

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE REPORT ON  
 UNIDENTIFIED ROCKFISH IN THE RECREATIONAL FISHERY**

In March, it was brought to the Council’s attention that unidentified rockfish catches in the recreational fishery have not been accounted for in historical annual catch estimates. This could be a concern to the extent that a portion of the unidentified rockfish could be overfished species. In response, the Council requested that each state provide a report at the September meeting that describes the magnitude of the unidentified catch, the reasons why all fish are not identified, the potential amount of unidentified rockfish that could be overfished species, and a recommendation for how to move forward. This is the Washington Department of Fish and Wildlife’s (WDFW’s) initial response to that request.

Magnitude of Unidentified Catch

Unidentified rockfish in Washington is comprised of both retained and released catches. When interviewing anglers, WDFW samplers will attempt to collect complete species information for all fish caught, at times using rockfish identification cards to assist anglers in accurately determining the species. For a rockfish to be recorded in the “unidentified” category, it means that the fish were not available to the sampler (for retained catch) or were released by the angler who could not identify the species.

In RecFIN, estimates of recreational catches are reported as landed or retained catch (A), and released catch (B). Released catch is further separated into catch that is reported by the angler to be released dead (B1) or released alive (B2). WDFW’s Ocean Sampling Program records all released rockfish in the B1 category, and does not ask anglers whether or not a fish was released live (B2). The mortality of released fish is then estimated using the Groundfish Management Team’s discard mortality by depth matrix.

The number of identified rockfish caught by Washington anglers, on average, is about 281,500 per year. Of that amount, about 10% are released (Table 1).

Table 1. Number of identified rockfish caught in Washington recreational fishery, 2005-2008.

| <b>Identified Rockfish</b>   | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> |
|------------------------------|-------------|-------------|-------------|-------------|
| Total Rockfish Landed (A)    | 288,072     | 268,293     | 248,716     | 205,597     |
| Total Rockfish Released (B1) | 43,479      | 29,332      | 24,021      | 19,088      |

The number of unidentified rockfish recorded by WDFW samplers, on average, is about 355 per year, or about 0.4 mt using an average weight across all rockfish species. Of that amount, approximately 58% are retained catch. In general, unidentified rockfish represents less than 0.1% of the total rockfish landed and 0.5% of the total rockfish released (Table 2).

Table 2. Estimated catch of unidentified rockfish in Washington recreational fishery, 2005-2008.

| <b>Unidentified Rockfish</b>    |               | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> |
|---------------------------------|---------------|-------------|-------------|-------------|-------------|
| Numbers of Fish                 | Landed (A)    | 295         | 122         | 145         | 278         |
|                                 | Released (B1) | 165         | 127         | 113         | 175         |
|                                 | <b>Total</b>  | <b>460</b>  | <b>249</b>  | <b>259</b>  | <b>454</b>  |
| Weight (mt)                     | Landed (A)    | 0.4         | 0.1         | 0.2         | 0.3         |
|                                 | Released (B1) | 0.2         | 0.2         | 0.1         | 0.2         |
|                                 | <b>Total</b>  | <b>0.6</b>  | <b>0.3</b>  | <b>0.3</b>  | <b>0.5</b>  |
| Percent Total Rockfish Landed   |               | 0.1%        | 0.05%       | 0.06%       | 0.14%       |
| Percent Total Rockfish Released |               | 0.4%        | 0.4%        | 0.5%        | 0.9%        |

### Unidentified Rockfish by Washington Subarea

Higher amounts of unidentified rockfish are encountered off Washington’s north coast (WDFW Marine Catch Areas 3 and 4) with decreasing amounts as you move further south. On average, about 66% of the unidentified rockfish were from the north coast and less than 10% from the Columbia area (Marine Catch Area 1) (Figure 1).

The diversity of rockfish species encountered in the north coast is also considerably greater than what occurs in the south coast (Marine Catch Area 2) and Columbia areas, which may contribute to the higher amounts of unidentified rockfish in the area. Black rockfish make up 92% of the rockfish landed in the south coast and 97% in the Columbia area with yellowtail rockfish comprising most of the balance in both areas. In the north, about 85% are black rockfish, with the balance being blue, china, copper, quillback, and yellowtail rockfish.

Another factor that may contribute to the higher amount of unidentified rockfish in the north could be the larger number of private boats that fish the area. In general, having more boats to sample means that a sampler is not always present when the boat reaches the dock, giving anglers time to fillet their catch before the sampler arrives.

