Exhibit G. Groundfish

Oregon Fish and Wildlife Commission
Salem, December 6, 2019
Maggie Sommer, Marine Resources Program

photo: Ian Chun
Outline

• Issue 1. Nearshore Logbook & Fishery Report
• Issue 2. 2020 Groundfish Regulations
  • Federal regulation updates
  • Harvest guidelines
  • Commercial fishery management measures
  • Recreational fishery management measures
Issue 1. Nearshore Fishery Report

Annual report on the Commercial Nearshore fishery

http://www.dfw.state.or.us/MRP/publications/
Commercial Nearshore Fishery

ODFW-issued limited entry black and blue rockfish permits allow harvest of those species (plus deacon RF) up to specified limits.

Nearshore endorsements on some permits also allow harvest of cabezon, greenling, and other nearshore rockfish species.

Photo credits: Oregon Marine Reserves program, except mixed rockfish tote: Cameron Sharpe
112 total Black & Blue Rockfish permits

67 with nearshore endorsements

Regulations limit total annual commercial catch, and bimonthly catch by each permitted vessel.

<table>
<thead>
<tr>
<th>Port Group</th>
<th>Permit Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garibaldi group</td>
<td>10</td>
</tr>
<tr>
<td>Pacific City</td>
<td>11</td>
</tr>
<tr>
<td>Newport group</td>
<td>2</td>
</tr>
<tr>
<td>Bandon group</td>
<td>4</td>
</tr>
<tr>
<td>Port Orford</td>
<td>39</td>
</tr>
<tr>
<td>Gold Beach</td>
<td>13</td>
</tr>
<tr>
<td>Brookings</td>
<td>7</td>
</tr>
</tbody>
</table>

Photo: Carla Sowell
Commercial Nearshore Fleet

Vessels average ~25’
North coast fishing is more seasonal, and more focused on black rockfish

Port Orford has the most activity coastwide
South coast is more year-round, with more targeting other nearshore species

Photos: Cameron Sharpe
Commercial Nearshore Landings

Majority of landed catch is black RF
Most trips land ~ 60 – 250 lbs

Most nearshore rockfish and about half of black rockfish are sold live

Photo: Cameron Sharpe
## Comm. Nearshore Trips and Landings (pounds), 2018

<table>
<thead>
<tr>
<th>Period</th>
<th>Trip Count</th>
<th>Black RF</th>
<th>Blue &amp; Deacon RF</th>
<th>Other Near-shore RF</th>
<th>Greenling</th>
<th>Cabezon</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Jan-Feb)</td>
<td>219</td>
<td>19,751</td>
<td>707</td>
<td>1,538</td>
<td>3,107</td>
<td>8,106</td>
</tr>
<tr>
<td>2 (Mar-Apr)</td>
<td>400</td>
<td>47,303</td>
<td>1,203</td>
<td>1,706</td>
<td>6,249</td>
<td>15,378</td>
</tr>
<tr>
<td>3 (May-Jun)</td>
<td>576</td>
<td>57,141</td>
<td>1,382</td>
<td>4,349</td>
<td>6,736</td>
<td>18,993</td>
</tr>
<tr>
<td>4 (Jul-Aug)</td>
<td>506</td>
<td>59,744</td>
<td>1,197</td>
<td>4,912</td>
<td>8,901</td>
<td>10,818</td>
</tr>
<tr>
<td>5 (Sep-Oct)</td>
<td>461</td>
<td>52,835</td>
<td>1,647</td>
<td>4,769</td>
<td>10,197</td>
<td>10,026</td>
</tr>
<tr>
<td>6 (Nov-Dec)</td>
<td>300</td>
<td>32,657</td>
<td>1,394</td>
<td>2,636</td>
<td>4,331</td>
<td>1,405</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,462</strong></td>
<td><strong>269,430</strong></td>
<td><strong>7,530</strong></td>
<td><strong>19,910</strong></td>
<td><strong>39,521</strong></td>
<td><strong>64,636</strong></td>
</tr>
<tr>
<td><strong>Attainment (% HG)</strong></td>
<td><strong>97.9</strong></td>
<td><strong>96.5</strong></td>
<td><strong>12.4</strong></td>
<td><strong>97.1</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(2018 Commercial Fishery Data Update, Table 10)*
2018 Commercial Nearshore Catch by Area
Commercial Nearshore Logbook Data Uses

