

**PROPOSED OVERFISHING LIMITS FOR COWCOD SOUTH OF 40°10' N LAT.,
THE OREGON AND WASHINGTON SUBSTOCKS OF KELP GREENLING, AND
THE WASHINGTON SUBSTOCK OF CABEZON**

The 2015 and 2016 overfishing limits (OFLs) for cowcod south of 40°10' N lat., kelp greenling in Oregon, kelp greenling in Washington, and cabezon in Washington were not provided in September and November of 2013 when the Scientific and Statistical Committee (SSC) and the Pacific Fishery Management Council (Council) were scheduled to decide the biennial specifications. The Council tasked the SSC with reviewing proposed methods for calculating OFLs for these stocks. The estimates in the following tables were derived by methods reviewed by the SSC Groundfish Subcommittee in webinars conducted on December 11, 2013 and January 30, 2014. The full SSC will review the Groundfish Subcommittee's reports and provide their recommendations on 2015 and 2016 OFLs for these stocks at this meeting.

Cowcod South of 40°10' N lat.

The OFLs for the stock of cowcod south of 40°10' N lat. are based on estimates from the 2013 assessment, which covered the area from Pt. Conception south to the U.S.-Mexico border, and an OFL estimate based on depletion-based stock reduction analysis (DB-SRA) for the area from Pt. Conception north to 40°10' N lat. These OFL estimates and associated acceptable biological catches (ABCs) associated with overfishing probabilities (P*s) of 0.45 and 0.25 are provided in Table 1.

Table 1. 2015 and 2016 Harvest Specifications (in mt) for Cowcod South of 40°10' N lat.

| Stock | Cat. | 2015 OFL | 2015 ABC | | 2016 OFL | 2016 ABC | |
|-----------------------------|------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | P* = 0.45 | P* = 0.25 | | P* = 0.45 | P* = 0.25 |
| COWCOD S. of 40°10' N. lat. | | 66.6 | 59.9 | 38.2 | 66.1 | 59.4 | 37.8 |
| <i>COWCOD (Conception)</i> | 2 | <i>55.0</i> | <i>50.2</i> | <i>33.8</i> | <i>54.1</i> | <i>49.4</i> | <i>33.3</i> |
| <i>COWCOD (Monterey)</i> | 3 | <i>11.6</i> | <i>9.7</i> | <i>4.4</i> | <i>12.0</i> | <i>10.0</i> | <i>4.5</i> |

Kelp Greenling in Oregon, Kelp Greenling in Washington, and Cabezon in Washington

The proposed OFLs for kelp greenling in Oregon, kelp greenling in Washington, and cabezon in Washington are based on DB-SRA. One issue to note is that the 2016 OFLs differ based on the choice of P* since the DB-SRA projections assume the 2015 ABC is removed in 2015. Therefore, a higher P* decided for the 2015 ABC specification will generate a relatively lower 2016 OFL since the projection model assumes more catch in 2015. Table 2 depicts the 2015 and 2016 OFLs and associated ABCs for these stocks relative to the choice of P*.

Table 2. 2015 and 2016 Harvest Specifications (in mt) for Kelp Greenling in Oregon, Kelp Greenling in Washington, and Cabezon in Washington.

P* = 0.45

| Stock | 2015 OFL | 2016 OFL |
|---------------------|----------|----------|
| Kelp greenling (OR) | 14.0 | 15.5 |
| Kelp greenling (WA) | 31.4 | 27.7 |
| Cabezon (WA) | 4.0 | 4.4 |

2015 ABCs

| Stock | Cat. | Overfishing Probability (P*) | |
|---------------------|------|------------------------------|------|
| | | 0.45 | 0.25 |
| Kelp greenling (OR) | 3 | 11.7 | 5.3 |
| Kelp greenling (WA) | 3 | 26.2 | 11.9 |
| Cabezon (WA) | 3 | 3.3 | 1.5 |

2016 ABCs

| Stock | Cat. | Overfishing Probability (P*) | |
|---------------------|------|------------------------------|------|
| | | 0.45 | 0.25 |
| Kelp greenling (OR) | 3 | 12.9 | 5.9 |
| Kelp greenling (WA) | 3 | 23.1 | 10.5 |
| Cabezon (WA) | 3 | 3.7 | 1.7 |

P* = 0.25

| Stock | 2015 OFL | 2016 OFL |
|---------------------|----------|----------|
| Kelp greenling (OR) | 14.0 | 16.6 |
| Kelp greenling (WA) | 31.4 | 30.0 |
| Cabezon (WA) | 4.0 | 4.7 |

2015 ABCs

| Stock | Cat. | Overfishing Probability (P*) | |
|---------------------|------|------------------------------|------|
| | | 0.45 | 0.25 |
| Kelp greenling (OR) | 3 | 11.7 | 5.3 |
| Kelp greenling (WA) | 3 | 26.2 | 11.9 |
| Cabezon (WA) | 3 | 3.3 | 1.5 |

2016 ABCs

| Stock | Cat. | Overfishing Probability (P*) | |
|---------------------|------|------------------------------|------|
| | | 0.45 | 0.25 |
| Kelp greenling (OR) | 3 | 13.8 | 6.3 |
| Kelp greenling (WA) | 3 | 25.0 | 11.4 |
| Cabezon (WA) | 3 | 3.9 | 1.8 |

PFMC
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