

A scenic landscape featuring a river in the foreground, surrounded by lush vegetation. On the left, there are trees with vibrant yellow and orange autumn foliage. On the right, there are tall green grasses and reeds. In the background, a dense forest of evergreen trees stretches across the horizon under a clear blue sky. The overall scene is peaceful and natural.

Genetic Health and Connectivity Considerations

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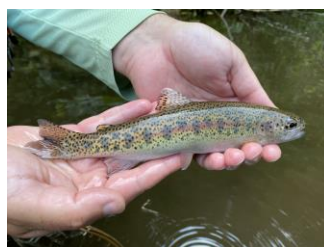
www.travisseaborn.com





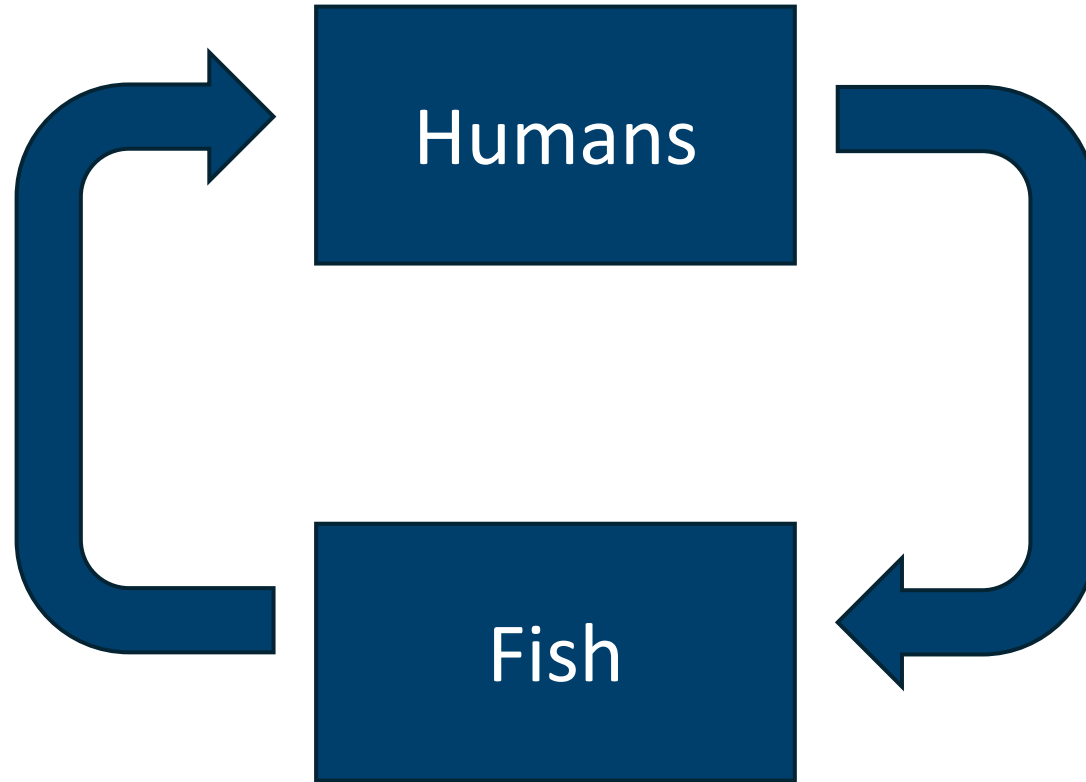


How do species respond to environmental change?



