

# Susitna-Watana Hydroelectric Project Document

## ARLIS Uniform Cover Page

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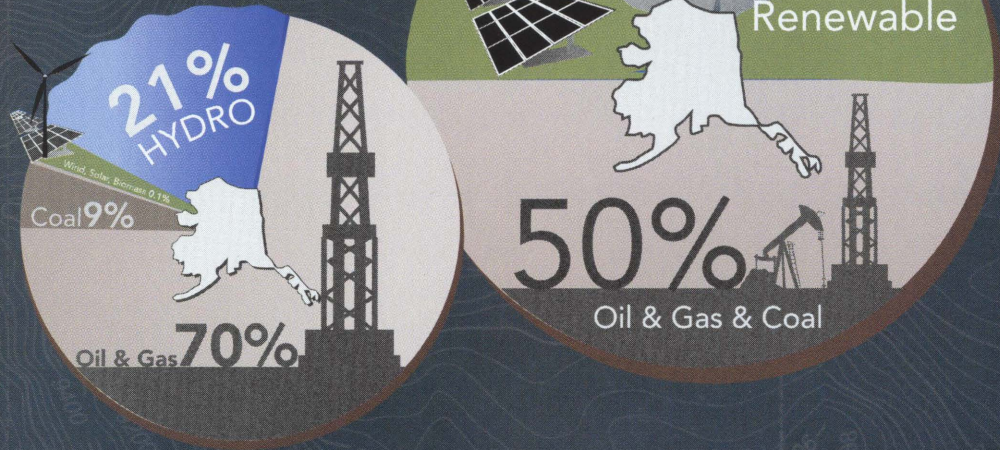




# Alaska's renewable energy goal

BY 2025:

TODAY:



In 2010, Alaska's Legislature unanimously adopted a renewable energy goal to supply 50 percent of the state's electrical power from renewable sources by 2025.

