

An aerial photograph of a large, powerful wave breaking. The water is a deep teal color, and the white foam of the wave is prominent. Three surfers are visible: one on the left side of the wave, one in the middle, and one on the right. The surfers are small against the vastness of the ocean.

# Surf's Up

How can we use our knowledge about wave characteristics to pick the best surf break?



## Mavericks

- Seasonal waves in California
- Up to 7 stories or 60 ft (18 m) tall
- Annual surf competition in winter



# Surf Challenge

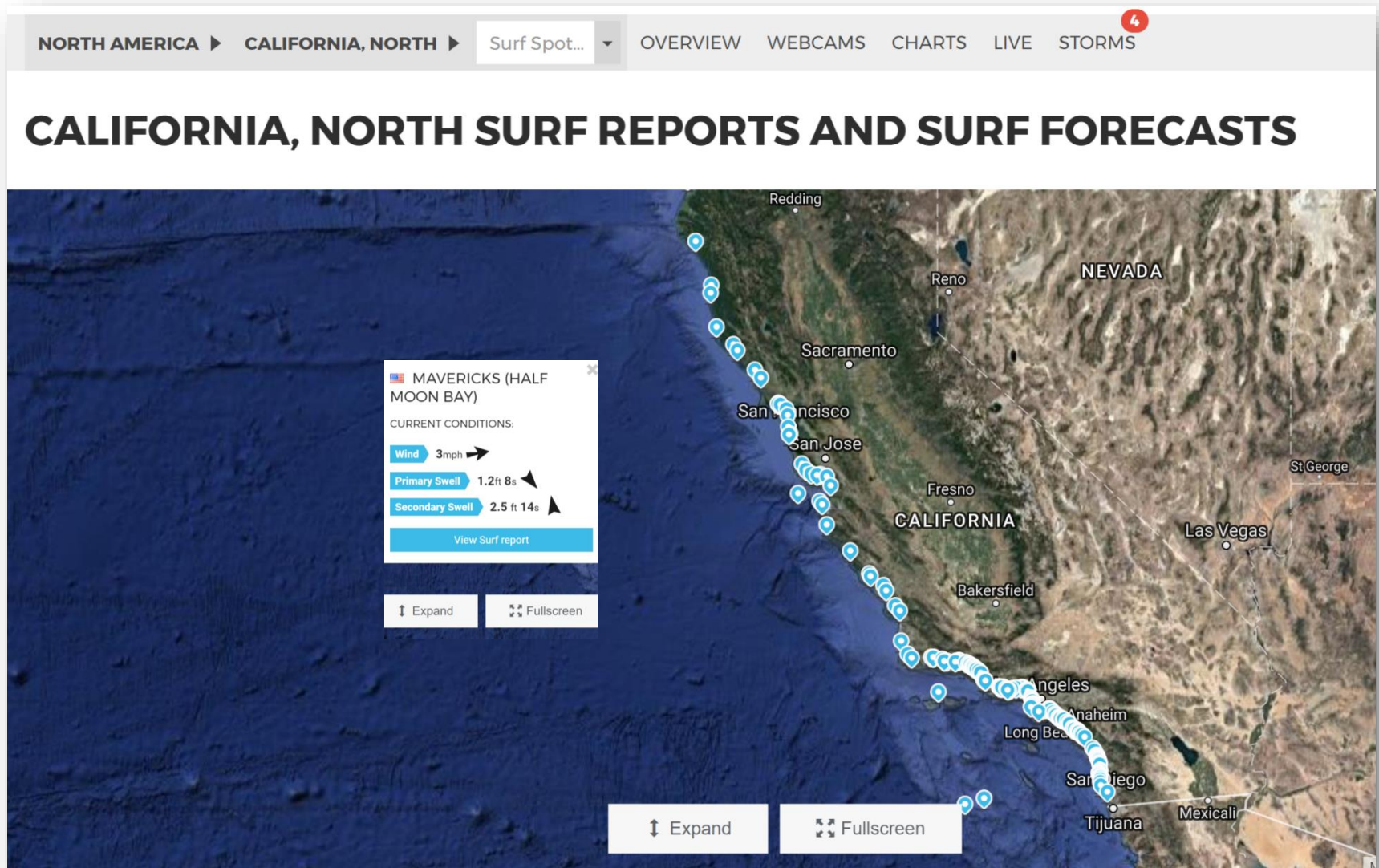
**You and your friends are trying to decide what break to surf.**

- One break has a wave height of 8 feet and a period of 8 seconds.
- A second break has a wave height of 4 feet and a period of 4 seconds.

**Which break do you choose and why?**



# Satellites Forecast Surf Conditions



# Example of Surf Report

**CURRENT SURF REPORT FOR MAVERICKS (HALF MOON BAY)**



**2-4ft** ★★★★★  
 6MPH LIGHT, ONSHORE →

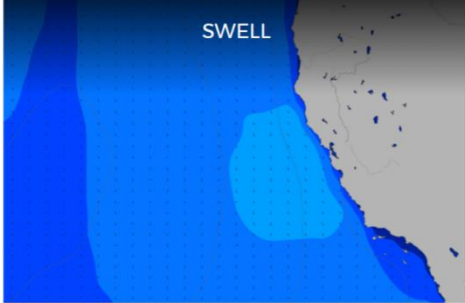
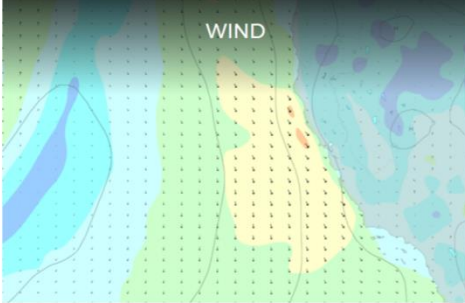
**Primary Swell** 1.3ft at 8s ↙  
**Secondary Swell** 2.5ft at 14s ↘

