# Severe Drought in California: Improving Tools for Water-Related Ecosystem Management

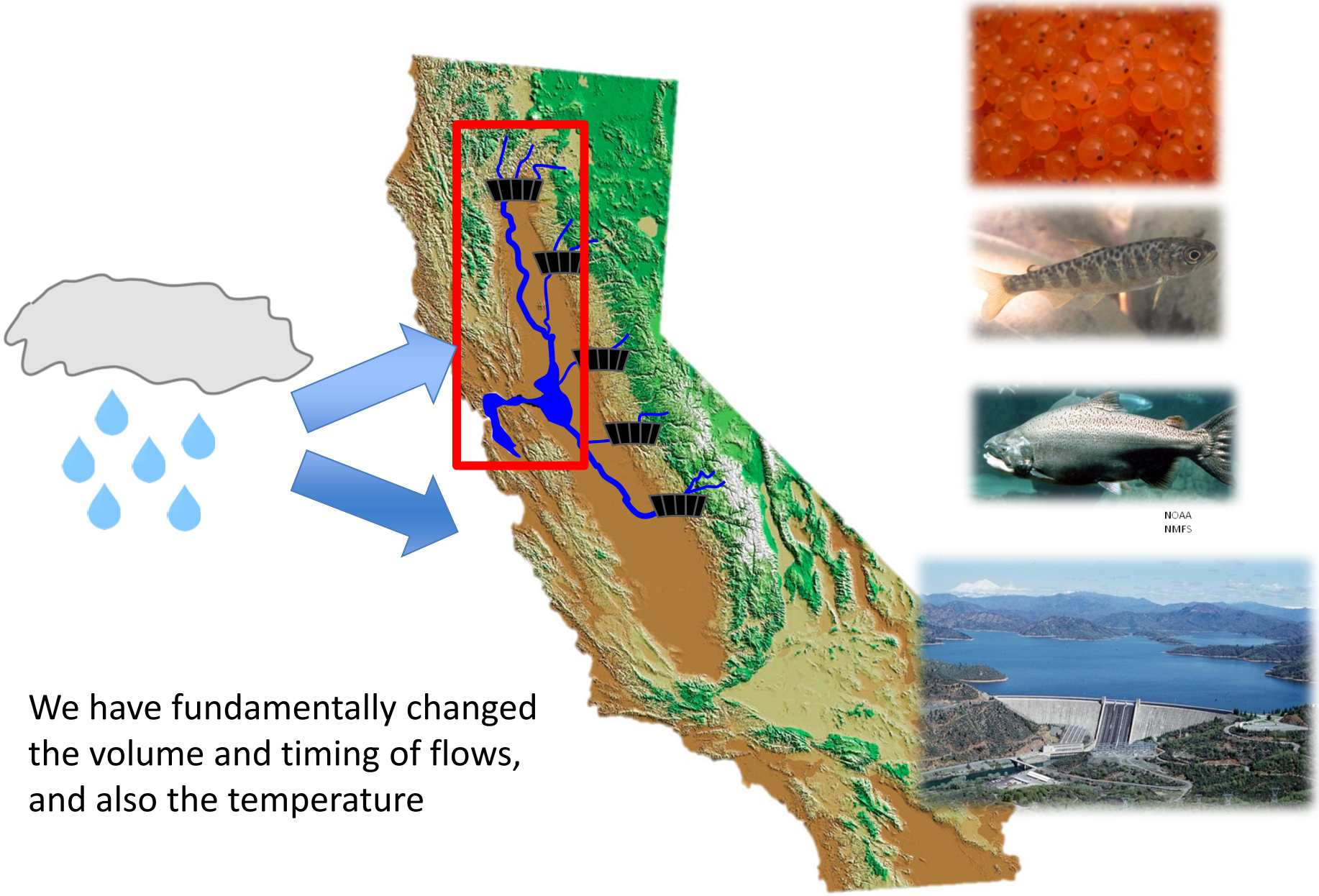
Endangered Winter Run Chinook Salmon

NOAA Species in the Spotlight

NOAA FISHERIES

