



# Eklutna Hydroelectric Project Fish & Wildlife Agreement

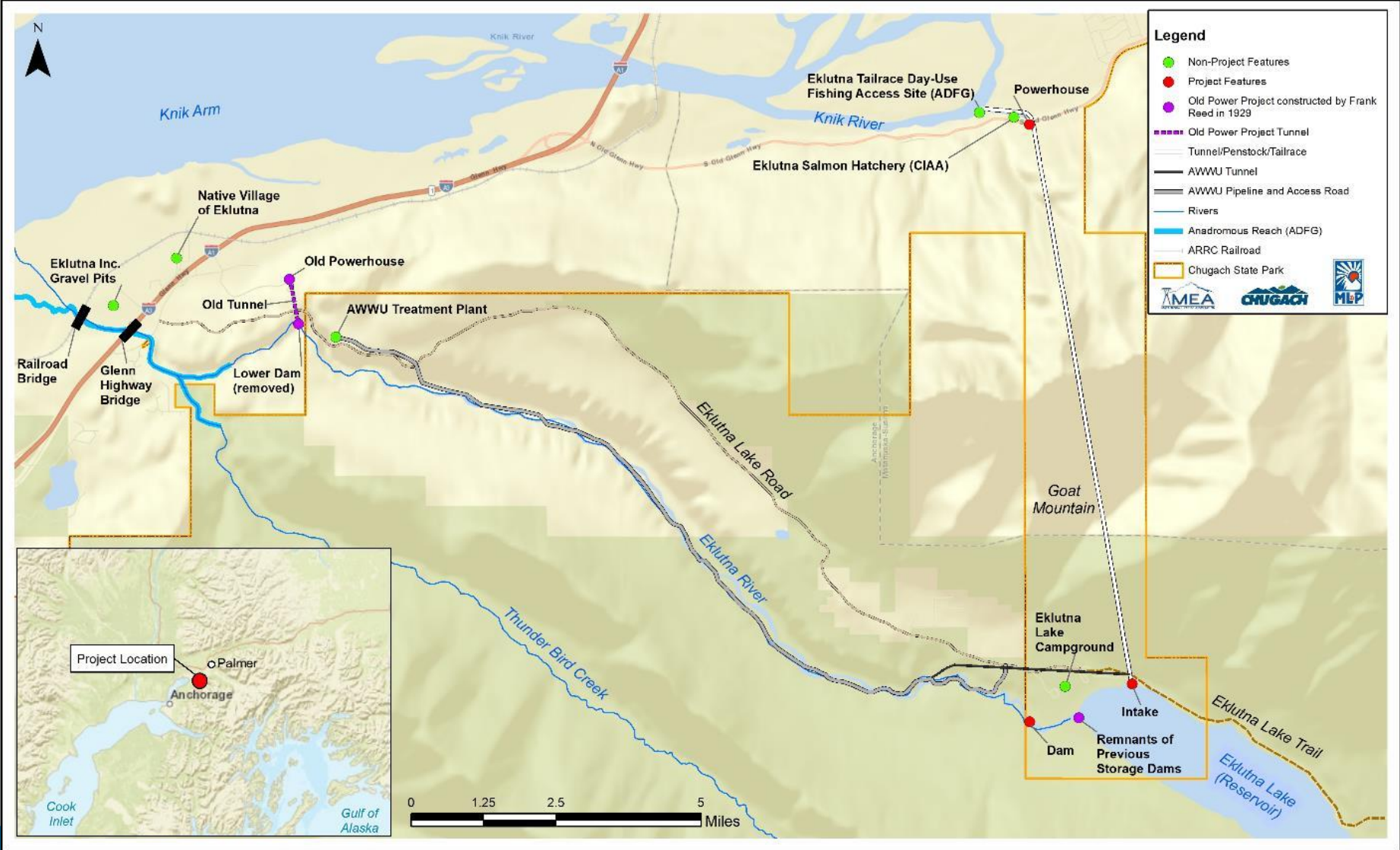
Anchorage Assembly  
Enterprise and Utility Oversight Committee  
October 15, 2020



# Agenda

- Provide Update on Activities since February 2020
- Review Project Facilities and Operations
- Q&A

