

Economic Impact Analysis

Amend Section 29.15, Title 14, CCR re: Abalone.

Creation or Elimination of Jobs within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California

Depending on which regulatory option the Commission chooses, the proposed action could reduce recreational abalone activity and thus direct revenue expenditures by 1.4 percent to as much as 36.9 percent. These outcomes could result in adverse revenue impacts to businesses ranging from \$182,000 (2009\$) to \$4.8 million (2009\$) in potential direct revenue losses. In the North Coast area most affected by these potential losses, the resulting impact to the economy could range from \$324,000 (2009\$) to \$8.5 million (2009\$) in total economic output losses. This includes losses in wages ranging from 0 to \$2.3M and from 0 up to 82 jobs over the season. This is due to the multiplier effect each dollar of direct revenue has on the affected regional economy's total output. It is unlikely that the regulations under consideration would create any new businesses, eliminate any businesses, or induce the expansion of existing businesses.

Analysis

Changes in recreational fishery spending often do not move in direct relation to changes in fishery management regulations. Data suggests that effort is often transferred to the pursuit of different species or entirely out of fishing and directed towards other recreational pursuits in the area. In that way, recreational participation does not always exhibit a linear response to reductions in daily bag limits or annual limits. However, abalone as a species, have virtually no substitutes and abalone enthusiasts often pursue abalone nearly singularly. Furthermore, the abalone fishery is virtually unique to the Northern California coast. Under these conditions, the regulatory options being considered by the Commission to effectuate a 25% reduction in abalone harvesting will not likely induce a 25% reduction of participant spending activity in the fishery.

The Department of Fish and Wildlife evaluated participant survey and report card data under current recreational abalone regulations to summarize information on: numbers of fishery participants, points of origin, primary trip destinations, catch by month of the season, and average expenditure per visitor. Each option was analyzed to assess the potential impacts on these variables that influence the direction and magnitude of economic impact.

For the years 2002 through 2011, an average of 36,000 licensed fishers obtained abalone report cards. These fishers are often accompanied by additional companions, boosting the total to over 50,000 people related to the abalone fishery. Most travel from northern California counties, with some from counties further south and some from out of state. The majority, over 50 percent, travel from northern counties (see Table 1).

Table 1. County of origin for abalone fishery participants	
County	Percent of Trips
Sonoma	20%
Mendocino	11%
Humboldt	11%
Alameda	7%
Contra Costa	6%

The county of origin is relevant, as the distance traveled to abalone sites gives an indication of expenditures on gas and other supporting purchases made along the way. Survey data indicates that abalone fishers make over 100,000 trips, individually or in groups, to select coastal areas to take abalone either by diving or shore picking each year. Preferred harvest site destinations are shown in Table 2.

Table 2. County destination for abalone trips	
County	Percent of Trips
Sonoma	48.3%
Mendocino	48.2%
Humboldt	2.9%
Marin	0.4%
Del Norte	0.3%

Destination information gives an indication of where the abalone fishers and companions will purchase lodging, meals, fuel, equipment and other miscellaneous items. Abalone sport fishers' spending constitutes about \$13 million (2009\$) in goods and services injected into the coastal areas near abalone sites. Surveys show an average of \$43 per person is spent per day. As each person makes repeated trips over the season, this adds up to more than 300,000 visitor-days with each visitor spending their typical amount each trip. The coastal merchants that receive this spending are principally small businesses.

Chart 1 shows how the abalone angler fishing days per month are distributed across the seven month season. Months with a higher share of days would indicate a higher volume of spending during those months in the fishery vicinity.

