

## GROUNDFISH ESSENTIAL FISH HABITAT/ROCKFISH CONSERVATION AREA PROJECT TEAM SUPPLEMENTAL REPORT

This report supplements the progress report by the Essential Fish Habitat/Rockfish Conservation Area Project Team (Agenda Item F.5.a, Project Team Report), specifically Section 2 (Analytical Approach) and Section 3 (EFH Conservation Areas Progress Report). It contains an analysis of two level 1 (alternative-wide) metrics that were not available when the main report was submitted: catch composition and ex-vessel value.

### **Revisions to Section 2. Analytical Approach**

The progress report stated that the catch composition and ex-vessel value metrics would include the amount that would be displaced by proposed closures, as well as restored by proposed openings, and would be based on data collected by the West Coast Groundfish Observer Program (WCGOP). Displaced catch would be estimated using the most recent data, collected from 2011 through 2014. Restored catch would be estimated using data collected between 2002 and 2006.

However, further investigation indicates that it is not possible to estimate the restored values using WCGOP data. This is due to several issues. First, observer coverage for this period (prior to 2006 when Amendment 19 was implemented) was very low, between 15 percent and 24 percent, compared to the nearly 100 percent coverage in the data used to estimate the displaced catch (2011-2014). Second, the observer coverage was randomly stratified in a manner to ensure coverage of the entire coast and a variety of depths in order to estimate total discards at coastwide and management area scales.

These data, however, are not appropriate for estimating the total discards or total retained weight at the small spatial scales of the proposals. WCGOP is intended to provide discard estimates, and other data, such as from PacFIN, are more appropriate for retained estimates, especially in trawl fisheries with state logbooks. Finally, the trawl fishery has undergone tremendous change since 2006 and the data from 2002-2006 are not an accurate reflection of the current fishery. These changes include the 2006 implementation of the EFHCAs (Amendment 19) and the 2011 implementation of the Catch Shares Program (Amendment 20). Therefore, unless an alternate approach is developed to estimate the restored catch and ex-vessel value, the analysis will be limited to estimating the catch and ex-vessel value that might be displaced by the proposed closures.

### **Revisions to Section 3. EFH Conservation Area Progress Report**

Catch composition for five major categories of fishes displaced by proposed closures (Section 3.1.5 in main report).

The observed catch (both discarded and retained), from 1 January 2011 through 31 December 2014, in the areas proposed for closure is summarized in Table 1, and is used to estimate the catch that would be displaced over a similar four-year period by each proposal. Catch is reported in kilograms (kg) for vessels using bottom trawl gear, including those operating in catch shares and limited-entry CA halibut. Catch was aggregated into six categories: rockfishes, flatfishes,

roundfishes, sharks, miscellaneous, and total groundfish. Haul catches were summarized based on the proportion of straight line tow distance intersecting the relevant proposed closures. For example, if only 20 percent of a tow intersected an area proposed for closure, only 20 percent of the groundfish catch from that haul was included in this summary.

As shown in Table 1, the observed catch of groundfishes, in all categories, was highest in the areas proposed for closure by Greenpeace (GP) (17.7 million kg) and the Marine Conservation Institute (MCI) (13.7 million kg). The observed catch in the Oceana/Natural Resource Defense Council/Ocean Conservancy (ONO) proposed closures was considerably lower (2.2 million kg), but still much greater than in the other proposals, followed by the Collaborative (Collab) proposal (0.3 million kg). The lowest reportable catch was in the Monterey Bay National Marine Sanctuary (MBNMS) proposal (1,147 kg), while the catch in the Gulf of Farallones National Marine Sanctuary (GFNMS) proposed closures was suppressed to protect confidentiality because fewer than three vessels fished in this area.

Table 1. Summary of observed (discarded + retained) groundfish catch (1000 kg) for 2011-2014, by aggregate species groups, in areas proposed for closure. Conf. = value suppressed to protect confidentiality.

