WFPA/WFFA/WSAC Np Buffer Proposal

Special FPB Meeting

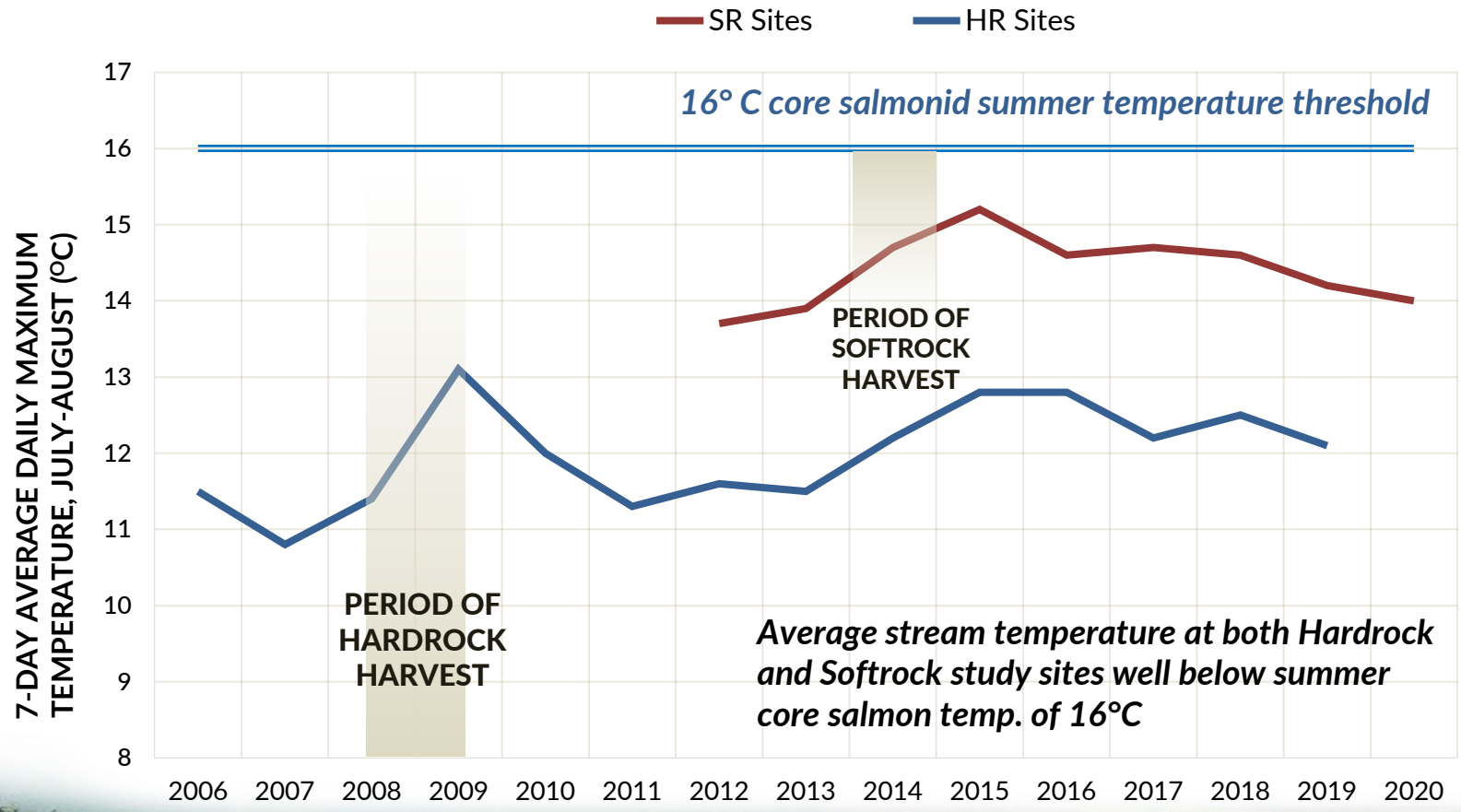
October 31, 2022

AMP Studies Considered

1. **Hardrock Phase I Study** (July 2018)
2. Amphibian Buffer/Shade Study (June 2019)
3. Amphibian Genetics Study (August 2019)
4. Type N Buffer Characteristics, Integrity and Function Study (Nov 2019)
5. WWA Np Stream Extensive Temperature Monitoring (Oct 2019)
6. Hardrock Phase II Study (Jan 2022)
7. Softrock Study (Jan 2022)

What Have We learned?

