

Exercise 1: Create a mobile dashboard from a desktop dashboard

 How can I print an exercise to PDF format?

Technical note

Software requirements

- ArcGIS Online

Use the latest version of Google Chrome, Mozilla Firefox, Apple Safari, or Microsoft Edge. Other web browsers may not display your maps and apps correctly.

For information about supported web browsers for ArcGIS Online, go to ArcGIS Online Help: Supported browsers (<https://links.esri.com/SupportedBrowsers>).

Introduction

With ArcGIS Dashboards, you can present geographic information and data visualizations in a single view. Data visualizations are configured as elements, such as maps, lists, and charts. You can set up actions that filter and highlight features between elements. This functionality not only creates a more interactive viewing experience but also can provide greater situational awareness. For example, if you are viewing a flood warning, you can potentially set up an action to also show critical infrastructure in that area which could be affected by the flood.

Scenario

Imagine that you are working for the city of New Orleans, Louisiana, USA. You have been tasked to create an internal flood awareness app for the Emergency Operations Center (EOC). This app will allow decision-makers to monitor—nearly in real time—stream flow levels, as well as weather events that could potentially impact flood controls, such as levees, flood walls, and pump stations.

In this exercise, you will create a flood awareness dashboard. First, you will create a desktop view for viewing in the EOC. You will then create a mobile view derived directly from the desktop view. The mobile view will be used by the operations team when they are outside of the EOC.

Data source

The scenario described in this exercise, although based on real-world data, is fictional and was developed for educational purposes only. The data is directly from or derived from layers hosted in ArcGIS Living Atlas of the World, or downloaded from the U.S. Census Bureau.

Note: The exercises in this course include View Result links. Click these links to confirm that your results match what is expected.

Estimated completion time in minutes: 90

[Expand all steps](#) ▾

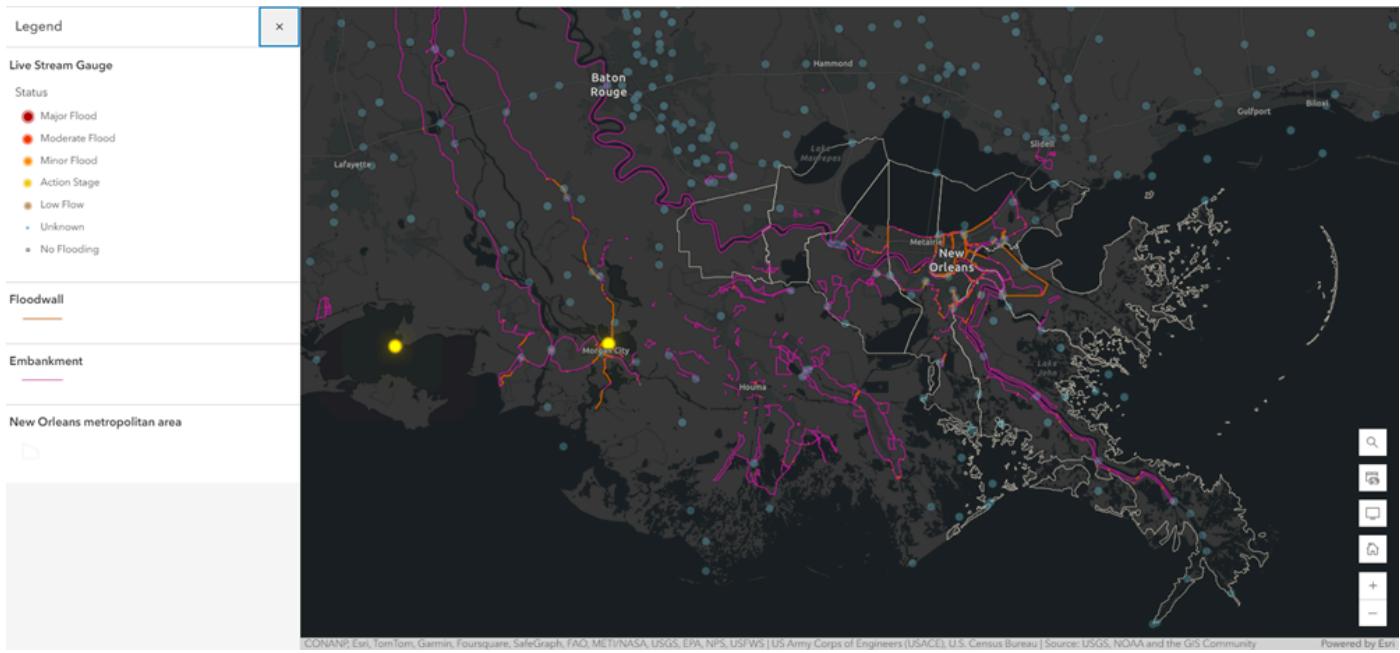
[Collapse all steps](#) ▲

- Step 1: Create a dashboard

As with other app builders, you can create a dashboard directly from the web app page or from a web map. When you create a dashboard from scratch, you are presented with an empty layout. When you create a dashboard directly from a web map, the initial layout includes the map. You can also create a dashboard by making a copy of another dashboard. No matter how you initially create the dashboard, it is easy to add and configure elements that work together to visually display your data.

In this step, you will create a dashboard in desktop view for display in the EOC. After you have configured the desktop view, you can create a mobile view.

- Sign in to ArcGIS Online, if necessary, using your course ArcGIS account (username ending in _geoapps).
- At the top of the page, click the Search button  and type **Louisiana Flood Monitoring owner:esritrainingsvc**.
- On the left, under Filters, turn off Only Search In <Your MOOC Organization>.
- For the Louisiana Flood Monitoring web map result, in the bottom right, click Open In Map Viewer.



*Step 1d***: Create a dashboard.*

Because certain layers in this map are updated often, your map view may differ from what is shown in this example.

This map contains layers of flood control infrastructure elements such as levees, flood walls, and pump stations. It also contains layers from ArcGIS Living Atlas of the World: Live Stream Gauges and USA Weather Watches and Warnings / Events Ordered by Size and Severity. Both layers display information about water depth, water flow, and potentially adverse weather events—nearly in real time. It is important that the EOC personnel can monitor information from these live feeds and see the data in context with the flood control infrastructure.

- e From the Contents (dark) toolbar to the left of the map, click the Layers button .

Layer	Actions
Live Stream Gauge	...
Pump station	...
Floodwall	...
Embankment	...
USA Weather Watches and Warnings	...
New Orleans metropolitan area	...

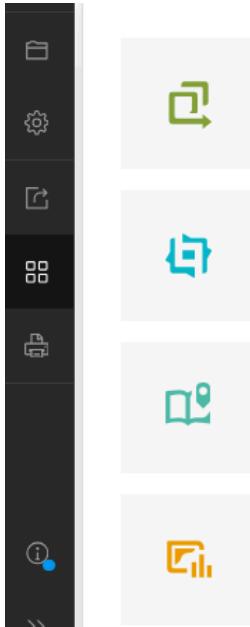
*Step 1e***: Create a dashboard.*

The map is an important part of the dashboard that you are creating; it is the focal point of the dashboard layout. The map is ready for use, because it has already been styled in a way that suits the audience and purpose. The pump stations only need to be viewed when the map is zoomed in at the county level, so the visibility range is set accordingly. Additionally, the dashboard will be viewed on a large screen in a darkened room. To make it easier to see important details, the basemap is dark gray and the data is symbolized in brighter, more contrasting colors.

To learn best practices on creating web maps for dashboards, see ArcGIS Dashboards Help: Create web maps for dashboards (<https://links.esri.com/MapsDashboards>).

You will now create the dashboard. Because you are creating the dashboard directly from the map, the map will automatically be added to the dashboard layout as a map element.

- f From the Contents toolbar, click the Create App button  and choose Dashboards.

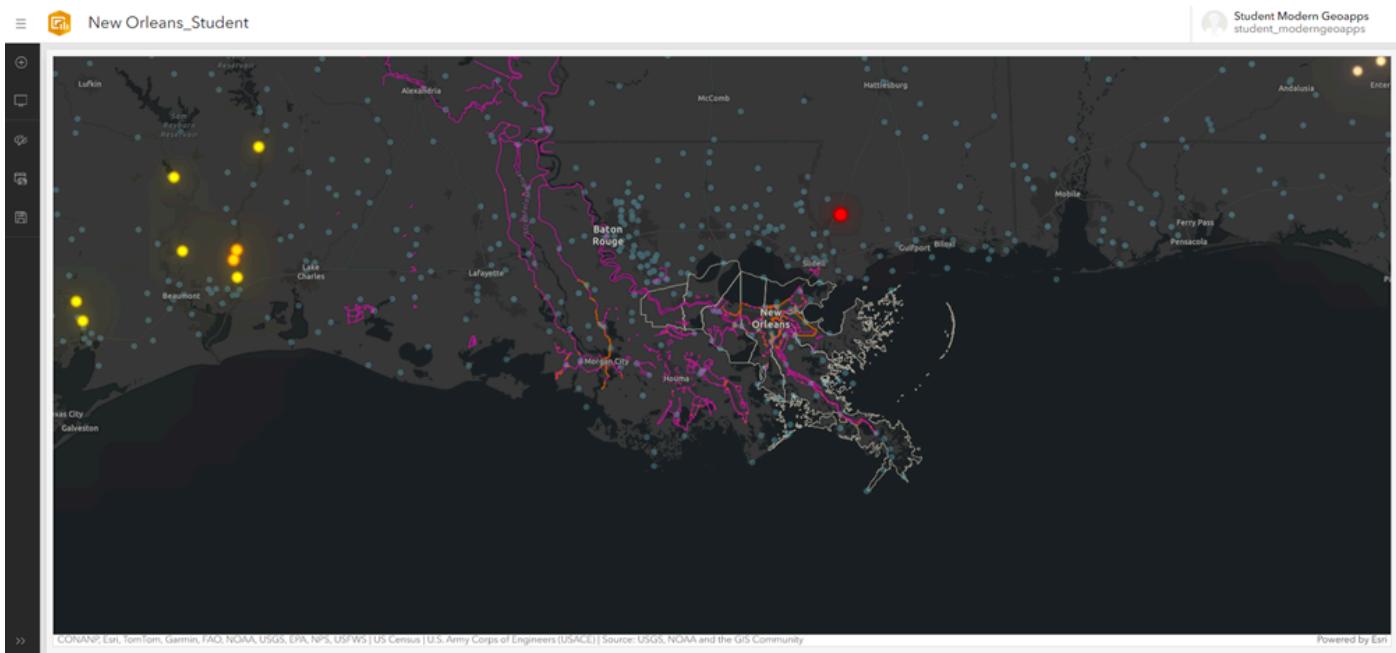


*Step 1f***: Create a dashboard.*

- g In the Create New Dashboard window, complete the following steps:

1. For Title, type **New Orleans_<Your Student Name>** (for example, **New Orleans_Student**).
2. For Tags, add **New Orleans** and **Flood Monitoring**.
3. For Summary, type **Dashboard to monitor potential flooding indicators in New Orleans-Metairie metropolitan area. For training purposes only.**

- h Click Create Dashboard.



*Step 1h***: Create a dashboard.*

The dashboard opens, displaying a map element stretched out across the entire layout. On the left side is the dashboard toolbar, which contains tools to view and edit the dashboard elements.

In this step, you created a dashboard from a web map. Now that you have a map in your dashboard, you can add more elements, with the operational map layers serving as data sources for those elements.

