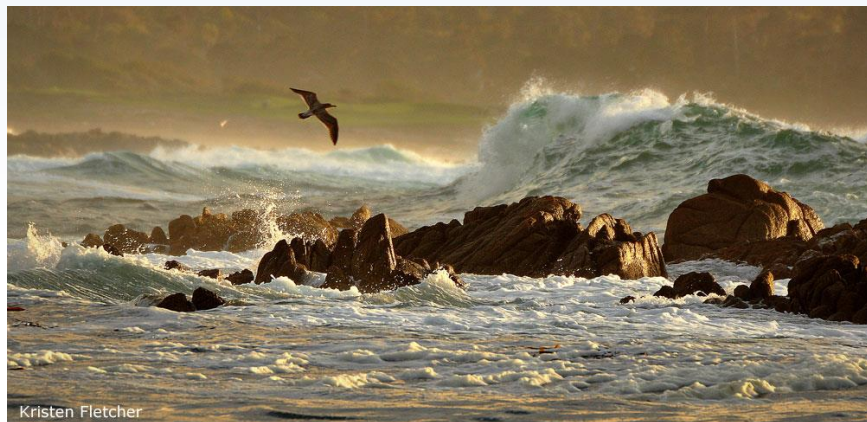




## *CA Artificial Reef Program Plan Open Listening Sessions*



### *Asynchronous Recording Pre-Project Open Online Listening Session*

*Cyndi Dawson  
Senior Environmental Scientist  
Marine Region Habitat Conservation Program*

*Lian Guo & Tanya Torres  
Science Integration Team  
California Sea Grant*

*Pike Spector  
Biodiversity Program Manager  
Ocean Protection Council*



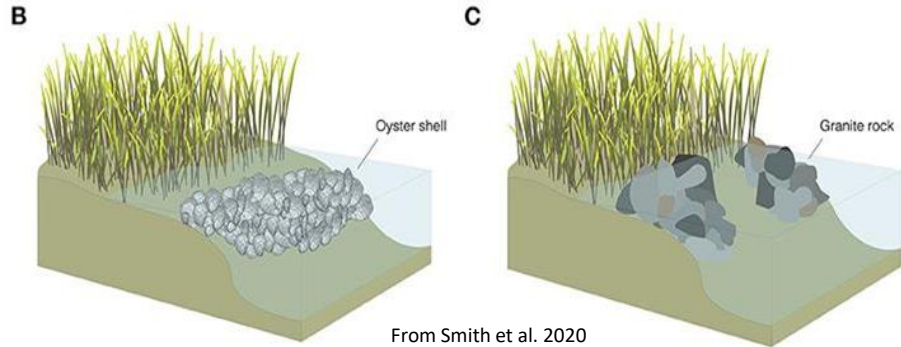
# What will we cover today?



- What is an “artificial reef”?
- Artificial reefs in CA – Then & Now
- What is the CA Artificial Reef Program (CARP) Plan?
- The CARP Plan timeline
- CA Artificial Reefs – What do we know?
- What will the CARP Plan include?

# What is an “artificial reef”?

- Intentionally placed by humans in marine environment
- Manmade or natural objects
- Duplicate conditions on natural reefs & rough bottoms
- Induce production of fishes and invertebrates
- Stimulate growth of kelp or other midwater plant life
- Creates natural habitat



From Smith et al. 2020



# Artificial Reefs in CA – Then & Now



- Placement and studies began in the 1950s
- Department published “Plan” in 1990, **missing key elements**
- Renewed interest in artificial reefs has launched new effort to create comprehensive Plan that meets standards



## California Artificial Reef Program (CARP)



was created in 1985 to be administered  
by the Department



# What is the CARP Plan?



- CARP Plan will provide consistent framework for design, materials, and siting of different types of artificial reef projects:
  - Species/biodiversity enhancement or restoration (e.g. native oyster, kelp, etc.)
  - Fishing or recreational diving
  - Multiple benefit/purpose (e.g. living shorelines, coastal resilience, etc.)
- Many agencies involved in permitting artificial reefs projects





# CARP Plan Timeline





# CA Artificial Reefs – What do we know?



- Variable results
- Most studied artificial reef in CA, Wheeler North (San Onofre)
- Under certain conditions can provide increases in local biomass of species found on natural reefs, like kelp, finfish, and invertebrates







# What the CARP Plan will include



- Brief history of artificial reefs in California
- Summary of knowledge regarding artificial reefs in California and globally
- General criteria for design, materials, and location
- Siting/connectivity and habitat conversion
- Proposed requirements for various types of artificial reefs, including reefs constructed for species restoration/enhancement, recreational opportunities, and multi-benefit projects.
- Potential benefits and risks of artificial reefs
- Monitoring recommendations





<https://wildlife.ca.gov/Conservation/Marine/Artificial-Reefs>

CONTACT

ArtificialReefs@wildlife.ca.gov

or (831)-682-9249