### Unidentified Rockfish by Trip Type

On average, most of the unidentified rockfish are encountered on fishing trips targeting bottomfish (47%), followed by salmon (26%) trips and halibut trips (22%) (Figure 2). Salmon and halibut trips are defined by species on board even though combination trips could occur (e.g., halibut and bottomfish). Although rare, we have seen a few salmon/halibut combination trips in recent years (noted as sal/hal in the figure).

The amount of unidentified rockfish attributed to the different types of fishing trips varied between years, which could be the result of changes in regulations, such as depth restrictions, or fluctuations in salmon and halibut seasons.

Figure 1. Distribution of unidentified rockfish by Washington recreational subarea.

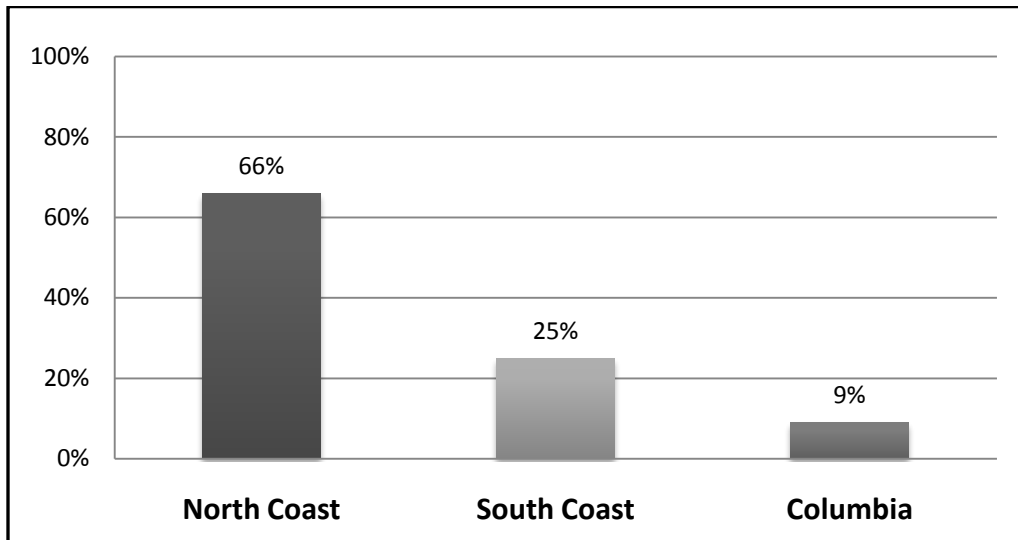
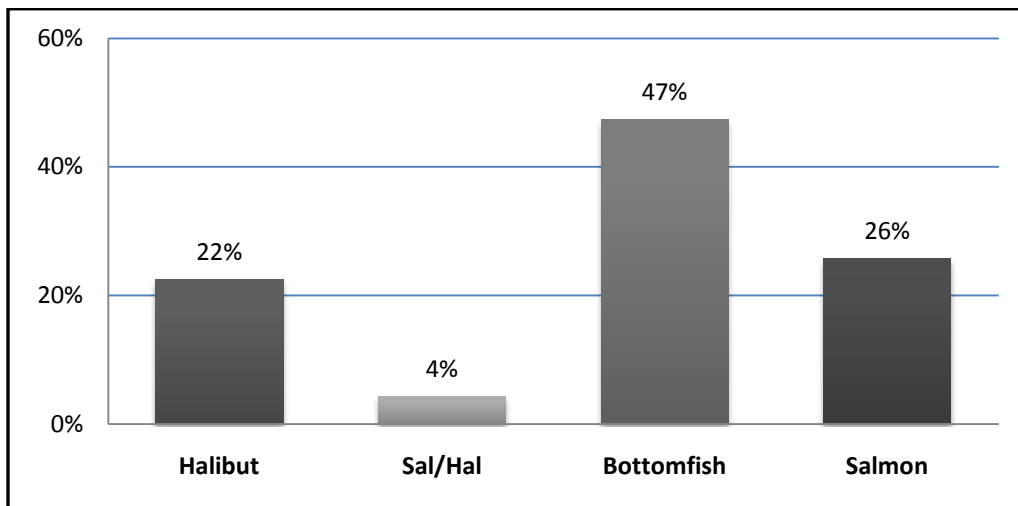


Figure 2. Distribution of unidentified rockfish by trip type.