- Step 2: Configure a details element

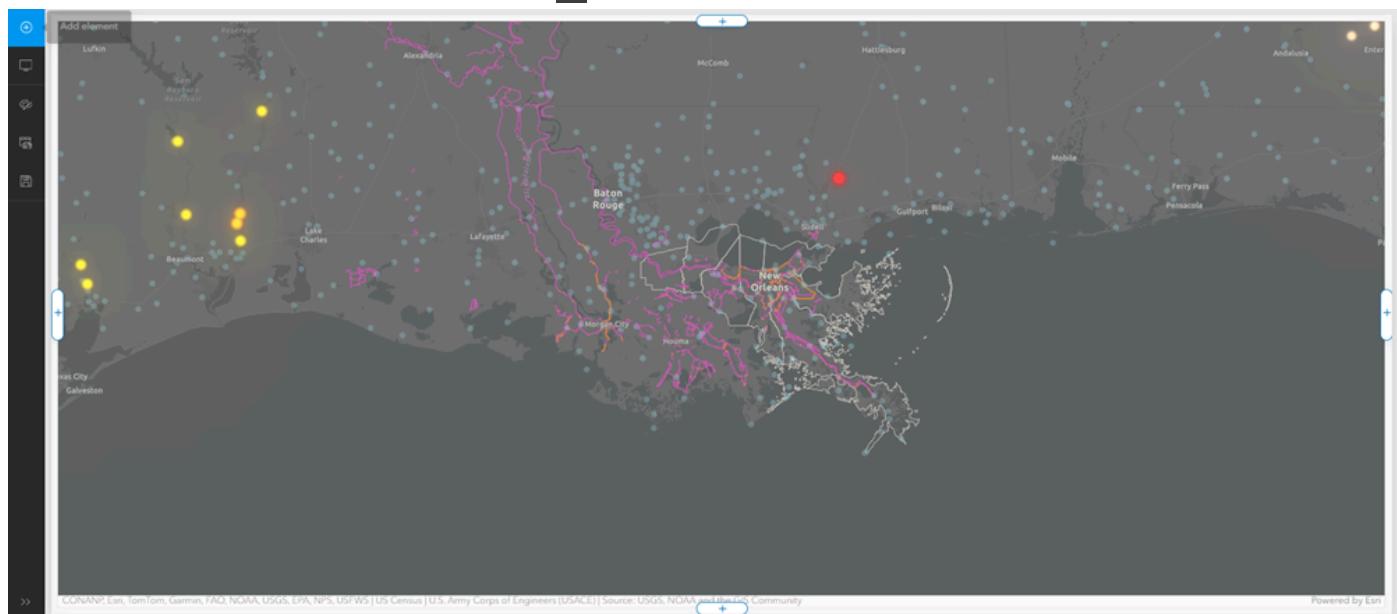
After you have created a dashboard, the process to add and configure elements is relatively straightforward. In general, you select an element, add it to the layout in a row or a column, and then configure it. Configuration primarily consists of data, visualization, and text settings.

You add and configure elements starting with the desktop view. After you have configured the desktop view, you can configure the mobile view.

In this step, you will add and configure a details element, using the stream gauge layer from the map as the data source. The details element shows information about a feature such as text, links, and attachments.

First, you will add the element to the layout.

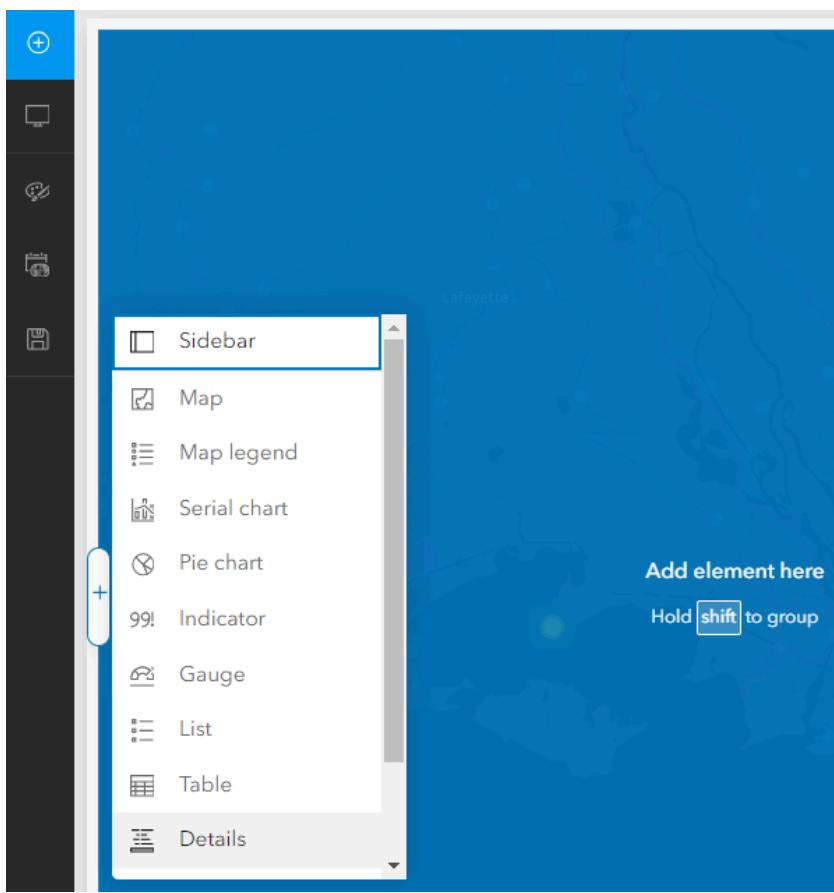
- a On the dashboard toolbar, click the Add Element button .



*Step 2a***: Configure a details element.*

The dashboard layout appears transparent. Position indicators on each side of the layout allow you to add elements.

- b On the left side of the map, click the position indicator and choose Details.



*Step 2b***: Configure a details element.*

- c In the Select A Layer window, under Layers From 'Louisiana Flood Monitoring' Map, click Live Stream Gauge.

Details

Data	Data options
Details	Layer: Live Stream Gauge Change
General	Filter + Filter
Accessibility	Maximum features displayed 50 ^ v
	Sort by Add field

1 of 50

Station: 03807 (Maricopa County)
Grand Ave. @ 27th Ave.
STATUS: UNKNOWN
HEIGHT: 0.45 FEET (0.14 METERS)
FLOW: 0 ft³/s (0 L/s)
STATION: 03807
LOCATION: AZ, USA
ORGANIZATION: Maricopa County
UPDATED: 7/5/2024, 7:00 AM
[STAGE GRAPH](#) | [STAGE DATA](#) | [DISCHARGE DATA](#)

*Step 2c***: Configure a details element.*

Now that you have selected a layer, a Details window appears. In this window, you will configure the element. On the right side, you can see a preview of the data. The live stream gauge layer contains measurements of water height and other information such as flow rate and the location of the gauge.

- d From the Data tab, under Data Options, next to Filter, click +Filter.
- e Under Filter, click Field For The Condition and choose Governing Location.
- f Under Value, click Enter A Value, type LA, and choose LA, USA.

Details

Data	Data options
Details	Layer: Live Stream Gauge Change
General	Filter
Accessibility	<div style="border: 1px solid #ccc; padding: 10px;"> <p>Governing Location abc ▾ Delete</p> <p>equal ▼</p> <p>Value Field</p> <p>LA, USA ▼</p> <p style="text-align: center;">AND OR</p> </div>

*Step 2f***: Configure a details element.*

Only the stream gauges located in the state of Louisiana will be shown on the map.

- g Click the Details tab and view the Details Options section.

Details

Data	Details options
Details	Title toggle switch
General	Contents toggle switch
Accessibility	Media toggle switch
	Attachments toggle switch

*Step 2g***: Configure a details element.*

Options in the Details tab are based on how the layer's pop-up information is configured. In this case, you have the option of displaying the title, content information from the layer, media such as images or charts, and layer attachments. You want to include all this information in the element, so you will leave the default settings.

For more information about details options, see ArcGIS Dashboards Help: Details (<https://links.esri.com/DashboardsDetails>).

- h Click the General tab and, under Name, type **Stream data**.

The name that you added is used as a reference when configuring element actions and is what you see when viewing the list of elements in the View pane. The name is not displayed on the dashboard. It is good practice to give each element an easily understood name so that, as you add additional elements, you can keep track of each one.

- i Next to Title, click Edit.
 - j Under Title, type **Stream Observation**.
- The title is displayed on the dashboard and is configured as rich text. For more information about element settings, see ArcGIS Dashboards Help: Configure an element (<https://links.esri.com/ConfigureElement>).
- k Click Paragraph and choose Heading 4.
 - l Scroll down and, turn on Last Update Text.

The Last Update Text option will indicate when the data was mostly recently updated. Because people will be making decisions based on what they see in the dashboard, it is important that they are aware of the timeliness of the data.

- m Turn on Source Data Download.

*Step 2m***: Configure a details element.*

With data download enabled, you can download a CSV file of the filtered fields and their values.

- In the bottom right of the Details window, click Done.

New Orleans_Student

Stream observation

Station: NWSABKL1 (NOAA)

Amite River Basin at Bayou Manchac at Alligator Bayou near Kleinpeter

STATUS: UNKNOWN
HEIGHT: 0.71 FEET (0.22 METERS)
FLOW: UNAVAILABLE
STATION: NWSABKL1
LOCATION: LA, USA
ORGANIZATION: NOAA
UPDATED: 7/2/2024, 11:00 AM
[STAGE GRAPH](#) | [STAGE DATA](#) | [DISCHARGE DATA](#)

AMITE RIVER BASIN AT BAYOU MANCHAC AT ALLIGATOR BAYOU NEAR KLEINPETER

Universal Time (UTC)

Last observed value: 1.01 ft at 3:00 PM CDT
8-Jul-2024

NOAA SPHERIC ADMINISTRATION
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
DEPARTMENT OF COMMERCE

Normal Pool: 0'

Stage (ft)

Height (ft)

Latest observed value: 1.01 ft at 3:00 PM CDT
8-Jul-2024

Normal Pool: 0'

Map showing the Amite River Basin at Bayou Manchac at Alligator Bayou near Kleinpeter, highlighting the location of the station (red dot) in Baton Rouge, Louisiana. The map also shows the basin's extent, surrounding cities like New Orleans, and various rivers and water bodies.

