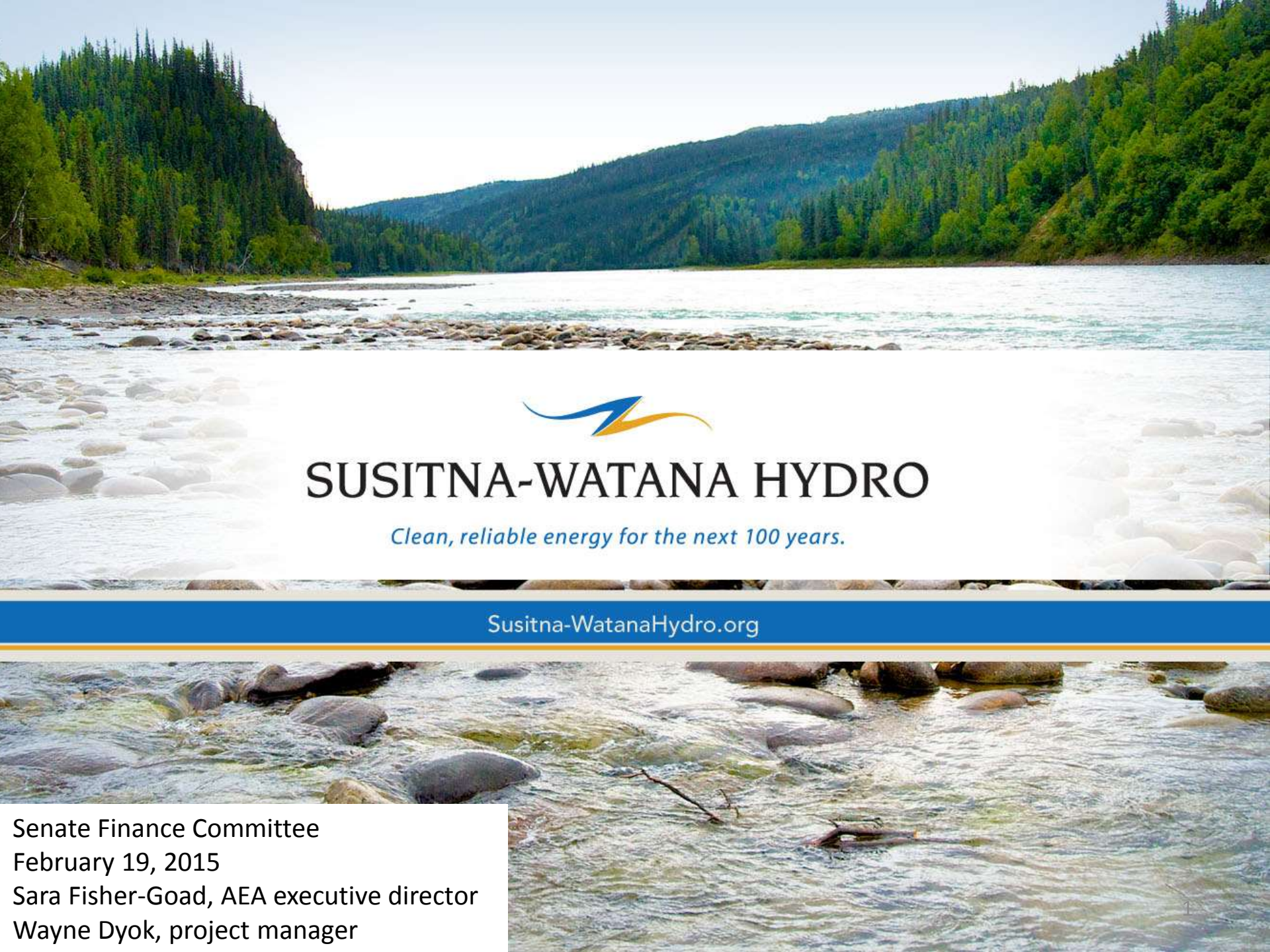


Senate Finance Committee
February 19, 2015
Sara Fisher-Goad, AEA executive director
Wayne Dyok, project manager

Project Status

- Federal Energy Regulatory Commission Integrated Licensing Process
- Three Environmental Field Seasons Supporting 58 FERC-Approved Studies
- Filed Initial Study Report June, 2014
- 50 Tech Memos filed with FERC 2013-2014
- Engineering Feasibility Report Released January 2015
- 60-Day Licensing Abeyance

