

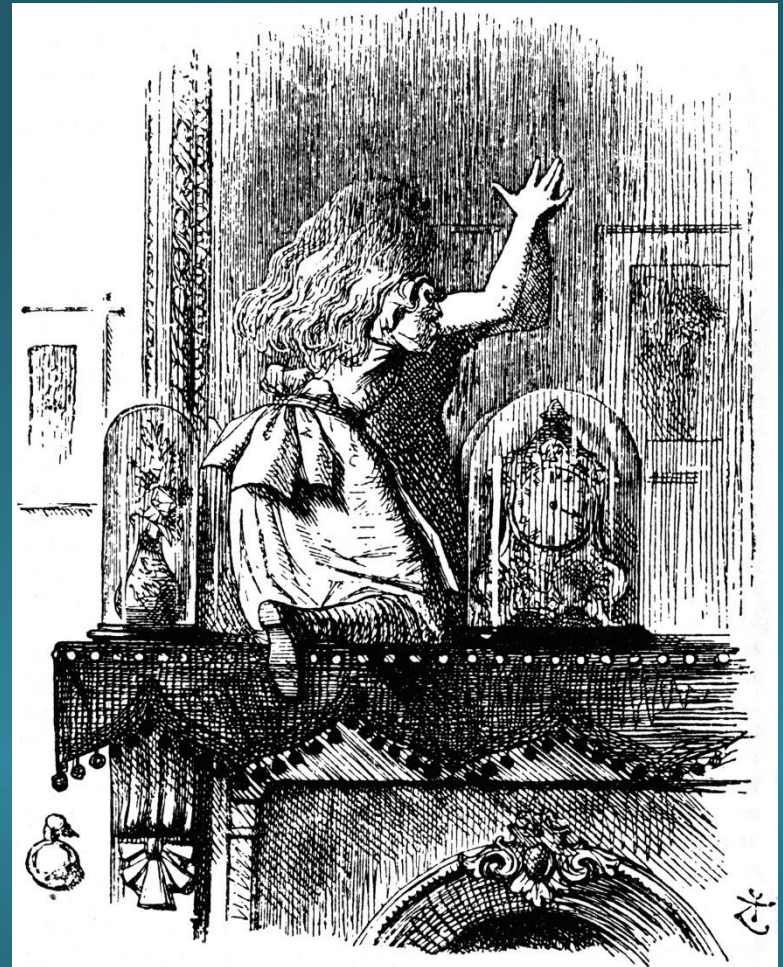
Through the Looking Glass

South Fork Nooksack Temperature TMDL

Steve Hood

South Fork Watershed
Education Committee Forum

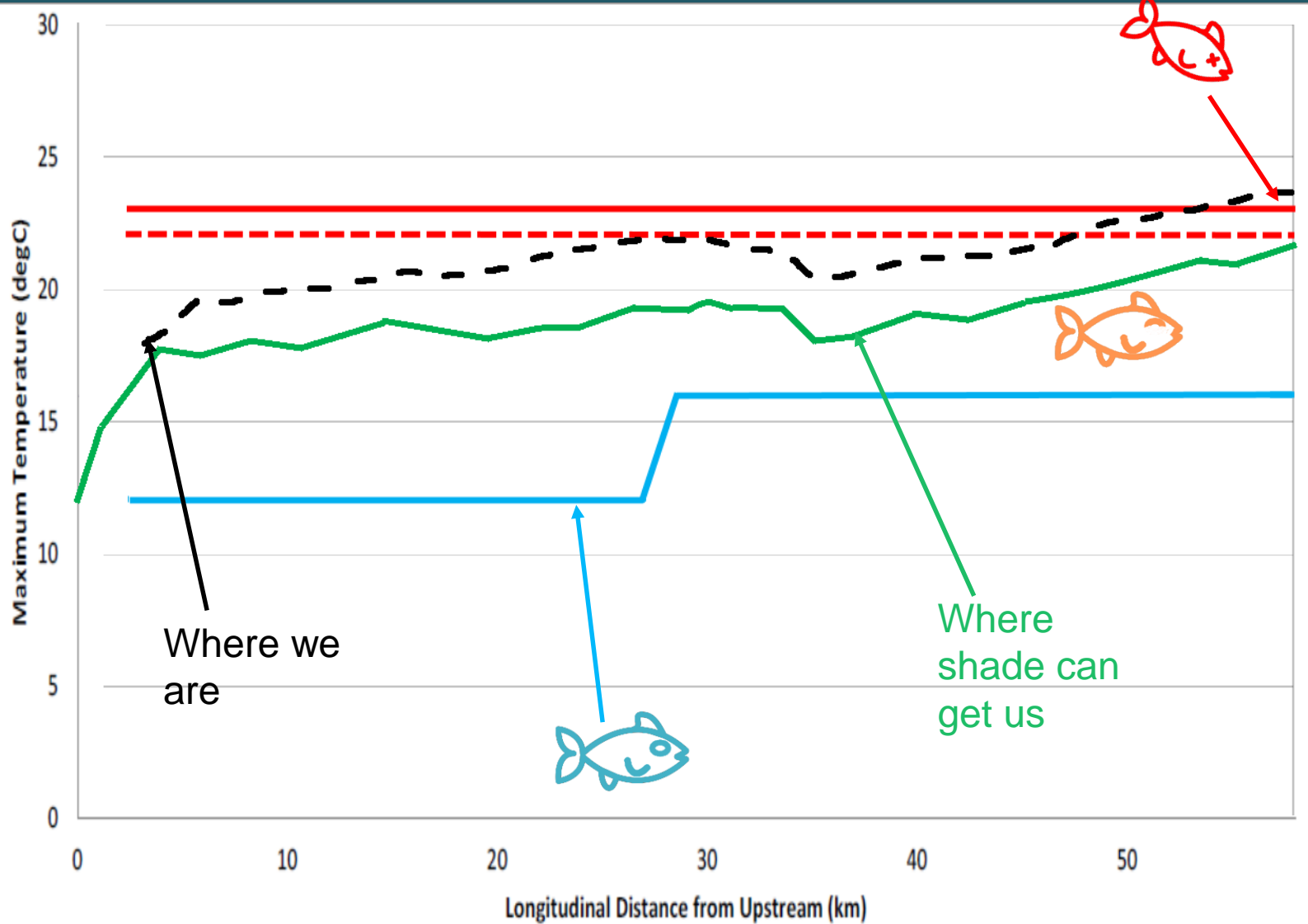
September 19, 2018



The evolution of a simple project

- Temperature TMDL should be easy – allocate the shade from site potential tree height buffers.
- If criteria isn't met we can call SPV natural conditions.

