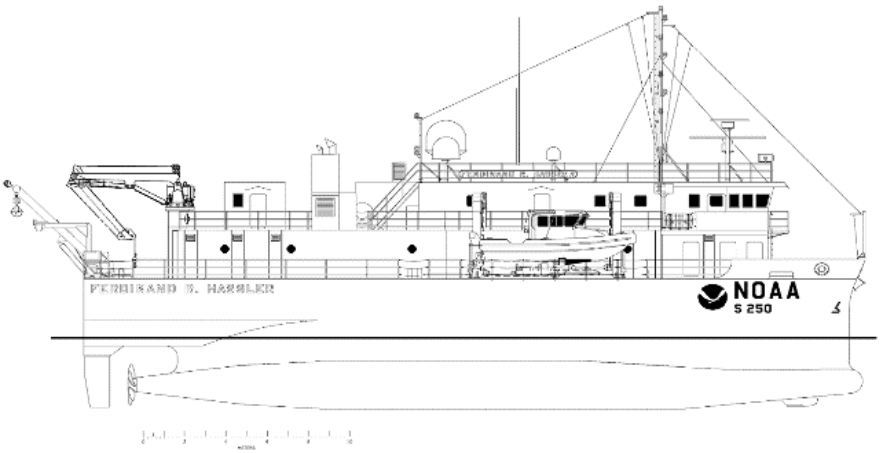
Daily Survey Statistics for Operations Officer

Standard
Operating
Procedure



REVISION HISTORY			
REV	**Description of Change**	**Editor**	**Effective Date**
1	Initial release	PS Amanda Finn	03/29/2022

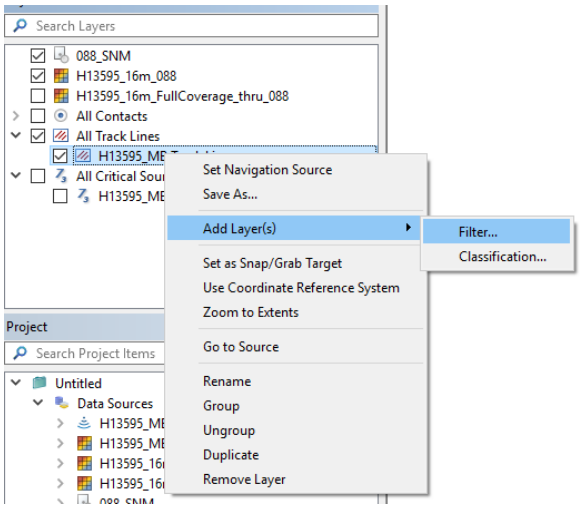
Contents

Overview

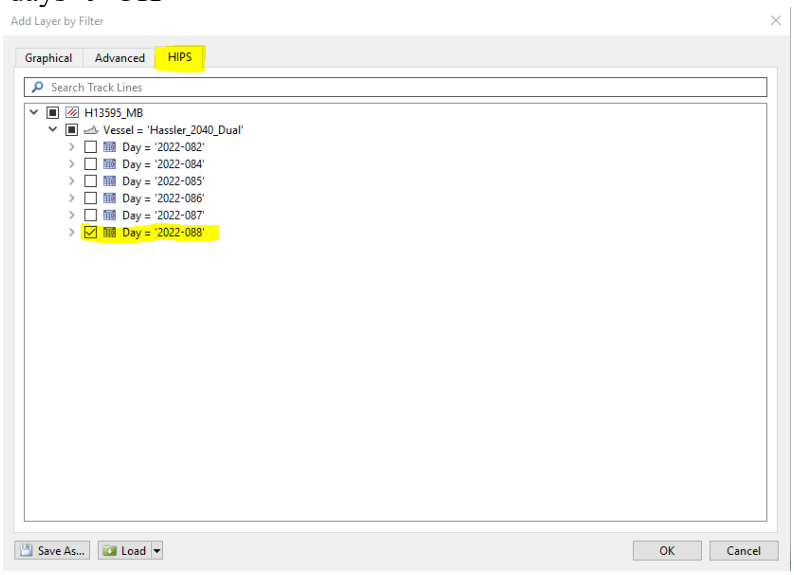
This SOP outlines the steps required to produce the daily statistics for each survey day: linear nautical miles (LNM), square nautical miles (SNM), and number of CTD/MVP casts. These statistics can be retrieved at the end of Charlene processing each day.