**Location:**  
River mile 184,  
above Devils Canyon

**Size:**  
735-foot-high dam

**Reservoir:**  
About 42 miles long,  
average 1 mile wide

**Estimated Supply:**  
Roughly 50 percent of  
Railbelt electrical demand

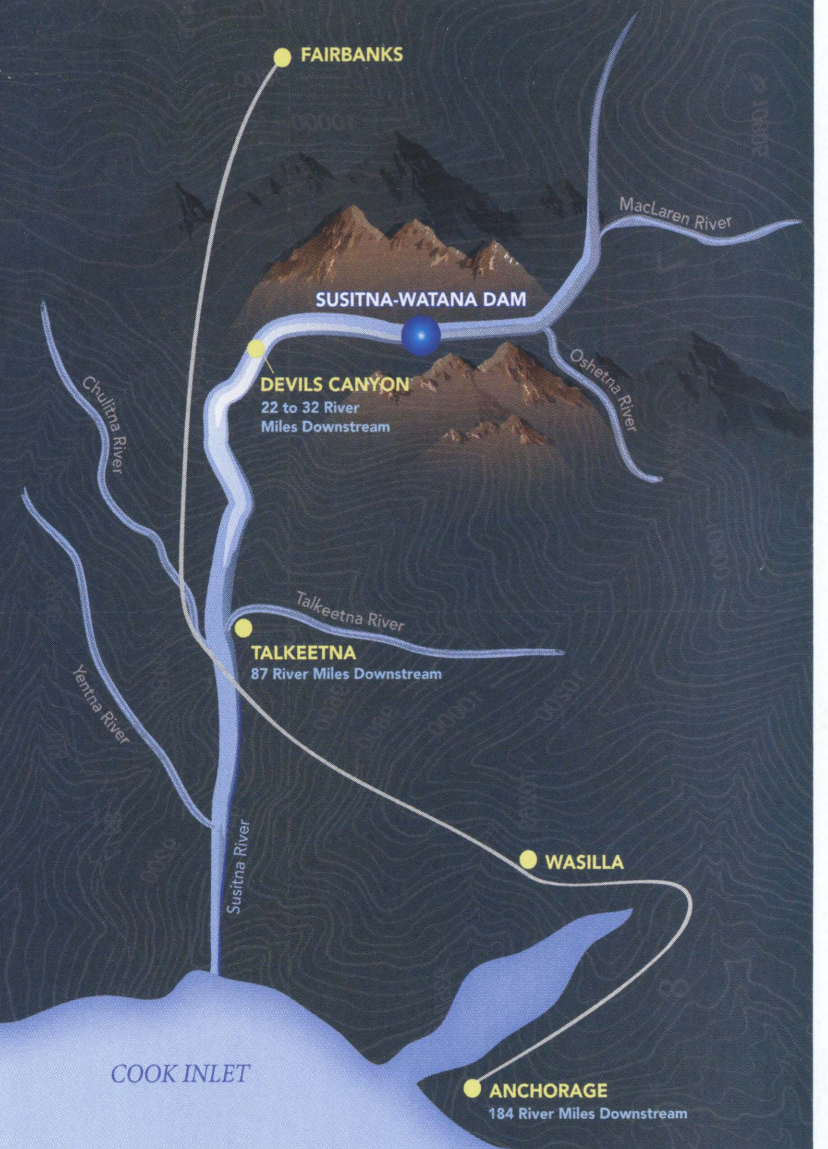
**Installed Capacity:**  
600 MW

**Annual Energy**  
2,800,000 MWh

**Licensing:**  
Federal Energy Regulatory  
Commission (FERC)

**Project Life:**  
100+ years, providing  
long-term, stable rates

**Cost:**  
\$5.19 billion



## SUSITNA-WATANA HYDRO



Clean, reliable energy for the next 100 years.

SUSITNA-WATANA HYDRO



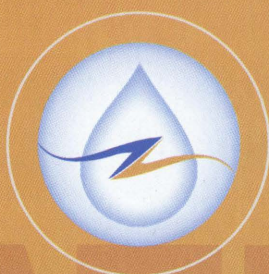
Find us online: [susitna-watanahydro.org](http://susitna-watanahydro.org)

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Clean, reliable energy for the next 100 years.

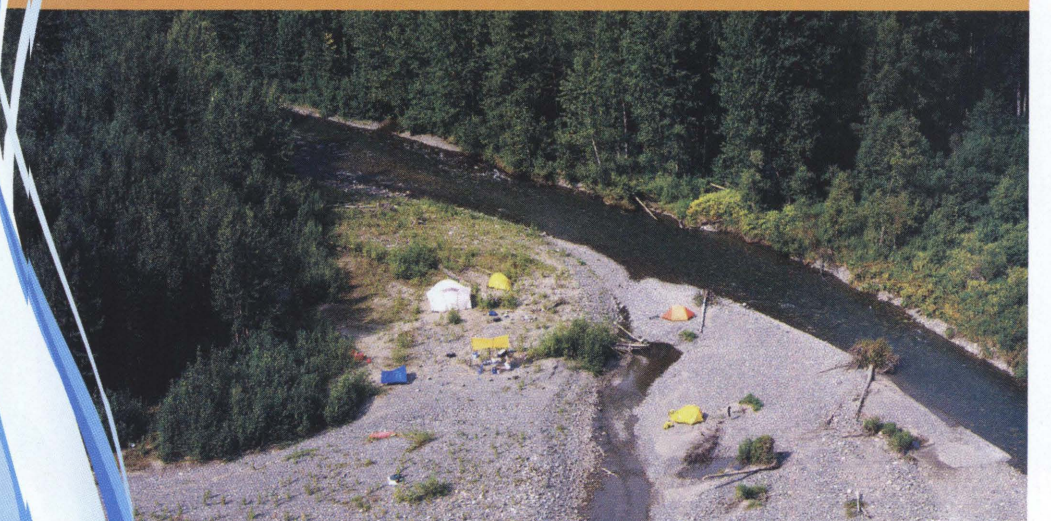
### Susitna-Watana Hydro:

- Is a planned hydroelectric project on the upper Susitna River that will provide **more than 50 percent** of all electricity from Fairbanks to Homer.
- Will help stabilize energy costs throughout the Railbelt for **100+ years**.
- Will help **diversify Alaska's energy portfolio** and decrease our dependence on fossil fuels.
- Will enable Alaska to achieve its goal of providing **50 percent** of its electrical energy from renewable sources by 2025.



