

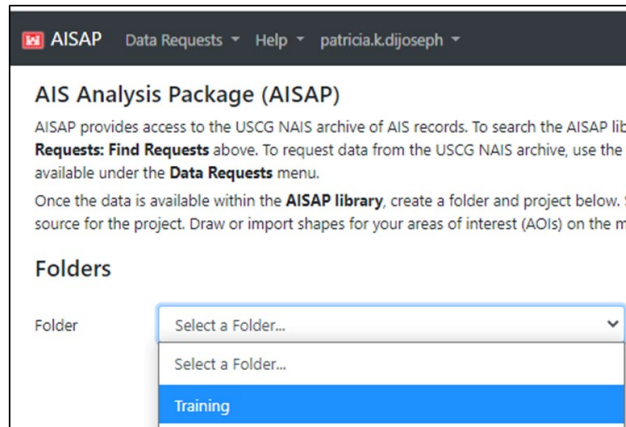
Before Starting: • You need an AISAP account with a username and password.

• You need to complete Exercises 1, 2, and 3.

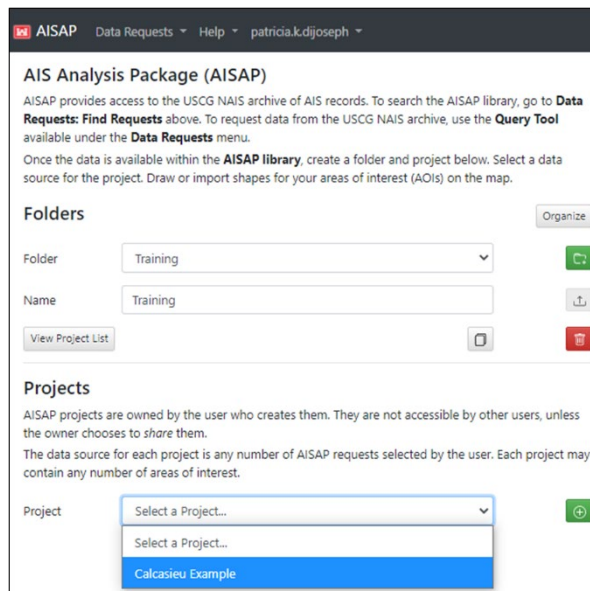
Exercise Goal: Learn how to access heat maps, vessel track lines, and vessel statistics in your project. There are questions listed along the way to help you explore the results. They are listed as **Q1**, **Q2**, etc.

Built-In Tools for Data Visualization and Quantitative Analysis

1. Log in to AISAP-Cloud https://aisap.usacegis.us/aisap_portal/home.html
2. Choose the **Folder** “Training” from the **Folder** dropdown menu that you created in Exercise 1.



3. Choose the **Project** “Calcasieu Example” from the **Project** dropdown menu that you created in Exercise 1.



4. Click on the **Analysis** tab. Make sure your AOI rows are **white**. If they are yellow or gray, see Step 12 of Exercise 2.

Areas of Interest

Edit AOIs Edit Vectors **Analysis** Vessel Tracks Edit Order

A yellow row indicates that the AOI is new or modified and requires processing. When ready, click the Process data button.

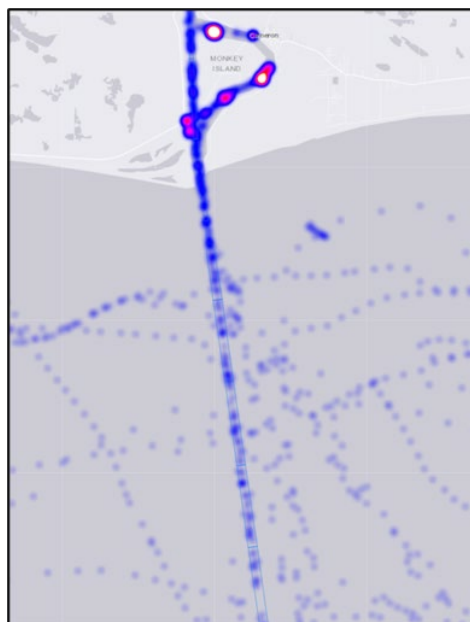
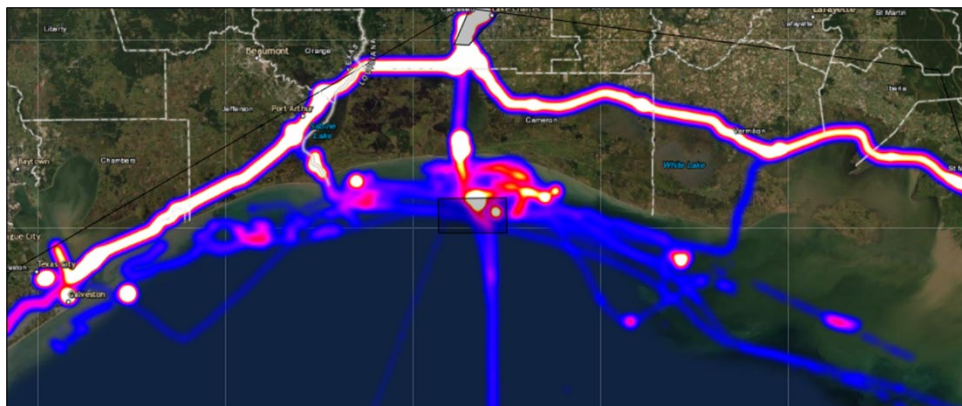
Select Files
Travel Times

