From:	Wu, Jennifer
To:	Caldera.Stephanie@deq.state.or.us
Cc:	Barber, Anthony; Palmer, John; Henning, Alan; Gene Foster; SEEDS Joshua; jeffrey.lockwood@noaa.gov
Subject:	EPA ppt for 6/19 1:30pm EQC meeting
Date:	Tuesday, June 17, 2014 3:51:07 PM
Attachments:	EPA Cold Water Protection Presentation.pptx

Hi Stephanie,

As in my voicemail, I'm sending you EPA's presentation for the 2nd day of the EQC meeting on June 19. EPA's presentation is part of the 1:30pm section following presentations from Gene/Josh and ODFW's.

Tony Barber and John Palmer will be speaking for EPA. I understand that the ppt will be pre-loaded, but we'll bring it on a thumb drive in case. If there's anything else you need, please feel free to let us at EPA know.

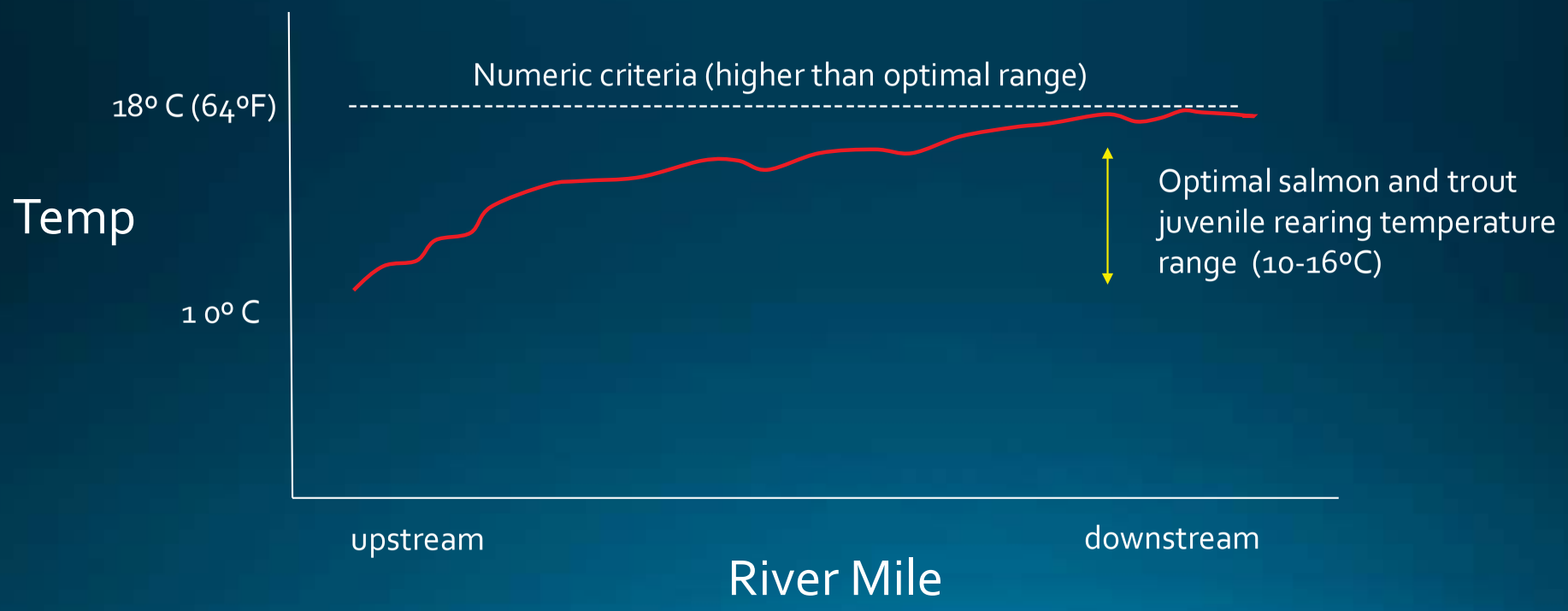
Thanks,

Jenny

EPA Pacific Northwest Temperature Guidance (2003)

