation season, after natural flows decline (July-Sept)



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Cutler Overview *Current License*

- Current license issued 1994; expires 2024
- Current license requirements (in part):
 - Reservoir operating elevation limits (typically 4406.5-4407.5)

Period	Reservoir Elevation (Ft)	Tolerance (Ft)	% of Time Goal Met
March 1 – Dec 1	4,407.5 – 4,406.5	± 0.25	95%
Dec 2 – Feb 28	4,407.5 – 4,406.0	± 0.25 to 0.5	90%
 - Water Quality Monitoring Program (quarterly at 5-year intervals)
 - Fish Habitat Enhancement Program (placed structures, discontinued monitoring per agreement with UDWR)
 - Cutler Resource Management Plan



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Cutler Overview

Current License (cont.)

Resource Management Plan covers:

- Vegetation Enhancement Program (buffers, woody vegetation planting, bank stabilization, fencing, erosion control basins, and wildlife habitat protection and improvements)
- Agricultural and Grazing Lease Program (continue agricultural uses but modify leases to protect/enhance other resources, and property coordination)
- Recreation Program (create 8 day-use sites and two boat-in sites, canoe and walking trails, allow recreation use including hunting and fishing access on Project lands, create boater use zones in reservoir, trapping permit program) and related Wetland Mitigation Program





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Cutler Overview

Future License Proposal

- To meet new generation scenarios that include more variable sources of energy, such as wind and solar generation, need additional operational flexibility beyond the current 1-1.5 foot elevation change limits.
- *NOT* proposing a change to the upper reservoir limits (perhaps additional flexibility in tolerance range limits)
- Will study a full range of reservoir lower elevation limits, down to the spill gate lower sill elevation (mechanical limit of lower elevations possible), equal to approximately 11 feet
- *No new inundation*; consider removal of Wheelon Dam
- Relicensing is *not* the on-going conversation about Bear River water use





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Cutler Overview

Future License Proposal

- PacifiCorp is the operator of the Bear River system
- Talking to Utah, Idaho, and Wyoming to continue needed water discussions, but that is a separate issue from generation related to the Cutler license...

“As demands increase for energy and water supply within the Bear River Basin, it has been recognized that increased collaboration is necessary to meet the region’s future challenges. Utah, Idaho, Wyoming, and PacifiCorp/Rocky Mountain Power are discussing the water supply, power operations, and future needs throughout the Bear River Basin, including Bear Lake. In addition, all of these parties are reaching out to their associated stakeholders in order to reflect the important and diverse interests within the basin.”





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Cutler Overview *Future License Proposal*

- Because we are proposing a change from relatively 'flat' operation, over the next two years, will need to look at potential effects to and information needs for a variety of resources





Cutler Hydroelectric Project

Cutler Overview *Relicensing Issues*

- Water Quality/Hydrology/Water Rights
- Sedimentation/Dredging
- Fishery – No native sport fishery; few natives in the lower Bear
- Terrestrial Wildlife Habitat/Threatened and Endangered Species (e.g., Ute ladies'-tresses orchid)
- Native freshwater mollusk community
- Invasive species (*Phragmites*, Quagga mussels, other)
- Cultural and Tribal resources– prehistoric and historic
- Recreation opportunities
- Agricultural opportunities
- Others?
- Protection, Mitigation, and Enhancement (PME) measures → future discussion