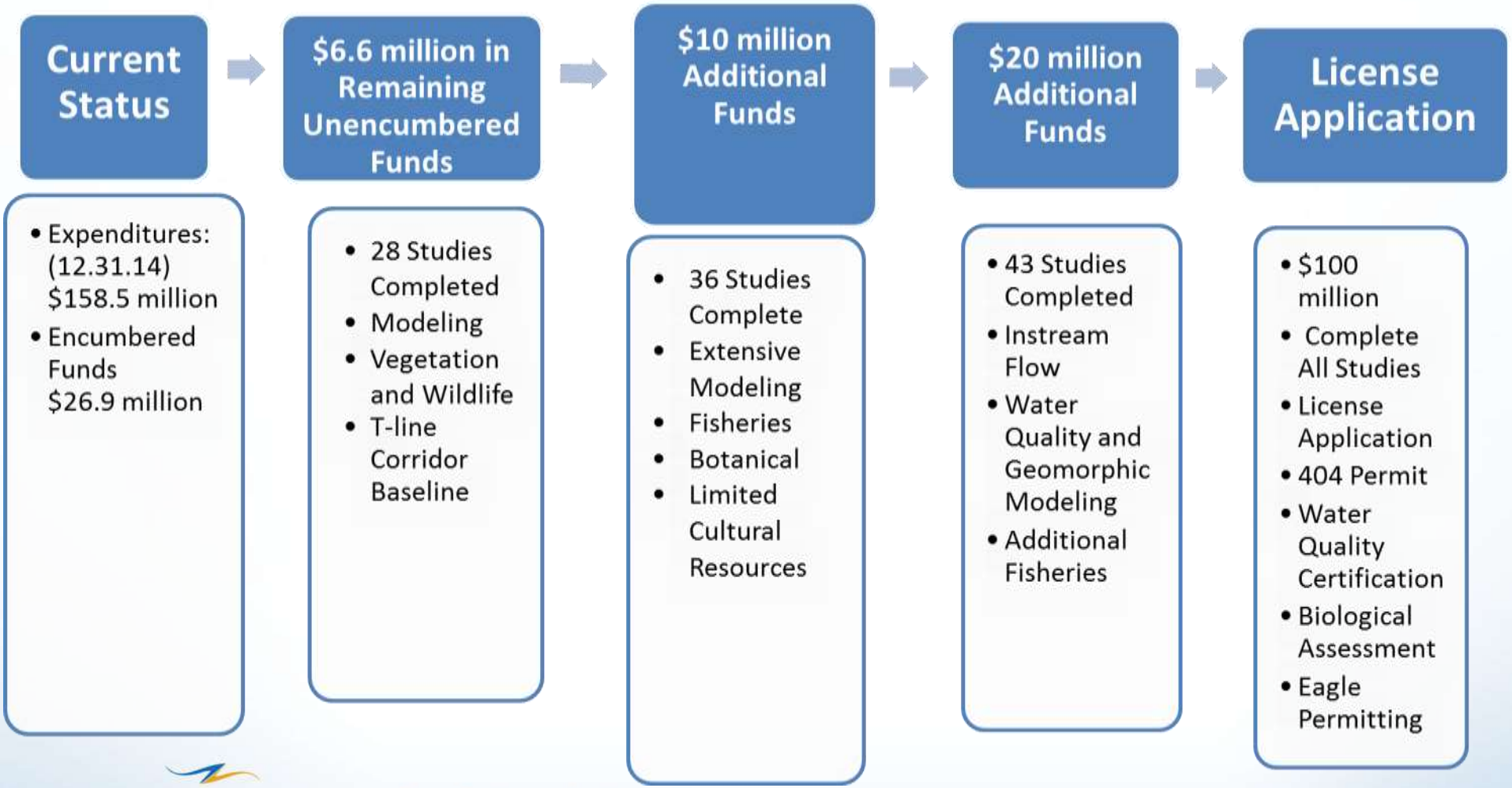
Project Funding

- Funded total of $192 million through Capital Fund appropriations
  - FY09-11: $11.17 million (combination of Railbelt Energy Fund and General Fund)
  - FY12: $65.7 million (Railbelt Energy Fund)
  - FY13: $0
  - FY14: $95.2 million (General Fund)
  - FY15: $20 million (General Fund)

Administrative Order 271

- Dec. 26, 2014- AO 271 directs all State agencies to halt to the maximum extent possible discretionary expenditures for six projects, including Susitna-Watana Hydro
- Summary of Project Funding ($thousands)
  - State of Alaska appropriations $192,072.8
  - Expenditures (as of 12.31.14) ($158,476)
  - Total Non-Discretionary Encumbered Funds ($26,915.10)
  - Balance of Authorized Funds $6,681.70

