

GROUNDFISH MANAGEMENT TEAM REPORT ON PART I MANAGEMENT MEASURES FOR 2011-2012 FISHERIES

In preparation for the Council's preliminary preferred groundfish harvest specifications for 2011-2012, the Groundfish Management Team (GMT) discussed the continued use of set asides to account for species impacts in specific fisheries, exempted fishing permits (EFPs) or research activities. Currently, the GMT has discussed only overfished species set aside amounts and plans to discuss and make recommendations for non-overfished species set aside amounts as needed when analyzing management measures.

Set aside amounts are an important consideration for the Council to make before deciding on final harvest specifications. The Council does not have direct management control over some of these fisheries or the research activities, nevertheless, the bycatch must be considered in the accounting of total mortality. Likewise, for some fisheries (e.g. salmon troll) further action is not being considered at this time to reduce impacts to groundfish because changes to the current management measures are unlikely to result in appreciable reductions in overfished species impacts. As such, the Council must make a best estimate of the bycatch and take it "off the top." With this "off the top" adjustment in place, the Council then determines how to best control the fisheries it does manage in a way that maintains total catch below each rebuilding annual catch limit (ACL).

Tribal

The following description of set-asides for the tribal fisheries gives some of the rationale behind the numbers found in the GMT scorecard to estimate bycatch by fishery and sector. The methods used to estimate these impacts represent the best judgment of tribal fishery managers based on both past performance and anticipated potential impacts in the coming season(s). Though the impact estimates are divided by fishery for the sake of precision in estimating overfished species impacts, tribal managers typically manage to stay within overall projected impacts (i.e., across fisheries).

Whiting Fishery

The GMT updated the 2010 set-asides for the tribal whiting fishery at the March 2010 Pacific Council meeting. This was based on the whiting set aside amounts described in the proposed rule for 2010 Tribal Fishery for Pacific Whiting (75 FR 11829, March 12, 2010). Using the methodology described in the 2009-2010 harvest specifications and management measures Environmental Impact Statement (EIS), the GMT calculated 4.3 mt for canary, 0.1 mt for darkblotched, 7.2 mt for Pacific ocean perch (POP), 5 mt for widow, and 0 mt for yelloweye rockfish (Table 1). This methodology used a weighted average approach for calculating Makah's bycatch rate assuming recent years are more representative of bycatch. Those rates are tripled to provide a conservative estimate of potential bycatch for the Quileute Tribe's developing fishery.

Table 1. Estimated bycatch (mt) in the tribal whiting fisheries for 2010.

Sector	Canary	Darkblotched	POP	Widow	Yelloweye
Makah	1.78	0.02	2.99	2.06	0.00
Quileute	2.52	0.03	4.22	2.92	0.00
Total Tribal	4.30	0.05	7.21	4.99	0.00

Non-Whiting Midwater Trawl Fishery

The Makah Tribe is the only tribe that conducts a midwater trawl fishery. The fishery targets yellowtail rockfish and the combined fleet is subject to a limit of 180,000 lbs/2 months. Overfished species bycatch in this fishery consists of widow and canary rockfish. Widow rockfish are subject to an annual limit of 10 percent of the weight of yellowtail landed and may be changed inseason to stay within projected impacts. This was changed from a per-landing limit in 2010 in response to increasing encounters of widow rockfish on some trips. The set-aside of 40 mt is based on the maximum expected catch of yellowtail (490 mt) as well as recent bycatch in the fishery (Table 2). Canary rockfish is subject to a limit of 300 lbs/trip. As reflected in Agenda Item F.9.c, Supplemental GMT Report, June 2008 the canary set-aside was changed beginning in 2009:

The GMT notes that one change in the set-asides for overfished species from these fisheries compared to status quo is the increased estimate of canary rockfish in the Makah midwater trawl fishery targeting yellowtail rockfish. Due to higher encounters of canary bycatch in recent years, particularly 2007 and 2008, the Tribe has been unable to successfully prosecute the fishery while remaining within the canary estimate provided in the scorecard. The Makah Tribe is proposing a doubling of those estimated impacts (from 1.8 mt to 3.6 mt) to allow for resumption of the fishery given increased availability of canary rockfish yield in 2009-2010.

Table 2. Catch in metric tons of canary, widow, and yellowtail rockfish in the Makah midwater trawl fishery for 2005-2009.

