1. Log on to your AISAP account
2. Go to **Data Requests** drop down menu, select **Query Tool**
3. On the **Query Tool** page, find the line that says "**Which Vessels?**". →
   You will see that the "All MMSIs" option is checked by default.
4. Check the box for "Selected MMSIs".

If you know the vessel or vessels MMSI you can enter them in the MMSI List field, separated with commas. What if we don't know the MMSI for the vessel we want to find? Continue to Step 5.

5. Click on the **Magnifying Glass Icon** next to the **MMSI List** field, a pop-up window named **Vessel Search** will appear.

6. You can search using partial records in any of the Name, Call Sign, or IMO number fields.

   For example, searching on the word <u>north</u> in the **Name** field will return records for any and all vessels with the word <u>north</u> anywhere in the name. →

7. For this exercise type the word '<u>oberstar</u>' in the **Name** field then click the **Find Vessels(s)** button.

8. You should see two records for vessels with this word in their name.

9. Click on the green plus sign next to the top one, MMSI 366904890, to the **MMSI List** field for your query. Click **OK**.

10. Set your query **Start time** to October 1, 2018 00:00:00

11. Set the query **End Time** to October 5, 2018 00:00:00.
12. Set **Sampling Rate** to 5 minutes.
13. Enter a **Request Description**, such as "HON JL Oberstar, MMSI 36690489- 1-5Oct2018, 5min."

14. Check **Include KML Track Lines?** box, then click the **Submit Request** button.
15. Check your email to confirm that the request has been submitted to the USCG archive. Note the **Request Number** listed in your email, you'll need it later, it is also called the **Request ID**.
    This query is pretty small, it should return quickly. (in testing it took less than 1 minute)
16. Once you receive an email that the request is complete, return to AISAP.
17. Check if the data is ready in the AISAP library, there is a lag between the data being retrieved from USCG and when it is ready to use in AISAP.
18. Go to **Data Requests** -> **Request Status Lookup** -> make sure your email is in the email field and click on **Check Request Status**. For your request ID, look for the "AISAP Ready" field value. Does it say **true**? If not, wait a few minutes and click on Check Request Status again.
19. Create a new **Project** for this exercise, name it **AISAP Training-individual vessel-Oberstar**. Save it by clicking on the blue floppy disc icon.
20. We know that the Oberstar request is now in the AISAP library, so you want to add that data to your Project.
21. Do you remember which icon to use? (*hint: writing utensil*)
22. This will bring to you the **Find Previous Requests** page.
23. Use the Request Number from your email in the **Request ID** field. If you are still waiting for your email and want to proceed use **AISAP-USACE Request ID 105230** or **AISAP-Cloud Request 78292**.

24. Click on **Retrieve Data** button. The page will refresh. Scroll down on the left screen panel to see the results.

25. **Check the box** next to the result to select this data source.

26. Click the **Add** button to add this data source to your project. You will be redirected back to your project page.

27. Now we face a dilemma. We have vessel reports, but we don't know exactly where to draw our AOI to visualize the vessel tracks. There are three different ways to proceed.

Find Previous Requests

Search for completed requests that are available for use in AISAP. If no requests are found based on the criteria you submit, broaden your search or select the Query Tool link from the Data Requests menu above to retrieve data from the NAIS archive.

| Clear Map | Draw Area |

Request ID: 105230

Requests

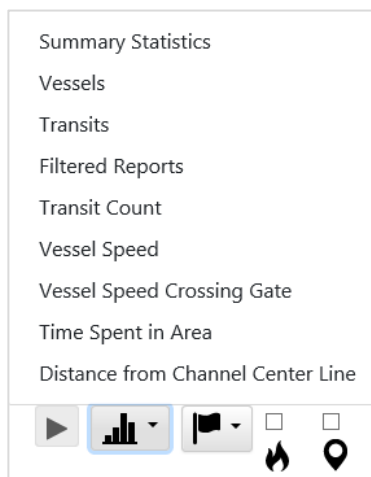Current Project: AISAP training-individ vessel-Oberstar

Current Source:

This project has no data source.
Select the desired requests and click **Add**.

| Add |
| Clear All |
| Done |

ID	Description	MMSI	Start Time	End Time	Num Recs
☑ 78292	HON JL Oberstar, MMSI 366904890, 1-5Oct2018, 5min. AISAP training	366904890	2018-10-01T00:00:00	2018-10-05T00:00:00	1152

Option 1 - Finding a vessel by drawing a really large AOI

28. Given that Oberstar was a congressman from MN there is probably a Great Lakes connection, so draw an AOI that covers the Great Lakes.
29. Proceed to the **Analysis** tab, click the **Play button icon** in the yellow row to process the data. This should take less than 1 minute.
30. Refresh the AOI by clicking on the **Check status button.**

31. On the **Analysis** tab, click the **Flag icon** and select **Show All Transits**. You should get a map like this -→

32. If you don't want to see the shadow of the AOI boundary you can turn it off. Go to the **Edit AOIs** tab, then underline uncheck the **AOIs** box in the light blue row.

33. Click on the S**tatistics icon** and select **Vessels**.

Summary Statistics

Vessels

Transits

Filtered Reports

Transit Count

Vessel Speed

Vessel Speed Crossing Gate

Time Spent in Area

Distance from Channel Center Line

34. A new tab called 'Vessels in AOI' will open.

35. QUESTION: What were the vessel dimensions?_____

36. QUESTION: Why might the vessel track line be broken up in the St Marys River?_____

37. How do these interrupted track lines affect the transit count for this AOI? _____

AISAP records should always be examined carefully, there may be underlying technical issues (such as coverage gaps, or vessel drafts set to 0 ft) that skew results. You may need to process results to get rid of outliers or clearly erroneous records.