# Eklutna Area Overview

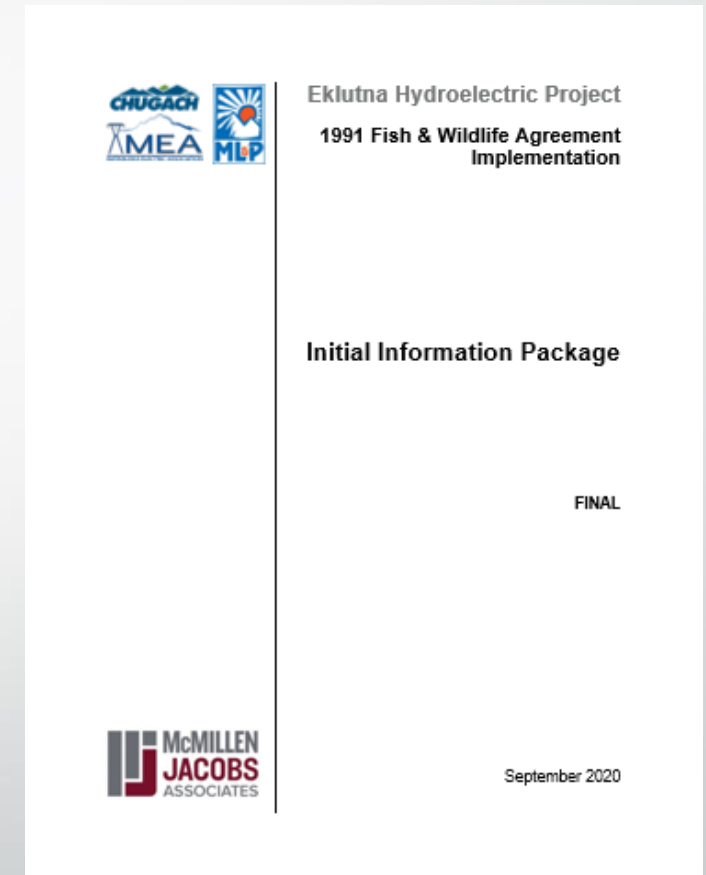


# Expanded Project Team

- Additional Technical Experts:
  - R2 Consultants – Instream Flow and Fisheries
  - Watershed GeoDynamics – Geomorphology and Sediment Transport
- Meeting Facilitation and Communication:
  - Information Insights – Meeting Facilitator, Alli Harvey
  - Uqaqti Consulting – Stakeholder/Outreach Specialist, Joy Huntington
- Project owners committed to an enhanced status for Native Village of Eklutna

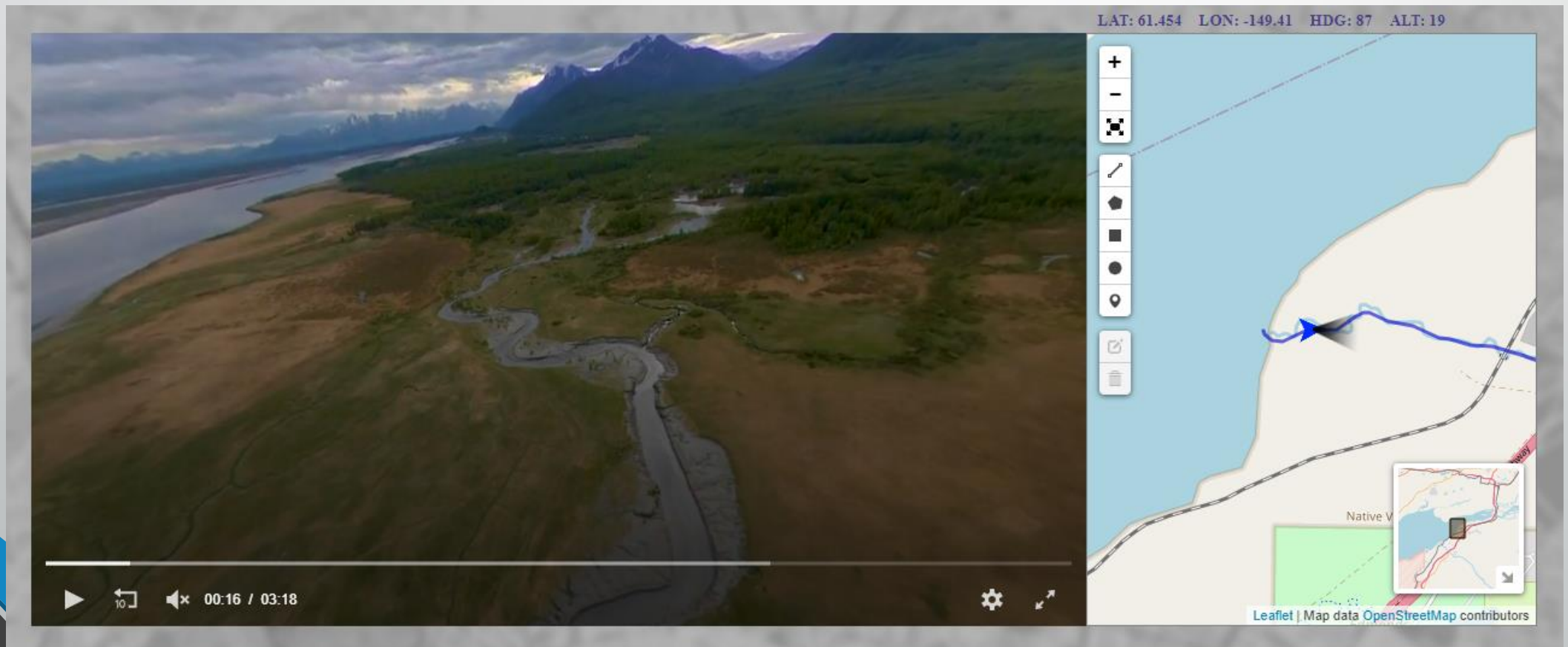
# Developed Initial Information Package (IIP)

