Willamette Basin Review (Reallocation) Fish and Wildlife Perspective

House Committee on Natural Resources

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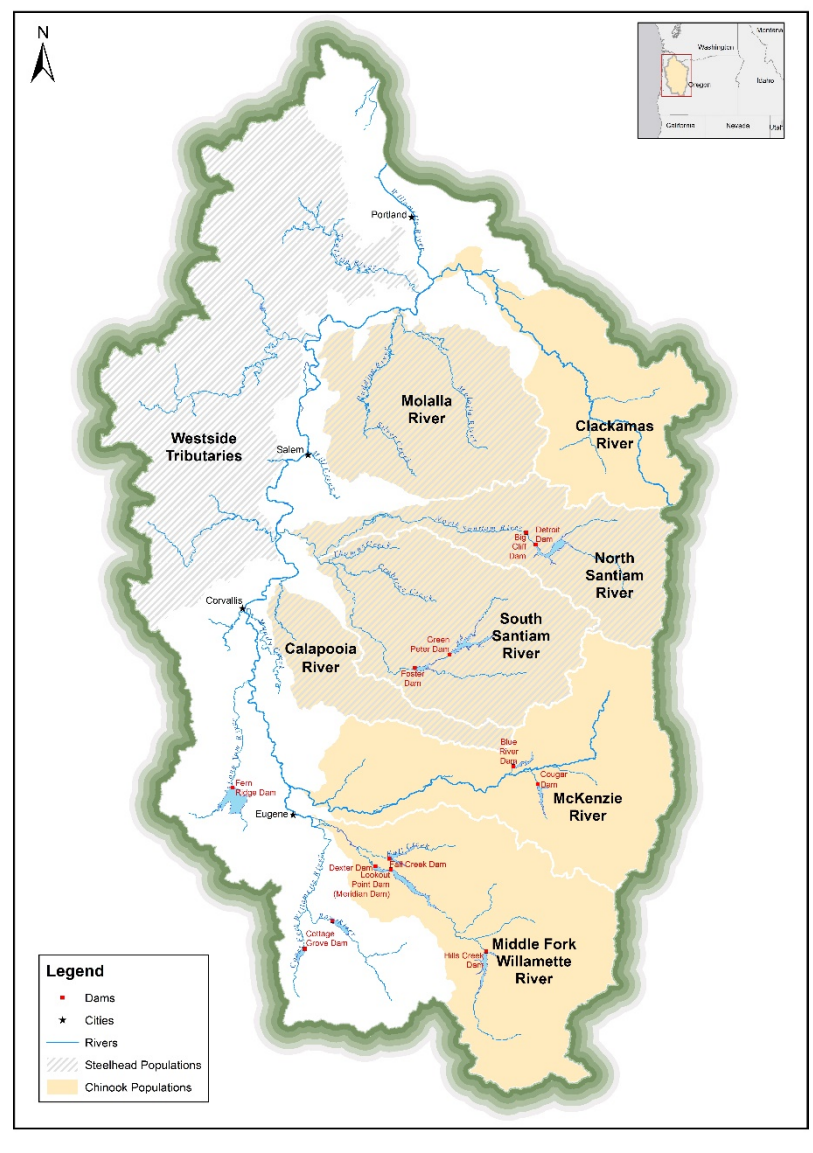
Willamette Project | Fish and wildlife

- Willamette Project (1951-present)
- ESA listings & recovery plans
  - Oregon Chub (1993)
  - Bull Trout (1998)
  - Spring Chinook and Winter Steelhead (1999)
- **NOAA Fisheries and FWS Biologica Opinion (2008)**
- **Willamette temperature and flow**
- **Willamette Basin Review (Reallocation)**