Species	2005	2006	2007	2008	2009
canary	1.9	0.9	0.0	0.6	1.3
widow	25.6	9.2	0.5	13.0	35.1
yellowtail	480.0	111.2	7.3	155.5	429.1

Bottom Trawl Fishery

The Makah Tribe is also the only tribe conducting a bottom trawl fishery. Overfished species bycatch is primarily canary rockfish and Pacific ocean perch (POP). The canary set aside of 0.8 mt is based on recent average catch which has remained fairly consistent (Table 3). The high

catch in 2009 was the result of increased encounters associated with Pacific cod availability (as well as commensurate lower impacts from other Makah fisheries). POP bycatch is more variable in recent years. The set-aside for POP is 3.7 mt based on the highest year of landings (2006).

Table 3. Catch in metric tons of canary rockfish and Pacific ocean perch in the Makah bottom trawl fishery for 2005-2009.

Species	2005	2006	2007	2008	2009
canary	0.8	0.5	0.8	0.6	1.5
POP	3.2	3.7	1.8	0.6	0.2

Salmon Troll Fishery

These estimates include catch from all tribes participating in the treaty troll fishery. The canary set aside of 0.5 mt is based on the highest recent landings from 2004-2005 (Table 4). Using a similar approach for yelloweye would lead to a set-aside of 0.2 mt while using the average of recent years would result in 0.1 mt. The tribes are not recommending a set-aside specific to the treaty troll fishery as the scorecard currently contains a conservative estimate of yelloweye impacts (see below) for the long line fisheries for Pacific halibut and sablefish and tribes will manage all fisheries to stay within that estimate.

Table 4. Catch in metric tons of canary and yelloweye rockfish in the treaty troll fishery for 2005-2009.

Species	2005	2006	2007	2008	2009
canary	0.6	0.2	0.1	0.1	0.0
yelloweye	0.2	0.1	0.1	0.1	0.0

Fixed Gear Fishery

The coastal tribes participate in longline fisheries for Pacific halibut and sablefish. Set asides for these fisheries are based on combined past performance of these closely related fisheries (Table 5). The set aside for canary is 0.3 mt and is based on average historical catch from 2001-2009. An average is used for canary given they are not predictably associated with target species and the trend across this time period is generally decreasing. For yelloweye, bycatch is more strongly associated with target species, especially when they are located on the shelf. Another factor in estimating bycatch is the lack of a trip limit during open competition halibut fisheries. The set-aside for yelloweye is 2.3 mt, representing the highest amount of bycatch from a year when yelloweye were classified as overfished and when the status quo halibut plan under a recent court ruling in *U.S. v Washington* was in place (i.e. 2002). The status quo halibut plan that was in place for 2001-2003, and includes an open competition fishery, is the same plan that is in effect for the 2010 fishery and likely to be in place for 2011-2012.

Table 5. Catch in metric tons of canary and yelloweye rockfish in treaty longline fisheries for 2001-2009.

Species	2001	2002	2003	2004	2005	2006	2007	2008	2009
canary	1.1	0.3	0.5	0.5	0.2	0.2	0.0	0.1	0.1
yelloweye	2.9	2.3	0.2	0.7	0.6	0.4	0.3	0.1	0.1

Non-treaty Incidental Open Access

California Halibut trawl fishery

The California halibut trawl fishery is a state permitted fishery that operates in southern California. Commercial trawling is prohibited in all state waters except for the California halibut trawl grounds located south of Point Conception. Conservation measures such as minimum mesh sizes, minimum poundage limits, closed seasons, and Federal observer coverage have been implemented to reduce bycatch of species other than California halibut.

The GMT reviewed the 2008 total mortality report and examined state landing receipts to determine the best estimate of overfished species impacts from this fishery. Observer data from the limited entry and open access fisheries indicate no discards of any overfished species in this fishery except canary rockfish, which was miniscule. State landing receipts from 2004 -2008 indicate trace landings of bocaccio rockfish. Impacts to overfished species are not expected in this fishery because it occurs in an area with low overfished species encounters because it takes place and over sandy bottom habitat. The best estimates of impacts to this fishery have been updated in Table 6.

California Gillnet Fishery

The California gillnet fishery is a state permitted fishery that occurs in California. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate small landings of bocaccio (0.3 mt) and widow rockfish (2.9 mt) in this fishery. Minimal impacts to overfished species are expected in this fishery because this gear is not allowed inside the Rockfish Conservation Areas (RCAs) and is subject to depth restrictions which preclude them from fishing in nearshore waters. The best estimates of impacts to this fishery based on state landing receipts have been updated in Table 6.