- Compilation of all relevant existing information
- Draft IIP and reference documents uploaded to the Project website in March
- Stakeholder meeting on April 16, 2020 to review the Draft IIP
- Deadline for written comments was April 24
- Final IIP and comprehensive comment-response table now available on the Project website



# Acquired Imagery, Videography, & LiDAR

- Acquired aerial imagery, videography, and LiDAR in May 2020
- Spherical video available online: <https://biglook360.com/eklutna/>



# Established Technical Work Group (TWG)

- Established “Aquatics” TWG in May/June 2020
- Several entities agreed/volunteered to participate:
  - Native Village of Eklutna
  - Alaska Department of Fish and Game
  - National Marine Fisheries Service
  - U.S. Fish and Wildlife Service
  - Trout Unlimited
  - Alaska Pacific University
  - Alaska Institute for Climate and Energy
  - Project Owners
- Expanding TWG for infrastructure related studies

# Developed Information Matrix

- First step in developing study plans
- Identifies what information will be needed to compare potential alternatives
- Key resource parameters include:
  - Fish Habitat
  - Water Quality
  - Macroinvertebrates
  - Wetlands
  - Wildlife
  - Recreational Use and Facilities
  - Cultural Resources
  - Carbon Benefit
  - Safety
  - Municipal Water Supply
  - Downstream Bridges and Property
  - Eklutna Salmon Hatchery
  - Power Production
  - Cost



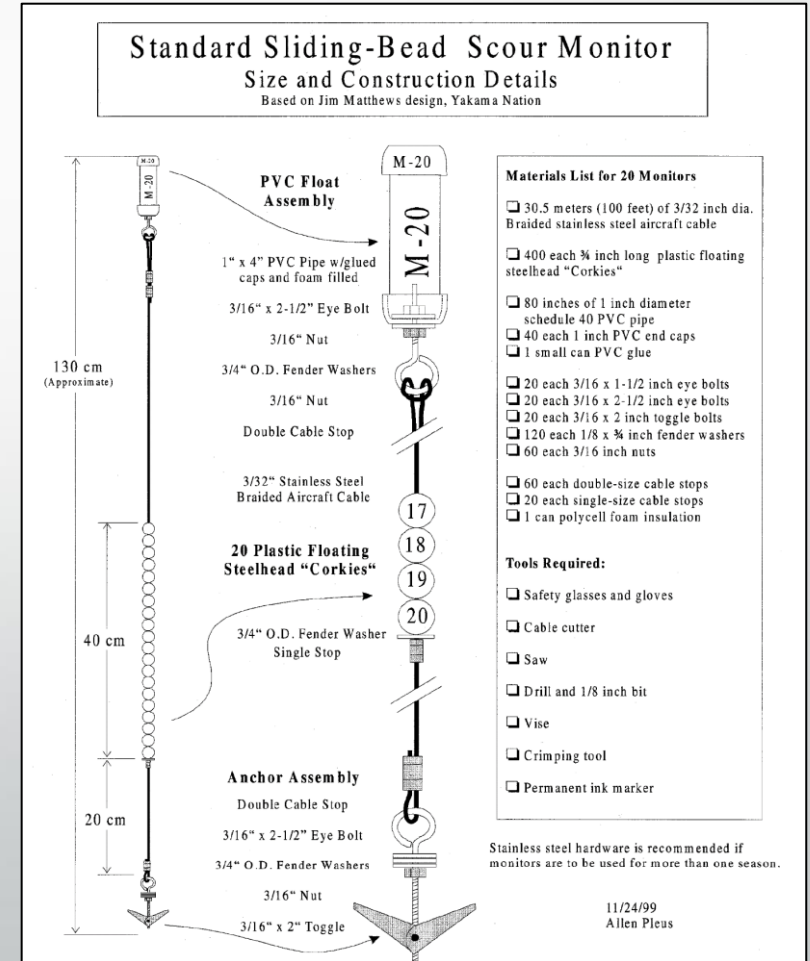
# Conducted Site Visits

- First TWG meeting on July 15 to prep for site visit
- Conducted site visit July 20-22
- TWG meeting on July 23 to kick off study planning effort
- Conducted another site visit August 21-23

