

PRESENTED BY: The Squaxin Island Tribe  
Natural Resources Department and  
University of Washington

Presenters: Candace Penn and  
Dr. Guillaume Mauger

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# *Where the Creek Meets the Tide*

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October 2024

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10/16/2024

# *Overview*



... and is projected to rise 1.5-2 ft, on average, by 2100



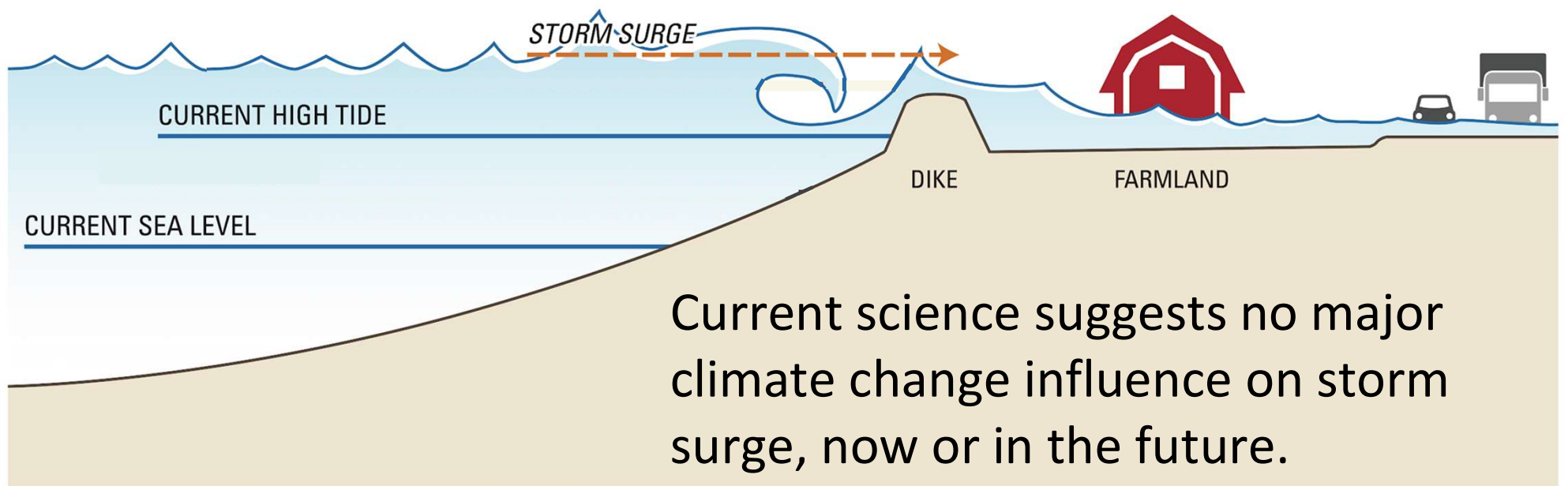
Source: Miller et al. 2018