*Step 2n***: Configure a details element.*

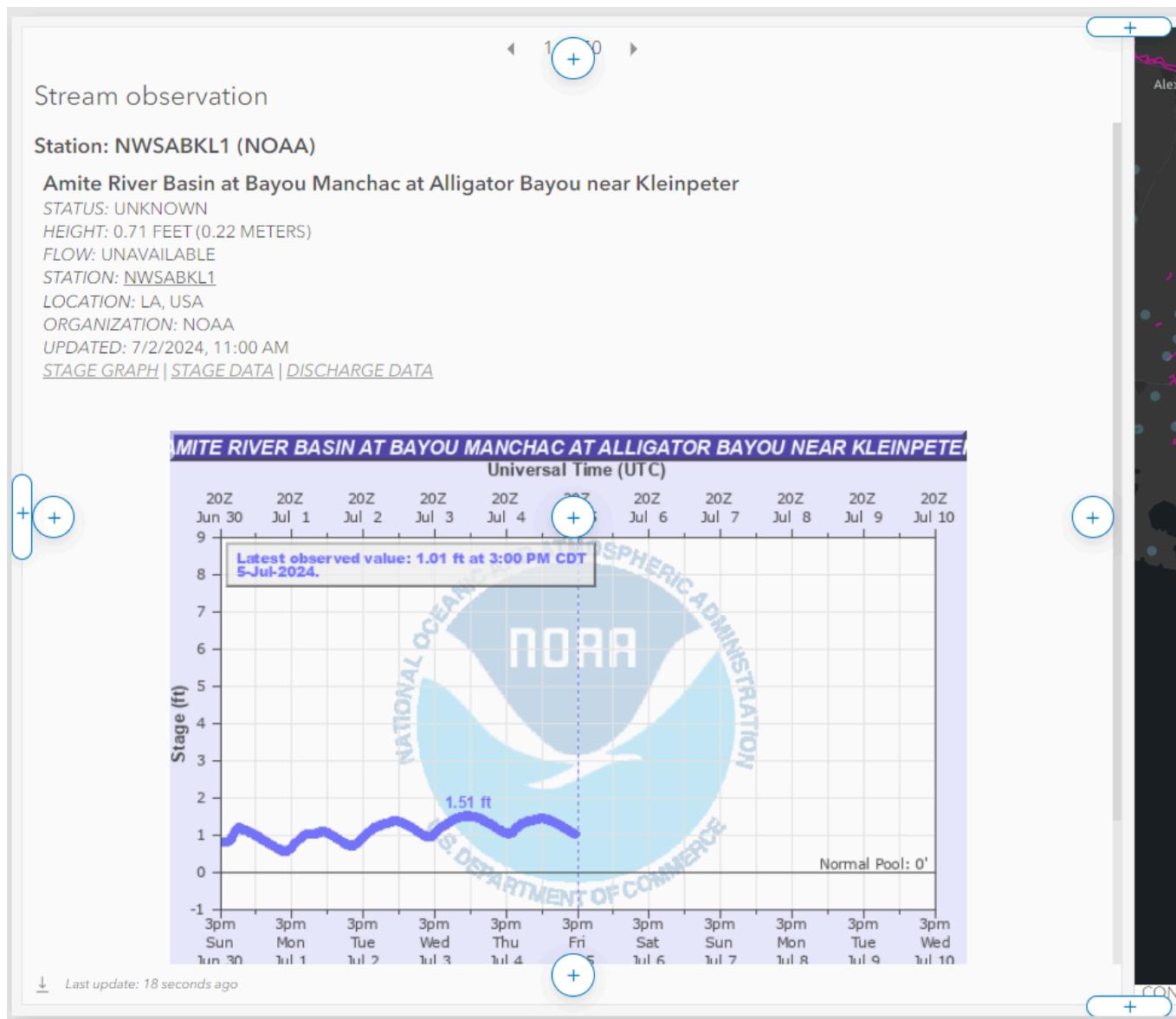
- On the dashboard toolbar, click the Save button  and choose Save.

In this step, you added and configured a details element. The details element is now displayed on the layout, next to the map. As you add more elements, the layout might look crowded. Later, you will resize elements so that the layout is more streamlined.

- Step 3: Configure a gauge element

You have added a details element that displays information about stream heights. In this step, you will add and configure a gauge element, which will show the total number of weather events in Louisiana. A gauge displays a value from a single metric and generally is used to show progress or an amount. This gauge is meant to provide a simple overview and will be accompanied by another element listing the weather events, which you will add later.

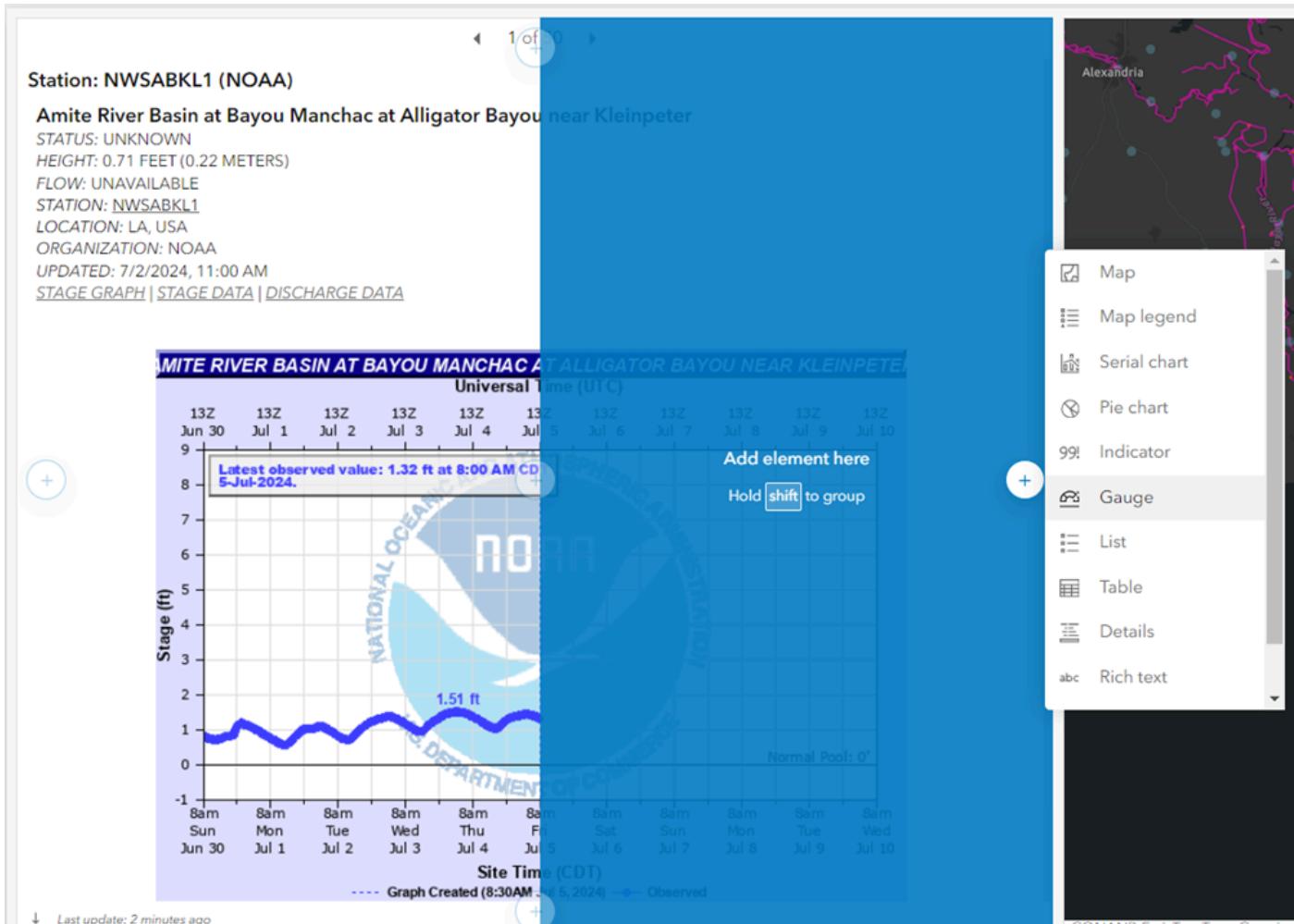
- On the dashboard toolbar, click the Add Element button .
- Point to the details element.



Step 3b***: Configure a gauge element.

As you add elements to the layout, you can dock them as rows or columns to the dashboard or adjacent to other elements. You will add this gauge to the right of the details element.

- On the right side of the details element, click the position indicator button  and choose Gauge.



*Step 3c***: Configure a gauge element.*

- d In the Select A Layer window, under Layers From 'Louisiana Flood Monitoring' Map, click USA Weather Watches And Warnings and choose Events Ordered By Size And Severity.

Layers from 'Louisiana Flood Monitoring' map:

	Live Stream Gauge
	Pump station
	Floodwall
	Embankment
USA Weather Watches and Warnings	
1 layers	
	Events Ordered by Size and Severity
	New Orleans metropolitan area

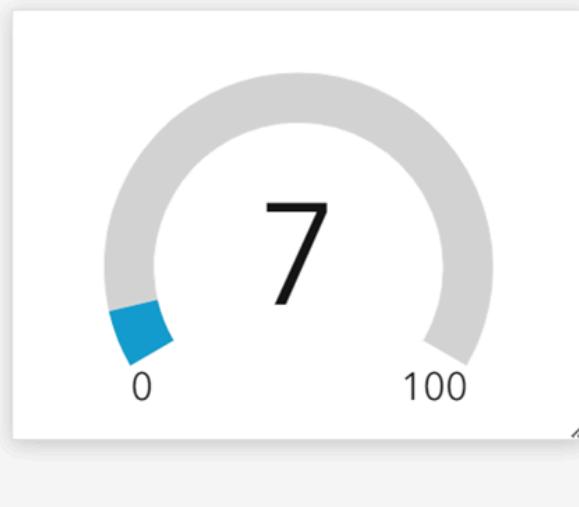
*Step 3d***: Configure a gauge element.*

You may notice that there are several hundred events. This layer includes many types of weather events across the United States. You are only interested in viewing events affecting the state of Louisiana.

- e In the Details window, next to Filter, click +Filter.
- f Under Filter, complete the following steps:

1. Click Field For The Condition and choose Area Ids Affected.
2. Under Area Ids Affected, click Equal and choose Contains.
3. Under Contains, type **LA**.

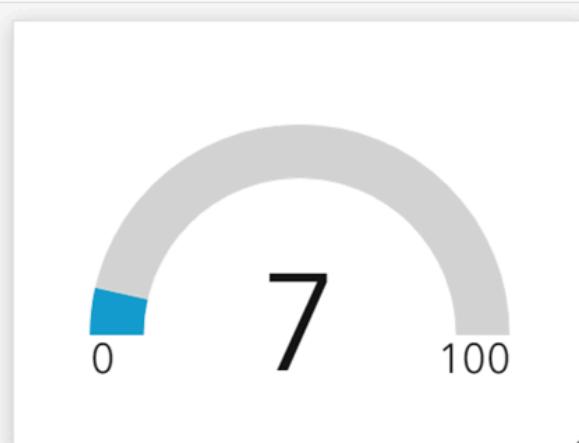
Data	Data options
Gauge	Settings Layer: Events Ordered by Size and Severity Change
General	
Accessibility	Filter Area Ids Affected abc Delete contains LA AND OR



*Step 3f***: Configure a gauge element.*

- g Click the Gauge tab and, under Shape, choose Half Donut.

Data	Gauge options
Gauge	Settings Style Progress Meter Shape Circle Horseshoe Half donut Value
General	
Accessibility	



*Step 3g***: Configure a gauge element.*

- h Click the General tab and, under Name, type **Weather events (count)**.