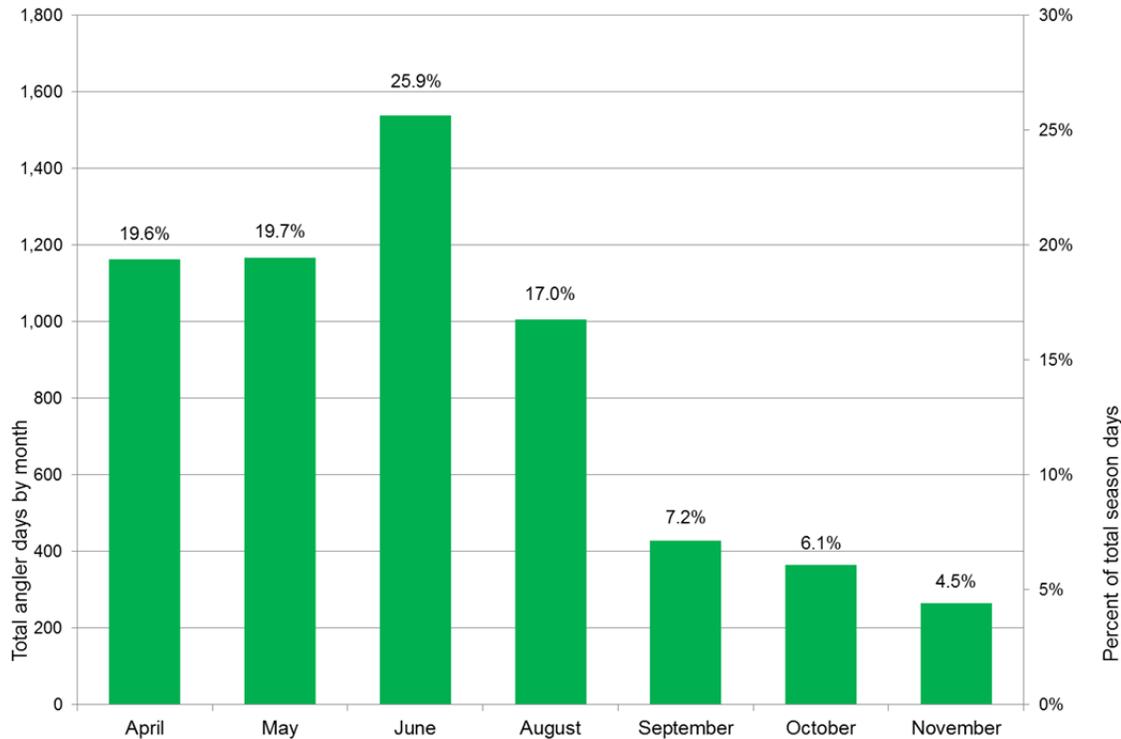


Chart 1. 2011 Abalone angler fishing days by month

Consideration was given to the differentiated spending volumes and patterns of abalone fishers relative to how far they travel, how often they visit and their method of take. These characteristics were difficult to fully incorporate into the model given the data; however some patterns appear to emerge. Those who live closer to the fishery sites and visit often tend to spend less at coastal businesses for food and lodging. It is a day trip with packed lunches generally. Rock-pickers and fishers preferring to dive at low tides tend to visit during early hours in the first part of the season and return to their homes rather than stay overnight.

Depending on which regulatory option the Commission chooses, the potential economic impacts may vary both by degree and geographic area. Some options, such as reducing the annual limit (Option 4), are predicted to have relatively smaller impacts on the number of individuals participating in the fishery. However, the number of visits that each participant makes may drop as annual limits are filled in a shorter period of time. Some options, such as an early morning closure (Option 1), may selectively reduce fishing visits by subsets of fishers that have been shown in surveys to spend less in the locale of the fishery on food and accommodations. Reducing the daily bag limit (Option 2) may reduce fishing effort and recreational spending by those individuals that need to travel longer distances to the coast. Other options, such as reducing the length of the season by closing individual months (Option 3), may have varying impacts on businesses depending on which month(s) are closed and how fishing effort changes in response to the new season. Some months of the season are also more vital to local businesses' annual revenue. Finally, targeted catch reductions in Marin and Sonoma counties (Option 5) may result in reduced revenues for local businesses in these locations. If fishing effort shifts to Mendocino and Humboldt counties in response to

targeted catch reductions, coastal businesses in those counties may see increased revenues.

Table 3. Annual Net Job Losses by Option	Catch Reduction	Maximum Job Losses
Fort Ross Closure for 2 to 6 Years		45
1 Early Morning Closure (7am to 8 am start time)	5% - 23%	3
2 Reduce Daily Limit of 3 to 2	29%	11
3 Reduce Season by 1-3 Months	12% - 28%	6 to 20
4 Reduce Annual Limit of 24 to 21 - 9	3%-36%	28 to 82
5 Targeted Reduction in Sonoma and Marin	2% - 68%*	36

*Reductions in Sonoma and Marin counties only; Mendocino, Humboldt and Del Norte counties excluded.

A sustainable red abalone fishery is anticipated to provide long term benefits to local small businesses in the coastal economy that rely on abalone fishing for part of their income. A healthy abalone fishery will attract more recreational spending in the north coast region, particularly in Marin, Sonoma, Mendocino, and Humboldt counties.

Benefits to the Environment

The Commission anticipates benefits to the State’s environment. The proposed regulation changes are being made in order to effectively manage the red abalone fishery and maintain its sustainability. The Marine Life Management Act mandates that fisheries in California are managed sustainably. Abalone populations in California have declined and the fishery south of San Francisco was closed in 1997. The proposed regulations will benefit the abalone resource, abalone fishery and local businesses by maintaining a healthy viable fishery for years to come. Red abalone is an iconic species in California and one that is part of the State’s natural heritage.

The proposed amendments to Section 29.15, Title 14, CCR are consistent with the requirements of the Abalone Recovery and Management Plan (ARMP), adopted by the Commission in 2005. The Commission anticipates benefits to the State’s environment by reducing harvest levels to allow the recovery of sustainable populations of abalone for the overall health of the fishery and the marine ecosystem.

The proposed regulation, which includes closure of the Fort Ross area as well as five options to reduce the total take of abalone by 25%, will benefit the red abalone population in northern California by enhancing the sustainability of the resource. Higher densities of red abalone in closer proximity to their neighbors have better fertilization rates and greater reproductive success than those at low densities. The proposed regulation changes are anticipated to increase the density of red abalone, leading to increased reproduction and recruitment to improve the long-term health of the fishery.

The environment will benefit from the proposed regulation options in the following ways: (1) The algal community will continue to be grazed by a stable population of red abalone in northern California rocky subtidal habitats. This grazing will maintain algal communities and prevent them from overgrowing reef communities; (2) Abalone will continue to act as important macrograzers maintaining substrate suitable for other invertebrates; and (3) Abalone will provide an important food source for other marine life in rocky subtidal kelp communities.

Health and Welfare of California Residents and Workers Safety

The proposed regulation changes will provide for a means of preserving a sustainable abalone fishery providing recreation, nutrition and health benefits to California residents.

If an early morning closure is adopted (Option 1), fishers may incur greater risk in the pursuit of abalone at higher tides and later in the day when water conditions could be rougher and more dangerous. Alternatively, closing the season during the months of April and November when ocean conditions are more challenging (Option 3) may result in fewer fatalities for abalone divers.

The Commission does not anticipate any measurable change in worker safety as a result of the proposed regulation.