Eric Danner
Southwest Fisheries Science Center

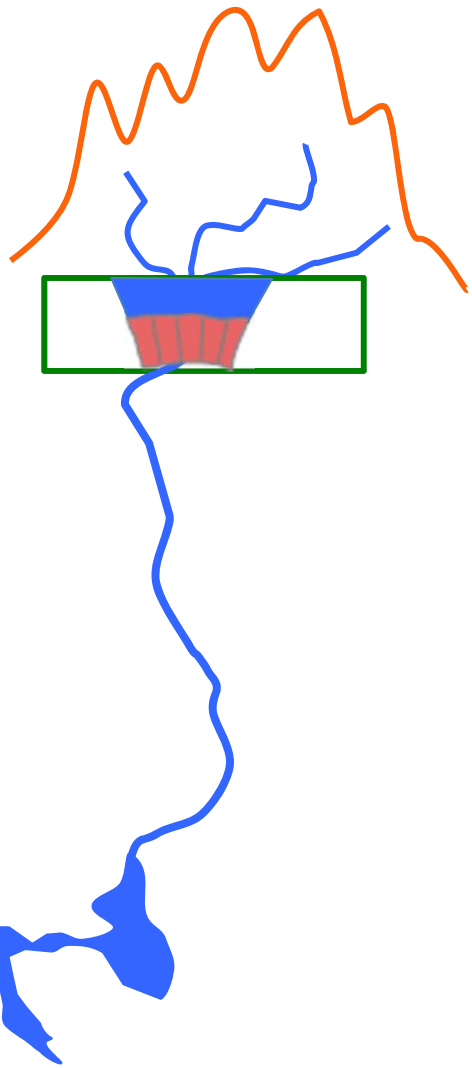
# Water and salmon in California



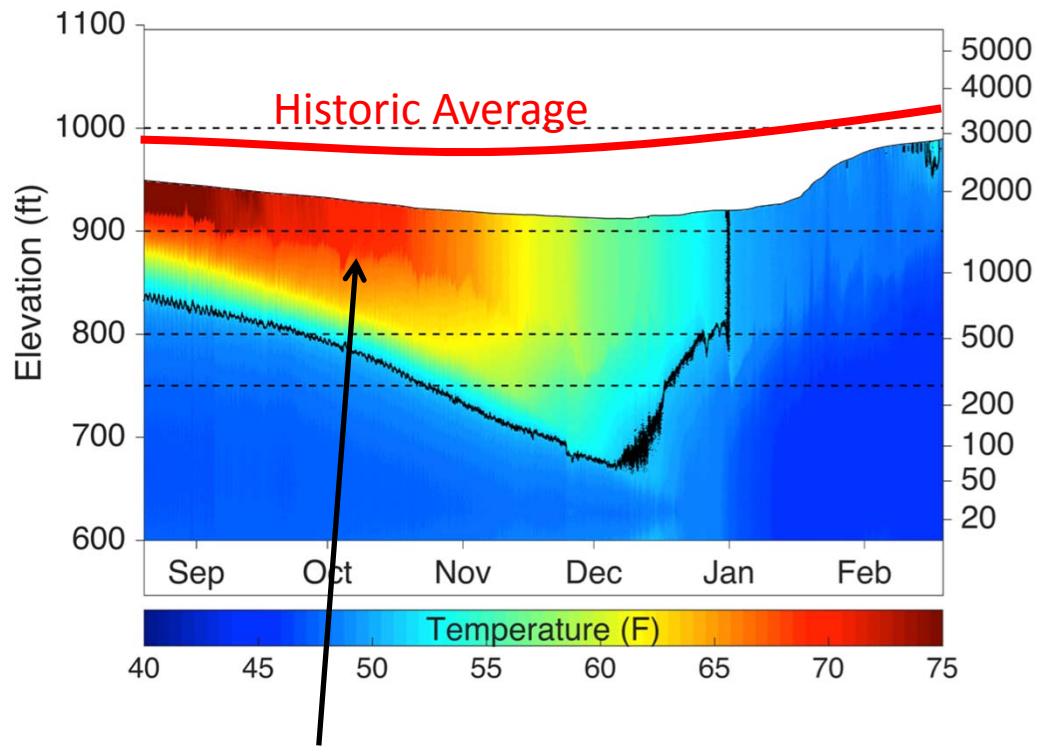

We have fundamentally changed