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Source: Miller et al. 2018

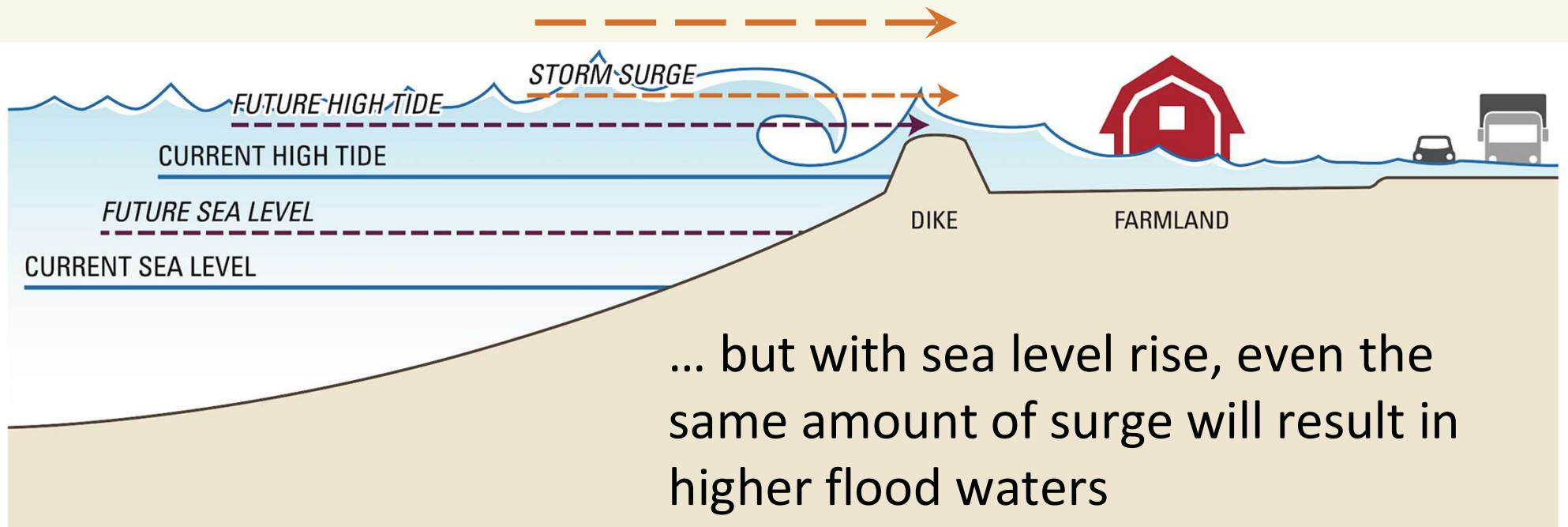
# Rising Sea Levels and Storm Surge



NOTE: Sea, tide, and storm surge levels are for illustrative purposes only and do not depict actual or projected levels.

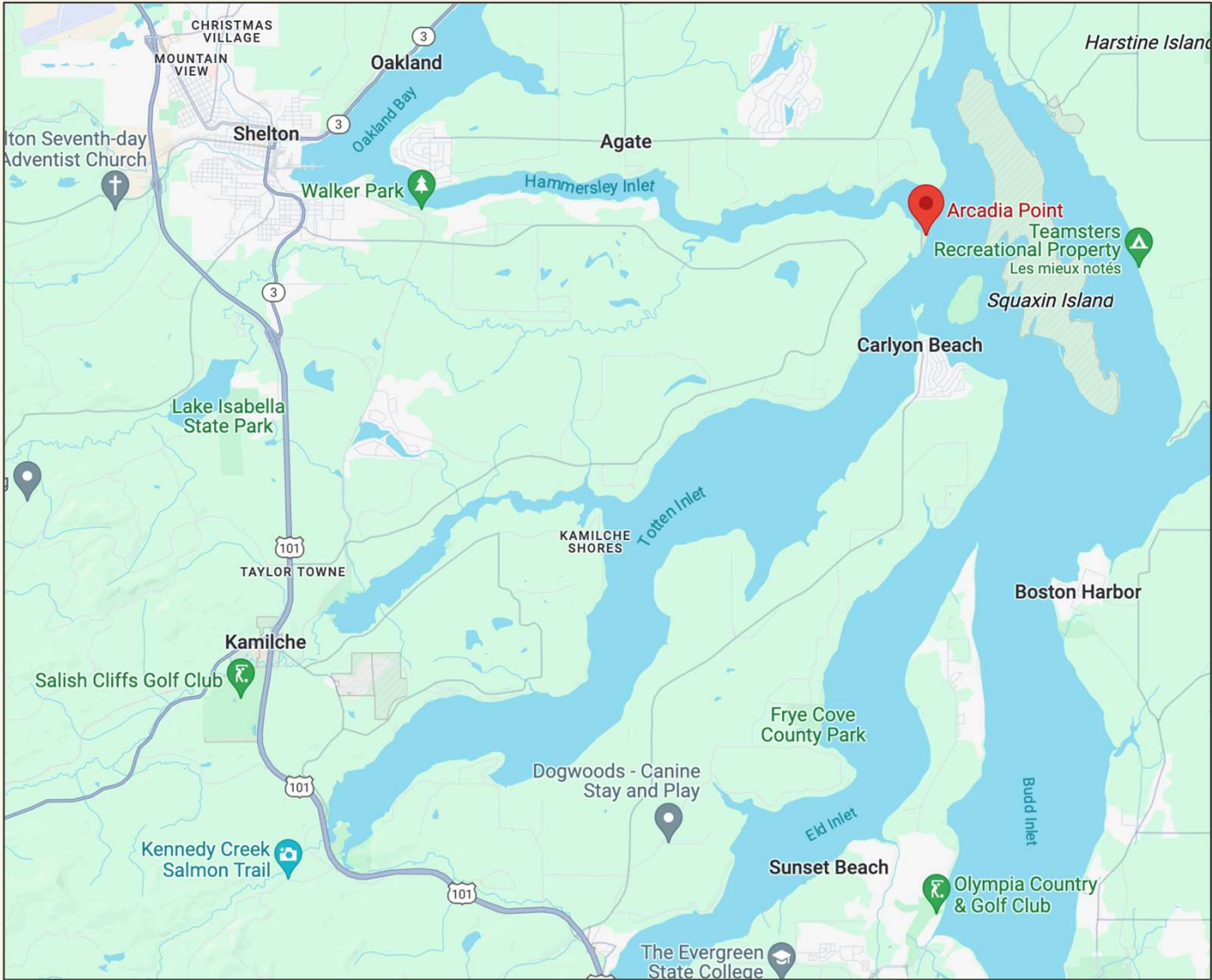
Source: [http://www.skagitclimatescience.org/wp-content/uploads/2015/09/SeaLevelRise\\_BriefOverview.pdf](http://www.skagitclimatescience.org/wp-content/uploads/2015/09/SeaLevelRise_BriefOverview.pdf)

