Powering the Electric Grid and the Nuyakuk Falls Diversion-Hydro Investigation.

BBRSDA Fleet Meeting
March 5, 2025

Nushagak Electric & Telephone Cooperative

Board of Directors

Nushagak COOPERATIVE

WWW.NUSHTEL.COM

Mark Lisac

Retired Fisheries Biologist – USFWS Togiak NW-Refuge

NETC member since 1983

Joined NETC Board of Directors Aug. 2022

Solar Educator

Alternative Title

Who in their right mind would consider a hydro project in the world's largest intact salmon producing ecosystem?

What's wrong w/ burning diesel to generate electricity, forever???

Outline:

- The Utility Cooperative
  + misconceptions
- Diesel Costs & Security
- Power Needs
- Options Evaluated
- The Nuyakuk Project – 2017 to Present
- What's Next – Updated Study Report
  - USR submitted to FERC Dec 2, 2024
  - Public Review : Dec 2024 to Mar 2025
  - USR Public Meetings: Jan 15 & 16
  - Risk Analysis
  - NETC Board Decision

Nushagak COOPERATIVE

NETC
1,507 Member-owners

WWW.NUSHTEL.COM

How Social Media got it wrong: “big corporation coming to steal our resources”….

Nushagak COOPERATIVE

1,507 Member-owners

- Electric meters,
- Land-lines,
- Internet users

WWW.NUSHTEL.COM

IRS 501 (C) (12)

ANNUAL REPORTING

A Cooperative is:

a **NONPROFIT** Entity established for the benefit of it’s MEMBERS

(IRS 501 (C) (12)

Mission

To provide safe, reliable and affordable services to support member’s quality of life now and into the future.

Regulated

All Cooperatives are Governed by the same Principles

Both are COOPERATIVES
… to Benefit members

Hydro project link on the BBRSDA Web page:::: www.nuyakukhydro.com

Board of Directors

9 Directors Elected by the Membership

Purpose

Make informed decisions to ensure the long-term success of the Cooperative.

Strategic Plan – Goal & Objectives

Provide a Secure Energy Future	• Develop an Information campaign, leveraging strategic partnerships • Evaluate all power resources

About Us - Board of Directors

**The regularly scheduled Board meetings are held every third Tuesday*

	**PETE ANDREW** President 4/22/98 - Current **27 years**		**HENRY STRUB** Vice President 1984 - Current **41 years**
	**ANNIE FRITZE** Secretary 3/24/15 - Current **10 years**		**JAMES HALL** Treasurer 9/19/24 - Current **1.5 years**
	**BRUCE BALTAR** Director 10/18/16 - Current **9 years**		**JEAN BARRETT** Director 3/21/23 - Current **2 years**
	**SUSAN FLENSBURG** Director 3/26/19 - Current **6 years**		**MARK LISAC** Director 8/9/22 – Current **2.5 years**
	**WANDA WAHL** Director 7/21/15 - Current **10 years**		

What thoughts keep YOUR Board Members up at night?

When thinking about providing competitive, reliable and safe electricity,

#1 = The Cost of Energy
The Cost of Producing Energy
The Cost to the Members

Nushagak COOPERATIVE

NETC is 100% Diesel Electric Power Generation and Distribution Cooperative

FACTORS EFFECT COST OF DIESEL = COST OF ENERGY = COST OF GOODS & SERVICES

ALL THESE EFFECT THE COST OF DIESEL ENERGY:

- Supply chain
- Transportation
- Insurance
- Natural Disasters
- Fuel cost
- Demand
- Wars
- Labor Cost
- Price Fixing
- Emission Cost
- Environmental Disasters
- **LOSS OF ONSHORE PROCESSING**

Out of Our Control

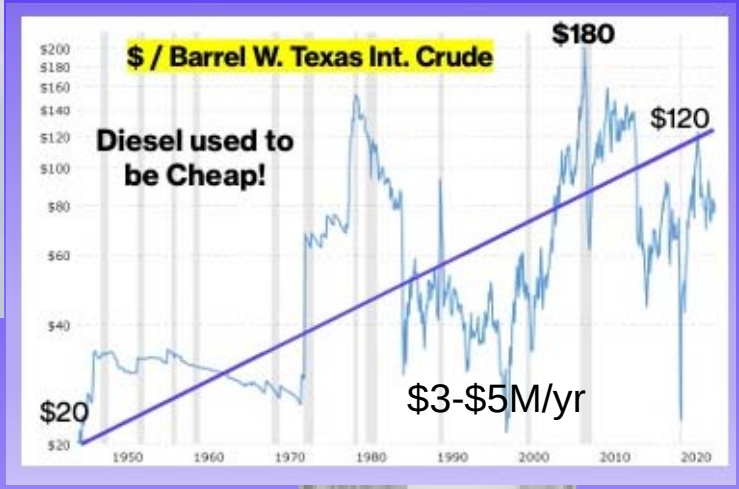
Nushagak COOPERATIVE

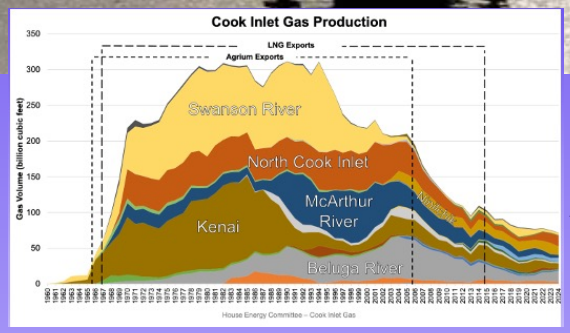
ALL OF THESE EFFECTED BY THE COST OF ENERGY:

- Air Fare
- Groceries
- Transportation
- Manufacturing
- Interest Rates
- Inflation
- Small Business O&M
- Housing
- Home Heating
- **The PRICE OF FISH**
- **PCE Subsidy**
- ……. More ……

FACTORS EFFECT COST OF DIE

COST OF GOODS & SERVICES





DIESEL ENERGY $

In the News:

Russia Invades Ukraine

Suez Canal blocked

The DANGERS of Transporting 3 MILLION Gallons of Diesel / YEAR Through BB Waters = Risky Business

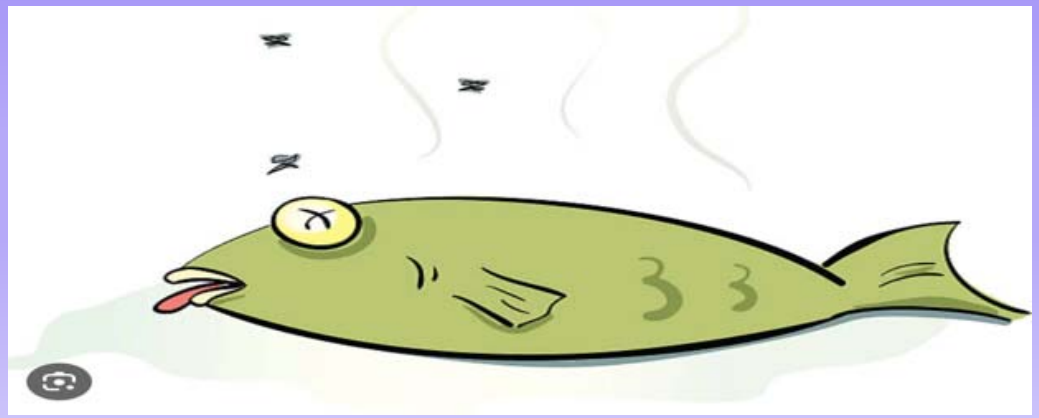
A diesel spill in BB waters & rivers could harm salmon and the salmon fishery.

SIX COMMUNITIES

Dillingham + Aleknagik + New Stuyahak + Ekwok +Koliganek + Levelock

---

Nushagak, Naknek & Kvichak Bays & Rivers



Diesel spills have disrupted Commercial and Subsistence **salmon** fisheries

Past Oil Spills in the News - KDLG / BB Times

- **Nushagak District closed to fishing because capsized tender is leaking fuel**
  - **Jul 26, 2018**
- https://www.kdlg.org/fisheries/2018-07-26/nushagak-district-closed-to-fishing-because-capsized-tender-is-leaking-fuel

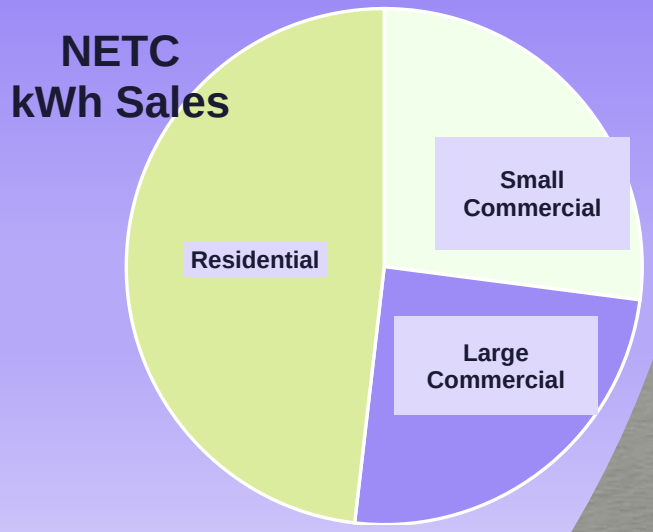
- **Diesel Fuel Spilled in the Nushagak River**
  - **May 14, 2014**
- https://www.kdlg.org/environment/2014-05-14/diesel-fuel-spilled-in-the-nushagak-river

- **More Details About the Diesel Fuel Spill in the Nushagak River**
  - **May 17, 2014**
- https://www.kdlg.org/environment/2014-05-17/more-details-about-the-diesel-fuel-spill-in-the-nushagak-river
-

BB Times & Dutch Harbor Fisherman : Search OIL Spills in W. Alaska = 60+ articles

LOSS OF LARGE onshore electric customers

The Coop survives by selling electricity – and spreading the cost of operation among the Members

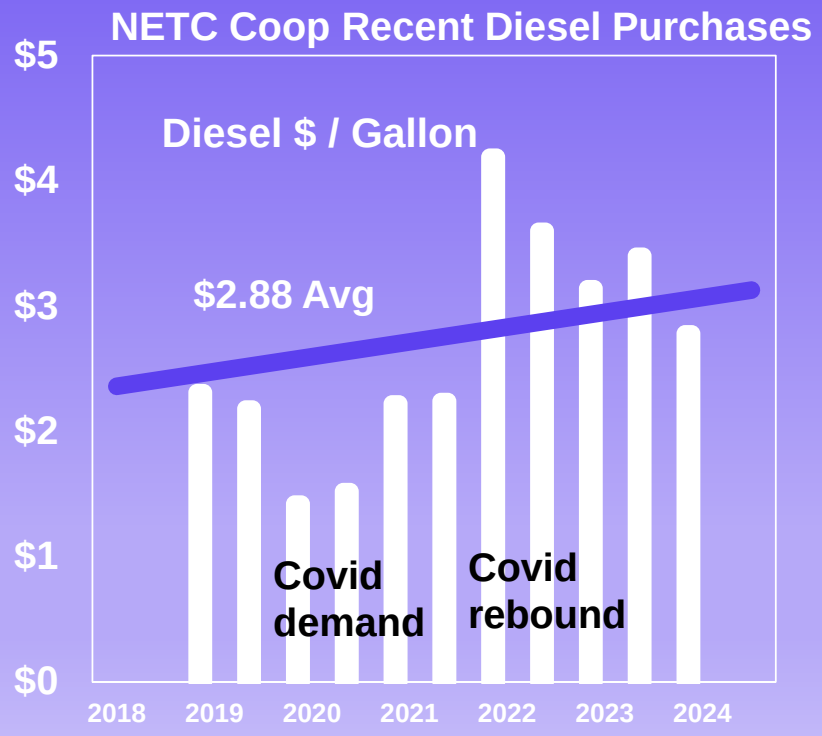


Offshore processing:

Peter Pan closures
King Kove
Kodiak
Dillingham
Port Moller

The Hanna in Nushagak Bay 2024 season

Realities of Fossil Fuel Dependency



Date	$ / gallon	# of Gallons	Total $$$$
Spring 2024	$2.78	502,212	$1,394,090
Fall 2023	$3.40	1,200,000	$4,000,000
Spring 2023	$3.14	200,686	$629,752
Fall 2022	$3.60	500,524	$1,800,000
Spring 2022	$4.19	693,039	$2,900,000
Fall 2021	$2.24	604,222	$1,300,000
Spring 2021	$2.22	684,425	$1,500,000
Fall 2020	$1.52	522,776	$794,567
Spring 2020	$1.42	808,889	$1,148,460
Fall 2019	$2.18	551,001	$1,200,961
Spring 2019	$2.31	600,229	$1,388,990
5 years	TOTAL	6,263,781	$18,056,820

COOP W/ Unalakleet, Naknek, Kotzebue, & Nome

Home heating fuel $6.85 / gal in Dillingham

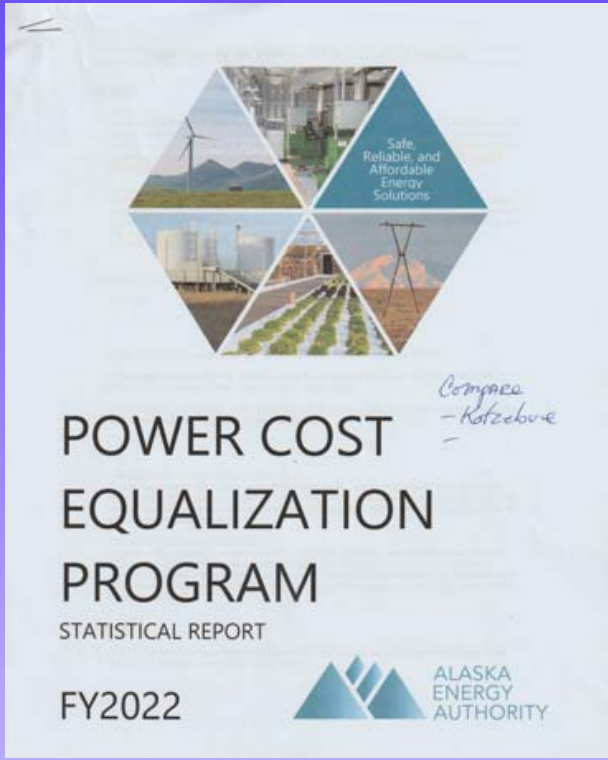
Impacts more than NETC.
Members' Cost of Diesel Power Production

(From AEA 2022 Annual PCE report) **

	Dillingham, Aleknagik	AVEC		Koliganek	Levelock	TOTAL		Naknek, S. Naknek, King Salmon
		Ekwok	New Stuyahok					
Population	2,463	107	491	194	60	3,315		868
Members	1,507	80	149	100	78	1,914		1,229
MWh	**19,745**	**452**	**1,926**	**695**	**297**	**23,116**		**24,489**
Diesel Gal	1,324,448	w/ New Stu	145,709	55,358	23,142	**1,548,657**		1,648,054
$/gallon	$1.91		$ 3.14	$ 3.14	$ 3.14			$ 1.98
$ diesel	$2,532,197		$485,240	$ 173,950	$ 73,727	**$3,265,114**		$ 3,271,326
PCE $	**$ 727,072**	**$62,048**	**$170,123**	**$ 67,416**	**$ 9,636**	**$1,036,295**		$ 644,867
COST to MEMBERS	**$ 1,805,125**		**$ 253,069**	**$ 106,534**	**$ 64,091**	**$ 2,228,819**		**$ 2,626,459**

STATEWIDE Average Price of Diesel ($/gallon) : 2021 = $2.63; 2022 = $3.02; =14.8% INCREASE

PCE reduces Members' Electric Bills



"PCE reduces the electric rates paid by rural consumers to levels comparable to those paid by consumers in Anchorage, Fairbanks, and Juneau."