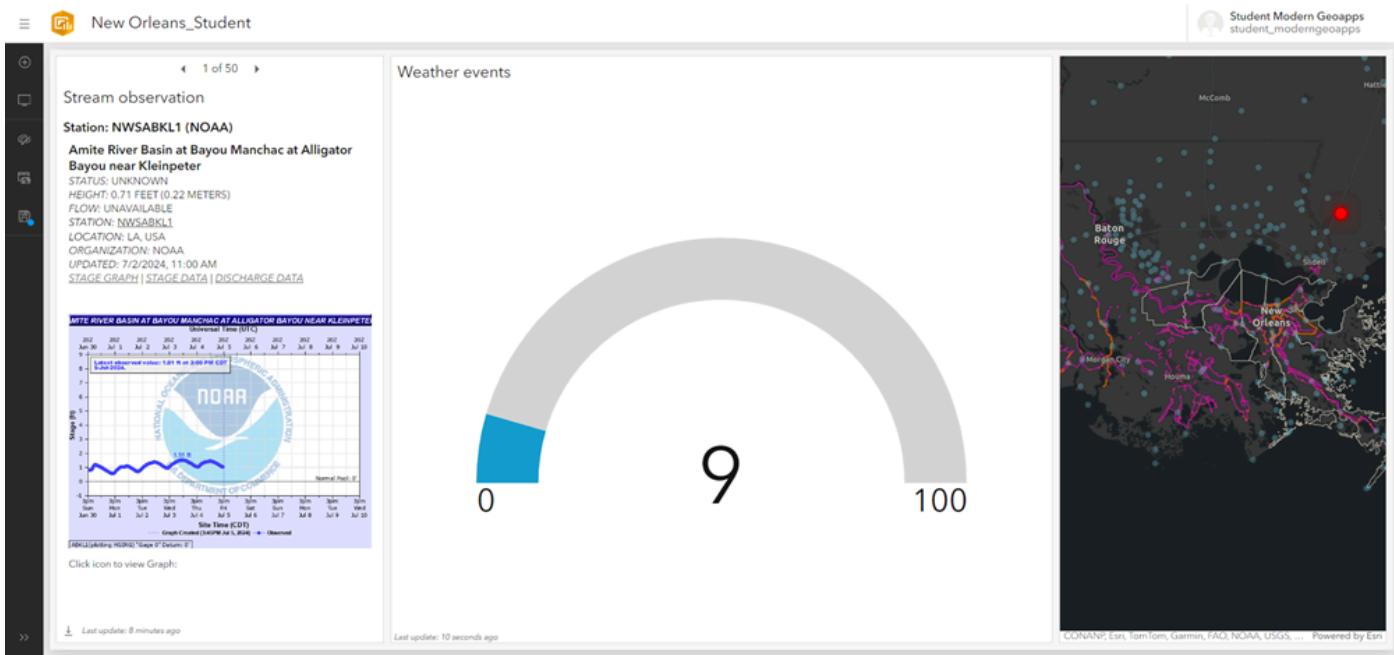
- i Next to Title, click Edit.

- j Under Title, type **Weather events**.

- k Click Paragraph and choose Heading 4.

- l Scroll down and turn on Last Update Text.

- m Click Done.



*Step 3m***: Configure a gauge element.*

n Save your dashboard.

In this step, you added and configured a gauge element that displays the number of weather events affecting Louisiana. You will now add an element that lists the individual events.

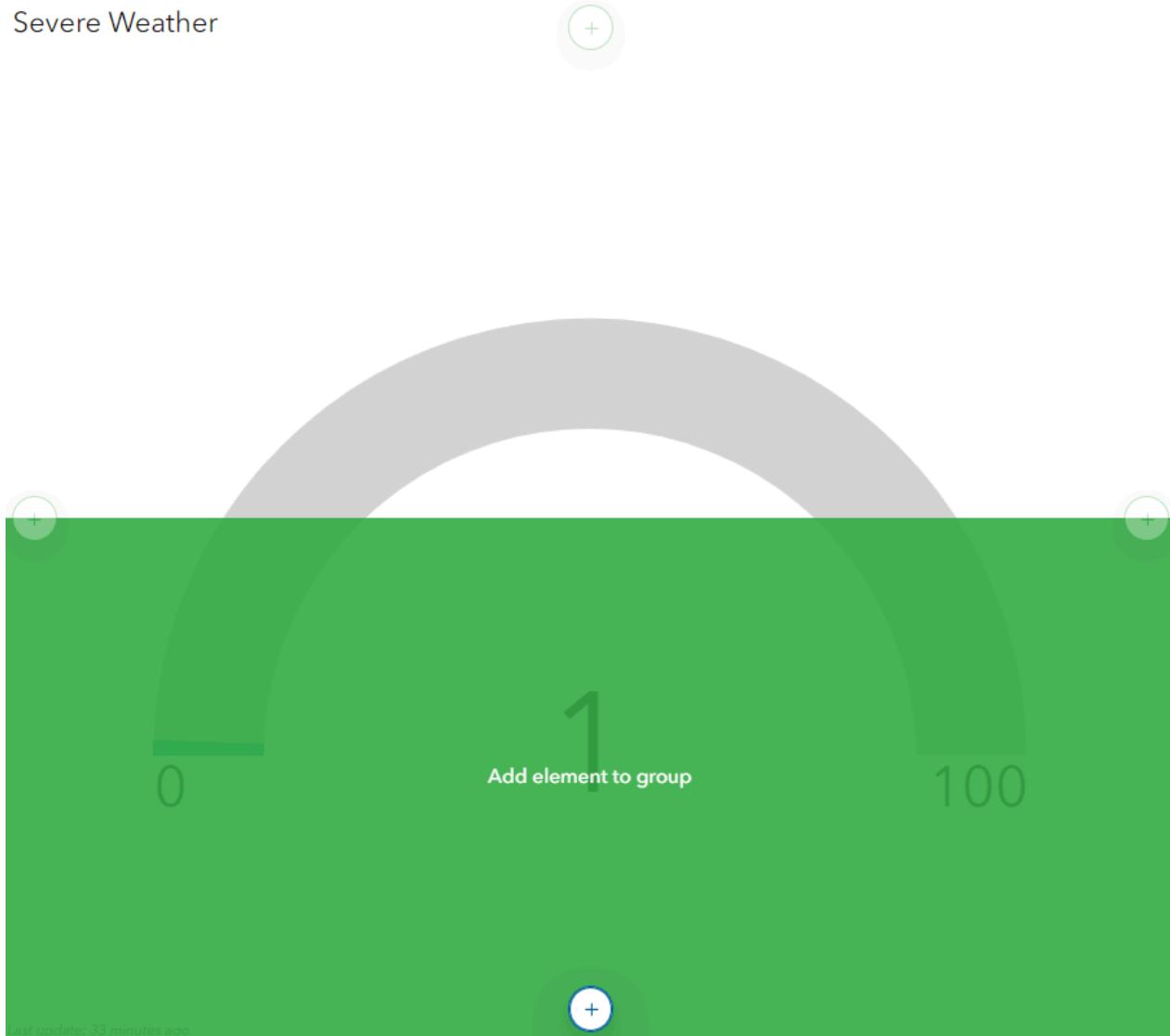
- Step 4: Configure a list element

A list element displays selected information from a layer, such as values or images.

You already have a gauge element that shows the number of weather events, but it does not tell you the type of weather. In this step, you will add and configure a list element that displays the types of weather events impacting Louisiana.

- On the dashboard toolbar, click the Add Element button
- Point to the position indicator button at the bottom of the gauge element and press Shift to add the element to a group, as shown in the following graphic.

Severe Weather



Grouped elements can be moved and resized as if they are a single element.

- c While pressing Shift, click the position indicator button and choose List.
- d In the Select A Layer window, under Layers From 'Louisiana Flood Monitoring' Map, click USA Weather Watches And Warnings and choose Events Ordered By Size And Severity.
- e Under Data Options, click +Filter.

Just as you did with the gauge, you will filter the layer to only see events affecting Louisiana.

- f Under Filter, complete the following steps:
 1. Click Field For The Condition and choose Area Ids Affected.
 2. Click Equal and choose Contains.
 3. Under Contains, type **LA**.

The screenshot shows the ArcGIS interface with the 'Data' tab selected. In the 'Data options' panel, there is a 'Layer' section titled 'Events Ordered by Size and Severity' with a 'Change' button. Below it is a 'Filter' section for 'Area Ids Affected' with dropdown menus for 'contains' and 'LA', and buttons for 'AND' and 'OR'. To the right is a legend listing various weather events with their corresponding icons:

	Flood Warning
	Heat Advisory
	Heat Advisory
	Special Weather Statement
	Heat Advisory
	Special Weather Statement
	Heat Advisory
	Special Weather Statement
	Special Weather Statement

*Step 4f***: Configure a list element.*

- g Under Sort By, click Add Field and choose Type.

The screenshot shows the 'Sort by' configuration panel. It has a 'Sort by' header with an 'Add field' dropdown. Below is a table with one row, showing 'Type' as the field name, with a sorting arrow icon and an 'X' button to its right.

*Step 4g***: Configure a list element.*

- h Click the General tab and, under Name, type **Weather events (type)**.

- i Next to Title, click Edit.

- j Under Title, type **Event type**.

- k Click Paragraph and choose Heading 4.

- l Turn on Last Update Text.

You will now configure an action so that, when you select an event in the list, the map will pan to the feature and the feature will flash.

- m Click the Actions tab and, under When Selection Changes, click Flash.

- n Turn on Louisiana Flood Monitoring.

- o Click Pan, and then turn on Louisiana Flood Monitoring.

List

Data	Actions
List	Selection mode Single Multiple
General	When selection changes
Accessibility	<p>Filter Active targets: 0</p> <p>Flash Active targets: 1</p> <p><input checked="" type="checkbox"/> Louisiana Flood Monitoring On</p> <p>Show pop-up Active targets: 0</p> <p>Pan Active targets: 1</p> <p><input checked="" type="checkbox"/> Louisiana Flood Monitoring On</p>

*Step 4o***: Configure a list element.*

- p Click Done.

The dashboard consists of three main sections:

- Stream observation:** Shows data for NWSABKL1 (NOAA) at Amite River Basin at Bayou Manchac at Alligator Bayou near Kleinpete. It includes a status message (UNKNOWN), height (0.71 FEET / 0.22 METERS), flow (UNAVAILABLE), station ID (NWSABKL1), location (LA, USA), organization (NOAA), and update time (7/2/2024, 11:00 AM). It features links for Stage Graph, Stage Data, and Discharge Data.
- Weather events:** A card with a gauge showing a value of 9 out of 100. Below it is a legend for event types: Flood Warning (green), Heat Advisory (orange), Special Weather Statement (yellow).
- Map:** A map of the New Orleans area with various weather event outlines. A red dot highlights a specific event. The map is powered by Esri.

*Step 4p***: Configure a list element.*

You will now test the element to see how the actions work.

- q On the list element, click one of the weather events.

The map should pan to the selected weather event feature, and the feature should briefly flash. To avoid clutter on the map from the numerous weather events, the layer visibility for the weather events is turned off, which is why you can only see the outline of the event flashing when it is

selected.

- r Save your dashboard.

In this step, you added and configured a list element. Your dashboard now includes two elements that display information about weather events in Louisiana. By viewing and interacting with the information in the list, EOC personnel can determine which weather events may lead to flooding in the New Orleans metropolitan area.

- Step 5: Configure an indicator element

You have added a gauge element that indicates the number of weather events. An indicator is another element that allows you to display a numeric value. You can configure an indicator in several ways, including adding an icon and applying advanced formatting.

In this step, you will add and configure an indicator element displaying the number of pump stations that do not have backup power. This information is important for EOC personnel to know when assessing areas for potential flooding, because pump stations are used to pump out excess water.

- a On the dashboard toolbar, click the Add Element button .

- b Add a grouped indicator element under the list element.

- [Remind me how](#)

Point to the list element and press the Shift key. While still pressing Shift, click the position indicator button and choose Indicator.

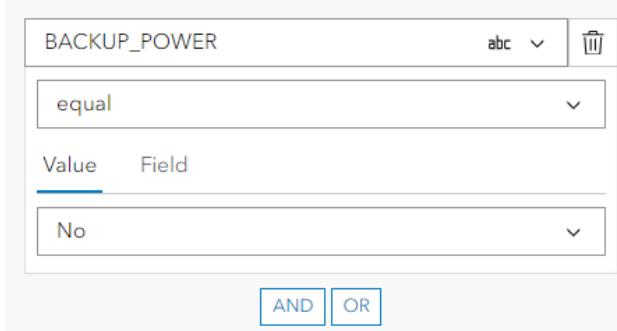
- c In the Select A Layer window, choose the Pump Station layer.