Simply shade it



The problem with shade only

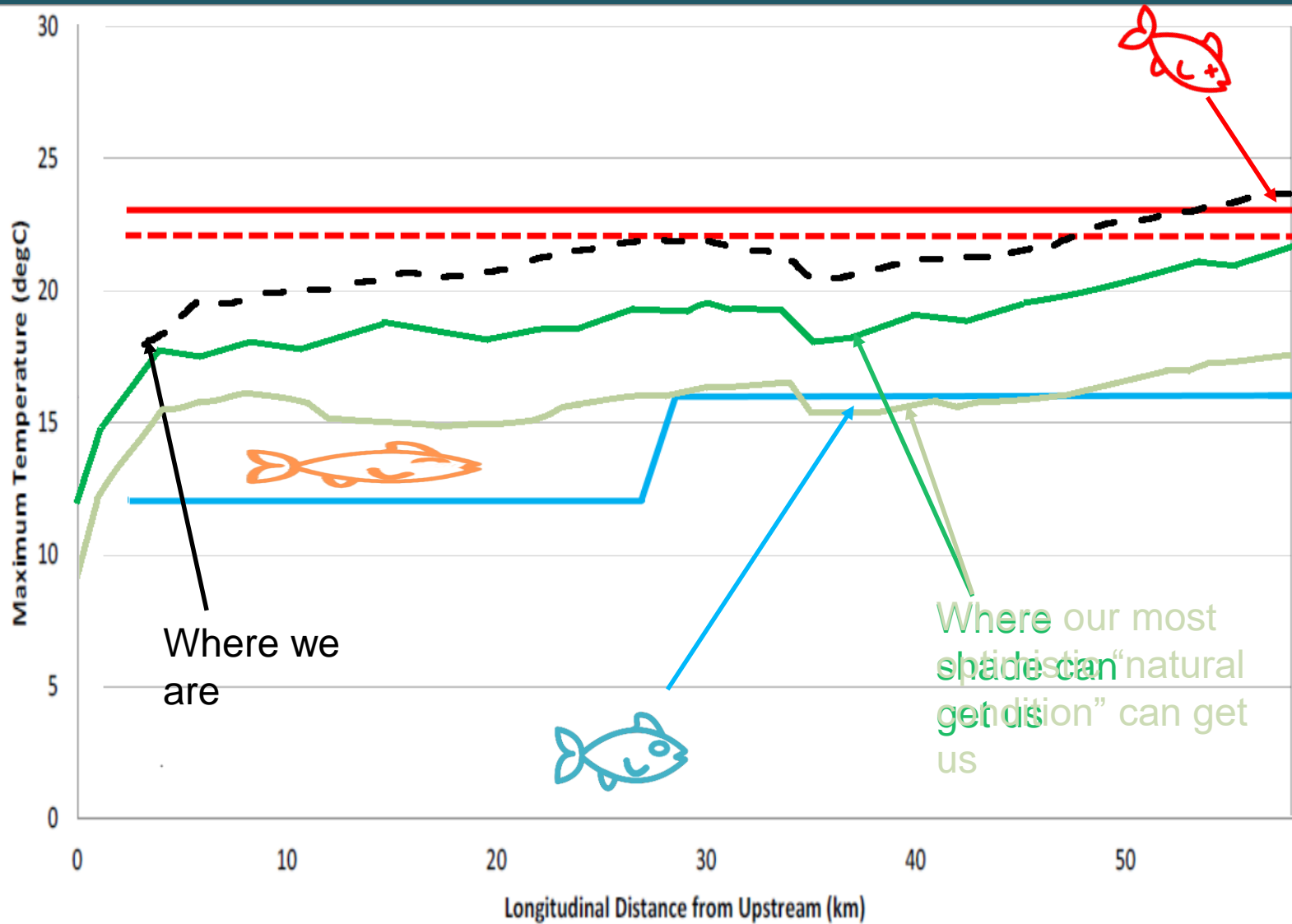
- 100 year site potential underestimates the natural climax forest
- Other factors that have changed, affect temperature

Sensitivity of Nat. Conditions

- Cooler headwaters
- Channel width
- Climax forest
- Hyporheic flow

Photo by Alan Cressler

If we could do it all!



Factor in climate change

- We can not (barely) meet the criteria now
 - Future summers will be warmer
 - Drier
 - We will have less snow pack