Willamette Project | Flow & temperature impacts

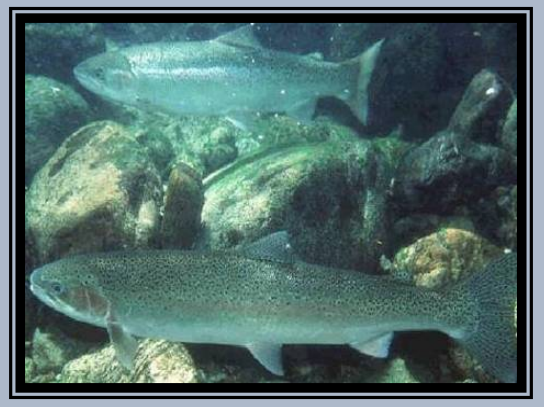
13 Dams and Reservoirs:

- Spring chinook and winter steelhead
- Adult migration & spawning
  - Time moving through system delayed
  - Temperature / disease
  - Pre-spawning mortality
- Smolt out-migration & rearing
  - Emergence timing
  - Reduced flow & availability of habitat
  - Temperature impacts
- Drought and climate change exacerbate these impacts

Willamette Project 2008 BiOp & RPAs | Flow and temperature

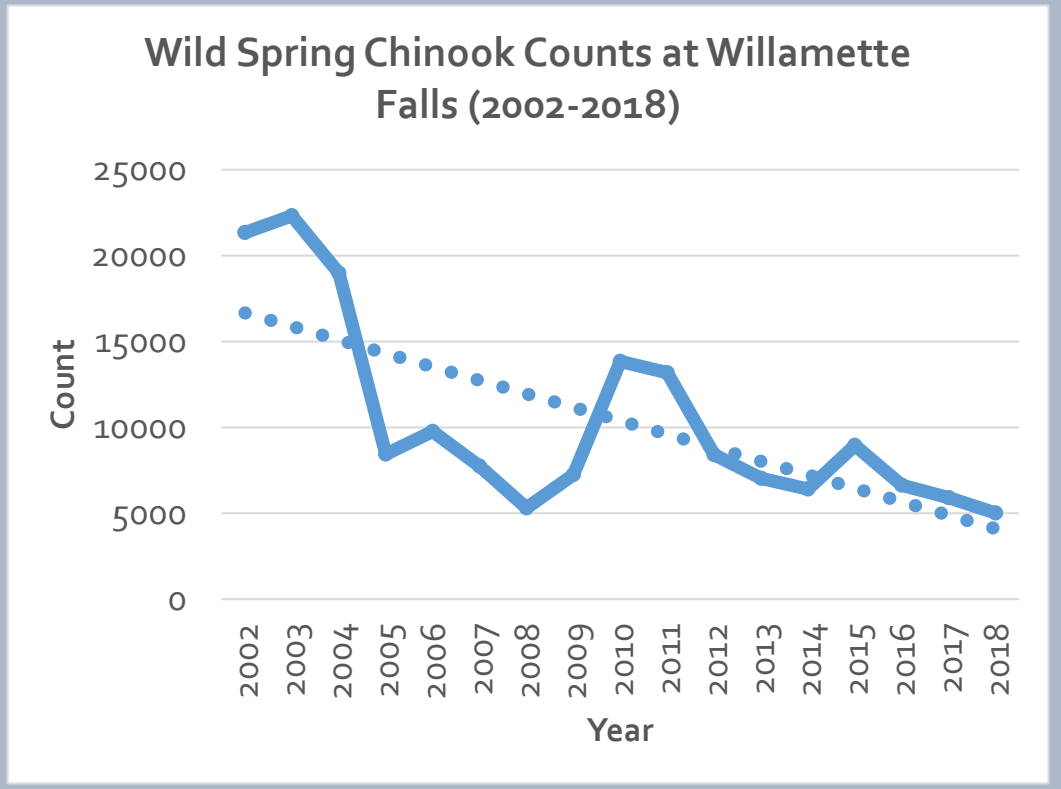
1. Mainstem & tributary minimum flows
   - Migration, spawning, rearing, incubation
   - Low flow targets (deficit) in dry years (Salem & Albany)
2. New tributary flow studies
3. Legally protect stored water for fish
   - Convert the minimum perennial stream flow
   - Additional instream protected for salmon and steelhead survival

