

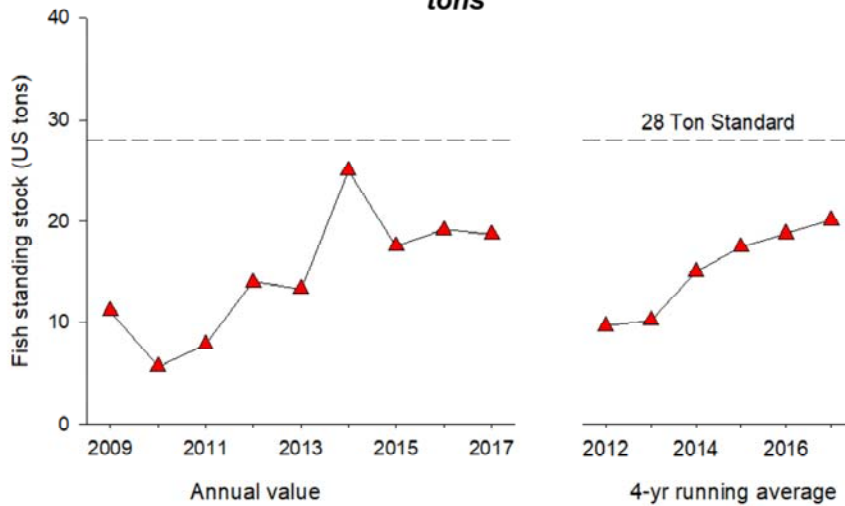
Remediating Wheeler North Reef



**SONGS Mitigation Monitoring Project
Kate Huckelbridge, Coastal Commission**

Performance Standard: Fish Standing Stock

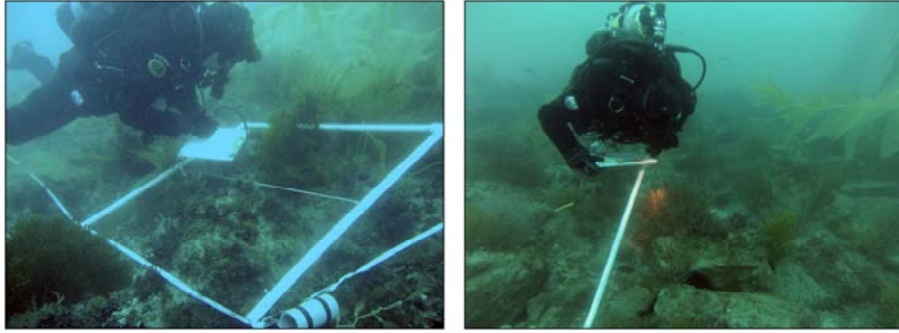
The standing stock of fish at the mitigation reef shall be at least 28 tons



Wheeler North Reef has consistently failed to support a fish standing stock of 28 tons

- As Dr. Reed discussed in the previous presentation and as shown in this graph, it has consistently failed to support the required fish standing stock of 28 tons.

SONGS Independent Studies



Monitoring data were used to:

1. Investigate the reason(s) for Wheeler North Reef's failure to meet the performance standard for fish standing stock
2. Develop potential solutions for ensuring that this standard is met in the future

As required by the permit, the monitoring team conducted independent studies to determine why Wheeler North Reef has failed to meet the fish standing stock requirement and what solutions could be implemented to bring the reef into compliance

Conclusions from Independent Studies



The present configuration of Wheeler North Reef (174 acres of low relief reef with 48% rock coverage) is not sufficient to consistently meet the performance standard for fish standing stock



How much additional acreage is needed?

These studies, which we have discussed in detail in the past, show that Wheeler North Reef is behaving like a natural reef, but that it is not big enough to consistently meet the fish standing stock performance standard. This conclusion leads to the question – how much additional reef acreage is needed for the reef to consistently support 28 tons of fish?

Estimated area of additional reef for remediation

Reef Design	Additional acres needed*
Low relief (< 1 m), low rock cover (41%)	200
Low relief (< 1 m), medium rock cover (63%)	125
Low relief (< 1 m), high rock cover (81%)	105

**Number of additional acres needed for Wheeler North Reef to sustain a fish standing stock of at least 28 tons with 95 % confidence*

★ Each of these low relief options provides added value for kelp


- Shown here is a summary table with estimates of the number of additional acres of various reef designs that are needed for Wheeler North Reef to sustain a fish standing stock of at least 28 tons
- As you can see the amount of additional acreage varies greatly depending on its rock coverage and vertical relief
- If new additional acres were designed like the existing Wheeler North Reef (i.e., low relief with low rock coverage), then 200 additional acres would be needed, which would more than double its current size
- It would take approximately half of this area (i.e., 105 acres) if the additional acres were low relief with high rock coverage
- Each of these low relief options provides added value for kelp

Tentative Remediation Timeline

- May 2016 – CCC requires SCE to remediate
- March 2017 – SCE submitted lease amendment application to SLC, began underwater habitat surveys
- May 2018 (*est.*) – SLC releases draft EIR
- August 2018 (*est.*) – SLC reviews and acts on lease amendment application and appropriate CEQA action
- Fall 2018 (*est.*) – CCC, USACE, RWQCB and other permits
- Summer 2019 (*est.*) – Begin reef construction

Questions?

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