	Name	Filters	Email?	Process	Results	Transits	Heat Map	Cluster
	Region							
	MidChannel							
	UpperSection							

5. In the AOI **Region** row, check the **Heat Map** selection.

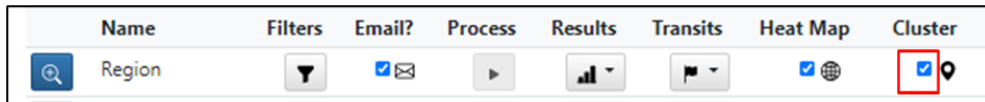
	Name	Filters	Email?	Process	Results	Transits	Heat Map	Cluster
	Region							

Explore the heat map, including zooming in and out.

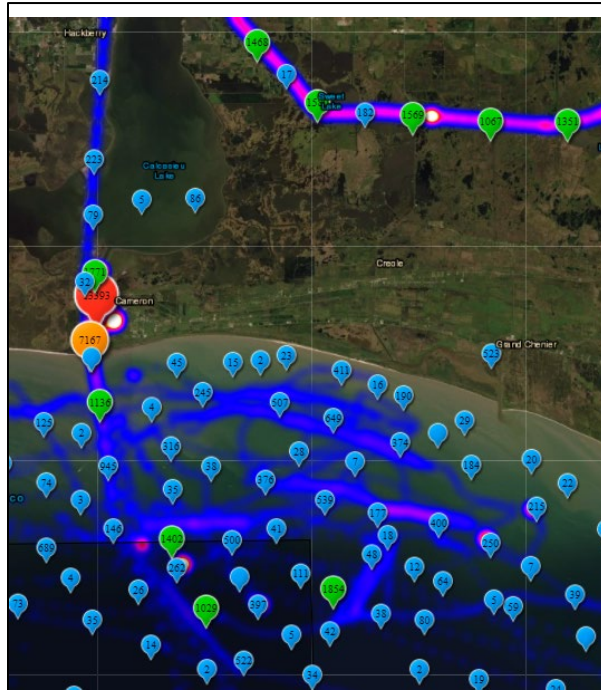


- Q1.** Do vessels just stay local?
- Q2.** Are vessels using the channel?
- Q3.** What can the bright spots tell you?

6. In the AOI **Region** row, check the **Cluster** selection.



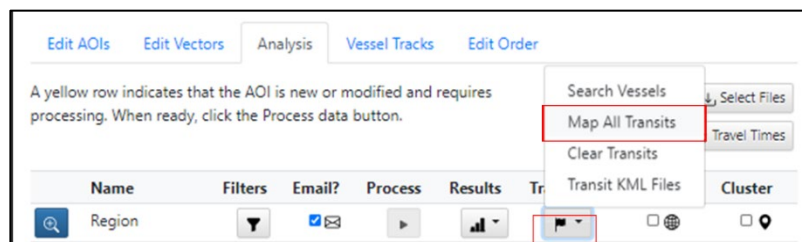
Explore the cluster map, including zooming in and out.



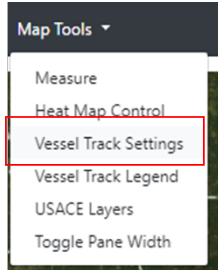
- Q4.** Where do you see the largest amount of AIS data?

