Recreational Data to Support Stock Assessments

FISH 576 Presentation – January 31, 2025

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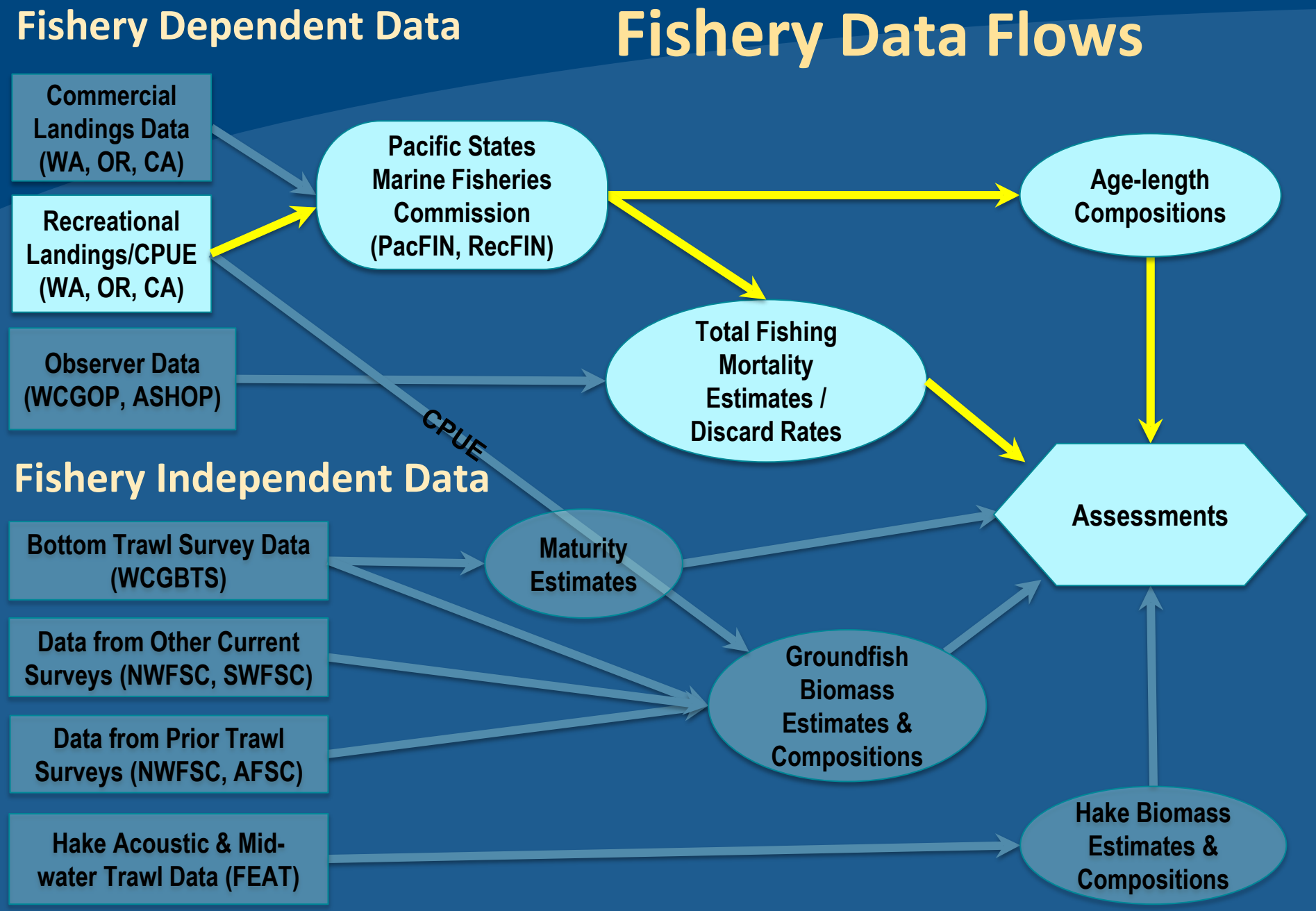
Fishery Data Flows