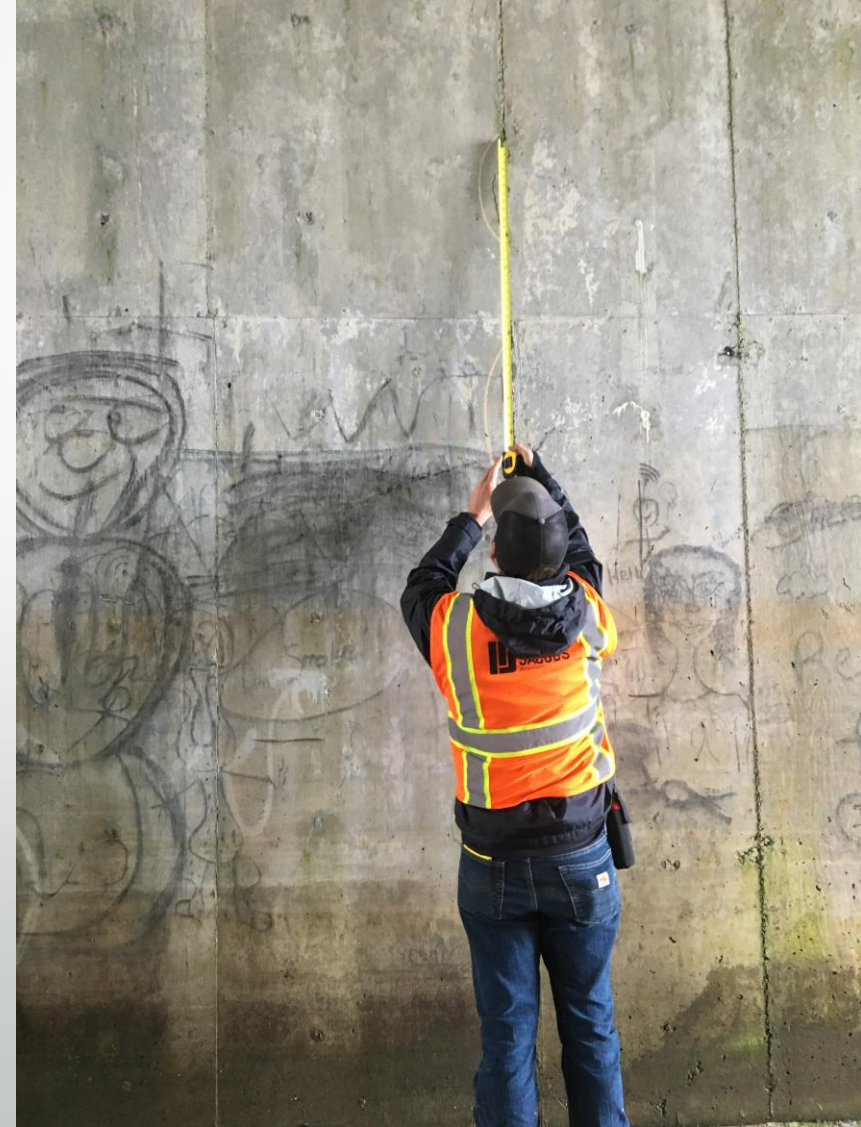
# Upper and Lower Eklutna River



# Established Transects and Installed Scour Monitors



# Conducted Condition Assessment



# Maintenance Gate Access



# Developed Study Program Framework

- Based on Information Matrix and TWG discussions
- TWG meeting on September 3, 2020 to review Study Program Framework, including:
  - Proposed Studies
  - Study Objectives
  - Study Areas
  - Preliminary Methodologies
  - Study Plan Outline
  - Study Planning Schedule

# Proposed Studies

Year One Studies (2021)	Year Two Studies (2022)
Instream Flow Study	Engineering Feasibility and Cost Assessment Study
Geomorphology/Sediment Transport Study	Hydropower Valuation Study
Fish Species Composition and Distribution Study	Recreation Study
Water Quality Study	Wildlife Study
Macroinvertebrate Study	Wetlands/Riparian Habitat Study
Stream Gaging	Cultural Resources Study
Lake Aquatic Habitat and Fish Utilization Study	Fish Hatchery Assessment
Lake Shoreline Erosion Study	Imagery/LiDAR Support (if needed)
Hydro Operations Modeling Study	
Infrastructure Assessment Study	
Imagery/LiDAR Support (if needed)	

