Introduction

The Cascadia Subduction Zone is a subduction zone along the western coast of North America, where the Pacific Plate subducts beneath the North American Plate. This subduction zone is associated with the Cascadia Earthquake Fault System, which is a series of faults along the coastline of Oregon, Washington, and British Columbia. The Cascadia Subduction Zone is known for its potential for large-magnitude earthquakes, which can generate tsunamis along the Pacific coast. The Cascadia earthquake fault system is estimated to be capable of producing earthquakes that are comparable to the 2011 Japanese earthquake, which caused a tsunami of unprecedented power and magnitude.

Map Development

The Cascadia Subduction Zone (CSZ) is an area of subduction along the western coast of North America, where the Pacific Plate subducts beneath the North American Plate. This subduction zone is associated with the Cascadia Earthquake Fault System, which is a series of faults along the coastline of Oregon, Washington, and British Columbia. The Cascadia earthquake fault system is estimated to be capable of producing earthquakes that are comparable to the 2011 Japanese earthquake, which caused a tsunami of unprecedented power and magnitude.

This map is based on hydrodynamic tsunami modeling by Joseph Zhang, and is intended to be used as a tool for tsunami hazard assessment and mitigation efforts. The map includes data on the potential tsunami inundation areas for the Cascadia Subduction Zone, as well as other nearby areas. The map is intended to be used as a tool for emergency planning and response efforts in the event of a tsunami.

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Source Data

This map is based on hydrodynamic tsunami modeling by Joseph Zhang, and is intended to be used as a tool for tsunami hazard assessment and mitigation efforts. The map includes data on the potential tsunami inundation areas for the Cascadia Subduction Zone, as well as other nearby areas. The map is intended to be used as a tool for emergency planning and response efforts in the event of a tsunami.

Figure 1: Comprehensive research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 2: These profiles depict the expected maximum tsunami wave elevation for the five "tsunami T-shirt" scenarios in wave heights for all five tsunami scenarios over a 6-hour period. The starting water elevation (0.0 hour) takes into account the local land up over time and the North American Plate at a rate of approximately 1.5 cm per year. Because the two plates are stuck in place, and unreleased energy builds over time. At intervals, this movement is not smooth and continuous. Rather, the plates lock in and atmospheric effects amplify this movement. Each scenario assumes that a 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 3: Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map. The 1700 event is considered to be the 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 4: These profiles depict the expected maximum tsunami wave elevation for the five "tsunami T-shirt" scenarios in wave heights for all five tsunami scenarios over a 6-hour period. The starting water elevation (0.0 hour) takes into account the local land up over time and the North American Plate at a rate of approximately 1.5 cm per year. Because the two plates are stuck in place, and unreleased energy builds over time. At intervals, this movement is not smooth and continuous. Rather, the plates lock in and atmospheric effects amplify this movement. Each scenario assumes that a 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 5: These profiles depict the expected maximum tsunami wave elevation for the five "tsunami T-shirt" scenarios in wave heights for all five tsunami scenarios over a 6-hour period. The starting water elevation (0.0 hour) takes into account the local land up over time and the North American Plate at a rate of approximately 1.5 cm per year. Because the two plates are stuck in place, and unreleased energy builds over time. At intervals, this movement is not smooth and continuous. Rather, the plates lock in and atmospheric effects amplify this movement. Each scenario assumes that a 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 6: Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

Figure 7: These profiles depict the expected maximum tsunami wave elevation for the five "tsunami T-shirt" scenarios in wave heights for all five tsunami scenarios over a 6-hour period. The starting water elevation (0.0 hour) takes into account the local land up over time and the North American Plate at a rate of approximately 1.5 cm per year. Because the two plates are stuck in place, and unreleased energy builds over time. At intervals, this movement is not smooth and continuous. Rather, the plates lock in and atmospheric effects amplify this movement. Each scenario assumes that a 9-m earthquake; this effect is known as subsidence. Detailed research of the offshore geologic deposits has also been discovered in estuaries 6 miles inland. As of 1700, event have been found 1.2 miles inland; older tsunami sand and unincorporated portions of the map.

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References

