



RIEMA RI-CHAMP Hazard Consequence Hub

Field Operations Guide

As of 2/22/2024

Introduction

This Field Operations Guide (FOG) describes using the Rhode Island Emergency Management Agency (RIEMA) interactive Rhode Island Consequence Hazard, Modeling and Prediction system (RI-CHAMP) Hazard Consequences Hub to display ACTIVE STORM Model dashboards.

<https://ri-champ-riema.hub.arcgis.com/>

The RI-CHAMP activates Advanced CIRCulation (ADCIRC) **Active Storm** hydrodynamic modeling when an actual storm (e.g., hurricane, tropical storm, or nor-easter) threatens the area covered by RI-CHAMP. These storms are used as the basis for near-real-time consequence predictions. The Current Storm Forecast is updated and recompiled with updated forecast data at set intervals (typically every 6-12 hours.)

RIEMA's RI-CHAMP hub utilizes ESRI's ArcDashboard and PDF reports to display and summarize an Active Storm's potential storm impacts and consequences on RI's communities and infrastructure by integrating the storm model outputs with vulnerable asset data from the RI-CHAMP Infrastructure Asset Consequence Threshold (IACT) database.

Contact Information

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Inside this Field Operations Guide

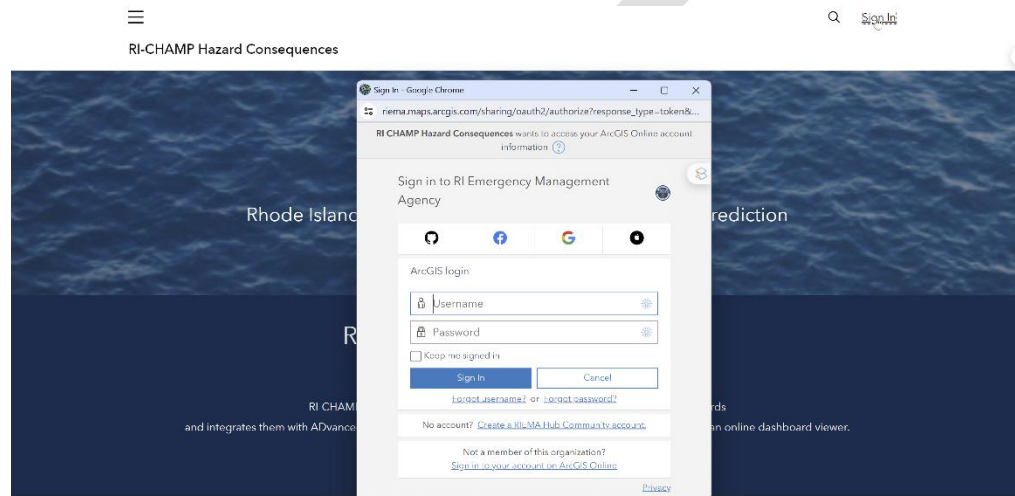
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Accessing the RI-CHAMP Hub

- Access the **Active Storm** dashboard at the following link for the RI-CHAMP Hub page:

<https://ri-champ-riema.hub.arcgis.com/>

- Access to the dashboard requires an approved username and password. This can be through RIEMA, or another approved AGOL organization account. If you are unsure whether you have access, see the contacts.



- If you are not an already approved user, you will need to sign a [confidentiality statement](#) prior to gaining access.

RI-CHAMP Hazard Consequences

HAZARD CONSEQUENCES

RI-CHAMP displays local critical infrastructure managers' concerns for storm hazards and integrates them with ADvanced CIRCulation (ADCIRC) Model wind, wave, and storm surge outputs in an online dashboard viewer.

Approved Users

Click the **Sign in** in the upper right of this website interface to view dashboards and pdf content.

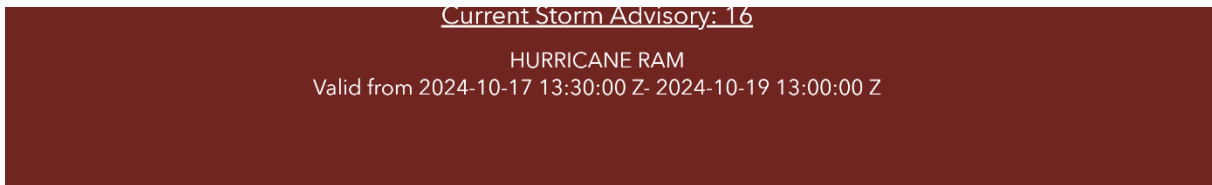
Login with the credentials received to access RICHAMP.

Need Credentials?

[Sign Confidentiality Statement](#)

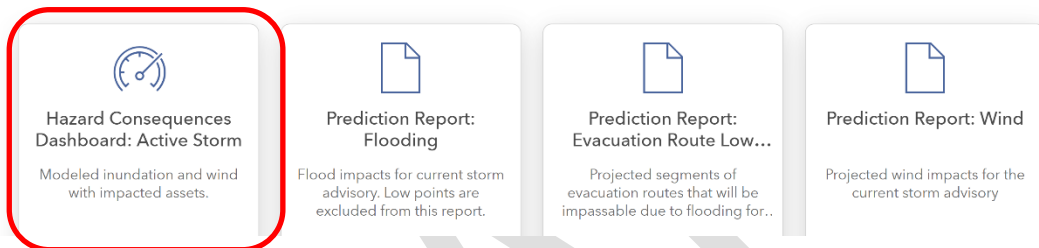
Finding the dashboard

- Once logged in, scroll down on the webpage. The Active Storm dashboard will display under the "Current Storm Advisory" description on the main page of the RI-CHAMP Hub.
- Click on the title to navigate to the dashboard.



