

Manuscript Title: Soils' seismic property research on the basis of investigation of their nonlinear properties

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#### Reviewer's Comments

1. This manuscript is very difficult to follow. The author may want to proof-read the manuscript for grammatical mistakes and avoid the use of very long sentences.
2. This reviewer is not sure about the author's contribution and what the author tries to achieve in this manuscript. It seems that the author is giving a review on previously-developed techniques on determining whether soil nonlinearity is important.
3. This reviewer feels that the manuscript should be re-organized such that the methods are first presented, which is followed by an example application on one of the Russian city territories and comparison between seismic microzonation with and without the consideration of soil nonlinearity. In addition, many types of measurements (metrics) are presented in the manuscript, the author may want to compare the efficiency of each type of measurement in indicating soil nonlinearity.
4. The title of the manuscript should be modified to reflect that the SMZ strategy presented in this manuscript is for use in Russia. (Soil nonlinearity has been taken into account in many other earthquake-prone countries.) Also, the grammar of the current title seems to be strange.
5. In the manuscript, the author has used the terms "non-elasticity", "nonlinearity", "inelastic" and "linear-nonlinear elastic". The author may want to make sure that the soil nonlinearity discussed in this manuscript is consistent with the definition used in the geotechnical earthquake engineering community.
6. Is "absorption" mentioned in this manuscript the same as "damping" in geotechnical earthquake engineering?