Option 2 – Find a vessel by looking at the KML file in Google Earth

38. Glance back at step 24 to refresh your memory -- we have vessel position reports for a vessel, but we don't know where it was operating. You saw the 'draw a giant AOI' option above, but AISAP has another option that will work if you have Google Earth installed on your machine.

39. On the **Data Requests** drop-down menu select **Query Tool**.

40. Scroll down to the section named **Download Files**.

41. Enter your query **Request ID** and click on **VesselTrackLines.zip** For this exercise use your own request number, or AISAP-USACE Request ID 105230 , or AISAP-Cloud Request ID 78292.

42. You'll be prompted to Open or Save the .zip file
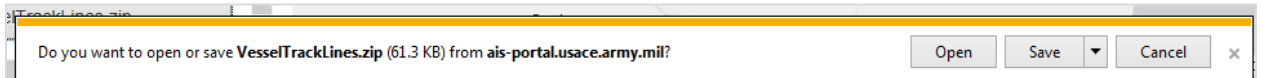
43. Click **Save As** and select your Desktop as the Save location

44. After the file saves, click **Open**.

45. The Zip file extractor window will appear, select all the records **(Ctrl+A)** and hit **Extract.**

46. You will prompted to select an extraction location, select your Desktop.


HON JAMES L OBERSTA...

47. Click on the icon for HON JAMES L. OBERSTAR to open it in Google Earth. You should see a track line with a triangle-shape icon representing the vessel at the start of the query time.   →

Note the triangular icons for each vessel track may be hard to discern against the satellite imagery, especially when the randomly chosen color of the line is blue!

Viewing animations in Google Earth

48. In the upper left corner of your screen you will see the animation controls for Google Earth.
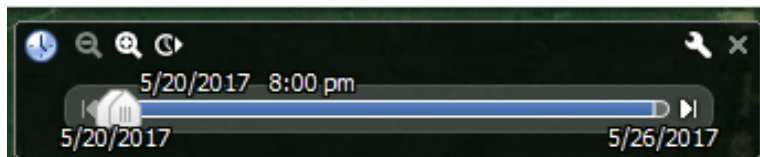
49. The play button is the circle with the right-facing arrow.   In order to see longer 'trails' for the vessel tracks separate the two time sliders, the greater the distance the longer the 'trail' will be. We have a separate exercise on this topic later in the day where we learn more about Google Earth.

Option 3 – Find your vessel using Voyage.csv and Report.csv Files

The request voyage file is a csv file containing a list of the vessels returned in the AIS data request and attributes such as vessel draft. NOTE these fields are hand entered by the vessel operators so may contain errors. The design draft is usually used as the draft entry. The **Report.csv** file is a csv file listing the time-stamped position reports for each vessel. If you are a GIS person this might be most useful to you!

Download Files

After a submitted request is **complete**, the files listed below will be available. To verify that the request is complete, select the Request Status Lookup link under the Data Requests menu.

Enter the associated request number to download the desired files.

Request Number

> 78292

[Reload Request Parameters]

[Voyage.csv]

[Report.csv]

[VesselTrackLines.zip]

50. Go to **Data Requests** -> **Query Tool**. Scroll down to the section **Download Files**.

51. Enter your **Request Number** in the field or use or AISAP-USACE Request ID 105230, or AISAP-Cloud Request ID 78292.

52. Click on "**Voyage.csv**" and then open the file in Excel.

53. How many vessels are listed? _____
54. What are the ship type(s)? _____

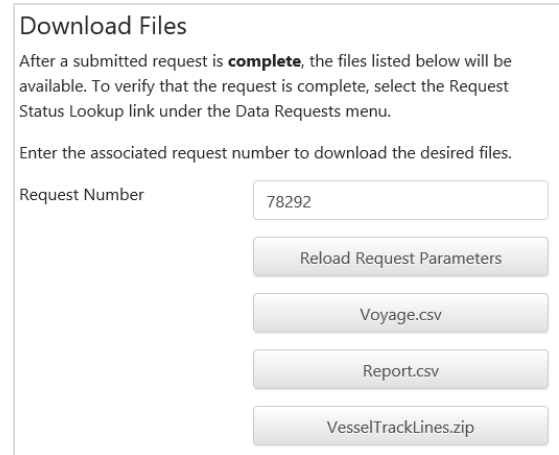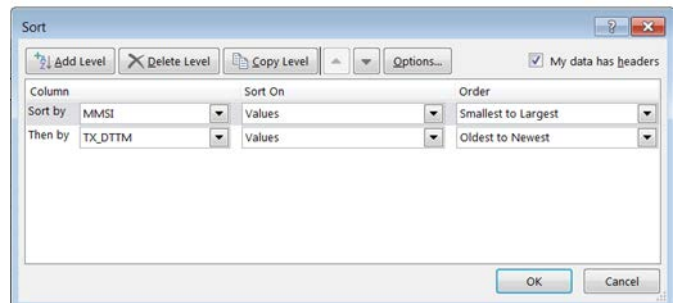55. Close the Voyage.csv file, return to AISAP **Download Files** screen.

56. Using the same **Request Number**, click on "**Report.csv**" button, and then open the file in Excel.

57. Sort the file by **TX_DTTM** (the date/time field) (oldest to newest). →

    If you are unfamiliar with sorting records in excel raise your hand and the instructor will show you.

58. Could the data in this format be useful for your work? _____

59. Select one of the lat/lon pairs in an MMSI record and conduct a google search on it to see the location of the position reports. From there you can determine where a vessel was at a given time, which could help you draw your AOI back in AISAP.

End of Exercise.