Addressing Nass issues

* The simulation model can be run with any group of CUs as long as stock recruit parameters have been estimated
* However there will substantial uncertainty underlying the stock recruit relationship for stocks that are data limited and it is unclear how this may influence management strategy evaluations
* What is the consequence of directly incorporating uncertainty in stock recruit parameters for data limited populations?
  + For initial analysis compare scenarios with Nass where medians are used vs. draws from MCMC distribution.
  + If interesting trends emerge, then I could conduct a study using simulated stock-recruitment time series comparing scenarios where the data are perfectly observed, imperfectly observed (moderate and high error in catch/spawner abundance estimates), and gappily observed
  + What is the appropriate amount of uncertainty to incorporate into each scenario’s MSE
* Lack of recovery in Pacific salmon populations could be driven by declines in productivity or persistent biases in assumptions used to generate estimates of abundance.
  + Currently Canadian catch is assumed to be a set proportion of the estimated spawner abundance because the proportion of SA3 origin fish cannot be estimated.
  + However if we instead calculate SA3 catch as a function total American catch making assumptions about proportion of unmarked fish (using recent otolith data) and proportion area 3 (using expert opinion) we could generate multiple “true” SR time series.
    - Estimate SR parameters for each and look at trends in abundance.
    - Want to determine whether it’s possible that realistic levels of observation error in catch estimates could result in stalled recovery, independent of changes in productivity.
  + What is the impact of each process in the context of recovery planning?