Proposal	Rockfishes	Flatfishes	Roundfishes <sup>1</sup>	Sharks <sup>2</sup>	Misc.	Total Groundfishes
<b>Collab</b>	61.9	28.1	177.4	388	0	<b>306.3</b>
<b>GFNMS</b>	Conf.	Conf.	Conf.	Conf.	Conf.	<b>Conf.</b>
<b>GP</b>	3,249.0	1,323.2	10,801.6	2,295.7	7.0	<b>17,676.5</b>
<b>MBNMS</b>	0.3	0.3	0.3	0.2	0	<b>1.1</b>
<b>MCI</b>	1,724.3	1,077.0	9,367.3	1,532.3	3.4	<b>13,704.3</b>
<b>ONO</b>	522.7	102.2	1,227.5	323.5	0	<b>2,176.0</b>

<sup>1</sup> For the purpose of this analysis, roundfishes include cabezon, kelp greenling, lingcod, Pacific cod, Pacific hake, sablefish, grenadiers, and morids.

<sup>2</sup> For the purposes of analysis, sharks include sharks, skates, and ratfishes.

Ex-vessel value of the catch displaced by closures (Section 3.1.6 in the main report)

The annual ex-vessel value of the observed catch reported in Table 1, aggregated by the same species groups, is summarized in Table 2. The WCGOP provided a dataset including an estimate of the percentage of each haul occurring in the proposed closed area, along with the fish-ticket adjusted weight for retained fishes, and the corresponding fish ticket number. Ex-vessel revenues were calculated on a per-trip basis using an average price from the fish tickets associated with each trip and the fish-ticket adjusted retained weight in the proposed closed areas. These trip revenues were summed for all vessels for each year, adjusted to real dollars (using 2015 as a base year), and an average was taken for the entire fleet across the four years with complete observer data, 2011-2014.

As shown in Table 2, the ex-vessel value of groundfishes, in all categories, was highest in the areas proposed for closure by GP (\$5,658.0K), followed closely by MCI (\$4223.3K). The annual ex-vessel value of the catch in the ONO closures was considerably lower (\$818.1K) than GP and MCI, followed by the Collab proposal (\$100.5K). The lowest reportable annual value was in the

MBNMS proposed closures (\$0.5K), while the value of the GFNMS closures was suppressed to protect confidentiality.

Each of the four coastwide proposals include closures in the tribal usual and accustomed (U&A) areas of the Washington Coast Treaty Tribes (Hoh Tribe, Makah Tribe, Quileute Tribe, and Quinault Indian Nation). Similar to the total ex-vessel value, the ex-vessel value of the catch from the U&A was highest in the MCI and GP proposals (\$895.9K and \$585.5K respectively), followed by the ONO proposal (\$68.4K) and the Collab proposal (\$20.2K).

Table 2. Average annual ex-vessel value from 2011-2014 (thousands of dollars, adjusted for inflation to 2015 dollars) for catch, by aggregate species groups, in areas proposed for closure. Conf. = value suppressed to protect confidentiality.

Proposal		Rockfishes	Flatfishes	Roundfishes <sup>1</sup>	Sharks <sup>2</sup>	Misc.	Total Groundfishes
<b>Collab</b>	<b>Total</b>	17.5	42.9	36.2	3.7	0.1	<b>100.5</b>
	<b>In U&amp;A</b>	5.7	3.0	11	0.4	0	<b>20.2</b>
<b>GFNMS</b>	<b>Total</b>	Conf.	Conf.	Conf.	Conf.	0	<b>Conf</b>
	<b>In U&amp;A</b>	946.1	2,665.6	1,864.3	178.6	3.4	<b>5,658.0</b>
<b>GP</b>	<b>Total</b>	102.6	264.9	182.6	35.2	0.2	<b>585.5</b>
	<b>In U&amp;A</b>	0.3	0	0.1	0	Conf.	<b>0.5</b>
<b>MCI</b>	<b>Total</b>	465.1	2,181.5	1,437.5	136.4	2.3	<b>4,222.8</b>
	<b>In U&amp;A</b>	101.0	408.5	339.3	46.9	0.2	<b>895.9</b>
<b>ONO</b>	<b>Total</b>	166.7	310.9	327.4	12.7	0.5	<b>818.1</b>
	<b>In U&amp;A</b>	13.2	24.3	28.6	2.2	0	<b>68.4</b>

<sup>1</sup> For the purpose of this analysis, roundfishes include cabezon, kelp greenling, lingcod, Pacific cod, Pacific hake, sablefish, grenadiers, and morids.

<sup>2</sup> For the purposes of analysis, sharks include sharks, skates, and ratfishes.