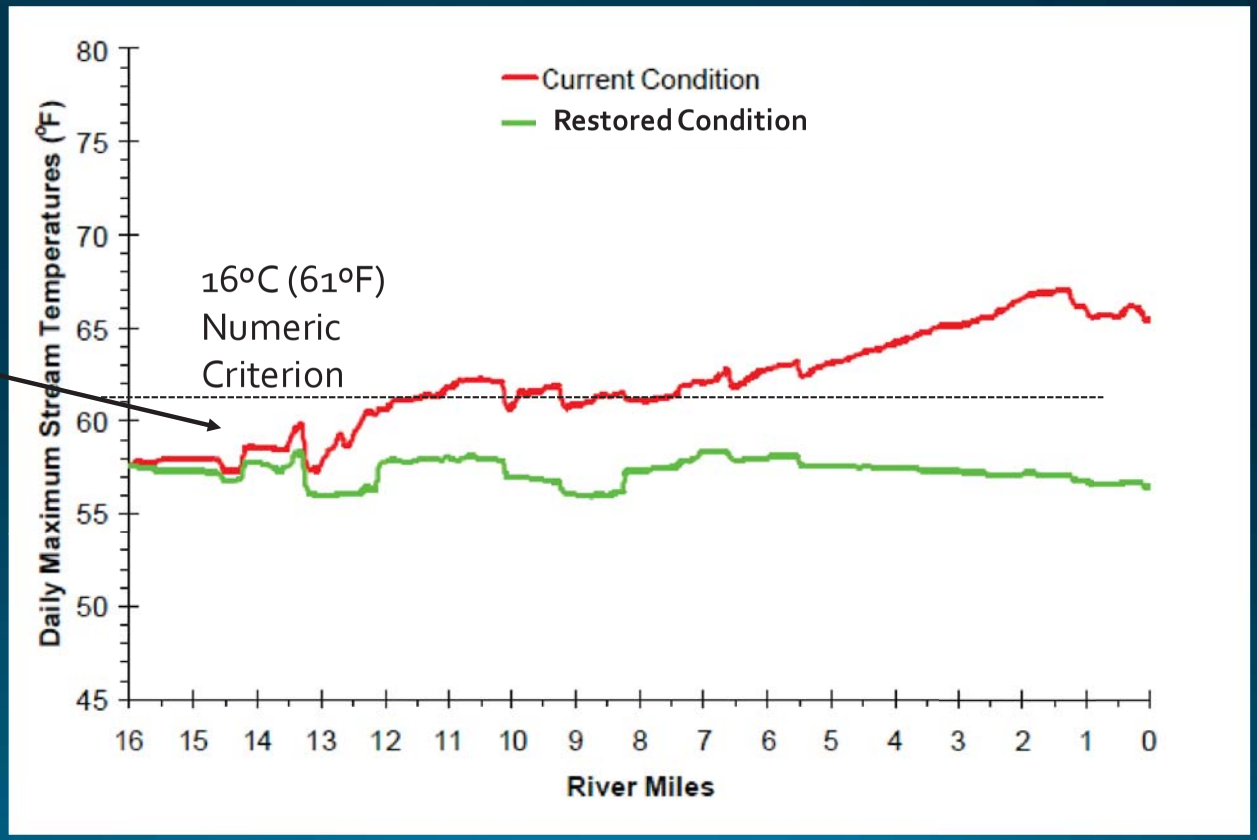
- Joint effort with NMFS, FWS, States, & Tribes
- Technical team issued 6 peer-reviewed issue papers
- Policy team supported EPA in issuing two drafts for public comment
- Recommended temperature criteria to meet CWA & ESA
  - Numeric criteria to protect cold water salmonids
  - Additional water quality provision to maintain stream temperatures currently colder than numeric criteria (i.e., Protecting Cold Water criterion)
- Numeric criteria & PCW included in EPA's 2003 proposed rule & Oregon's 2003 temperature standard revision

PCW Rationale #1 – Supports protectiveness of numeric criteria



PCW Rationale #2 – Prevents further warming of downstream reaches

Anthropogenic upstream warming likely contributes to downstream exceedance of numeric criteria



