



# WEBER HYDROELECTRIC PROJECT

## Weber Hydroelectric Project Overview and Relicensing Process

FERC No. P-1744  
PacifiCorp Energy

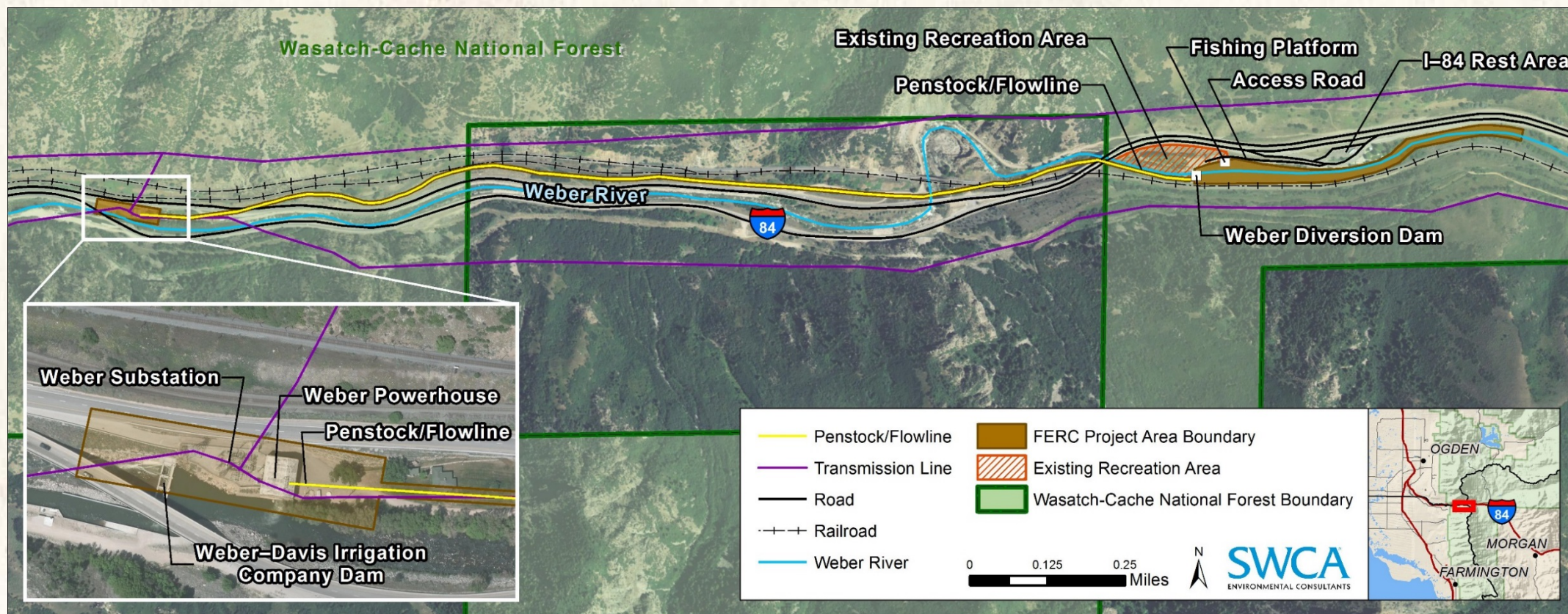






# WEBER HYDROELECTRIC PROJECT

## Location and Components of the Weber Hydroelectric Project







# WEBER HYDROELECTRIC PROJECT

## Project Overview

- Constructed in 1908–1910
- 1903 water right of 365 cubic feet per second (cfs) (1938 and 1965 Bureau of Reclamation contracts)
- Run-of-river project
- 27-foot-high, 114-foot-long concrete diversion dam
- Approx. 9,138-foot-long concrete and steel pipeline
- 185-foot head
- Nameplate rating of 3.85 megawatts (MW)/330 cfs
- Horizontal 5,000-horsepower (hp) dual Francis reaction turbine
- 46-kV, 77-foot-long transmission line
- Current license issued 1989; expires June 30, 2020