Genetics, movement, and our social-ecological system

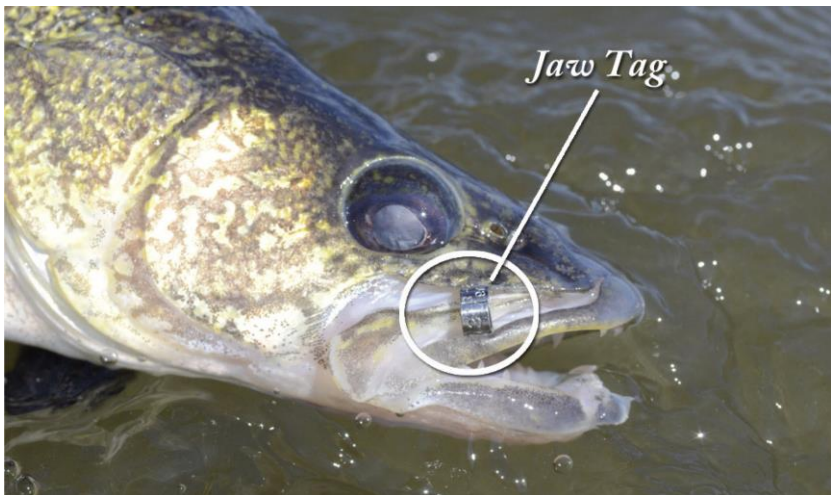
Genes
related to
movement
and growth



Hatcheries
Fisheries



Lots tools and considerations for movement and population health

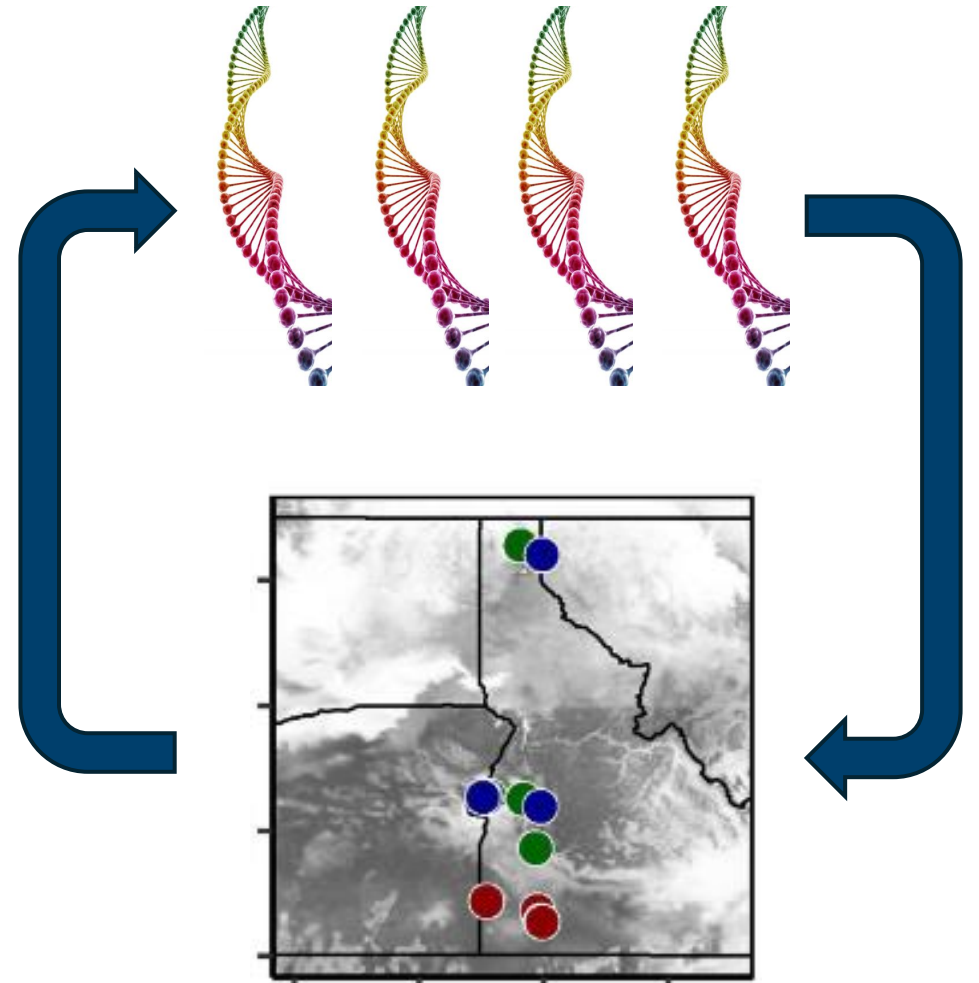


A sampling of the lab's toolbox

Conservation genetics: understanding the genetic health of a population

Landscape genetics: understanding connectivity and local adaptation

Landscape ecology: understanding aspects that influence population sizes or presence/absence



