

## Agenda Item Summary

### BACKGROUND

Oregon's recreational abalone fishery was suspended by emergency rule beginning January 1, 2018. This suspension was due to 1) low densities of red abalone, 2) unfavorable environmental conditions, 3) increasing effort and an expected spike in interest concurrent to recent California fishery closure. ODFW begins issuing special permits for abalone at the beginning of each calendar year, and adoption of the emergency rule allowed staff to hold issuance of 2018 permits pending a review of the fishery by the Commission.

Oregon's recreational abalone fishery targets only red abalone (*Haliotis rufescens*). Red abalone is the world's largest species of abalone, and its northern range termination is Oregon's south coast, where they reach their largest sizes. While abalone meat is delicious, Oregon abalone permit holders are typically most interested in these large, trophy size shells. Trophy abalone hunting is an exciting harvest opportunity unlike other invertebrate fisheries and is a lifelong passion for many divers. Reflecting the low abundance of abalone in Oregon, harvest limits are modest (1/day and 5/ year) and harvest is low (~189 abalones reported/ year (10 year average)).

Oregon's red abalone fishery is very small, however, based on the sensitivity of the species and strong interest of harvesters, staff has made a number of investigations on this species. Since the 1950s, various red abalone projects have occurred. Initial projects focused on commercial harvest; after commercial fishing was discontinued, a recreational limit was established (3/day) then staff work focused on bolstering populations via stock enhancement projects (1960s-1990s). Low abundances of red abalone found during qualitative surveys in the early 1990s caused concern among biologists about the sustainability of the fishery. In 1995, staff presented the Commission with two options regarding the fishery: 1) fishery closure or 2) restrictive harvest rules (1/day, 5/year) and the Commission adopted the restricted fishery which has been in place under permanent rules since. In recent efforts, staff developed methods for quantitative surveys to assess stocks, a pilot effort occurred in 2011 followed by a more robust survey in 2015.

Aside from red abalones, one other species of abalone is common to Oregon, the flat abalone (*Haliotis walallensis*). This species was the subject of an intensive commercial fishery from 2001 to 2008. It was closed due to population depletions, despite a single harvester catching a quota of only 3,000 pounds per year.

Since the suspension on January 1, 2018, ODFW has reviewed fishery permit data, survey data, and reached out to permit holders to solicit their opinions on preferred options.

## PUBLIC INVOLVEMENT

On January 14, 2018, staff sent out a mailer to each abalone/scallop permit holder from 2016 or 2017. The mailer included information on the causes and condition of the current suspension and included a questionnaire soliciting opinions on their preferred management choice and, if they suggested new fishery rules, which would be acceptable, in rank order (Attachment 5). The permit was sent to 418 individuals and reached 358 individuals; we received information back from 143 individuals (40% response rate). The response was robust and passionate, many lengthy comments were received (Attachment 6).

## ISSUE 1

### **MODIFICATIONS TO THE RECREATIONAL ABALONE FISHERY**

## ANALYSIS

Abalone fisheries have a poor record of sustainability. Their reproductive biology, which is heavily dependent upon maintaining high population density requires intensive management of harvest mortality. On the West Coast of the United States, many abalone fisheries have been conducted, however each has closed or are currently suspended due to population depletions caused by overharvest, disease, or environmental conditions.

The current problems Oregon's abalone fishery is facing are: 1) low densities, 2) adverse environmental conditions, and 3) increasing fishery pressure.