## WATER POWER

For more than a century, Alaskans have harnessed power from water. Today, hydropower – from nearly 40 separate projects - supplies 21 percent of all electricity generated in Alaska.





# HYDROPOWER

## DIVERSIFYING ALASKA'S ENERGY PORTFOLIO

AN ESTIMATED **1,000 JOBS**  
DURING CONSTRUCTION PHASE

Currently employs engineers, fieldworkers, scientists and local businesses

**20** FULL-TIME JOBS  
estimated to maintain and operate the facility once completed

Susitna-Watana Hydro will provide long-term, stable electricity rates to consumers and businesses by further diversifying Alaska's energy infrastructure.

The cost of power from Susitna-Watana Hydro is anticipated to be competitive with other fuel sources at start-up, even with no direct State investment beyond the licensing phase. The 50-year average cost of wholesale power is estimated to be 6.9 cents per kilowatt hour\*.

\*Inflation adjusted

### STUDY PLAN

The Federal Energy Regulatory Commission has approved all 58 study plans for Susitna-Watana Hydro, allowing a two-year study period to begin this year.

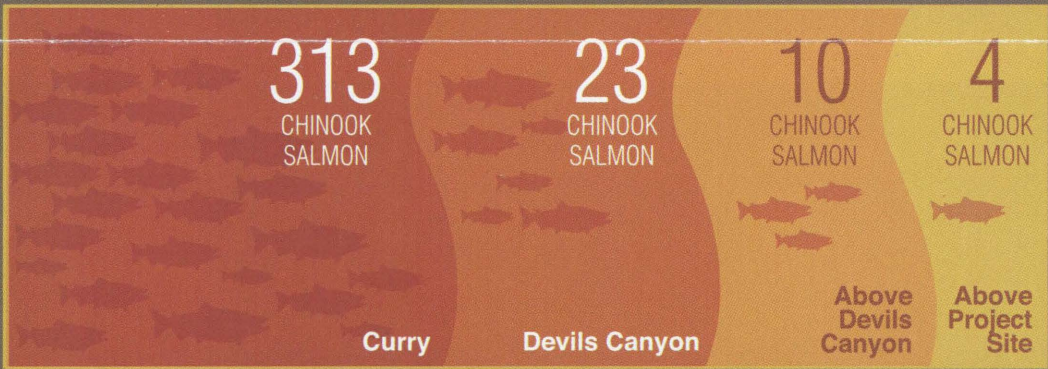
- New studies will supplement more than 3,000 study documents completed during the 1980s and nearly a decade of management-related data gathered by the Alaska Department of Fish & Game.
- Susitna-Watana Hydro's approved study plans cover the area from the upper Susitna River to Cook Inlet.

Studies will be completed in 11 different categories:

- Geology and Soils
- Water Resources
- Instream Flow Studies
- Fish and Aquatic Resources
- Botanical Resources
- Wildlife Resources
- Recreation and Aesthetic Resources
- Cultural and Paleontological Resources
- Subsistence Resources
- Socioeconomic and Transportation Resources
- Project Safety