Hardrock/Softrock 7DADM Temperature Pre- and Post-Harvest



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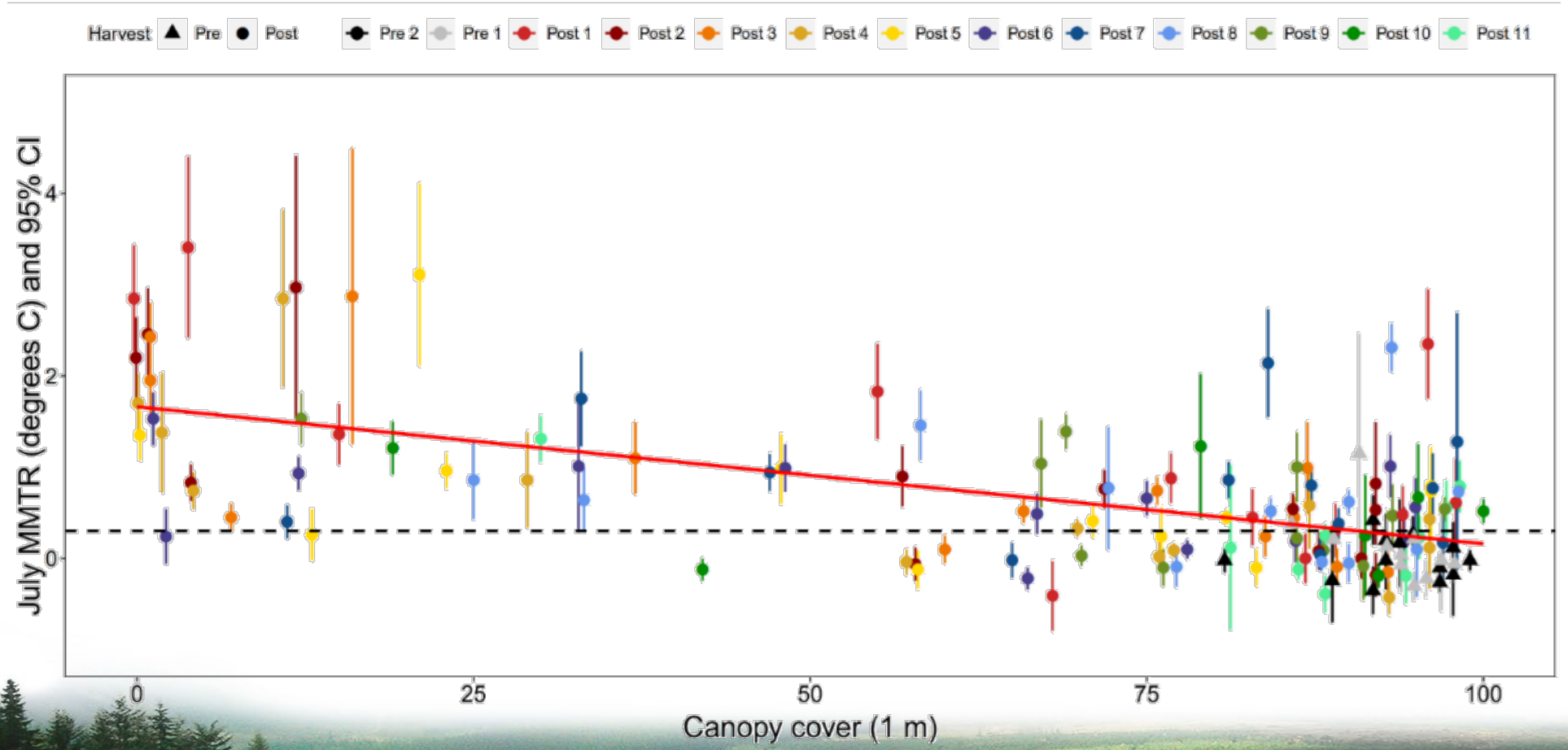
Canopy Closure/Temperature Response at Hardrock Sites Pre and Post Harvest



Dashed line = 0.3 °C

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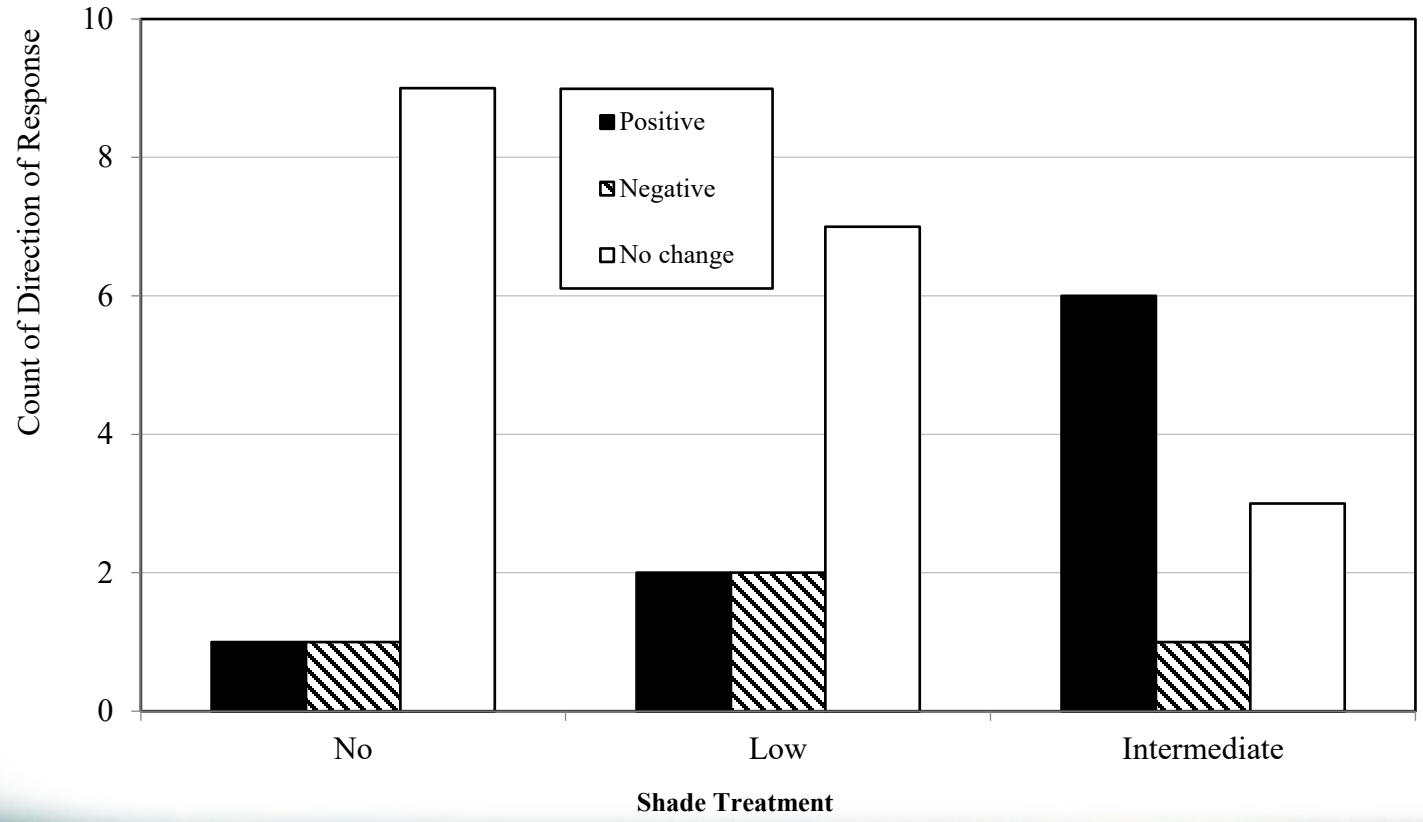
Amphibian Abundance & Body Condition Post Treatment