Cutler Hydroelectric Project

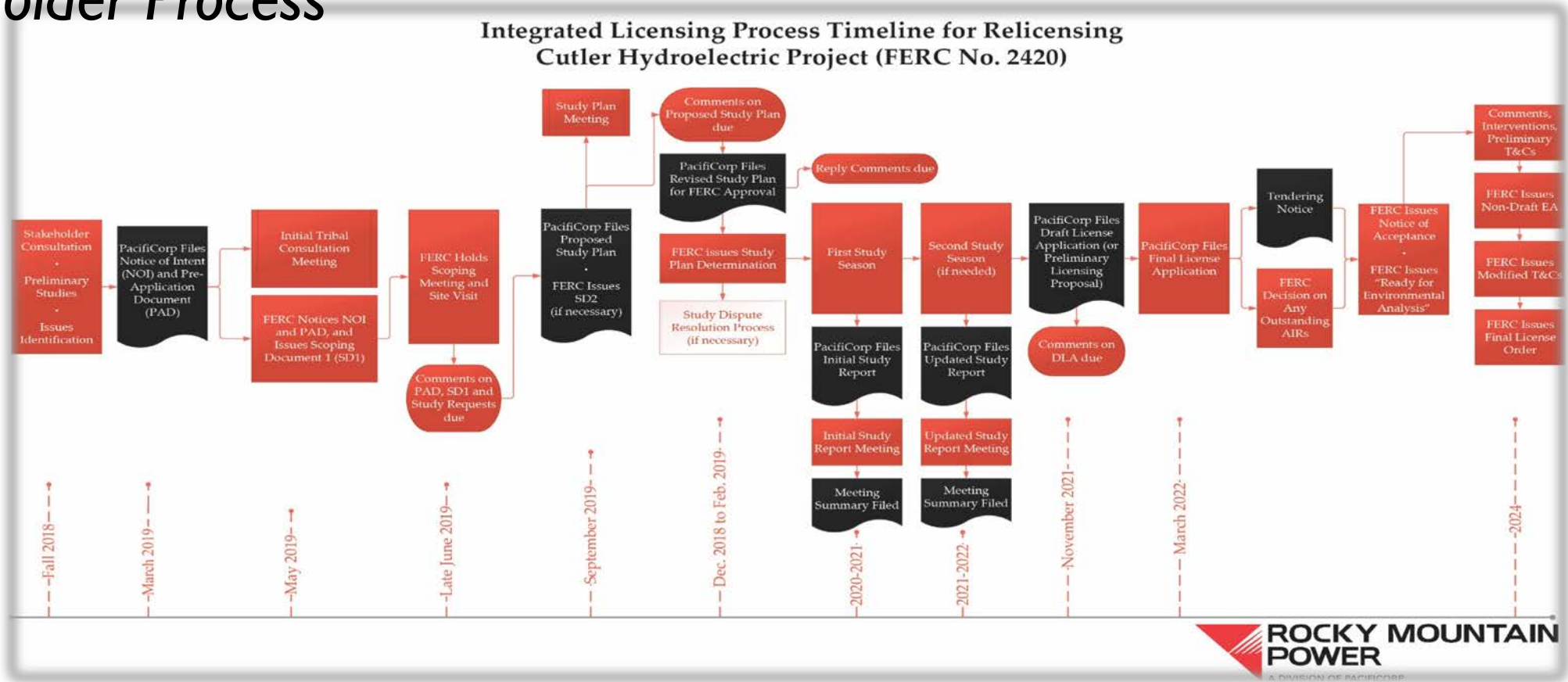
Cutler Overview *Proposed Relicensing Studies*

- **Hydrologic modeling / Sedimentation:** Light detection and ranging (LiDAR) study (Fall 2019)
- **Aquatic Resources:** Fish and freshwater mussel populations assessment
- **Cultural Resources:** Conduct a cultural resource inventory (archaeological, architectural, ethnographic resources)
- **Wildlife & Botanical:** Map and characterize the distribution of shoreline aquatic habitat within the Cutler Project Boundary to identify the area that would be exposed under the proposed wider operating range
- **Wetlands, Riparian, and Shoreline Habitat:** Same study will quantify the amount of available littoral habitat, characterize existing emergent and aquatic vegetation, and map invasive species
- **Rare, Threatened, Endangered species:** Conduct a Ute ladies'-tresses orchid survey
- **Recreation and Land Use:** Analyze LiDAR data to determine reservoir pool level thresholds for access at respective recreation sites
- **Others?**



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Cutler Overview *FERC Relicensing Process and PacifiCorp Cutler Stakeholder Process*





