

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.

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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

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### 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*