You will apply a filter so that only pump stations without backup power are displayed.

- d Under Data Options, click +Filter.

- e Create a filter with the condition that BACKUP_POWER is equal to No.

Filter



The screenshot shows a 'Filter' dialog box. At the top, there is a dropdown menu labeled 'BACKUP_POWER' with 'equal' selected. Below it, there are two tabs: 'Value' (which is selected) and 'Field'. Under the 'Value' tab, there is another dropdown menu also labeled 'equal'. Below these dropdowns are two buttons: 'AND' and 'OR'.

*Step 5e***: Configure an indicator element.*

- f Click the Indicator tab and, under Top Text, type **Pump stations**.

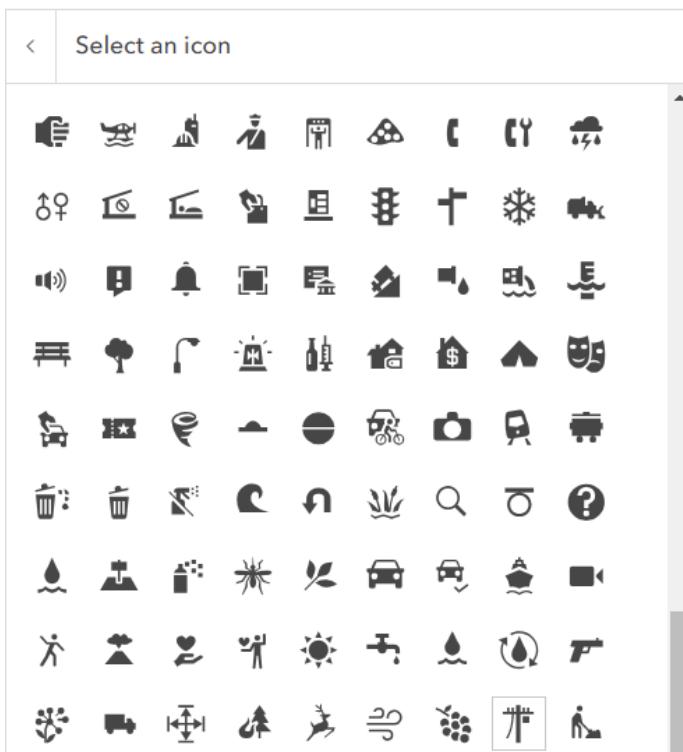
- g Under Bottom Text, type **No backup power**.

An icon can draw attention to an element and provide quick understanding of its purpose. You can add an icon from the scalable vector graphics (SVG) library, or you can create a custom SVG icon. You will select an icon from the library.

- h Next to Icon, click Add Icon.

- i Under Select An Icon, click Solutions.

- j Scroll to the last line of the Solutions icons and select the power line icon, as shown in the following graphic.



Note: If you cannot locate the power line icon, select an icon that makes sense for the scenario.

- k Click OK.

Pump stations

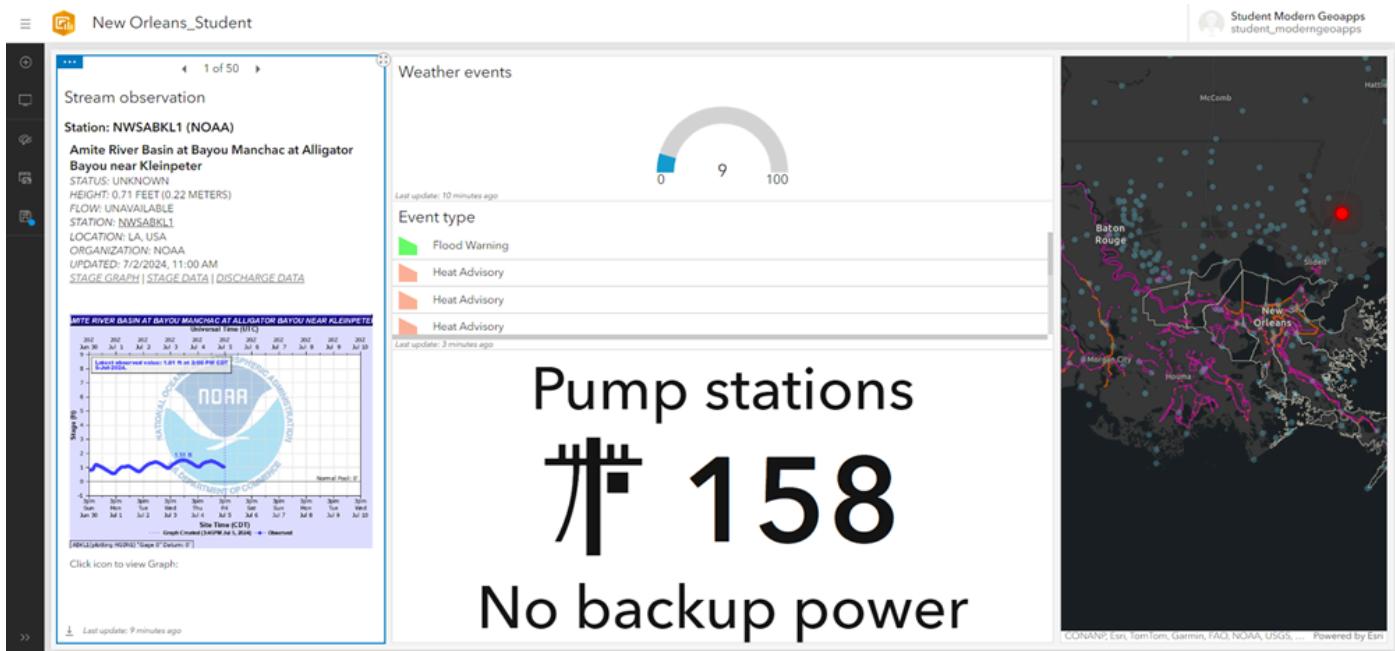
158

No backup power

*Step 5k***: Configure an indicator element.*

The indicator has been configured to display the number of pump stations without backup power. The power line icon indicates that the pump station is only connected to the main power grid. If the power fails, the pump station will not be able to pump water.

- l Click the General tab and, under Name, type **Pump station backup power**.
- m Click Done.



*Step 5m***: Configure an indicator element.*

n Save your dashboard.

In this step, you added and configured an indicator element to display the number of pump stations without backup power. At the moment, the indicator data is static and always remains at 158. Later, you will configure an action to filter the number of pump stations as the map extent changes.

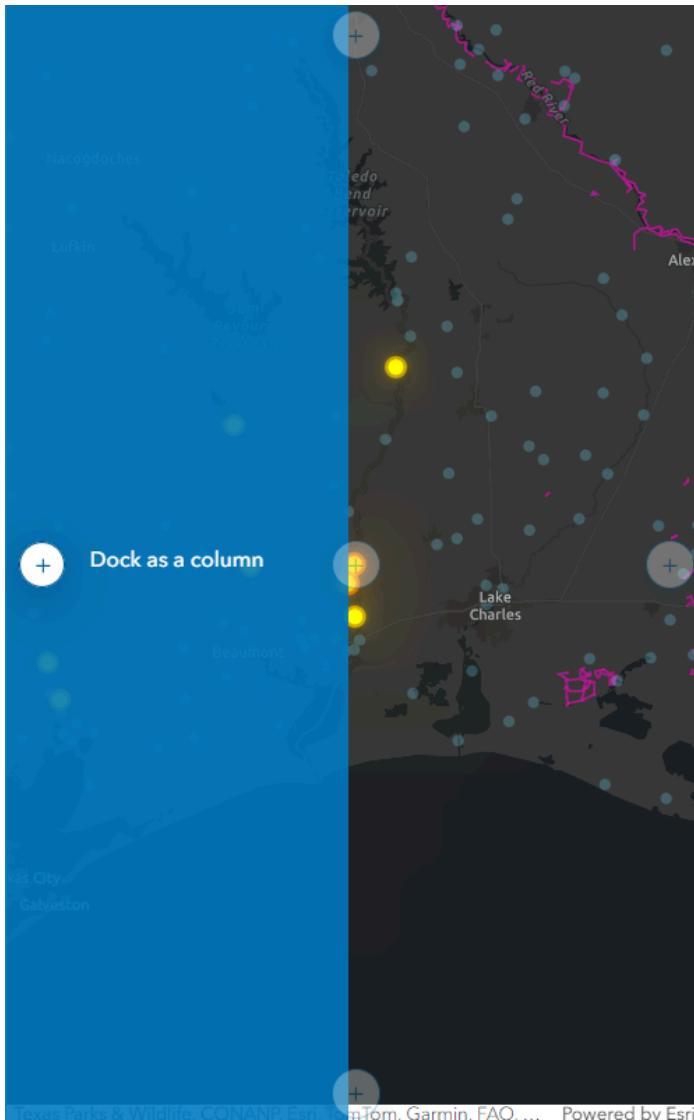
- Step 6: Add a map legend element

You have added elements displaying information about weather events and pump station status. In this step, you will add a map legend element so that EOC personnel can identify features on the map at a glance.

A map legend element dynamically lists the layers in a map. Although you can add a legend option to the map element itself, it only appears when clicked. The map legend element remains visible within the dashboard at all times, depending on how it is docked in the layout.

So far, you have been adding elements using the Add Element button. You can also view and add elements from the View pane.

- On the dashboard toolbar, click the View button .
- In the View pane, click +Add Element and choose Map Legend.
- Click Done.
- In the dashboard layout, point to the map legend.
- In the upper-left corner of the map legend, point to the Element Options button , and then click and hold the Drag Item button .
- Drag the map legend to the left side of the map element and dock it as a column.



*Step 6f***: Add a map legend element.*

After you have docked an element, you can move it again by pointing to the element options button, clicking the drag item button, and dropping the element in a new location.

New Orleans_Student

View

Desktop + Add mobile view

Body Header Sidebar Settings

Row Stream data Column Weather events (count) Weather events (type) Pump station backup power Map legend (1) Louisiana Flood Monitoring + Add element

Stream observation

Station: NWSABKL1 (NOAA)

Amite River Basin at Alligator Bayou near Kleinpeter

STATUS: UNKNOWN
HEIGHT: 0.71 FEET (0.22 METERS)
FLOW: UNAVAILABLE
STATION: NWSABKL1
LOCATION: LA, USA
ORGANIZATION: NOAA
UPDATED: 7/2/2024, 11:00 AM

STAGE GRAPH | STAGE DATA | DISCHARGE DATA

Click icon to view Graph:

Weather events

Last update: 13 minutes ago

Event type

- Flood Warning
- Heat Advisory
- Heat Advisory
- Heat Advisory

Live Stream Gauge

Status

- Major Flood
- Moderate Flood
- Minor Flood
- Action Stage
- Low Flow
- Unknown
- No Flooding

Floodwall

Embankment

New Orleans metropolitan area

Pump stations

158

No backup power

*Step 6***: Add a map legend element.*

- g Save your dashboard.

