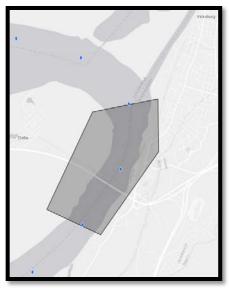
Before Starting: Users should know how to create a project and add data to it.

Exercise Goal: Learn how to determine when, and for how long, vessels transited or dwelled within a user-defined area, set direction of travel filter, and use the heat maps built-in function.

For this exercise, we'll examine tow boat traffic near the Vicksburg Bridge on the Lower Mississippi River.

- 1. Log on to your AISAP account.
- 2. Create a new project named **"AISAP Training Vicksburg Bridge"**. Save it by clicking on the blue floppy disc icon.
- 3. Add a data source. Do you remember which icon to use? (*hint: writing utensil*) This will bring to you the **Find Previous Requests** page.
- 4. In the **Request ID** field, enter **105606** for the AISAP-USACE site.
- 5. Click on the **Retrieve Data** button. The page will refresh. Scroll down on the left screen panel to see the results. What location and time period is the data for?
- 6. Check the box next to the correct Request ID to select this data source.
- 7. Click the **Add** button to add this data source to your project. You will be redirected back to your project page.
- Add an AOI at Vicksburg, from river mile 435 to river mile 437 (Hint: Turn on Map Tools → USACE layers → River Mile Markers). Name it "Vicksburg_bridge" and click on the blue save icon next to the name.
- 9. Let's filter the AOI so we only see results for tow boats. Proceed to the **Analysis** tab, and click on the Set Filters Icon.





10. A pop up Set Filters box will open. Proceed to the **Filters tab**, scroll down to **Vessel Types**, and select **Towing**. Click on **Apply Changes**. You will be brought back to your project screen.

Set Filters for Vicksbur	g_bridge	×
Settings Filters MMSI		
Specific Direction	Inbound	•
Remove Parked Vessel Reports	0	knots
Vessel Types	Pleasure Craft Port Tender Reserved (Future Use) Reserved (Local Use) Reserved (Regional Use) Sailing Tanker Towing Tug WIG	• •
4		•
	Apply Changes	Cancel

- 11. In the Analysis tab, click the Play button icon in the yellow row to process the data.
- 12. You will receive an email when processing is complete. If your AOI row is still grayed out, click on

the refresh button.

Heat Map

13. Turn on the heat map for your AOI by clicking on the **flame** icon.

Areas o	f Interest						
	AOIs are being pr complete, click th				nd determin	e whether	Q
Edit AOIs	Edit Vectors	Analysis	Vessel 1	Tracks			
	indicates that the /hen ready, click t				equires	#	
Na	ime						
Q Via	ksburg_bridge	Y	×		<u>ч</u> н -	- "	∞ ♦ = O

- 14. What happens as you zoom in and out? ____
- 15. Turn on the point cluster map for your AOI by clicking on the **bubble** icon. What happens as you zoom in and out?



16. Unclick the flame and bubble icon to turn off the heat map and point cluster map.

- 17. Now let's see what vessels were in our area of interest. On the Analysis tab, click on the Statistics
 - icon and select Time Spent in Area.
- 18. A new tab called 'Time Spent in Area' will open.
- 19. Click on the Export Data to CSV File icon

located in the top right corner.

- 20. How many vessels were recorded in the area?_____
- 21. Bonus question: What is the average vessel dwell time?_____
- 22. Which vessel had the longest dwell time?_____

Finding a Vessel's Track Line

- 23. Let's look at the vessel track for **Scout**, which had the longest dwell time, so that we can investigate what it was doing.
- 24. Go back into your AISAP project.
- 25. Go to the Vessel Tracks tab, in the Select an AOI field select "Vicksburg bridge".
- 26. In the Name field, type "Scout". A record for SCOUT should appear.

Area	s of Interest	i i							
Edit AC	Dis Edit Vector	s Analys	sis Vessel Trac	ks					
Vicksbu	Vicksburg_bridge2								
Vessels	Vessels Get Transits								
	MMSI	Name	Vessel Type	Draft (ft.)	Length (ft.)	Width (ft.)			
	Q	Q Scout	Q	Q	Q	Q			
	367402890	SCOUT	Towing	0	45.9	19.7			
		1		1	1				

- 27. Check the box to the left of the record, and then click on Get Transits.
- 28. We see that Scout made two transits (scroll down if needed). Click on the magnifiying glass next to **Transit 2**, or the transit that has a start date of 12.30.18 and and end date of 1.1.19. A transit track will appear on your map.
- 29. What can you infer from the transit track?_____
- 30. Clear the track by going to the AnalysisTab, selecting the flag icon to the right of our AOI, and selecting Clear Transits.

	Ols Edit Vecto	ors Anal	ysis Ve	essel Track	s				
Vicksb	urg_bridge2								
/essels							Get Tr	ansits	
\checkmark	MMSI	Name	Vessel Ty	/pe	Draft (ft.)		ength (ft.)	Wid	ith (ft.
	Q	Q. Scout	Q		Q	Q		Q	
~	367402890	SCOUT	Towing		0		45.9		19.
ransits	MMSI	Name	Transit	Start D	Date	Er	Map T	ransits	1
Q	367402890	SCOUT	2	2018-12-30T22:55:00		20	019-01-01T	23:55:00	
~									

Adding a Directional Filter

- 31. Let's study only downstream traffic (i.e., vessels heading south).
- 32. Go to the Edit Vectors tab and click on the add inbound vector button (up arrow).
- 33. On the map, click within your AOI, and drag your mouse south to draw an arrow that points downbound. To edit the arrow, double click on it.

Areas o	Edit Vectors Analysis Ves	sel Tracks		
2) On the ma drag to draw	lesired button. Ip in the highlighted AOI, click and	To add curves to a cl button to enable edi - Drag a vertex to m - Right-click to delet - Drag a ghost verte	ting. ove it to a ne e a vertex.	w location.
	Name	€ ♠	₽V	₽C
ଷ	Vicksburg_bridge2		v	C

- 34. Proceed to the **Analysis** tab, and click on the **Set Filters Icon**.
- 35. A pop up Set Filters box will open.
 Proceed to the Filters tab, scroll down to
 Specific Direction, and select Inbound (in this tool, Inbound refers to the direction of the arrow, Outbound refers to the opposite direction of the arrow).
 Click on Apply Changes. You will be brought back to your project screen.
- 36. Bonus Question: If you had chosen Specific Direction Outbound, what direction of travel would you have set for the filter?

Set Filters for Vicksburg	g_bridge2		×
Settings Filters MMSI			
Minimum Beam	Inclusive 5		feet 🔺
Maximum Beam	Inclusive 25		feet
Minimum Length	Inclusive 5		feet
Maximum Length	Inclusive 25		feet
✓ Specific Direction	Inbound		Ţ
Remove Parked Vessel Reports	0		knots
Vessel Types	Pleasure Craft Port Tondor		* .
			,
		Apply Chang	les Cancel

- 37. In the **Analysis** tab, click the **Play button icon** in the yellow row to process the data. You will receive an email when processing is complete. If your AOI row is still grayed out, click on the refresh button.
- 38. Turn on **Show All Transits** (Click on the **Flag Icon** and select **Show All Transits**) to see the downbound tracks.
- 39. Bonus Question: How many transits were downbound?

End of Exercise.