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To: CA Fish and Game Commission

1416 Ninth St.

Sacramento, CA 95814

RE: Dec. 5, 2017 Commission Meeting

Agenda Item: Proposed Changes to Recreational Abalone Fishing Regulations

Dear President Sklar and Commissioners,

I am a former commercial abalone fisherman, and was the last diver to enter into the commercial fishery (2 yrs. Prior to the complete closure of Southern California in 1997). Thank you for your consideration of my public comments.

In reading the ISOR published with the notice of proposed regulation, I see that the DFW is attributing recent declines in densities of N. Coast red abalones to lack of kelp resulting in increased mortality due to starvation. If this is correct, and there is not enough food to support the current population, then a fishery closure will only exacerbate the current situation. Removing some of the larger animals in the population through harvest would have a positive impact on the remaining population by increasing the chances of survival of a greater number of small and medium sized animals.

A closure of the fishery, will negatively impact the population under these conditions.

The basis for DFW making a recommendation to close the fishery, is predicated upon density based triggers outlined in the ARMP. These numbers are arbitrary and have little scientific basis. The concept of "MVP", Minimum Viable Population was derived from a study in Australia by Scoresby Shepherd on a stunted population of a much smaller species than Red Abalone. According to all the published scientific literature on abalones, egg production is a function of size of the animals. Red abalones, being the largest of any abalone species in the world, therefore have the highest reproductive potential, and should be able to reproduce successfully at lower density levels than other species with much smaller size.

There are fundamental flaws in the way the DFW calculates it's density estimates. Firstly, the habitat is not *defined*. In Northern California, the DFW's surveys are conducted in known abalone fishing

grounds, aka “high use” areas. They go do a transect over a measured area in a fishing spot. Then average out all of them over broad areas. Yet, without any estimate of total habitat, there is no estimate of overall abundance. Absent the estimate of total abundance, there is no analysis of how much impact the fishery is having on the parent population. How much is it being exploited. In 1997, DFW staff said off the record, that they guessed the fishery on the North Coast was harvesting somewhere between 2-5% of the total population annually but they had no basis for this, it was just a gut feeling.

The point being, that a risk assessment of the various options for some limited levels of fishing should identify some estimate of how much impact it will have on the resource. Granted DFW will say they don't have enough information. In response to that, the analysis should qualify what their levels of confidence are in those data, and assessment of risk.

For the record, in 1996/7 DFW presented density data to the Commission citing declines in densities at the Channel Islands, from 800-1000 ab / HA down to a few hundred ab/HA. (see Commission's statement of facts). In comparison, the DFW's own published literature by Wendell also documented declines at Pt Estero (Morro Bay) prior to and after reoccupation by sea otters at similar levels. When the commercial divers cried foul over the data, the Commission directed DFW biologists to go back out to San Miguel, and survey in the areas where fisherman were diving. Despite finding densities much higher (1000-1500 ab / HA range), the DFW continued to refute that there was a healthy population. They reported to the commission that there was a problem with the size ratio, in that few animals were legal size (approx. 1 percent). And that they found preliminary observations of skewed sex ratios (25:1 male/female), which were alarming, only later after lab results turned out to be normal 1:1.

Also in 1997, the Dept. presented to the Commission the (CEQA document) it was preparing as and “Informational Document”, abandoning it's commitment to the constituents to complete a full EIR. Included in the Informational Documents was and Appendix 1, Draft Fisheries Recovery and Management Plan for California Abalones. The basis of this plan was built around “Harvest Refugia”, and establishing no fishing areas as reserves to insure against overharvest. The North Coast was given as the example of a successful fishery, based upon an estimated 20 percent of the populations being in deep water creating a defacto refuge beyond the reach of breath hold divers, and attributing recruitment into the fishery to these populations.