Commercial Nearshore Logbook index of cabezon catch used in the 2019 cabezon stock assessment
Issue 2. 2020 Groundfish Regulations

1. Updated federal rules
2. State harvest guidelines
3. Commercial management measures
   • Cumulative period limits (trip limits)
   • Black Rockfish Management Areas
   • Dressed-to-round conversion factors
4. Recreational management measures
   • Bag limits
   • Depth restriction
1. Federal Rules

Adopt updates by reference

• Notable: Amendment 28 to the West Coast Groundfish Fishery Management Plan

• Changes to groundfish trawl closed areas:
  • Adjustments to habitat closures based on new high-resolution habitat mapping
  • Trawl Rockfish Conservation Area removed due to rebuilding of overfished stocks & individual quota management with 100% observer coverage

2. State Harvest Guidelines

Total catch limits for each species or management group are allocated to the commercial & sport sectors as “HGs”

- Oregon total
- Commercial HG
- Recreational HG

Based on estimated long-term maximum sustainable yield, as reduced by social, economic, and ecological factors. Buffered for uncertainty.

Proportions vary by species, and were established in 2004 based on year-2000 catch with no substantive changes since.

Fishing in a sector may be restricted or closed when an HG is reached to prevent overfishing or negatively affecting the other sector.
# 2020 Recommended Harvest Guidelines

<table>
<thead>
<tr>
<th>Management group</th>
<th>Sector</th>
<th>Allocation</th>
<th>2019 HG (metric tons)</th>
<th>2020 HG (recommended, mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black rockfish</td>
<td>Commercial</td>
<td>24%</td>
<td>123.8</td>
<td>122.9</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>76%</td>
<td>392.2</td>
<td>389.1</td>
</tr>
<tr>
<td>Blue and deacon rockf.</td>
<td>Commercial</td>
<td>18.6%</td>
<td>18.9</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>81.4%</td>
<td>82.6</td>
<td>80.1</td>
</tr>
<tr>
<td>Nearshore rockfish</td>
<td>Commercial</td>
<td>51.3%</td>
<td>12.3</td>
<td>12.2</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>48.7%</td>
<td>11.7</td>
<td>11.6</td>
</tr>
<tr>
<td>Cabezon</td>
<td>Commercial</td>
<td>64.3%</td>
<td>30.2</td>
<td>30.2</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>35.7%</td>
<td>16.8</td>
<td>16.8</td>
</tr>
<tr>
<td>Greenling</td>
<td>Commercial</td>
<td>75.1%</td>
<td>128.5</td>
<td>118.3</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>24.9%</td>
<td>42.6</td>
<td>39.2</td>
</tr>
</tbody>
</table>
3. Commercial Management Measures

Commercial Nearshore Fishery Management Goals:
• Sustainable fishing opportunity without exceeding federal and state limits
• A predictable, stable, year-round season

Bimonthly cumulative vessel landing limits ("trip limits") are used to achieve these goals.
# Commercial Nearshore Trip Limits (lbs/period)

<table>
<thead>
<tr>
<th>Management group</th>
<th>2019 trip limit (outset)</th>
<th>2019 trip limit after in-season changes</th>
<th>2020 trip limit (recommended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black RF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>P2</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>P3</td>
<td>1,800</td>
<td>1,800</td>
<td>1,800</td>
</tr>
<tr>
<td>P4</td>
<td>1,800</td>
<td>2,400</td>
<td>1,800</td>
</tr>
<tr>
<td>P5</td>
<td>1,500</td>
<td>2,100</td>
<td>1,500</td>
</tr>
<tr>
<td>P6</td>
<td>1,500</td>
<td>2,100</td>
<td>1,500</td>
</tr>
<tr>
<td>Blue/Deacon RF</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>Other NS RF</td>
<td>450</td>
<td>600</td>
<td>450</td>
</tr>
<tr>
<td>Cabezon</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Greenling</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>
Commercial Black Rockfish Management Areas