Applications Across Management

Habitat restoration

Connectivity projects

Surrounding land cover decisions

Hatchery stocking

Angling pressure

Translocation

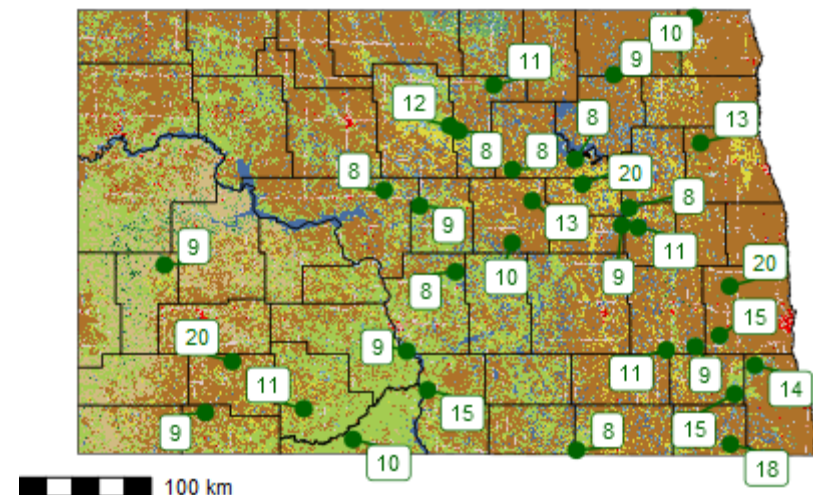


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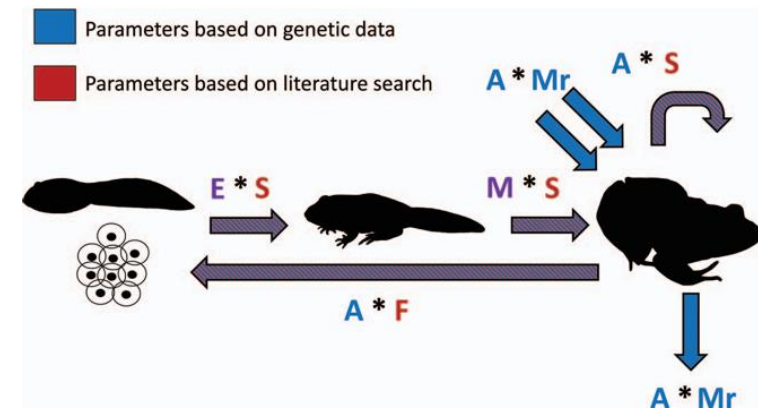


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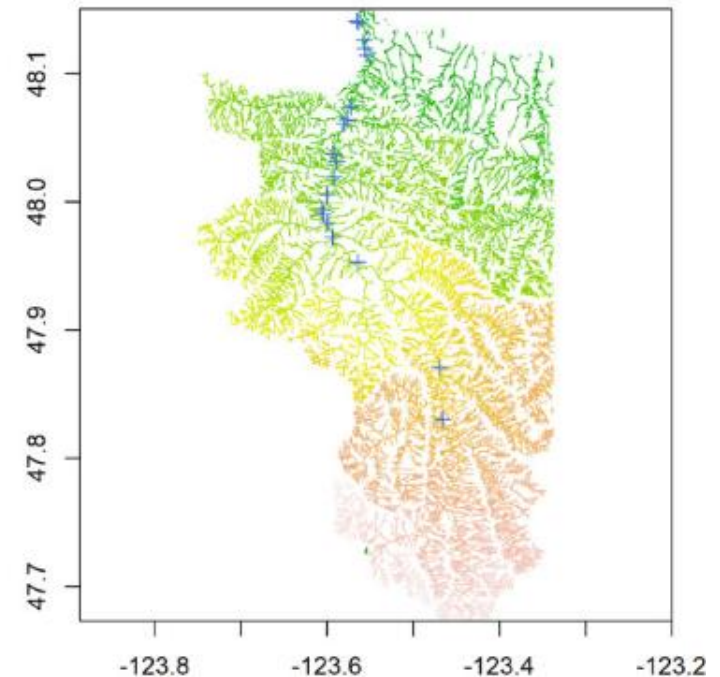