Calculate Linear Nautical Miles

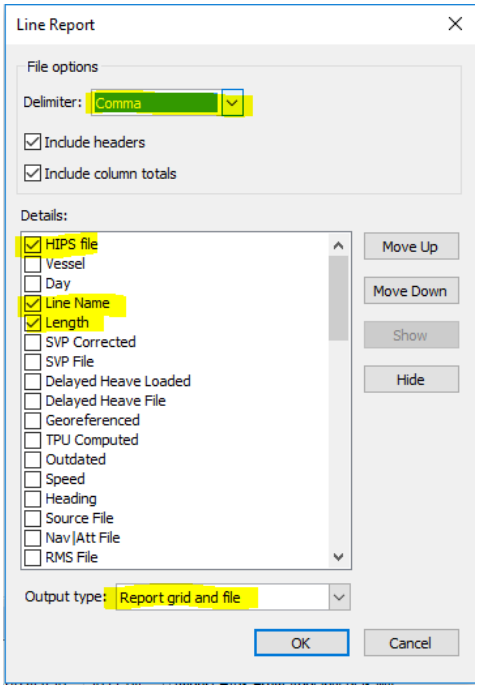
1. Open the survey's HIPS project in Caris
2. In the "Layers" window, right-click on the "HXXXX_MB Track Lines" child layer → Add Layer(s) → Filter



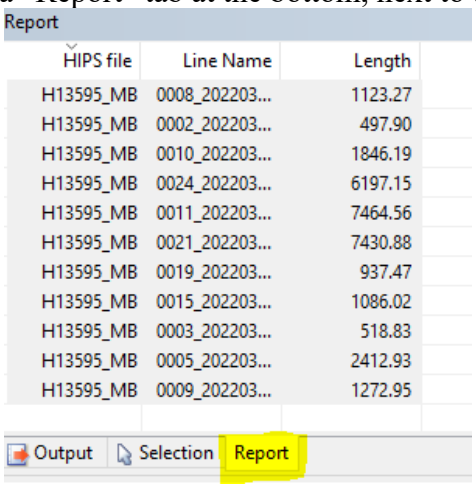
3. Select the "HIPS" tab
4. Uncheck all other days → OK



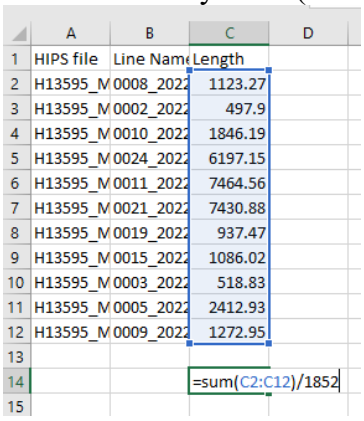
5. Double-click on your new layer to rename it after the day number
6. Select the layer → Ctrl+A (or "Select All")
7. Tools → Report → Line



8. Match these parameters. De-select everything except "HIPS file," "Line Name," and "Length." → OK
9. Once it runs, CARIS will display a "Report" tab at the bottom, next to the Output and Selection tabs



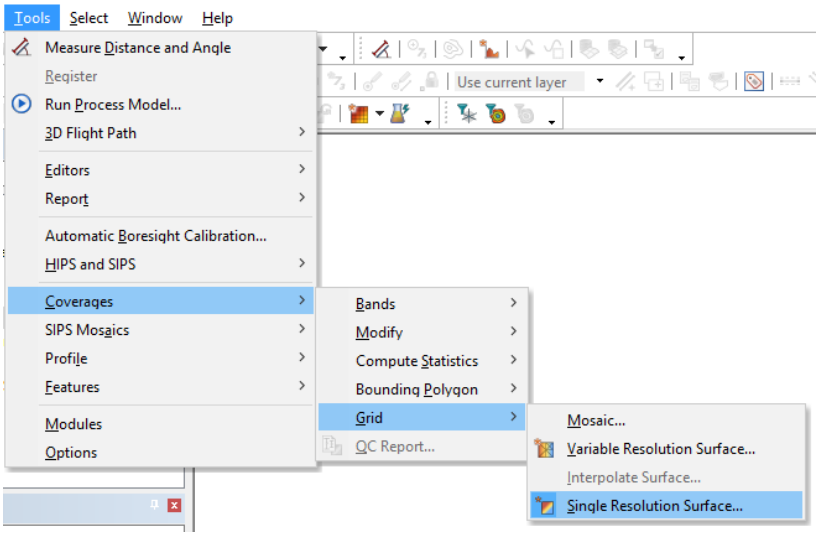
10. Manually select all the lines → Right-click → Copy
11. Open an excel spreadsheet → Paste the data into excel
12. Calculate the SUM of all the line lengths and divide by 1852 (this converts meters into nautical miles)