The Base Rate " changes

Cook Inlet Nat Gas ⇩

+

Railbelt / Juneau Rates ⇧

=

Base Rate ⇧

PCE SUBSIDY ⇩

PCE Formula:
95% of the eligible costs per kWh between 20.03 cents/kWh, "the base rate" and $1.00/kWh, "the ceiling".

NOT GUARENTEED

CHANGES DEPENDING ON RAILBELT RATES

https://www.akenergyauthority.org

How can we fulfill our coop mission?

"Provide competitive, *reliable* services"

Now & Future

Continued Economic Sustainability for the communities w/o Burden to Membership

The 15+ Year History of Alternatives Evaluated

+ **Solar – ongoing**
  - UAF BBC
  - IPP being Considered

+ **Wind – Studied 4 Sites**
  - Wind-diesel hybrid system
  - Rejected - minimal wind resource

+ **2 Storage (Dam) Hydro Projects**
  - Lake Elva & Grant Lakes
    + Rejected
    + Impacts > rewards

ALL HAVE LIMITATIONS WHEN IT COMES TO PROVIDING BASE-LOAD POWER NEEDS

Nushagak COOPERATIVE

CHALLENGE: How to -

Provide Base-Load Power Needs

Reduce Diesel Insecurity & Financial Impact

FOR NETC AND MAYBE OTHERS

NEED:

Steady – Reliable- Predictable

Minimize Impacts

Why consider an in-river hydro project?

Looking for a consistent Base Load Power Source

IN 2017 Operations Managers suggested that the Nuyakuk Falls appeared to be an ideal formation for a run -of-river hydro power source

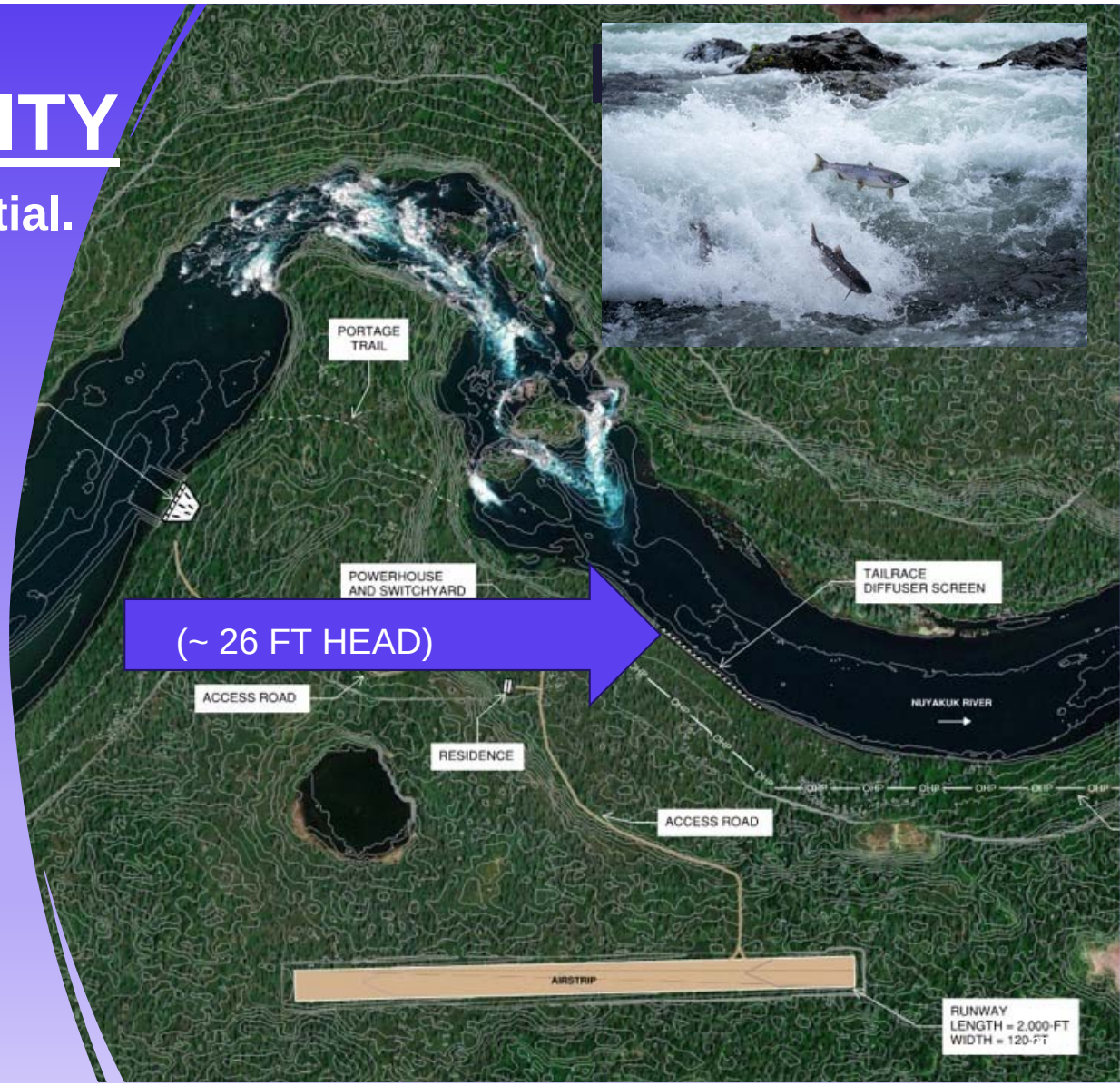
NO DAM OR FISH LADDER REQUIRED

Harnessing GRAVITY

2017 – Nuyakuk Falls potential.

Divert H2O from top to bottom through a turbine
=
Convert gravity into electricity

NO DAM!
NO FISH LADDER!



The first thing the Board Did:

FISH FIRST

RESOLUTION 2017-30

RECOGNIZE & PRIORITIZE the importance of salmon to sustain the areas Culture & Economy

NUSHAGAK ELECTRIC & TELEPHONE COOPERATIVE, INC.

RESOLUTION NO. 2017-30
Resource Evaluation and Utilization Resolution: Fish First

WHEREAS, Nushagak Electric & Telephone Cooperative, Inc. ("NETC"), is a member-owned cooperative providing electric and telecommunications service in the city of Dillingham and the surrounding area; and

WHEREAS, it is in the best interest of the Members of Nushagak Electric and Telephone Cooperative to commit to the responsible evaluation and utilization of resources in the Bristol Bay Region; and

WHEREAS, the Bristol Bay watershed produces the largest runs of Sockeye Salmon in the world and is the last pristine environment for producing all species of Pacific wild salmon; and

WHEREAS, the Members of Nushagak Electric and Telephone Cooperative have cultural and subsistence ties to these wild salmon runs and that this relationship is of the highest priority to our members and our community: and

WHEREAS, Commercial fishing has provided a sustainable economy in our communities for over 100 years; and

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of Nushagak Cooperative endorses a Fish First directive when evaluating any resource utilization; and

BE IT FURTHER RESOLVED that the Board of Directors of Nushagak Electric and Telephone Cooperative will use the same values stated in this Resolution before entering into any contract for Resource Evaluation or eventual Utilization

CERTIFICATION

Resolutions of support to amend *AS 41.21.167 Wood Tikchik State Park 2019*

Meeting Date: March 7, 2019

CITY OF DILLINGHAM, ALASKA

RESOLUTION NO. 2019-09

A RESOLUTION OF THE DILLINGHAM CITY COUNCIL IN SUPPORT OF NUSHAGAK ELECTRIC & TELEPHONE COOPERATIVE'S (NETC) CONTINUING STUDY AND EVALUATION EFFORTS FOR DEVELOPMENT OF A HYDROELECTRIC FACILITY ON THE NUYAKUK RIVER AND SUPPORT FOR THE LEGISLATION TO ALLOW ACCESS TO WOOD TIKCHIK STATE PARK (WTSP) FOR THIS EFFORT

CURYUNG TRIBAL COUNCIL
RESOLUTION 2019-05

SUPPORTING NUSHAGAK ELECTRIC & TELEPHONE COOPERATIVE'S (NETC) CONTINUING STUDY AND EVALUATION EFFORTS FOR DEVELOPMENT OF A HYDROELECTRIC FACILITY ON THE NUYAKUK RIVER AND SUPPORT FOR THE LEGISLATION TO ALLOW ACCESS TO WOOD TIKCHIK STATE PARK (WTSP) FOR THIS EFFORT

BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, ALASKA 99576
(907) 842-5257

Resolution 2019 - 04

A RESOLUTION SUPPORTING FEASIBILITY STUDIES OF THE PROPOSED HYDROELECTRIC PROJECT AT THE NUYAKUK RIVER FALLS

CITY OF ALEKNAGIK
Resolution 19-03

Support for Nushagak Electric & Telephone Cooperative's (NETC) Continuing Study and Evaluation Efforts for Development of a Hydroelectric Facility on the Nuyakuk River and Support for the Legislation to Allow Access to Wood Tikchik State Park (WTSP) for this Effort

(c) "Development and operation of a hydroelectric site at Lake Elva ~~or~~ Grant Lake ***"or Nuyakuk Falls"*** *is not considered an incompatible use"*

2. **FERC – Federal Energy Regulatory Comm. = Permitting & Oversight**

Nushagak COOPERATIVE

CONTRACTOR – McMillen – Project Coordination

3.

Expert Researcher Teams

Engineer | Fish | Water | Cultural | Terrestrial

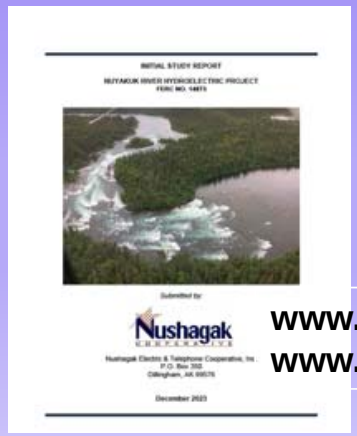
Technical Working Groups

1. Legislation Modified
AS 41.21.167 (C)

WTSP Use Permit
Camp facilities
Research activities

Participants:	
BBNA	ADFG
UTBB	DNR – AK State P.
BBRSDA	Native Am Rights F
BBEDC	USGS
BBSRI	USFWS
U. Of Washington	NMFS
U. Of Alaska	NOAA
Concerned Public	Trout Unlimited
Sandia Nat Lab	Pacific NW Lab

Agencies
NGOs
Academics
Public



www. Nushtel.com
www.nuyakukhydro.com

Tech Work Groups & FERC approved studies

USR December:

- Falls Fish Passage
- Fish Entrainment & Impingement
- False Attraction
- Future Flows
- Water Quality
- Flow Duration Curve Change Analysis
- Ice Processes
- Botanical & Wetlands Survey
- Caribou Population Evaluation
- Noise Study
- Recreation Inventory by Season
- Aesthetic Study

USR Adendum - February

- Subsistence Study
- Section 106 Evaluation
- Chinook & Sockeye Lifecycle Models
- Fish Population Integrated Risk Assessment
- Decision Support Tool

COMMENT PERIOD EXTENDED TO MARCH 20, 2025

UPDATED STUDY REPORT

NUYAKUK RIVER HYDROELECTRIC PROJECT
FERC NO. 14873

Submitted by:

Nushagak COOPERATIVE

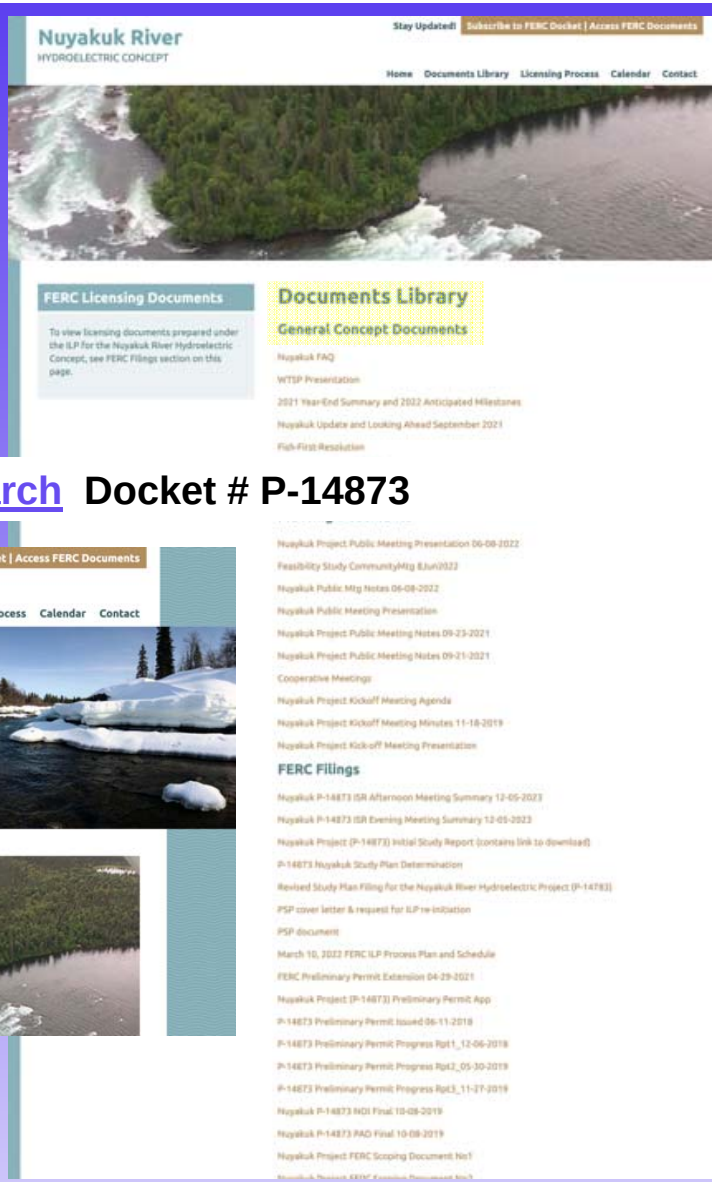
Nushagak Electric & Telephone Cooperative, Inc.
P.O. Box 350
Dillingham, AK 99576