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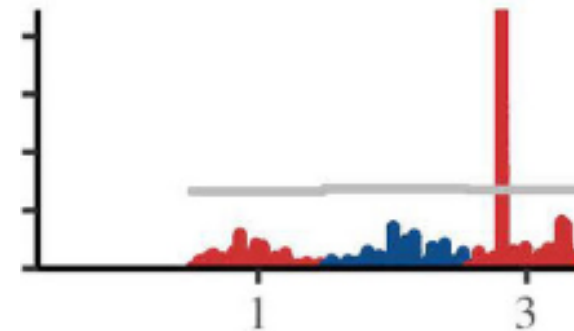
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Desert vs. Cold



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[Environmental DNA: An Emerging Tool for Understanding Aquatic Biodiversity \(U.S. National Park Service\) \(nps.gov\)](#)

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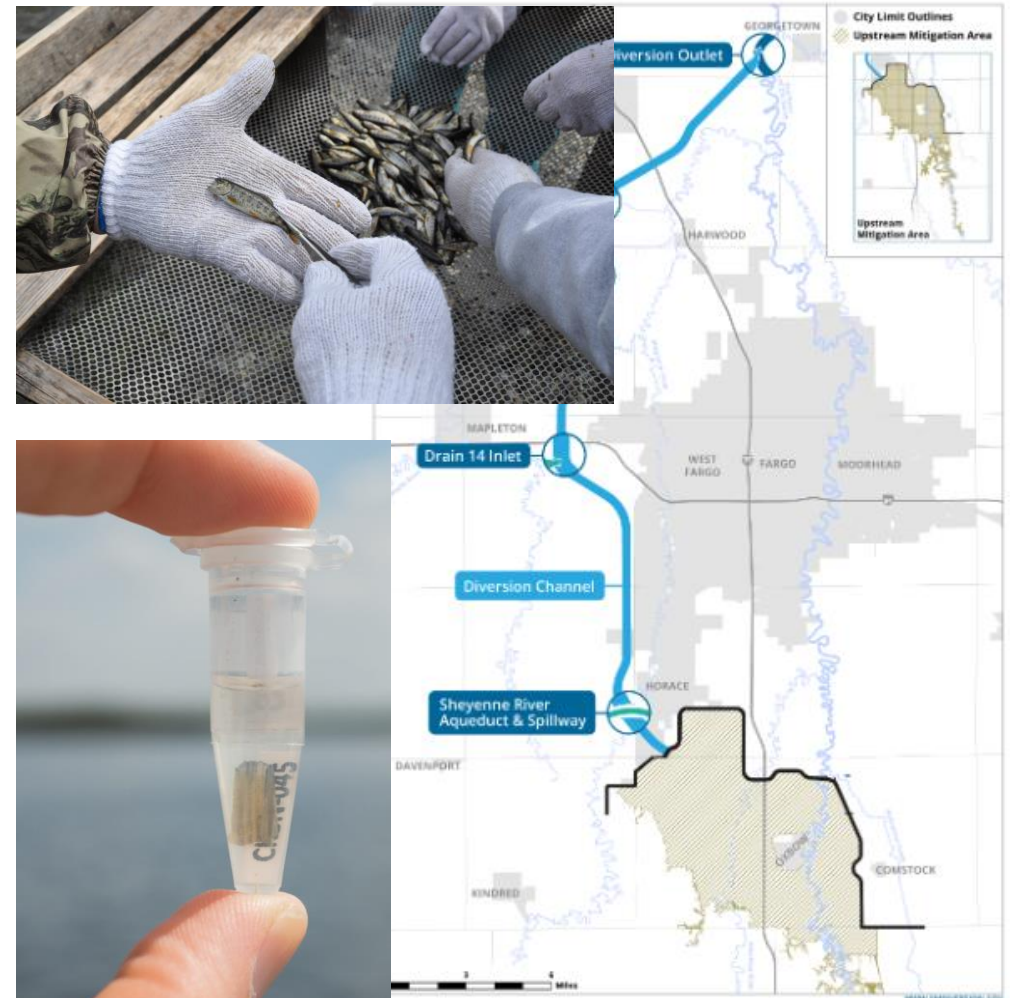
What can we learn about the costs and benefits?