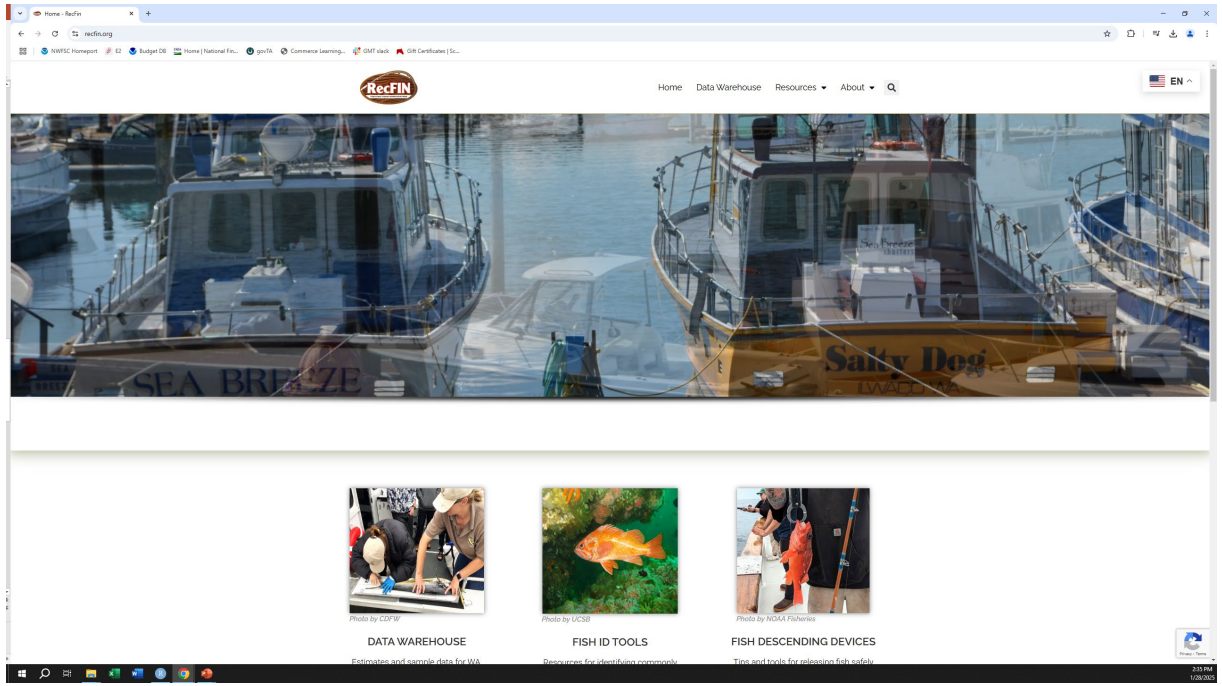


Recreational Fisheries Data Challenges

- There is huge effort and broad diversity of recreational fisheries and habitats, particularly in California.
- Several hundred species caught recreationally, with substantial gradients among community structure over depth and latitude.
- Limited automated processing capabilities across states and data sampling programs
- Quantity of data varies by species

Recreational Data Overview

Most recreational data available from recfin.org



…but work with your state data contact and confirm

NOAA FISHERIES

A Bit of Terminology on Data Sources

- Recent state sampling programs

RecFIN → OSP: Ocean Sampling Program (**WA**)
ORBS: **Oregon** Recreational Boat Survey
CRFS: **California** Recreational Fisheries Survey

- Past state sampling programs

MRFSS: Marine Recreational Fisheries Statistical Survey

- Historical Catch Reconstructions*
- Many Historical California length studies*

*Historical California catch reconstructions and historical length studies are not on RecFIN.