EPA pilot examination of climate change

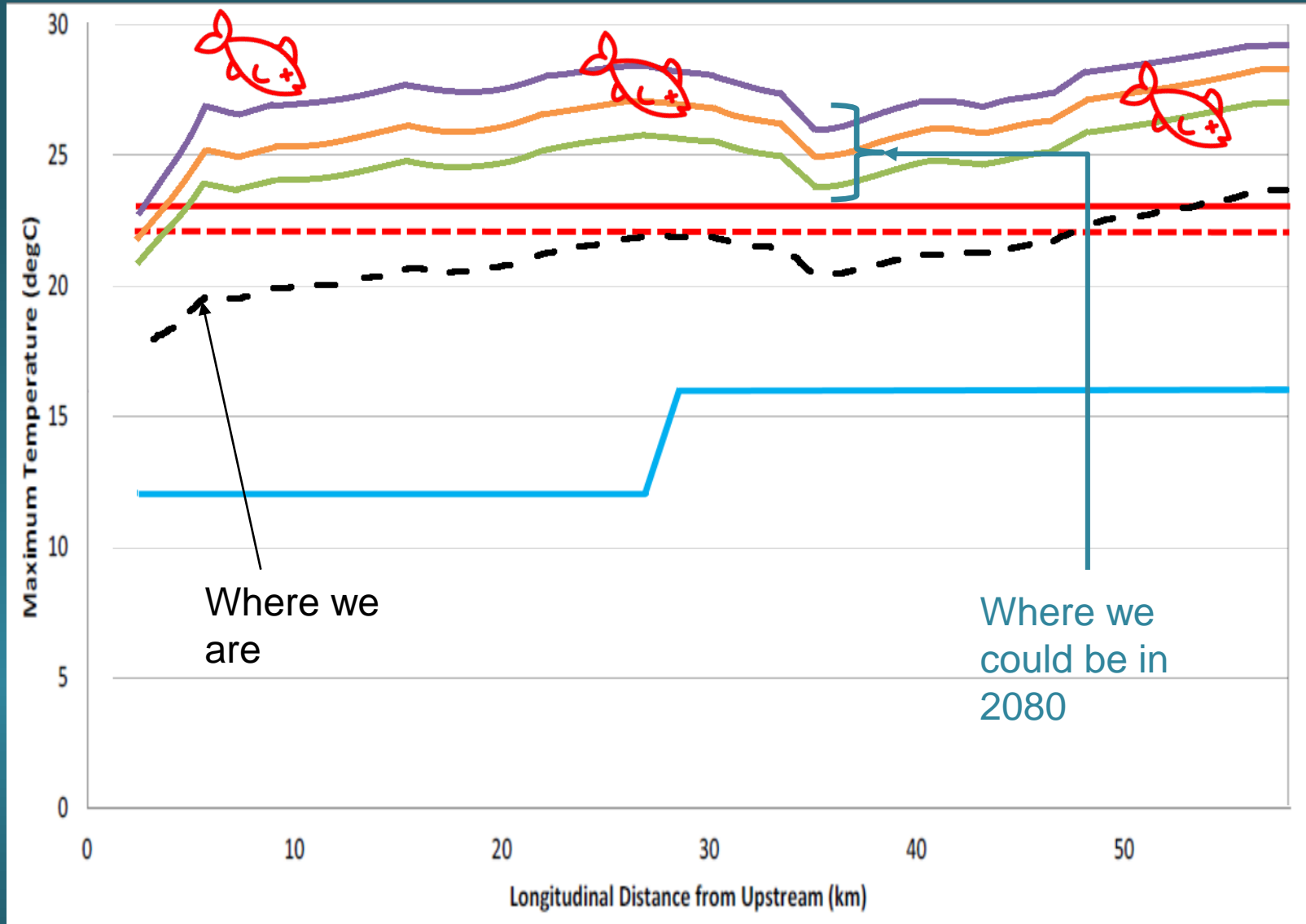