the volume and timing of flows, and also the temperature

# The Reservoir: How much cold water do we have?

Reservoir



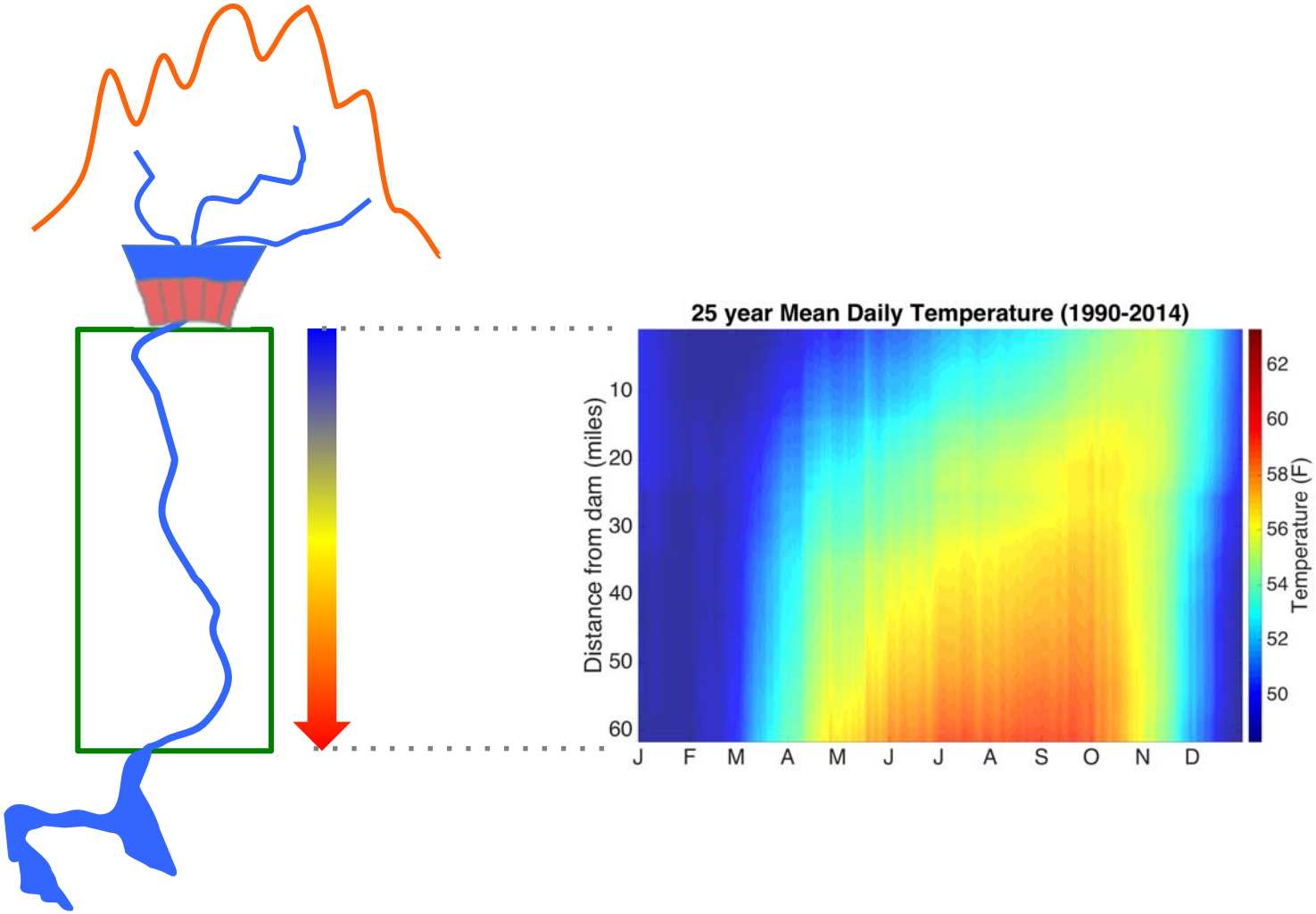
*Will El Niño bring enough water in 2016?*