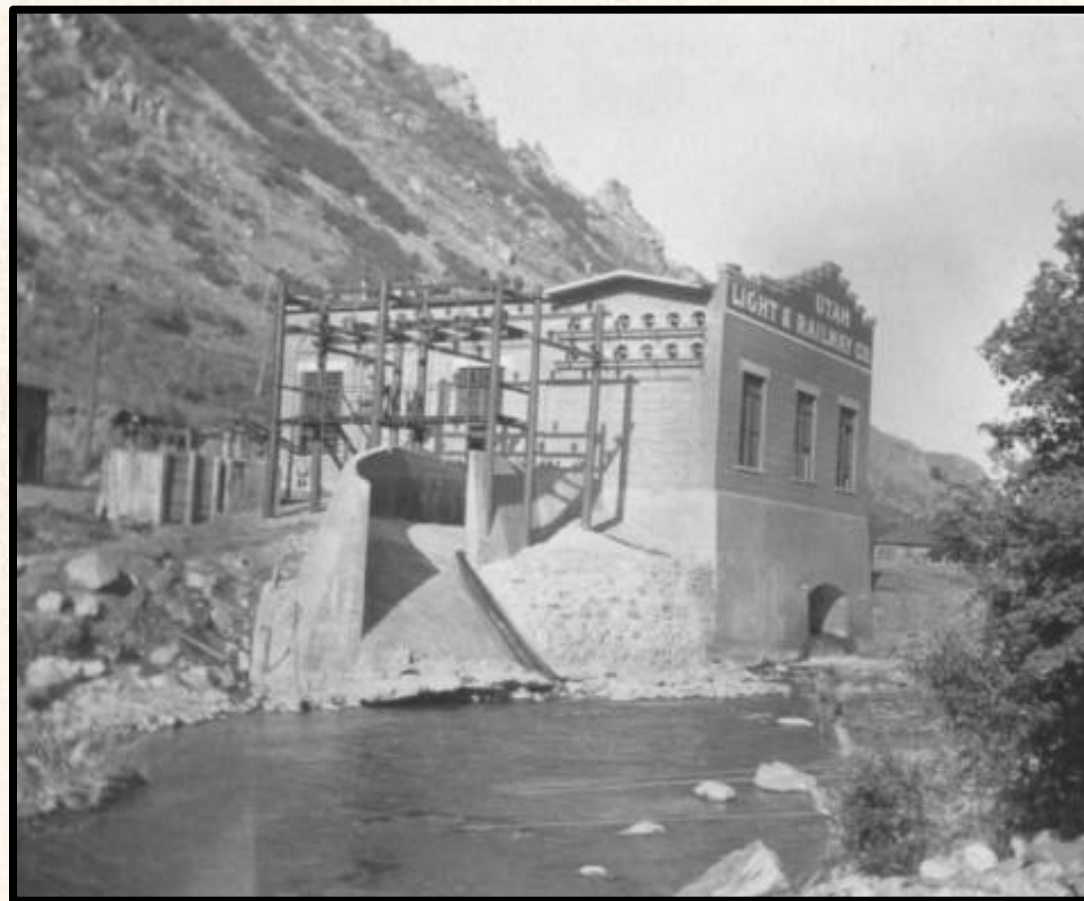
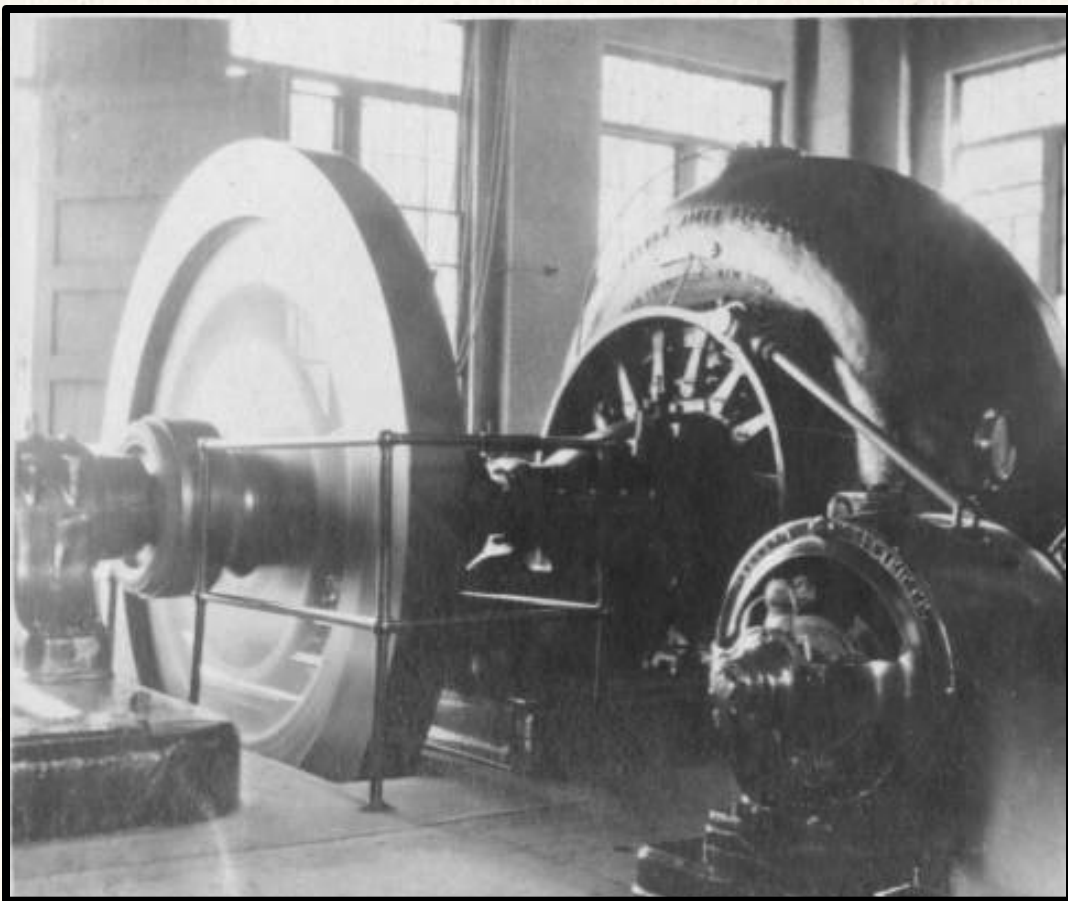