Potential Paths



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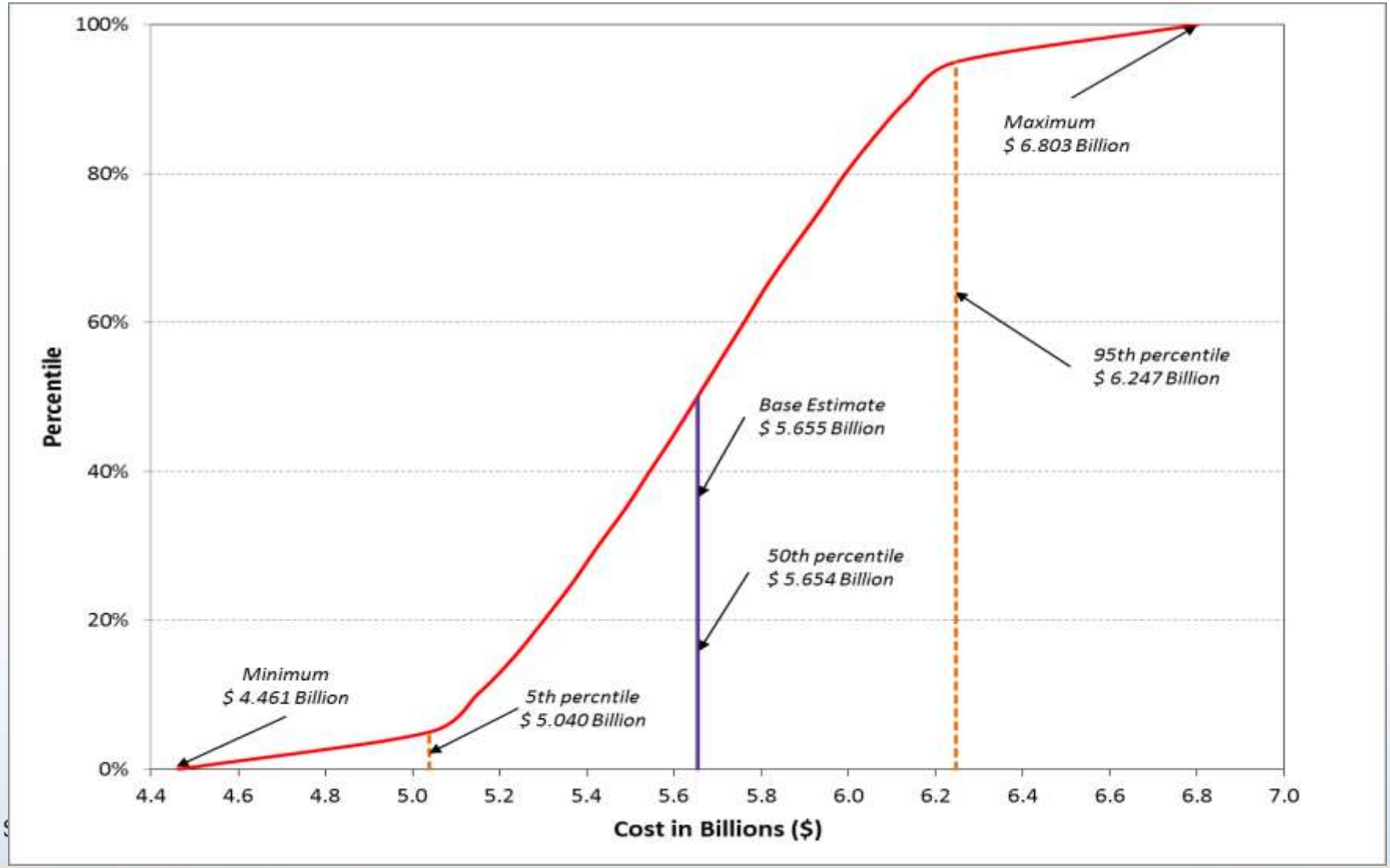
Project Cost Range



Comparing 3 Finance Options

- Bond & RUS Financing
  - $0.064/kWh 50 year average real price
- All Bond Financing
  - $0.073/kWh 50 year average real price
- State Loan & RUS
  - Similar to Bradley Lake model
  - $0.037/kWh 50 year average real price

Economic Impact

- Majority Alaska Hire
  - 65% Alaskans employed
  - Capitalizing on Pacific Northwest hydroelectric experience while maintaining Alaska Hire
- In 2014, nearly $7 million earned in Alaska wages
- In 2013, $6 million spent in goods and services in the Mat-Su Valley

Environmental Study Process

- ✓ Study Plan Development
- Study Implementation Phase
- Impact Assessment
- Development of Protection, Mitigation and Enhancement Measures (PMEs)

2014: Safe and Effective Field Work

- More than 200 in the field, with one recordable incidents
- Completed data collection for 13 FERC-approved studies
  - Water Quality, Bioaccumulation of Mercury
  - Ice Processes, Glacier and Runoff Changes
  - Salmon Escapement, Aquatic Habitat Characterization, Fish Passage Barriers
  - Large Carnivores, Terrestrial Furbearers, Bat, Wood Frog
  - Subsistence
  - Probable Maximum Flood

Understanding the Susitna Basin

- Advanced the state of science for agencies to better manage resources
  - Wildlife, fish, recreation, subsistence surveys etc.
  - Documented distribution of invasive Northern Pike in Lower Susitna River
  - Contributed >4,500 tissue samples to ADF&G Gene Conservation Lab
  - Expanded distribution data for species such as Chinook Salmon, Lake and Rainbow Trout
  - Maximized value of Mat-Su fisheries research
- Expanded public knowledge of Susitna Basin
  - Environmental, fish and game, aerial imagery, hydrology data, etc.

