# Santa Barbara Coastal LTER





### **Bob Miller**

LTER SCIENCE COUNCIL MEETING 2018 MADISON, WI



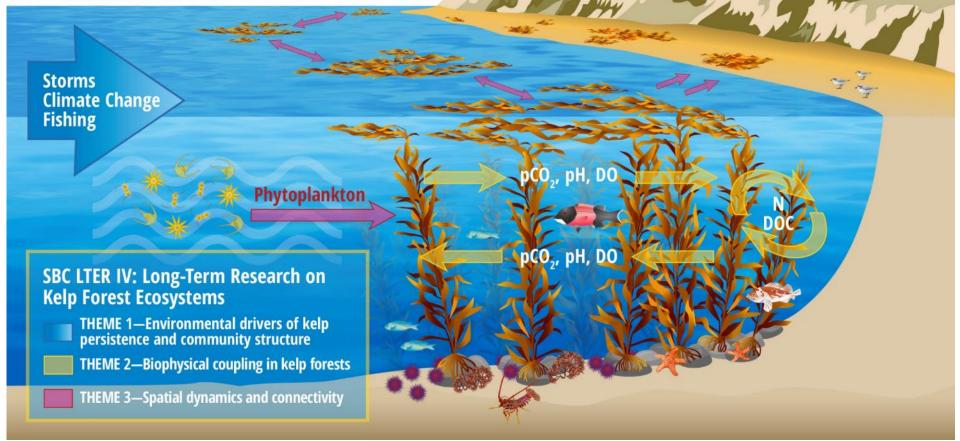
### SBC NEWS

#### SBC IV (2018-2024)

Focus: Use of a dynamic, short-lived foundation species to examine ecosystem consequences to longterm change

#### **Overarching question**

How do natural and human drivers influence giant kelp dynamics and alter the long-term structure and function of kelp forest ecosystems?



### SBC Organic Matter



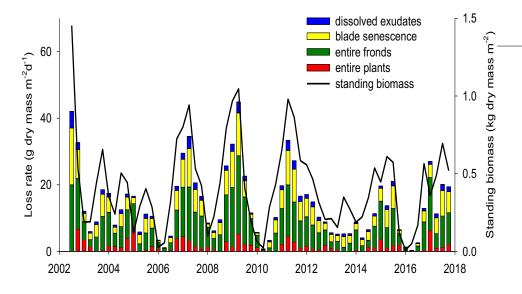
Production

Consumption & degradation

Export

- What drives the dynamics of different forms of kelp organic matter production?
- What is the role of microbial communities in the production, remineralization and trophic transfer of kelp-derived DOM?
- How does the timing, amount and form of kelp wrack subsidy influence the community structure and ecosystem function of beaches?

### SBC Organic Matter Results





## Large storm inputs of kelp on beaches are highly concentrated

Kelp Plants Per 100m 0-5 6-10 11-15 11-25 Kelp – entire plants Beach consumer abundance is more evenly distributed

LTER Science Council Meeting May 16 and 17, 2018