Ecological Risk Assessment of Large-Scale Hydropower on Pacific Salmon Populations within the Susitna River

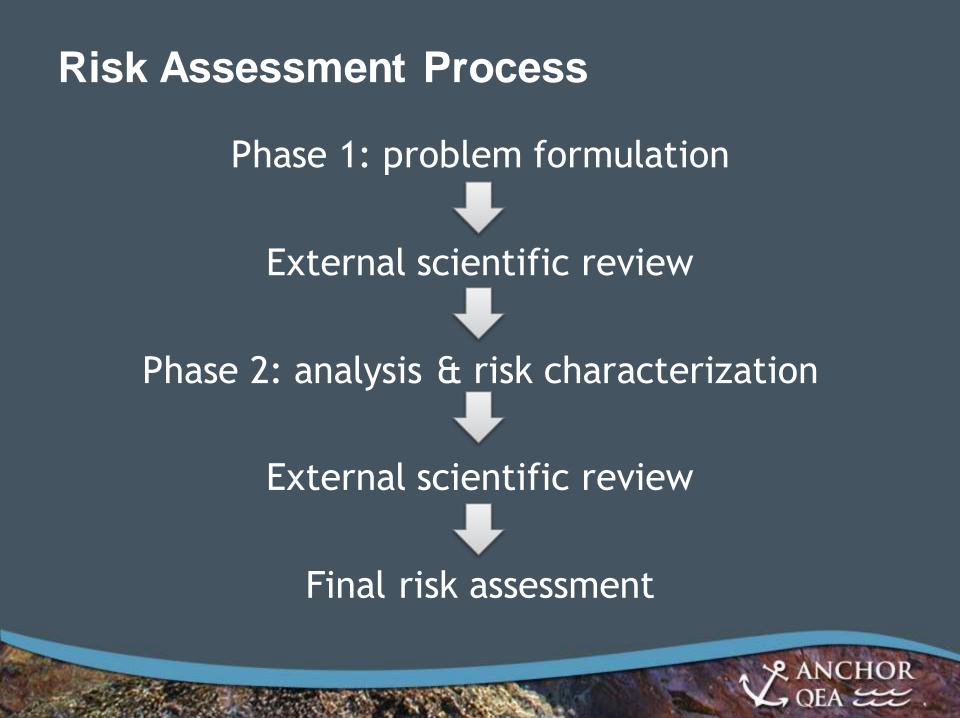
Presented by Joe Miller

November 13, 2013

Purpose of the risk assessment

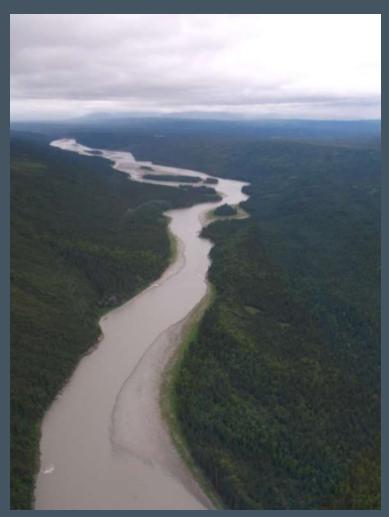
Provide The Nature Conservancy with an assessment of potential risks to salmon populations from the proposed Susitna-Watana project...

- Evaluate
- Inform & communicate
- Make decisions



What is risk?

- Resource of interest
- Magnitude and probability
- Uncertainty
- Choice of endpoints



Severity

Magnitude	High			most significant
	Medium			
Š	Low	least significant		
		Low	Medium	High
	Probability			

L'ANCHOR QEA .

Uncertainty (e.g., weather forecast)

de	High			
Magnitude	Medium			
N	Low			
		Low	Medium	High
	Probability			

QEA ETT

Endpoints

Population-level effects:

- Abundance
- Productivity
- Spatial structure
- Diversity

The goal is to identify potential changes (\downarrow or \uparrow)

More specifically...

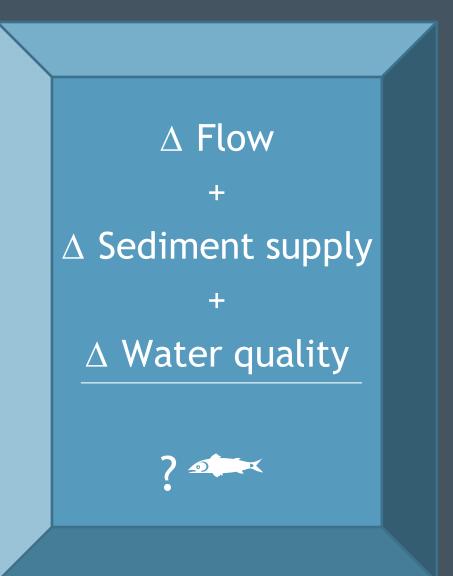
Looking at the propagation of risk





Focal areas

- Project activities
- Habitat processes
- Habitat attributes
- Population parameters





Other focal areas—external modulation and biological feedback

- Climate change
- Marine productivity
- Marine derived nutrients





Schedule and status

- Phase 1
- Phase 2

Next steps...





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