From McCracken et al., 2018

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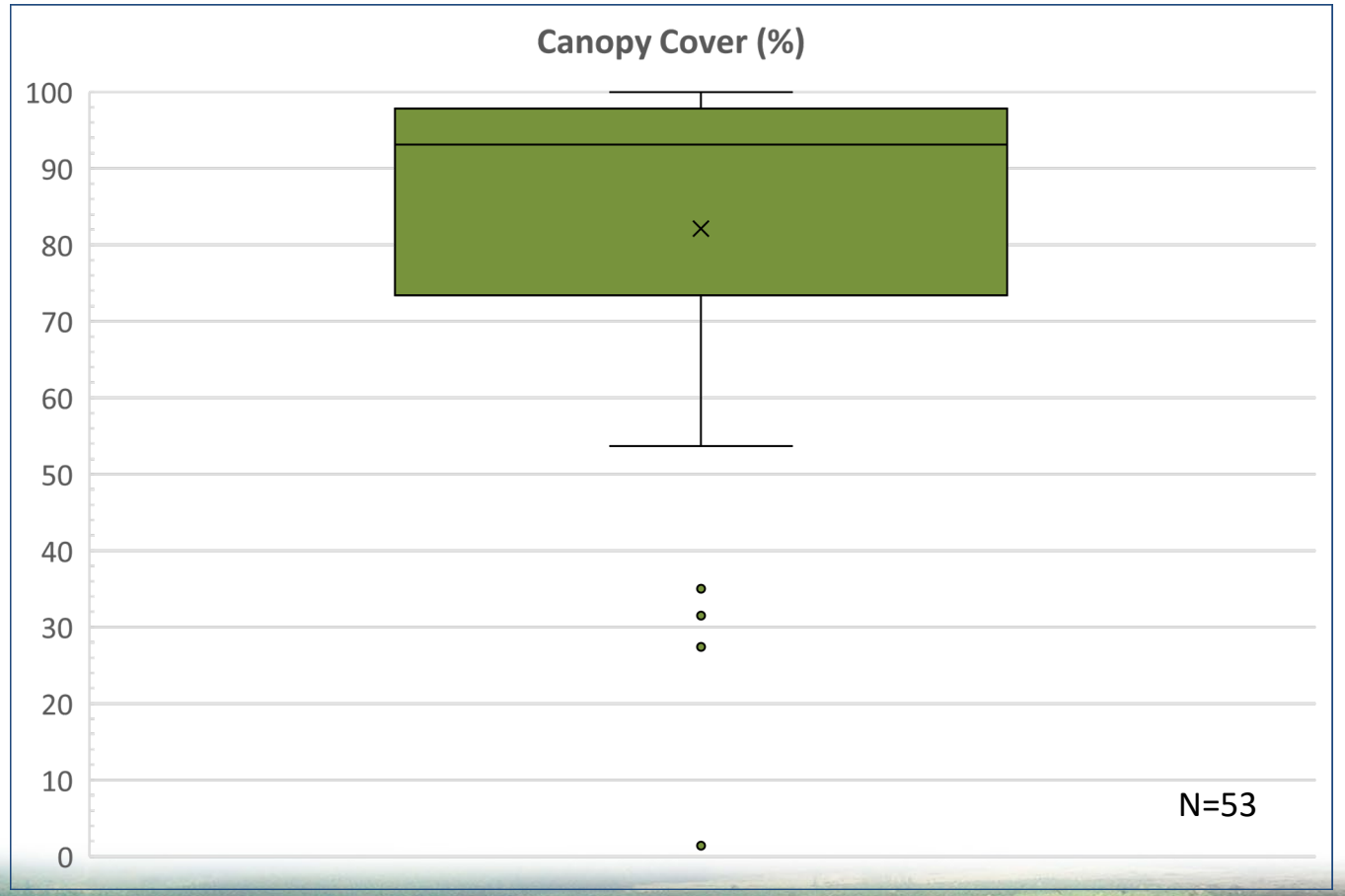
Extensive Stream Temperature Monitoring