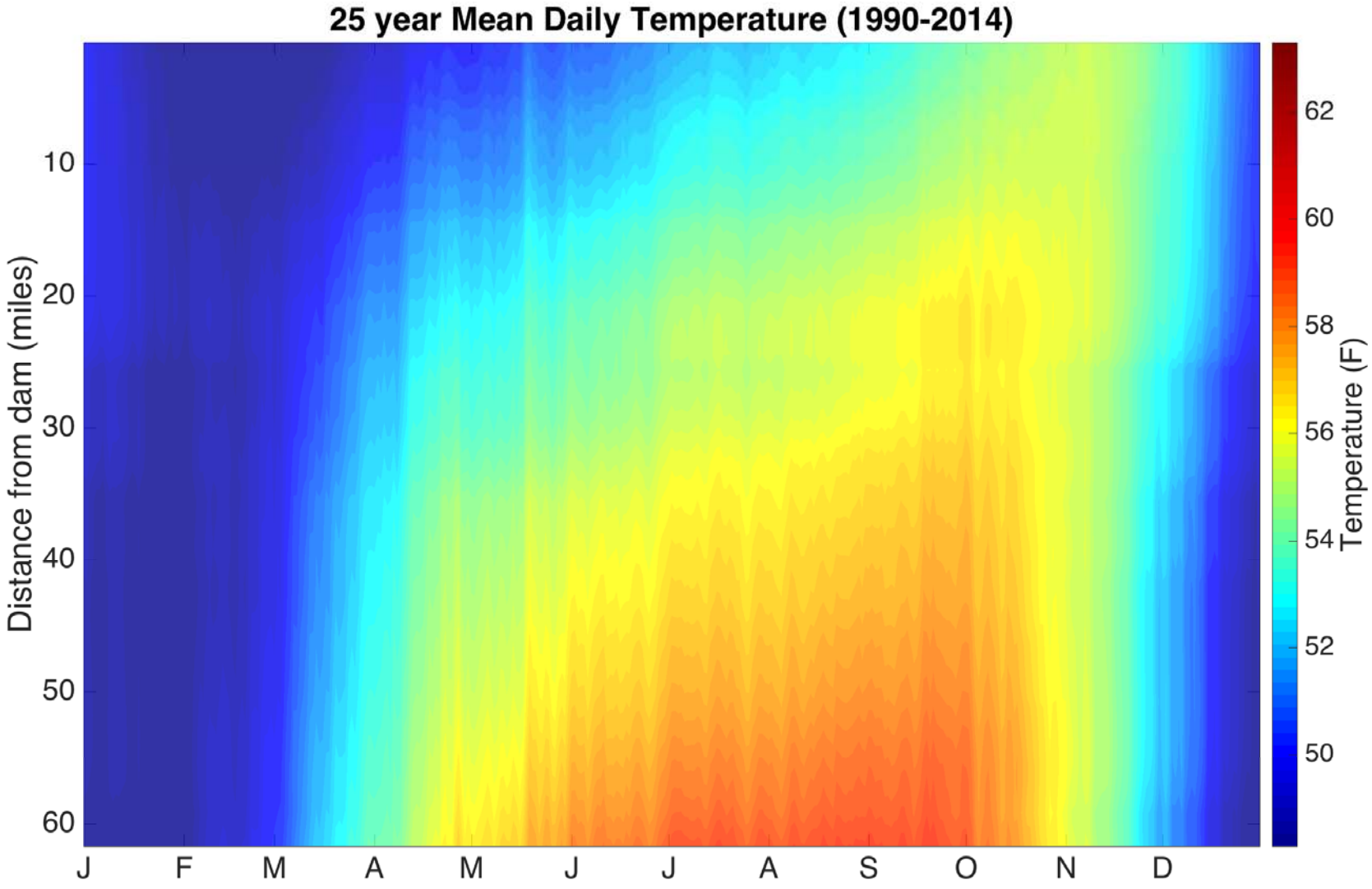

Too warm for salmon downstream

# The River: Is the water cold enough for salmon?

