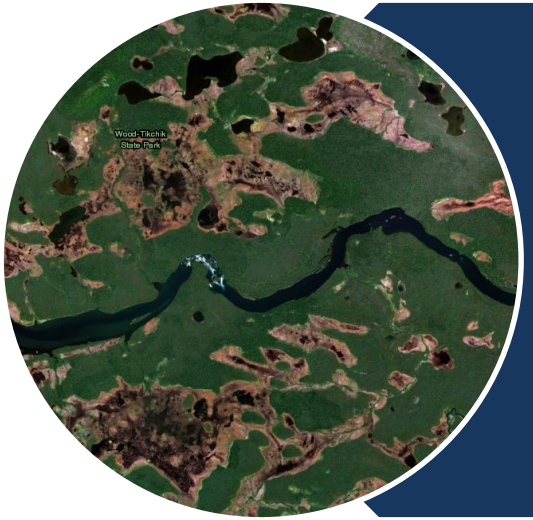


Nuyakuk Hydroelectric

Hydropower for Bristol Bay

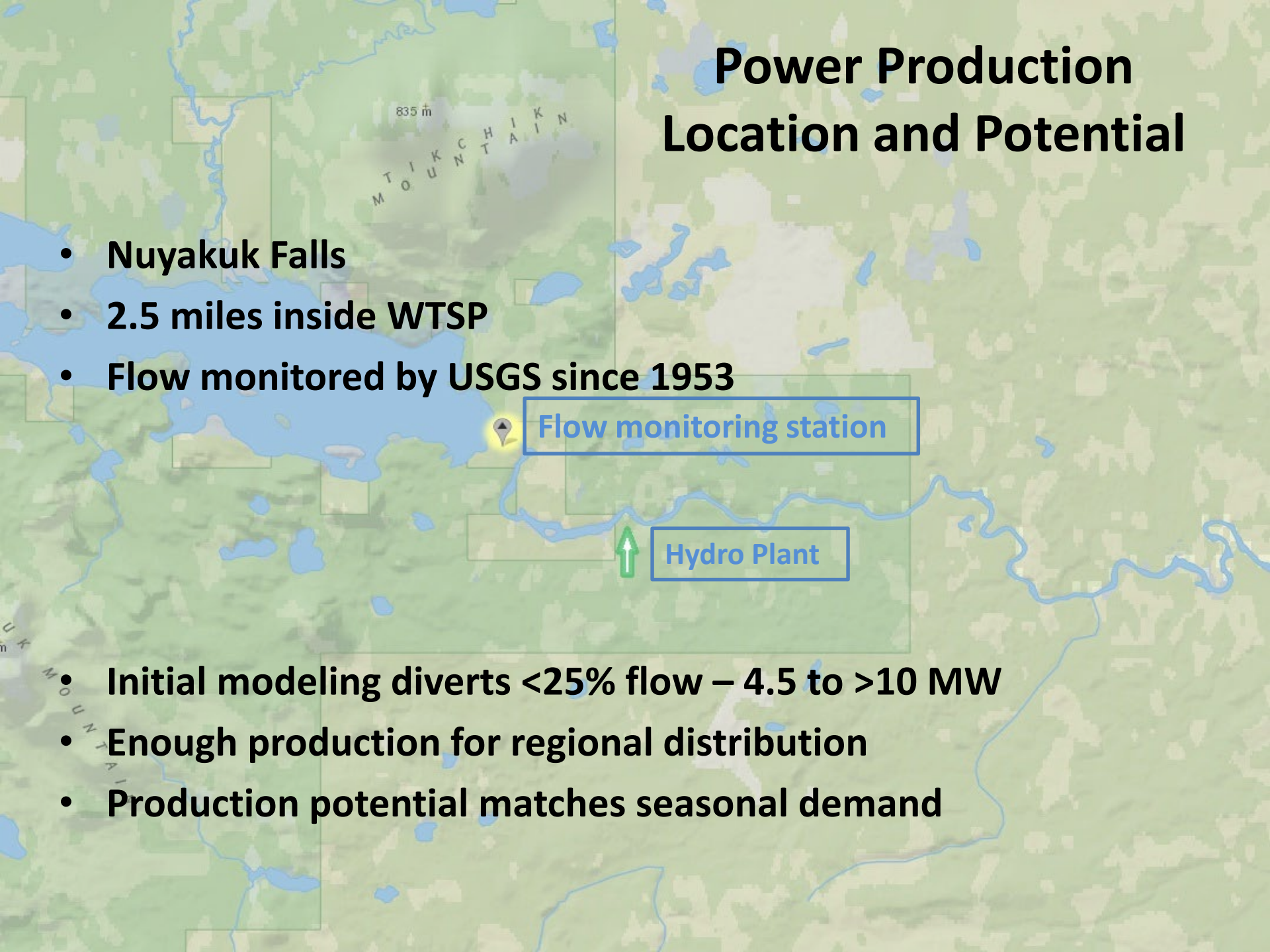
Nushagak
COOPERATIVES

Logical Natural Location

- Glacial moraine defines Wood Tikchik lake system
  - Creates natural dam
  - Lake acts as a natural Sediment deposition site
  - Nuyakuk Falls acts as a natural spillway