Mean= 82%
Median= 93%

From Ehinger et al., 2019

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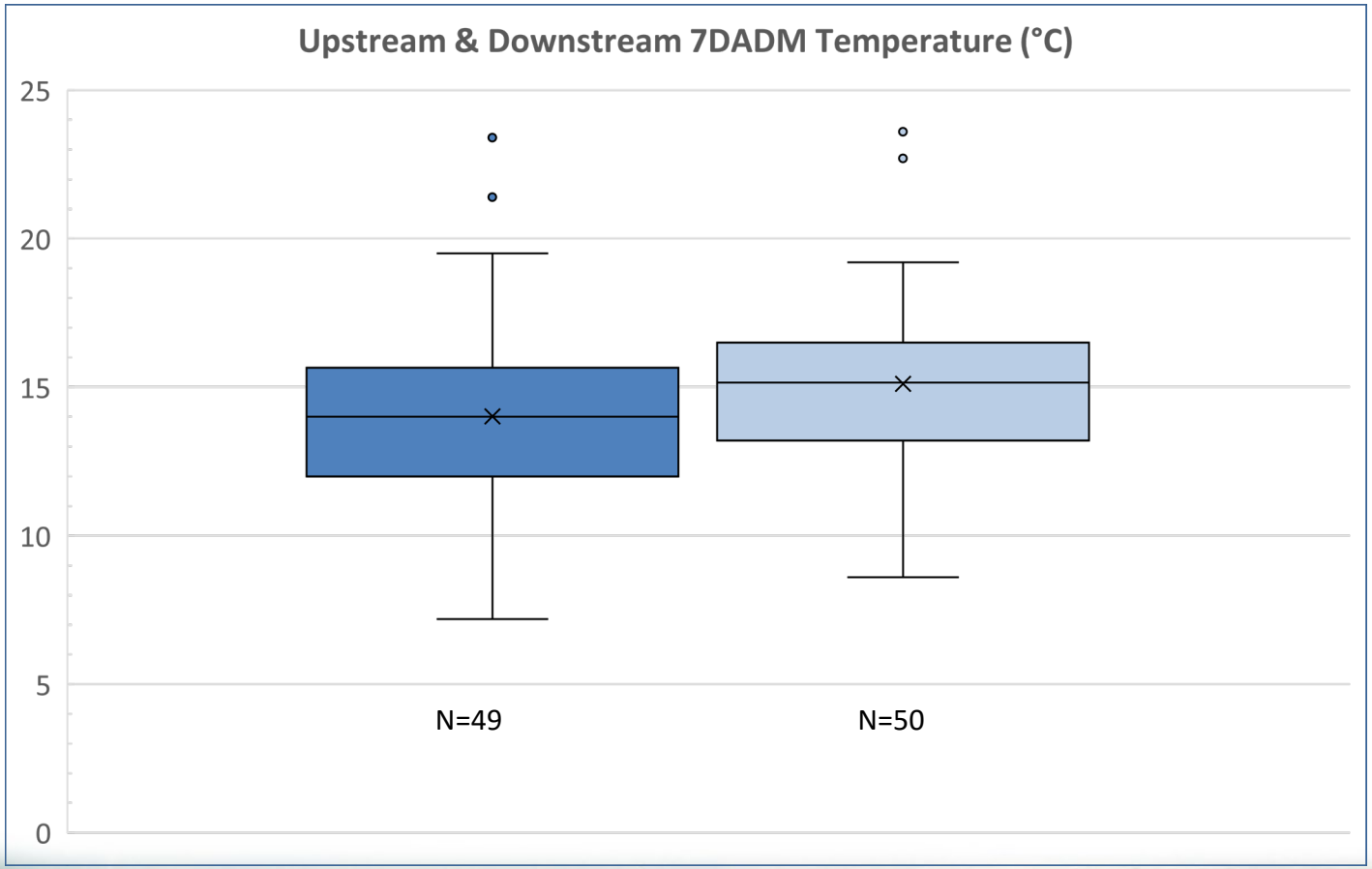
Extensive Stream Temperature Monitoring



Mean & Median
14° - 15° C

From Ehinger et al., 2019

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WFPA Focal Watershed Administrative Units

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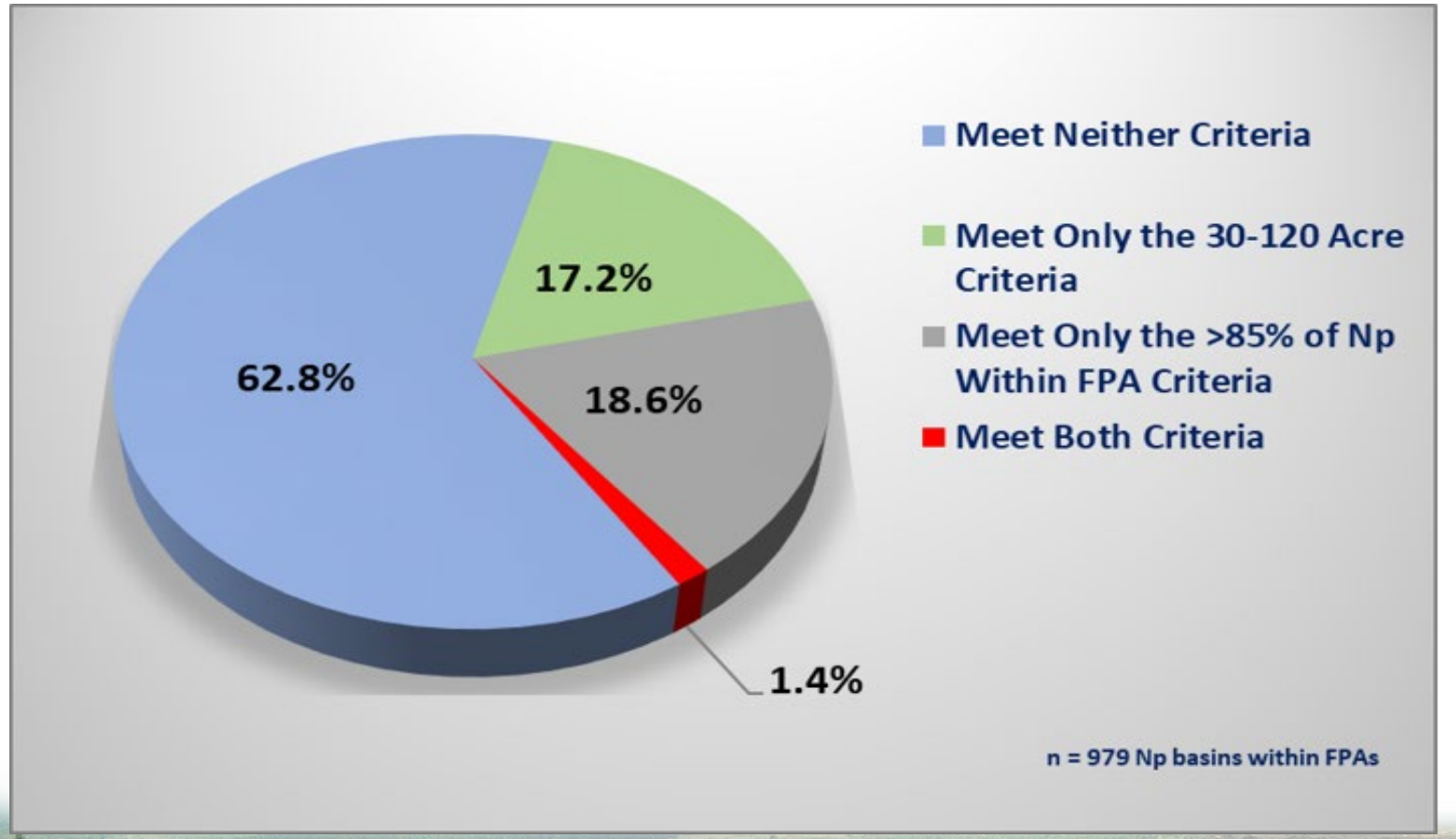
Proportion of 30-120 Acre Np Basins in FPAs with >85% Harvested, 2010-2020