But the 1997 Legislation that pre-empted the Commission's authority, and closed the fishery by statute, led to the DFW abandoning it's efforts to complete the EIR, and it's FMP. By 2005, the DFW had completely rewritten the ARMP, and rather than continuing with the harvest refugia idea, they changed to the current density based plan. A couple of key points here are the fact that Legislation had passed (MLPA) which resulted in the 20% harvest refugia goals having already been satisfied prior to the Commission's receipt of the ARMP. Also, after So. Cal. Abalone fishing was closed by statute, the DFW started conducting surveys in the high use areas on the N. Coast and compiling it's density data. This is where the higher 6600 Ab / HA number originated from. Data collected after the closure.

When the DFW presented the draft ARMP to the Commission in 2005, their conclusions were that So. Calif. Continued to be in decline, based upon the data from before, and at the time of the closure 1997. They had not done any surveys in the period after, to see if any recovery had occurred. This led to the Commission directing DFW staff, once again to go out with the commercial divers and conduct current surveys. An extensive effort was made to collect current density data for San Miguel Island. In this

effort, an attempt was made to quantify the total habitat, and kelp canopy was used a proxy for abalone habitat. This was to dispel pessimistic arguments alleging that the population was “small”, etc.

As a result a total estimate of abundance for emergent abalones was derived at 3 million animals. However in applying the densities in the survey to a biomass estimate, it also resulted in the densities being diluted down, as compared to how the density number is calculated in Northern California.

And as a result, the proposed experimental fishery was denied on the basis that the density was below the MVP outlined in the ARMP.

Here is what is wrong with DFW’s methodology. First, the scale that the density numbers are being applied is way too big. Hundreds of miles of coastline. When you find abalones they are patchy. Lots of areas with none, and then pockets or parts of reefs where they are bunched up. It’s rare to find solitary animals on the bottom of the ocean. This being the case, as far as reproduction goes, it’s a lot less important how many there are averaged out over a large area, than it is how close they are together. The way DFW has used density is based on a flawed perception that they are evenly distributed across the habitat, and that the end density number equates to distance between animals, and if the distance is too great, then reproductive failure occurs. This is a flawed idea.

Also, it does not take into consideration that the animals have the ability to move, and can aggregate together when it’s time to spawn. And additionally, it does not indicate if there is recruitment. A better indicator if recruitment is occurring is to take a look at the size classes of the animals in the population.

If you act to Close the remaining fishery the following negative consequences will occur:

1. More animals will die of starvation.
2. DFW loses the revenues from report card sales.
3. All fishery dependent data will cease.
4. The efforts by the sportsmen to generate new data on size structure will undoubtedly end, in the absence of any fishing opportunity.
5. DFW will likely curtail fishery independent monitoring.
6. You lose the checks and balances of corroborating fishery dependent data with fishery independent data.

In 1995 when the Commission acted to close the fisheries for Pink, Green, and White abalones, the Commission directed DFW to develop an FMP for pink abalones at the request of commercial divers who believed there was still a viable resource. DFW failed to fulfill that promise.

In 1996/7 DFW committed to doing a full EIR during consideration of the closure of So. Calif. Red abalone fishing, and allow the Commission to consider all of the alternatives. The Legislature pre-emptively stepped in micromanaging the process and arbitrarily closed the fishery down before the completion of the EIR. Then, DFW abandoned the CEQA process on the basis that “the need for the environmental document had been eliminated.” This was an act of bad faith, because it presupposes that no other feasible alternative could have reasonably achieved most of the Dept.’s basic objectives.

In 2006 the Commission adopted the ARMP, incorporating Alternative #8 for an experimental fishery at San Miguel Island as the preferred alternative. But by 2008 the DFW derailed the idea which led to the Ocean Science Trust review. CEQA was circumvented in the Commission’s review and adoption of the

ARMP. A key element of CEQA is the requirement for “feasible alternatives”. Feasible by definition is “capable of being achieved within a reasonable amount of time.” The ARMP goals fail to meet this criteria. No estimates of time are given for any of the goals.