- 1) Oregon red abalone populations are extremely limited. The northern termination of the range of red abalone is near Coos Bay, OR. Suitable habitats (shallow, protected kelp beds) within Oregon are rare; as a result, they are only found in a few small areas. In 2015, ODFW performed a subtidal survey using similar methods as performed in California to assess this population. Results of that survey indicated densities of 0.03 red abalone/m<sup>2</sup> in areas with ideal habitats. While densities are often low near range terminations, these densities were approximately 1/10<sup>th</sup> of levels expected to be able to maintain sustainable populations.
- 2) Since 2015, warm waters have dominated the West Coast's nearshore ocean. Principally due to this warm water, kelp beds have been dramatically reduced, causing abalone starvation which resulted in the sharply declined densities found in California abalone surveys. While abalone surveys were not conducted in Oregon in 2016 or 2017, kelp conditions are similarly reduced and evidence of abalone starvation has been found. We suspect that environmental changes have also reduced red abalone populations in Oregon.
- 3) Since the inception of the recreational abalone permit in 1996, harvest and effort has increased. In recent years, as California has reduced limits, Oregon permit issuance and harvest has accelerated.

As California’s robust fishery (>25,000 permits/year) is now suspended, we have seen a spike of interest for Oregon’s small fishery (~300 permits/year). Low harvest pressure has been key to the persistence of Oregon’s abalone fishery, a condition which staff believes is no longer tenable under status quo regulations.

**Permit Holder Questionnaire Results:**

In January of 2018, subsequent to emergency suspension of the abalone fishery, we sent abalone/scallop permit holders (from 2016 or 2017) a mailer which included information on the suspension and a questionnaire requesting 1) their preferred management approach, and 2) if they suggest alternate fishery rules, which rules would be preferred.

Regarding a preferred management approach: 27% chose fishery closure or suspension, 4% chose status quo, 4% chose to defer to ODFW’s recommendation, and 65% chose “alternate fishery rules” (meaning the fishery should continue, but with new regulations to increase sustainability).

Regarding “alternate fishery rules”, of the nine options provided, we found harvesters had the greatest support for 1) Reduced Annual Take, 2) Seasonal Closure, 3) Increased Minimum Shell Size and 4) a Limited Entry Permit. “Multiple Approaches” was also highly preferred (Figure 1).

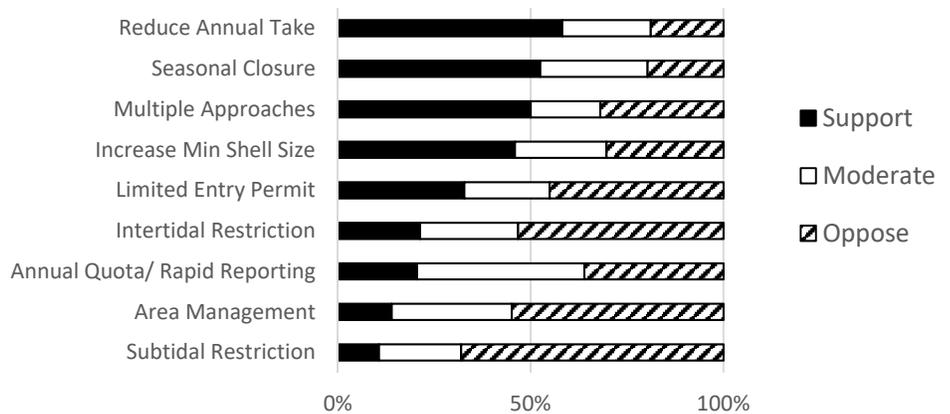


Figure 1. Oregon abalone permit holders "alternate fishery rule" preferred approaches

**Management options:**

We do not know the estimated abundance of abalone in Oregon, however we have one data point (2015 surveys) that provides a reasonable measure of relative abundance, which may be compared to future surveys. For this reason, the options we suggest here are not quota based. Instead, they are based on research in worldwide abalone fisheries, recent survey data of Oregon’s red abalone stock, current environmental conditions, and input from the public. We provide nine options and weigh their expected risks (Table 1):