# Flow Release for Studies

Project owners committed to flow releases for study purposes contingent on the following prerequisites:

- Address any safety concerns
- Define flow releases (magnitude, duration, timing) and develop study plan
- Conduct condition assessment of spillway and drainage outlet gate
- Evaluate impacts to existing fish habitat
- Evaluate impacts to downstream infrastructure
- Evaluate impacts to lakeside trail and associated infrastructure
- Calculate cost of providing flows and assess feasibility
- Address any legal concerns



# Ongoing Consultation with the Native Village of Eklutna (NVE)

- In June 2020, the Project owners committed to an enhanced status that includes:
  - Utilizing NVE's expertise throughout process
  - Incorporating Traditional Ecological Knowledge
  - Holding additional coordination meetings with NVE
  - Sharing all documents directly with NVE for feedback
  - Submitting an NVE-specific comment summary to the Governor
- Project owners met with NVE leadership on September 30, 2020

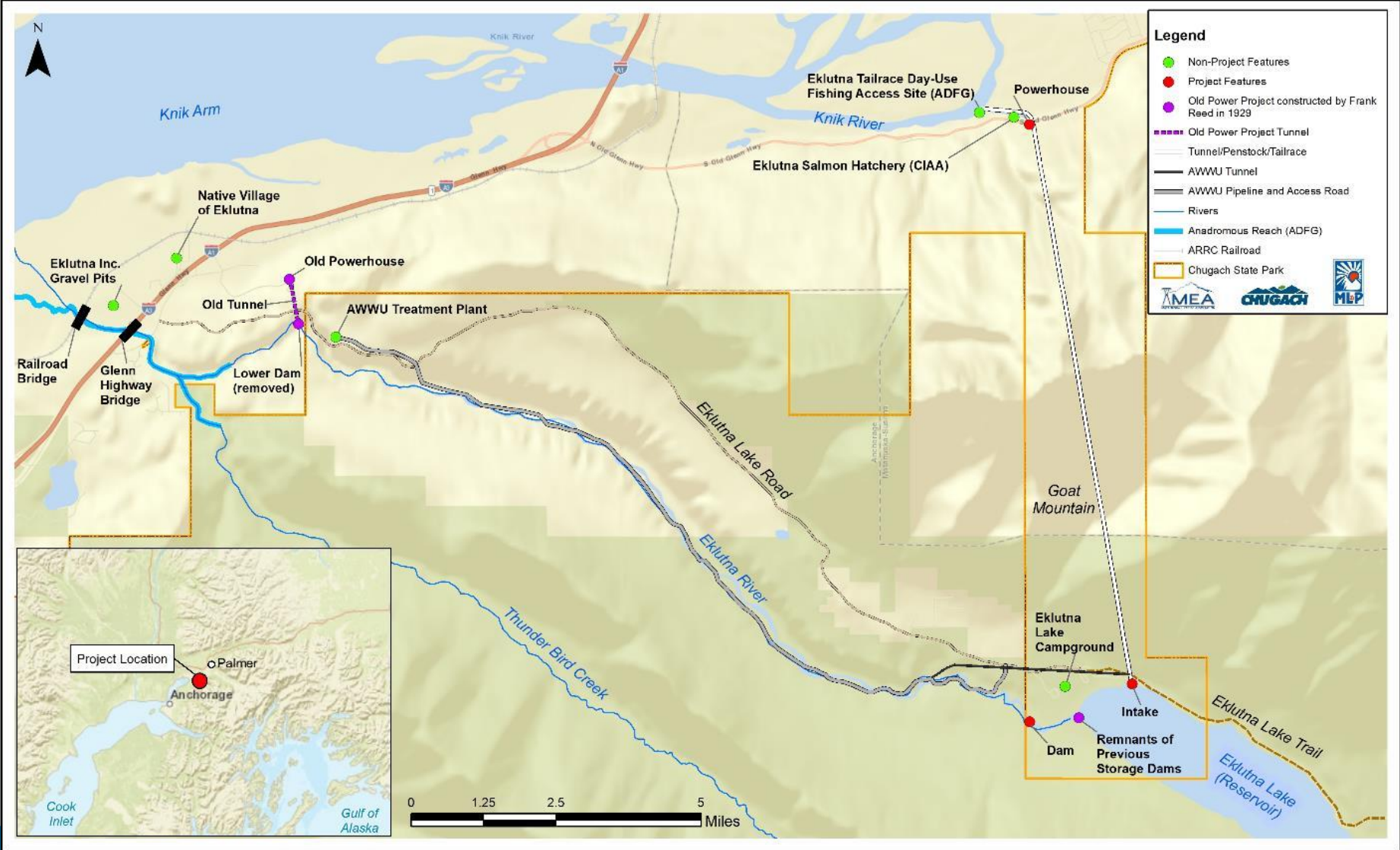
# Schedule for Remainder of 2020

Activity	Timeframe
Expand TWG and Draft Year 1 Study Plans	September – October
TWG Review and Comment Period	October – November
TWG Meeting to Review Comments, and Consultation with NVE	End of November
Prepare Comment/Response Table and Finalize Year 1 Study Plans	Early December
Obtain Approval from Parties to the Agreement, then Submit Approved Year 1 Study Plans to the Governor	December – January

# Next Steps in Early 2021

- Submit approved Study Plans to the Governor by January and obtain feedback
- Discuss Governor's feedback with TWG and revise Study Plans if needed
- Obtain any necessary permits or access permissions for study implementation
- Address remaining prerequisites for study flow releases
- Implement Final Study Plans