River



# Model of river temperatures



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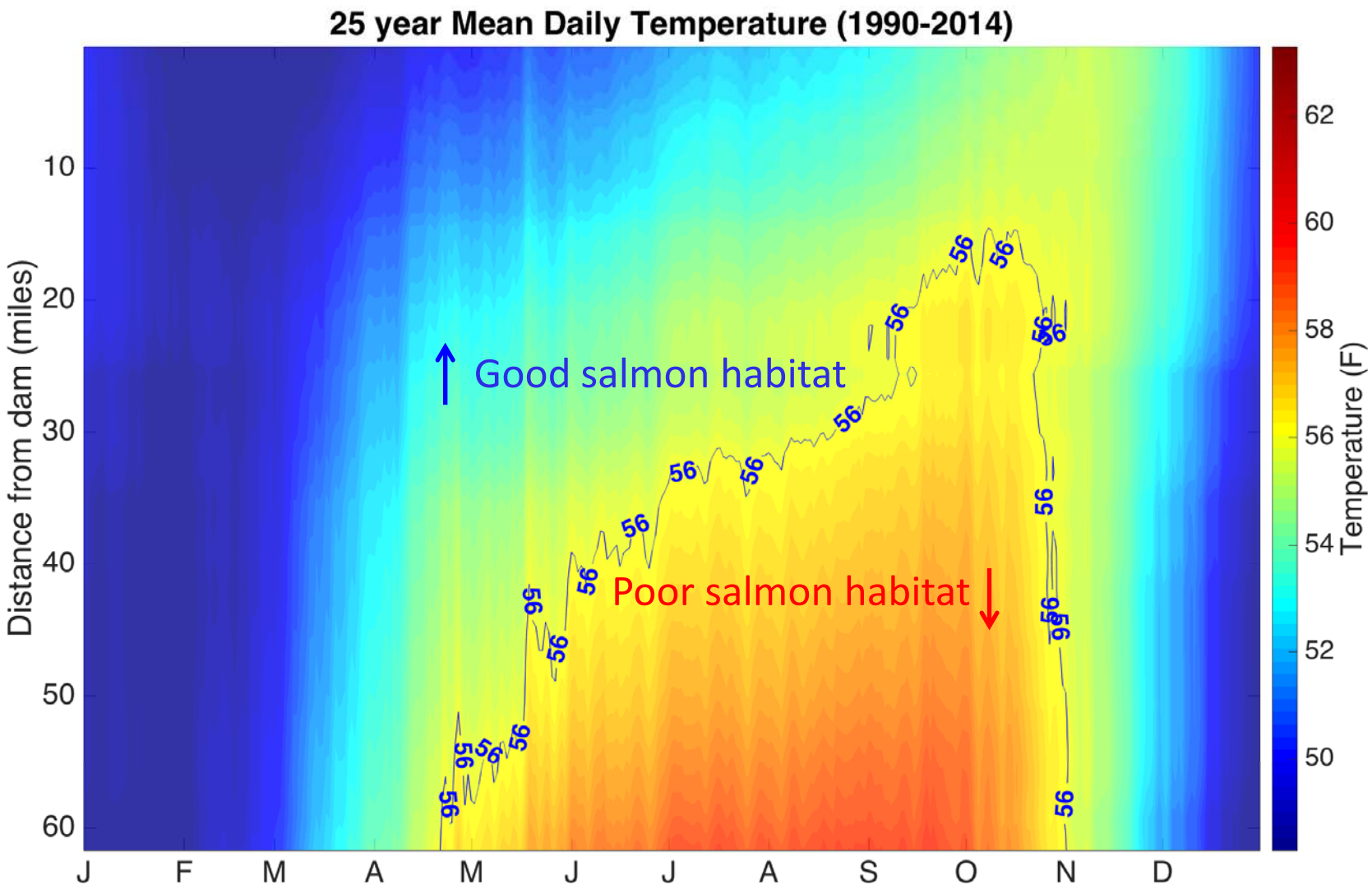
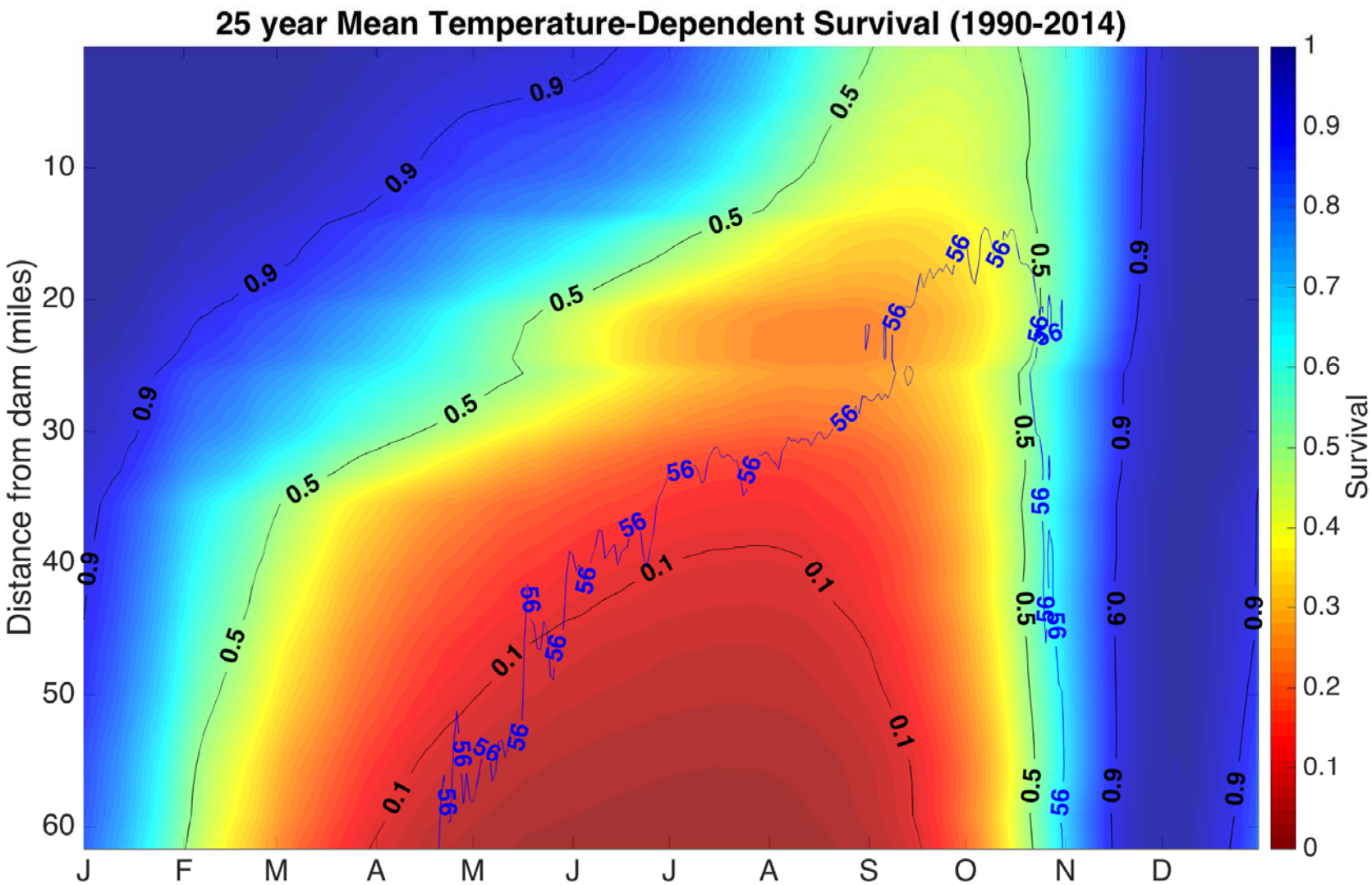
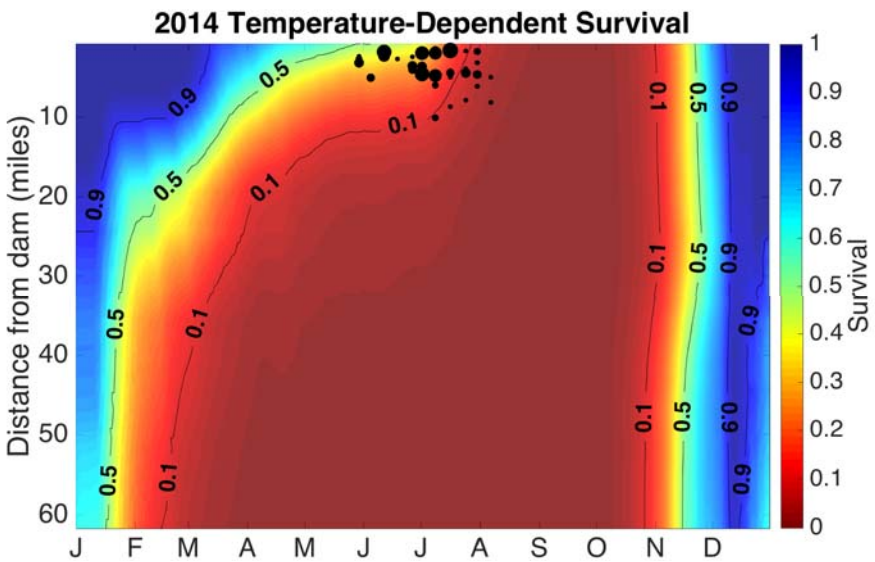