CURRENT STORM ADVISORY (Barrier Closed)

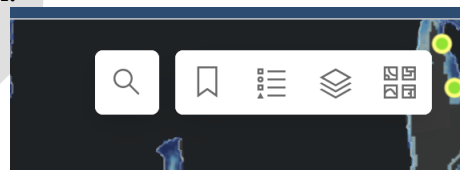
Dashboards and Consequence Prediction Reports should be updated approximately 2 hours after each National Hurricane Center track forecast is issued



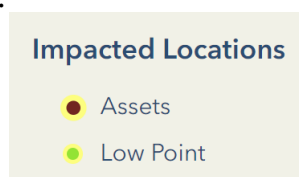
Using the dashboard

BELOW ARE A FEW HELPFUL REFERENCE POINTS ON USING THE DASHBOARD. HOWEVER, CLICK ON THE **FAQ/REFERENCE TAB** FOR MORE HELP NAVIGATING THE DASHBOARD AND FOR TERM DEFINITIONS.

- The dashboard viewer displays inundation surfaces for flooding extent and depth, overlaid with assets at critical infrastructure facilities as points on an interactive map. Storm wind speeds are also modeled but not shown as a map surface.
- Change what layers you see on the map, the basemap imagery, and use bookmarks to help zoom into preset areas using the buttons in the top right of the map. You can also click the magnifying glass to search for an address or location.



- Once flooding or wind speeds at an asset location are projected to exceed the hazard threshold identified for that asset (e.g., 6 inches of flooding), the consequence threshold is triggered causing the points to appear as an impacted location.




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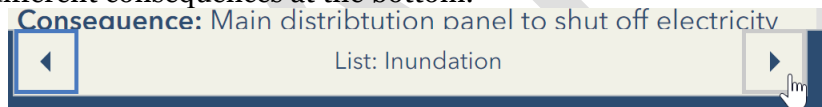
- Storm impacts can be filtered using the selections at the top of the dashboard. Depending on the version of the dashboard, the ones you see may be slightly different.

 RIEMA Hazard Consequence Viewer	Filter by Sector Water and Wastewater Sector	Filter by Lifeline Sector Show all Lifeline	Filter by ESF Show all ESF	Filter by Municipality Bristol	Filter by Storm Vulnerability Show all Vulnerabilities
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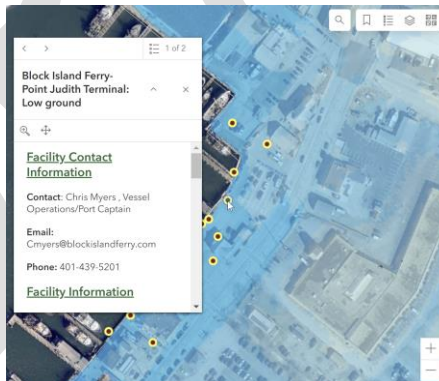
- The Total Asset, Consequences Triggered, and Total Impacts panel will update as a user zooms in and out on the map. These will also change as you filter.



- Clicking on an asset in the Consequences Triggered panel will highlight that asset. Scroll through the lists of different consequences at the bottom.



- Clicking on an impacted asset displays a pop-up window. Users of the dashboard can click on the point to access information regarding the asset, time of impact, and consequences as a result of flooding or wind speeds exceeding a threshold.

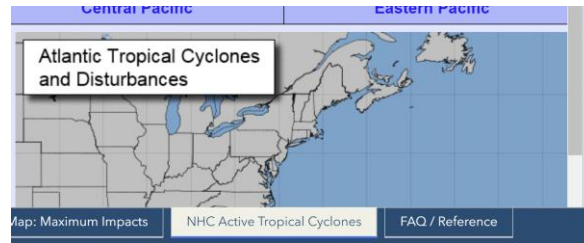


- For Current Storm Forecast dashboards, each time the storm model is re-run (typically every 12 hours using updated forecast data), the predicted triggered consequences are updated based on the revised storm impact information.
- RI-CHAMP does not forecast storms, it uses National Hurricane Center (NHC) track and storm forecasts. View the NHC forecast used to develop model outputs and impacts by clicking on the tab below the "Maximum Impacts" map.

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IMPORTANT: The RI-CHAMP system is not intended to track actual storm impacts; its purpose is to help emergency managers anticipate the likely impacts of a storm moving through the area (based on the available data).

Downloading storm prediction reports

- There are three prediction reports, one for flooding impacts, evacuation route low point impacts, and wind impacts.
- Click "View" to be sent to a webpage to download the report you want.

CURRENT STORM ADVISORY (Barrier Closed)

Dashboards and Consequence Prediction Reports should be updated approximately 2 hours after each National Hurricane Center track forecast is issued

 <p>Hazard Consequences Dashboard: Active Storm</p> <p>Modeled inundation and wind with impacted assets.</p> <p>View</p>	 <p>Prediction Report: Flooding</p> <p>Flood impacts for current storm advisory. Low points are excluded from this report.</p> <p>View</p>	 <p>Prediction Report: Evacuation Route Low...</p> <p>Projected segments of evacuation routes that will be impassable due to flooding for..</p> <p>View</p>	 <p>Prediction Report: Wind</p> <p>Projected wind impacts for the current storm advisory</p> <p>View</p>
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- Impacts are sorted by municipality and then by ESF. One of the easiest ways to navigate the reports are to use Ctrl-F to find the municipality, facility, or ESF you are concerned about.