The ARMP also fails to accurately describe the whole record historically.

DFW’s slide show in Atascadero followed by an emotional appeal was pathetic. Obviously the days of adhering to the scientific method are gone. Of adhering to the scientific method, and publishing peer reviewed data no longer exist, nor of adhering to proper procedure and compiling a full CEQA EIR.

If you look back of the decades of the management plans, and CEQA documents, the descriptions of the causes of mortality and the biology of the animals really has not changed. However DFW has disregarded most of that. They keep going around bean counting and looking at their one or two decade long set of density data which gives no meaningful risk assessment of the fishery to the decision makers.

In Atascadero, Sonke Mastrup made a statement that recovery in So. California “hasn’t worked.” Where is the evidence. In 1996 the density at SMI was estimated few hundred animals / HA. By 1997 it was 1000-1500. By 2006 it was 2000 avg. (over the entire kelp canopy area) with a biomass estimate of 3,000,0000 emergent animals. And today, 2017, the DFW has not done any surveys for 8 years. Yet they can make baseless claims that recovery has not occurred. The ARMP and the DFW and the closure at hand has more to do with saving face than any biologically based need.

Here is what I see happening. The ISOR and the Commission’s Notice lays the foundation to close the fishery. DFW recommends following the triggers they created in the ARMP. The Commission closes fishery with the caveat that DFW does a new FMP. After the fishery is closed, the need for the FMP goes away.

The need for the FMP always seems to precede a closure, but is never followed through on. Now I’m being told that DFW is working on a “Northern FMP”, but that it won’t include southern California. Won’t include the red abalone species throughout it’s entire range. Won’t reconcile any of the disparities or double standards that have plagued the previous closures and the ARMP.

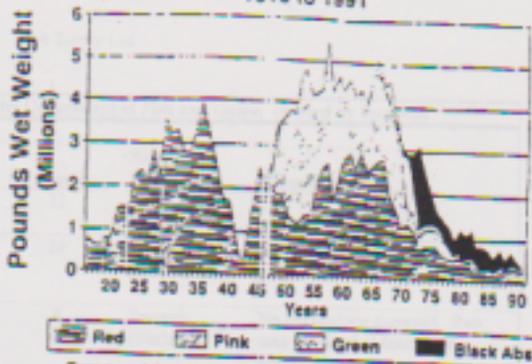
After 20 yrs. of frustration, I think it’s time the Commission and DFW stop leading people on. Why say you are going to consider the alternatives, if they are not consistent with the ARMP. Why waste everyone’s time. As someone whose livelihood depended on the resource and was financially devastated this issue has had lifelong consequences, both financially and emotionally.

Respectfully,

Don Thompson



## Calif. Commercial Landings of Abalones 1916 to 1991



Commercial abalone wet weight landed from all California for 1916 to 1991 and for California (Karpov and Tegner 1993)

From Draft Supplemental Environmental Document, ABALONE OCEAN SPORT FISHING State of California, The Resource Agency, Department of Fish and Game, August, 1993

1-A: This graph was included in a report to the California Legislature by the Abalone & Marine Resource Council. A sentence above the graph, citing DFG Lieutenant, J.E. Watkins states, "There is as much poaching going on currently as when this report was written." The implication is that poaching is the cause of decline.

Commercial divers cite loss of habitat caused by pollution in southern California (sewage, offshore oil wastes, etc) as the cause of decline for southern species and sea otters on the south-central coast.

1-B: This graph was omitted by AMRC. Large-scale depletion of abalone by sea otters is well documented: Ebert, 1968 a&b; Wild & Ames, 1973; Miller, 1973; 1980; Gotsall, 1984; Wendell, '94.

Commercial divers have lost approximately 90% of commercial fishing grounds to the sea otter. Commercial landings now average approx. 10% of historic.

Source: Supplemental Environmental Document: ABALONE OCEAN SPORT FISHING, State of California, Resources Agency, DFG, 8-93.