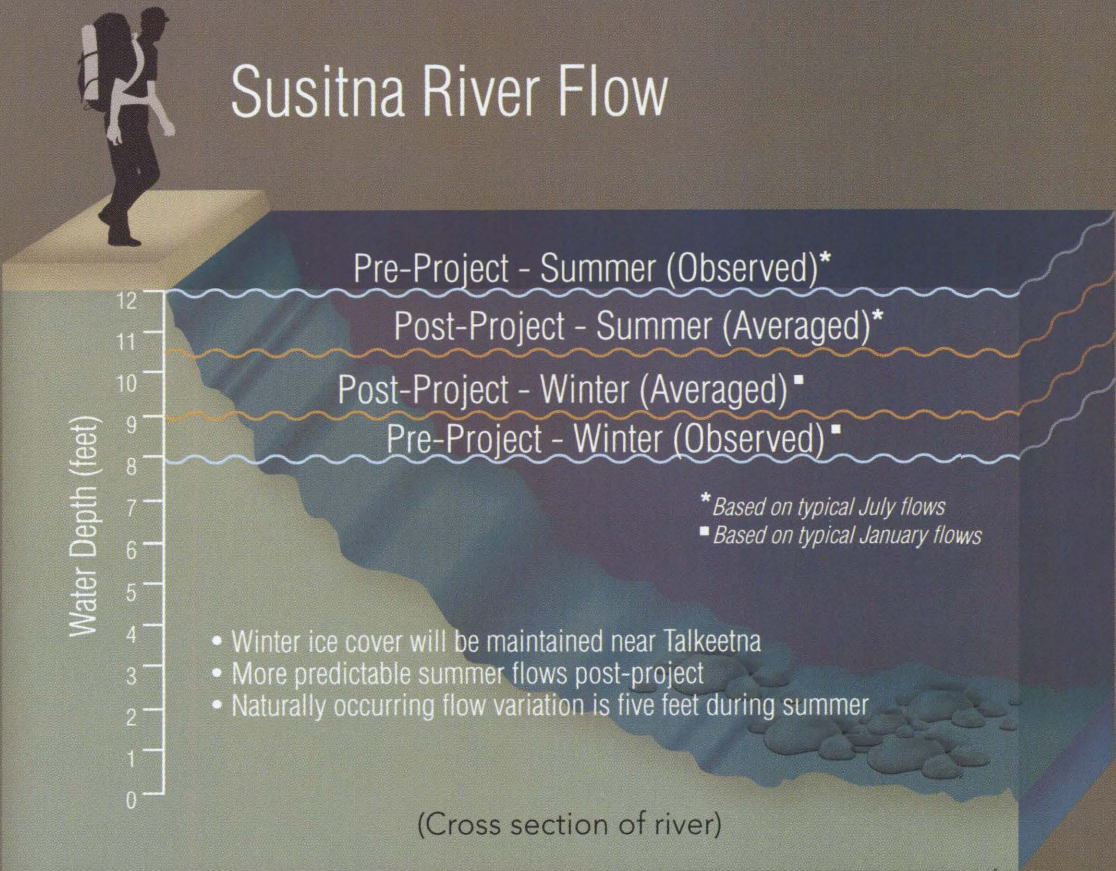
### Chinook salmon and Devils Canyon

Only one salmon species has been documented within 35 miles of the project site.

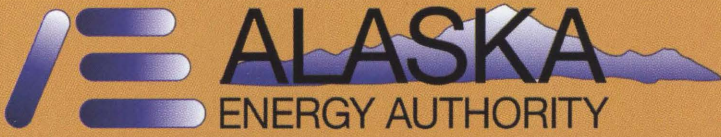


Of the 10 tagged chinook salmon that made it through Devils Canyon, five returned back downriver to spawn (2012 study).

### Susitna River Flow



Water levels are estimated to be within the natural flow variations once Susitna-Watana Hydro begins operating. The above illustration is based on previous water-flow studies and scientific modeling at Sunshine, near Talkeetna.



Susitna-Watana Hydro is just one project on which the Alaska Energy Authority (AEA) is working to diversify Alaska's energy portfolio. In 2008, the State created the **Renewable Energy Fund (REF)**. Since then, AEA has managed the REF, which has provided \$202 million for **228 renewable energy projects** statewide. In 2012, the Legislature authorized the fund for another **10 years**.

Preliminary Planning

Design and Licensing

Construction

2013

2024

WE ARE HERE

START UP

Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 - Year 112