Cultural Resources

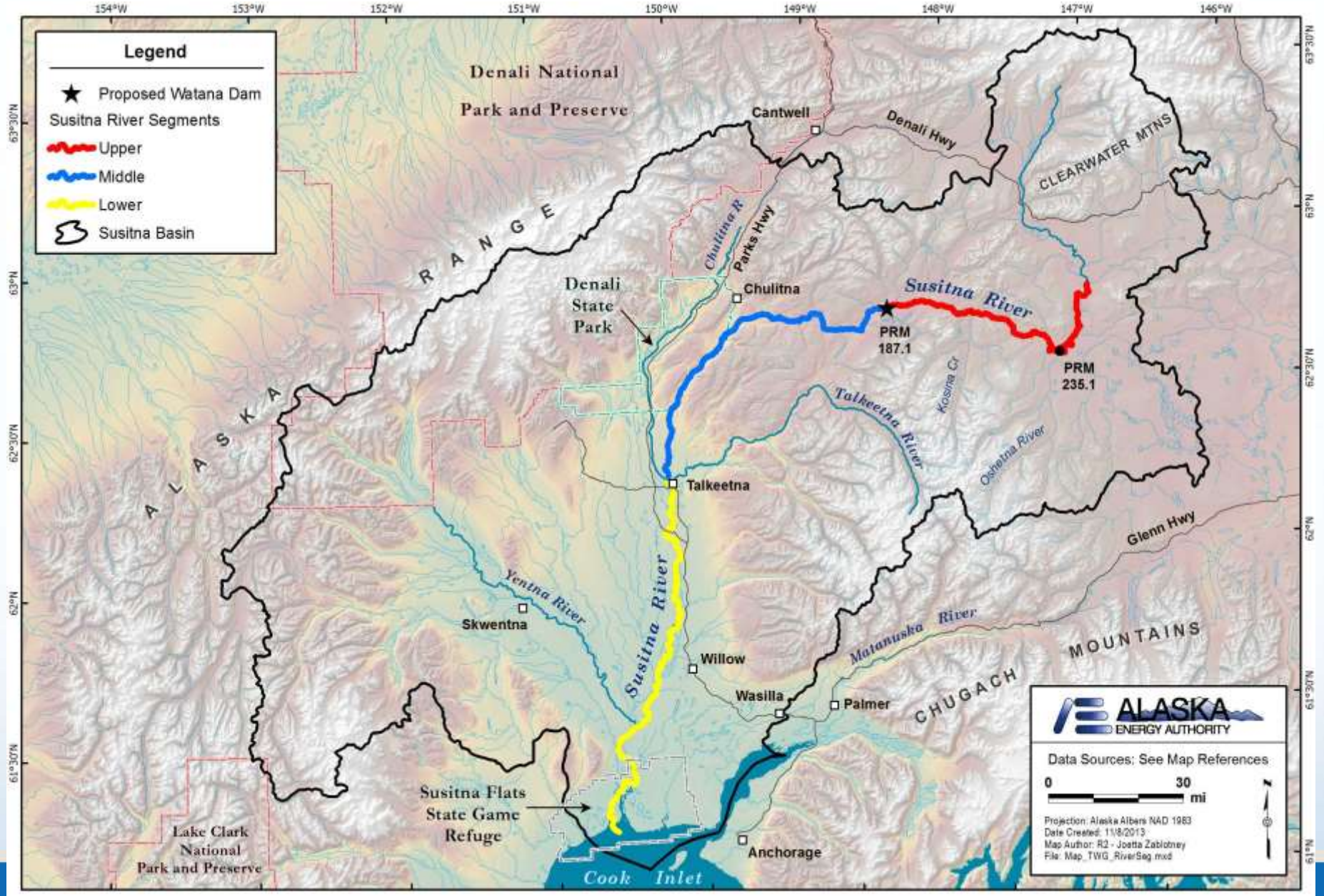
- Developing a better understanding of historical and current human use of the Susitna region
  - Subsistence, cultural resources, archeology, ethnogeography, recreation, health, etc.
- Ahtna Ethnogeography Study
  - Interviewed Ahtna elders to discuss traditional uses
  - Documented Ahtna place-names, Athabascan groups and territorial boundaries, traditional routes, trails, artifacts.
- A similar effort for Dena'ina people part of FERC-approved study plan, not completed

Wildlife Studies and Coordination

Increased ADF&G's Understanding for Game Management Unit 13E

- **Moose** habitat use and movement; population estimates and bull and calf ratios; productivity and survival
- **Caribou** seasonal use and movement; interactions between neighboring herds and population dynamics
- **Dall's Sheep** surveys