# Eklutna Area Overview



# Eklutna Hydroelectric Features



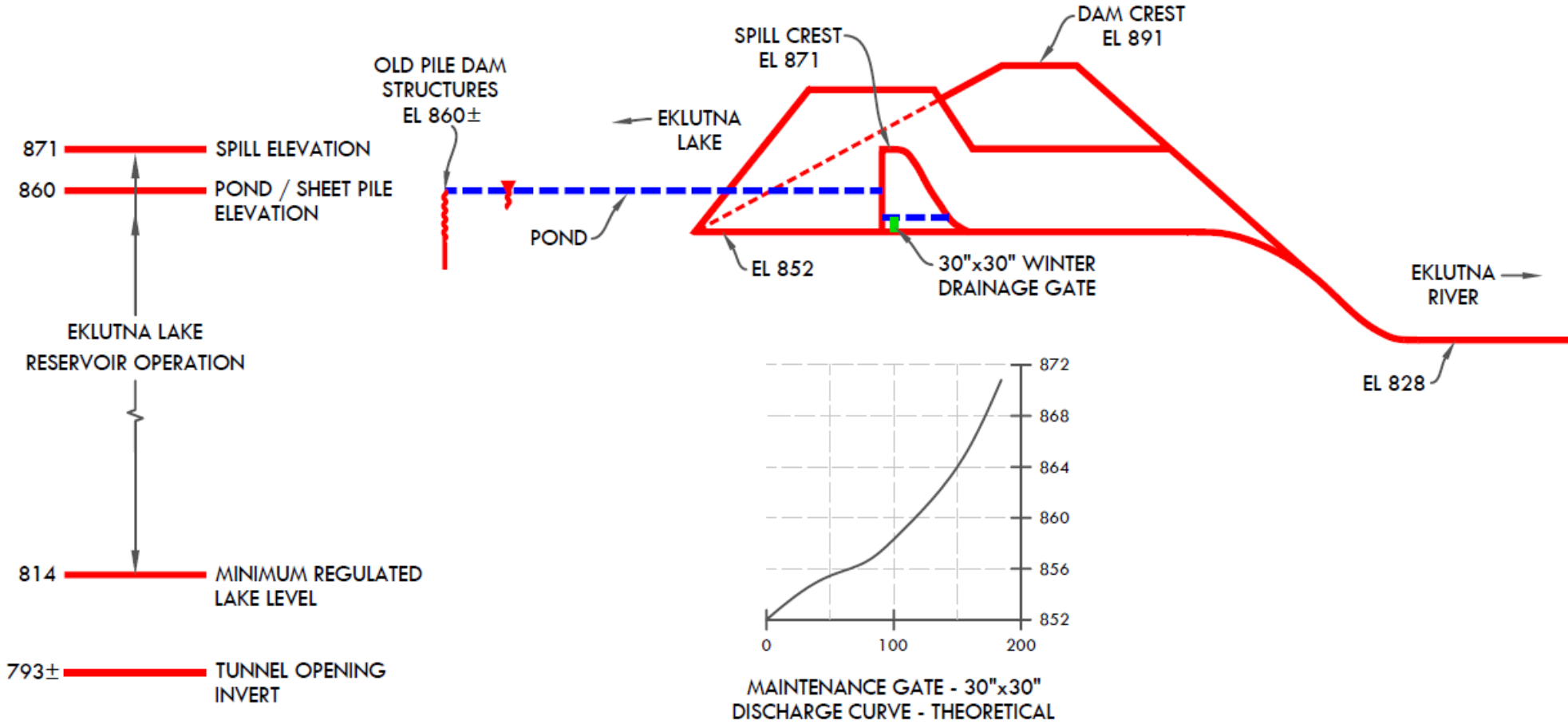
# Critical Elevations

- El. 794 feet – Intake
- El. 814 feet – Minimum Regulated Lake Level
- El. 852 feet – Drainage Outlet Gate
- El. 860 feet – Crest of Natural Glacial Moraine (approximate)
- El. 860 feet – Remnants of Old Dams
- El. 871 feet – Spillway Crest
- El. 891 feet – Dam Crest

# Drainage Outlet Gate

- There is a 30" x 30" drainage outlet in the base of the spillway
- Controlled by a manually operated slide gate
- Can release up to 191 cfs (when lake level is at the spillway crest)
- Not a typical reservoir outlet (constructed to drain the "pond" in the winter)
- Currently the slide gate is only operated once annually for maintenance purposes