## OPTIONS

1. **Permanent fishery closure:** Permanent fishery closure is the most conservative measure. In the last Commission exhibit on red abalone in 1995 this was the staff recommendation, citing paucity of abalones in Oregon and concerns over the population status.
2. **Temporary fishery closure:** Temporary fishery closure would close the fishery until the risks of fishery are better understood and are found to be acceptable. We suggest a three year period of closure, allowing time to 1) re-assess red abalone populations in Oregon and 2) analyze science and management to occur in California's red abalone fishery. In this case, staff could update Commission in January of 2021, and present new options for the fishery prior to the end of the temporary closure.
3. **Reduced Annual Limit (3):** Reduced annual limit was popular among harvester suggestions. Most frequently, three/year was suggested. Based on analysis of existing harvest patterns, we expect little change (reducing projected take by 15%) in harvest with an annual limit of three, as most harvesters do not harvest more than three currently. However, this may not provide an overall reduction if effort increases as a consequence of the California closure (Attachment 3).
4. **Reduced Annual Limit (1):** Reducing the annual limit to one abalone per year would be expected to reduce take substantially (reducing projected take by 58%) at current effort levels. However, this may not provide an overall reduction if effort increases as a consequence of the California closure (Attachment 3).
5. **Seasonal closure:** Many harvesters preferred seasonal closure to reduce take in peak months. The mechanism by which this reduces take is to restrict harvesters to diving at times that do not have good marine weather. The effect in California has been to lower harvest, however, consequences have included diving in unsafe conditions.
6. **Increased size limit:** Since the fishery largely operates as a trophy fishery, increasing the size limit is sensible for that sector. Increasing the size limit to trophy size would substantially reduce take, but may cause additional mortalities to undersized abalones. Several harvesters suggested a 9" or 10" size limit. Staff included 10" as an option because that is the conventional beginning to "trophy" size and is the most conservative size limit evaluated.
7. **No SCUBA:** Many abalone divers are free divers (aka breath hold diving or snorkeling), a high percentage of harvesters suggest restricting harvest to only this method, as in the California fishery. In California, this practice is intended to create a *de facto* deep water reserve. However, Oregon's red abalone are found in very shallow waters, so this regulation would not have a similar effect in Oregon.

8. **Limited entry permits:** Many harvester permit holders preferred a limited entry system. Often, harvesters suggested a two tiered system of residents and non-residents, while others suggested using harvest and compliance history to develop tiers. While a limited entry system would be among the most sustainable fishery options, the management costs would be great. To have a limited entry system we would either need to estimate the number of abalones in the population, or develop a conservative harvest rate from fishery dependent data. A “big game” model of permit administration would need to be developed and enforcement needs could be high, depending on the valuation of such a harvest opportunity. This all could be done, but would require thorough discussion and data acquisition to develop and fund.
9. **Status quo:** Status quo would retain the same 1/day, 5/ year, 8” minimum size limit. This is the most risky option for the stock.

The assessment of management risk shown in Table 1 is based upon staff’s professional judgement and should be viewed in a relative manner.

Table 1. expected risks to management options in Oregon’s recreational abalone fishery

Management choice	Risk to stock	Effect to harvesters	Enforcement costs	Administration costs
Permanent fishery closure	Low	High	Low	Low
Temporary fishery closure	Low	High	Low	Medium
Reduce annual limit (3)	High	Low	Medium	Medium
Reduce annual limit (1)	Medium	Medium	High	Medium
Seasonal closure	High	Medium	High	Medium
Increased size limit (10")	Medium	Medium	Medium	Medium
No SCUBA	High	High	High	Medium
Limited entry permit	Medium	Medium	High	High
Status quo	High	Low	Medium	Medium

**STAFF  
RECOMMENDATION**

Staff recommends Option 2, **Temporary fishery closure**. A temporary closure of the fishery provides maximum immediate protection to the red abalone stock in Oregon, while also providing notice to the public that we do not intend for the fishery to be permanently closed. A closure period of three years will allow staff to re-assess red abalone populations and analyze California’s stock conditions and fishery management choices.

<b>DRAFT MOTION</b>	I move to amend OAR 635-039-0090, closing the recreational abalone fishery for three years, as set forth in Attachment 3.
<b>EFFECTIVE DATE</b>	Upon filing