- Current status:
  - In drought years, do not meet low flow targets (deficit); also miss targets in average years
  - No progress has been made for F&W flow protections

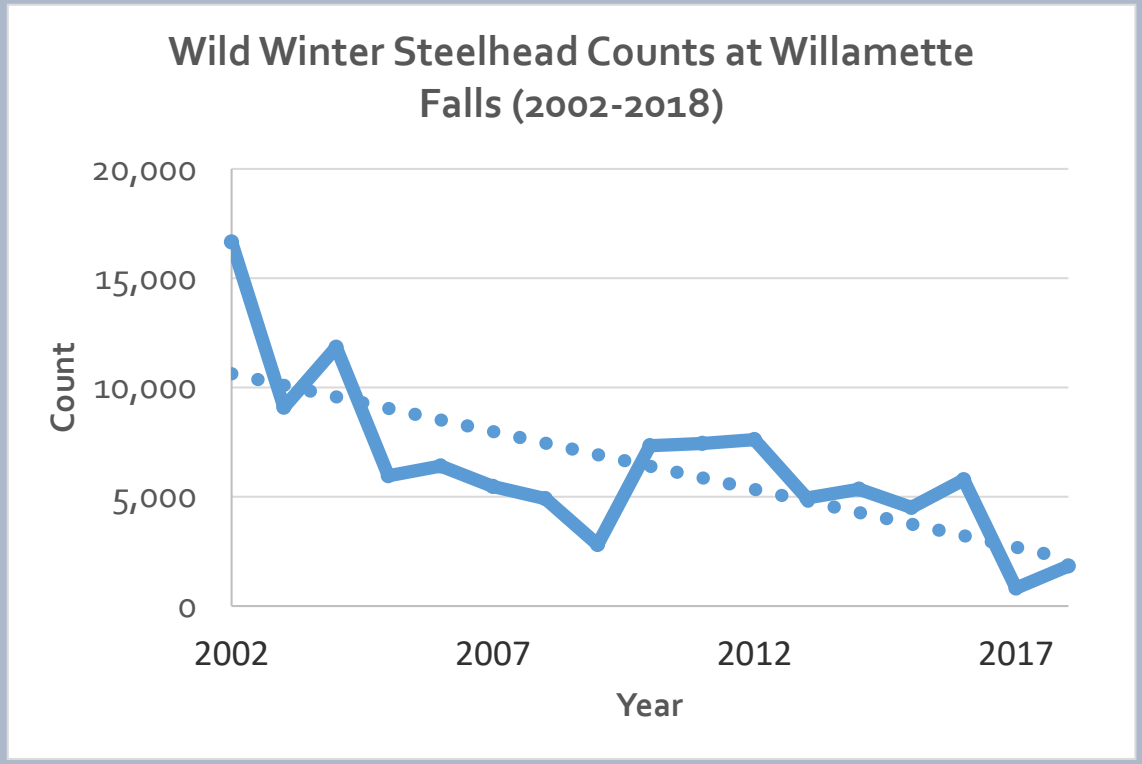


Brian Franklin

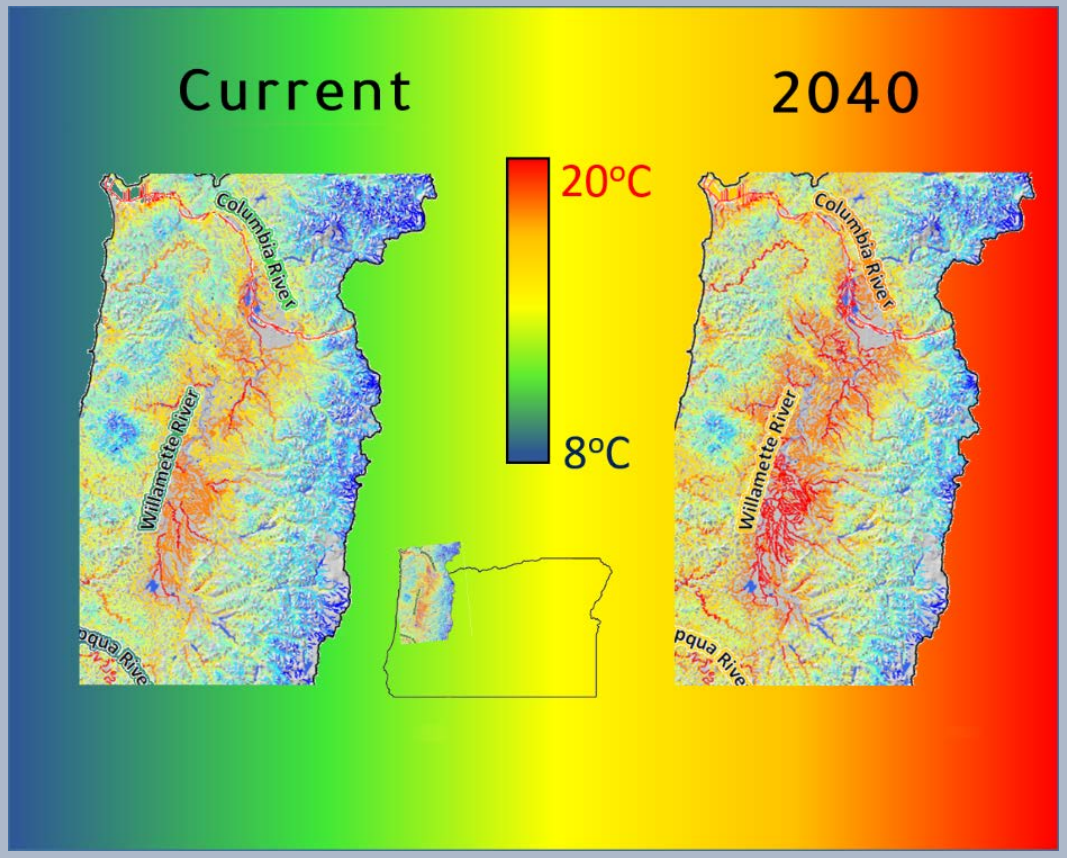
Willamette Spring Chinook



Willamette Winter Steelhead



Climate Change | Impacts to water in the Willamette



NorWest, 2019

- **By 2050, 2015 will be the new norm**
- Oregon 4-9 ˚C **warming** by 2100 (Mote et al. 2019)
- **Decrease flow** up to 50% in summer (Mote et al. 2019)
- **Increase water temp** to 20 ˚C in the Willamette (NorWest, 2019)
- These factors not included in reallocation
- Currently in drought years, BiOp flow targets are not met

Willamette Basin Review (Reallocation)

	Reallocation amount (AF)
Agriculture	327,650
Municipal and Industrial	159,750
Fish and Wildlife	1,102,600
Total Volume	**1.6 MAF**

Allocation

- 1st - allocate to 2070 peak needs for municipal and agriculture
- 2nd - allocate remainder of water for fish and wildlife (instream purposes), evaluated the ability to meet BiOp flow targets

Dry year planning

- "Share the pain" in any year the reservoirs don't fill; proportional reduction across uses

State goal

- Meet multiple water needs, while ensuring recovery of listed species by meeting BiOp flow targets

Willamette Basin Review (Reallocation) | Next steps

- Draft jeopardy opinion for Willamette Basin Review for salmon and steelhead (NMFS)
- NMFS and Corps are in consultation (summer)
- Assume there will be RPAs similar to 2008 BiOp regarding- legally protecting fish and wildlife flows
- Implementation- unclear during years of short supply
- Significant investment by ODFW and WRD

Questions?