California Sheephead Fishery

The California sheephead fishery is a state permitted fishery that is primarily taken by trap gear in southern California. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate trace amounts of bocaccio rockfish in this fishery. Impacts to overfished species are not expected in this fishery because it occurs in an area of low overall bycatch of overfished species.

Coastal Pelagic Species (CPS) – Wetfish Fishery

The CPS fishery for wetfish is a limited entry fishery that occurs coastwide. In California, this fishery primarily occurs in Monterey and southern California. CPS (sardine, anchovy, jack mackerel, Pacific mackerel) are targeted with “round-haul” gear including purse and drum seines.

In the sardine fishery, 2009 landings data indicate no catch of overfished species (however groundfish species are not required to be landed). In California, state landing receipts from 2004-2008 indicate trace landings of bocaccio rockfish in this fishery. In Oregon reported logbook and observed catches of non-target species caught in the Oregon sardine fishery showed no catch of rockfish (Table 13 of the 2008 SAFE document). Washington at-sea observer data also indicates miniscule amounts of bycatch. Impacts to overfished species are not expected in this fishery because it occurs in an area of low overall bycatch of overfished species

Coastal Pelagic Species – Squid Fishery

The CPS fishery for squid is a limited entry fishery that is focused around two major fishery areas in California: northern California (Monterey Bay) and southern California (ports of Ventura, Port Hueneme, San Pedro, and Terminal Island). Targeting occurs on shallow-water spawning aggregations with “round-haul” gear similar to the CPS wetfish fishery. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate trace amounts of bocaccio rockfish in this fishery. Impacts to overfished species are not expected in this fishery, because targeting occurs over sandy bottom habitat. Rocky reef areas (where many overfished groundfish species occur) are avoided due to gear conflicts. The Council’s SAFE reports also have bycatch information for some of the other CPS fisheries (based on Observer or logbook information). For example, the report showed that the frequency of bycatch in observed loads of California market squid (2003-2007) was less than 1 percent for bocaccio rockfish (the highest annual incidence rate was 0.8 percent).

Dungeness Crab Fishery

The Dungeness crab fishery is a restricted access fishery that occurs on the west coast. This fishery targets Dungeness crab using trap gear in shallow waters. Conservation measures such as gear modifications have been implemented to reduce bycatch, specifically crab pots are constructed with escape rings designed to let small fish and small crab escape and pots are made with a release mechanism to allow escapement of all animals that are caught by lost pots. These measures have been implemented to reduce bycatch of species other than crab. Fishermen in this fishery are not permitted to land incidental species except for octopus, so information on groundfish species is limited.

This fishery is not observed under the federal groundfish observer program. California state landing receipts from 2004-2008 indicate trace landings of bocaccio and darkblotched rockfish in this fishery. Impacts to overfished species are not expected in this fishery due to the selectivity of the gear.

Highly Migratory Species (HMS) Fishery

The fishery for HMS is an open access fishery on the West Coast, with the exception of the swordfish drift gillnet fishery off California. Targeting of tunas, sharks, billfish/swordfish, and other pelagic species occurs with a variety of gears (troll gear, drift gillnets, pelagic longline, purse seines) and in waters ranging from the nearshore to outside the 200-mile zone. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate small landings of bocaccio rockfish and trace landings of darkblotched rockfish in this fishery. Impacts to overfished species are not expected in this fishery, because most of the targeting occurs in the offshore, in the open ocean where few overfished rockfish species are expected to occur.

Ridgeback prawn Fishery

The ridgeback prawn trawl fishery is a state permitted fishery that primarily occurs in southern California within the California halibut trawl grounds. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate no landings of overfished species in this fishery. Impacts to overfished species are not expected in this fishery because it occurs in an area of low overall bycatch of overfished species and over sandy bottom habitat. The best estimates of impacts to this fishery have been updated in Table 6.

Sea Cucumber Trawl Fishery

The Sea cucumber trawl fishery is a state permitted fishery that primarily occurs in southern California within the California halibut trawl grounds. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate trace landings of bocaccio rockfish in this fishery. Impacts to overfished species are not expected in this fishery because it occurs in an area of low overall bycatch of overfished species and over sandy bottom habitat.

