

Nat. Hazards Earth Syst. Sci. Discuss., author comment AC3
<https://doi.org/10.5194/nhess-2020-427-AC3>, 2021
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Reply on RC3

Robert P. Dziak et al.

Author comment on "Assessing local impacts of the 1700 CE Cascadia earthquake and tsunami using tree-ring growth histories: a case study in South Beach, Oregon, USA" by Robert P. Dziak et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-427-AC3>, 2021

Response to a few minor comments of Reviewers 2 and 3:

Reviewer 2:

Line 9: Although the study does discuss some of the spatial components of disturbance history, it doesn't read as the principal emphasis/analysis of the tree-ring work. I would suggest changing to "We present an investigation of the disturbance history..."

We agree, and revised the abstract.

Line 10: I would suggest "changes" rather than effects? Agree, we added "changes"

Line 22: erroneous floating period?

Removed erroneous period.

Line 29: add "growth" before suppression

Added growth

Line 30: for non-dendrochronologists what is a "growth-event"?

Changed "event" to "increases" here.

Line 32: "Here we present a spatial analysis of the disturbance..."

Removed "spatial focused"

Line 43: replace "it seems" with "it is plausible".

We edited line to say "it is plausible"

Line 43: add in here "in the form of traumatic resin ducts, ring width suppression etc." after "might be recorded in ring widths"

Added "in the form of traumatic resin ducts and ring width suppression" to sentence

Line 57: "Occurred **in** the Cascadia Subduction Zone" Changed to "along"

Line 63: as these dates aren't exact, maybe add an ~ in front of the dates.....We added the "~" before the dates

Line 67: change "should" to "would"..... Changed to "would"

Line 94-95: rogue paragraph space?..... Yes there is, we removed it

Line 111: "it" refers to the digital-elevation and bathymetric grids? The inundation model? The elevation grid, and we substituted this in for "it"

Reviewer 2:

Abstract

- Douglas with only one "s" -*We removed the extra "s"*
- 9: add latin name *Pseudotsuga menziesii* - *Added latin name*
- 10: add "(CSZ)" after Cascadia subduction zone - *Added (CSZ)*
- 13: "0 to 10 m" *Edited*
- 14: "shows that several trees experienced" *Added "that"*
- 19: why do you indicate 110 years and not 320 or more ? it should be clarified for the reader even in the abstract - maybe better to indicate between 1660 and 1780, referring to the period you analyzed

Added to the sentence >321 year growth history...

- 19: remove "." after "location" *Removed*