



DESCRIPTION OF MANAGEMENT PROCEDURES PROPOSED FROM MSAB015

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DESCRIPTION OF MANAGEMENT PROCEDURES PROPOSED FROM MSAB015

The proposed management procedures from the 15th Session of the Management Strategy Advisory Board (MSAB015) are described here. Each management procedure has a coastwide component and a distribution component (Appendix II of IPHC-2020-MSAB016-07). The distribution component can distribute directly to IPHC Regulatory Areas or distribute to Biological Regions first.

For all the MPs considered, the coastwide component sees the application of a coastwide SPR and of a 30:20 control rule. The 30:20 harvest control rule adjusts the reference SPR if the estimated stock status falls below the 30% trigger value. Specifically, the fishing intensity is reduced linearly if the stock status falls below 30% of unfished spawning stock biomass to a value of zero at and below an estimated status of 20% of unfished spawning stock biomass.

MP15-A: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0. Further adjustments are applied to the distributed TCEY, to assign a fixed 1.65 million pounds for IPHC Regulatory Area 2A (when possible) and a percentage allocation for IPHC Regulatory Area 2B calculated from a 30% weight on the current interim management procedure's target TCEY distribution (i.e., O32 stock distribution and relative harvest rates) and 70% weight to 20%.

MP15-B: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0. Further adjustments are applied to the distributed TCEY, to assign a fixed 1.65 million pounds for IPHC Regulatory

Area 2A (when possible) and a percentage allocation for IPHC Regulatory Area 2B calculated from a 30% weight on the current interim management procedure's target TCEY distribution (i.e., O32 stock distribution and relative harvest rates) and 70% weight to 20%.

MP15-C: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to Biological Regions using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to Biological Regions such that the relative harvest rate in Biological Regions 4 and 4B is 0.75 and the relative harvest rate in Biological Regions 2 and 3 is 1.0. The regional TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. Further adjustments are applied to the distributed TCEY, to assign a fixed 1.65 million pounds for IPHC Regulatory Area 2A (when possible) and a percentage allocation for IPHC Regulatory Area 2B calculated from a 30% weight on the current interim management procedure's target TCEY distribution (i.e., O32 stock distribution and relative harvest rates) and 70% weight to 20%.

MP15-D this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0. Further adjustments are applied to the distributed TCEY, to assign a fixed 1.65 million pounds for IPHC Regulatory Area 2A (when possible) and a percentage allocation for IPHC Regulatory Area 2B calculated from a 30% weight on the current interim management procedure's target TCEY distribution (i.e., O32 stock distribution and relative harvest rates) and 70% weight to 20%. These 2A and 2B adjustments are made by adding to the total coastwide TCEY, rather than reallocating among IPHC Regulatory Areas (as in other MPs). Once this last step is complete, the sum of the distributed TCEY is compared with the TCEY corresponding to a SPR value of 36% (maximum fishing intensity). If the sum of the distributed TCEY is higher than the TCEY corresponding to the maximum fishing intensity, IPHC Regulatory Areas 2A and 2B are adjusted so that the sum of the distributed TCEY is equal to the TCEY corresponding to the maximum fishing intensity. If the sum of the distributed TCEY is lower than the TCEY corresponding to the maximum fishing intensity, no further adjustments are made.

MP15-E: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0. Further adjustments are applied to the distributed TCEY, to assign a fixed 1.65 million pounds for IPHC Regulatory Area 2A (when possible).

MP15-F: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. A National Share of 20% is then applied to IPHC Regulatory Area 2B and the remaining 80% is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0.

MP15-G: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0.

MP15-H: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in IPHC Regulatory Area 4B is 0.75 and the relative harvest rate in all other IPHC Regulatory Areas is 1.0.

MP15-I: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the 'all-sizes' stock distribution, which is determined

from the biomass of all sizes of Pacific halibut caught in the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0.

MP15-J: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using a 5 year moving average of the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS. A proportional relative harvest rate is applied to IPHC Regulatory Areas such that the relative harvest rate in the western areas (i.e. 3B, 4A, 4CDE, and 4B) is 0.75 and the relative harvest rate in eastern areas (i.e. 2A, 2B, 2C, 3A) is 1.0.

MP15-K: this MP applies a coastwide SPR and the 30:20 harvest control rule to obtain a coastwide TCEY. A 15% constraint is then applied to not allow the coastwide TCEY to increase or decrease by more than 15% from the previous year's limit. The coastwide TCEY is then distributed to IPHC Regulatory Areas using the previous 5-year average of the O32 stock distribution (i.e. biomass of fish over 32 inches) from the FISS, calculated only every 5th year.