December 2024

Attachments

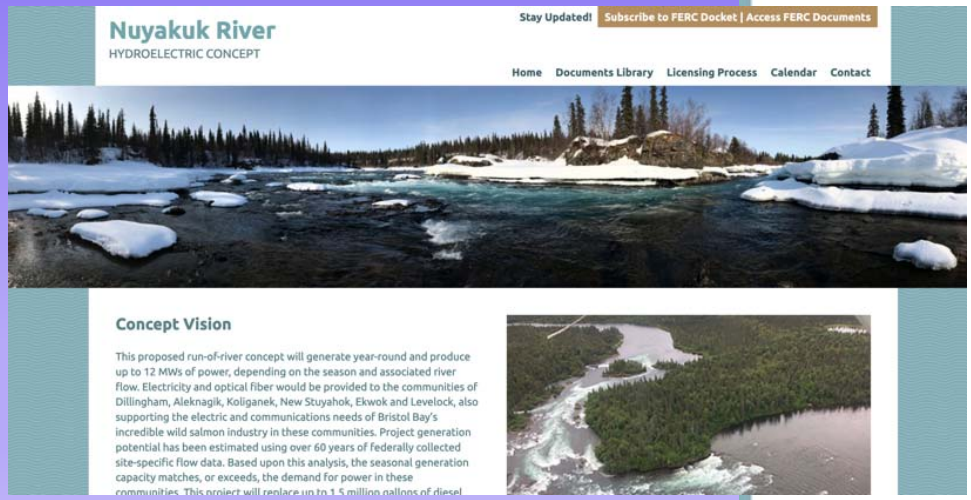
TWGs, FERC -
Review, Amend & Approve Study Designs

All Document Library
https://www.nuyakukhydro.com/documents-library/



https://elibrary.ferc.gov/eLibrary/search **Docket # P-14873**

- 100 Public & Agency Meetings
- Monthly TWG Meetings

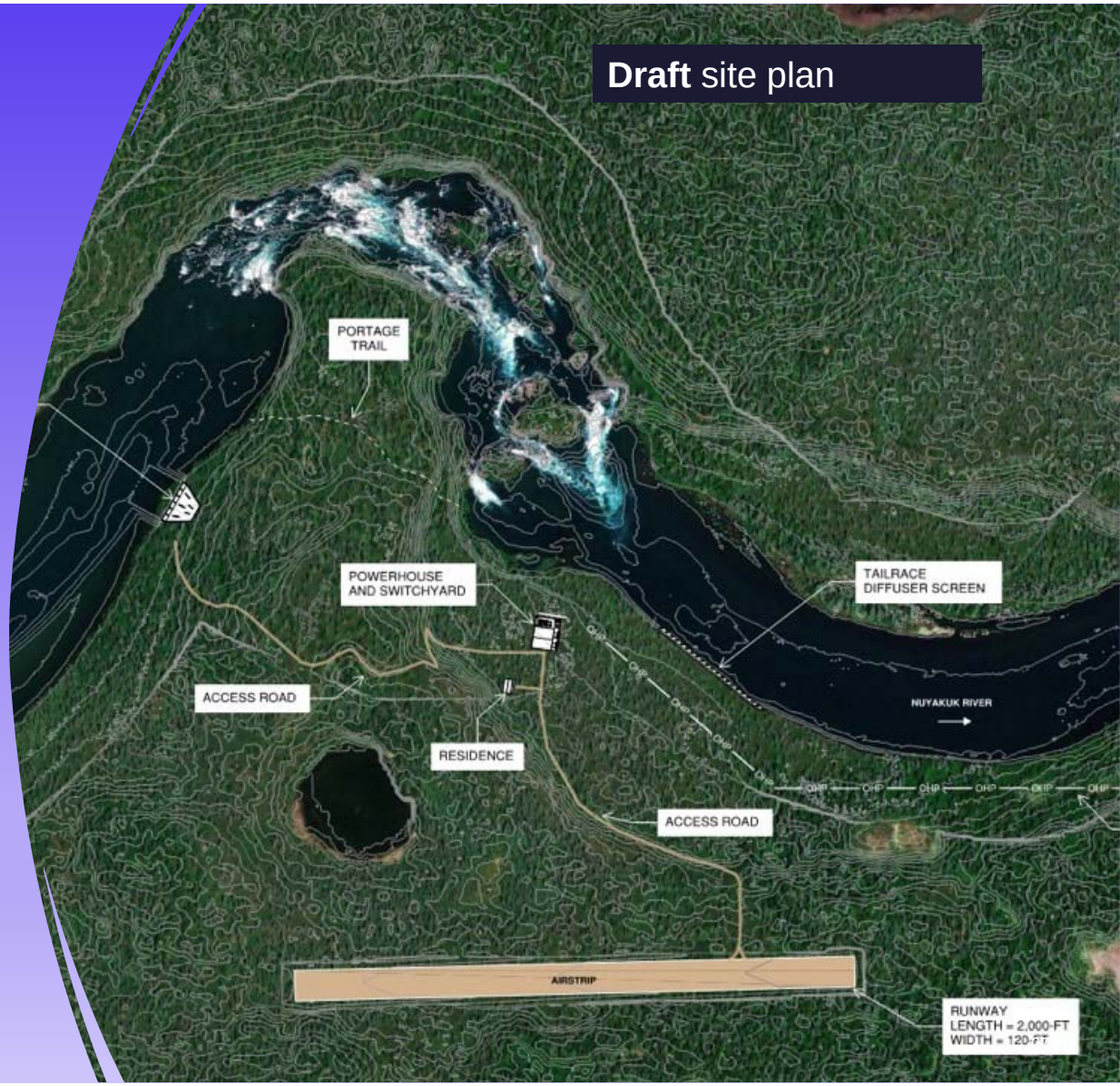


Nuyakuk Falls potential:

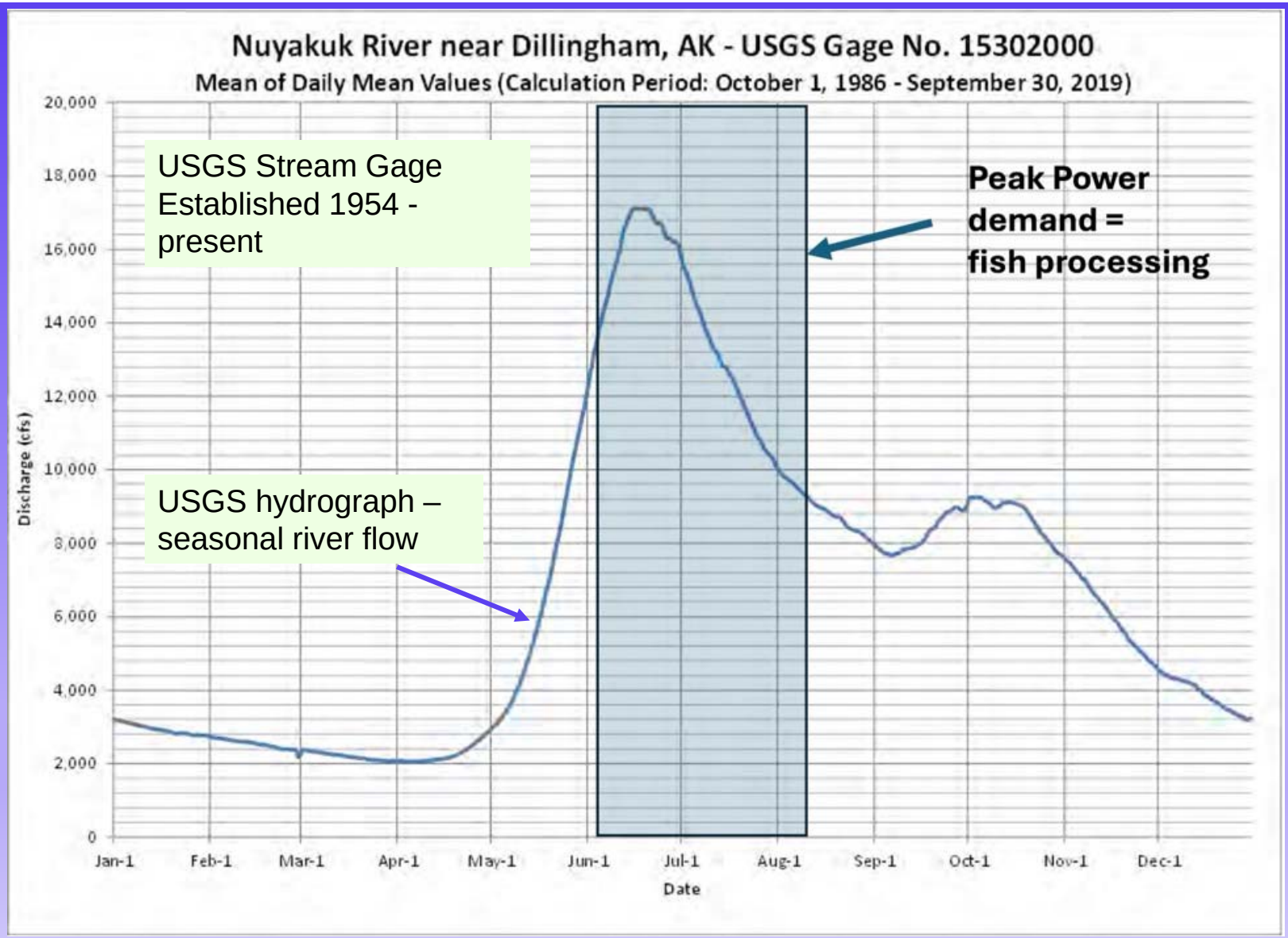
ADNR & FERC

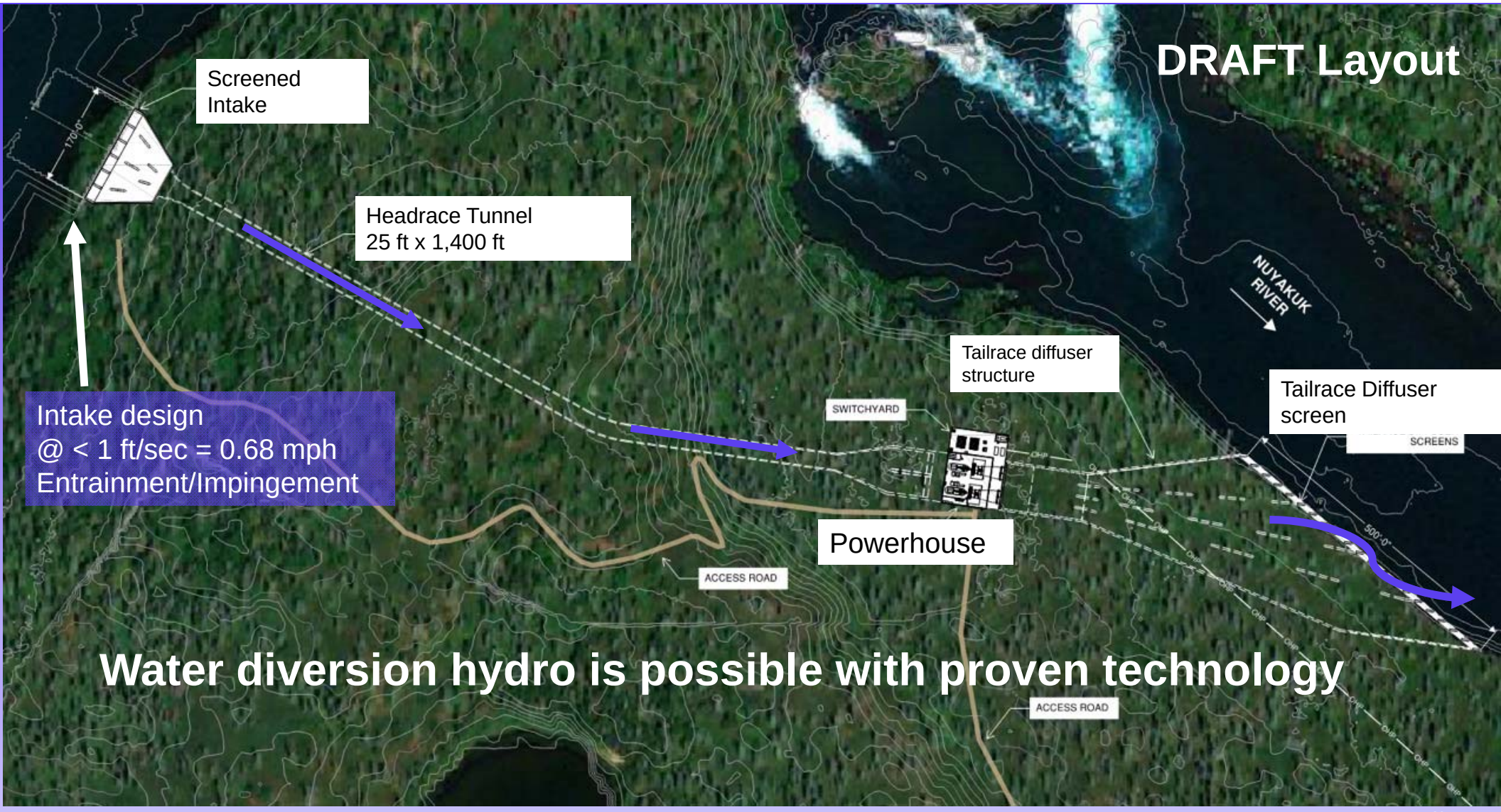
70% of water must remain in the Natural Flow
==========

