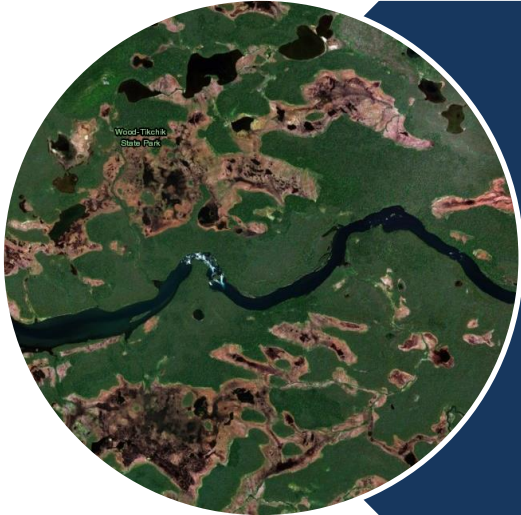
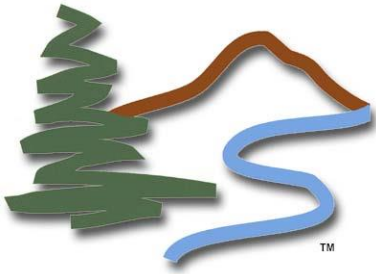




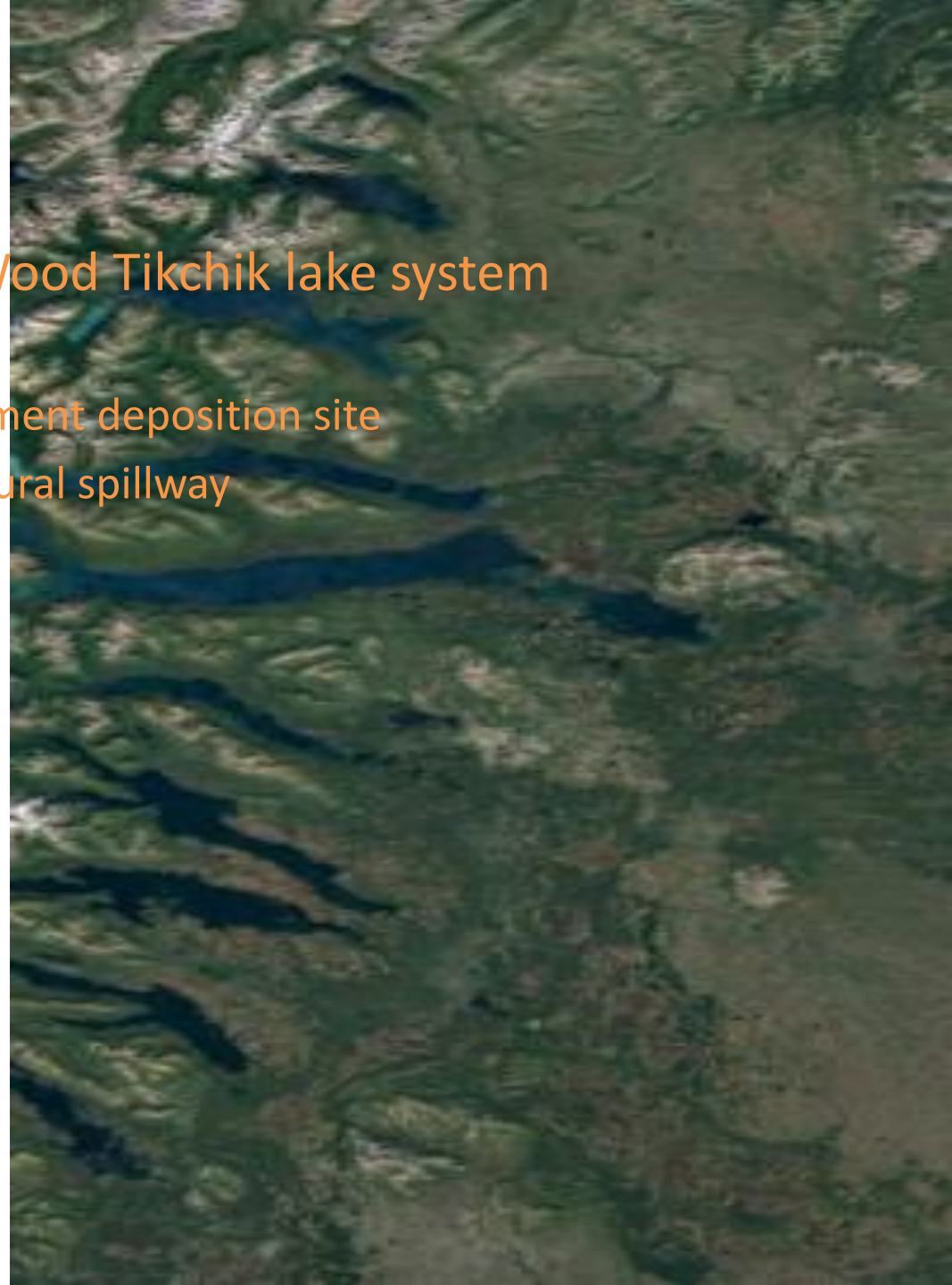
Nuyakuk Hydroelectric

Hydropower for Bristol Bay



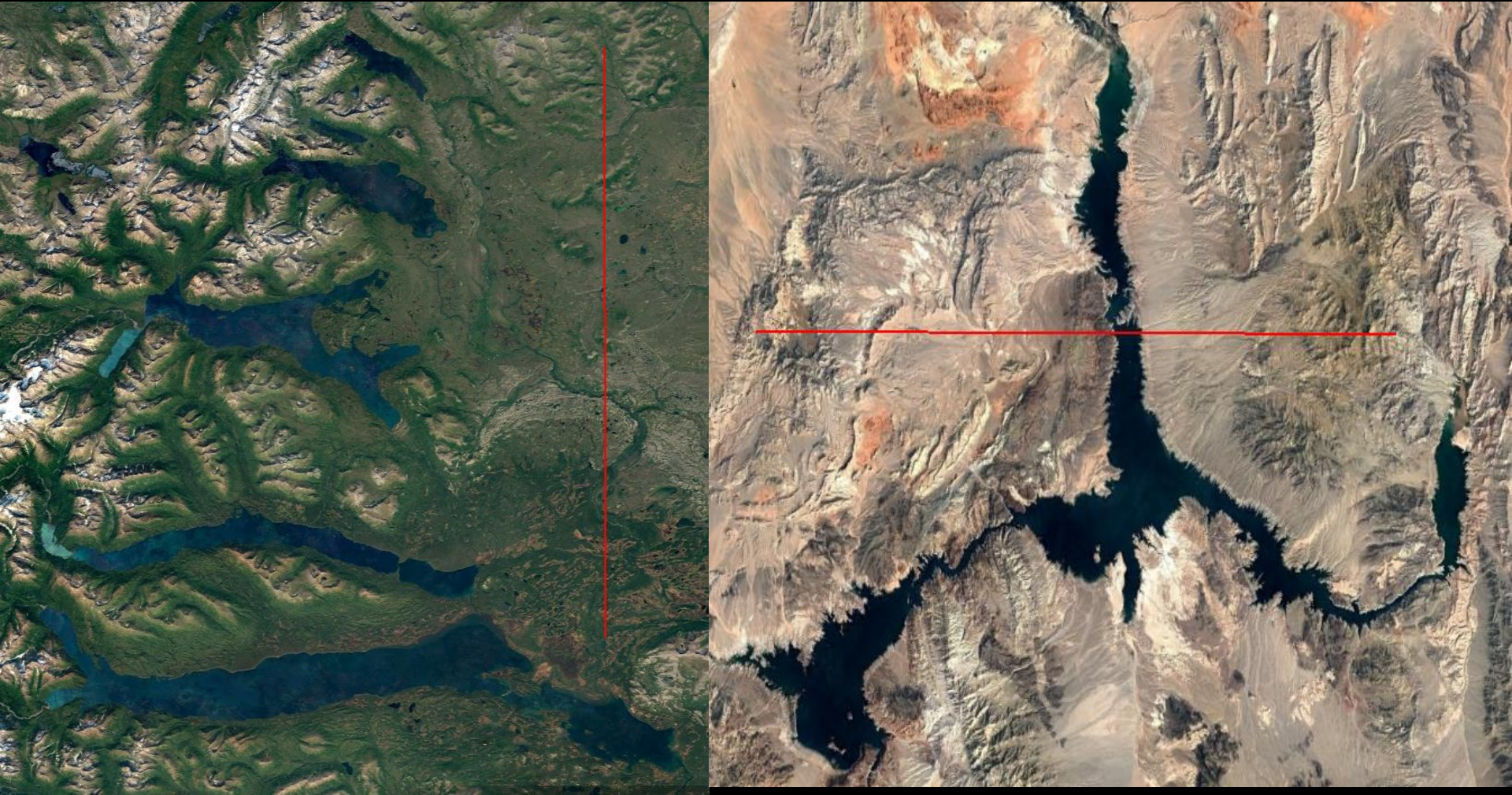
Logical Natural Location

- 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



Tikchick Lake

- The lake system feeding the falls is 1544 square miles
- This slide compares Tikchik Lakes and Lake Mead
- Each red line is 35 miles



