*Northern Rockfish – Gulf of Alaska – ABL*

In 2020 a full assessment was conducted for Gulf of Alaska northern rockfish. The input data were updated to include survey biomass estimates for 2019, survey age compositions for 2019, final catch for 2018 and 2019, preliminary catch for 2020, fishery age compositions for 2018, and fishery size compositions for 2019. The survey biomass estimate was estimated using a Vector Autoregressive Spatio-temporal (VAST) model for the GOA. The aging error matrix was updated with data through 2017, the previous matrix had data through 2008. No changes were made to the assessment model.

Spawning biomass was above the *B40%* reference point and projected to be 102,715 t in 2021 decreasing to 99,597 t in 2022. The SSC has determined that reliable estimates of *B40*%, *F40%*, and

F35% exist for this stock, thereby qualifying northern rockfish for management under Tier 3. With *B40*%, *F40%*, and F35% estimated at 33, 933 t, 0.073, and 0.061, respectively. Spawning biomass in 2021 is projected to exceed *B40%*, thereby placing northern rockfish in Tier 3a. The 2021 and 2022 catches associated with an *F40%* are 5,358 t and 5,100 t, respectively. These catches were put forward as the authors’ and Plan Team’s recommended ABCs. The 2021 and 2022 OFLs are 3,396 t and 6,088 t.

A random effects model was use to establish regional ABCs based on the proportions of model-based estimates for 2021 with 2,023 t allocated to the Western GOA, 3,334 t to the Central GOA, and 1 t to the Eastern GOA. The Eastern GOA allocation is managed within the “Other Rockfish” complex. The recommended OFLs for 2021 and 2022 are not regionally apportioned. Northern rockfish is not being subjected to overfishing, is not overfished, and is not approaching an overfished condition.

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