USGS stream gage site
70 years of Flow data
+
Estimated
=
10 – 14 MW
potential

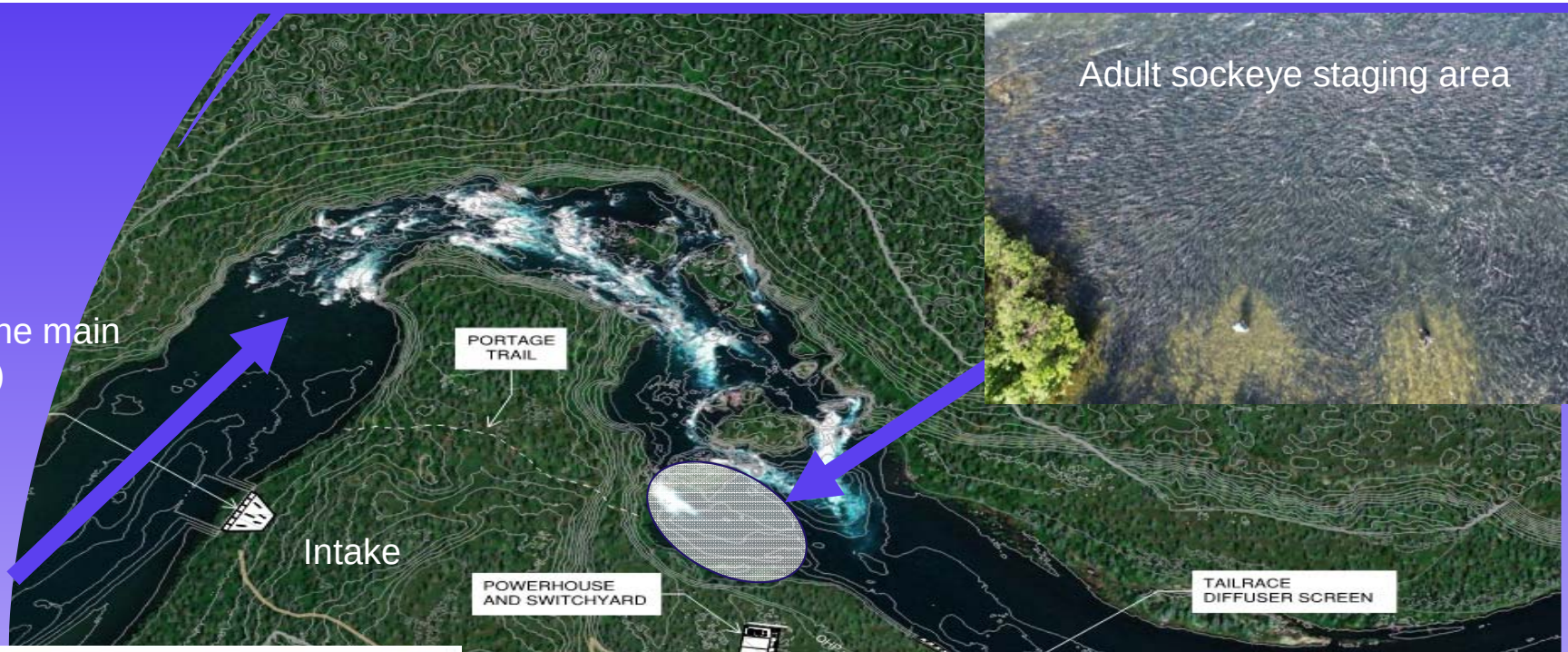


DISCHARGE - CUBIC FEET PER SECOND (CFS)




DRAFT Layout
Screened Intake
Headrace Tunnel
25 ft x 1,400 ft
Intake design
@ < 1 ft/sec = 0.68 mph
Entrainment/Impingement
Tailrace diffuser structure
Tailrace Diffuser screen
SCREENS
SWITCHYARD
Powerhouse
ACCESS ROAD
ACCESS ROAD
NUYAKUK RIVER
Water diversion hydro is possible with proven technology

Smolt travel the main flow (thalweg)




Previous photo

Adult Sockeye and Chinook Falls Passage Behavior

Radio tagged:
446 sockeye
11 Chinook
100 pink
3 chum

Predators:
140 A. grayling
36 rainbow trout
4 N. pike
9 A. char
2 lake trout
1 H. whitefish

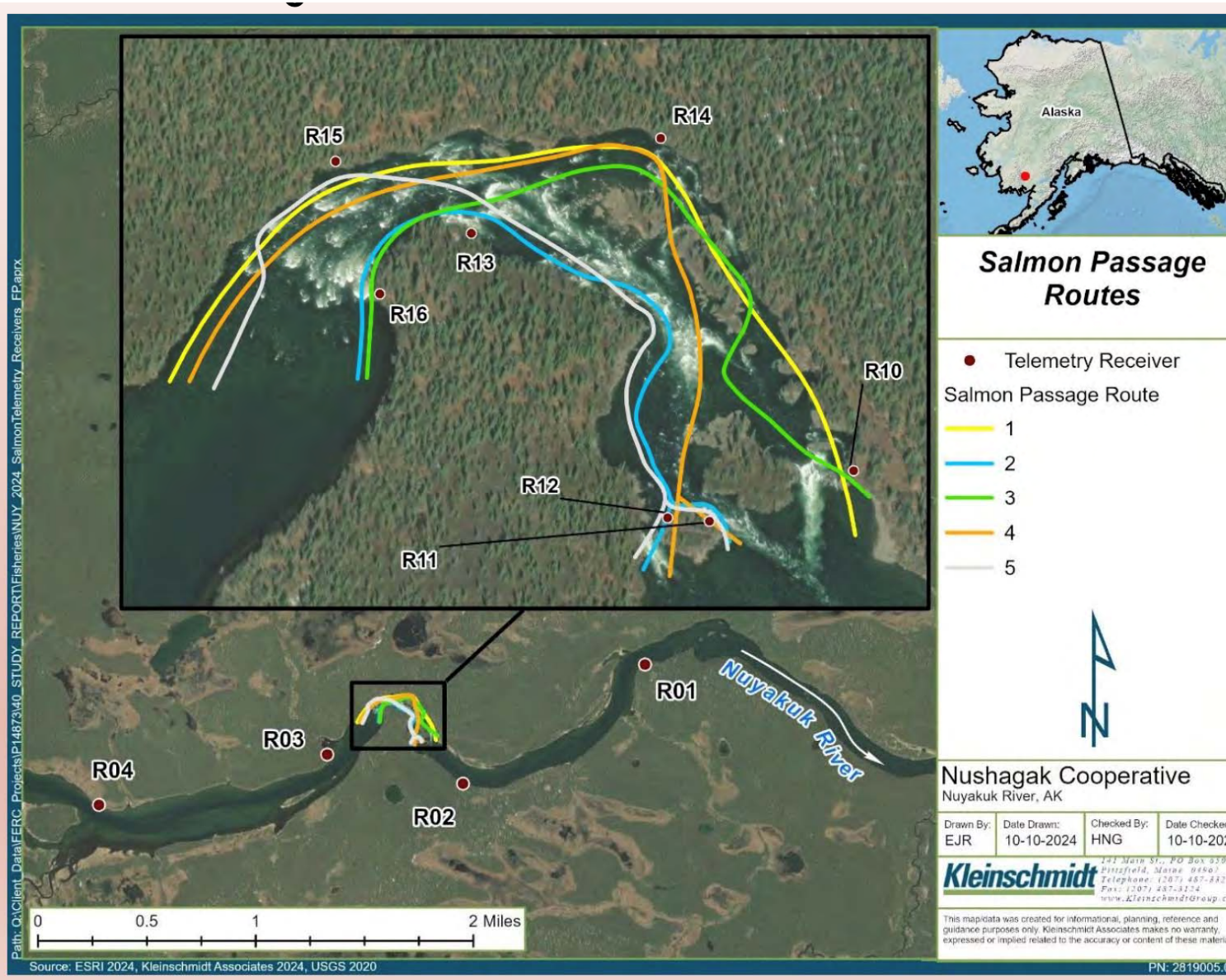
ADULT UPSTREAM PASSAGE

Hold @ Falls 1 – 3 days
Ascend 5 to 44 hours

Try different routes until successful

92% - 97% success
@ 10,000 to 18,000 cfs

Routes change w/ changing flows



Smolt Travel Routes

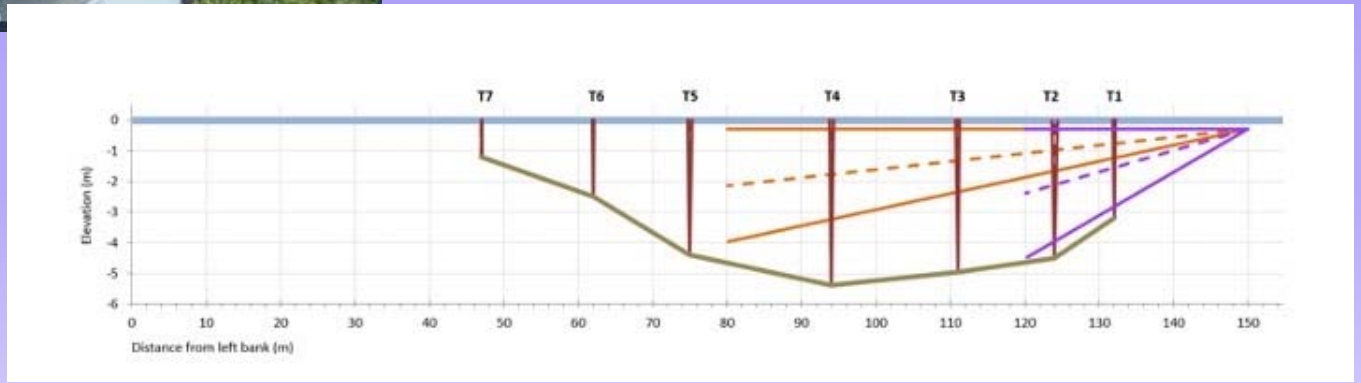
3-D Mapping

- 7 - Up looking sonar
- 2 - Side looking sonar

OPERATED

- 2023, May 27 – July 13
- 2024 , May 9 – July 13

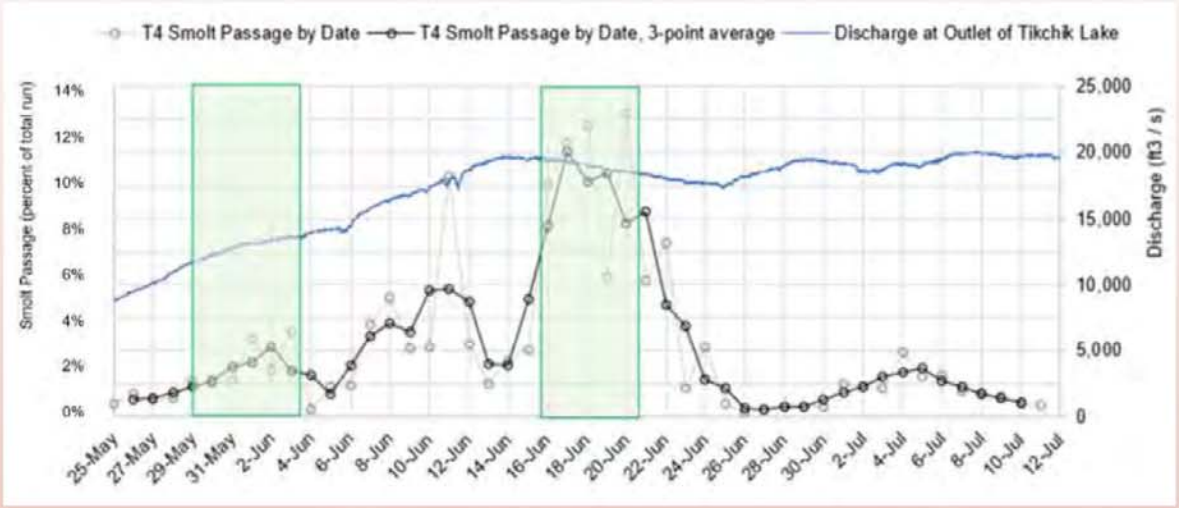
Deployed in May over the snow/ice banks



Juvenile Salmon Migration

Smolt outmigrating
Late May to mid-July

2023 Migration Intensity



2024 Migration Intensity

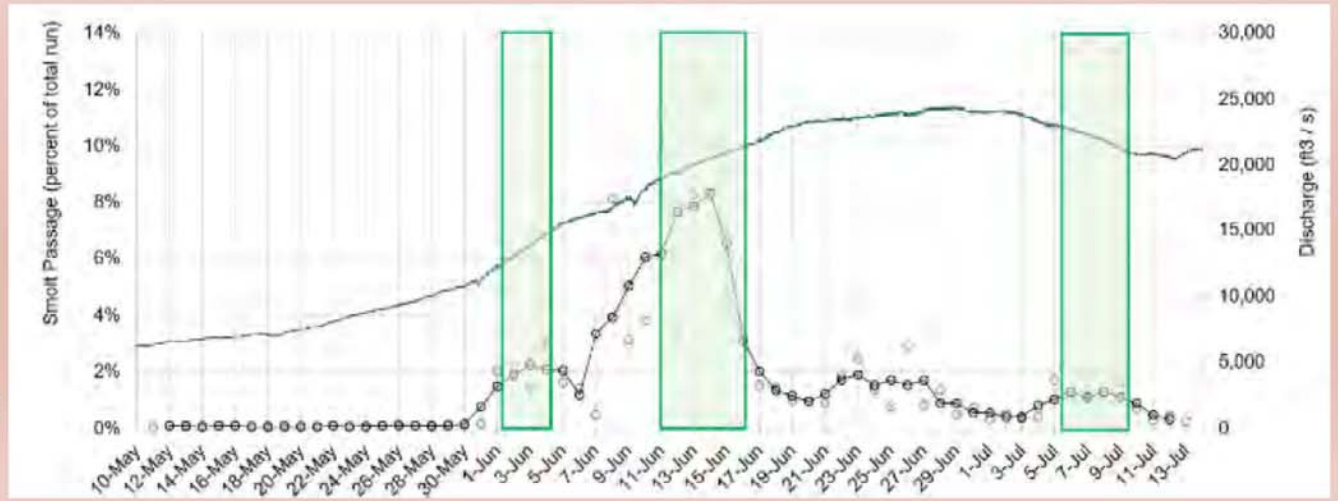
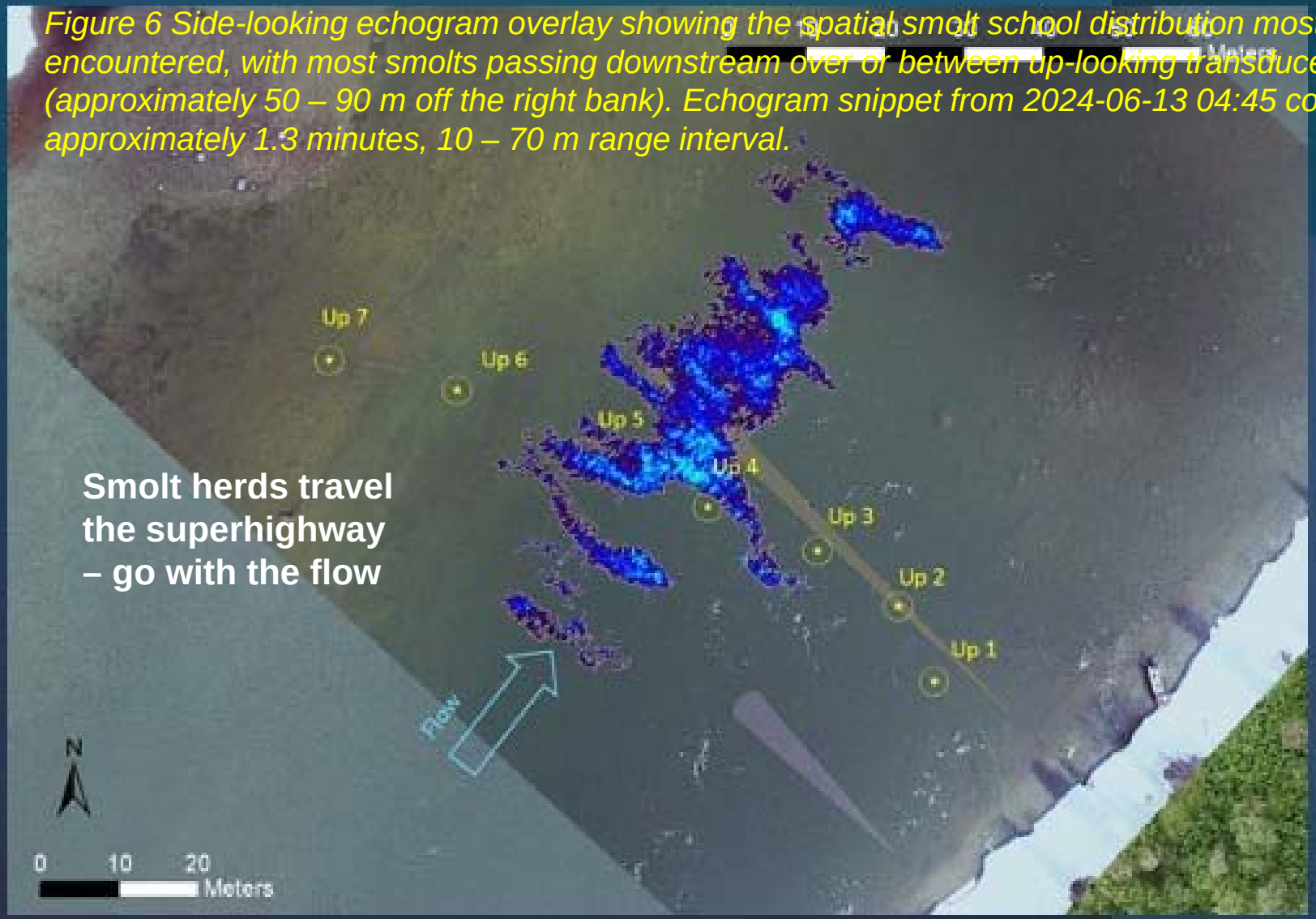


Figure 6 Side-looking echogram overlay showing the spatial smolt school distribution most commonly encountered, with most smolts passing downstream over or between up-looking transducers 3 and 5 (approximately 50 – 90 m off the right bank). Echogram snippet from 2024-06-13 04:45 covering approximately 1.3 minutes, 10 – 70 m range interval.