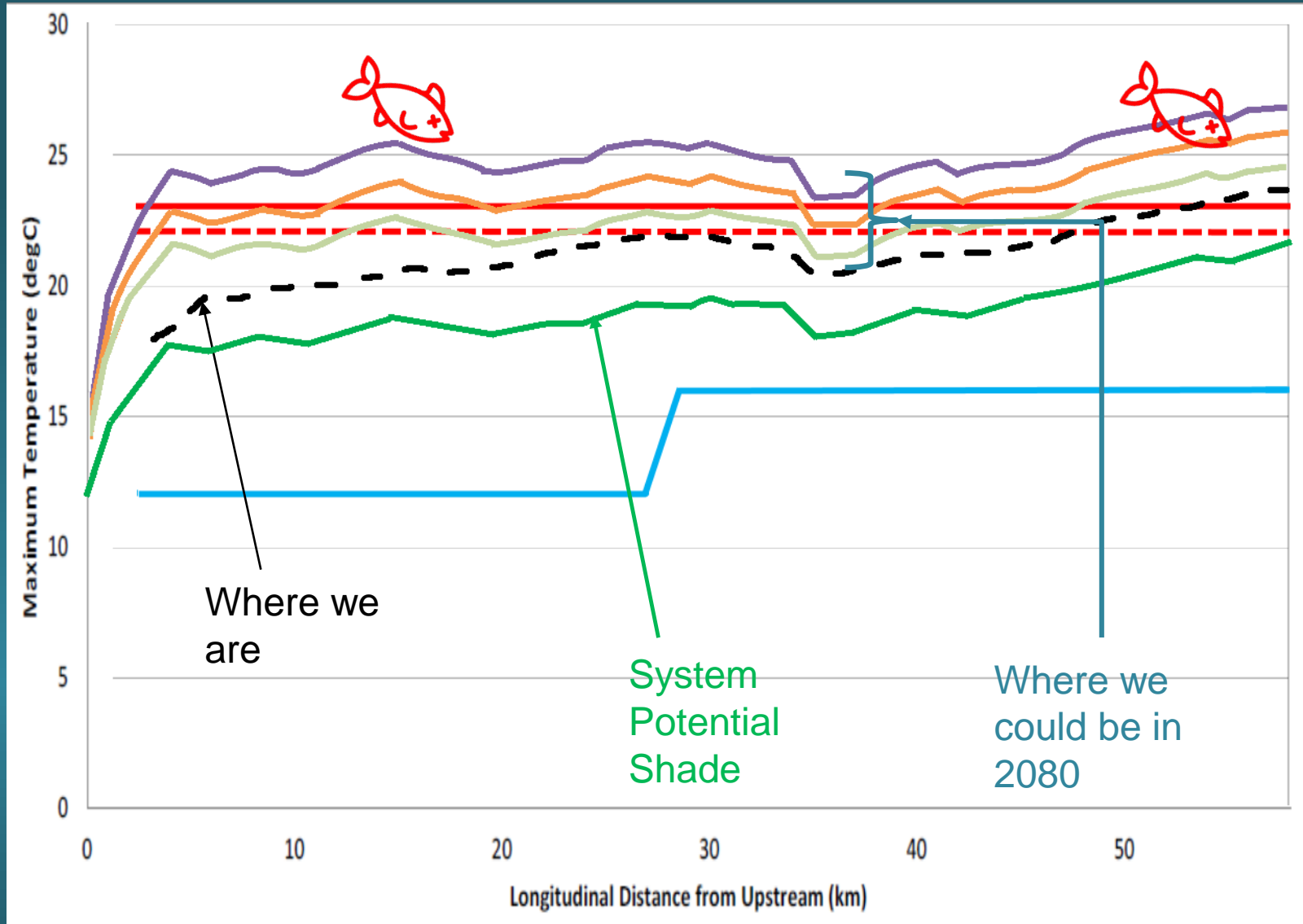
‘Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!’