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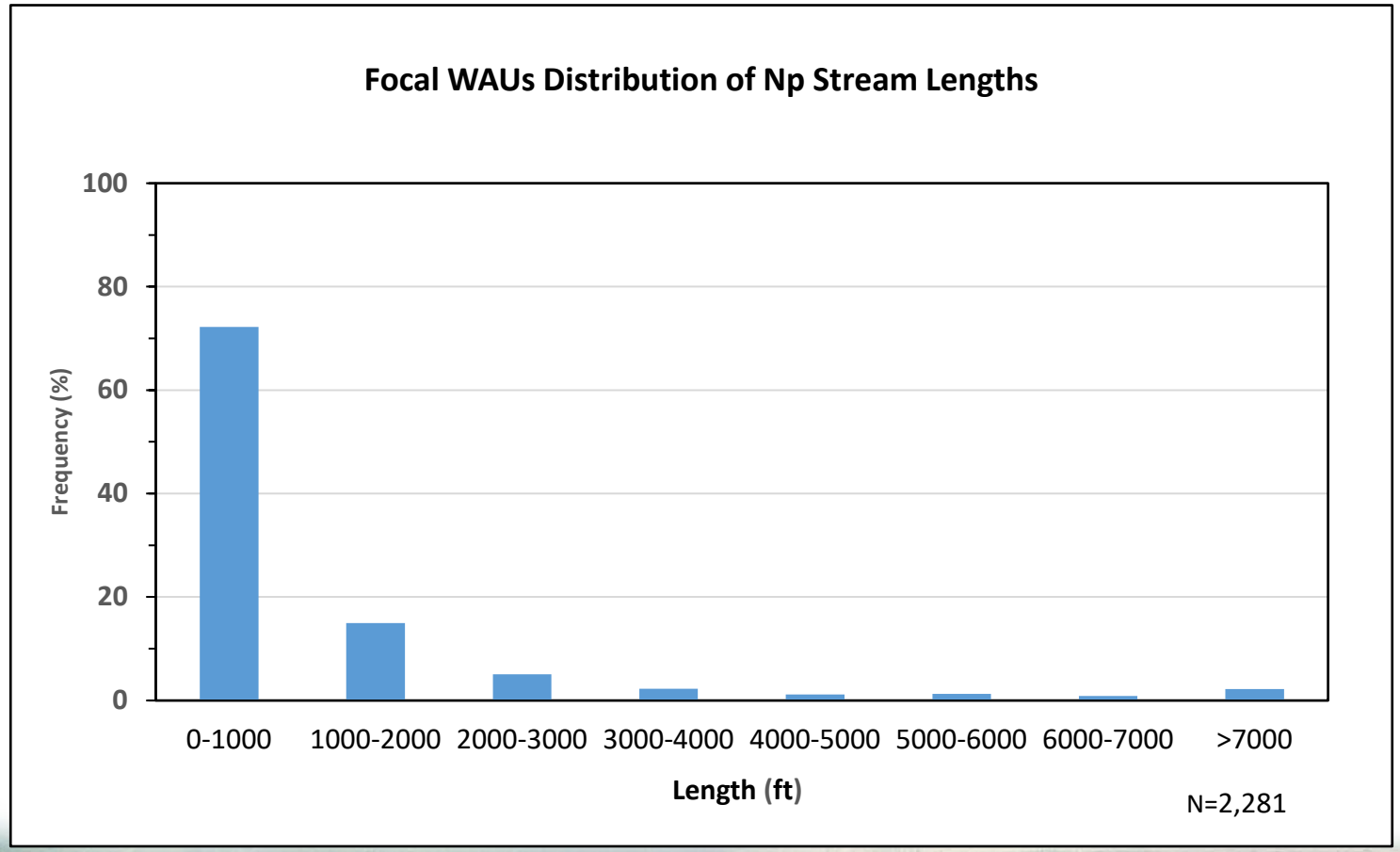
Np Stream Length Distribution in Six WWA WAUs



Mean = 1,217 ft.
Median = 503 ft.