Understanding Potential Impacts

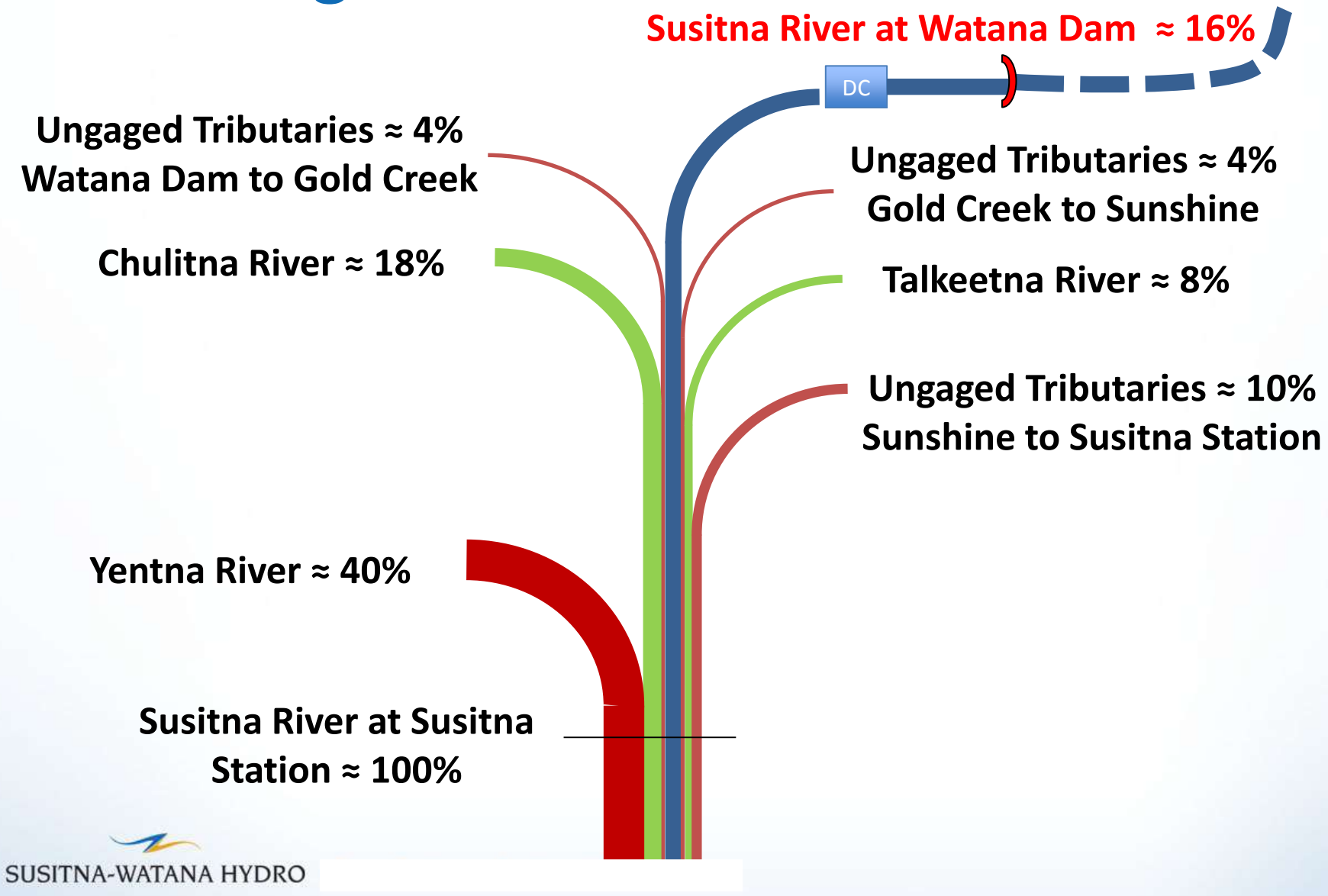


Confirming Results and Defining Areas of Impacts

- Observations similar to 1980s
  - Fish distribution
  - Chinook salmon only documented anadromous fish above Devils Canyon
  - Water chemistry and seasonal changes in chemistry
  - Geomorphically stable river system
  - Magnitude of bird migration and breeding distribution

- Defining potential areas of impacts
  - Insignificant water quality or geomorphic impacts below Yentna River Confluence (No further modeling proposed in this reach)
  - Minor impacts on main channel geomorphology in Middle River (Dam site to Chulitna River confluence)

Average Annual Flow Contributions



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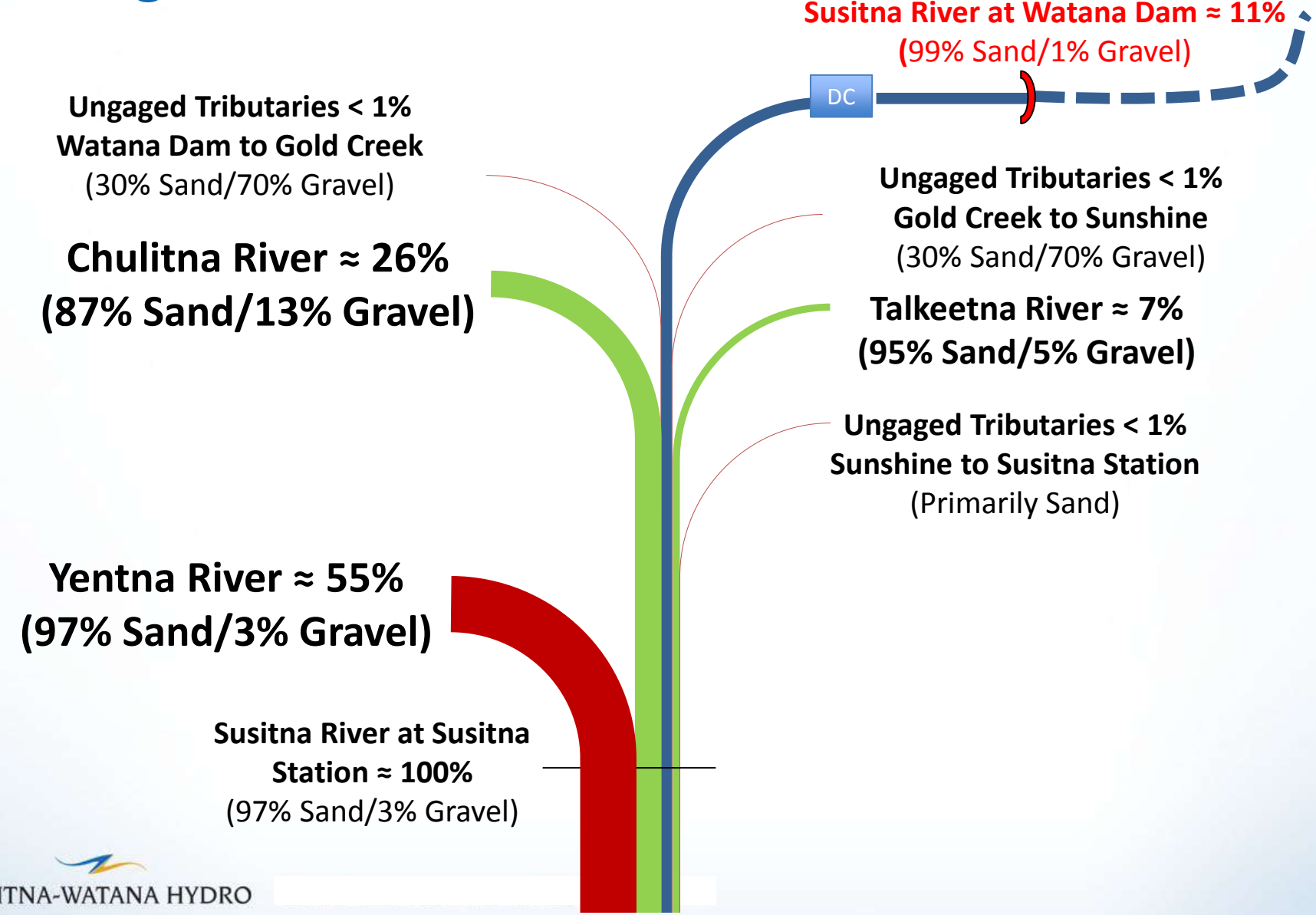
Average Annual Bed Material Load Contributions



