

Tsunami Interactive Web Guide Capstone Project

Instructions

Imagine that you discover a time and place traveling machine. You decide to use this machine to help save people from the dangers of tsunami hazards. You first use the machine to travel back to Washington in January 1964, three months before the March 27, 1964 Alaska earthquake and tsunami that wreaked havoc across the world! You plan to go back to the town of Ilwaco, WA, where you know that people barely escaped the tsunami in 1964. You can read personal, historical accounts from residents impacted by the tsunami [here](#). You think that you can go back in time and help save them. **Knowing what you do now about tsunami hazards, what would you do to help these people? Think about what you can teach them, particularly about tsunami warning signs so they have more time to evacuate, and how you could design systems to help them evacuate, etc.**

You also decide to visit Ilwaco in the present day, where you notice that the population has roughly doubled since 1964, to see if the town is more prepared for tsunami hazards now. You could use our [website](#) and [portal](#) to find hazard maps and evacuation routes, assembly areas and shelters, and tsunami sirens. You could also use the [emergency management website for the county](#) to see what plans they have in place for tsunamis. **Compare and contrast what this town has done to improve their emergency response to tsunamis since 1964. How do you think they have improved, and in what ways, if any, do you think they still need to improve?**

Step One: Choose one of the two project options below to explore further.

Community Hazard Plan: Create a Community Hazard Plan to communicate information about possible tsunami hazards to the residents of Ilwaco. A Community Hazard Plan describes what tsunami hazard is and how people can prepare and what to do during an event.

Your Community Hazards Plan should include:

- What natural warning signs were available for the 1964 tsunami?
- What do the residents of Ilwaco need to know about tsunamis to stay safe?
- Evaluate Ilwaco's current evacuation map/plan. What are its strengths and weaknesses? How can this communication tool be improved?
- What other hazards or challenges might impact the town evacuation efforts? What should county emergency managers and citizens consider?

Technology and Communication Systems Project: The technology and communication systems that warn people of an incoming tsunami are important components of a Community Hazards Plan. Research the technology and communication systems that exist and how they have evolved over time.

Your Technology and Communication Systems Project should include:

- How were Washington residents informed about an incoming tsunami in 1964?
- What detection and/or communication technologies exist now that didn't in 1964? How do those systems work?
- What improvements still need to be made on these new technologies? What are common failure points?

Step Two: Once you have explored, decide how you want to share your learning. Your final project can take any of the following forms:

- Flyer/Poster/Brochure
- Essay or article for a publication
- Slideshow presentation/PowerPoint/Google Slides/Presi/Adobe Acrobat PDF
- Other (check with your teacher)

Here are some possibly useful resources on these topics to get you started, though there are others that you can find that might be more appropriate for your grade level:

- 1) <https://www.noaa.gov/explainers/us-tsunami-warning-system>
- 2) <https://pubs.usgs.gov/fs/2014/3018/pdf/fs2014-3018.pdf>
- 3) <https://noaa.maps.arcgis.com/apps/MapSeries/index.html?appid=c466d465750f4e1b8d737cc3e7c0046f>

This task aligns with NGSS PE MS-ESS3-2 <https://www.nextgenscience.org/pe/ms-ess3-2-earth-and-human-activity>

These resources were designed in consultation with regional science coordinators in NEWESD 101 and ESD 112