# WEBER HYDROELECTRIC PROJECT

**Weber plant, circa 1914**

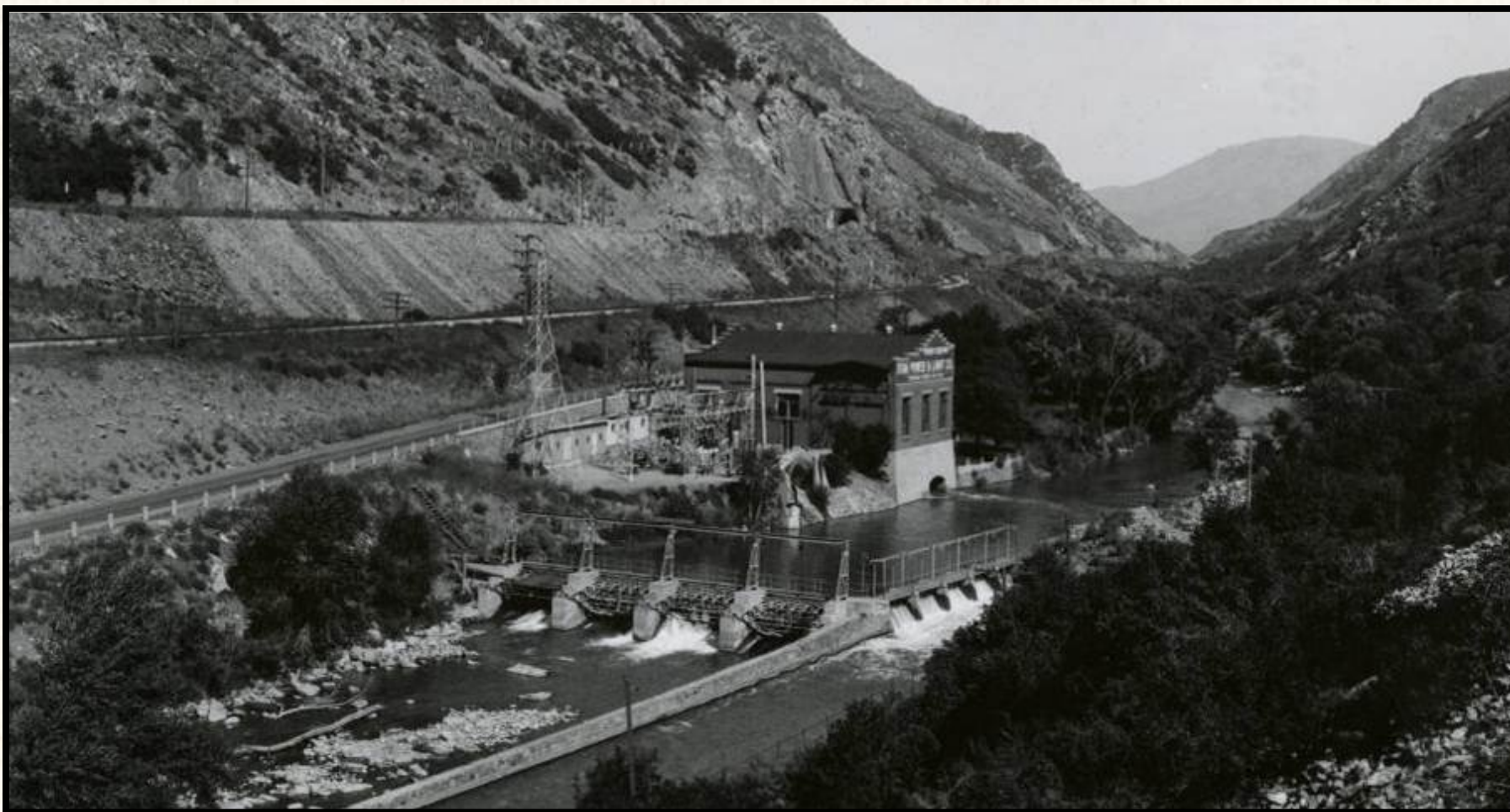






# WEBER HYDROELECTRIC PROJECT

**Weber plant, circa 1945**







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Diversion Dam

- 27-foot-high, 114-foot-long concrete diversion dam
- Intake structure
- 8.4-acre forebay
- Run-of-river operation
- Located between railroad tracks, I-84, and multiple pipelines