# Rising Sea Levels and Storm Surge

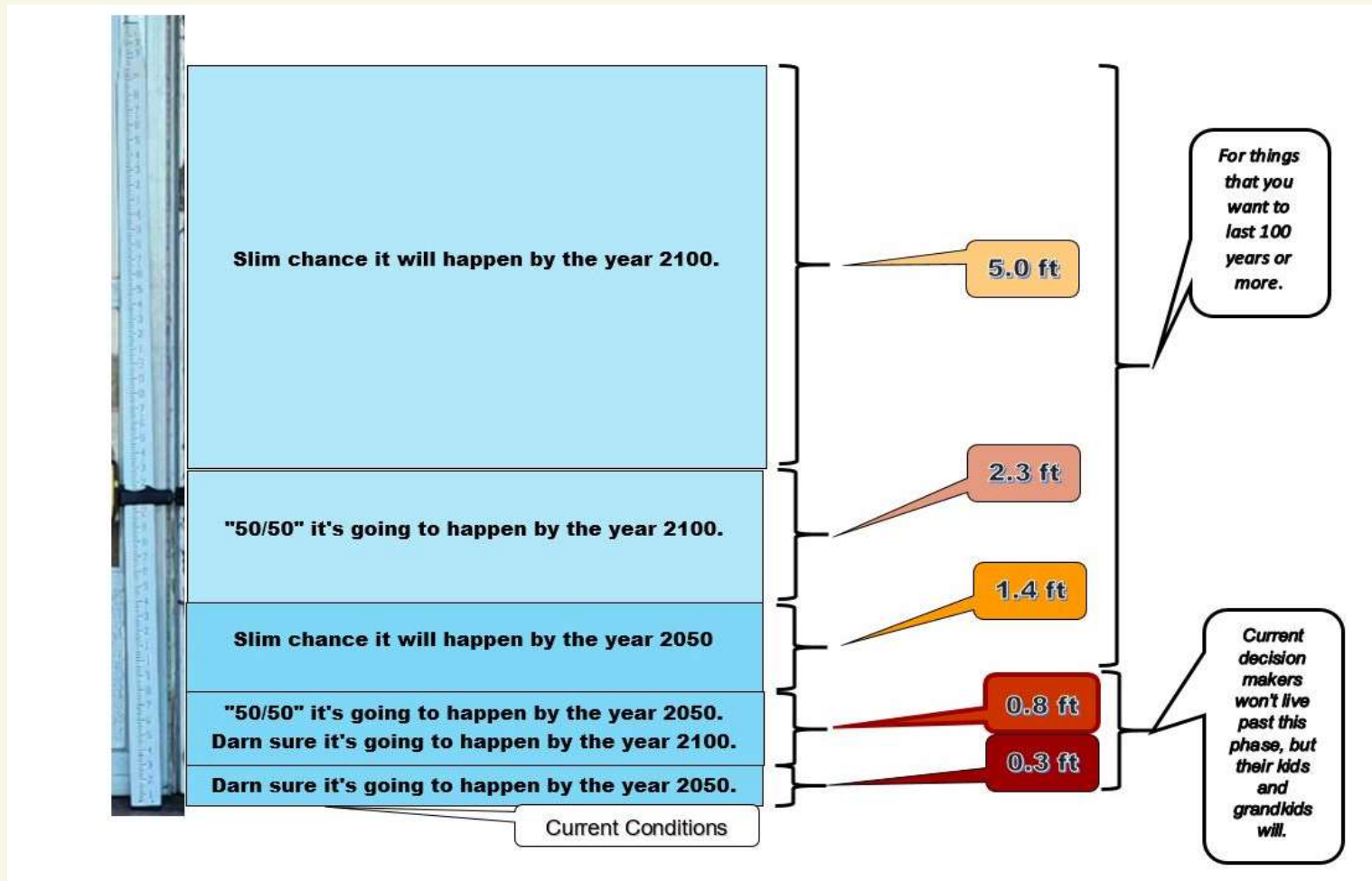


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Source: [http://www.skagitclimatescience.org/wp-content/uploads/2015/09/SeaLevelRise\\_BriefOverview.pdf](http://www.skagitclimatescience.org/wp-content/uploads/2015/09/SeaLevelRise_BriefOverview.pdf)