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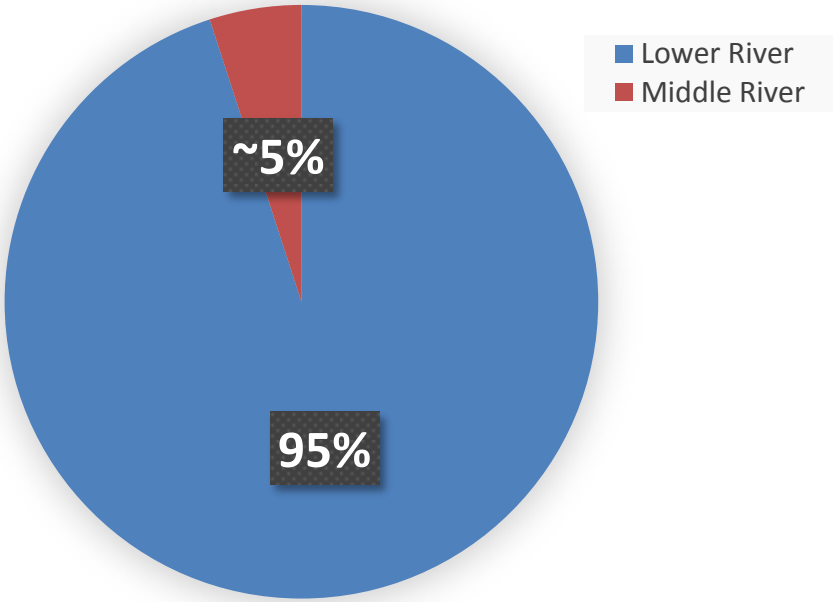
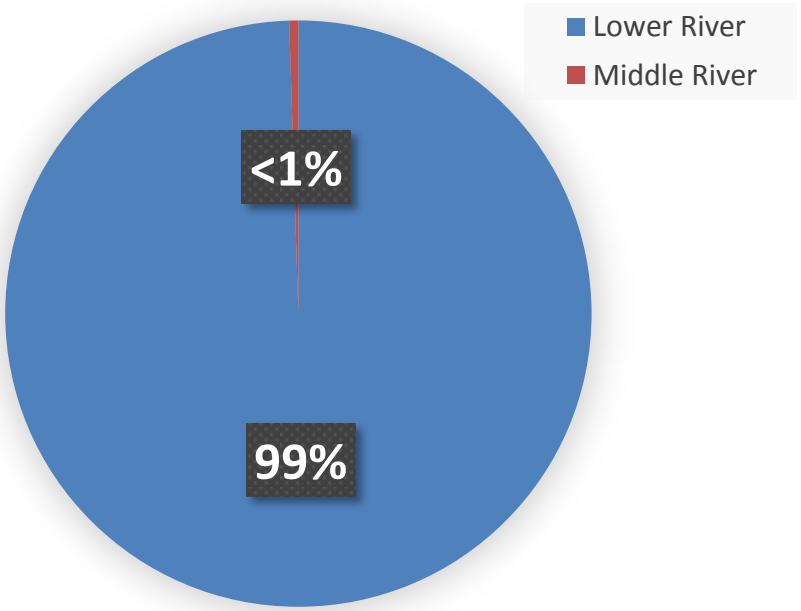
Salmon Spawning Distribution