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: "Fish ladder"/ice chute







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Flowline/Penstock

- Approx. 9,138-foot-long concrete and steel pipeline
- Buried throughout much of its 1.7-mile length
- Two freeway crossings
- One river crossing
- One railroad crossing







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Trestle Crossing







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Powerhouse

- One generating unit
- Rated at 3.85 MW/330 cfs
- Horizontal 5,000-hp dual Francis reaction turbine
- Average annual generation of 16.932 gigawatt hours (GWh)
- Additional average annual 3.9 GWh - 1938 contract

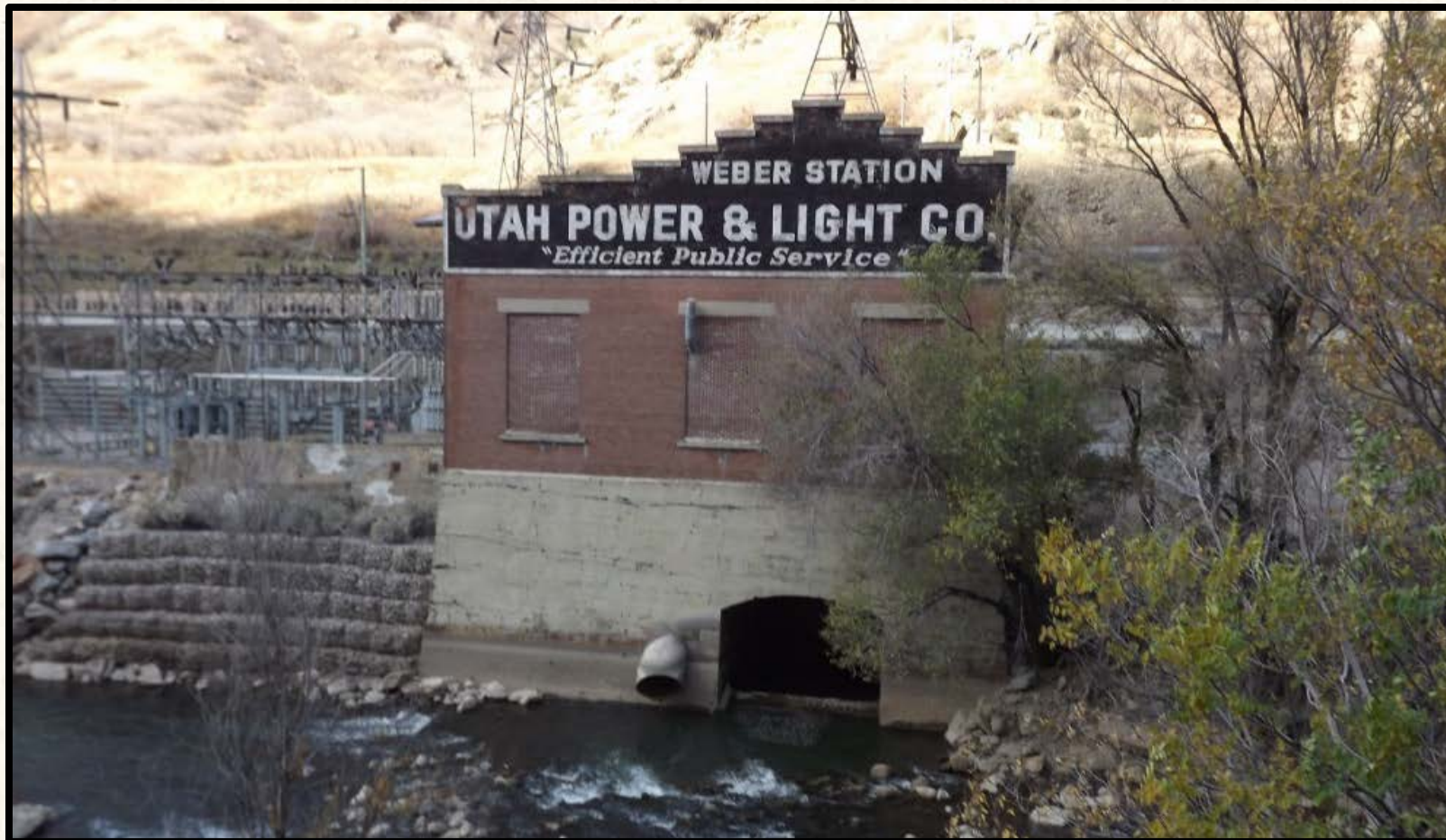






# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Powerhouse/Substation







# WEBER HYDROELECTRIC PROJECT

## Project Facilities: Transmission line



- 46 kV
- 77 feet long
- Substation is a Rocky Mountain Power asset





# WEBER HYDROELECTRIC PROJECT

## License Process

- Three license processes available; until recently FERC strongly encouraged the Integrated Licensing Process (ILP), now the default mode, but has now decided that the Utility can choose (with approval) whichever process makes sense for their situation
- ILP/TLP/ALP – No final decision has been made, but PacifiCorp currently has an interest in ALP