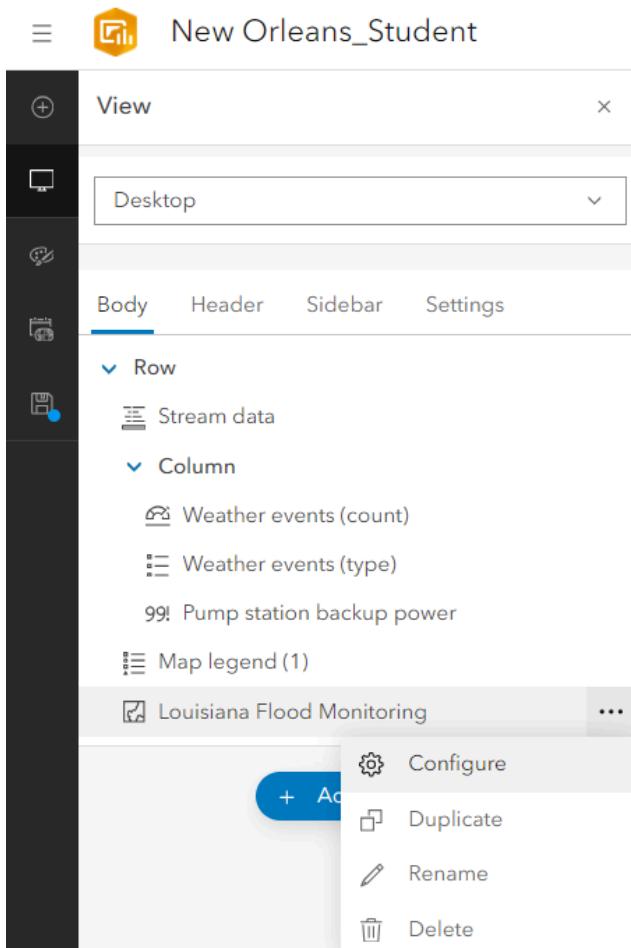
In this step, you added a map legend element to the dashboard. The legend displays the layers in the map with their associated symbology.

- Step 7: Configure the map element

You have added all the elements required for your dashboard and configured most of them. The map is the focus of the dashboard for the EOC, as it gives an overview of the flood protection infrastructure in the state of Louisiana—primarily in greater New Orleans. When you created the dashboard from the web map, it automatically added the map to a map element in the layout. However, you still need to configure the map element settings, especially the map and layer actions that will enable interactivity between dashboard elements.

In this step, you will adjust map display settings and configure map and layer actions.

- Click the View button to open the View pane, if necessary.
- Next to Louisiana Flood Monitoring, click the Options button and choose Configure.

*Step 7b***: Configure the map element.*

First, you will adjust the map display settings. You will give viewers the option to access bookmarks that were created in the original map, as well as to return to the original map extent. Additionally, you will enable the option to turn layer visibility on and off. These settings will make it easy for the EOC personnel to quickly zoom to primary areas of interest and to focus on specific layers if needed.

- In the Louisiana Flood Monitoring Map configuration window, turn on the following options:
 - Initial View And Bookmarks
 - Layer Visibility
 - Search

Louisiana Flood Monitoring Map

X

The screenshot shows the 'Settings' dialog for a map. On the left is a sidebar with tabs: General, Map actions, Layer actions, Accessibility, and Settings (which is selected). The main area contains various configuration options:

- Scalebar:** Options include None, Line, and Ruler (which is selected).
- Initial view and bookmarks:** A toggle switch is turned on.
- Legend:** A toggle switch is turned off.
- Layer visibility:** A toggle switch is turned on.
- Basemap switcher:** A toggle switch is turned off.
- Search:** A toggle switch is turned on.
- Compass:** A toggle switch is turned off.
- Find my location:** A toggle switch is turned off.
- Zoom in/out:** A toggle switch is turned off.
- Point zoom scale:** A numeric input field shows '10000' with up and down arrow buttons.

At the bottom right are 'Cancel' and 'Done' buttons.

*Step 7c***: Configure the map element.*

- d Click the General tab and, next to Title, click Edit.
 - e Under Title, type **New Orleans-Metairie metropolitan area**.
 - f Click Paragraph and choose Heading 4.
- You will now enable map actions, which will filter the data displayed in selected elements in response to a change in the map extent.
- g Click the Map Actions tab, and then click Filter.
 - h Under Filter, turn on the map extent filters for all four elements.

Louisiana Flood Monitoring

X

Map

Settings

General

Map actions

Layer actions

Accessibility

Map actions

When map extent changes

Filter
Active targets: 4

To ensure performance and scalability, map extent filters in public dashboards may produce approximate results in some scenarios. Map extent filters will produce exact results in private dashboards or dashboards shared to your organization. [Learn more about map extent filters.](#)

99! Pump station backup power

Stream data

Weather events (count)

Weather events (type)

*Step 7h***: Configure the map element.*

You will now enable layer actions, which will filter data in the elements based on the selection of features in the map.

- i Click the Layer Actions tab and, under Layer Actions, click the Live Stream Gauge layer.
- j Under When Selection Changes, click Filter.
- k Turn on Stream Data.
- l Click Flash and turn on Louisiana Flood Monitoring.

With this layer action enabled, when you select one or more Live Stream Gauge features in the map, the stream gauge data in the Details element will filter to show information only about the selected features. The selected features will also flash in the map.

- m Under When Map Is Clicked, turn on Select Feature.
- n Under Additional Selection Tools, turn on Rectangle.

When map is clicked

Show pop-up

Select feature [\(i\)](#)

Additional selection tools

Requires one or more layer actions to be configured.

Rectangle

Lasso

Circle

Line

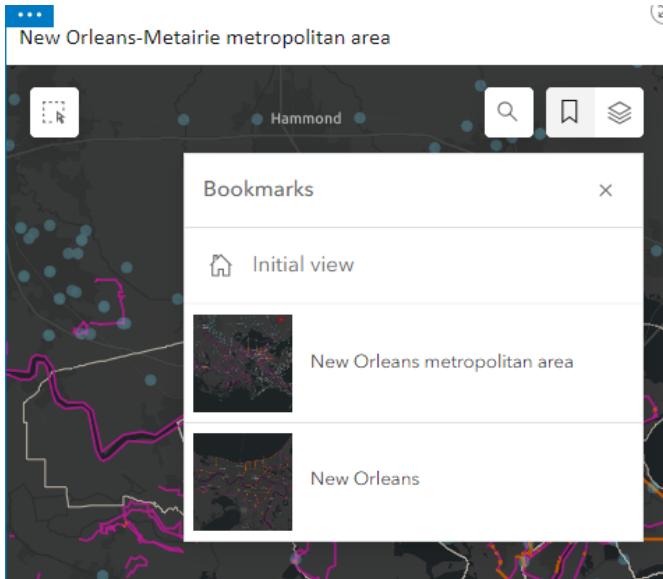
*Step 7n***: Configure the map element.*

Setting these options allows you to select features in the map, individually or as a group, with the rectangle tool. Individually selected features will also display pop-up information in the map.

- o Click Done.

You can now test the changes that you made to the map element.

- p In the map, zoom and pan the map until you notice the data in the details, gauge, list, and indicator elements updating.
- q Still in the map, click the Bookmarks button  and choose New Orleans Metropolitan Area.



*Step 7q***: Configure the map element.*

You will apply one more setting to the map and other dashboard elements. You will turn on the Allow Dashboard Reset option so that the dashboard can be quickly returned to its original configuration.

- r In the View pane, click the Settings tab, then turn on Allow Dashboard Reset.

The Reset button is now visible at the bottom right of the dashboard.

- s Save your dashboard.

In this step, you adjusted map display settings, providing options for your audience to navigate the map using bookmarks, change layer visibility, and reset the dashboard. You also configured map and layer actions to allow interaction between the map and other dashboard elements.

As the EOC personnel navigate to different areas of the map or select features on the map, they will immediately see changes reflected in other parts of the dashboard, providing a comprehensive look at what is happening in a certain area.

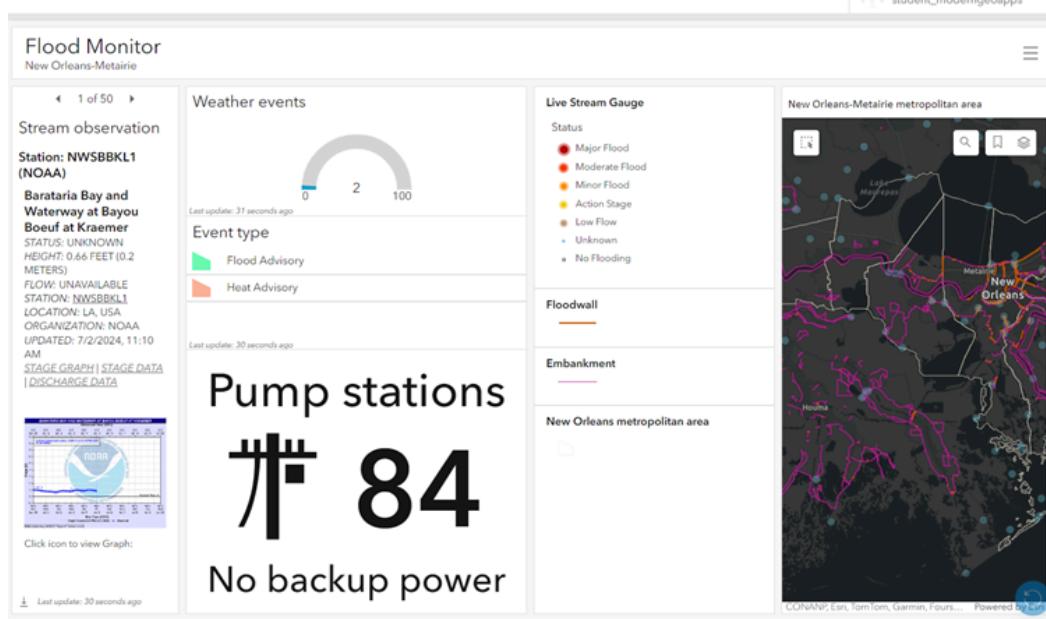
- Step 8: Add a header

You have added and configured the elements with which EOC personnel will interact. In this step, you will add a header to the dashboard.

A header can immediately communicate the purpose of the dashboard to your audience. The flood monitoring dashboard that you are creating is one of a few themed dashboards that are displayed and monitored for emergency planning and operations, so you want to make sure that the purpose is clearly stated.

- a Open the View pane.
- b Click the Header tab, and then click Add Header.
- c Under Title, type **Flood Monitor**.
- d Under Subtitle, type **New Orleans-Metairie**.
- e Under Subtitle Placement, click Below.

Click Done.



*Step 8f***: Add a header.*

g Save your dashboard.

In this step, you configured a header, which clearly identifies the dashboard's purpose and the area of coverage.

- Step 9: Modify the design of the dashboard

Your dashboard contains all necessary elements and is nearly ready to share with the EOC. However, you can still tweak the overall design to make it more visually appealing.

In this step, you will update the theme and adjust the way that elements appear on the layout.

a On the dashboard toolbar, click the Theme button .

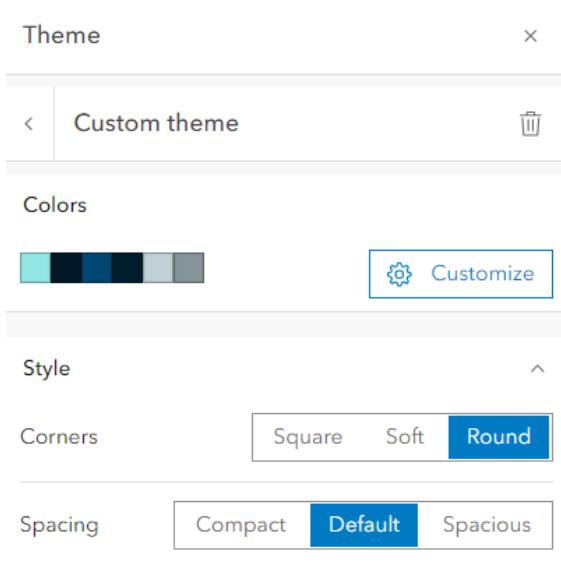
The light theme is used by default when you create a dashboard, but you can apply different premade themes. You can also select a theme and customize the color palette and element styles, creating a new theme.