Chinook/Coho/Chum



Sockeye



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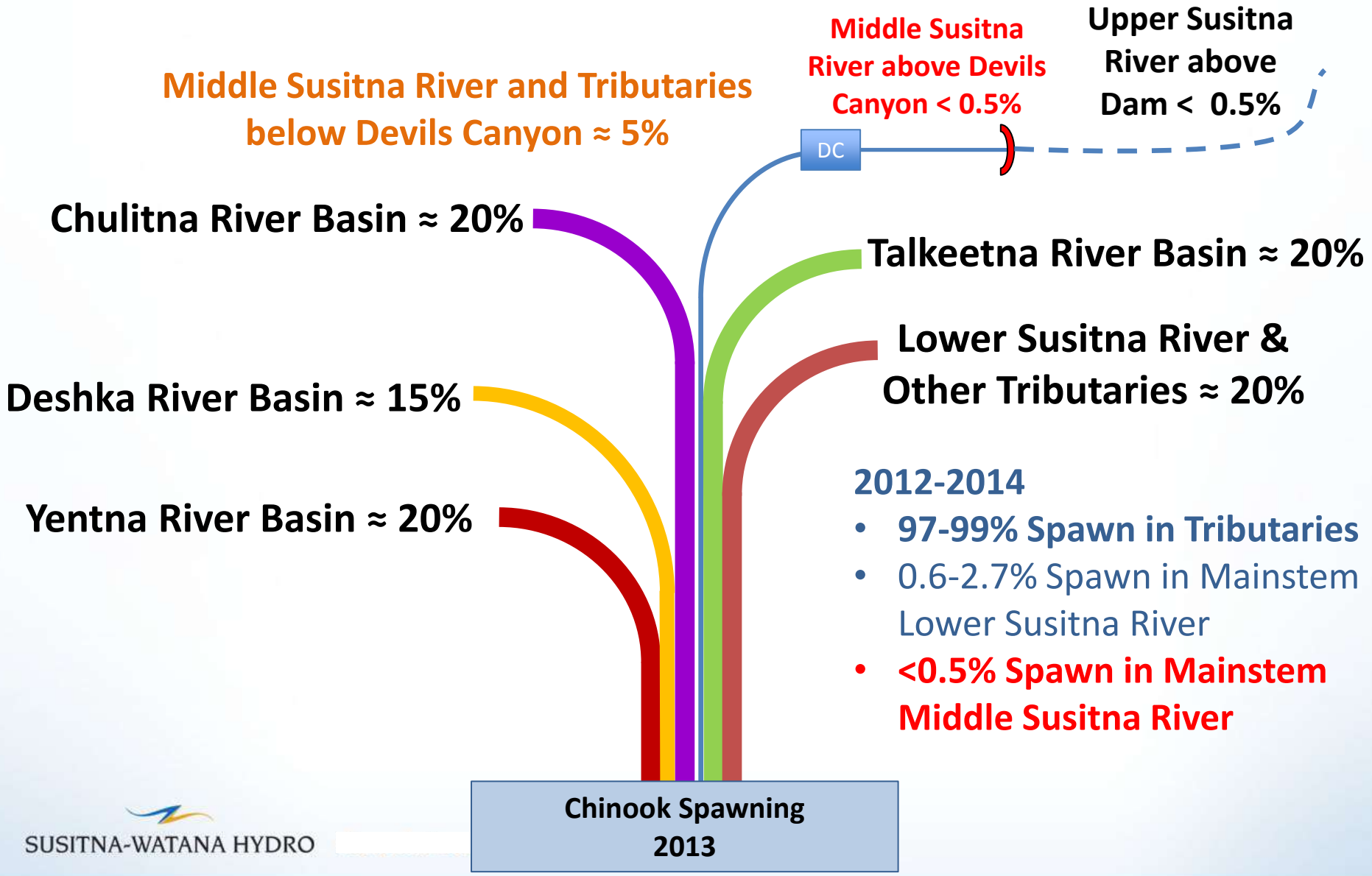
Chinook Salmon Spawning Distribution by Basin



2012-2014

- **97-99% Spawn in Tributaries**
- 0.6-2.7% Spawn in Mainstem Lower Susitna River
- **<0.5% Spawn in Mainstem Middle Susitna River**

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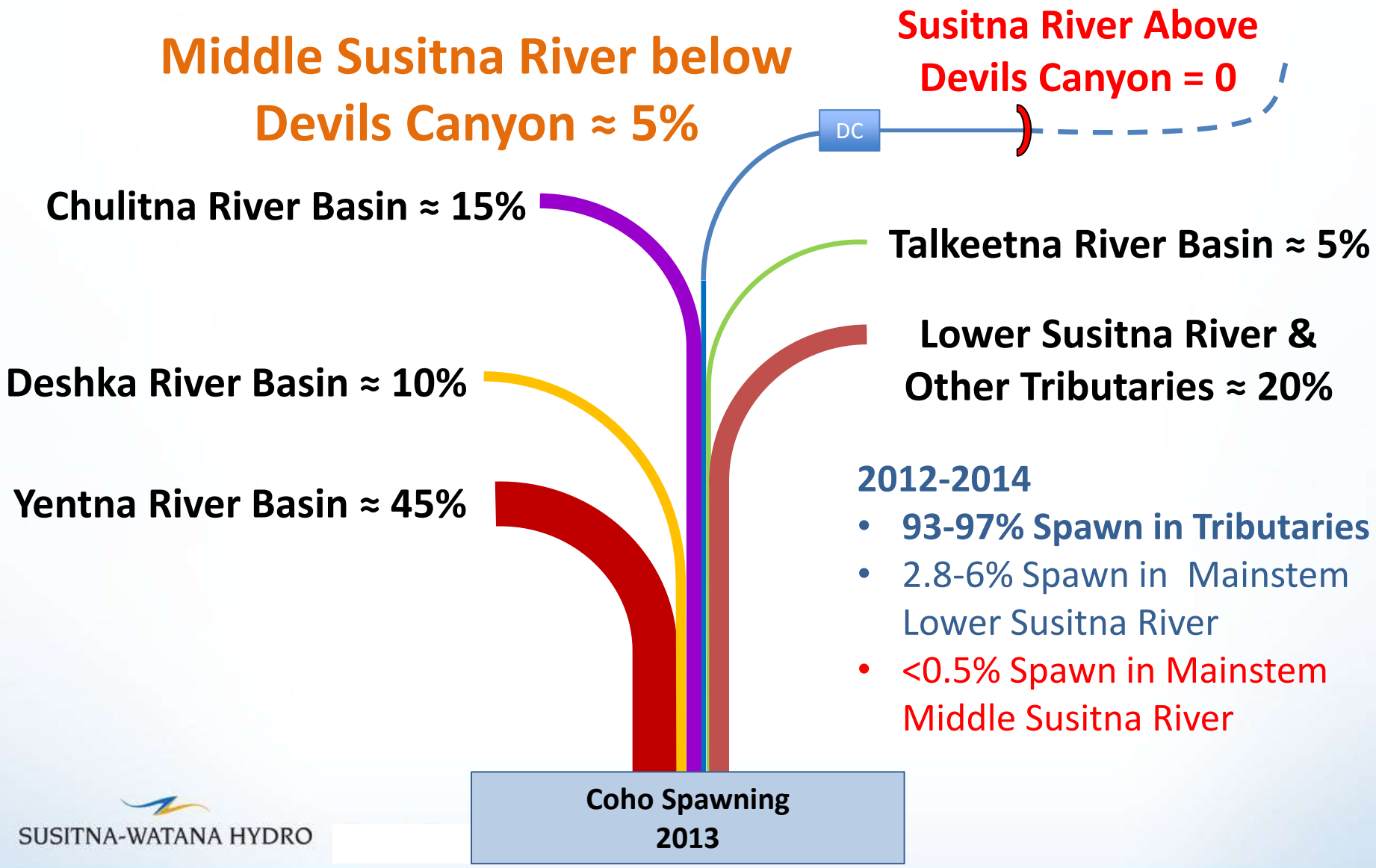
Data Sources: LGL (2014)