Smolt herds travel the superhighway – go with the flow

Smolt migrate primarily in the thalweg – main flow.

Design intake was moved to AVOID

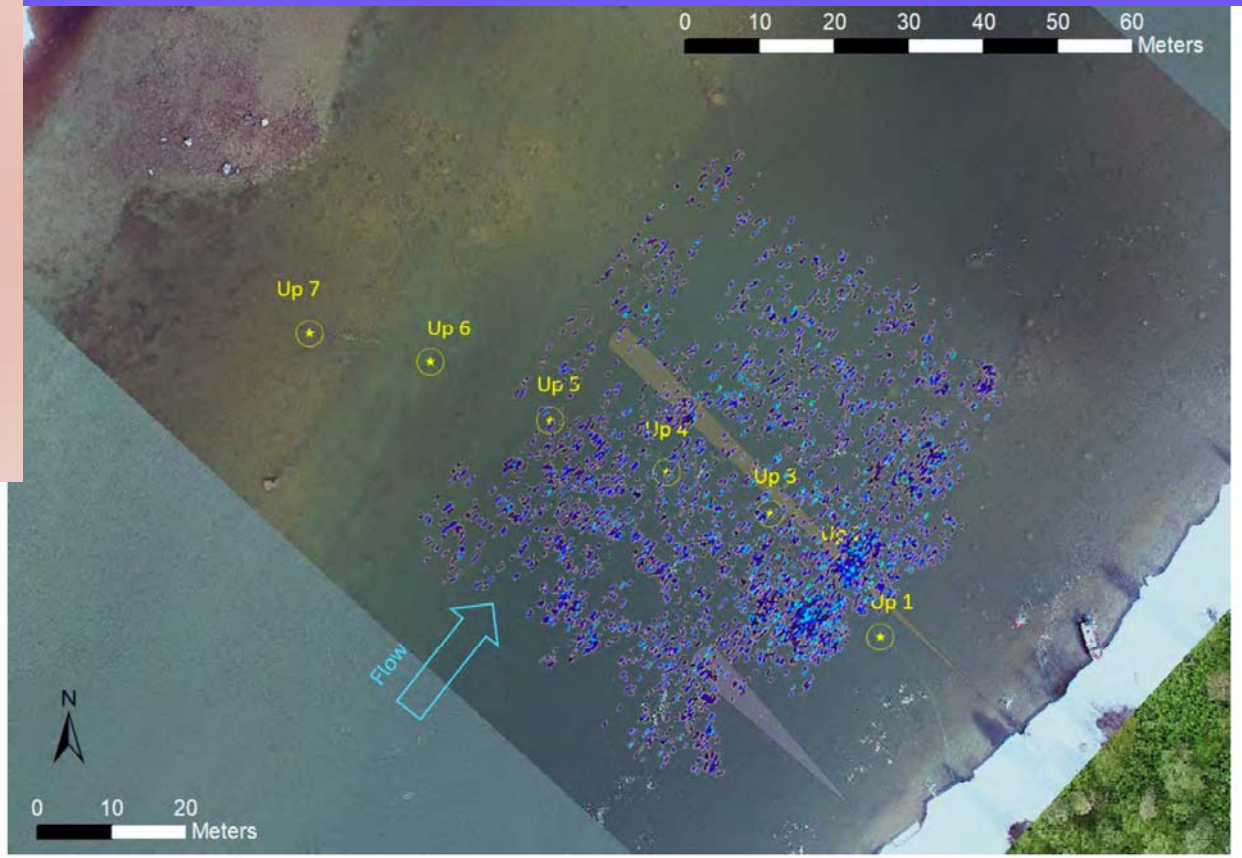
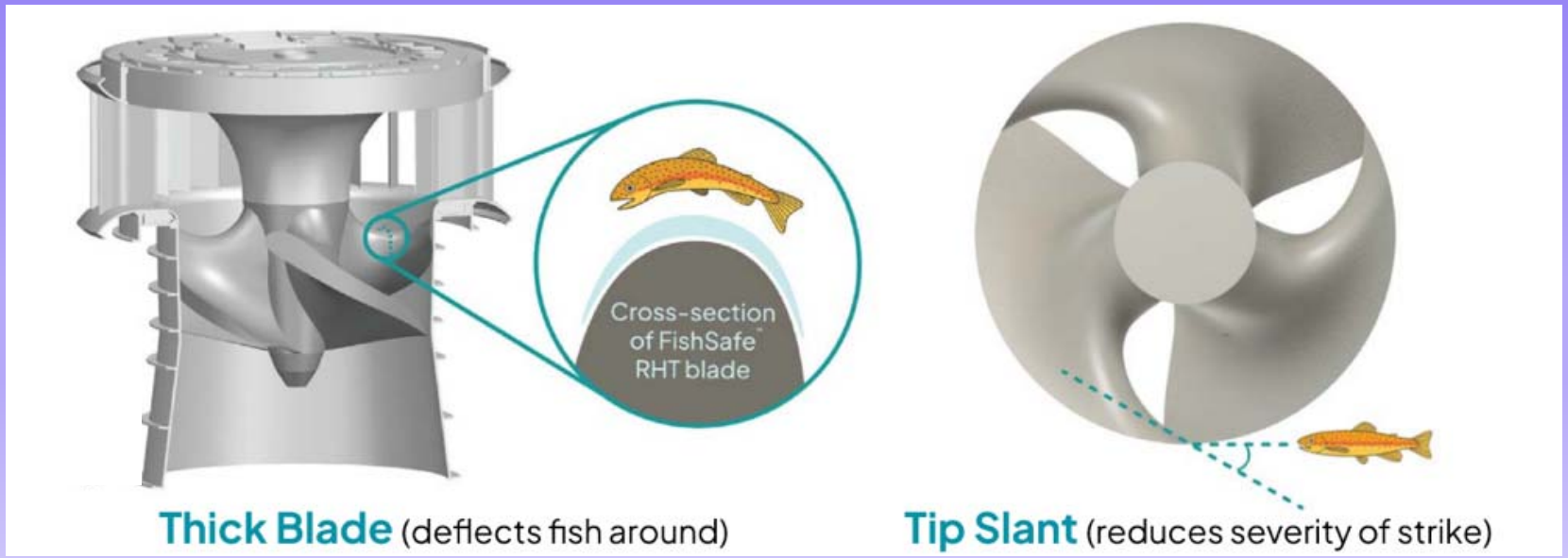


Figure 10 Side-looking echogram overlay showing a spatial smolt distribution similar to the previous example but at a time when schools had broken up (smolt density gradient still skewed towards the right side of the river, relatively close to shore). Echogram snippet from 2024-06-14 02:25 covering approximately 1.3 minutes, 10 – 70 m range interval.

Fish Friendly Turbines have been developed over many years

- If smolts enter intake, design features incorporated to pass fish safely through tunnel
- Turbine blades design: Thicker, Tip Slant, Geared to turn slower
- Testing – shows 95% + Survival



In River Hydro in Alaska Helping to stabilize Electric rates.

50 - 100 year lifespan with regular maintenance

King Cove:
(1994 & 2017)
Delta Cr Hydro replacing 23,000 gallons
Water Cr Hydro replacing 60,000 gallons
"… and frequently meets their 2 MW demand in the silence of diesels-off."

https://www.akenergyauthority.org

https://alaskarenewableenergy.org

IPEC – Inside Passage Electric Cooperative'
Jodi Mitchell, CEO – "ADFG has shown that hydro can be salmon friendly"
(Lower Turbidity, Reduced flow, Increased Oxygen Concentration…)

INN - Illiamna, Nondalton, Newhalen
Tazimin R. Falls (1999) - 824 kW
Replaces 20 – 50,000 gallons
NO SALMON

Gustavus – Falls Cr

Atka – Chunlisax Cr

Chignik Lagoon – Packers Cr

Hoonah - Gartina Falls (2015)

Kake – Cannuk Cr (2020)

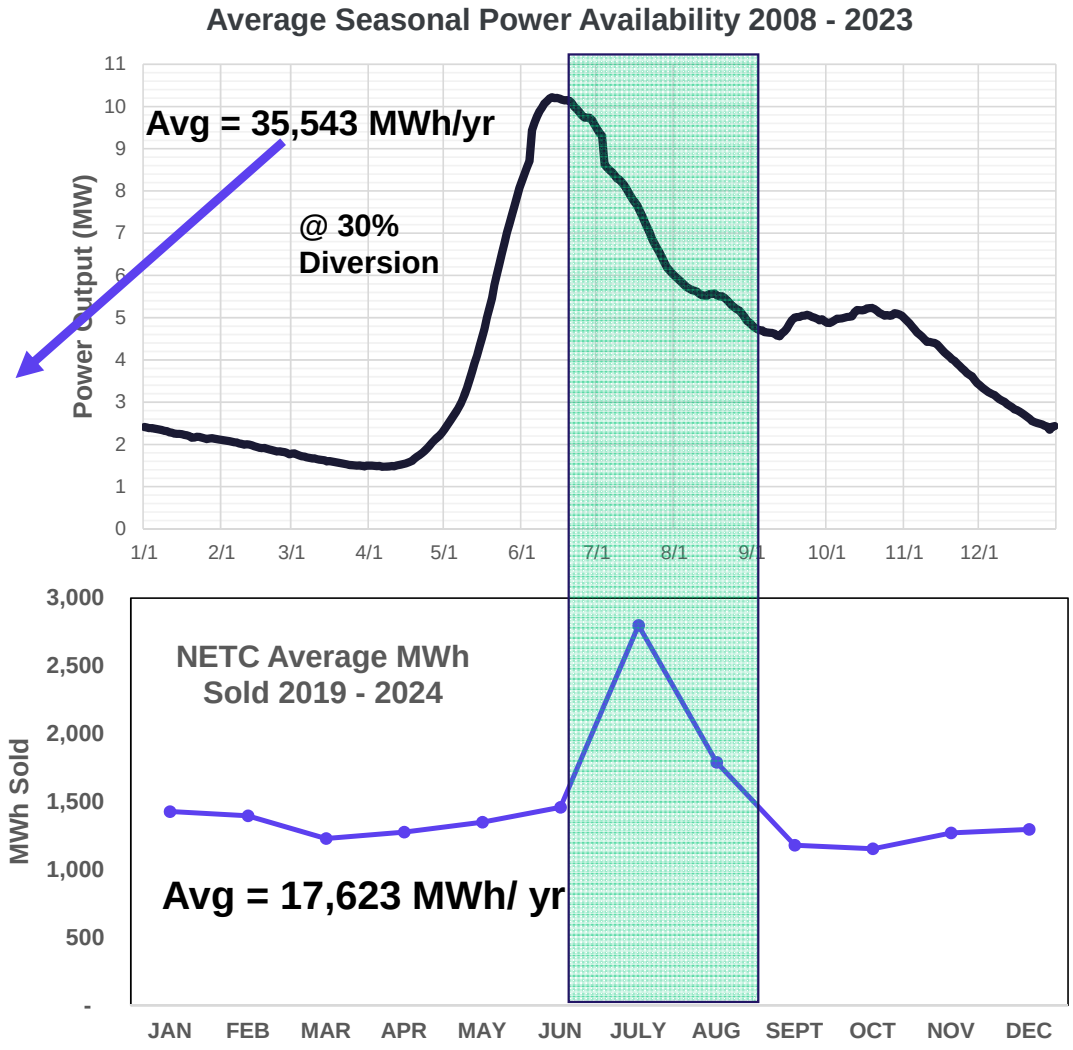
Angoon – Thayer Cr

Nuyakuk Falls Hydroelectric Capacity

Community	MWh / yr
Dillingham, Aleknagik	19,745
Ekwok	452
New Stuyahok	1,926
Koliganek	695
Levelock	297
Sub total	23,116
	-
Naknek, S. Naknek, King Salmon	24,489
Grand Total	47,605