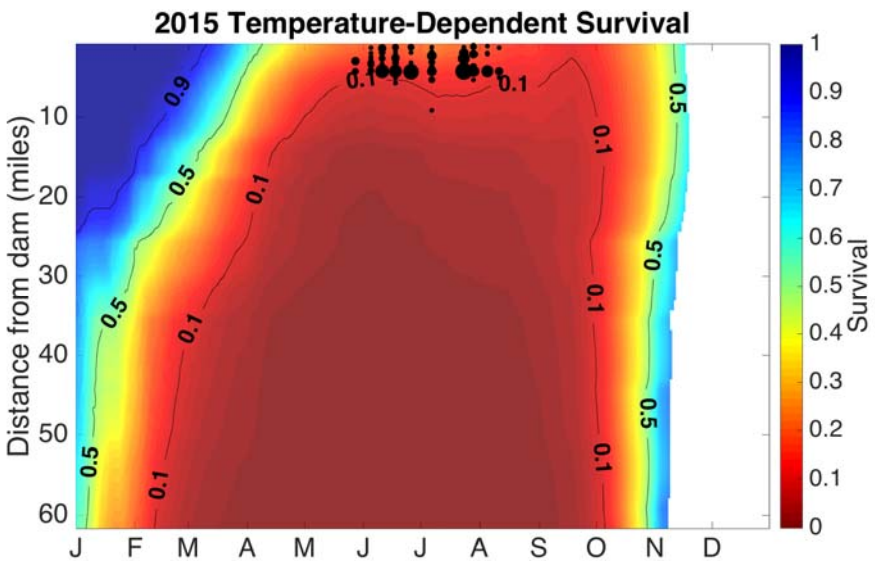
# Salmon survival as a function of temperature

