CNMI Unfished Areas LH Sampling Report

Notes

Erin Bohaboy, June/July 2025

Do Once: simulate BMUS populations, save as .RData objects

1. Ensure values are in BMUS\_LH\_sim\_pop\_parameters.xlsx

* Enter assumed true population values in the column for each BMUS.
* F should be zero
* mincat, catsd, maxcat, maxcatsd should be reasonable values to avoid errors, but don’t matter if F = 0.
* Reminder: age\_max is not a plus group in the population dynamics, it is simply the summary age to calculate population variance at a defined “old age”.
* N can be as large as possible, but will increase run time. for Amax = 55, each 100k takes about 3 minutes to run.
* Linf\_k\_cor\_TF is a TRUE or FALSE value that determines whether Linf and k are sampled independently from each other (false), or if Linf = f(k) (true). If Linf\_k\_cor\_TF = TRUE, it may be necessary to reduce the Linf or k marginal variability (Linf\_sd and k\_sd parameters) to limit variance on the combined distribution of the two parameters. The output of the simulate\_population\_harvest $parameters$k\_Linf\_cor\_value will provide an idea of what the correlation coefficient is (I think -0.5 or so is reasonable).

2. Save each simulated population dataframe in its own workspace.

To do: fill in population parameter assumptions.