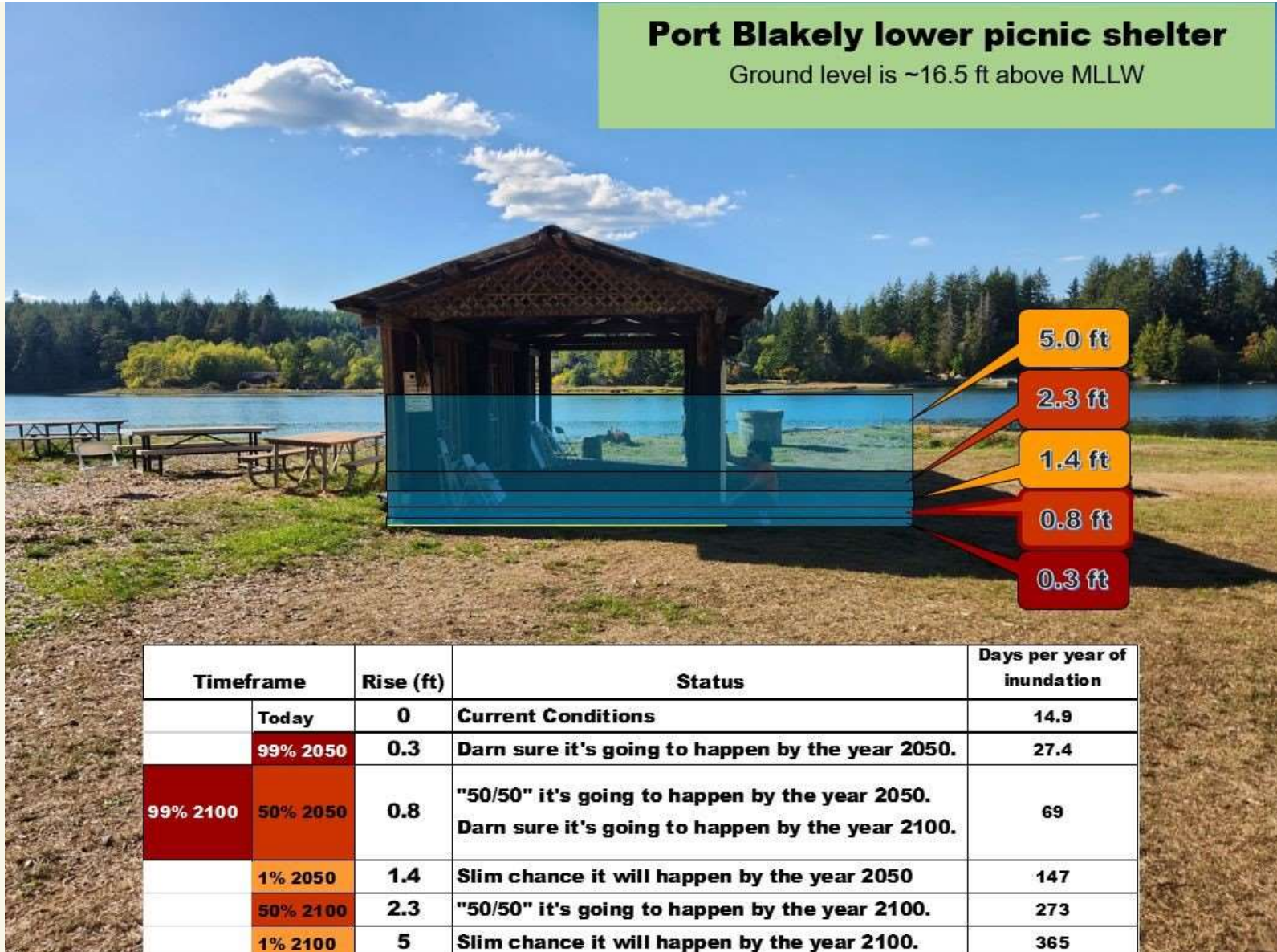
# Sea Level Rise Projections





## Port Blakely lower picnic shelter

Ground level is ~16.5 ft above MLLW



Timeframe		Rise (ft)	Status	Days per year of inundation
	Today	0	Current Conditions	14.9
	99% 2050	0.3	Darn sure it's going to happen by the year 2050.	27.4
99% 2100	50% 2050	0.8	"50/50" it's going to happen by the year 2050. Darn sure it's going to happen by the year 2100.	69
	1% 2050	1.4	Slim chance it will happen by the year 2050	147
	50% 2100	2.3	"50/50" it's going to happen by the year 2100.	273
	1% 2100	5	Slim chance it will happen by the year 2100.	365