- June 2015 – PacifiCorp files Notice of Intent and Pre-Application Document (NOI/PAD; also request for other than default ILP process)
- September 2015 – FERC Scoping process (collaborative with stakeholders)
- Spring 2016 – First study season
- 2018-2019 – Draft and final license applications submitted (potentially also a Settlement Agreement)
- 2020 – FERC issues new license





# WEBER HYDROELECTRIC PROJECT

## ALP vs ILP Comparison

TLP not considered further due to risk of exposure to late study requests

### ▶ ALP

- Best for non-controversial projects
- Combines pre-filing consultation with NEPA review
- Requires stakeholder consensus
- Early assistance provided by FERC staff upon request, including scoping; schedules set by proponent
- Formal study review process to eliminate exposure to study requests post-filing, upon request
- FERC suggested process for non-controversial/collaborative stakeholder relationship projects

### ▶ ILP

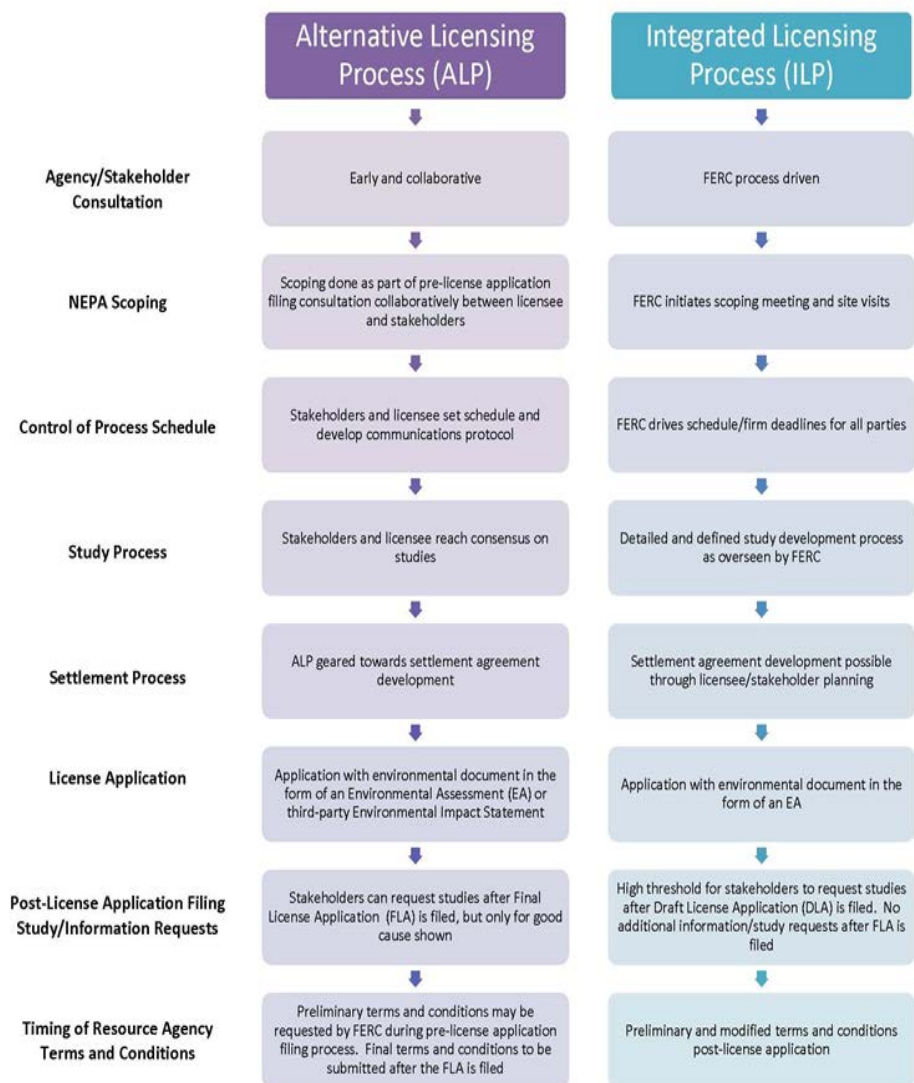
- FERC default process—'command and control'
- NEPA process occurs at the end of the licensing procedure
- No consensus required
- Early assistance from FERC staff; including scoping—FERC sets all process deadlines and schedules
- Formal study review process to eliminate exposure to study requests post-filing
- Unable to eliminate unnecessary process steps (e.g., 2<sup>nd</sup> stage consultation)