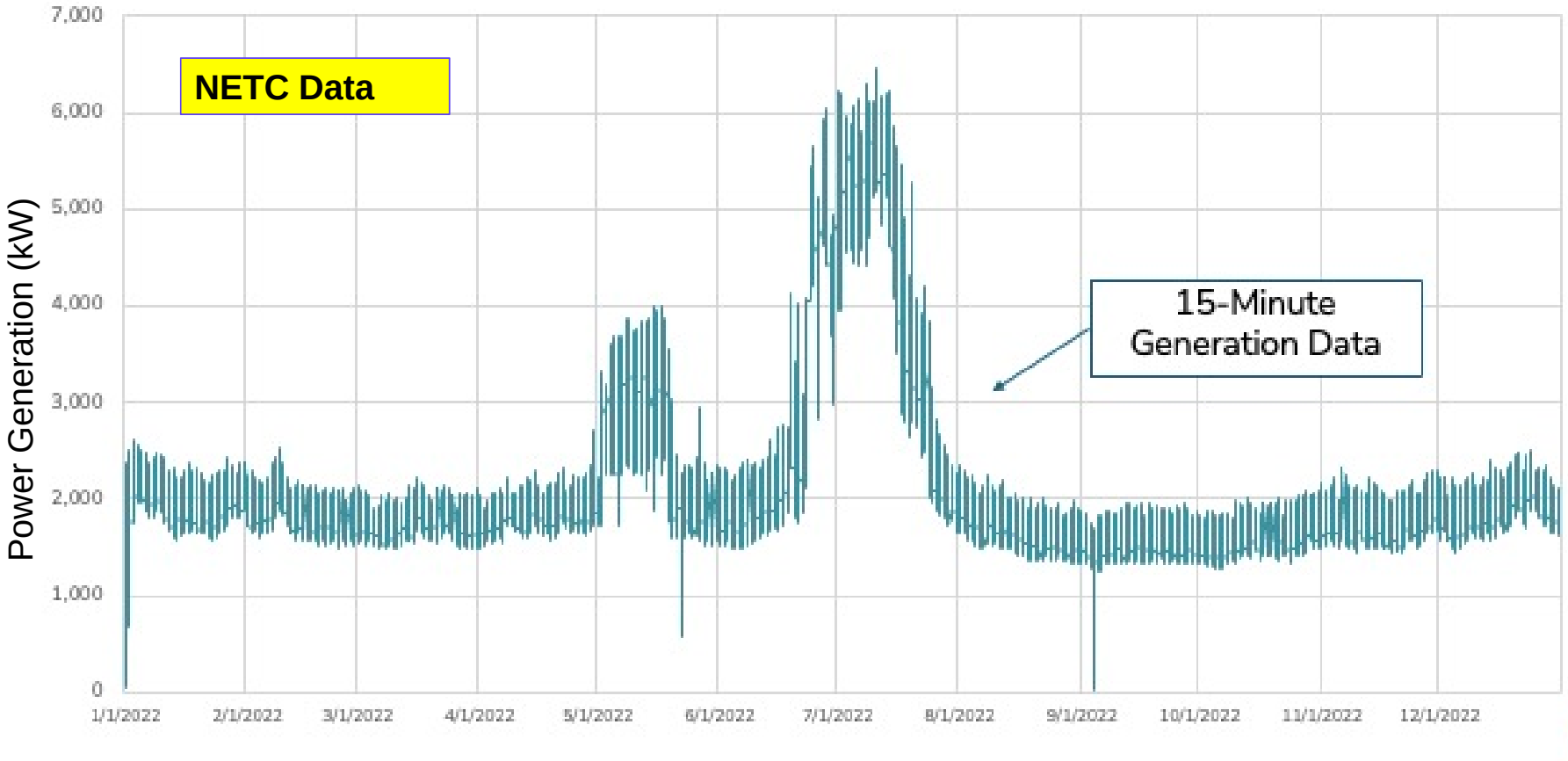
MWh / yr

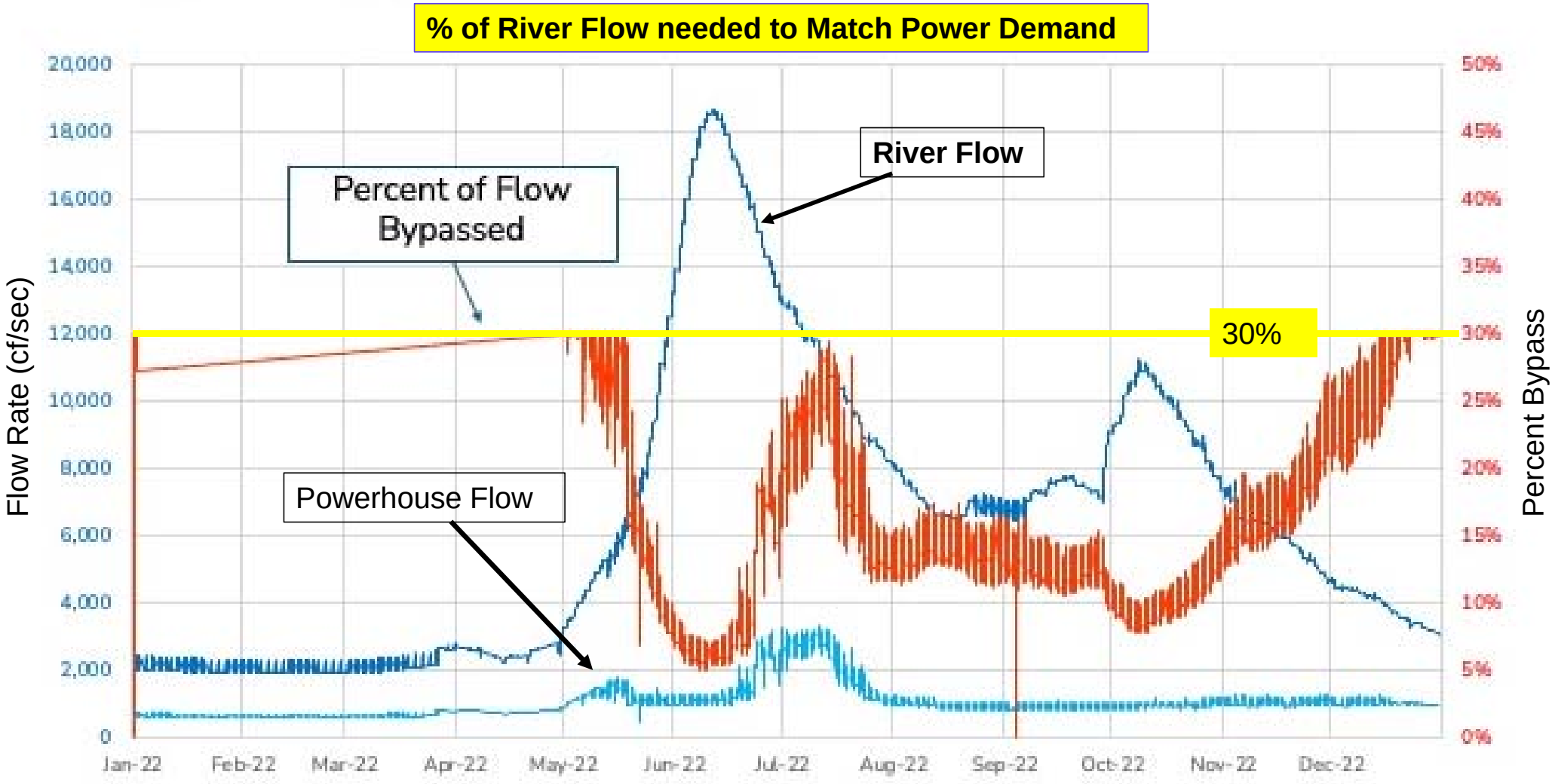
35,543
-- 23,116
= 12,427

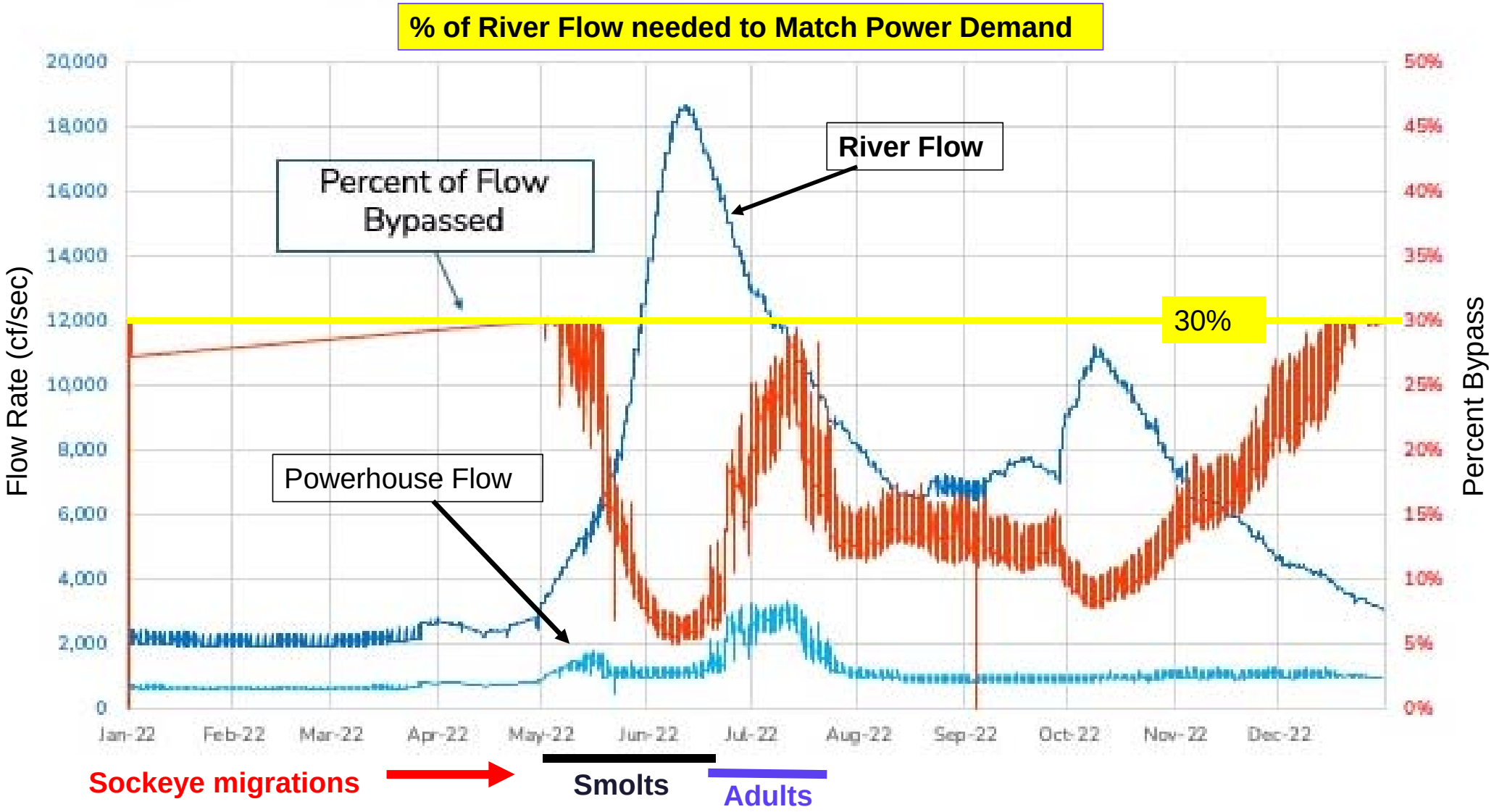


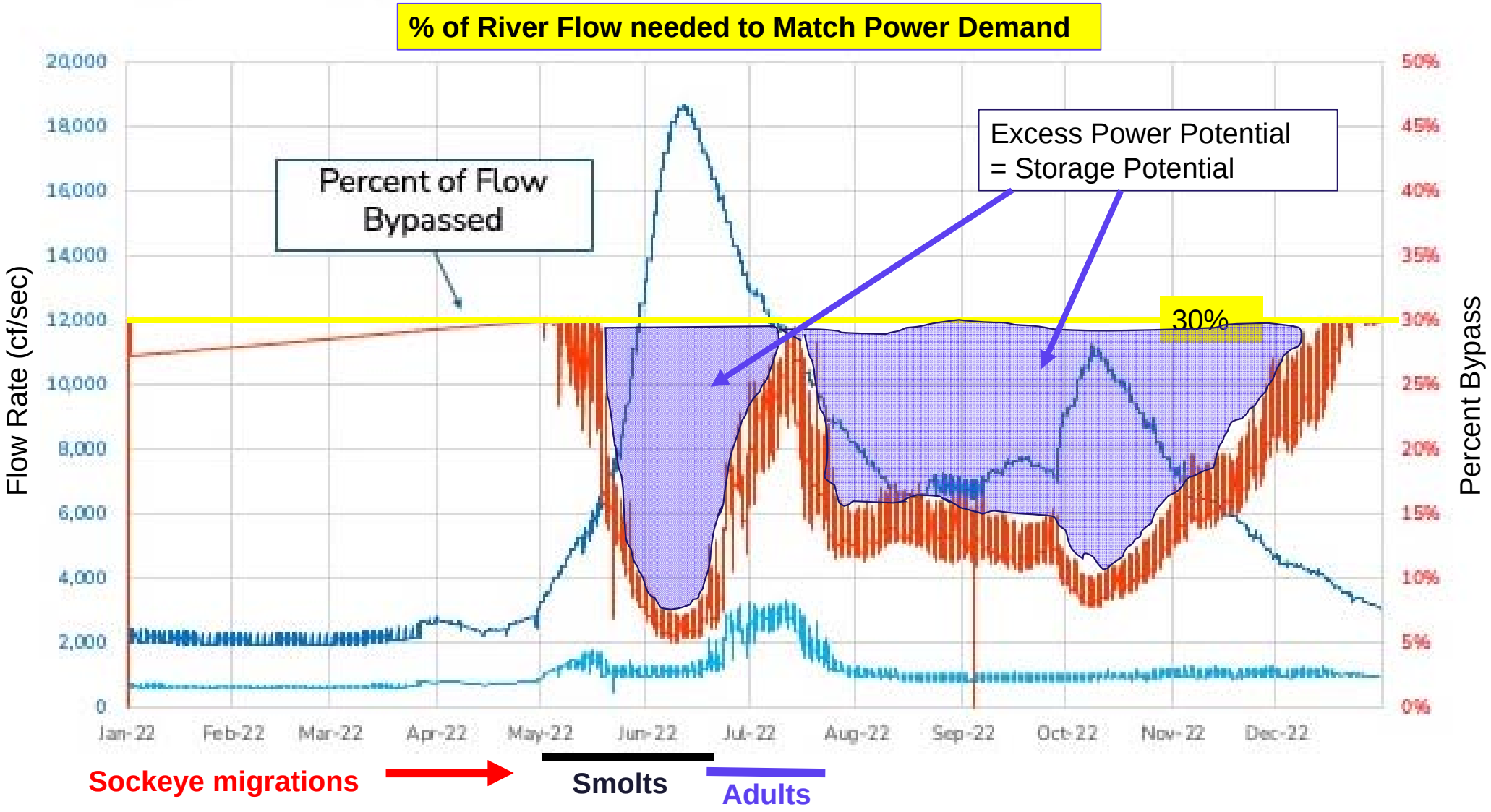
NEED MORE REFINED, MONTHLY, WEEKLY COMPARISON.