# EKLUTNA HYDROELECTRIC PROFILE DAM SPILLWAY

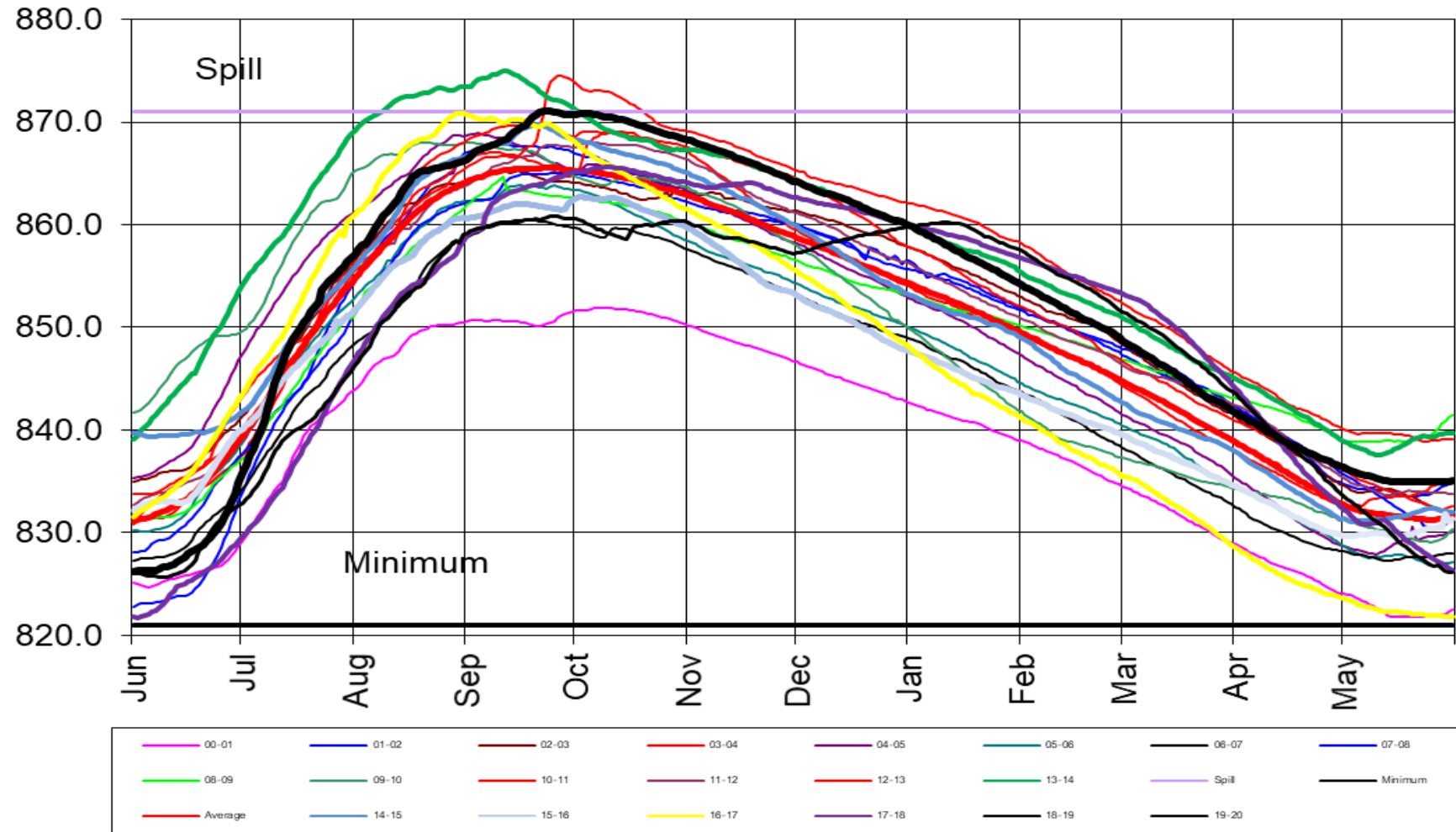




# Maintenance Gate Access



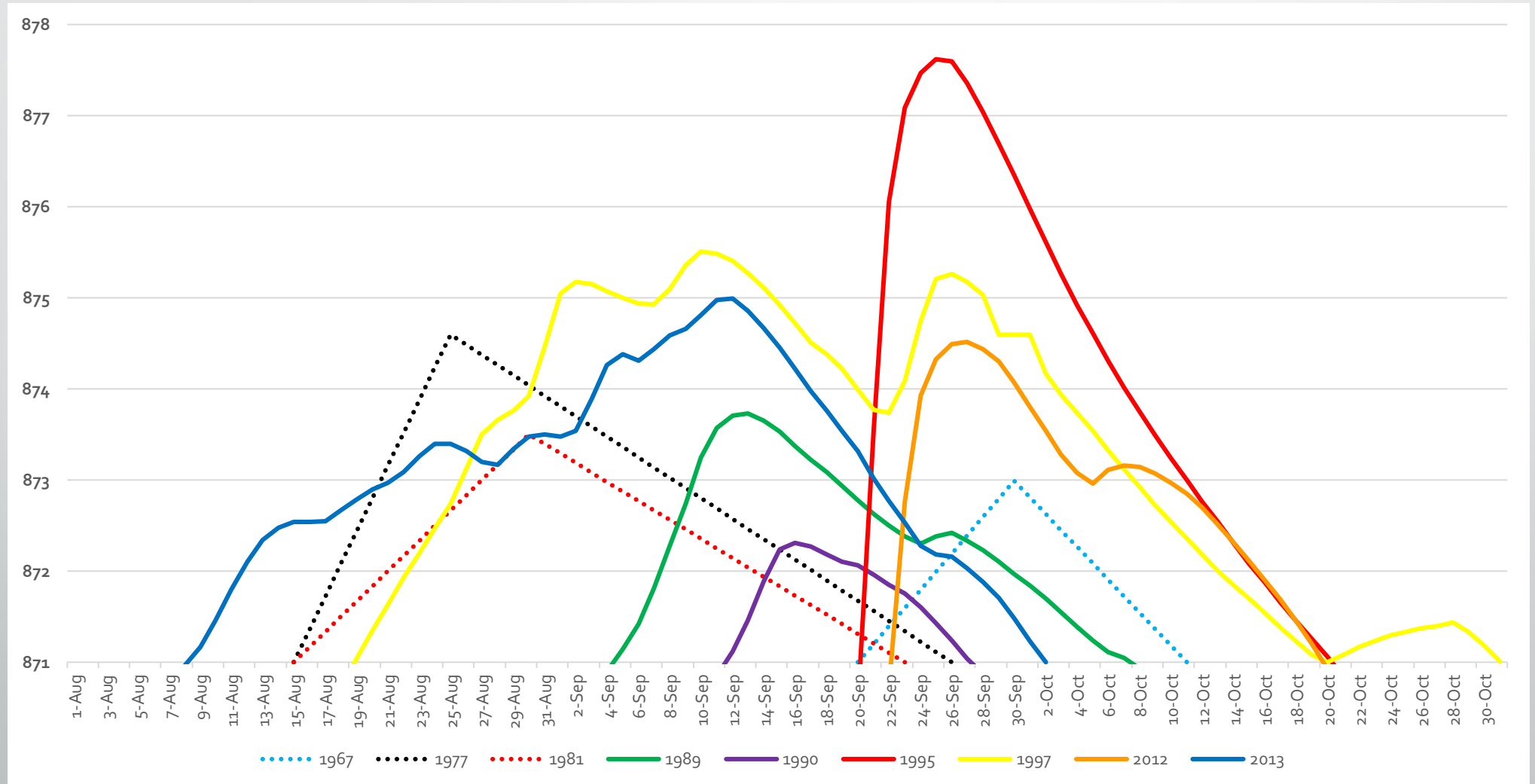
## Eklutna Lake Level June 1, 2000 Through June 21, 2020



# Eklutna Hydroelectric Features



# Spill Events





# Questions?