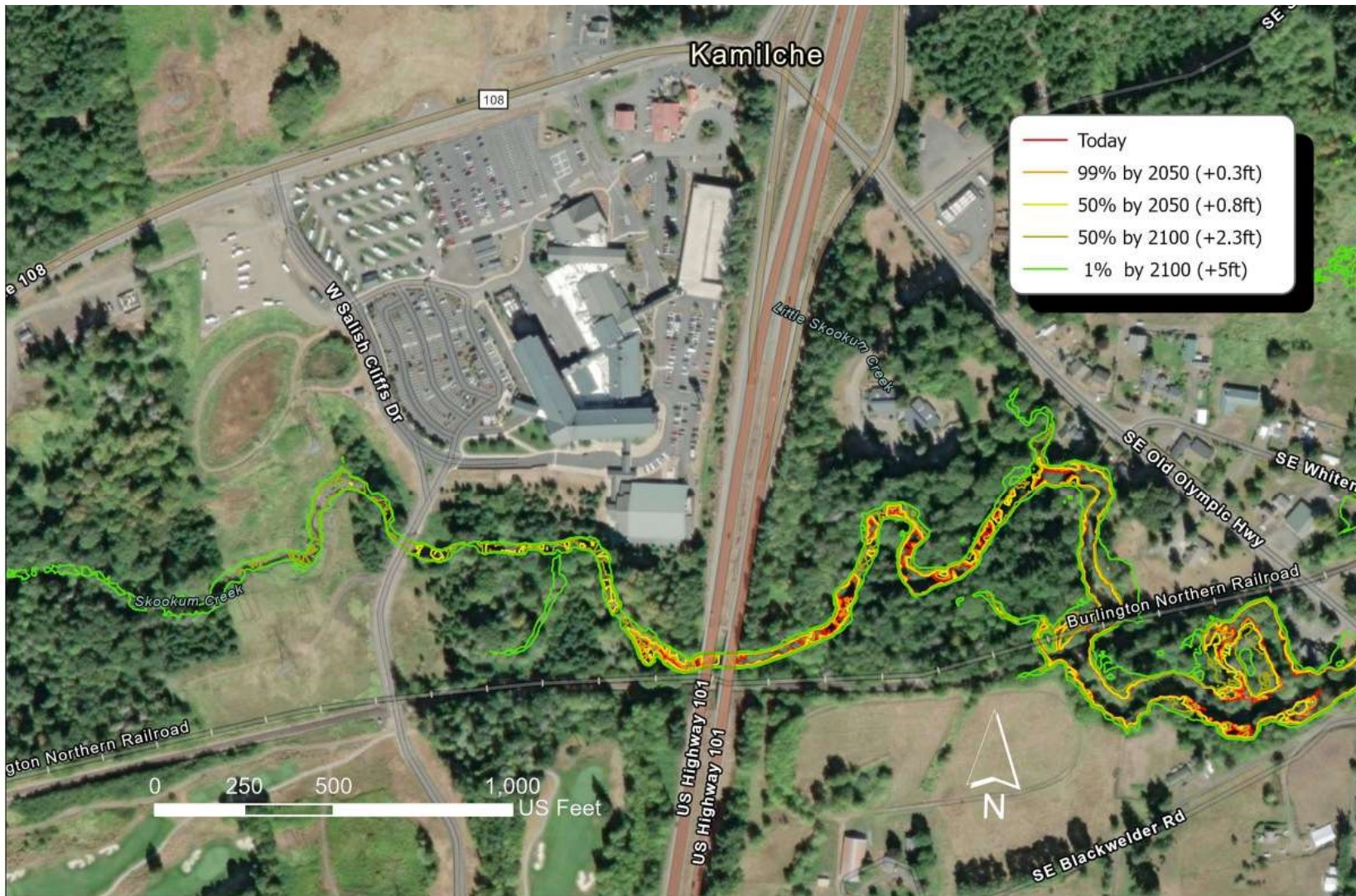


**“Zero on the staff gauge” = 15.3 ft above MLLW**  
**Skookum Creek Streamflow Monitoring Station at Highway 101**

Timeframe		Rise (ft)	Status	Days per year of inundation
	<b>Today</b>	<b>0</b>	<b>Current Conditions</b>	<b>121</b>
	<b>99% 2050</b>	<b>0.3</b>	<b>Darn sure it's going to happen by the year 2050.</b>	<b>164</b>
<b>99% 2100</b>	<b>50% 2050</b>	<b>0.8</b>	<b>"50/50" it's going to happen by the year 2050. Darn sure it's going to happen by the year 2100.</b>	<b>238</b>
	<b>1% 2050</b>	<b>1.4</b>	<b>Slim chance it will happen by the year 2050</b>	<b>307</b>
	<b>50% 2100</b>	<b>2.3</b>	<b>"50/50" it's going to happen by the year 2100.</b>	<b>355</b>
	<b>1% 2100</b>	<b>5</b>	<b>Slim chance it will happen by the year 2100.</b>	<b>365</b>

**Empirical Note-**

We have not yet observed the tide to reach this point, even though this sea level modeling says it does. We have only observed the tide just below the confluence of Skookum and Little Creek.

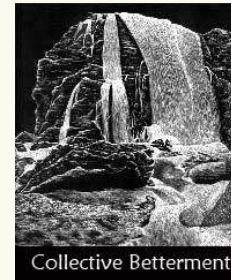


**Elevation of the 2-year return interval high tide (17.35 feet above Mean Lower Water)**

Image generated by Greg Stewart



*Thank you!*



**MASON**  
CONSERVATION DISTRICT



# Where the Tide Meets the Creek


SCAN TO VIEW THE STORYMAP





**Elevation of the 2-year return interval high tide (17.35 feet above Mean Lower Water)**

Image generated by Greg Stewart

 Squaxin Island Tribe Properties