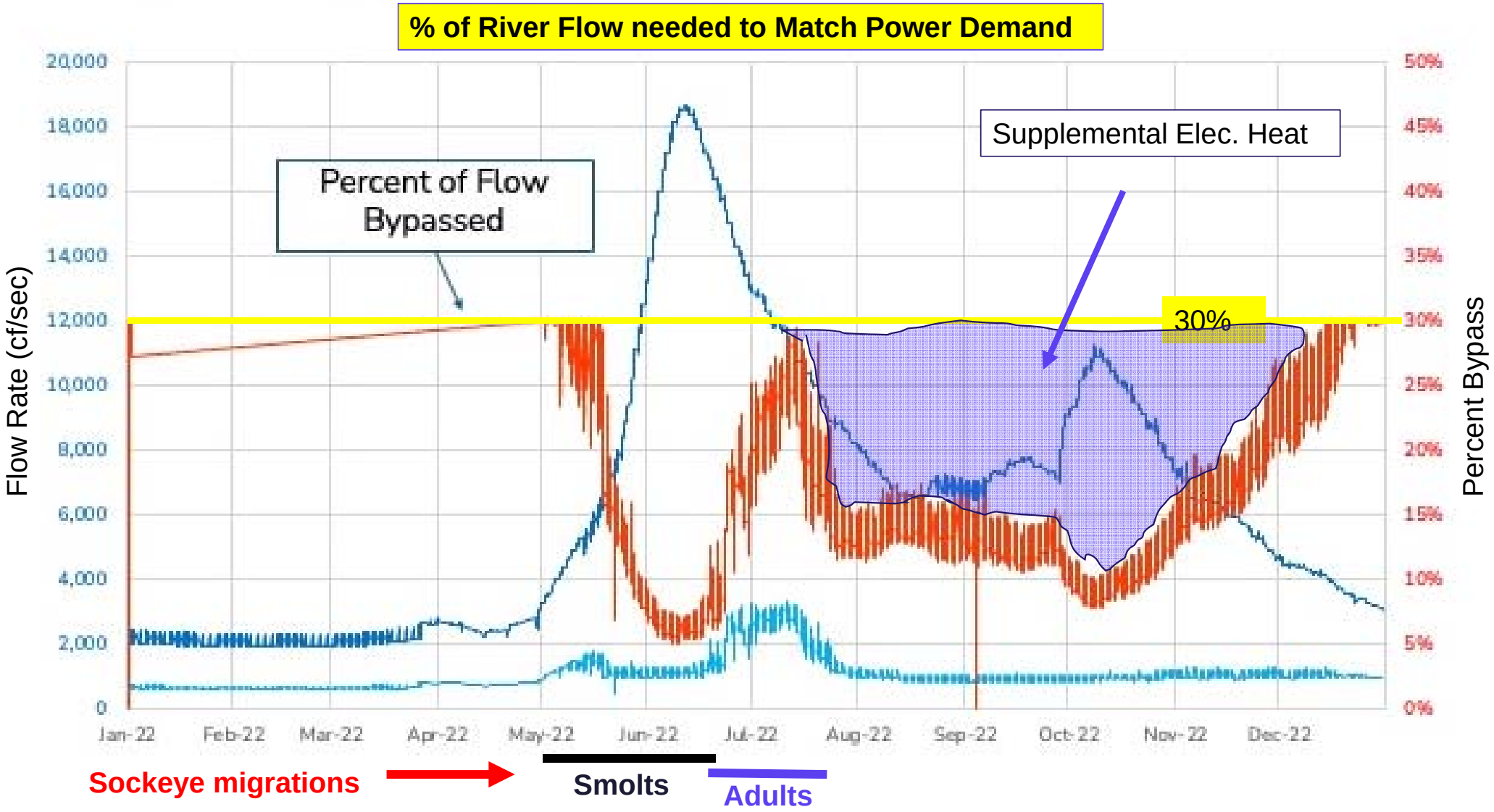
2022 System Demand (Dillingham/Aleknagik)




% of River Flow needed to Match Power Demand
Flow Rate (cf/sec)
Percent Bypass
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Jan-22
Feb-22
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
River Flow
Percent of Flow Bypassed
30%
Powerhouse Flow

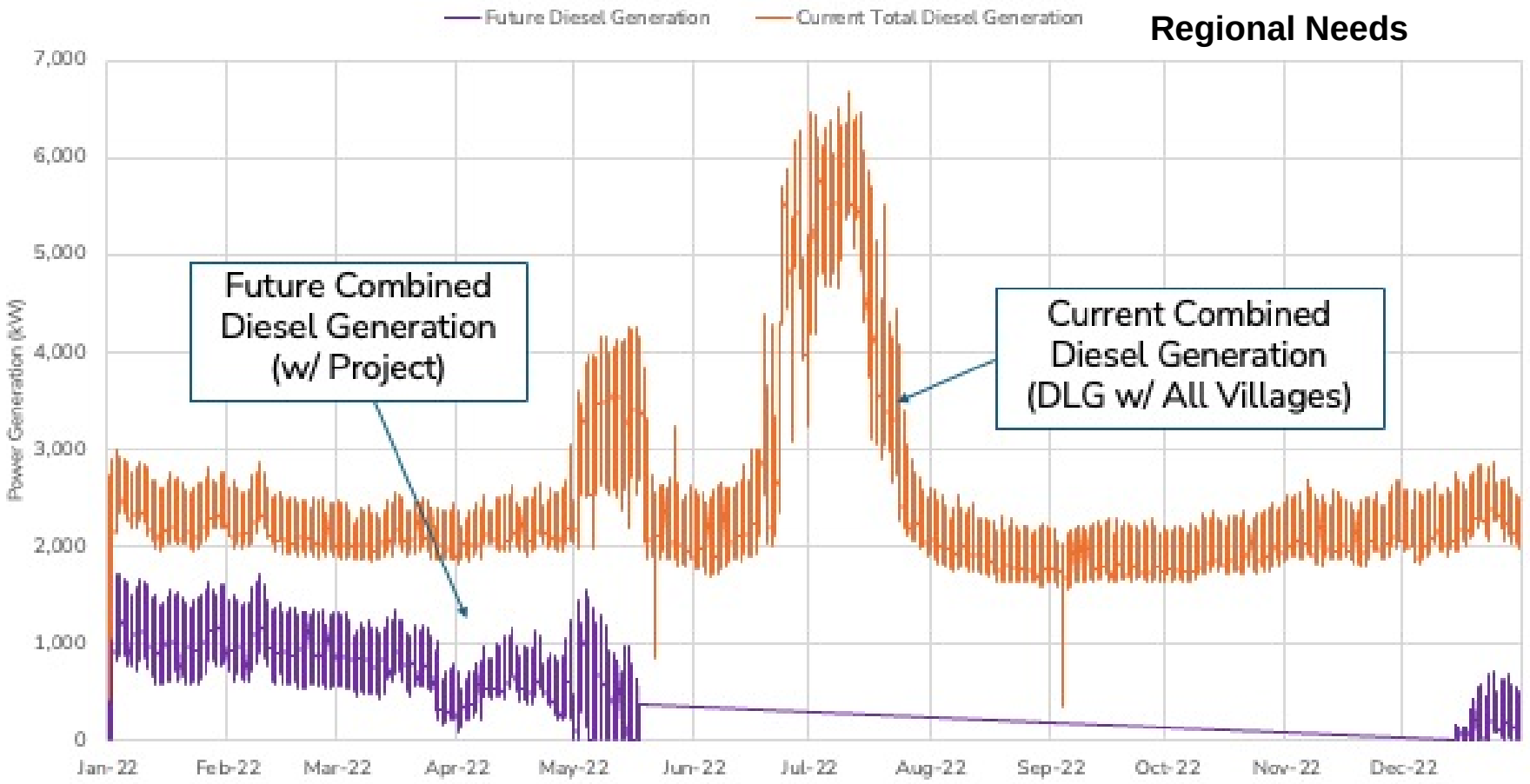

% of River Flow needed to Match Power Demand
Flow Rate (cf/sec)
Percent Bypass
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Percent of Flow Bypassed
River Flow
30%
Powerhouse Flow
Jan-22
Feb-22
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Sockeye migrations
Smolts
Adults


% of River Flow needed to Match Power Demand
Percent of Flow Bypassed
Excess Power Potential
= Storage Potential
30%
Flow Rate (cf/sec)
Percent Bypass
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Jan-22
Feb-22
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Sockeye migrations
Smolts
Adults

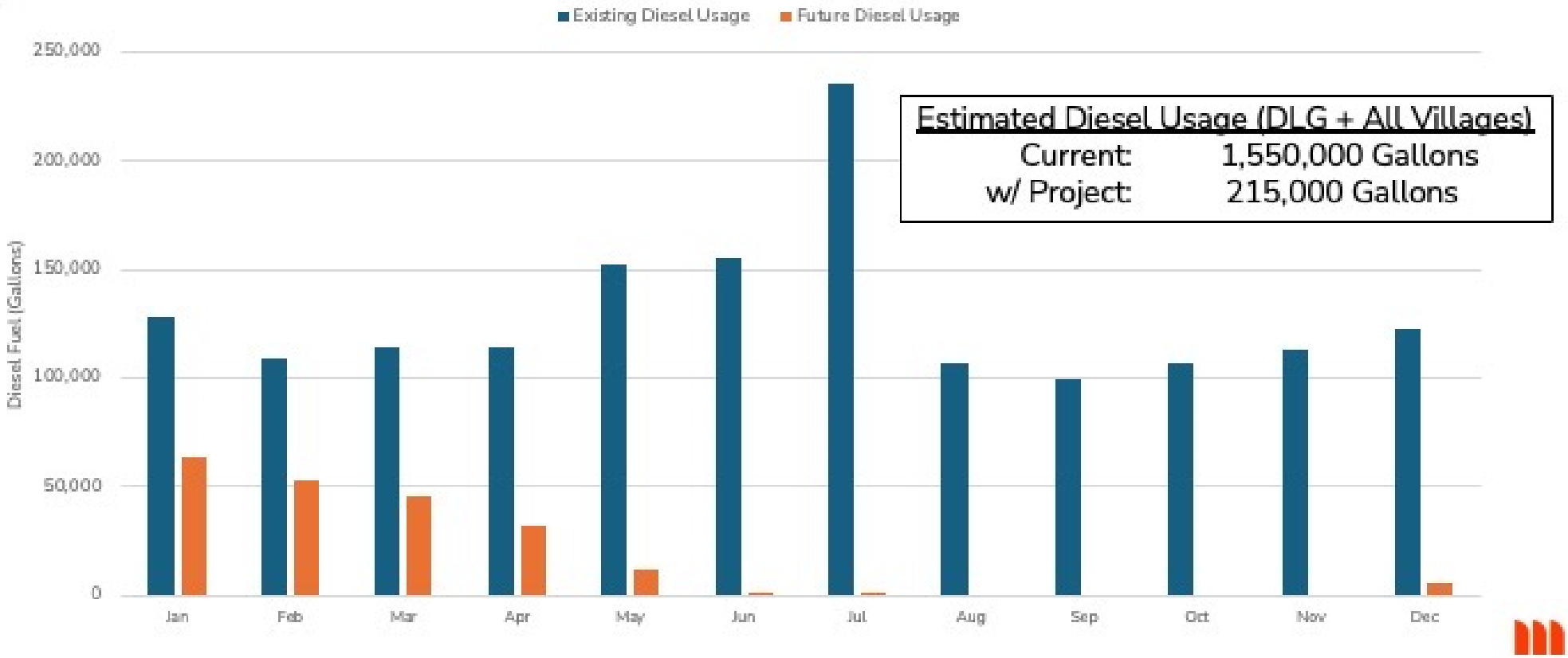

% of River Flow needed to Match Power Demand
Supplemental Elec. Heat
Percent of Flow Bypassed
30%
Flow Rate (cf/sec)
Percent Bypass
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Jan-22
Feb-22
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Sockeye migrations
Smolts
Adults

Diesel Usage

Projected Diesel Consumption



Diesel Fuel Usage Comparison



Annual Diesel Cost Savings

1,298,500 gals.
Diesel saved / year

Combined Six Villages	Current Gals. 1,513,000	Projected Gals. 214,500	Saving / Year $5,099,000
City/Village	**Current Diesel Usage (Gallons/Year)**	**Projected Diesel Usage w/ Project (Gallons/Year)**	**Cost Savings ($/Yr)[2]**
Dillingham/Aleknagik	1,300,000	180,000	$3,752,000
New Stuyahok/Ekwok	111,000	18,000	$732,000
Levelock	40,000	6,500	$373,000
Koliganek[1]	62,000	10,000	$242,000

[1] Assumes that transmission line option to Koliganek is approved.

[2] Assumes reduction in plant operating expenses in addition to fuel expenses for villages

Water diversion hydro could benefit other communities.

OPTIONS

Small Grid ???

Connect with existing distribution Grid

- **Dillingham / Aleknagik**

Reduce 1,200,000 gals for 1,507 members

Regional Grid ???

Connect with existing distribution Grids

- **Dillingham / Aleknagik**
- **Ekwok / New Stuyahak**
- **Koliganek**
- **Levelock**
- **Naknek / S Naknek / King Salmon**

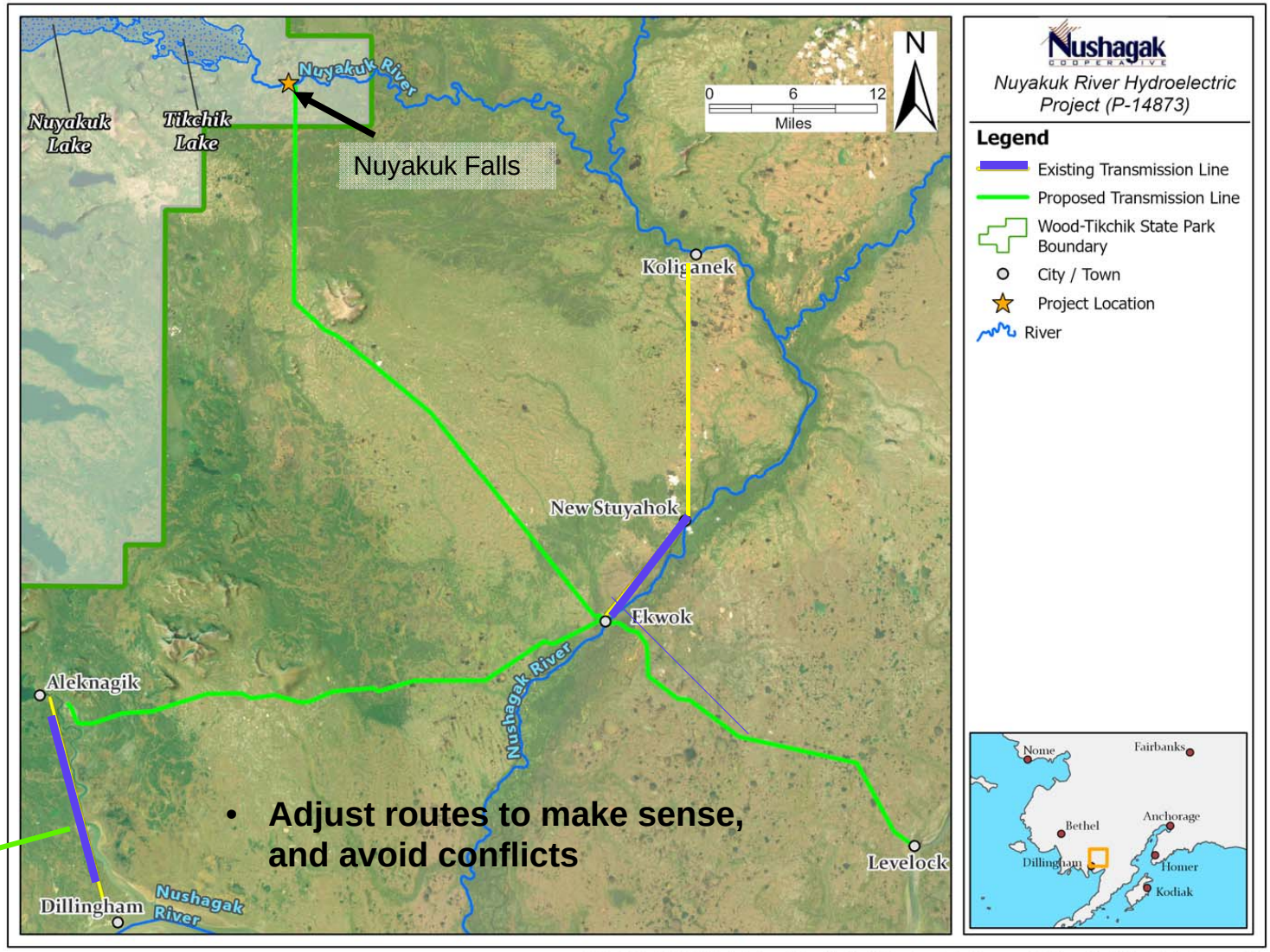
Reduce 3,200,000 gals for 3,000 members

Future Power: Electric heat. Heat Pumps. Electric vehicles.