Cutler Hydroelectric Project

Federal Energy
Regulatory Commission

Process 101





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Basics of FERC

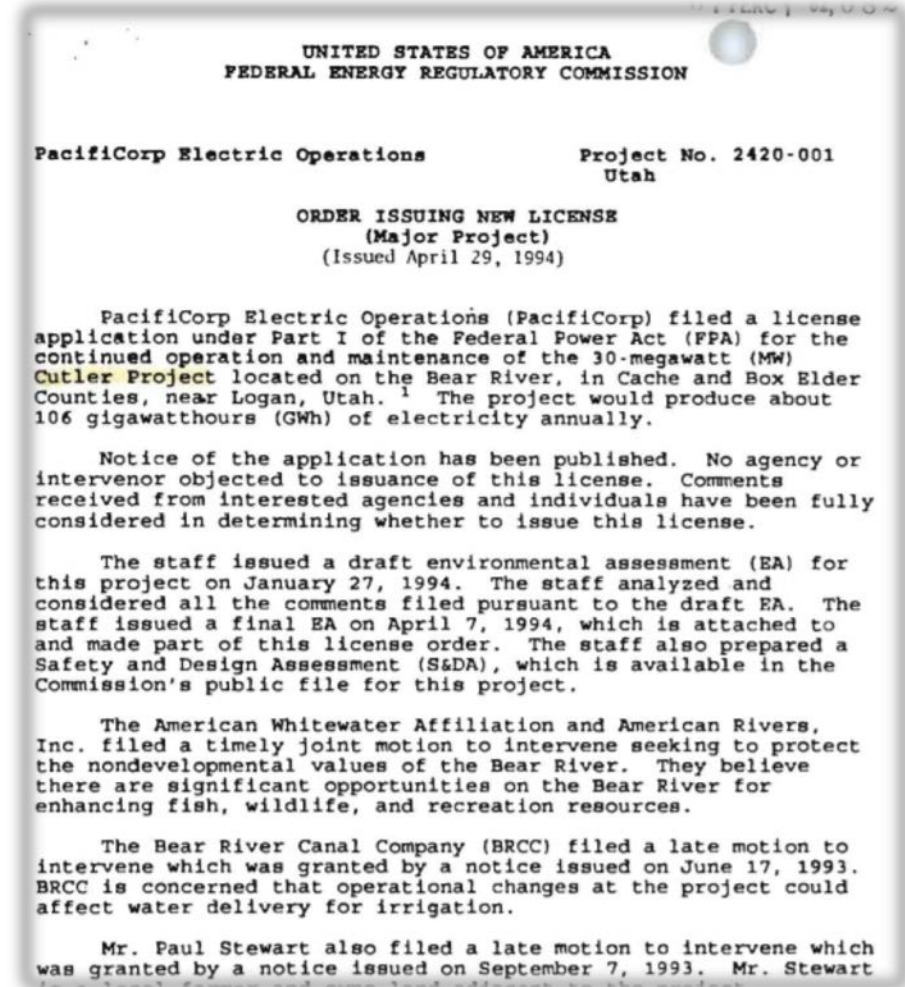
- **What is FERC?** - FERC is a federal, independent agency (formerly the Federal Power Commission)
- **What does FERC do?** - FERC regulates electrical transmission, hydropower licensing and safety, and natural gas and oil pipelines
- **How does FERC impact me?** - FERC manages the public, non-governmental organization, agency and tribal participation during the relicensing process
- **When does relicensing start?** - The relicensing process starts 5 to 5.5 years before the expiration of a project's license



Cutler Hydroelectric Project

What is a license?

- A FERC “license” is a regulatory document that permits dam owners to use public waters for energy production.
- It specifies the conditions for construction, operation, and maintenance of the project.
- Essentially a “permit to operate”
- Cutler’s License was last issued in 1994.