# WEBER HYDROELECTRIC PROJECT

## ALP vs ILP Comparison, cont.





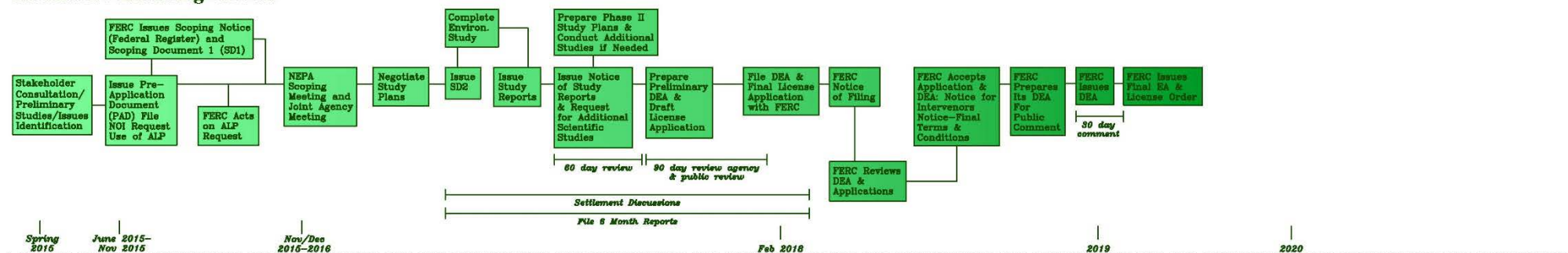


# WEBER HYDROELECTRIC PROJECT

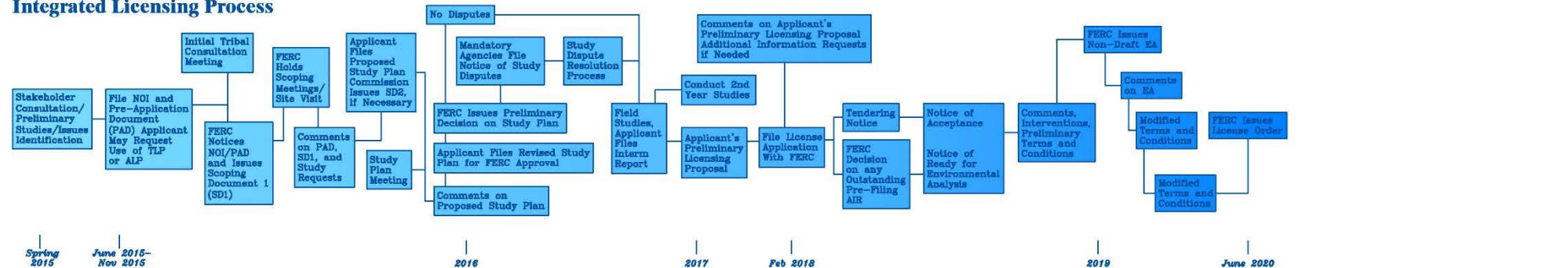
## ALP vs ILP Comparison, cont.

### PacifiCorp Energy Process Timeline for Relicensing Weber Hydroelectric Project FERC No. 1744

#### Alternative Licensing Process



#### Integrated Licensing Process







# WEBER HYDROELECTRIC PROJECT

## Potential/Typical License Issues:

- Fisheries Resources and Fish Passage
- Recreation Resources
- Land Rights
- Water Quantity and Quality
- Cultural Resources
- Terrestrial Wildlife Resources
- Botanical Resources







# WEBER HYDROELECTRIC PROJECT

## License Issues: Fisheries and Fish Passage

- Bluehead sucker (right and center)
- Fluvial Bonneville cutthroat trout (below left)
- Photographs taken at Weber diversion dam/day use site



Photos courtesy of UDWR





# WEBER HYDROELECTRIC PROJECT

## License Issue Detail: Fisheries and Fish Passage

- Two species of concern at Weber: Bonneville cutthroat trout and bluehead sucker.
- Bonneville cutthroat trout proposed for listing but found to not be warranted by the USFWS; bluehead sucker could be proposed within 5 years.
- Both species have stronghold populations in the reach between Weber Dam and the powerhouse.
- In 2011, Bonneville cutthroat trout population was discovered to retain fluvial life history trait; only second population known to do so and the only one in Utah.
- Fish passage at PacifiCorp Weber Dam is one of the highest priorities for upstream passage in Utah.







