

## **United States Army Corps of Engineers (USACE) Inundation Maps – 10 October 2024**

### **USE RESTRICTIONS**

USACE-produced mapping is provided to federal, state and local agencies with no usage or distribution restrictions.

### **MAP VIEWER**

An inundation map viewer has been published for this event and is available at

<https://geospatial.sec.usace.army.mil/arcgis/apps/dashboards/f2ff13ea7f7f45f997700eec61ad268b>

### **Inundation Web Services**

#### **10 October 2024**

##### ***Tile Services for the inundations***

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/PeaceBasin\\_10Oct2024\\_12Z\\_7dayQPEand3dayQPF/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/PeaceBasin_10Oct2024_12Z_7dayQPEand3dayQPF/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Tampa\\_Bay\\_Basin\\_10Oct2024\\_12Z\\_7day\\_QPE\\_and\\_QPF/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Tampa_Bay_Basin_10Oct2024_12Z_7day_QPE_and_QPF/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohnsBasin\\_10Oct2024\\_12Z7dayQPFand3dayQPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohnsBasin_10Oct2024_12Z7dayQPFand3dayQPE/MapServer)

##### ***Image Services for the inundations***

[https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay\\_10Oct2024\\_12Z\\_7day\\_QPEandQPF/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay_10Oct2024_12Z_7day_QPEandQPF/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/Peace\\_10Oct2024\\_12Z\\_7dayQPEand3dayQPF/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/Peace_10Oct2024_12Z_7dayQPEand3dayQPF/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/stJohn\\_10Oct2024\\_12Z7dayQPFand3dayQPE/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/stJohn_10Oct2024_12Z7dayQPFand3dayQPE/ImageServer)

##### **Feature Services for structures with an inundation depth**

###### **Critical Infrastructure:**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical\\_Infrastructure\\_10Oct2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical_Infrastructure_10Oct2024/FeatureServer)

###### **Structures possibly inundated**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_StJohns\\_10OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_StJohns_10OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_Peace\\_10OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_Peace_10OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_TampaBay\\_10OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_TampaBay_10OCT2024/FeatureServer)

## **9 October 2024**

### ***Tile Services for the inundations***

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/PeaceBasin\\_09Oct2024\\_12Z\\_7dayQPFandQPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/PeaceBasin_09Oct2024_12Z_7dayQPFandQPE/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohnBasin\\_09Oct2024\\_12Z\\_7dayQPFandQPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohnBasin_09Oct2024_12Z_7dayQPFandQPE/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/TampaBayBasin\\_09Oct2024\\_12Z\\_7dayQPFandQPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/TampaBayBasin_09Oct2024_12Z_7dayQPFandQPE/MapServer)

### ***Image Services for the inundations***

[https://geospatial.sec.usace.army.mil/image/rest/services/Peace\\_09Oct2024\\_12Z\\_7dayQPFandQPE/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/Peace_09Oct2024_12Z_7dayQPFandQPE/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/StJohn\\_09Oct2024\\_12Z\\_7dayQPFandQPE/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/StJohn_09Oct2024_12Z_7dayQPFandQPE/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay\\_09Oct2024\\_12Z\\_7dayQPFandQPE/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay_09Oct2024_12Z_7dayQPFandQPE/ImageServer)

### **Feature Services for structures with an inundation depth**

#### **Critical Infrastructure:**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical\\_Infrastructure\\_9OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical_Infrastructure_9OCT2024/FeatureServer)

#### **Structures possibly inundated**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_Peace\\_9OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_Peace_9OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_StJohns\\_9OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_StJohns_9OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_TampBay\\_9OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_TampBay_9OCT2024/FeatureServer)

**8 October 2024**

***Tile Services for the inundations***

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Peace\\_Basin\\_08Oct2024\\_12Z\\_7dayQPF\\_and\\_QPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Peace_Basin_08Oct2024_12Z_7dayQPF_and_QPE/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Tampa\\_Bay\\_Basin\\_08Oct2024\\_06Z\\_7day\\_QPF\\_and\\_QPE/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Tampa_Bay_Basin_08Oct2024_06Z_7day_QPF_and_QPE/MapServer)