- In 4 areas (shaded), vessels are limited to 300 lbs per day of black rockfish.
- Established in 1995 to prevent conflict with the sport fishery. Black rockfish is ~65-70% of the catch in both.
- Original limit was 200 lbs/day or 65 black rockfish, modified to current in 2010.
- Dec. 2018 public request to eliminate BRMAs; OFWC directed staff to evaluate.
Rationale for Public Request to Eliminate BRMAs

- BRMA daily limits reduce efficiency and increase costs since vessels must make more trips to catch the same number of fish.
- Other measures adopted since BRMAs began are sufficient to prevent commercial – sport conflict:
  - Limited entry permits cap total commercial participation.
  - HGs ensure fish for each sector and cap total catch.
  - Bimonthly commercial trip limits cap individual vessel catch.
BRMA Options

- Eliminate BRMAs
- Increase the BRMA daily landing limits
- Either option could be implemented year-round or seasonally, in some or all of the BRMAs
BRMA Staff Evaluation

How significant is the problem? Would the proposed change shift where commercial fishing occurs? Would it lead to conflict between the sectors?

Staff analyzed:

1. To what extent are BRMAs affecting the commercial nearshore fishery? Are the effects different on the north coast vs south coast?

2. Where is there spatial overlap between sport and commercial fishing for black rockfish?

3. Would eliminating BRMAs risk shortening the commercial season?

Known: Eliminating BRMAs or raising daily limits will not increase commercial catch of black rockfish overall, since the fishery currently uses almost all of its HG.
How much are BRMAs limiting comm. fishing?

• ~2,500 trips outside, ~1,600 inside
• Higher proportion of trips inside BRMAs on the north coast, vs. south

Daily limits affect 10-12% of trips in northern BRMAs, and <4% in southern BRMAs
Relative overlap between commercial and sport fishing for black rockfish. Modeled using 2017-18 comm. logbook and rec. charter observer data; not fully representative of private vessel rec. fishing (i.e., there is probably more potential overlap than shown here).
Would eliminating BRMAs shorten the comm. season?

**Unlikely.** Even if vessels that currently attain bimonthly limits could land the entire limit in one trip, the HG would likely be met only a few days earlier.
BRMA Analysis Conclusions

• Relatively few commercial trips overall appear limited by BRMAs.

• BRMAs are more limiting on the north coast vs. south coast.

• Most overlap between comm. and recreational fishing for black rockfish occurs within existing BRMAs.
BRMA Assumptions

• Eliminating BRMAs/raising limits:
  • Would lead to some reduction in the number of commercial fishing trips taken to catch the same overall amount of black rockfish
    • Fewer trips would mean less time and fuel, more flexibility
    • Fewer trips could mean less on-the-water overlap with sport fishing
  • Could cause a shift in where some comm. black rockfish fishing occurs; but existing data do not tell us how much or where
    • Fishing location is usually based primarily on where the fish are (habitat) and proximity to port
    • A shift could increase potential conflict and/or concentrate commercial removals on specific reefs
South coast commercial fishermen were largely neutral
  • Little commercial fishing occurs inside BRMAs in that region
  • Buyers often impose low daily limits anyway (due to capacity, demand, etc.)

Central/north coast comm. fishermen supported a variety of options to eliminate BRMAs or increase limits during some periods
  • Some concerns that commercial effort shift into BRMAs could reignite conflicts with recreational fishery
  • Others felt this risk is low, and preferred eliminating areas with daily limits to increase efficiency and flexibility
Recreational fishermen generally favored retaining BRMAs and associated trip limits

- Concerns included potential localized depletion due to commercial effort shift into BRMAs, and conflict with sport fishing in areas of high recreational use
BRMAs – Staff Recommendation

Retain the Black Rockfish Management Areas and raise the daily limit from 300 lbs to 500 lbs in Periods 1 (Jan-Feb) and 6 (Nov-Dec) for all areas.