# WEBER HYDROELECTRIC PROJECT

## Potential Studies: Fisheries and Fish Passage

- Water quality studies (temperature, dissolved oxygen, turbidity, nutrient levels) – minor given water quality conditions resulting from upstream sources?
- Instream flow studies: The 34-50cfs seasonal minimum flow in place since the 1940s has resulted in stronghold populations for both species; baseline studies only, if any?
- Telemetry work already completed by UDWR/TU?
- Bluehead sucker spawning study (some resources committed to current study)?
- Fish Passage Design Criterion
- Fish Passage Facilities Assessment
  - Upstream (jump heights, velocity for both species)
  - Downstream (necessity/alternatives, approach and sweeping velocities, fish safety)

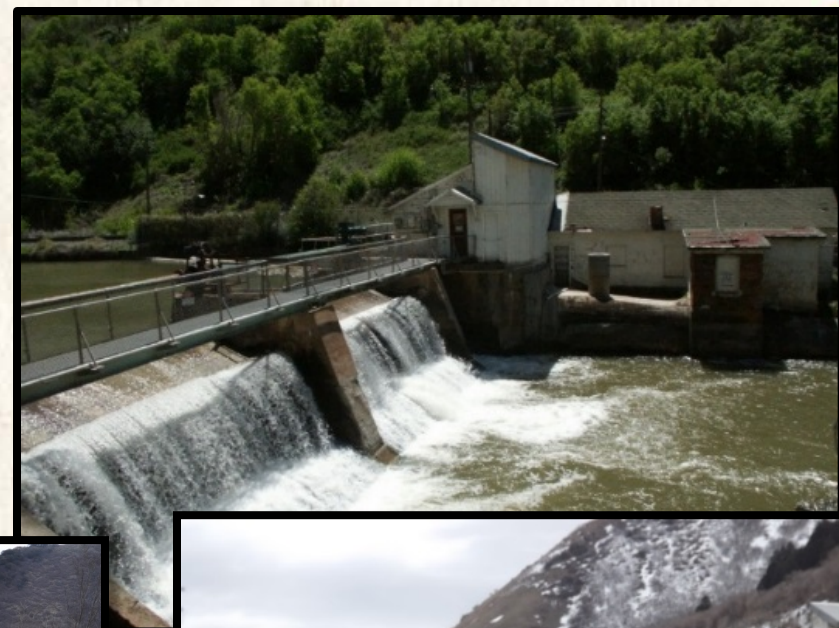




# WEBER HYDROELECTRIC PROJECT

## Potential Mitigation and Enhancement Measures (PM&Es)

- Construct functional fish ladder appropriate for *both* Bonneville cutthroat trout and bluehead sucker to allow for upstream fish passage.
- Existing recreation site upgrade (vault toilets, wind breaks, fishing access improvements).







# WEBER HYDROELECTRIC PROJECT

## Communication Protocol Overview

- ALP regulations require a formal communication protocol.
- FERC regulations require the applicant "submit a Communications Protocol, supported by interested entities, governing how the applicant and other participants in the pre-filing consultation process, including the Commission staff, may communicate with each other regarding the merits of the applicant's proposal and proposals and recommendations of interested entities."
- The Communications Protocol should document which oral, written, and electronic communications or issues will or will not be recorded.