NOAA FISHERIES

A Bit of Terminology on Catches

Landings = **mortality** of fish brought to the dock

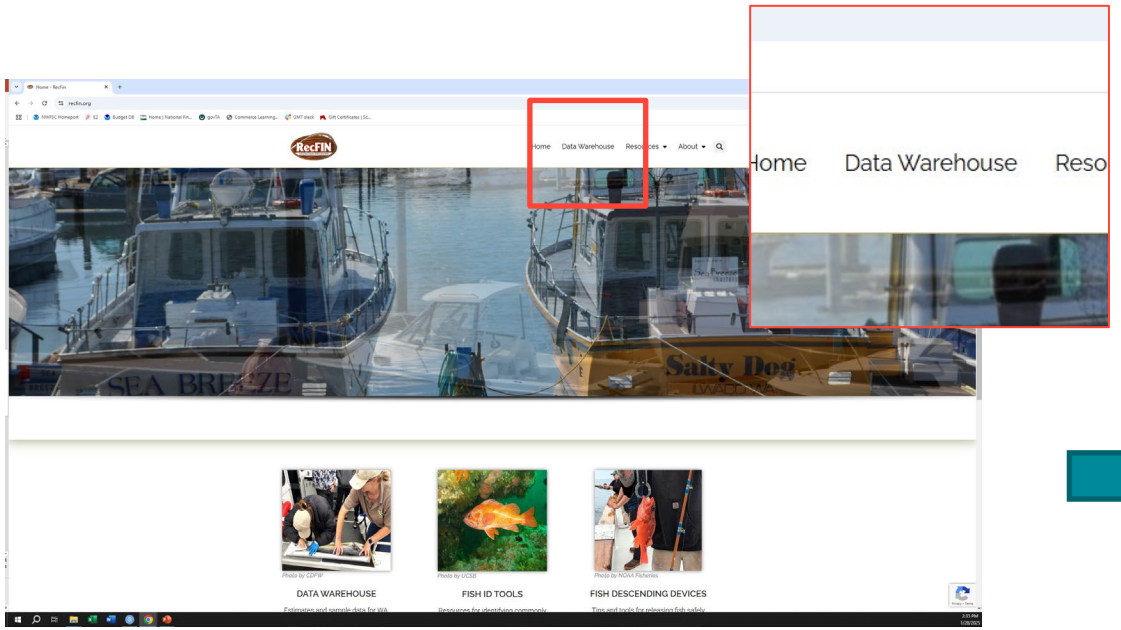
Discards = fish returned to the water

Dead discards = fish returned to the water that die

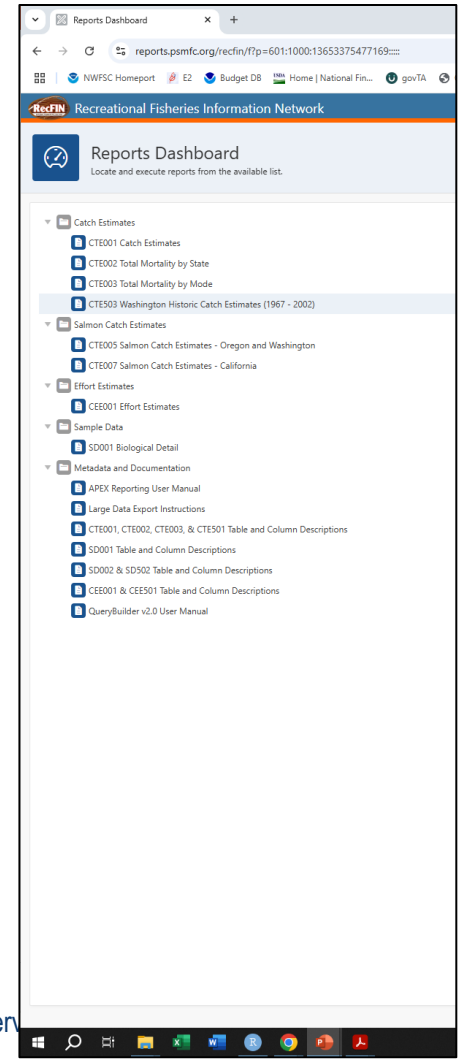
dead discards < discards

Total mortality = sum of landings and dead discards

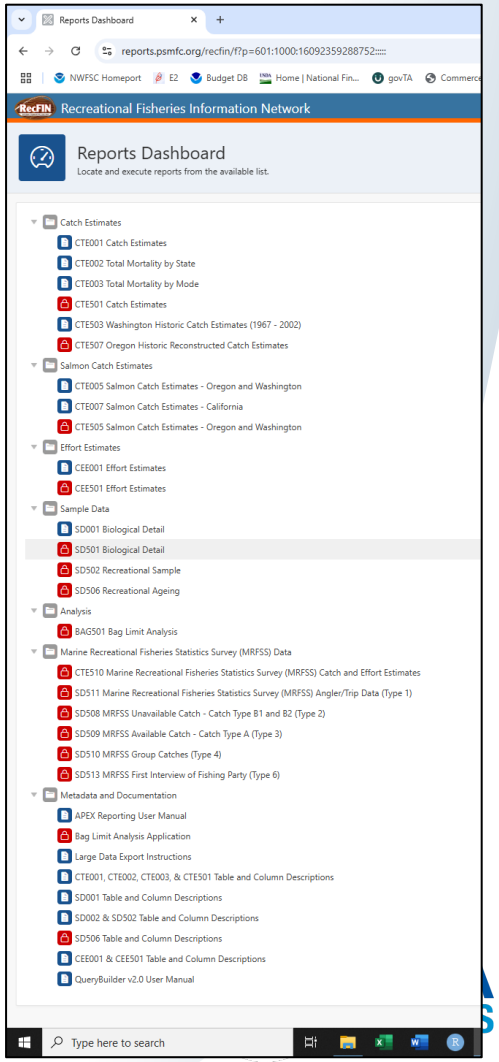
How To Access Recreational Data on RecFIN