Rationale: provides a modest increase in flexibility during the winter, while continuing to minimize the potential for conflict between commercial and sport fishing
Commercial Conversion Factors

• Dressed weight $\times$ conversion factor = round weight

• Conversion factors are established through research and specified in OAR, then applied on fish tickets for dressed landings

• Staff recommend adopting several not yet in OAR, and reinstating others that were inadvertently removed

• For trawl landings, a federal rule change is also needed before the new factors can be used
4. Recreational Management Measures

Goal: Provide sustainable fishing opportunity year-round without exceeding federal and state harvest limits

• Key tools: bag limits, area/depth closures, and gear requirements
Recreational Groundfish Fishery Overview

• ~ 100,000 angler-trips per year
• 50% charter, 50% private/guided
• Primarily ocean-boat fishing
• Year-round in Newport, Depoe Bay, Brookings; more seasonal in other ports
• Bottomfish is the “bread-and-butter” fishery: predictable year-round opportunity, relatively more accessible than other ocean fisheries.
2019 Recreational Season Recap – Regulations

• General marine species: 5 fish
  • Rockfish, greenling, Pacific cod, cabezon, skates…and other marine species not listed in Sport Fishing Regulations with a separate bag limit
  • Cabezon sub-bag limit: within the 5-fish bag, no more than one may be a cabezon (opens July 1)

• Lingcod: 2 fish

• Longleader: 10 fish, specified midwater rockfish, longleader gear, >40 fm

• Flatfish: 25 fish (not halibut)
2019 Rec. Season Recap – What Happened

- Relatively high effort: ~ 99,000 angler-trips projected through the end of 2019
- No inseason change to the general marine bag limit
- Less longleader fishing than 2018
- Retention of cabezon, copper, quillback, and china rockfish prohibited in August when recreational HGs were met
2019 Rec. Season Recap – Quota Status

Preliminary

2019

Sport Quota Used Through OCTOBER

% Quota Used

- Black rockfish
- Blue & deacon rockfishes
- Cabezon
- Canary rockfish
- Greenlings
- Minor nearshore rockfishes
- Yelloweye rockfish

Retention by boat anglers is prohibited beginning August 16.

Retention of China, copper and quillback rockfishes by boat anglers is prohibited beginning Aug. 23.

Retention prohibited.
Recreational Groundfish Regulations

• Seasonal depth restriction

• 2020 Bag limits
  • General marine bag limit
  • Proposed new sub-bag limit

• Other regulations
Rec. Fishery Seasonal Depth Restriction

• Since 2004, fishing has been seasonally limited to inshore waters to reduce impacts to yelloweye rockfish while the stock rebuilds from an overfished condition

• 2017 stock assessment showed improvement (projected rebuilding: 2028), and federal bycatch limits were raised

• States committed to a cautious approach to regulation changes expected to increase impacts

Photo: ODFW Marine Reserves Program
• In 2019 OARs, the line was moved deeper (from 30 to 40 fathoms), and the duration was reduced (from 6 to 4 months)

• With this change, yelloweye bycatch increased, but still well under the limit (~4.3 out of 7 mt)

• 2019 results suggest slightly more yelloweye impacts could be allowed
Depth Restriction – Staff Recommendation

Restrict groundfish fishing to shoreward of 40 fathoms from June 1 through August 31

Rationale: Expands all-depth season to include May and September, providing more offshore opportunity

- May help slow impacts on some of the other nearshore rockfish
- Continues ODFW’s cautious approach of relaxing regulations that provide more opportunity but increase yelloweye rockfish bycatch
2020 Recreational Bag Limits

Considerations

• Provide opportunity to attain HGs without exceeding them
• Ensure a 12-month season
• “Don’t go below 5 fish” for the general marine bag – public testimony at December 2018 OFWC meeting
• Simplicity vs. opportunity
2020 General Marine Bag Limit

• Black rockfish is the driving factor:
  • ~70% of all fish encountered in this fishery are black rockfish
  • No flexibility in the black rockfish HG

• A sub-bag for black rockfish was considered but not recommended:
  • Likely to result in increased discard and wastage (even with descending device use), without much reduction in total mortality
  • Black RF can be difficult to distinguish from some other species
2020 Copper, Quillback, and China RF Sub-bag

• The Nearshore Rockfish HG was reached mid-summer in 2019 and will be again in 2020.