<https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Map/MapServer>

***Image Services for the inundations***

[https://geospatial.sec.usace.army.mil/image/rest/services/PeaceBasin\\_08Oct2024\\_12Z\\_7dayQPFandQPE\\_tif/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/PeaceBasin_08Oct2024_12Z_7dayQPFandQPE_tif/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay\\_08Oct2024\\_6Z\\_7dayQPFandQPE\\_tif/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/TampaBay_08Oct2024_6Z_7dayQPFandQPE_tif/ImageServer)

[https://geospatial.sec.usace.army.mil/image/rest/services/St\\_Johns\\_08Oct2024\\_06Z\\_7dayQPF\\_and\\_QPE/ImageServer](https://geospatial.sec.usace.army.mil/image/rest/services/St_Johns_08Oct2024_06Z_7dayQPF_and_QPE/ImageServer)

**Feature Services for structures with an inundation depth**

**Critical Infrastructure:**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical\\_Infrastructure\\_8OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Critical_Infrastructure_8OCT2024/FeatureServer)

**Structures possibly inundated**

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[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_TampaBay\\_8OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_TampaBay_8OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_StJohns\\_8OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_StJohns_8OCT2024/FeatureServer)

**7 October 2024**

***Tile Services for the inundations***

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Peace\\_7Oct2024\\_7dayQPF/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Peace_7Oct2024_7dayQPF/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohns\\_7OCT2024\\_7dayQPF/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/StJohns_7OCT2024_7dayQPF/MapServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/TampaBay\\_7OCT2024\\_7dayQPF/MapServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/TampaBay_7OCT2024_7dayQPF/MapServer)

### ***Image Services for the inundations***

[https://geospatial.sec.usace.army.mil/server/rest/services/Peace\\_7OCT2024\\_7dayQPF\\_tif/ImageServer](https://geospatial.sec.usace.army.mil/server/rest/services/Peace_7OCT2024_7dayQPF_tif/ImageServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/StJohns\\_7OCT2024/ImageServer](https://geospatial.sec.usace.army.mil/server/rest/services/StJohns_7OCT2024/ImageServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/TampaBay\\_7OCT2024\\_7dayQPF\\_tif/ImageServer](https://geospatial.sec.usace.army.mil/server/rest/services/TampaBay_7OCT2024_7dayQPF_tif/ImageServer)

### **Feature Services for structures with an inundation depth**

#### **Critical Infrastructure:**

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#### **Structures possibly inundated**

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_PeaceRiver\\_7OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_PeaceRiver_7OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_StJohns\\_7OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_StJohns_7OCT2024/FeatureServer)

[https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures\\_TampBay\\_7OCT2024/FeatureServer](https://geospatial.sec.usace.army.mil/server/rest/services/Hosted/Structures_TampBay_7OCT2024/FeatureServer)

## **MODELING SUMMARY**

### **10 October 2024**

**USACE South Atlantic Division – St. John’s Region (HUC6 – 030801)** – Surge based upon Hurricane Milton on National Oceanic and Atmospheric Administration (NOAA) Tides and Currents observed preliminary data. Precipitation based upon NOAA’s MultiRadar/Multi-Sensor System QPE data from 03-10 October 2024. The downstream boundary is in the Atlantic Ocean and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to,

forward speed, storm size, intensity/wind speed, and precipitation. More information on the NOAA's MRMS data used these simulations can be found at <https://www.nssl.noaa.gov/projects/mrms/>. More information on the observed tidal data used these simulations can be found at <https://tidesandcurrents.noaa.gov/>. The QPE grids were pulled at 1-hr intervals.

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 3-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
6. All depths are reported in feet.