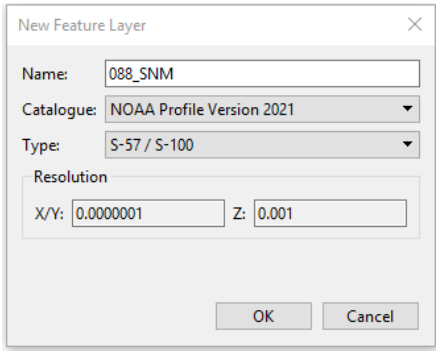
13. Document this number for the Operations officer

Calculate Square Nautical Miles

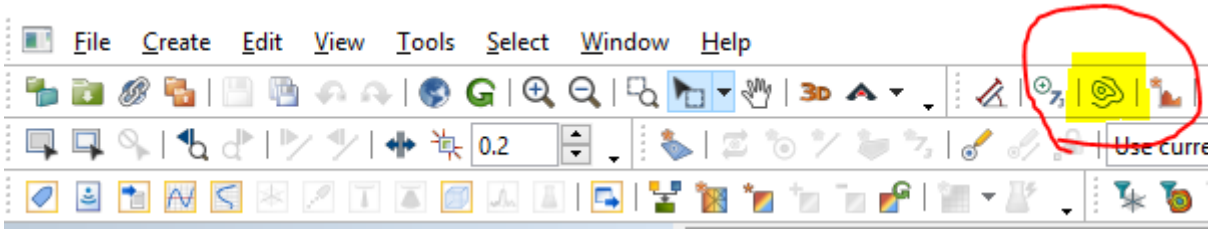
1. Select your day number layer in CARIS
2. Create a coarse resolution surface (8m, 16m, etc)



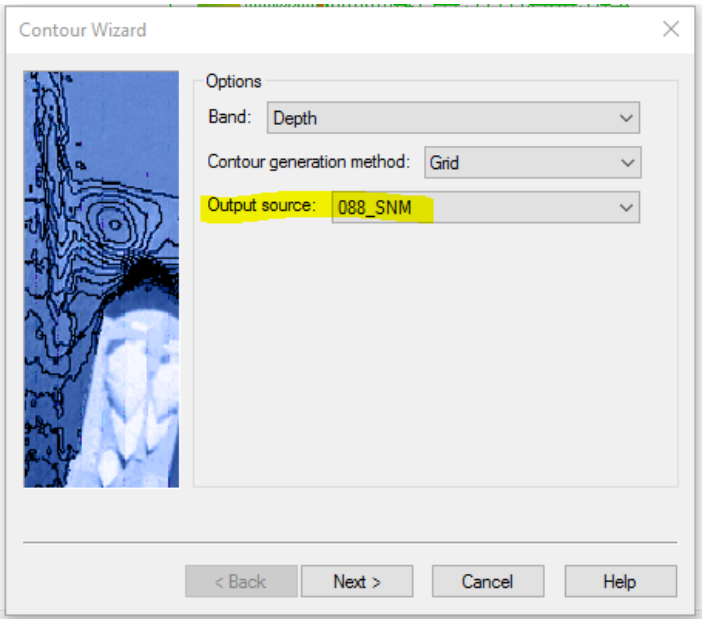
3. Create a new Feature Layer and name it “DDD_SNM”
    a. File → New → Feature Layer