Spot Prawn Fishery

The spot prawn fishery is a state permitted fishery that is taken by trap gear in California. The fishery occurs from just north of Monterey Bay to southern California. This fishery is not observed under the federal groundfish observer program. State landing receipts from 2004-2008 indicate no landings of overfished species in this fishery. Impacts to overfished species are not expected in this fishery because it occurs in an area of low overall bycatch of overfished species.

Pink Shrimp trawl fishery

The pink shrimp trawl fishery is not restricted by an RCA, but approved bycatch reduction devices or fish excluders in shrimp trawls are mandated to minimize incidental groundfish bycatch. 2007 was the first year that observer discard ratios from the pink shrimp fishery were used to estimate fleet-wide amounts of groundfish discards. The West Coast Groundfish Observer Program (WCGOP) observer reports show total mortality for darkblotched rockfish at 18 mt (2007) and 11 mt (2008), therefore for 2011-2012 the GMT recommends using a yearly set aside amount of 15 mt for darkblotched rockfish which is the mean of the 2007 and 2008 observed catch rounded to the nearest whole metric ton. Given the results of the 2007 and 2008 total mortality reports, the GMT recommends yearly set asides for POP of 0.1 mt because this is the amount landed in both 2007 and 2008 and 0.4 for canary rockfish, there was 0.4 mt landed in 2007 and 0.3 mt in 2008, 0.4 is the average rounded up accordingly. The best estimates of impacts to this fishery have been updated in Table 6.

Salmon Troll Fishery

The salmon troll fishery operates all along the west coast, however in recent years the fishery has been severely restricted because of salmon abundance and the set asides recommended by the GMT have been reduced accordingly. Currently the salmon troll fishery is exempted from RCA restrictions, but groundfish species, including lingcod, are not allowed to be retained while fishing in the non-trawl RCA. Salmon trollers are required to have VMS on their vessels and there are two mandatory yelloweye rockfish conservation areas (YRCAs) and two voluntary YRCAs that apply to salmon trollers. Currently there are set aside amounts in the salmon troll fishery for canary, bocaccio, widow and yelloweye rockfish. The canary impacts that the GMT accounts for in the salmon troll fishery changed after 2005 because the salmon fishery was

shifting from one with higher Chinook quotas to higher coho quotas, and canary bycatch in that fishery was most associated with Chinook targeting. The yield set asides were 1.6 mt (2005), 2 mt (2007/2008) and 0.8 mt (2009/2010). Because of the possible higher Chinook opportunities in the north for 2011-2012 the GMT recommends using 1.6 mt as the canary yield set aside in the salmon troll fishery. The other overfished species set aside amounts should remain the same as 2009/2010 because the GMT does not have any new information which would indicate a change in impacts. The best estimates of impacts to this fishery have been updated in Table 6.

Directed Pacific Halibut Fishery

The directed commercial fishery for Pacific halibut is managed and monitored by the International Pacific Halibut Commission (IPHC) and occurs south of Pt. Chehalis, WA. The fishery has bi-weekly ten hour openings, during which IPHC registered vessels have halibut trips limits varying on the vessel size. During directed commercial halibut openings, the non-trawl RCA is moved to 100 fm from 125 fm. However, due the 100-fm RCA being defined by waypoints rather than exactly following the bathymetric curve, there are some areas as shallow as 75 fm that are open during the halibut fishery. The GMT discussed the availability of data from the IPHC annual setline stock assessment survey stations south of Pt. Chehalis and outside of 100 fm, fish tickets, and logbooks, as well as the anticipated quota and number of openings for 2011 and 2012, and had conversations with Pacific halibut harvesters. While the Team believes that the impacts from the directed commercial halibut fishery are greater than zero for yelloweye and canary rockfish, we do not have the ability to quantify what that impact would be, given current data. Therefore, 0.0 mt is in Table 6 as a place holder to indicate that there is some level of yelloweye and canary rockfish impact from the directed commercial halibut fishery, even though the Team cannot quantify what those impacts are.