Cutler Hydroelectric Project

FERC Relicensing

- Relicensing is the process by which dam owners seek to renew their licenses so they can continue operating for 30-50 more years
 - Brings licenses in compliance with regulations and standards that have changed since last license was issued
 - Complex, multi-year process
 - Involves multiple participants with many public involvement opportunities
 - Develops a regulatory record
 - Provides FERC with decision-making information
 - Determines the final license terms and requirements



Cutler Hydroelectric Project

Basic Steps of Relicensing

- Describe project and identify key questions
 - PacifiCorp describes existing project, potential future operations, and identifies potential issues in the Preliminary Application Document (PAD)
 - Stakeholders ask questions and requests studies
- Answer questions and develop license application
 - Studies
 - Identify Protection, Mitigation, and Enhancement (PME) measures for new license
 - Submit license application
- FERC conducts a NEPA review and issues license with conditions
 - Solicits comments from stakeholders
 - Receives terms and conditions from resources agencies (state, federal, tribal)
 - Adjudicates conflicts (if any)
 - Issue license

On-going Compliance for many years after license issuance



Cutler Hydroelectric Project

National Environmental Policy Act (NEPA) and FERC Relicensing

- FERC is the “lead agency” for NEPA and therefore responsible for completing NEPA analysis
 - FERC will scope the range of questions that it needs to have answered
 - Public, Indian Tribes, and agencies have input into this process
 - PacifiCorp is then tasked with collecting information necessary to answer those questions



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Potential Studies

Study proposals...

- Must have “nexus” to project
- Must relate to public interest or specific resource agency goals
- Relate to an appropriate study area/area of potential effects
- Avoid academic questions
- Use commonly accepted study methods
- Reference existing data or studies, if available

Results of studies will support conversations about necessary PME measures that should be included in the new license.



Cutler Hydroelectric Project

FERC's Public Involvement

- This process includes:
 - State agencies
 - Federal agencies
 - Indian/Native Tribes
 - Local landowners and residents
 - Non-government organizations
- FERC maintains a public database where all submittals are tracked:
www.ferc.gov

The screenshot displays the FERC website interface. At the top, the FERC logo and the text "Federal Energy Regulatory Commission" are visible. Below this is a search bar with the placeholder text "Enter Search Term(s):" and a "Search" button. A navigation menu includes links for "ABOUT", "MEDIA", "DOCUMENTS & FILINGS", "INDUSTRIES", "LEGAL RESOURCES", "MARKET OVERSIGHT", "ENFORCEMENT", "CAREERS", and "CONTACT US". A "RESOURCES" section is also present. The main content area is titled "Industries >> Hydropower" and features a "Hydropower" sub-header with "TEXT SIZE" options (S, M, L). Under "Recent Highlights", there are three entries: one dated January 2, 2019, one dated December 20, 2018, and one dated October 30, 2018. A sidebar on the right contains "QUICK LINKS" and a "PHOTO GALLERY" with a photo of a person fishing. At the bottom, there are three boxes for "Licensing", "Compliance", and "Dam Safety & Inspections", each with a list of links.



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Milestones for FERC Public Involvement

