# Tables

**Table 0.** Summary of key improvements in reconstructing sport fish removals of rockfish using the Bayesian model as compared to the Howard et al. (2020) methods.

| Issue | Howard | Bayes |
| --- | --- | --- |
| Time series | 1999 - present | 1977 - present |
| Bias in SWHS | Not explicitly dealt with. Relies on logbook data and ratios of guided/unguided from SWHS data to estimate unguided releases and harvests. | Explicitly estimates bias in SWHS harvest and release estimates based on logbook data. |
| Species composition of releases | Assumes that species composition of releases is equal to that of the harvest, which is not evident in the logbook data. | Recognizes different release probabilities by species / species assemblage and estimates it from logbook data and bias corrected SWHS data |
| Sample size limitations | Uses sample size threshholds such that when areas fall below those threshholds values are borrowed from nearby areas. | Uses a hierarchichacal modelling approach that shares information between areas in the same region. Thus all data is used, even with small sample sizes. This is a more sound method that avoids assumptions and uses all of the data. |
| Error propogation | Error is propogated when variance estimates are available, but there is uncertainty associated with borrowing values from nearby areas, or the assumption of species compositions being identical in harvest and releases, are not dealt with. | By breaking the assumption that species composition is equal between harvests and releases, uncertainty in the release estimates is more reflective of the fishery. Furthermore, the hyerarchichal approach more accurately captures uncertainy within and between areas within a region. |

**Table 1.** Model priors for parameters associated with species composition, retention probability, the harvest trend spline, SWHS bias and proportion guided.

| Parameter\_fmt | Parameter |
| --- | --- |
| [[paragraph]] | s |
| [[paragraph]] | s |
| [[paragraph]] | ml |
| [[paragraph]] | sl |
| [[paragraph]] | sHa |
| [[paragraph]] | b0H |
| [[paragraph]] | mHb |
| [[paragraph]] | sHb |
| [[paragraph]] | mRb |
| [[paragraph]] | sRb |
| [[paragraph]] | l1a |
| [[paragraph]] | l2a |