Power Production Location and Potential

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

Flow monitoring station

Hydro Plant

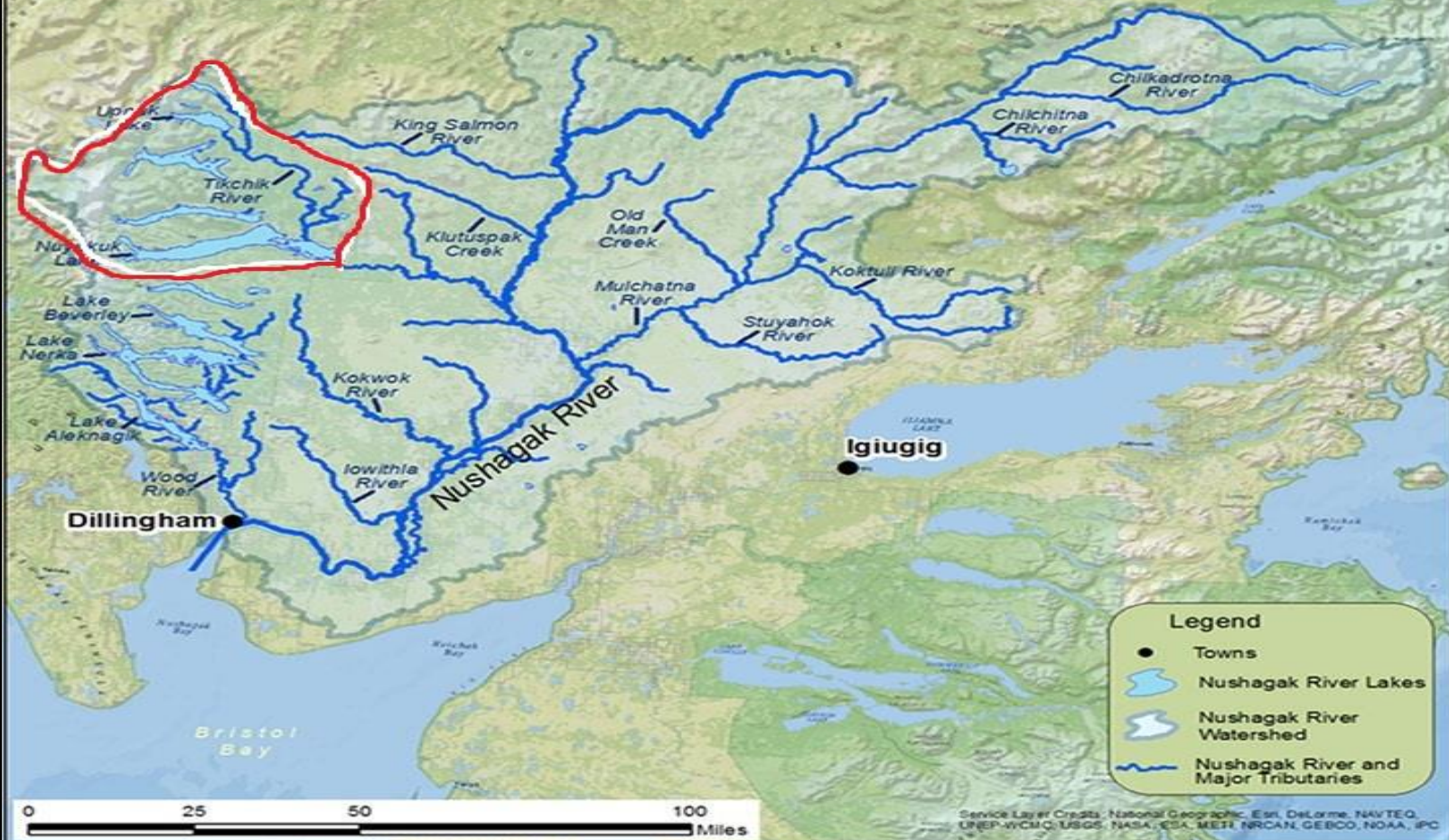
- Initial evaluation is diverting <25% flow – 4.5 to >10 MW
- Enough production for regional distribution
- Production potential matches seasonal demand

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')
- Powerhouse with two 5MW bulb-type turbines
- Affected water flow 3000 feet from the top of the falls to the bottom