-Red Queen

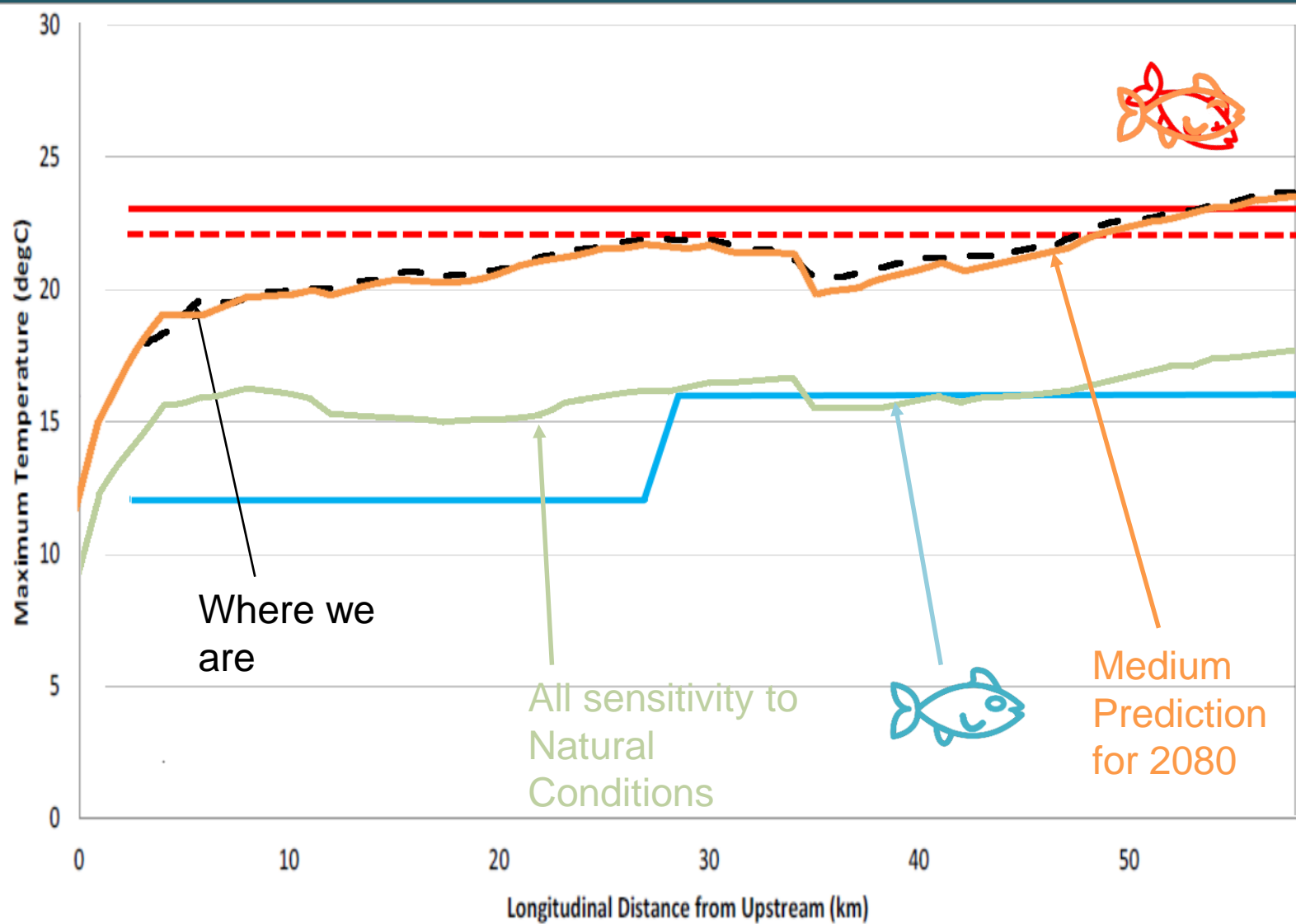
If we stand still (do nothing)



If we trot along (Shade only)



If we run as fast as we can



Implementation

- Shade
- Lateral connectivity (flood plain access)
- Longitudinal connectivity (fish blockage)
- Enhance ground water (wetlands)
- Hyporheic exchange (log jams)
- Refugia (more log jams)

The residents

- Descendants of homesteaders and other long time residents
- Long history of farming and forestry
- History of restoration (CREP, Agricultural preservation)

A scenic view of a river flowing through a lush green forest. The river is surrounded by dense vegetation and large rocks, creating a natural, rocky stream bed. The water is clear and flows over the rocks, creating small rapids and white water. The forest is thick with various types of trees and undergrowth, creating a vibrant green backdrop. The overall atmosphere is peaceful and natural.

Hope for implementation?

**SOUTH FORK WATERSHED
EDUCATION COMMITTEE**

More Information



<https://ecology.wa.gov/southNooksack>