Source: North Coast TMDL, ODEQ, 2003 – Salmonberry River

PCW Rationale #3 – Protects last remaining high quality salmonid habitat

- Human activity has significantly warmed rivers and streams across the Pacific Northwest
- Summer rearing habitat truncated to higher elevations & summer migration in lower rivers is stressful/lethal
- Elevated stream temperature identified by NMFS/FWS as a limiting factor in the recovery of ESA-listed salmonids
- Protecting existing high quality habitat important for recovery
- Predicted Climate Change impacts (1-2°C increase) makes this even more important

Reduced Salmon/Steelhead Thermal Habitat - Common Pattern In Pacific Northwest Streams

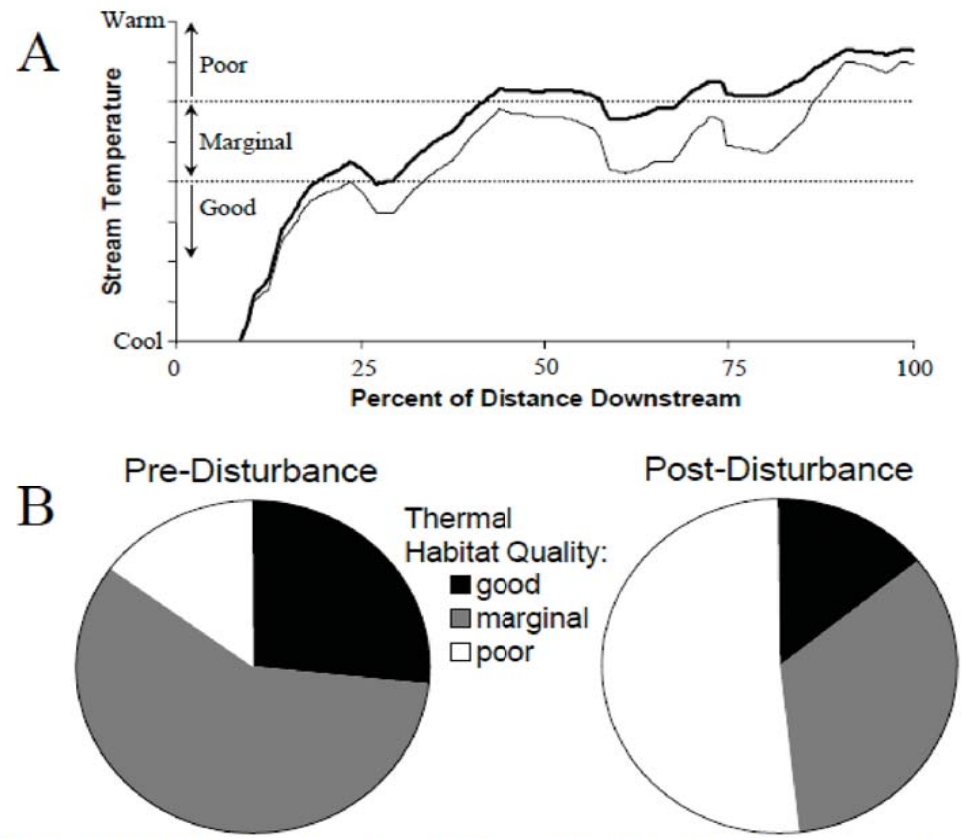


Figure 6. Quantitative depiction of results from a conceptual model of stream warming. (A) Thinner "pre-disturbance" line represents historic downstream temperature trend; thicker "post-disturbance" line represents the effects of a hypothetical change in stream structure that results in a cumulative 2.5% increase per stream km in the rate at which water approaches an assumed equilibrium temperature of 22.5°C. Zones demarcated by dashed lines show associated *habitat quality of* a hypothetical species of concern. (B) Resulting change in thermal quality of habitat after the hypothetical structural change (after Poole and Berman in press).

Source: EPA Issue Paper 3 – Spatial and Temporal Patterns of Stream Temperature (2001)