Public facing

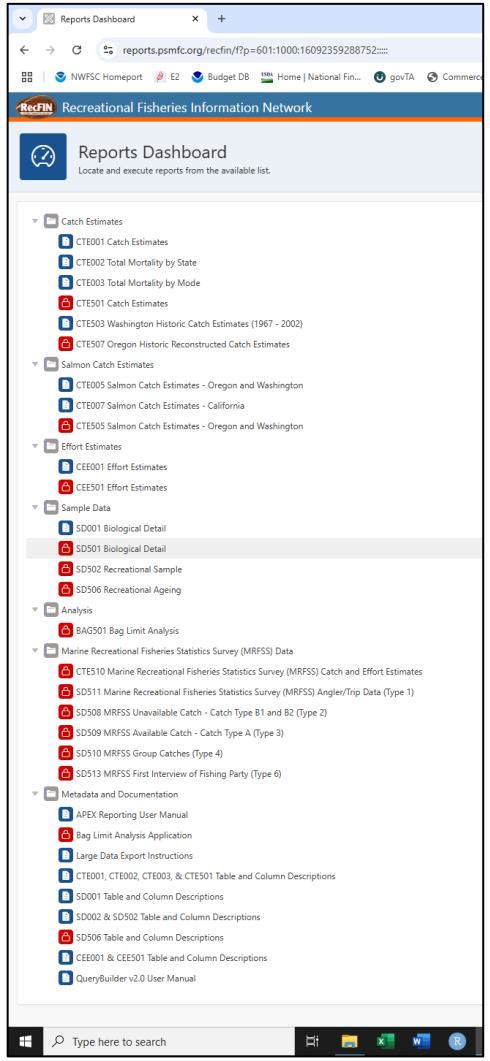


With log in



Pertinent Data Sets in RecFIN

With log in



Catch files

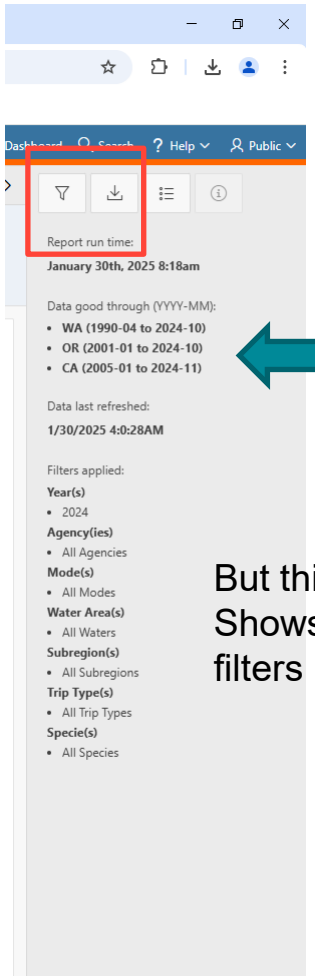
CTE001 Catch Estimates
CTE503 Washington Historic Catch Estimates
CTE507 Oregon Historic Reconstructed Catch Estimates
CTE510 MRFSS Catch and Effort Estimates

Biological files

SD001 Biological Detail
SD501 Biological Detail – Same as above but it has trip information (so I recommend using this file)
SD509 MRFSS Available Catch – yes this is oddly named for bio data

Respective metadata files (but also ask instructors)