- Q5.** What happens when you zoom in and out?

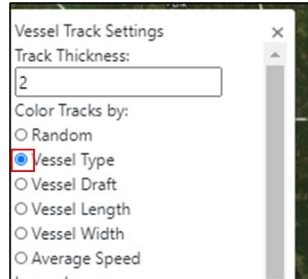
7. In the AOI **Region** row, uncheck the **Heat Map** and **Cluster** selections to turn off these layers.
8. In the AOI **Region** row, click on the Transits dropdown menu and select **Map All Transits**.



9. At the top of the screen, go to the **Map Tools** drop down menu, and select **Vessel Track Settings**.



10. A Vessel Track Settings popup box will open. Check the box next to Color Tracks by: **Vessel Type**.



11. At the bottom of the popup box click **Update**.

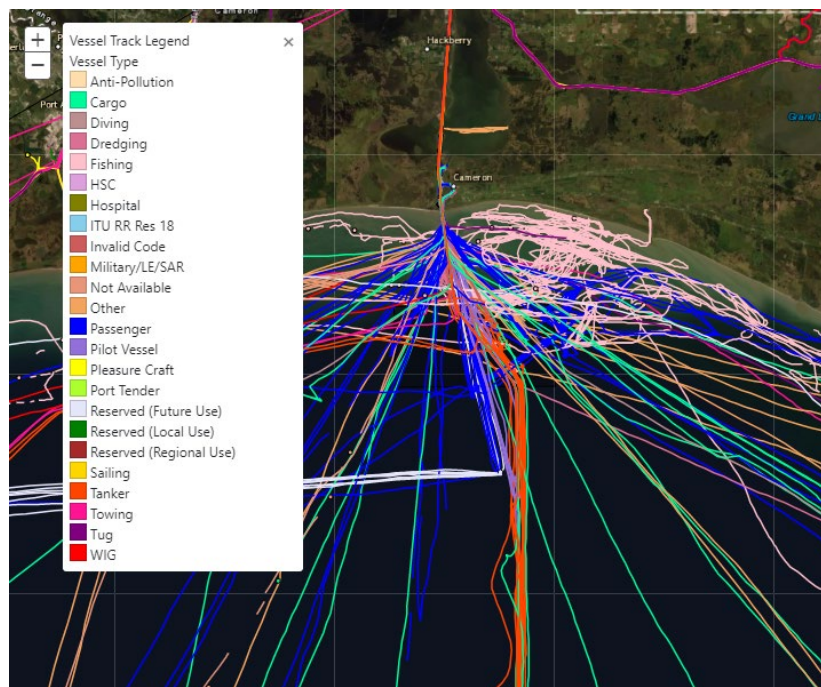
12. Click on the “X” at the top of the Popup box to close the Vessel Track Settings.



13. At the top of the screen, go to the **Map Tools** drop down menu, and select **Vessel Track Legend**.

A Vessel Track Legend popup box opens.

Explore the map, including zooming in and out.



Q6. Which vessel types do you see?

Q7. What happens when you zoom in closely and click on a vessel line?

Q8. How might the vessel tracks change if there was a shoal limiting channel navigation?

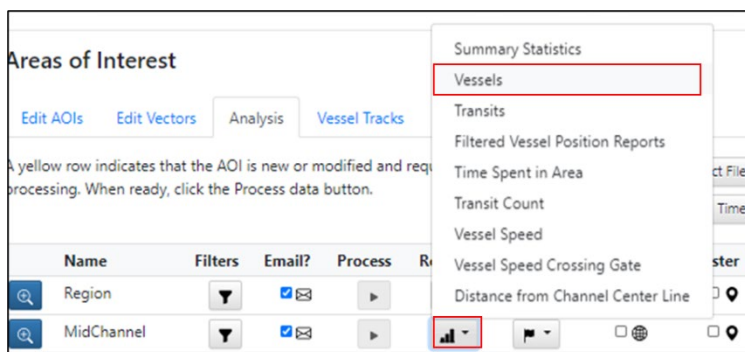
Q9. How can you apply vessel tracks in the situation where a vessel reports a grounding?