• Copper, quillback, and China rockfish >98% of this group. Retention was prohibited August 23, 2019 and is expected earlier in 2020.

• A sub-bag limit could slow accumulating catch and postpone—but not prevent—the need to prohibit retention.

• Most anglers catch <1 per trip. Some target them and would be more affected.

• A sub-bag would increase reg. complexity, but these species are relatively easier to ID.

Photo: ODFW Marine Reserves Program
Bag Limit Modeling and Uncertainty

Alternatives are evaluated using past data and assumptions about effort, catch rate, and average fish size.

Effort is a key source of uncertainty. It is variable and has been trending higher.

Left: projected 2020 black rockfish impacts with a 5-fish bag limit. Actual catch expected to fall within the white bar 95% of the time.

2019 projections overestimated black RF impacts by ~11%, and underestimated nearshore rockfish impacts by ~32% (not pictured).
# Catch Projections for 2020 Rec. Bag Limit Alternatives

<table>
<thead>
<tr>
<th>Option</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 Ocean Boat Limit</td>
<td>374.8</td>
<td>66.7</td>
<td>7.2</td>
<td>11.6</td>
<td>18.6</td>
<td>16.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019 regulations all-depth &lt; 40 fm</td>
<td>319.2</td>
<td>52.0</td>
<td>4.80</td>
<td>19.6</td>
<td>5.65</td>
<td>24.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 fish bag limit all-depth &lt; 40 fm</td>
<td>317.1</td>
<td>53.1</td>
<td>4.90</td>
<td>19.4</td>
<td>5.4</td>
<td>24.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 fish bag; 2 NSRF all-depth &lt; 40 fm</td>
<td>317.3</td>
<td>53.2</td>
<td>4.90</td>
<td>19.1</td>
<td>5.4</td>
<td>24.8</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5 fish bag; 1 NSRF all-depth &lt; 40 fm</td>
<td>317.8</td>
<td>53.2</td>
<td>4.90</td>
<td>18.3</td>
<td>5.4</td>
<td>24.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 fish bag; 1 NSRF all-depth &lt; 40 fm</td>
<td>347.6</td>
<td>54.8</td>
<td>5.10</td>
<td>19.1</td>
<td>5.8</td>
<td>26.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- **<80% of HG**
- **80-90% of HG**
- **90-100% of HG**
- **over HG**

**BRF projection as % of limit**

- 85%
- 93%
General Marine Bag – Staff Recommendation

5 fish general marine bag limit in 2020

Rationale:

• Minimizes risk of exceeding the HG which would result in early season closure

• Minimizes risk of an inseason bag reduction below 5 fish if actual catch is higher than projected
New Sub-bag – Staff Recommendation

1-fish sub-bag for copper, quillback, and China rockfish

(within the general marine bag, no more than 1 fish may be a copper, quillback, or China rockfish)

Rationale:

• Slows catch of nearshore rockfish and prolongs the period during which retention is allowed
• Increases angler awareness and avoidance

*Expect retention to be prohibited in-season even with a sub-bag*
Other Recreational Groundfish Rules

Staff recommendation: status quo

• Cabezon sub-bag limit (1 fish) and season (Jul. 1 to Dec. 31, or until HG is met)
• Lingcod bag limit (2 fish)
• Flatfish bag limit (25 fish)
• Longleader bag limit (10 fish, select species only), >40 fm, longleader gear only
• Descending devices required onboard and ready to use when fishing for bottomfish or halibut, and must be used when releasing rockfish >30 fm

Photo: Tamara Mautner
Summary Of Staff Recommendations

As reflected in Exhibit G., Attachment 3, Draft OARs, adopt:

- Updated federal rules (by reference)
- 2020 Recreational and commercial harvest guidelines
- 2020 Commercial nearshore bimonthly trip limits
- Commercial BRMA daily trip limit increase Jan-Feb and Nov-Dec
- Commercial conversion factors
- 2020 Recreational bag limits (general marine bag and new sub-bag for copper, quillback, and China rockfish)
- 2020 Recreational depth restriction
Questions?