The dashboard will be viewed in a darkened room, so to more easily view it, you will configure a dark theme.

b Click the Midnight Blue theme.

c Next to the Midnight Blue theme, click the Copy And Configure button.

d Under Style, next to Corners, click Round.



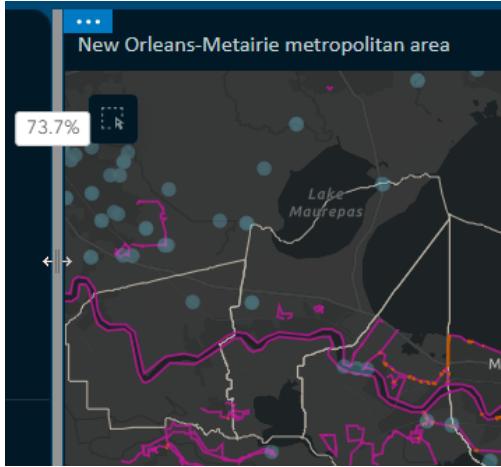
*Step 9d***: Modify the design of the dashboard.*

- e Close the Theme pane.

You will now resize and rearrange the dashboard elements so that the map is the focal point. At the moment, the elements displaying the most information, the map and details, are too narrow. As a result, the map only displays a portion of the New Orleans metropolitan area and some text in the details cannot be viewed without scrolling.

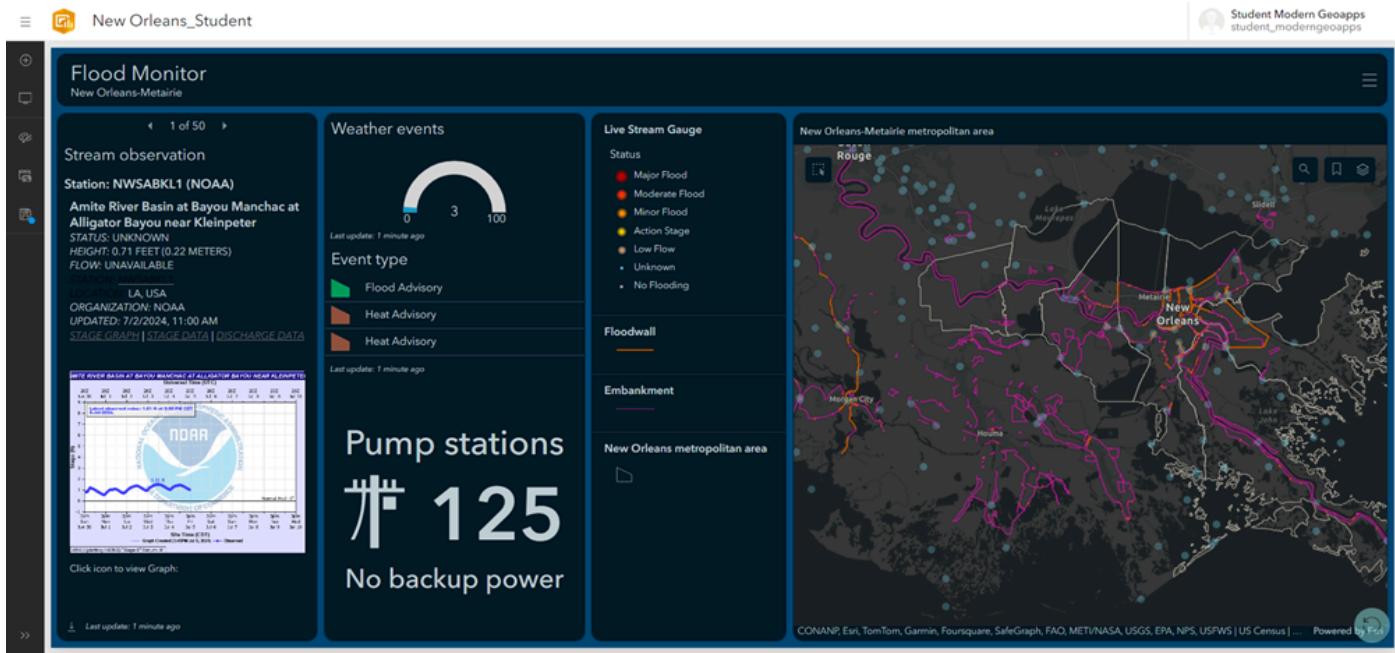
First, you will adjust the percentage of the layout that is filled by each row and column.

- f On the map element, point to the left-side border until the cursor changes to a double arrow.



*Step 9f***: Modify the design of the dashboard.*

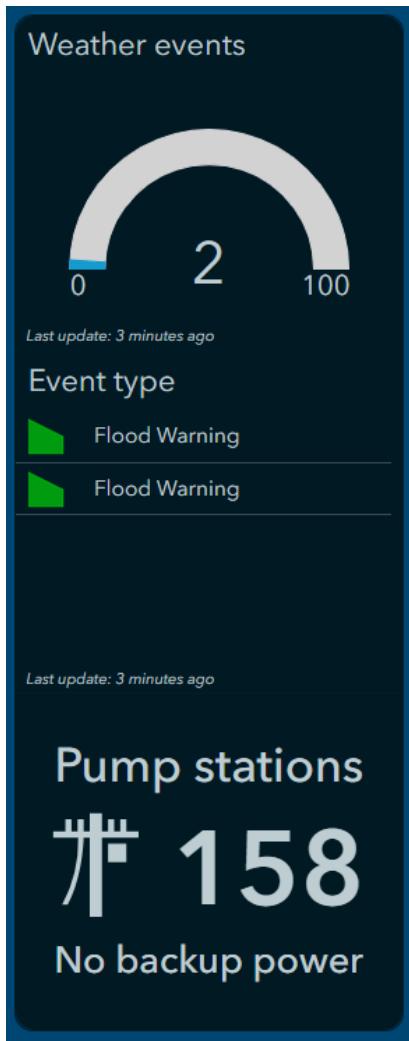
- g Drag the map border to the left until it reaches approximately 55 percent.
- h Drag the map legend border to the left until it reaches approximately 40 percent.
- i Drag the weather events gauge border to the right until it reaches approximately 20 percent.



*Step 9***: Modify the design of the dashboard.*

You will now adjust the arrangement of the column elements—the gauge, the list, and the indicator—so that they are evenly distributed within the column.

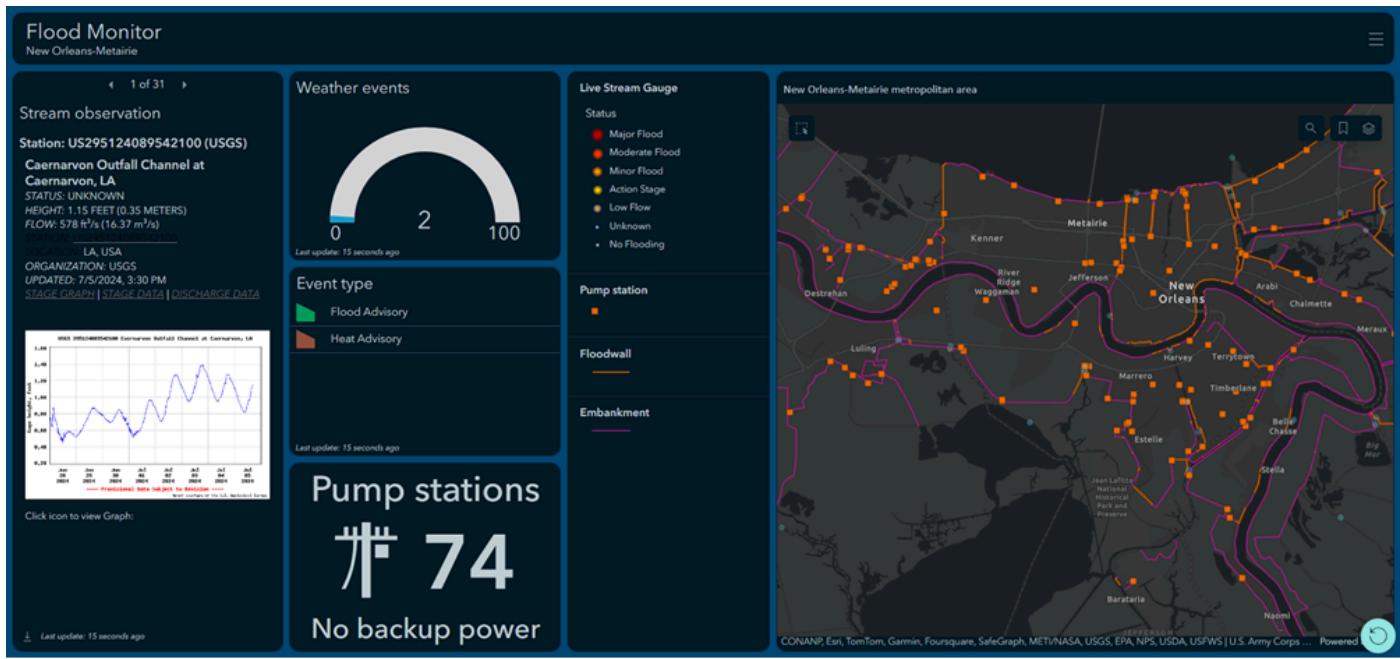
- j Open the View pane and confirm that you are in the Body tab.
- k Next to Column, click the Distribute Height Evenly button .



*Step 9k***: Modify the design of the dashboard.*

The height of each element is now distributed evenly in the column. Although you initially grouped the elements, you now think that they will stand out more if there is separation between each element.

- | Next to Column, click the Ungroup Elements button.
- m Close the View pane.



*Step 9m***: Modify the design of the dashboard.*

n Save your dashboard.

In this step, you updated the dashboard theme and adjusted the way that the elements appear on the layout. Your dashboard is now ready to be shared with EOC personnel so that they can monitor indicators of potential flooding.

- Step 10: Configure a mobile view

Now that you have created a desktop view of a dashboard for the EOC personnel, you can create a mobile view optimized for viewing on mobile devices.

In this step, you will create and configure a mobile view that can be used by the team when they are outside of the operations center. The mobile view will be a pared-down version of the desktop view and is meant to provide limited situational awareness of stream observations.

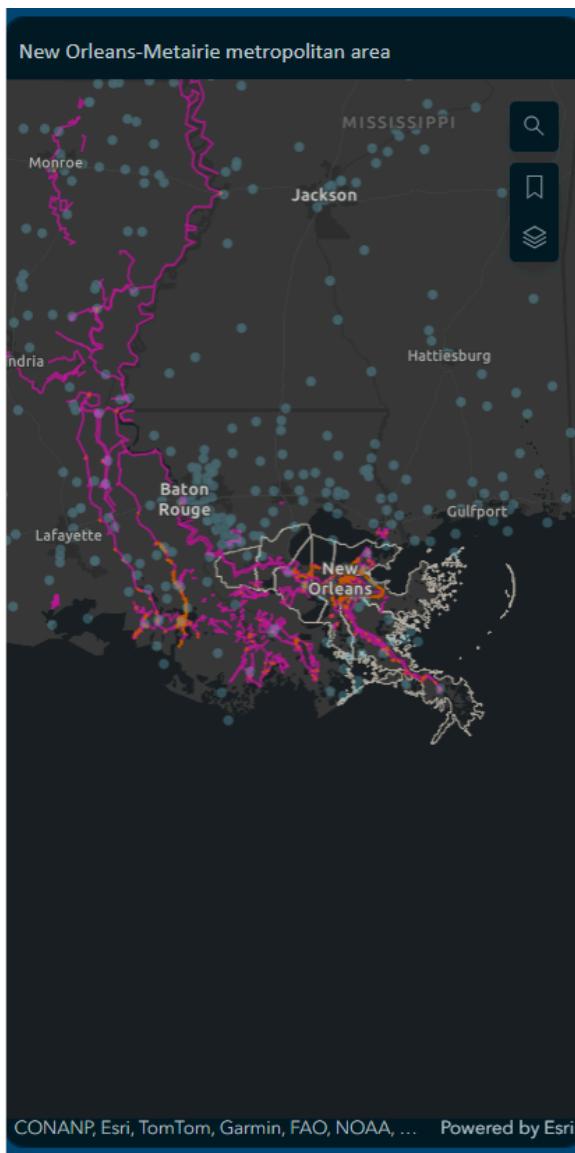
First, you will add a mobile view.