14. In the **Region** AOI row, click on the Transits dropdown menu and select **Clear Transits**.

15. Click on the “X” at the top of the Popup box to close the Vessel Track Legend.



16. In the AOI **MidChannel** row, click on the Results dropdown menu and select **Vessels**.



*A new tab opens **Calcasieu Example: MidChannel Vessels***

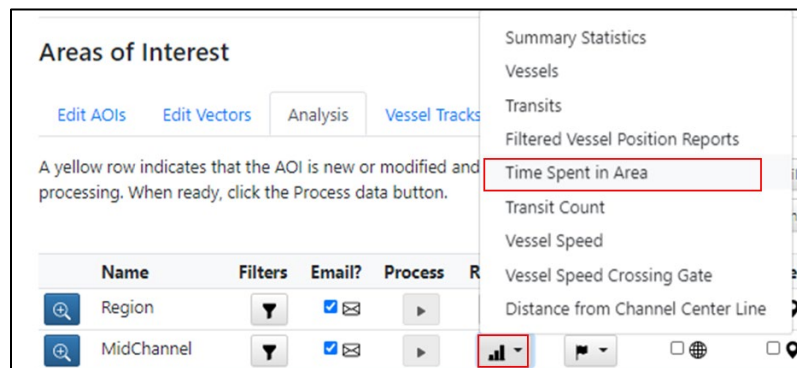
Calcasieu Example: MidChannel						
Vessels						
Vessels File						
MMSI	Vessel Name	Country	Vessel Type	Draft (ft.)	Length (ft.)	Width (ft.)
Q	Q	Q	Q	Q	Q	Q
564774000	EAGLE TACOMA	Singapore	Tanker	46.9	810.4	137.8
636015249	FPMC 28	Liberia	Tanker	38.1	603.7	105
538005778	NAVIG8 AXINITE	Marshall Islands	Tanker	38.7	603.7	88.6
538005991	NAVIG8 VIOLETTE	Marshall Islands	Tanker	34.1	600.4	105
369225000	PALMETTO STATE	United States	Tanker	36.4	610.2	105
538005322	RIDGEBURY ALEXANDR Z	Marshall Islands	Tanker	37.7	600.4	105
538004993	STENAWECO JULIA L	Marshall Islands	Tanker	36.1	600.4	105
319194000	STOLT TEAL	Cayman Islands	Tanker	15.1	367.5	62.3
235070466	VICTORIA KOSAN	United Kingdom	Tanker	20	377.3	59.1

Q10. Which vessel types do you see and why is it only Tankers?

Q11. What dimensions are the vessels self-reporting?

17. Close the tab when you are done exploring the results.

18. In the **MidChannel** AOI row, click on the Results dropdown menu and select **Time Spent in Area**.



A new tab opens **Calcasieu Example: MidChannel Time Spent in Area**

MMSI	Vessel Name	Country	Vessel Type	Draft (f...)	Length (f...	Width (ft.)	Previous Report	Start Time	Stop Time	Next Report	Dwell Time
Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
3692250...	PALMETTO STATE	United States	Tanker	36.4	610.2	105	5/3/2019 1:20:00 PM	5/3/2019 1:25:00 PM	5/3/2019 2:10:00 PM	5/3/2019 2:15:00 PM	0 00:45:00
2350704...	VICTORIA KOSAN	United Kingdom	Tanker	20	377.3	59.1	5/4/2019 10:15:00 A...	5/4/2019 10:20:00 A...	5/5/2019 4:50:00 A...	5/5/2019 4:55:00 A...	0 18:30:00
3191940...	STOLT TEAL	Cayman Islands	Tanker	15.1	367.5	62.3	5/3/2019 2:40:00 AM	5/3/2019 2:45:00 AM	5/3/2019 3:30:00 A...	5/3/2019 3:35:00 A...	0 00:45:00
6360152...	FPMC 28	Liberia	Tanker	38.1	603.7	105	5/2/2019 12:55:00 A...	5/2/2019 1:00:00 AM	5/2/2019 1:40:00 A...	5/2/2019 1:45:00 A...	0 00:40:00
5380057...	NAVIG8 AXINITE	Marshall Islands	Tanker	38.7	603.7	88.6	5/1/2019 12:20:00 A...	5/1/2019 12:25:00 A...	5/2/2019 1:50:00 A...	5/2/2019 1:55:00 A...	1 01:25:00
5380057...	NAVIG8 AXINITE	Marshall Islands	Tanker	38.7	603.7	88.6	5/3/2019 8:35:00 PM	5/3/2019 8:40:00 PM	5/3/2019 9:45:00 PM	5/3/2019 9:50:00 PM	0 01:05:00
5380053...	RIDGEBURY ALEXANDR...	Marshall Islands	Tanker	37.7	600.4	105	5/2/2019 6:25:00 PM	5/2/2019 6:30:00 PM	5/2/2019 7:10:00 PM	5/2/2019 7:15:00 PM	0 00:40:00
5380049...	STENAWECO JULIA L	Marshall Islands	Tanker	36.1	600.4	105	5/2/2019 11:35:00 A...	5/2/2019 11:40:00 A...	5/3/2019 9:30:00 PM	5/3/2019 9:35:00 PM	1 09:50:00
5380059...	NAVIG8 VIOLETTE	Marshall Islands	Tanker	34.1	600.4	105	5/5/2019 1:35:00 AM	5/5/2019 1:40:00 AM	5/5/2019 7:05:00 PM	5/5/2019 7:10:00 PM	0 17:25:00
5647740...	EAGLE TACOMA	Singapore	Tanker	46.9	810.4	137.8	5/1/2019 2:20:00 PM	5/1/2019 2:25:00 PM	5/1/2019 3:20:00 PM	5/1/2019 3:25:00 PM	0 00:55:00