Will connectivity and population health increase, decrease, or stay the same?

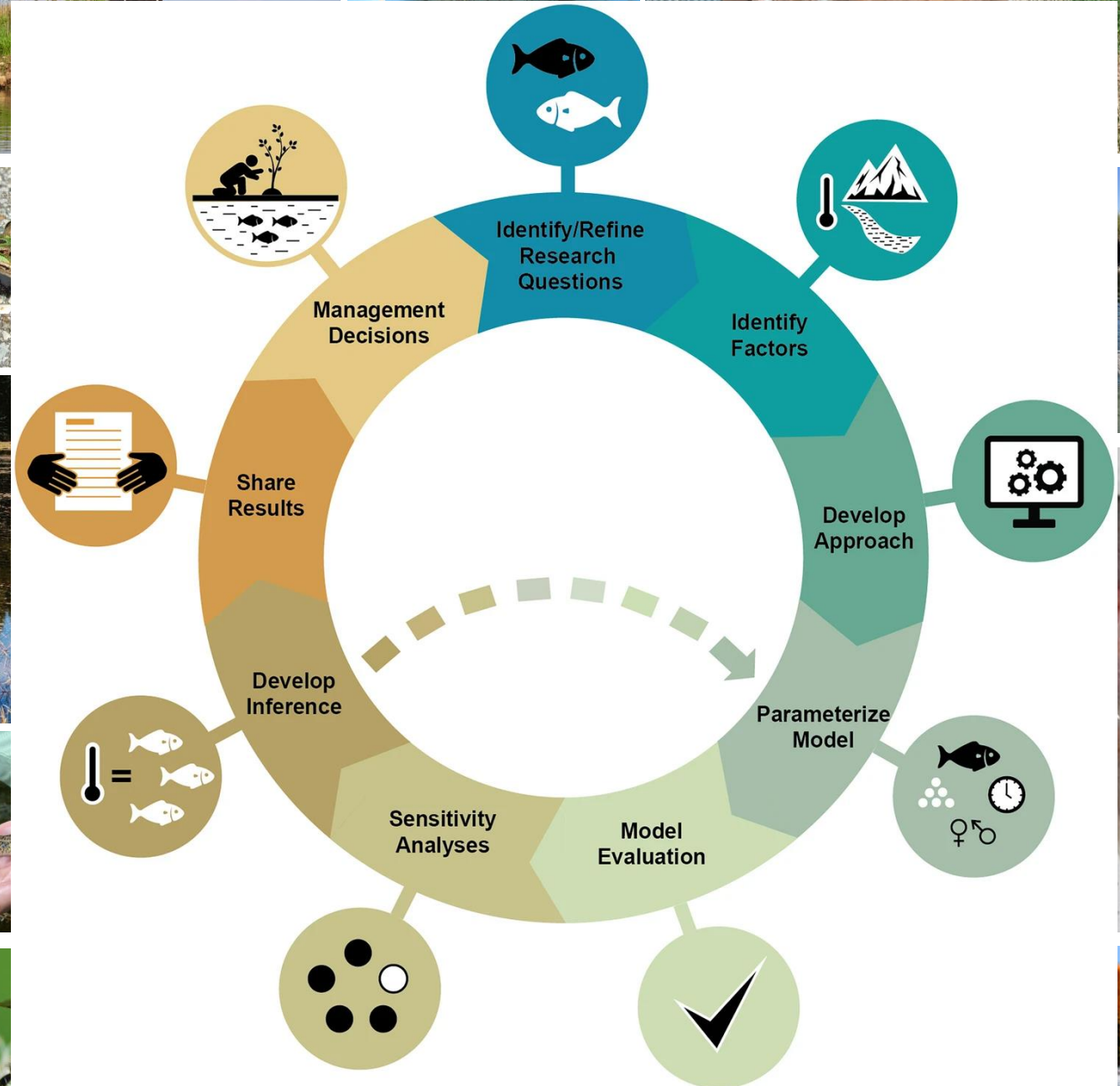
How will different species respond?

Glad some data are being collected for aquatic species! (And overall just research)

What might be the future research question or impact? What can we do now to preserve samples or better under the pre-diversion system? What can I do to help?



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Questions?
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