- Open the View pane.
- Click +Add Mobile View.

To streamline the mobile view and provide flexibility for viewing additional information, you will only add two elements: a map and stream gauge details. You will use the same map from the desktop view and will maintain the ability to turn individual layers on and off as needed.

For more information about mobile view best practices, see ArcGIS Dashboards Help: Dashboard mobile views (<https://links.esri.com/DashboardMobileViews>).

- Under the Body tab, click Copy Element and choose the Louisiana Flood Monitoring map.



*Step 10c***: Configure a mobile view.*

Because you copied the map element, all configurations except for actions are also copied. You can configure actions for an element in the map view the same way that you would in the desktop view.

You will now add a details element to provide updated stream gauge information.

- d Click Add Element and choose Details.
- e In the Select A Layer window, under Layers From 'Louisiana Flood Monitoring' Map, click the Live Stream Gauge layer.
- f In the Details window, under Data Options, click +Filter.
- g Create a filter with the condition that Governing Location is equal to LA, USA.

Details

The screenshot shows the 'Data' tab selected in a dashboard configuration interface. In the 'Data options' section, the 'Layer' is set to 'Live Stream Gauge' with a 'Change' button. Below this is a 'Filter' section for 'Governing Location'. The filter criteria are set to 'equal' with the value 'LA, USA'. At the bottom of the filter section are 'AND' and 'OR' buttons.

*Step 10g***: Configure a mobile view.*

You will limit the information shown in the details so that users can more easily read and interact with the element.

- h Click the Details tab and turn off Media.

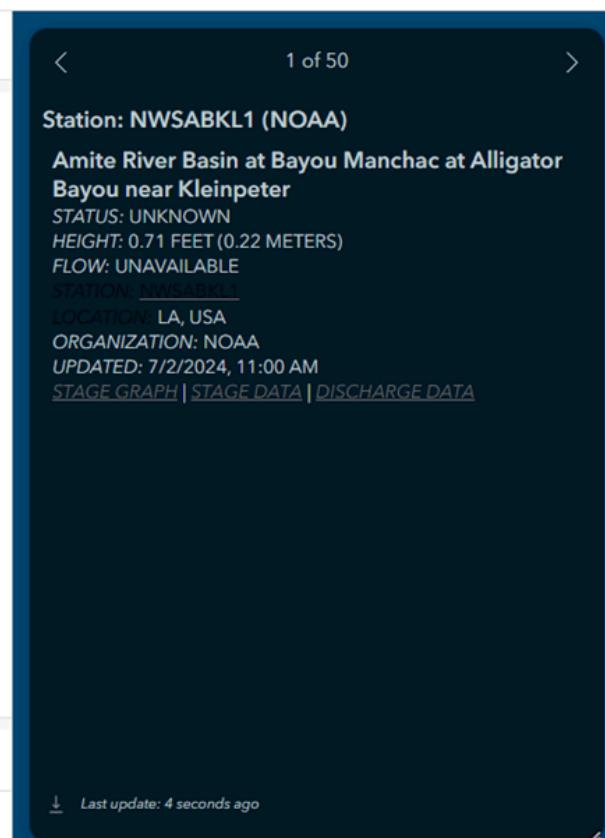
The graphic that displays trends in the stream height will no longer be shown in the element. However, if a user still wants to view the graphic, they can click the STAGE GRAPH link to open it.

- i Click the General tab and, under Settings, turn on the following options:

- Last Update Text
- Source Data Download

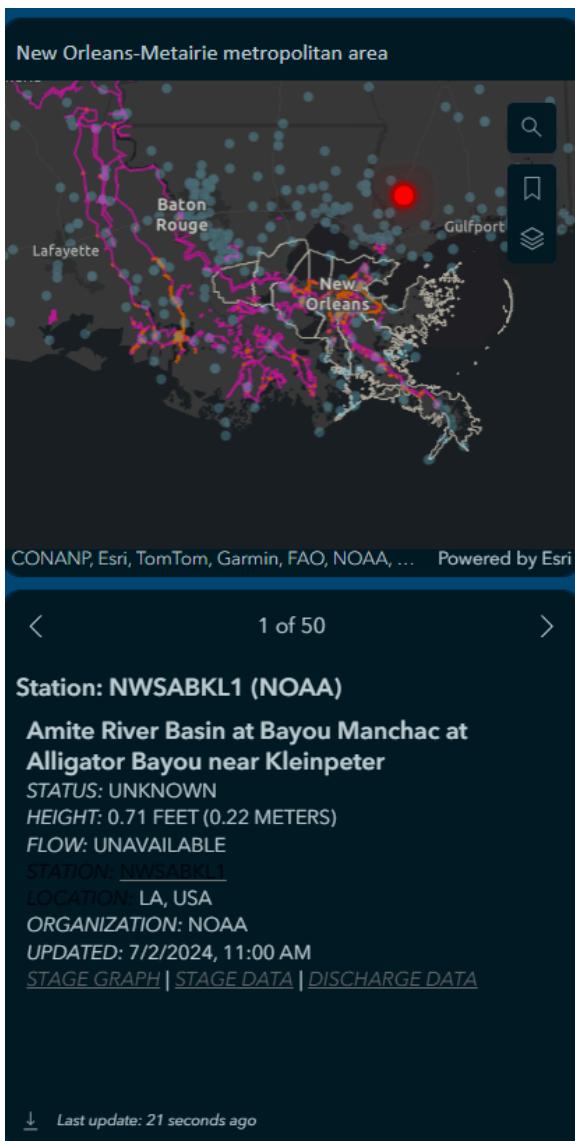
Details

Data	General options
Details	Settings
General	Name Details (1)
Accessibility	Title Description Text color Foreground color Last update text Source data download No data No selection



*Step 10i***: Configure a mobile view.*

- j Click Done.



Step 10j***: Configure a mobile view.

Now that you have added a details element, you will optimize the map for mobile viewing.

- k In the View pane, next to Louisiana Flood Monitoring, click the Options button and choose Configure.
- l Turn off Search.
- m Confirm that Layer Visibility is turned on.

Louisiana Flood Monitoring

Map

General

Scalebar
None Line Ruler

Initial view and bookmarks

Legend

Layer visibility

Basemap switcher

Search

Compass

Find my location

Zoom in/out

Point zoom scale
10000

*Step 10m***: Configure a mobile view.*

When using the mobile view, you can change the visibility of map layers as needed. Additionally, you can quickly zoom to bookmarked areas of interest.

- n Click the General tab and, under Name, type **Mobile Map**.

You will set a map extent filter so that, when the map extent changes, the stream gauge details filter to that area.

- o Click the Map Actions tab and, under Map Actions, click Filter.
- p Turn on the Details element.

Louisiana Flood Monitoring

General

When map extent changes

Map actions

Filter
Active targets: 1

To ensure performance and scalability, map extent filters in public dashboards may produce approximate results in some scenarios. Map extent filters will produce exact results in private dashboards or dashboards shared to your organization. [Learn more about map extent filters](#).

Details (1)

*Step 10p***: Configure a mobile view.*

- q Click the Layer Actions tab.

You will disable the pop-up option, as it takes up too much screen space.

- r Under When Map Is Clicked, turn off Show Pop-Up.

- s Click Done.

- t In the View pane, click the Header tab and click Add Header.

- u Under Title, type **Flood Monitor (Mobile)**.

- v Under Subtitle, delete New Orleans-Metairie.

Header

Appearance

Settings

Title

{ } Flood Monitor (Mobile)

Subtitle

{ }

*Step 10v***: Configure a mobile view.*

- w Click Done.

- x In the View pane, click the Settings tab, and then turn on Allow Dashboard Reset.

- y Save your dashboard.

In this step, you configured a streamlined mobile view that can be used by EOC personnel when they are away from the operations center. You are now ready to share the dashboard with the team.

- Step 11: Share the dashboard

Now that you have created and configured a desktop and a mobile view for your dashboard, you will share it with EOC personnel.

- a In the top left of the dashboard, click the Menu button  and choose Content.

- b Under My Content, locate your dashboard and click the Shared Owner button .

 New Orleans_Student

 Dashboard

Jul 5, 2024



Preview

...

*Step 11b***: Share the dashboard.*

- c In the Share window, under Set Sharing Level, click Everyone (Public).

Share

X

Set sharing level

Revert


Owner

Owner of the item(s) has access



Organization

All members of your organization have access



Everyone (public)

People outside your organization have access

Set group sharing

You don't have any groups to share to yet.

Save
Cancel

*Step 11c***: Share the dashboard.*

- d Click Save.

Now that you have shared the dashboard, it can be opened directly from its URL or embedded into another app or website. The mobile view can be opened with the same URL from a mobile device.

You will open and explore the desktop view to see what it will look like for the EOC personnel.

- e Next to your content, click the More Options button and choose Open Dashboard.

Title	Modified	...
New Orleans_Student	Jul 10, 2024	View details Open Dashboard Edit Dashboard Add to favorites

*Step 11e***: Share the dashboard.*

- f In the Map element, zoom and pan to different areas of New Orleans.

Just as you saw in your testing, the dashboard elements update based on map extent.

In this step, you updated the sharing settings for your dashboard. EOC personnel can now view and begin to use the dashboard.

- g If you want to complete the optional stretch goal, close the tab with the shared dashboard, go back to My Content, and open the dashboard for editing.

- h If you do not want to complete the optional stretch goal, return to the ArcGIS Online home page.

- [Remind me how](#)

On the My Content page, in the upper-left corner, click Home.

In this exercise, you created a flood awareness dashboard that will be used by team members in the Emergency Operations Center. You created a desktop view for personnel working inside the EOC. Then, you modified the desktop view to create a mobile view. This dashboard will provide insight into weather events that might lead to flooding and potentially impact flood control infrastructure.

- Step 12: Stretch goal (optional): Update the mobile view

You have created a dashboard using ArcGIS Dashboards and configured a desktop view and a mobile view. For this optional stretch goal, you will apply the skills that you have learned to add a new element to the mobile view.

Use the following high-level steps to update the mobile view.

- a In the dashboard, open the mobile view.
- b Delete the Details element from the mobile view.
- c Copy the Weather Events (Type) list element to the mobile view.
- d Configure the list filter to only display severe weather events in Louisiana.
- e Configure a layer action in the list to zoom to the selected target on the map.
- f Configure the Mobile Map element to set a map extent filter for the list element.
- g View the dashboard in mobile view from your phone or other mobile device.
- h Turn on the visibility for the USA Weather Watches and Warnings layer in the map.

For more information about opening a saved dashboard, see ArcGIS Dashboards Help: Dashboard URLs (<https://links.esri.com/DashboardURLs>).

Use the Lesson Forum to post your questions and observations. Be sure to include the **#StretchSection3** hashtag in the posting title.

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