Q12. What vessel has the longest dwell time?

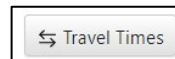
Q13. Why would tankers be dwelling in the AOI location?

Q14. Do you think dwell time would be affected by a shoal (e.g., would vessels have to wait longer at anchorage if there's a shoal)?

Q15. How would you go about conducting a before-and-after dwell time study?

19. Close the tab when you are done exploring the results.

20. In the Areas of Interest section, click on the **Travel Times** button.



A new tab opens **Calcasieu Example**.

So You Think You Got A Shoal: AISAP – Exercise 4 – Built-In Tools for Data Visualization and Quantitative Analysis

21. Select the for **MidChannel** and **UpperSection**.

Calcasieu Example

Select AOIs and click **Calculate** to determine travel times

☐ Region

☒ MidChannel

☒ UpperSection

Calculate

Travel Times

Download Travel Time File

MMSI	Vessel Name

22. Click the **Calculate** button.

Calculate

Travel Times						
 Travel Time File						
MMSI	Vessel Name	Previous Area Name	Leaving	Area Name	Arriving	Travel Time
Q	Q	Q	Q	Q	Q	Q
369225000	PALMETTO STATE	UpperSection	5/3/2019 9:55:00 AM	MidChannel	5/3/2019 1:25:00 PM	0 03:30:00
235070466	VICTORIA KOSAN	MidChannel	5/5/2019 4:50:00 AM	UpperSection	5/5/2019 7:25:00 AM	0 02:35:00
319194000	STOLT TEAL	UpperSection	5/2/2019 11:55:00 PM	MidChannel	5/3/2019 2:50:00 AM	0 02:55:00
636015249	FPMC 28	UpperSection	5/1/2019 9:15:00 PM	MidChannel	5/2/2019 1:00:00 AM	0 03:45:00
538005778	NAVIG8 AXINITE	MidChannel	5/2/2019 1:50:00 AM	UpperSection	5/2/2019 5:00:00 AM	0 03:10:00
538005778	NAVIG8 AXINITE	UpperSection	5/3/2019 5:35:00 PM	MidChannel	5/3/2019 8:45:00 PM	0 03:10:00
538005322	RIDGEBURY ALEXANDR Z	UpperSection	5/2/2019 3:10:00 PM	MidChannel	5/2/2019 6:35:00 PM	0 03:25:00
538004993	STENAWECO JULIA L	MidChannel	5/3/2019 9:25:00 PM	UpperSection	5/4/2019 12:30:00 AM	0 03:05:00
538005991	NAVIG8 VIOLETTE	MidChannel	5/5/2019 7:00:00 PM	UpperSection	5/5/2019 10:10:00 PM	0 03:10:00
564774000	EAGLE TACOMA	UpperSection	5/1/2019 11:20:00 AM	MidChannel	5/1/2019 2:25:00 PM	0 03:05:00

Q16. What does the travel time represent?

Q17. What vessel has the longest travel time?

Q18. Do you think a shoal would affect travel times?

Q19. How would you go about determining if the presence of a dredge affects travel time?

23. Close the tab when you are done exploring the results.

Q20. How could these built-in tools be useful for your projects or studies?

End of Exercise 4.