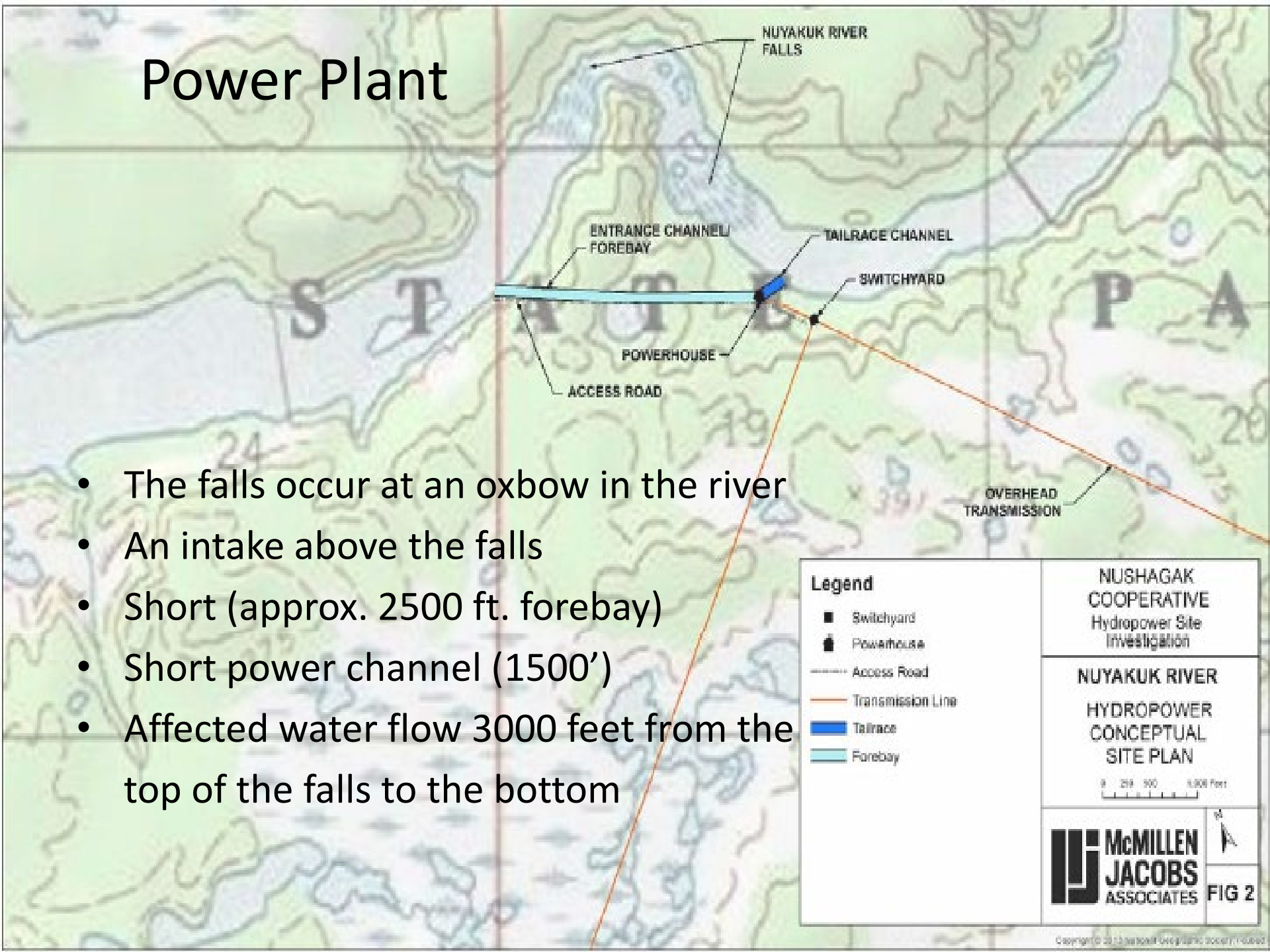
Power Production Location and Potential

- Nuyakuk Falls
- 2.5 miles inside WTSP
- Flow monitored by USGS since 1953



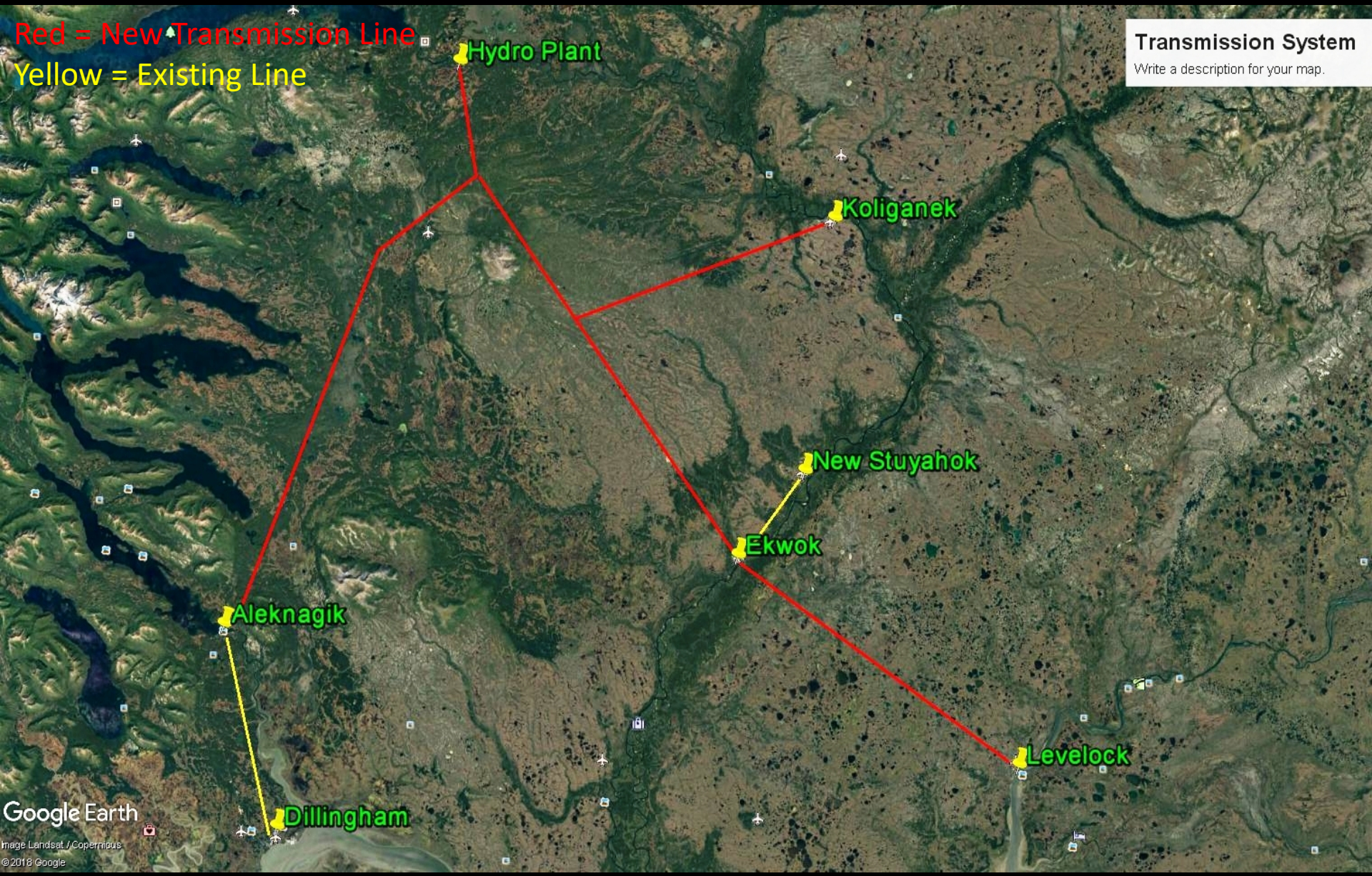
- Initial modeling diverts <25% flow – 4.5 to >10 MW
- Enough production for regional distribution
- Production potential matches seasonal demand

Power Plant



- The falls occur at an oxbow in the river
- An intake above the falls
- Short (approx. 2500 ft. forebay)
- Short power channel (1500’)
- Affected water flow 3000 feet from the top of the falls to the bottom


This design includes an intake at the top of the falls with a penstock (pipe-line) running down to the Power House at the bottom of the falls
With Less than 25% of the flow diverted 75% remains in the natural course over the falls, maintaining the natural passage for fish
There is no need for a dam.
The diverted water will return to the natural flow after passing through the Power Plant


Red = New Transmission Line
Yellow = Existing Line
Transmission System
Write a description for your map.
Hydro Plant
Koliganek
New Stuyahok
Ekwok
Aleknagik
Levelock
Dillingham
Google Earth
Image Landsat / Copernicus
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Considerations

- **Project would displace 1.5M gallons of fuel oil annually at current consumption**
- **Estimated cost to build $120M - $150M**
- **Estimated cost avoidance (NETC ONLY) over 40 year license period using current costs:**
  - **Fuel at current cost ($2.51/gallon) $150M**
  - **Scheduled genset maintenance $9M**
  - **Regulatory compliance for diesel generation $12M**
  - **Total $171M**
- **Transmission system would provide a route for Broadband middle mile expansion**