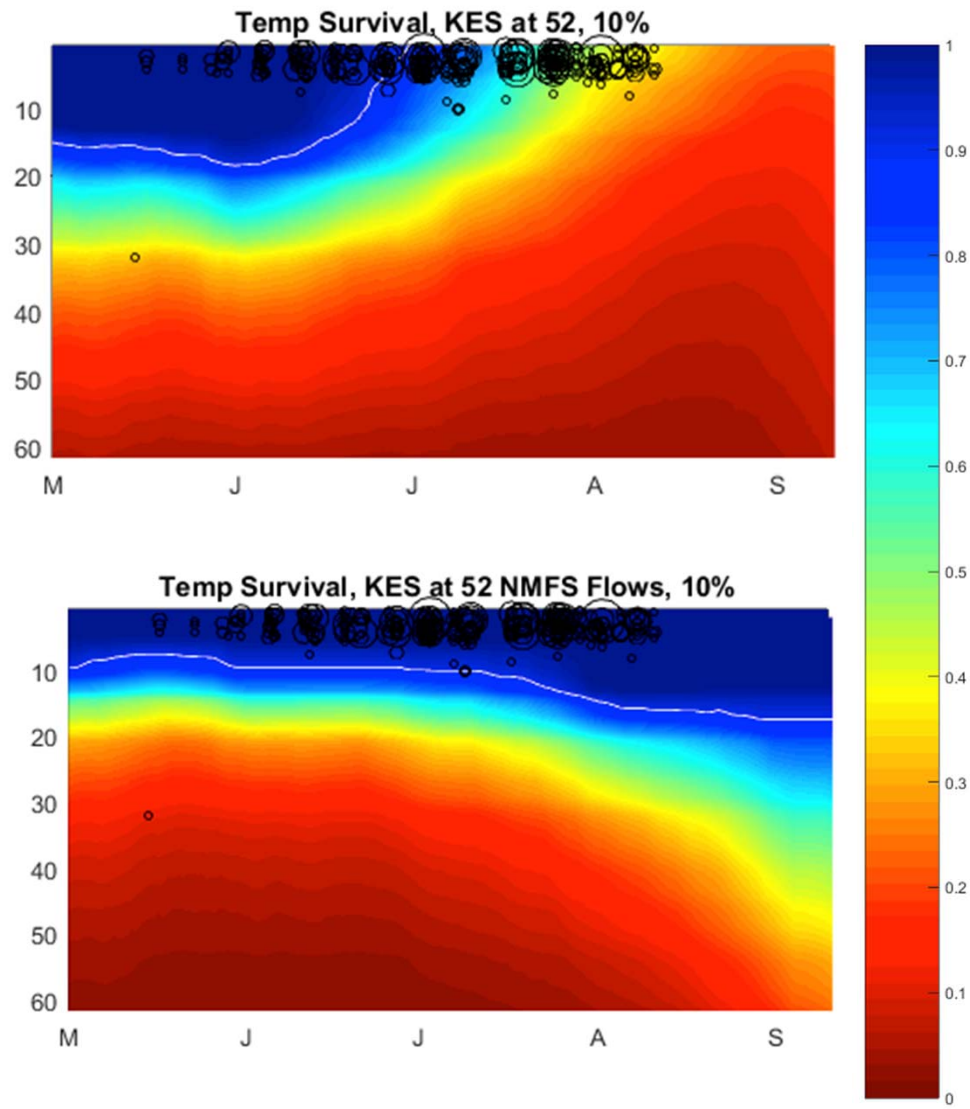


# Drought conditions and looking into 2016

Past two years




2016 Forecasts