After a survey, the following data will have been collected:

|  |  |  |
| --- | --- | --- |
| **Data** | **Data/Program(s) Needed** | **Where it goes** |
| Plankton Tow Data | Excel, Ruskin RBR | Source Data > planktonsamplingData.csv |
| CTD Cast | YSI Castaway CTD | Source Data > CTD\_Raw.csv |
| Tagging Reports | Tagger Logs | Source Data > Tagging\_Raw.csv |
| SSB Estimates from Jenna  (Time delayed) | Echoview output | Main Data > SSB Estimates.csv |

**Plankton Tow Data**

For the plankton data, fill in as much of the spreadsheet as possible. Some data needs to be entered exactly as formatted, e.g. “SB” and not “Scots Bay” for Ground. See the Appendix for a description of each column, if needed.

**CTD Cast**

For the CTD data, export the cast data as a .csv file using the YSI Castaway CTD software (see Appendix for steps). Open this file and copy and paste the raw data (without the column headers) into the CTD\_Raw.csv file. Be sure to add in the other columns in the datasheet manually as needed, these are: id, ground, plankton\_ID, Date, Lat, Lon, Year, Survey.

**Tagging Reports**

Important: the columns ‘Julian’, ‘Year’, and ‘Tag\_Annual’ are added later by the R script and can be ignored. All other columns should be manually entered from each tagger’s log. Ground should be fully spelled out as “Scots Bay”, “German Bank”, or “Other”. “CTD” is the CTD id name from the .csv file name.

**SSB Estimates**

**APPENDIX**

**Plankton Tow Data Columns**

Ground – “SB” or “GB” for Scots Bay or German Bank, respectively.

id – the ID tag given to the plankton tows, there should be two per survey barring weather and/or equipment issues. Format is SB2023-01 for tow 1, SB2023-02 for tow 2 from the same survey. If any tow has more than one jar, it still falls under that tow label (e.g. if tow SB2023-02 has two jars they are both under the -02 tow).

Survey.No – the survey number for this ground for this year.

Date – Date of the survey in DD/MM/YYYY format.

StartTime – the time that the survey was scheduled to start in the survey plans.

Sample – whether fishing was completed (“Y”) after the survey or not (“N”). Filling this in will be time delayed as it may take a few days after the survey for fishing to occur, but if you know that fishing happened for certain it can be added immediately.

Vessel.No – number of vessels attending the survey.

ExtraBox – for Scots Bay surveys only, whether the North or East extra boxes were assigned to any vessels for the survey. Answers are “No”, “Both”, “East”, or “North”.

EVessel – if a vessel was assigned to the East box, list the full name of the vessel here.

NVessel – if a vessel was assigned to the North box, list the full name of the vessel here.

PlanktonVessel – the vessel that the plankton tows were conducted on.

No\_jars – number of jars associated with each individual tow.

Lon1, Lat1 – the lat/lon coordinates for the start of the tow.

Lon2, Lat2 – the lat/lon coordinates for the end of the tow.

Time1 – time when the tow was started.

Time 2 – time when the tow was ended.

TowTime – total duration of the tow (or difference between the tow end and start times).

Gear – diameter of the netting used, should be defaulted to “1/500” for the 1/500um netting.

Net – diameter of the metal ring used, should be defaulted to “1” for the 1m ring.

SurfaceTemp – no longer used, previously taken from the wheelhouse sensors.

AirTemp – outside air temperature during the tow, can be taken from any weather forecast for the area.

WaterDepth1/2 – no longer used, previously taken from the wheelhouse sensors.

TowType – type of tow conducted, should be defaulted to “Surface Tow”.

Speed – speed of the vessel during the tows, in knots. Generally recorded by the captain.

Heading – heading of the vessel during the tows, in degrees. Generally recorded by the captain.

TideDirection – whether the vessel was “with” or “against” the tide during the plankton tows. Normally one tow with be with, and one will be against the tide.

AvgTowDepth -

**CTD Cast Data Columns**

id – ID of the CTD cast, can be found in the file name of the exported CTD .csv

Pressure, Depth, Temperature, Conductivity, Specific\_conductance, Salinity, Sound\_velocity, Density – all of these columns are added from the raw CTD data (pasted in) and not added manually.

Ground – ground that the CTD cast was taken on, generally “Scots Bay” or “German Bank” spelled out fully.

Plankton\_ID – id of the associated plankton tow(s).

Date – Date of the CTD cast.

Lat/Lon – Location of the CTD cast, generally given directly by the device assuming GPS satellites are in range. If GPS can not be found in a reasonable time frame, Lat/Lon from the wheelhouse can also manually be added.

Year – Year of the CTD cast.

Survey – survey number for the current year that the CTD cast occurred.