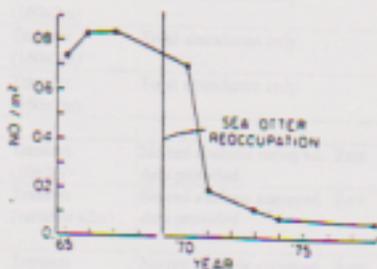
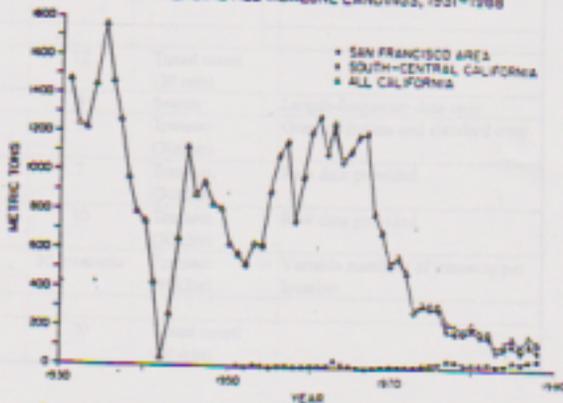


Figure 3.17. Red abalone density before and after sea otter reoccupation of Point Estero, central California (Hardy et al 1982).

1-C: This graph shows the decline in red abalone as it relates to those above (1-A & 1-B).

Source: Karpov, handout, Abalone Ad-Hoc Committee, 1993/Tegner, et al.

### COMMERCIAL RED ABALONE LANDINGS, 1931-1988



Tegner et al., Figure 3

pared by Steve Rabuck 6-95

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FISH AND GAME COMMISSION  
STATEMENT OF PROPOSED EMERGENCY REGULATORY ACTION

Emergency Action to Amend Sections 29.15 and 100,  
Title 14, California Code of Regulations,  
to Prohibit the Sport and Commercial Take of Red Abalone  
South of Point Lobos, San Francisco County

EXCERPT - DENSITIES  
1997

05-12-1997 03:21PM FROM CA FISH & GAME COMMISSION TO

In determining the status of abalone populations, the Department has relied on fishery independent and fishery dependent data as measures of red abalone stock abundance. Underwater surveys conducted by the Department and others are the basis for fishery independent assessment while landings and catch success by sport and commercial fishermen are the basis of fishery dependent assessment. It is important to examine both current data and trends over time. Four regions of California were compared by the Department: 1) northern California, north of San Francisco, where no sport SCUBA or commercial take is allowed; 2) The San Francisco area, including the Farallon Islands, Fitzgerald Marine Reserve, and the San Mateo coast where commercial take and sport without SCUBA is allowed; 3) central California, where sea otters have reestablished their range; and 4) southern California, south of Pt. Conception.

According to the Department, the fishery independent information for southern California shows a clear trend of declines at Santa Cruz and Santa Rosa Islands and low densities at all sites relative to those of northern California. Declines are most apparent at Santa Rosa and Santa Cruz Islands. On Santa Rosa Island densities declined ten-fold from 600 to 1,000 abalone-per-hectare in 1978-83 to 60-150 abalone-per-hectare by 1996. Sampling stations on Santa Cruz Island declined from 480 in 1983 to 0 by 1988. San Miguel Island densities were low throughout the survey period, ranging from 150 abalone-per-hectare during 1983-89 to 90 abalone-per-hectare in 1990-96. The decline to 90 abalone-per-hectare was statistically significant. San Miguel Island densities need to be interpreted cautiously since they are not corroborated by landing declines seen in other areas of central and southern California. The two locations surveyed off San Miguel Island by CNPS represent good kelp habitat but may not be optimal abalone habitat. Additional surveys are needed at San Miguel to establish remaining densities at optimal abalone habitat surrounding the Island.

The Department's fishery dependent information for central and southern California