# WEBER HYDROELECTRIC PROJECT

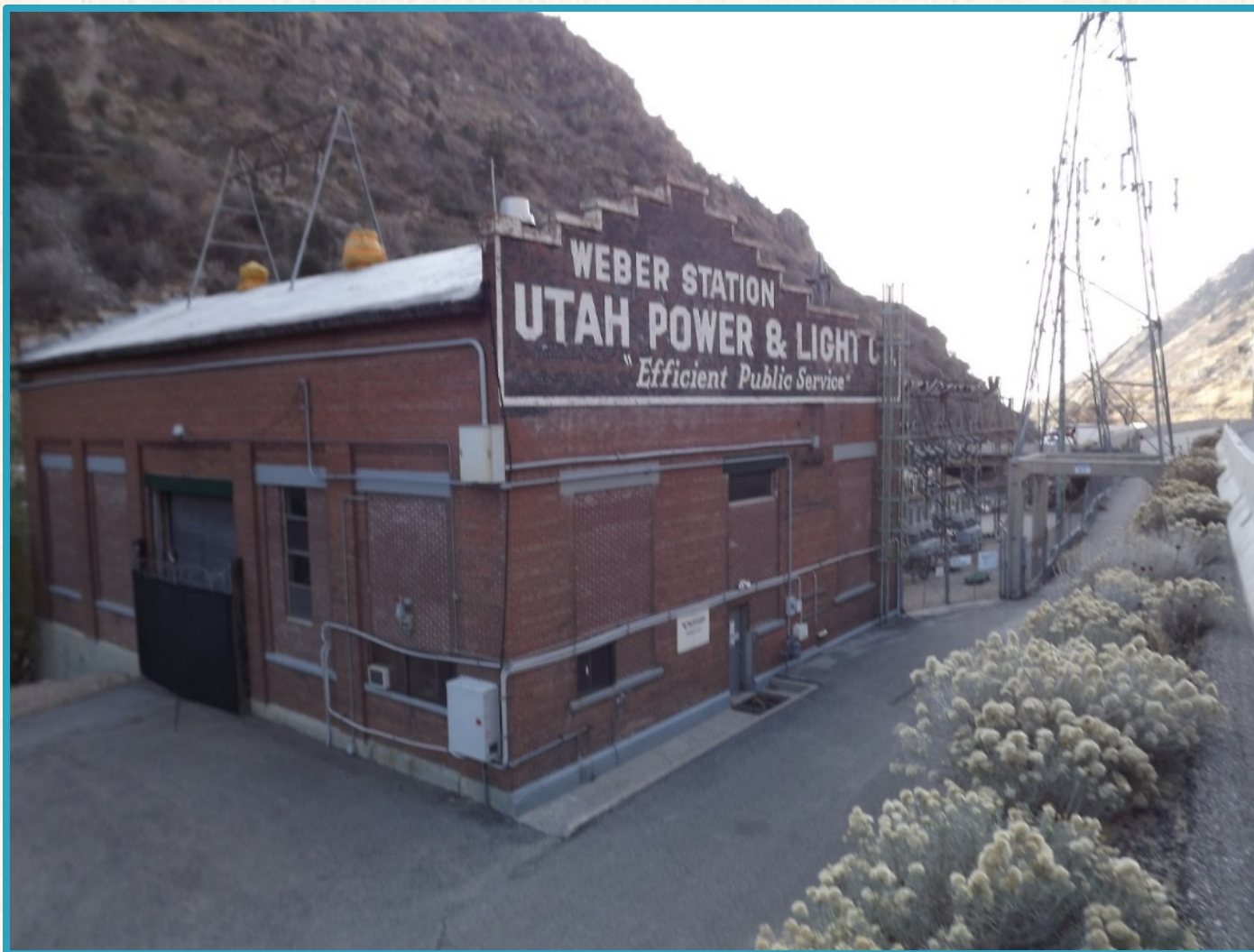
## Draft Communication Protocol

- Introduction
- Participants
- Guideline and Mechanisms
  - General Communication Mechanisms
  - Group Meetings
    - Schedule and Agendas
    - Attendance
    - Record Keeping
  - Teleconference Communications
  - Written Communications
  - Contact Logs
  - Communication with FERC Staff
  - Public Reference Files
- Communication Protocol
  - Communication within the Committee
  - Communication with Constituents
  - Communication with the Public





# WEBER HYDROELECTRIC PROJECT



**Thank you!**





# WEBER HYDROELECTRIC PROJECT

## Statement of Interest Overview

- ALP *requires* collaborative process amongst proponent and stakeholders.
- Request a statement of interest from each of the core interest groups by Monday, 30 March 2015.
- Examples from other entities/license processes available.





# WEBER HYDROELECTRIC PROJECT

## PacifiCorp Statement of Interest: Vision and Mission

- **PacifiCorp VISION:** Transform the future of electricity in the West through innovation, flexibility, and strategic partnerships.
- **PacifiCorp MISSION:** To be the best energy company in serving our customers, while delivering sustainable energy solutions.





# WEBER HYDROELECTRIC PROJECT

## PacifiCorp Statement of Interest

### We have an interest in:

- Reaching full and timely agreement through collaboration on all issues, including the identification and implementation of protection, mitigation and enhancement measures to be included in the FERC relicensing of the Weber Hydroelectric Project.
- Promoting an open, interest-based process where all participants can safely voice opinions and reach collaborative solutions that will work and are sustainable over time.
- Operating the Weber project in the public interest:
  - Safe, economic, sustainable generation operations
  - Mitigate project impacts/environmental footprint
  - Provide enhancements
- Preserving the renewable, efficient generation and other values provided by the project.
- Protecting PacifiCorp's current investment and ensuring that future investment in the projects is prudent for customers and stakeholders.
- Using quality and relevant science to inform policy and resource decisions that will be made in the relicensing negotiations.
- Enhancing our reputation as a responsible corporate citizen and environmental steward.
- Fostering long-term relationships with agencies, tribes, the local community, and other stakeholders.
- Ensuring public and employee safety.





# WEBER HYDROELECTRIC PROJECT

## PacifiCorp Statement of Interest (cont.)

### Resource-Specific Interests

- Protecting and enhancing native fisheries and other aquatic resources in the Weber River watershed.
- Maintaining high quality recreational fishing and day-use experiences.
- Respecting cultural values and resources on project lands.