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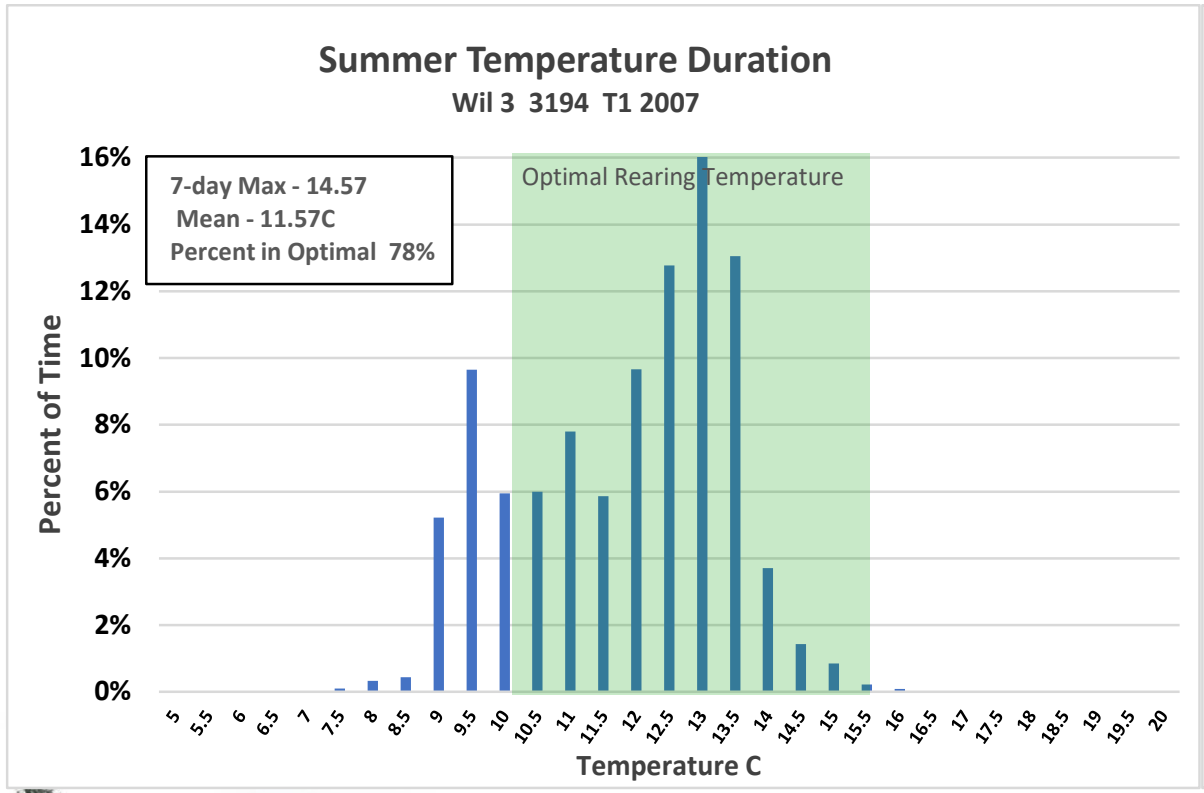
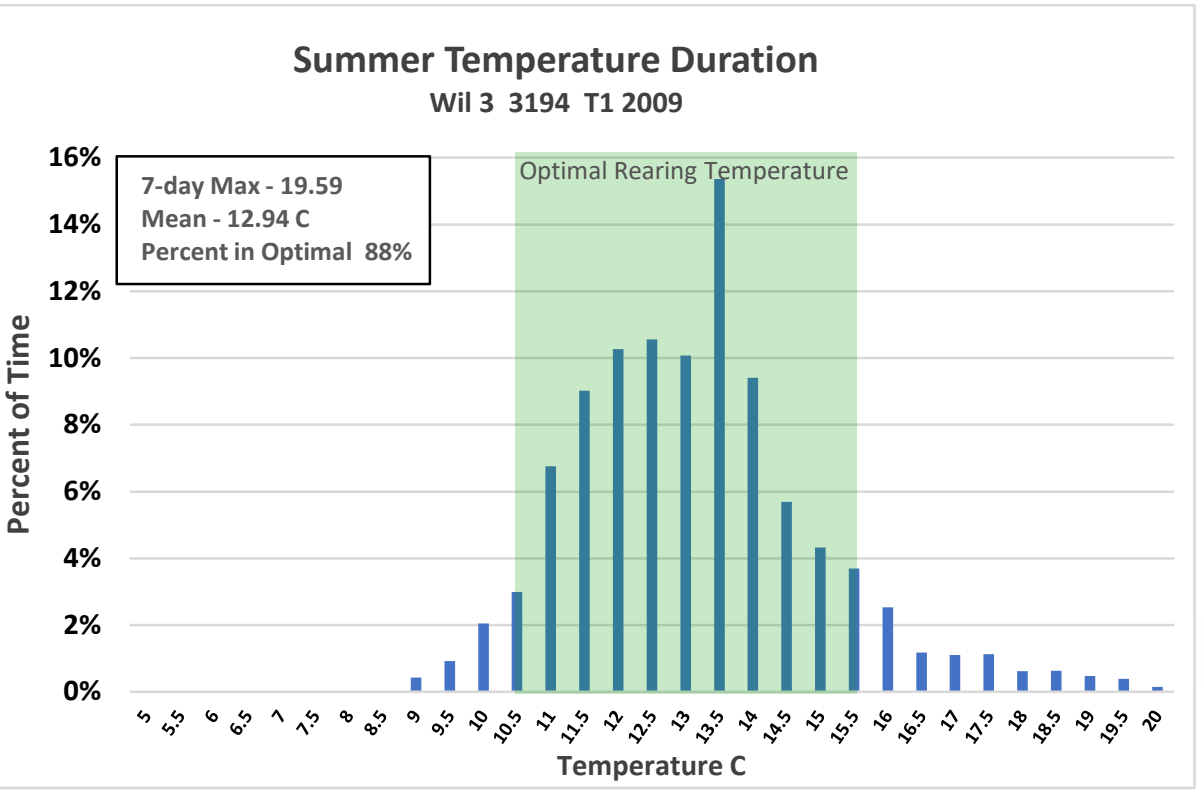
Stream Temperature Distribution in Optimal Range





Hardrock Willapa 3 treatment site, duration of summer temperature regime in optimal range

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What Have We Yet to Learn?

