

# Notable Historical Tsunamis in San Luis Obispo County

Run-up amplitude, in feet, above  
existing tide conditions

OBS = observed tsunami activity  
NR = No damage or severe  
conditions reported

- Distant Source -  
Tsunamis without felt  
earthquakes

- Local Source -  
Earthquake and tsunami  
together



Date	Magnitude-Source area	Tsunami location	Run-Up/Amp	Remarks
11/22/1878	No earthquake; Potential submarine landslide	Cayucos	OBS	Damage to wharf
		Morro Bay	OBS	Sea overtops portion of spit (likely the north end)
		Avila Beach	OBS	Damage to wharf
		Pismo Beach	OBS	Damage to wharf
11/4/1927	M7.3 Pt Arguello EQ	Port San Luis	4 ft	NR
4/1/1946	M8.8 – Aleutian Islands	Morro Bay	5 ft	NR
		Port San Luis	4 ft	Minor damage; Water within 2 ft of top of pier
11/4/1952	M9.0 Kamchatka	Avila Beach	5ft	NR
3/9/1957	M8.6 Aleutian Islands	Avila Beach	2 ft	
5/22/1960	M9.5 - Chile	Cambria	OBS	NR
		Morro Bay	OBS	One death from falling boom within harbor
		Avila Beach	3 ft	NR
		Pismo Beach	5 ft	NR
3/28/1964	M9.2 - Alaska	San Simeon	OBS	Minor inundation on beach
		Cayucos	OBS	Minor inundation on land
		Morro Bay	OBS	Damage to boats and docks
		Avila Beach	5 ft	Boat moorings broken
11/29/1975	M7.7 off Hawaii	Port San Luis	1 ft	NR
12/26/2004	M9.1 Indian Ocean	Port San Luis	1 ft	NR
11/15/2006	M8.3 - Kuril Islands	Port San Luis	2 ft	NR
9/29/2009	M8.0 – Samoa	Port San Luis	1 ft	NR
2/27/2010	M8.8 – Chile	Morro Bay	2 ft	NR
		Port San Luis	3 ft	NR
		Pismo Beach	4 ft	NR
3/11/2011	M9.0 - Japan	Morro Bay	5 ft	\$500k damage to boats and docks
		Port San Luis	6 ft	NR
		Pismo Beach	3 ft	NR
		Oceano	3 ft	No damage but 100 recreational vehicles evacuated
10/28/2012	M7.7 Haidi Gwaii	Port San Luis	1 ft	NR

# Tsunami Source Scenario Model Results for San Luis Obispo County

Near shore tsunami heights (flow depths) for both local and distant source scenarios, in FEET above Mean Sea Level. NOTE: The projections do not include any adjustments for ambient conditions, such as storm surge and tidal fluctuations, and model error (it is very important to note this difference, as those numbers can increase the projected water height during an event).

	TSUNAMI SOURCES	Approximate Travel Time	San Simeon	Cambria	Cayucos	Morro Bay (outside bay)	Morro Bay (inside bay)	Diablo Canyon PP	Avila Beach/Port San Luis	Shell Beach	Pismo Beach	Grover Beach	Pismo/Oceano State Beaches
Local Source	M7.3 Pt Arguello 1927 EQ	20-25min			2	3	2		3	2	3	2	2
Distant Sources	M9 Cascadia-full rupture	1.5hr			3	3	3		4	5	5	5	5
	M9.2 Alaska 1964 EQ	5hr	7	6	13	11	8	6	18	13	13	12	13
	M8.9 Central Aleutians I	5hr	8	7	10	11	7	6	15	12	13	10	11
	M8.9 Central Aleutians II	5hr			5	5	4		7	8	8	7	8
	M9.2 Central Aleutians III	5hr	17	14	24	20	11	15	36	28	26	22	27
	M8.8 Kuril Islands II	9hr			3	3	3		4	3	3	4	4
	M8.8 Kuril Islands III	9hr			5	4	3		6	4	4	4	5
	M8.8 Kuril Islands IV	9hr			4	4	4		7	6	6	5	4
	M8.8 Japan II	10hr			7	5	4		8	5	6	7	7
	M8.6 Marianas Trench	11hr	3	3	3	3	3	3	0	0	0	0	0
	M9.5 Chile 1960 EQ	13hr			7	5	4		6	4	6	6	6
M9.4 Chile North	13hr			7	5	4	4	6	5	6	6	5	
<b>Maximum Runup - Local Source</b>					<b>2</b>	<b>3</b>	<b>2</b>		<b>4</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>Maximum Runup - Distant Source</b>			<b>19</b>	<b>16</b>	<b>29</b>	<b>21</b>	<b>12</b>	<b>18</b>	<b>40</b>	<b>31</b>	<b>30</b>	<b>26</b>	<b>29</b>