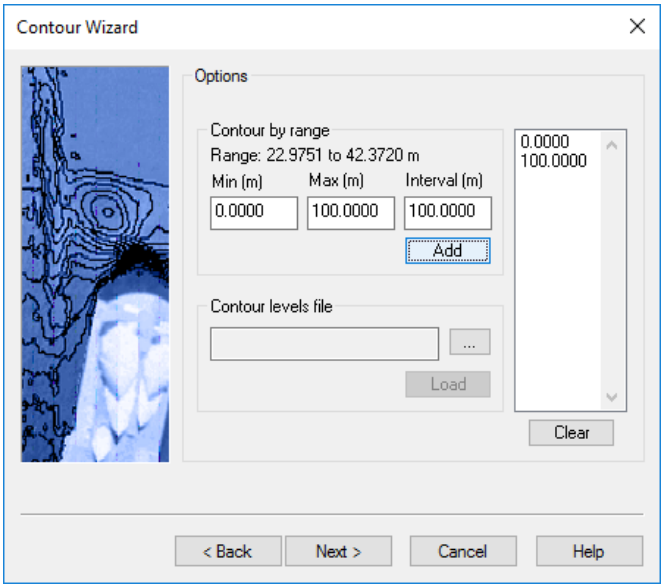
4. Select your surface in the “Layers” Tab
5. Select the “Contour” button at the top of the toolbar



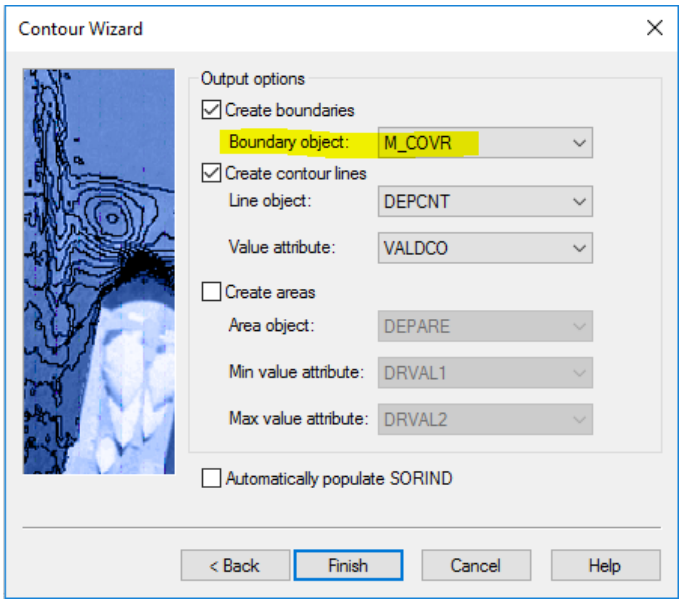
6. Set “Output Source” to your DDD_SNM Feature Layer
    a. Click Next



7. Set you Min and Max depths to numbers far outside your survey grid's depth range
    a. Set the interval to a very large number → Click "Add"
    b. Click Next



8. Match these settings. You should only have to change "Boundary object" to "M_COVR"
    a. Click Finish



9. When CARIS is done processing, select your "DDD_SNM" feature layer
    a. "Select All" or Ctrl+A
    b. In "Selection" tab at bottom of screen, add of the area of all the M_COVR objects (you may have more than one)
    c. Ignore any that have 0.00 for the Area
    d. If you do NOT see a column labeled "Area":
        i. Right-click on the column headers → More… → Check "Area" → OK
    e. You can also copy this into excel and add the column

Selection

Feature ID	Acronym	Name	Geometry	Latitude	Longitude	Depth	Object Ty...	Area
	M_COVR	Coverage	Area				Meta	0.02
	M_COVR	Coverage	Area				Meta	0.02
	M_COVR	Coverage	Area				Meta	0.03
	M_COVR	Coverage	Area				Meta	0.03
	M_COVR	Coverage	Area				Meta	0.03
	M_COVR	Coverage	Area				Meta	0.04
	M_COVR	Coverage	Area				Meta	0.05
	M_COVR	Coverage	Area				Meta	0.05
	M_COVR	Coverage	Area				Meta	0.05

Output | Selection | Report

10. And voilá!

Retrieve Number of Casts

There are several ways to do this:

1. Go to your desired day number in the Proc drive:
    a. Ex) *S:\2022\OPR-F364-FH-22\H13594\Processed\SVP\Hassler_2040_Dual\SVP\2022-084*
    b. The number of files in this folder indicate how many casts were taken.
2. Alternatively, open up the day number's acquisition log:
    a. Ex) *S:\2022\OPR-F364-FH-22\H13594\Processed\Reports\Survey\Acquisition_Processing_Logs\Acquisition_Logs\Hassler_2040_Dual\2022-084*
    b. And check in the Acquisition Log's MVP/CTD cast section how many were taken that day