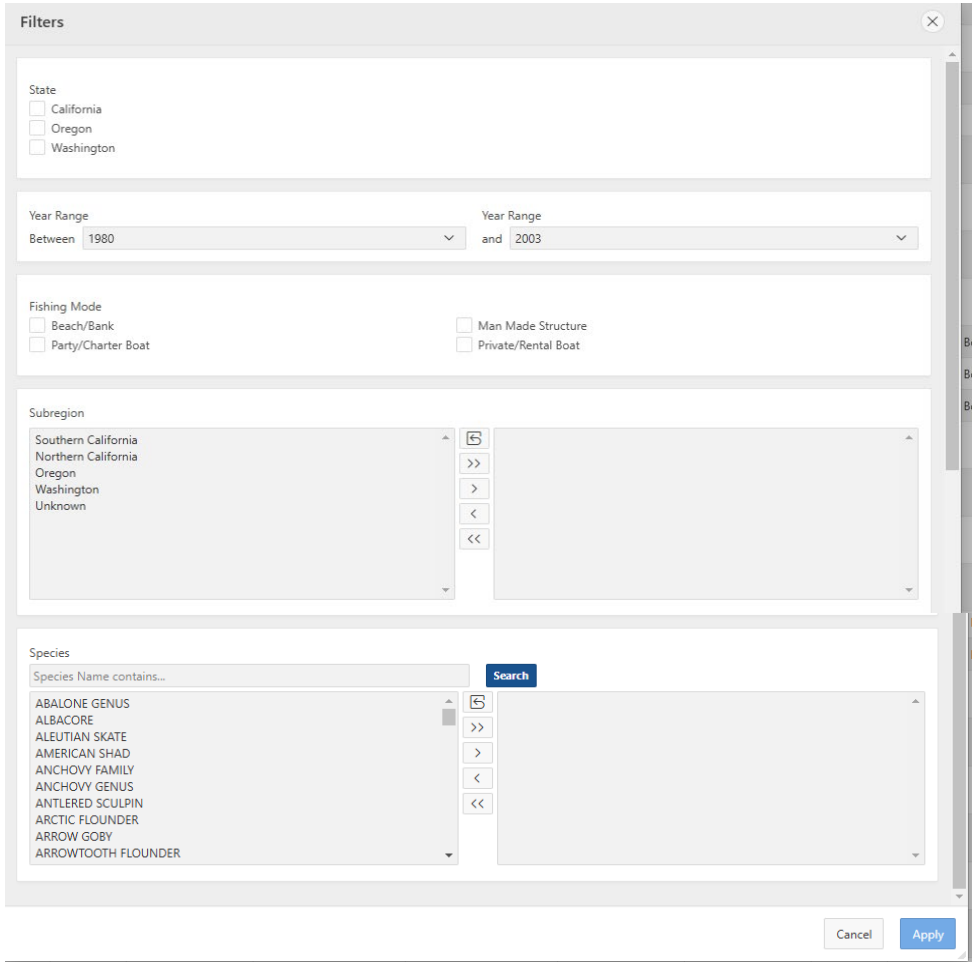
How to Filter and Download (e.g. with CTE001)



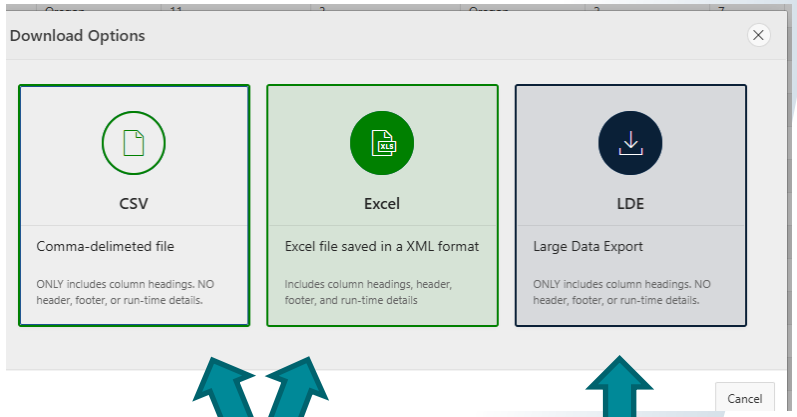
Note different years available

But this section Shows the default filters

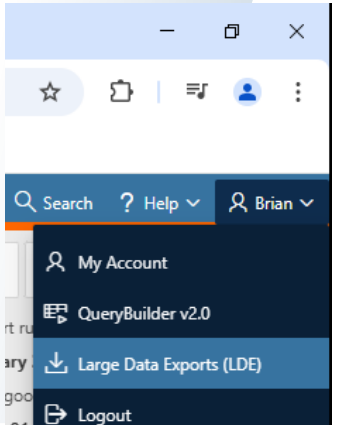
Filtering



Downloading



Only if data < 10000 rows



Processing data and preparing for SS3 input

- No formal structure in place for processing rec data
- Previous assessment repositories can be looked at on github
  - Lingcod 2021
  - Quillback rockfish 2021
  - Copper rockfish 2021
  - Canary 2023

Many others as directed by instructors

- Plot data for explorations
- Catches will likely be straightforward but biological data will need more looking at and filtering

Processing data and preparing for SS3 input

- Recreational biological samples are often not expanded
  - Can create SS3 ready comps using nwfscSurvey package
    - UnexpandedLFs.fn
  - There are catch-weighted expansions for WA/OR and perhaps CA (EJ Dick)
    - These may or may not differ from unweighted comps
- Need to output number of samples and numbers of 'trips' for biological data
  - What makes a 'trip' varies by state and data source

Things to Keep in Mind

- What was the data/fleet structure in the last benchmark?
- Is my catch data in number or weight?
- Does my catch data include discard mortality?
- Does my length data include discarded fish?
- What are the units?
  - LBS or KG or **MT? CM** or MM?
  - Fork length or total length?
- What column name do I use?!??!