- Why are routine harvest practices different than study treatments?
- How do WWA Np streams thermally respond to routine harvest practices?
- Why are some Np streams more thermally responsive than others, can we manage for factors associated with thermal responsiveness?
- What is the status and trend of stream temperature in WWA Np streams?
- How does summer temperature distribution in WWA Np streams compare to the optimal temperature range for target fish/amphibian species?
- Are there any downstream cumulative or biological effects of harvest adjacent to thermally responsive WWA Np streams?
- What is the biological effect of a small, transient change in stream temp below the designated use standard?
- What riparian stand condition should serve as a reference condition?

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Rx A - Area Control: Type Np stream basins greater than 30 acres and 85% or more harvested over a five-year or less period require a 75-foot wide, two-sided, unmanaged continuous buffer from the confluence of a Type S of F water to the upper point of perennial flow

Rx B - 1,000-foot Buffer: Harvest adjacent to Type Np streams require a 75-foot wide, two-sided, unmanaged buffer for 500 feet upstream from the confluence of a Type S or F water and a 50-foot wide, two-sided, unmanaged buffer for the next 500 feet for a total of 1,000 feet. If the 1,000-foot buffer and any other required leave areas due to sensitive sites and/or unstable slopes do not provide a minimum of 50% of the total Np stream length buffered, additional 50-foot buffers are required to meet the objective of 50% of the Np stream length buffered.

WFPA/WFFA/WSAC Np Buffer Proposal

Small Forest Landowner Rx: The SFL option is the same as prescription A and B, except the buffer configuration is a 50-foot wide, two-sided buffer with the outer 25 feet manageable at the landowner's option. Small landowners who choose to manage within the outer 25 feet buffer may remove half the available volume in a "thin from above" approach

Monitoring!

- Monitoring of key aquatic resource inputs at multiple spatial and temporal scales was (and still is) critical to understanding the overall effectiveness of the Forests & Fish rules.
- Current status of, and if/how, stream temperature regime distributions are changing across the landscape over time is unknown
- Extent of stream buffering and how buffers are changing over time is unknown
- Biological & cumulative effects are unknown; validation and refinement of performance targets has not occurred
- How can we have a science-based decision-making process with no monitoring program?

Proposal Rationale

- Rx A - direct response to the treatments evaluated in Hardrock & Softrock studies (whole Np basin harvest); more protection for activities which appear to have the greatest probability to result in a measurable temperature increase
- Rx B - doubles minimum buffer length and widens the buffer lower in the Np stream network to ensure protection of stream temperature regimes consistent with the biological needs of fish; balance environmental benefits with operational/regulatory costs
- SFL Rx - addresses disproportionate economic impact to SFLs from substantive regulatory changes; acknowledges SFLs tend to have smaller harvest units and harvest less often than large landowners
- Monitoring helps address key uncertainties and provides context
- Responsive to what we've learned and have yet to learn

Collaborative Decision Making is Not Easy, it Requires…

- Common vision of success
- Goals, objectives, targets are clear and shared by all
- Agreement on basic facts
- No better alternative
- Interests are clearly stated
- Work as hard to accomplish others' interests as much as your own

75-FOOT BUFFER ON **NON-FISH HABITAT** STREAMS

75’ no-cut buffer illustration, drawn to scale with a 4’ Np stream

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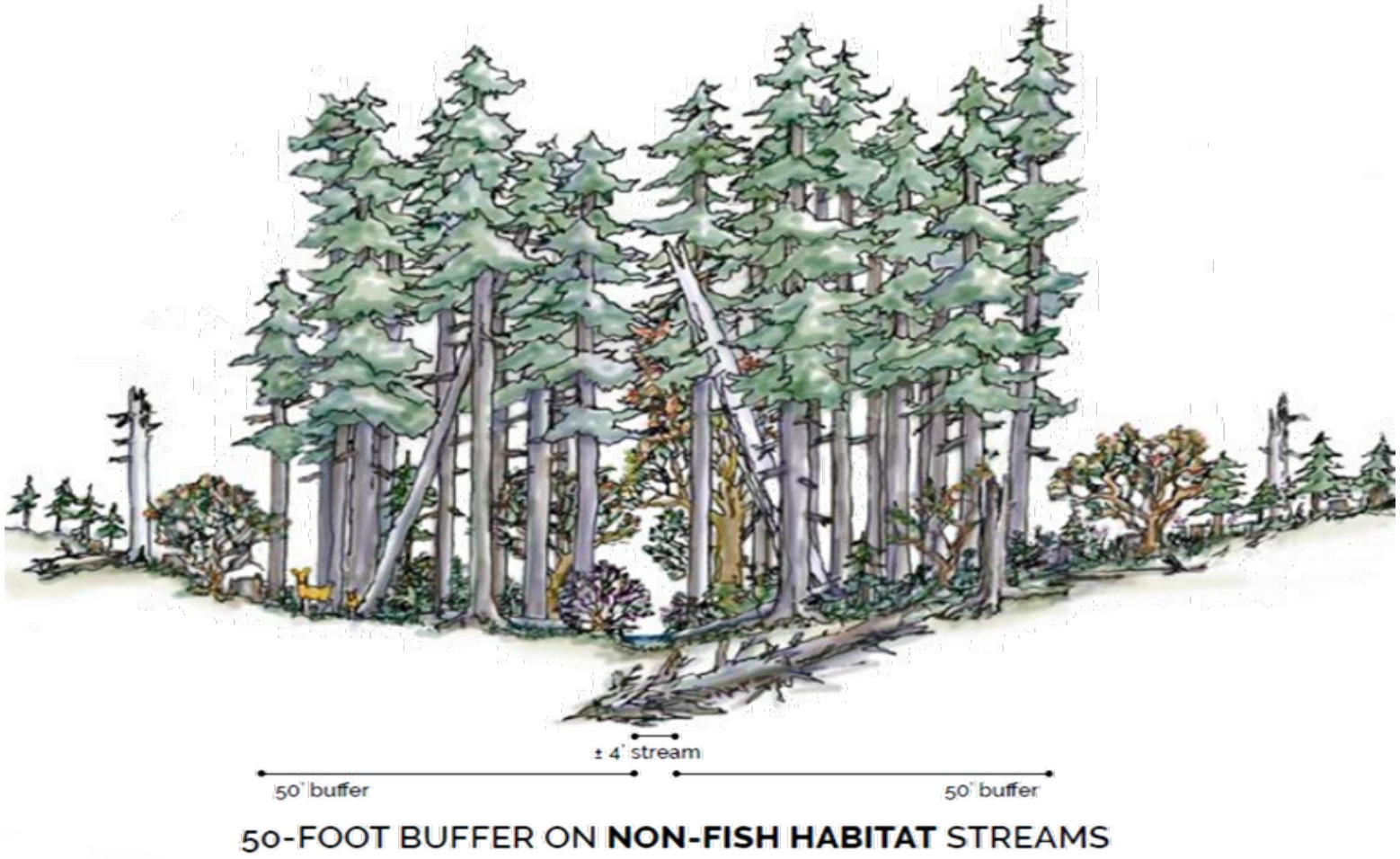