Table 6. Updated incidental Open Access impacts by fishery

GMT Scorecard - amounts updated April 1, 2010							
	Bocaccio b/	Canary	Cowcod	Dkbl	POP	Widow	Yelloweye
Open Access: Incidental Groundfish TOTAL	0.8	1.7	0.0	15.0	0.0	3.3	0.3
CA Halibut	0.0						
CA Gillnet c/	0.3					2.9	
CA Sheephead c/	0.0						
CPS- wtfish c/	0.1					0.0	
CPS- squid d/	0.0						
Dungeness crab c/	0.0			0.0			
HMS b/	0.1			0.0			
Pacific Halibut c/	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pink shrimp	0.1	0.1	0.0	15.0	0.0	0.1	0.1
Ridgeback prawn							
Salmon troll	0.2	1.6				0.3	0.2
Sea Cucumber	0.0						
Spot Prawn (trap)							

Research

Overfished groundfish species are caught in scientific research projects off the West Coast. Annually, in the total mortality reports, NMFS NWR provides the NWFSC with the best available estimates of groundfish species mortality in scientific research. These best estimates of research are deducted “off the top” before any allocations are made to groundfish fisheries. Table 8 summarizes overfished groundfish species mortality in scientific research from 2005-2008.

Given the variation in the research catches the GMT recommends using the maximum amounts seen for each species from 2005-2008, except for yelloweye which is discussed below. For example, canary rockfish impacts are highly variable and the Council might want to be more precautionary in establishing the set aside given that “lightning strikes” have forced the Council to restrict other fisheries in the past and canary rockfish is a constraining species; however, the Council may also want to weigh the likelihood of similar high impact events in calculating the set aside (i.e. as in the 2010 scorecard). Additionally, darkblotched catches in research have been close to 1 mt from 2005-2008 (except for 2005), however the GMT currently has a remainder of 18.4 mt in the scorecard for darkblotched. If the Council chooses to leave some residual in the scorecard for 2011-2012, then keeping the research set aside at 1.0 will most likely accommodate fisheries; whereas if the research were to take twice that much and the rest of the darkblotched ACL were fully subscribed, then it might be best to establish the set aside as the maximum that is currently in the scorecard.

At the March 2010 meeting the Council chose to use 1.1 mt for yelloweye in the IPHC survey (see Agenda Item E.5.b, Supplemental GMT Report), which along with other yelloweye research catches results in a research set aside for yelloweye of 3.3 mt. Therefore the GMT recommends using a yelloweye set aside in research of 3.3 mt, rather than the highest amount from the 2005-2008 Total Mortality Reports, which is reflected in the GMT recommendations in Table 8.

Table 7. Research Catches in metric tons from 2005-2008 and the median, average, maximum and minimum by species.

Year	Bocaccio	Canary	Cowcod	Dkbl	POP	Widow	Yelloweye
2008	1.2	1.8	0	1	1	1	1
2007	1	3	0	1	1	0	2
2006	0.2	7.2	0	0.9	1.2	0.2	0.1
2005	1.7	2.3	0.1	2.1	1.8	1.6	0.6
Median	1.1	2.7	0.0	1.0	1.1	0.6	0.8
Average	1.0	3.6	0.0	1.3	1.3	0.7	0.9
Max	1.7	7.2	0.1	2.1	1.8	1.6	2.0
Min	0.2	1.8	0.0	0.9	1.0	0.0	0.1

EFPs (non-whiting)

In November 2009, the Council recommended catch limits for overfished species in five non-whiting EFPS that would operate in 2010 and, in some cases, continue for a 12-month period that may extend into 2011. The set asides for non-whiting EFPs may change for 2011-2012, depending on projected impacts to overfished species in non-EFP fisheries, the number and type of EFP projects that are recommended, etc. For analytical purposes, we assume the same catch limits are adopted in 2011-2012 as were adopted for the 2010 EFP (Table 8).

Table 8. GMT Recommended 2011-2012 Set Aside for overfished species.

DRAFT GMT Recommended Set-Asides for Use in 2011-2012 SPEX Analysis							
	Bocaccio	Canary	Cowcod	Darkblotched	POP	Widow	Yelloweye
Category	South 40°10 N. Lat.		South 40°10 N. Lat.				
Tribal Whiting Trawl		4.3		0.1	7.2	5.0	0.0
Tribal Midwater trawl		3.6		0.0	0.0	40.0	0.0
Tribal Bottom Trawl		0.8		0.0	3.7	0.0	0.0
Tribal Troll		0.5		0.0	0.0		0.0
Tribal Fixed Gear		0.3		0.0	0.0	0.0	2.3
Open Access: Incidental	0.8	1.7	0.0	15.0	0.0	3.3	0.3
Research	1.7	7.2	0.1	2.1	1.8	1.6	3.3
EFP	11.0	1.3	0.2	1.5	0.1	11.0	0.4
Subtotal	13.5	19.7	0.3	18.7	12.8	60.9	6.3

GMT Recommendations

1. Use the values in Table 8 as the set asides for 2011-2012.