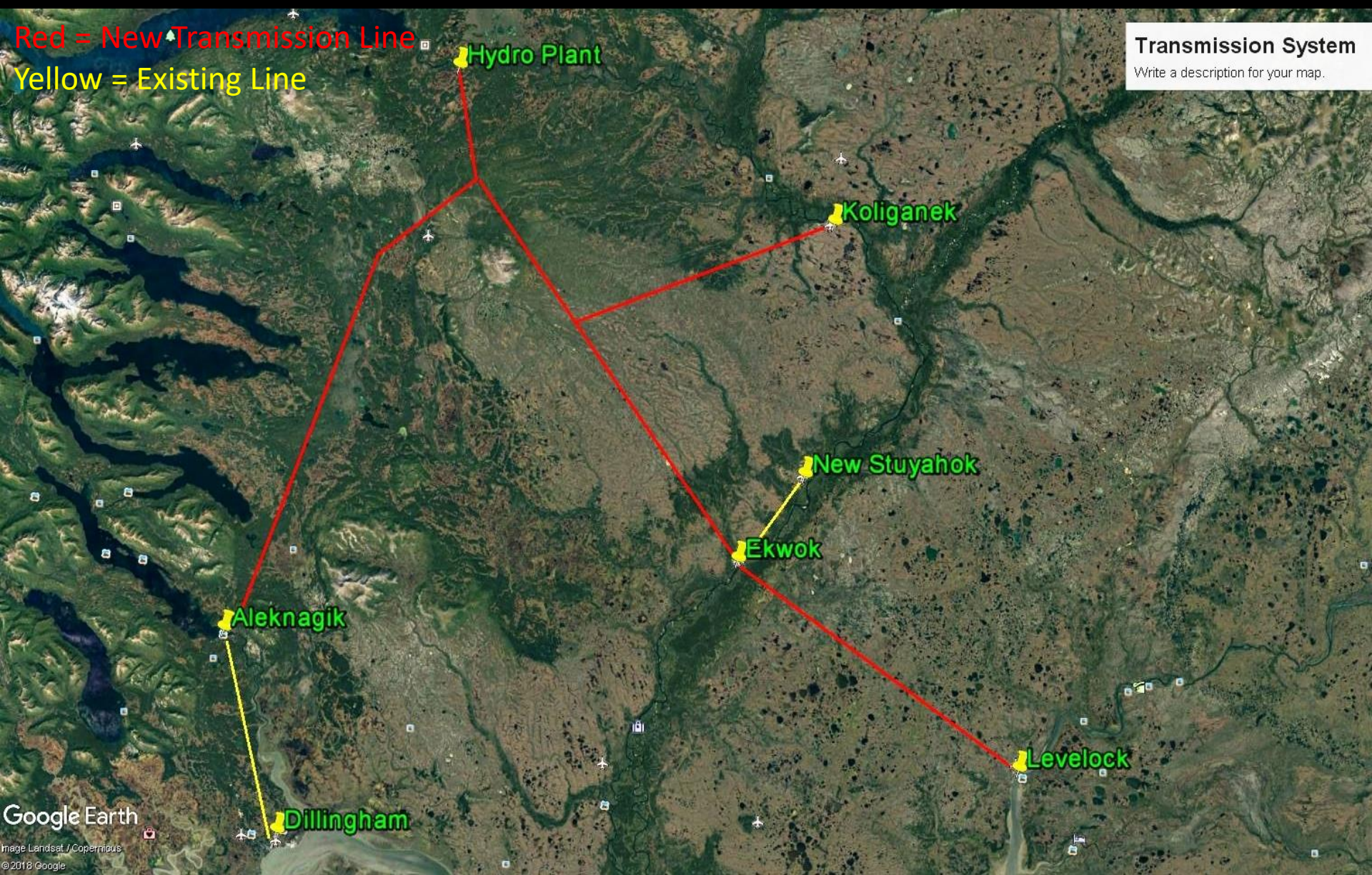


Extent of the watershed that is upstream of the Project



Red = New Transmission Line
Yellow = Existing Line

Transmission System
Write a description for your map.



Considerations

- Project would displace 1.5M gallons of fuel oil annually at current consumption of 25,000 MWHs
- Estimated yearly average power production for this project is 72,800MWHs this would displace 3+M gallons of fuel
- Estimated cost to build \$120M
- Estimated cost avoidance (NETC ONLY) over 40 year license period:
 - Fuel at current cost (\$2.10/gallon) \$126M
 - Scheduled genset maintenance \$9M
 - Regulatory compliance for diesel generation \$12M
 - Total \$147M

THIS TOTAL IS ASSUMEING ALL THE COST STAY THE SAME FOR THE NEXT 40 YEARS !

- Transmission system would provide a route for Broadband middle mile expansion



Thanks for your time and consideration

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COOPERATIVES