☀️ Air 66°f Sea 62°f



Low	4:44AM	-0.16ft	First Light	5:49AM
High	11:35AM	4.49ft	Sunrise	6:17AM
Low	4:34PM	2.69ft	Sunset	8:13PM
High	10:21PM	5.84ft	Last Light	8:42PM

Tide Location Half Moon Bay, California - 1.02km away

California Chart

HOURLY  MULTIPLE SWELLS  WIND HIGHLIGHTING  MODEL  UNITS FT, MPH

	Surf	Big Wave Rating	Primary Swell	Secondary Swell	Wind	Weather	Prob.
📍 Sunday 08/06	<a href="#">Advanced Forecast .all</a>						
12am	2-3ft	1.0	1.2ft 8s ↙	3s 13s ↘	3 4 mph ↗	☾ 59°f	100%
3am	2-3ft	1.0	1.2ft 8s ↙	3s 14s ↘	4 5 mph →	☾ 59°f	100%
6am	2-3ft	1.0	1.2ft 8s ↙	2.5s 14s ↘	3 4 mph →	☀️ 61°f	100%
9am	2-4ft	1.0	1.3ft 8s ↙	2.5s 14s ↘	6 6 mph →	☀️ 66°f	100%

# Maverick's Surf Report



**MAVERICKS (HALF ...**



11th February 2016

**18-28ft**

**9ft**

**19s**

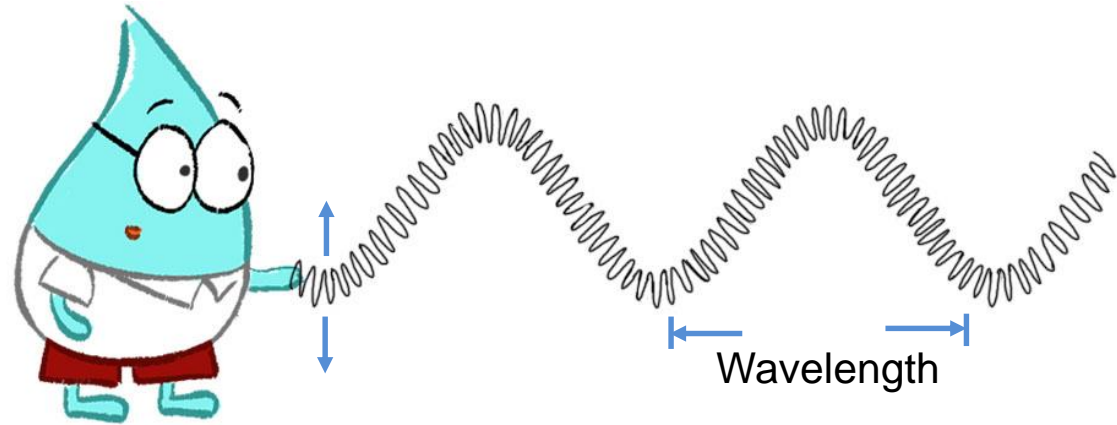


**7<sup>8</sup>  
mph**

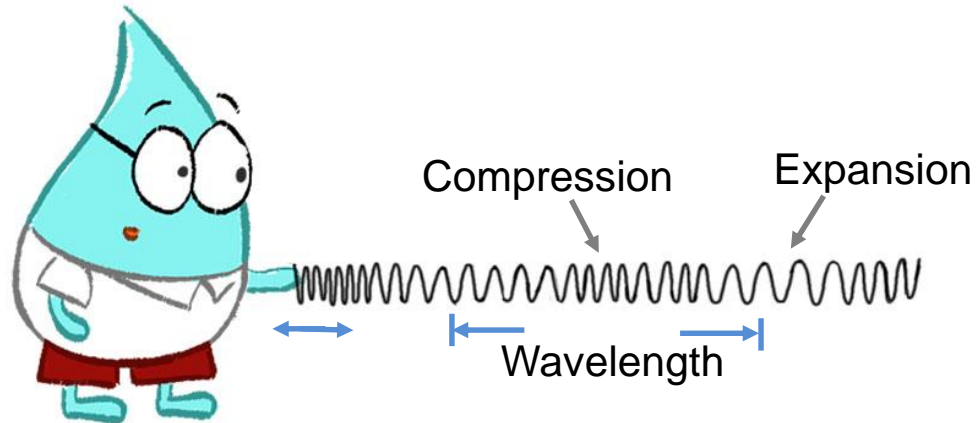


# Types of Waves

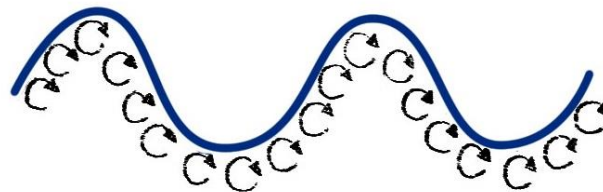
Transverse



Longitudinal



Surface





# Wave Characteristics