Coho Salmon Spawning Distribution by Basin



2012-2014

- **93-97% Spawn in Tributaries**
- 2.8-6% Spawn in Mainstem Lower Susitna River
- <0.5% Spawn in Mainstem Middle Susitna River

SUSITNA-WATANA HYDRO

(Merizon 2010) Data Source: LGL (2014)

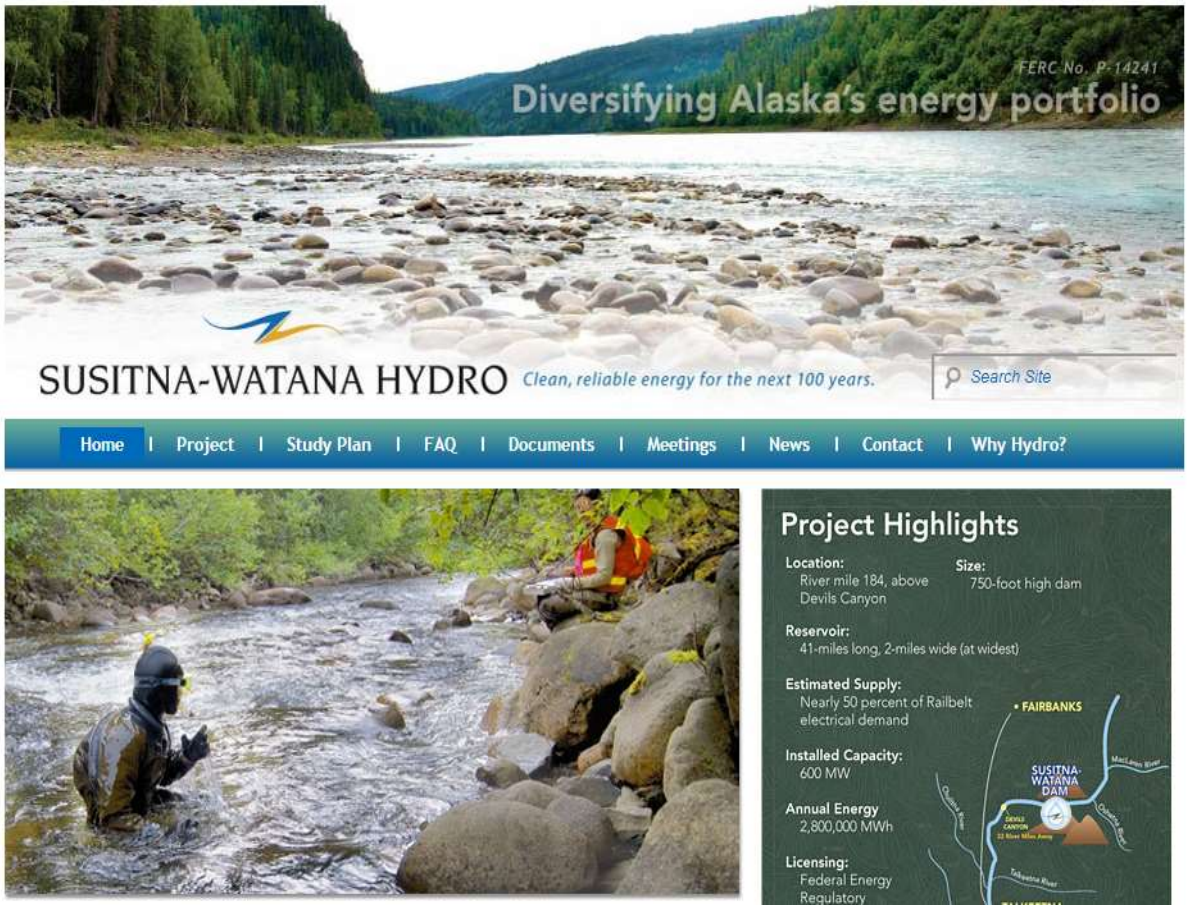
Chinook by the Numbers

Tagged Chinook Salmon and Devils Canyon

Only one salmon species has been documented within 30 miles of the project site.

Engineering Accomplishments

- Board of Consultants Endorsed Roller Compacted Concrete and Dam Configuration
- 2014 drilling confirmed no active faults found at dam site
- Mean Annual Energy - 2,800 Gigawatt Hours
- Engineering Feasibility Report - January 2015
  - Optimized dam height, capacity and power generation



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