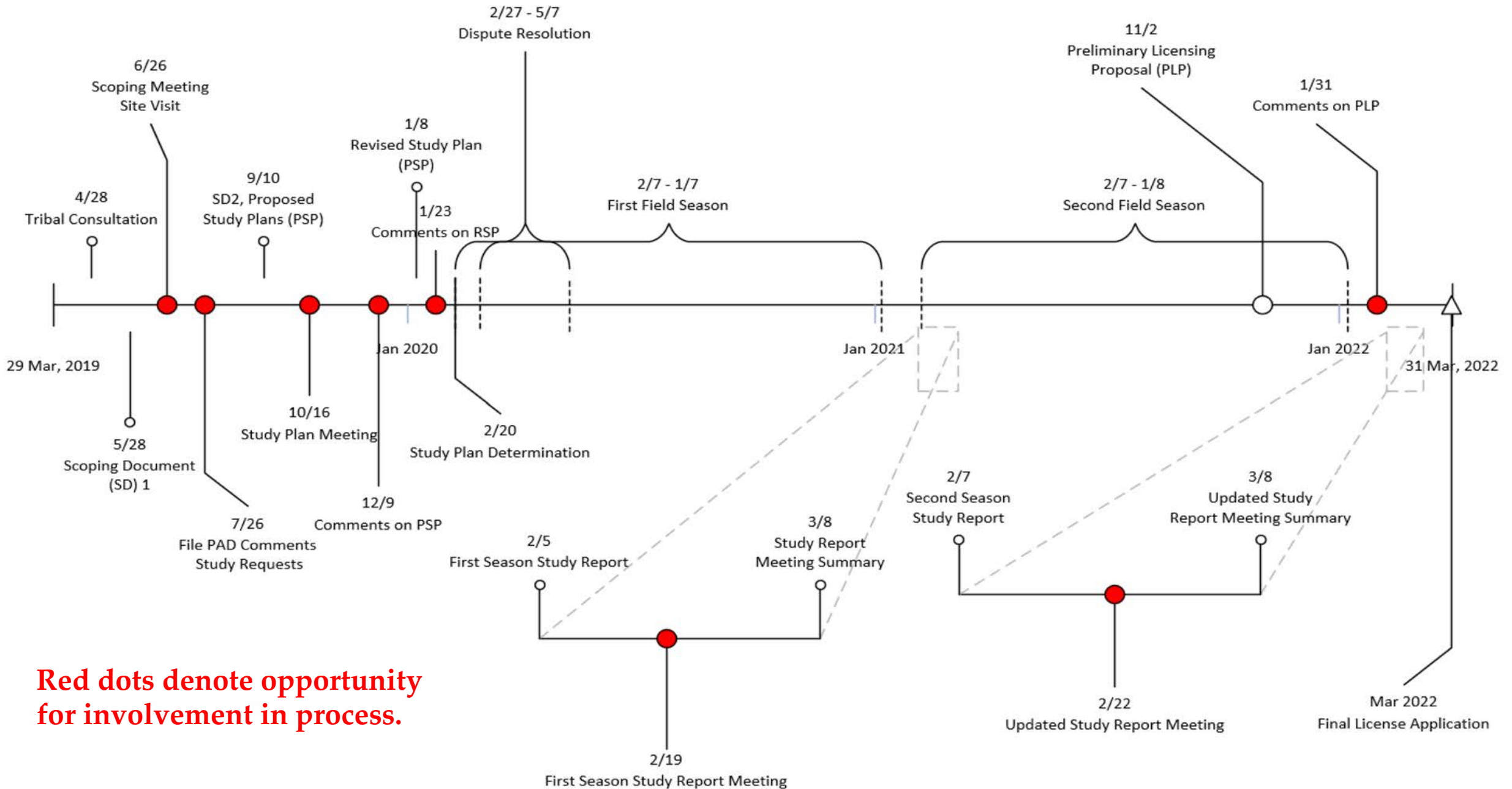
- Key milestones for public involvement:
 - Attend FERC scoping meetings
 - Comments on the PAD
 - Comments on Study Plan
 - Comments on Draft License Application
- How to be involved:
 - E-subscription (*must* have FERC Docket No. 2420)
 - E-library
 - Newspaper notices for public meetings



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Integration with FERC Licensing Process

- Integration with other regulatory processes and agencies:
 - Clean Water Act (CWA)/ State 401 Water Quality certification
 - National Environmental Policy Act (NEPA)
 - National Historic Preservation Act (NHPA)
 - Endangered Species Act (ESA)



Red dots denote opportunity for involvement in process.



Cutler Hydroelectric Project

FERC Relicensing Process and PacifiCorp Cutler Stakeholder Process

- Breakout sessions include more detail on Relicensing, Studies, Project Operations, Collaboration, and Project-specific Property Issues
- Take advantage of handouts and sign-up sheets, but that does not replace FERC docket
- Breakouts – Tell us more!

