

ADDENDUM to Agenda Item H.2, Attachment 1 – Pacific mackerel catch-only update

Revised Table 3. Pacific mackerel harvest control rules (HCR) for fishing years from the base model: A) 2021-22; and B) 2022-23. ABC buffers for Tiers 1 and 2 have been corrected to account for years from last assessment.

a) Fishing year 2021-22

Harvest Control Rule Formulas										
OFL = BIOMASS * E_{MSY} * DISTRIBUTION										
ABC _{P-star} = BIOMASS * BUFFER _{P-star} * E_{MSY} * DISTRIBUTION										
HG = (BIOMASS - CUTOFF) * FRACTION * DISTRIBUTION										
Harvest Formula Parameters										
BIOMASS (ages 1+, mt)	57,832									
P-star	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	
ABC BufferTier 1	0.9303	0.8644	0.8013	0.7397	0.6785	0.6164	0.5510	0.4786	0.3884	
ABC BufferTier 2	0.8654	0.7473	0.6420	0.5471	0.4604	0.3799	0.3036	0.2291	0.1508	
ABC BufferTier 3	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258	0.0771	0.0373	
EMSY=FRACTION	0.30									
CUTOFF (mt)	18,200									
DISTRIBUTION (U.S.)	0.70									
Harvest Control Rule Values (MT)										
OFL =	12,145									
ABCTier 1 =	11,298	10,498	9,731	8,983	8,241	7,485	6,692	5,812	4,717	
ABCTier 2 =	10,511	9,075	7,797	6,645	5,591	4,614	3,688	2,782	1,832	
ABCTier 3 =	9,446	7,317	5,620	4,255	3,152	2,256	1,528	936	453	
HG =	8,323									

b) Fishing year 2022-23

Harvest Control Rule Formulas										
OFL = BIOMASS * E_{MSY} * DISTRIBUTION										
ABC _{P-star} = BIOMASS * BUFFER _{P-star} * E_{MSY} * DISTRIBUTION										
HG = (BIOMASS - CUTOFF) * FRACTION * DISTRIBUTION										
Harvest Formula Parameters										
BIOMASS (ages 1+, mt)	45,925									
P-star	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	
ABC BufferTier 1	0.9259	0.8563	0.7898	0.7253	0.6616	0.5972	0.5300	0.4561	0.3651	
ABC BufferTier 2	0.8573	0.7332	0.6237	0.5260	0.4377	0.3567	0.2809	0.2081	0.1333	
ABC BufferTier 3	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258	0.0771	0.0373	
EMSY=FRACTION	0.30									
CUTOFF (mt)	18,200									
DISTRIBUTION (U.S.)	0.70									
Harvest Control Rule Values (MT)										
OFL =	9,644									
ABCTier 1 =	8,930	8,258	7,617	6,995	6,380	5,760	5,112	4,399	3,522	
ABCTier 2 =	8,268	7,071	6,016	5,073	4,221	3,440	2,709	2,007	1,286	
ABCTier 3 =	7,501	5,811	4,463	3,379	2,503	1,792	1,213	743	359	
HG =	5,822									