How can power be shared?

Draft Transmission Routes:

- **Finish mapping**
- **Culturally sensitive**
- **Private lands**
- **Corporate lands.**



Transmission via Electric power poles or Underground ????

Not the Tenn. Valley Authority transmission tower pictures that others have shared

Transmission Line Design – more like our existing

Type: Overhead Cable (Buried Alternative being Investigated)
Support Structure: FRP / Steel Poles
Pole Height: 100 ft
Span: 200 ft to 800 ft
Right of Way: 100 ft

Distances:

Aleknagik to Ekwok: 41 miles
Ekwok to Levelock: 30 miles
Stuyahok/Ekwok to Falls: 45 to 48 miles
Koliganek: 8 to 20 miles

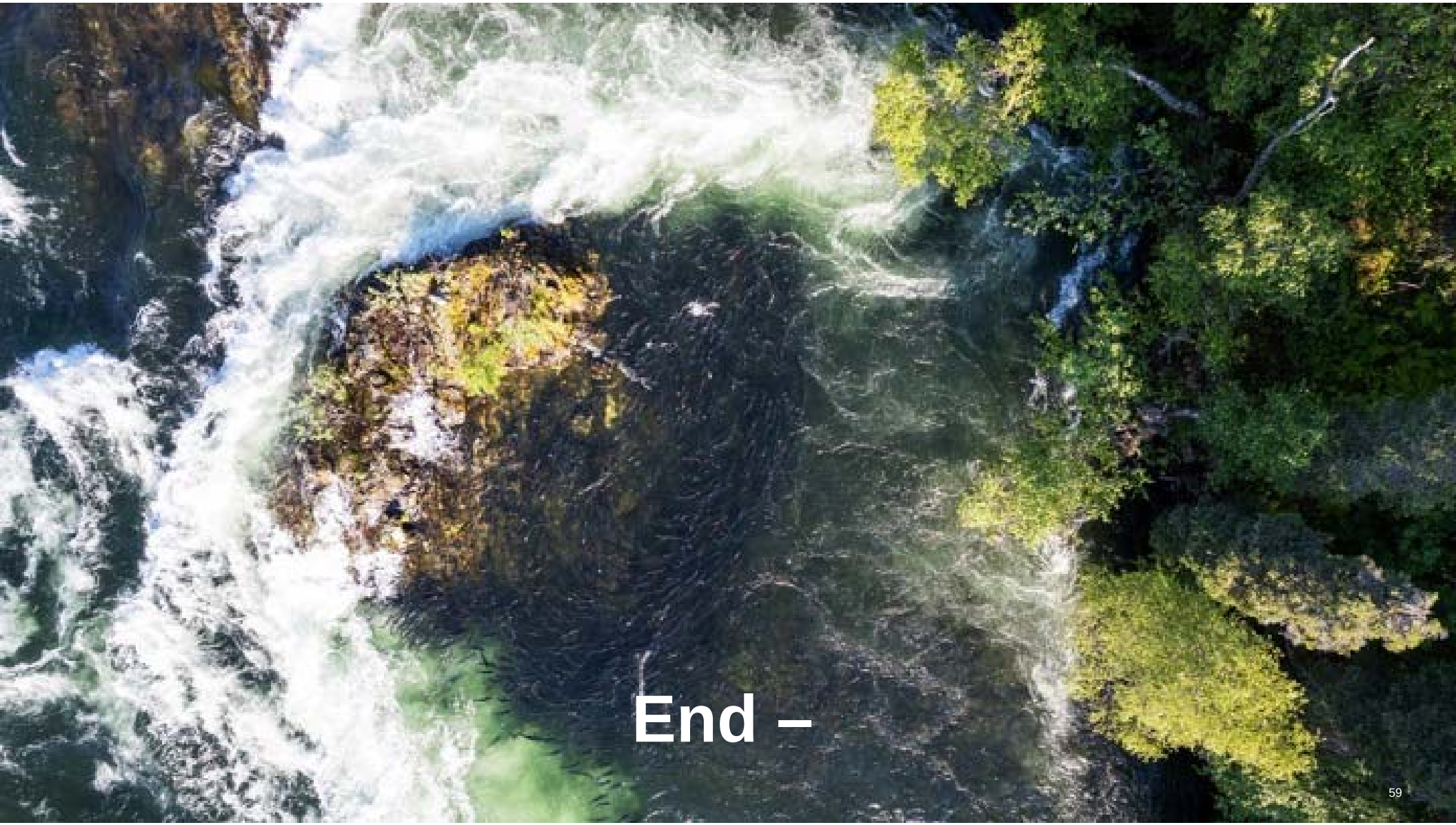
Total: 127 to 139 miles

Next Steps

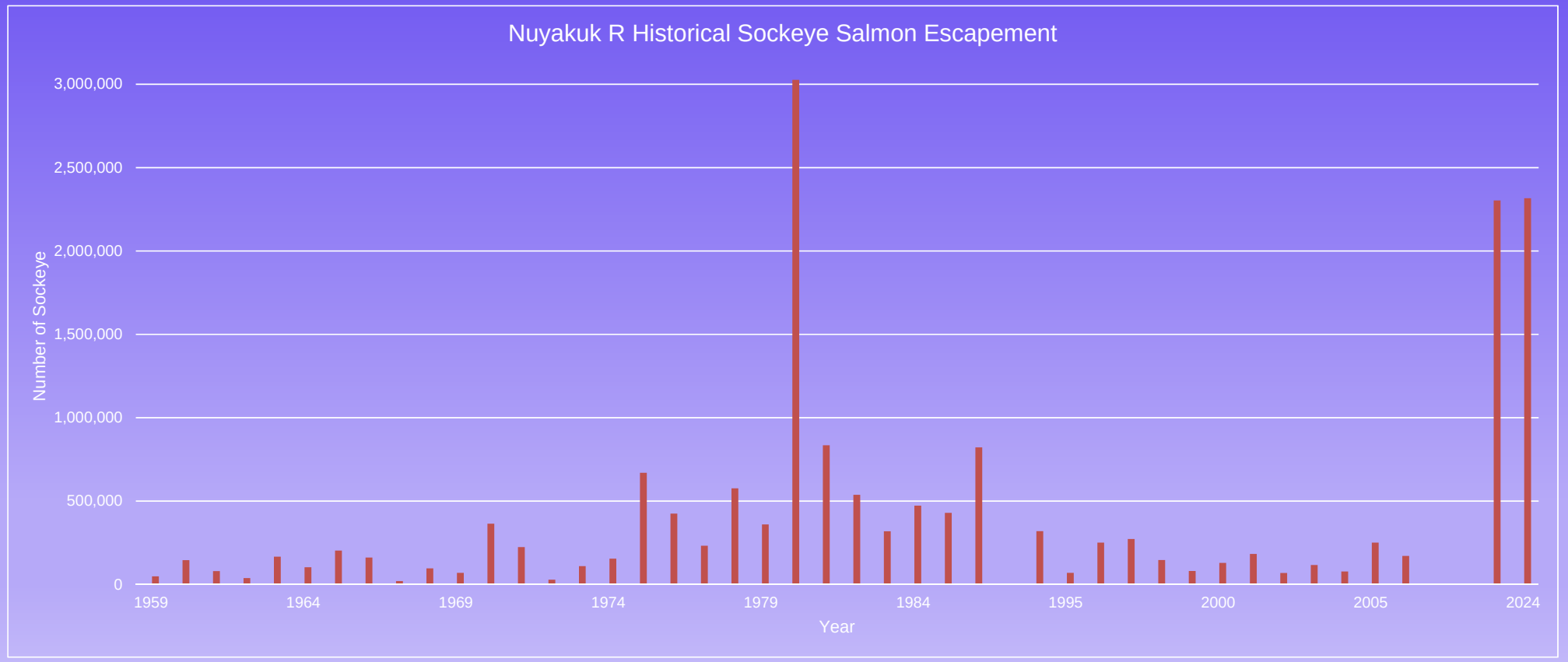
- **Updated Study Report (USR) – Submitted December 2, 2024**
  - + www.nuyakukhydro.com
  - + **FERC portal.**
- **Public Review of USR – Due ~~February~~ March 20, 2025**
- **NETC Responses to Comments to FERC & Public – ~~March~~ April 2025**
- **FERC Determination – ~~April~~ May 2025 = Were objectives met??**
  - + **Need for additional work(?) OR**
  - + **Missions accomplished (?)**
- **NETC decides whether to proceed or not**

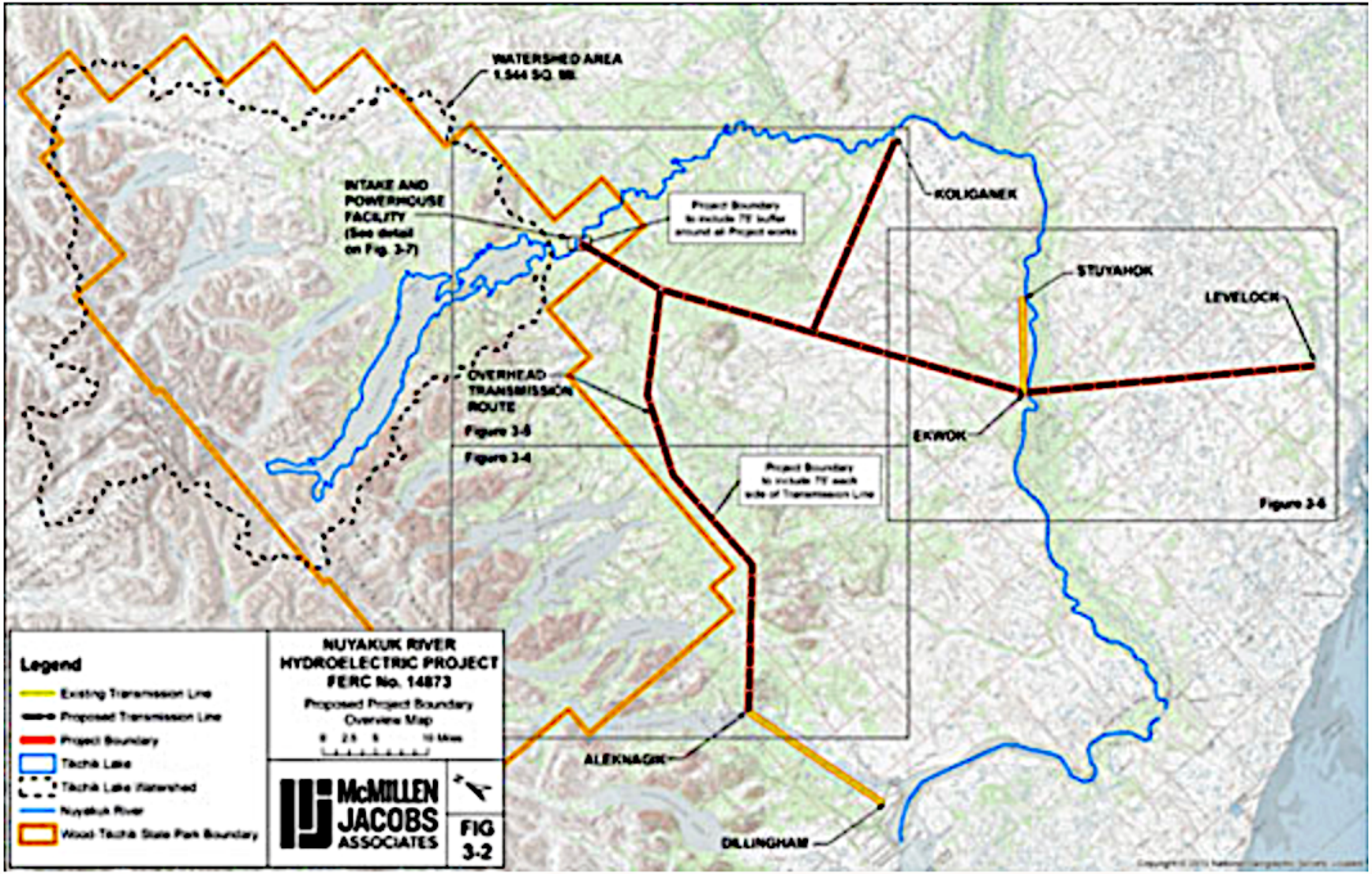
Nushagak COOPERATIVE

The NETC Board will have to decide whether to proceed.


End –

Historical Sockeye Counts
Nuyakuk Tower 1958 - 2024




WATERSHED AREA
1,544 SQ. MI.
INTAKE AND POWERHOUSE FACILITY (See detail on Fig. 3-7)
Project Boundary to include 75' buffer around all Project works
KOLIGANEK
STUYAHOK
LEVELOCK
OVERHEAD TRANSMISSION ROUTE
Figure 3-8
Figure 3-4
EKWOK
Project Boundary to include 75' each side of Transmission Line
Figure 3-6
ALEKNAGIK
DILLINGHAM
Legend
Existing Transmission Line
Proposed Transmission Line
Project Boundary
Tikchik Lake
Tikchik Lake Watershed
Nuyakuk River
Wood-Tikchik State Park Boundary
NUYAKUK RIVER HYDROELECTRIC PROJECT
FERC No. 14873
Proposed Project Boundary
Overview Map
0 2.5 5 10 Miles
McMILLEN JACOBS ASSOCIATES
FIG 3-2