50-FOOT BUFFER ON **NON-FISH HABITAT** STREAMS

50’ no-cut buffer illustration, drawn to scale with a 4’ Np stream

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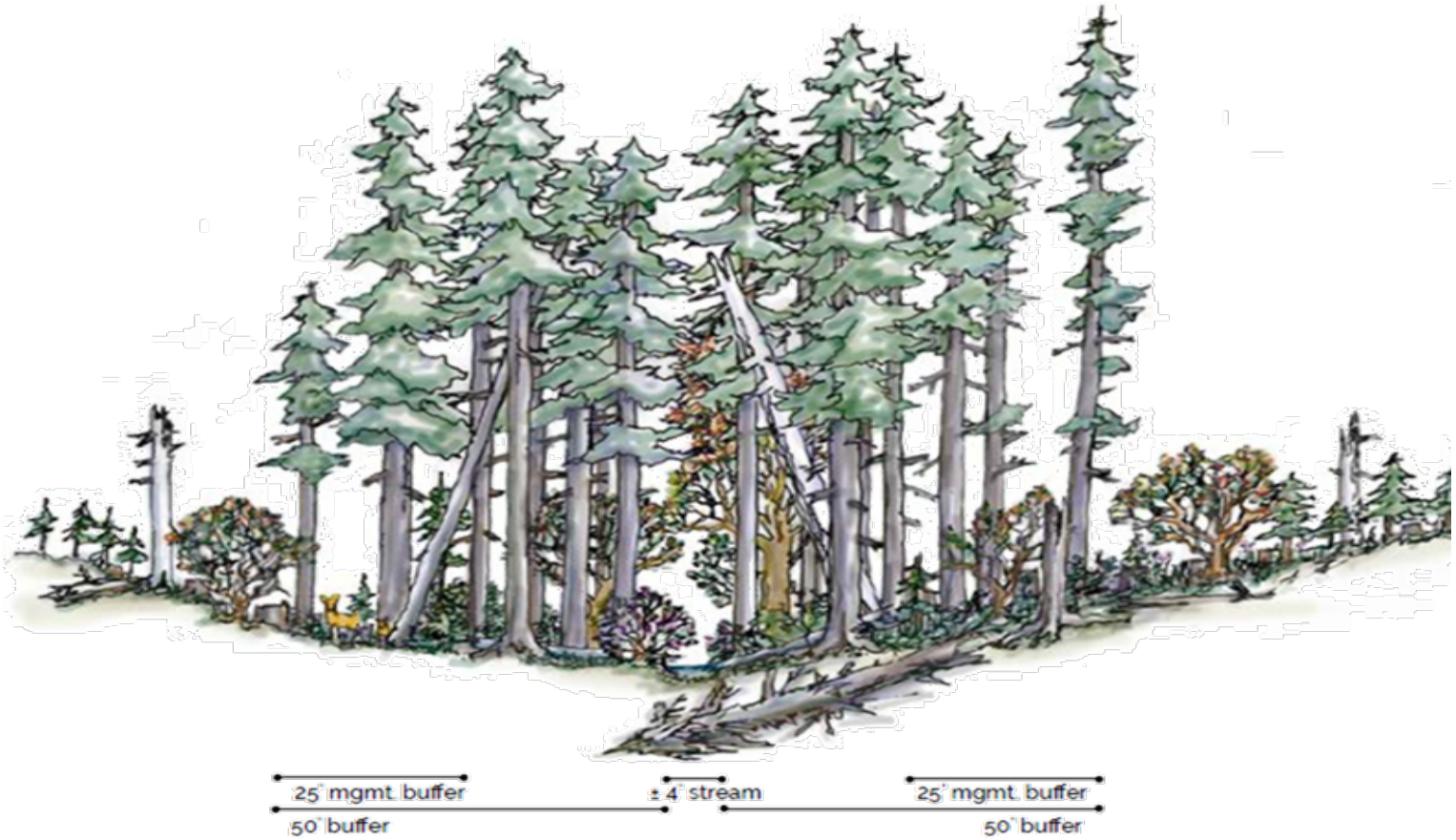

SFLO 50-FOOT BUFFER (25-foot management) ON **NON-FISH HABITAT** STREAM

50’ managed buffer illustration, drawn to scale with a 4’ Np stream

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Hwy 108 Culvert on Fish Stream Tributary to Skookum Creek

F&F:

- ~9,000 fish passage barriers removed, access to ~6,500 miles of habitat restored, ~$300 million worth

- RMZs, WMZs, sensitive sites, potentially unstable landforms, ~$2.5 billion worth

Other land uses lag years behind…

Downstream of FPB tour site

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Thank you - questions?