### Estimating Proportion of Overfished Species

From a conservation perspective, it is essential that we have as accurate catch reporting as possible in all groundfish fisheries, including recreational. Incorporating unidentified rockfish catches into historical and future catch estimates could affect achievement of optimum yields for overfished species, such as canary and yelloweye rockfish. Given that these species are managed under rebuilding plans with recreational-specific harvest guidelines, we want to be certain that our estimates are based on sound data collection and expansion methods.

Apportioning the unidentified rockfish to the species level requires a process for estimating the species composition of both the landed (A) and released (B1) unidentified rockfish. It is also important to take into consideration the variability in landed and released catch by coastal area, month, trip type and boat type when deciding on the best apportionment method.

WDFW examined summarized data, which were provided by the Oregon Department of Fish and Wildlife (ODFW), from observations on Oregon charter vessel trips. After careful consideration, we determined that the ODFW data would not be representative of the Washington unidentified rockfish catches. There are considerable differences in the fishing regulations between the two states, including depth restrictions by area and bag limits, and target species, all of which affect where boats fish and the composition of their retained and discarded catch. In addition, as noted above, there is quite a bit of difference among Washington subareas relative to rockfish catch composition, so applying one species composition across all Washington subareas does not seem appropriate.

Ideally, WDFW would have at-sea observations for Washington trips across trip types and subareas. However, absent this data the best source of information we have is the Ocean Sampling Program data. Apportioning the unidentified rockfish to the species level using these data stratified by port, month, trip type and boat type will provide our best estimate of overfished rockfish species catches, and will ensure that consideration for the variability in management measures by Washington subarea are accounted for in the estimates.

### Results

By applying the WDFW Ocean Sampling Program annual expanded estimates to the unidentified rockfish catch data, we calculated preliminary estimates of yelloweye and canary rockfish (Table 3). These catches have not been stratified by depth; therefore, we have not yet applied the depth-based mortality rates to estimate the mortality of canary and yelloweye rockfish in the unidentified rockfish category.

Table 3. Preliminary WDFW catch estimates of yelloweye and canary rockfish in the unidentified rockfish category.

| <b>Yelloweye Rockfish</b> |                | <b>2005</b>  | <b>2006</b> | <b>2007</b>  | <b>2008</b>  |
|---------------------------|----------------|--------------|-------------|--------------|--------------|
| Numbers of Fish           | Landed (A)     | 0.12         | 0.04        | 0.06         | 0.08         |
|                           | Discarded (B1) | 11           | 6           | 8            | 13           |
|                           | <b>Total</b>   | <b>11.07</b> | <b>6.54</b> | <b>8.34</b>  | <b>12.95</b> |
| Weight (mt)               | Landed (A)     | 0.0003       | 0.0001      | 0.0001       | 0.0002       |
|                           | Discarded (B1) | 0.03         | 0.02        | 0.02         | 0.03         |
|                           | <b>Total</b>   | <b>0.03</b>  | <b>0.02</b> | <b>0.02</b>  | <b>0.03</b>  |
| <b>Canary Rockfish</b>    |                | <b>2005</b>  | <b>2006</b> | <b>2007</b>  | <b>2008</b>  |
| Numbers of Fish           | Landed (A)     | 0.26         | 0.08        | 0.09         | 0.10         |
|                           | Discarded (B1) | 12           | 9           | 10           | 17           |
|                           | <b>Total</b>   | <b>12.09</b> | <b>9.13</b> | <b>10.37</b> | <b>17.56</b> |
| Weight (mt)               | Landed (A)     | 0.0002       | 0.0001      | 0.0001       | 0.0001       |
|                           | Discarded (B1) | 0.01         | 0.01        | 0.01         | 0.02         |
|                           | <b>Total</b>   | <b>0.01</b>  | <b>0.01</b> | <b>0.01</b>  | <b>0.02</b>  |

## Recommendation

In general, WDFW recommends that the unidentified rockfish catch be accounted for through the annual catch reporting by state and the biennial management and specifications process, beginning with the 2011-12 process. Given the variability among the three states relative to the magnitude and catch composition of unidentified rockfish, we believe that a coordinated approach by the Groundfish Management Team and RecFIN staff would be appropriate. Provided that potential unidentified rockfish catches can be accounted for pre-season, and management measures adopted accordingly through the biennial management process, we would not see a need to address unidentified rockfish catches through in-season management.

Specific to Washington, WDFW plans to stratify our preliminary estimates of unidentified rockfish by depth and apply the depth-based mortality rates to estimate the mortality of rockfish, by species, within the unidentified rockfish category. We will then provide that information to the GMT and Scientific and Statistical Committee in November for consideration.