This map and the data it represents are preliminary in nature and subject to change. This map is provided for general information purposes only and the United States provides no guarantee of accuracy or completeness. Any extraction, manipulation, or other use of these data inconsistent with this disclaimer is at the sole risk of the user.

**USACE South Atlantic Division – Peace Region (HUC6 – 031001)** – Surge based upon Hurricane Milton on National Oceanic and Atmospheric Administration (NOAA) Tides and Currents observed preliminary data. Precipitation based upon NOAA's MultiRadar/Multi-Sensor System QPE data from 03-10 October 2024. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the NOAA Tides and Currents website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NOAA's MRMS data used these simulations can be found at <https://www.nssl.noaa.gov/projects/mrms/>. More information on the observed tidal data used these simulations can be found at <https://tidesandcurrents.noaa.gov/>. The QPE grids were pulled at 1-hr intervals.

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 3-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
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accuracy or completeness. Any extraction, manipulation, or other use of these data inconsistent with this disclaimer is at the sole risk of the user.

**USACE South Atlantic Division – Tampa Bay Region (HUC6 – 031002)** – Surge based upon Hurricane Milton on National Oceanic and Atmospheric Administration (NOAA) Tides and Currents observed preliminary data. Precipitation based upon NOAA’s MultiRadar/Multi-Sensor System QPE data from 03-10 October 2024. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the NOAA Tides and Currents website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NOAA’s MRMS data used these simulations can be found at <https://www.nssl.noaa.gov/projects/mrms/>. More information on the observed tidal data used these simulations can be found at <https://tidesandcurrents.noaa.gov/>. The QPE grids were pulled at 1-hr intervals.

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 3-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
6. All depths are reported in feet.

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#### **9 October 2024**

**USACE South Atlantic Division – Peace Region (HUC6 – 031001)** – Surge based upon Hurricane Milton on CERA website, Advisory 17 Time 09-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100912. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.

2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
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**USACE South Atlantic Division – St. John’s Region (HUC6 – 030801)** – Surge based upon Hurricane Milton on CERA website, Advisory 17 Time 09-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100912. The downstream boundary is in the Atlantic Ocean and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

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3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
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5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
6. All depths are reported in feet.

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**USACE South Atlantic Division – Tampa Bay Region (HUC6 – 031002)** – Surge based upon Hurricane Milton on CERA website, Advisory 17 Time 09-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100912. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS

model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.
6. All depths are reported in feet.

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#### **8 October 2024**

**USACE South Atlantic Division – Peace Region (HUC6 – 031001)** – Surge based upon Hurricane Milton on CERA website, Advisory 13 Time 08-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100812. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

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3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
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5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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**USACE South Atlantic Division – St. John’s Region (HUC6 – 030801)** – Surge based upon Hurricane Milton on CERA website, Advisory 13 Time 08-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100812. The downstream boundary is in the Atlantic Ocean and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

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5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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**USACE South Atlantic Division – Tampa Bay Region (HUC6 – 031002)** – Surge based upon Hurricane Milton on CERA website, Advisory 13 Time 08-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100812. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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#### **7 October 2024**

**USACE South Atlantic Division – Peace Region (HUC6 – 031001)** – Surge based upon Hurricane Milton on CERA website, Advisory 8 Time 07-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100706. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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**USACE South Atlantic Division – St. John’s Region (HUC6 – 030801)** – Surge based upon Hurricane Milton on CERA website, Advisory 8 Time 07-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100706. The downstream boundary is in the Atlantic Ocean and

utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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**USACE South Atlantic Division – Tampa Bay Region (HUC6 – 031002) – Surge based upon Hurricane Milton on CERA website, Advisory 8 Time 07-Oct-2024, 0900 UTC. Precipitation based upon National Weather Service QPF, Timestamp 2024100706. The downstream boundary is in the Gulf of Mexico and utilizes the stage forecast from the CERA website. The inundation maps are composed using HEC-RAS model results for coastal areas and for inland areas. HEC-RAS results are uncertain because they depend on uncertain input parameters. In tropical cyclone events, these uncertain parameters include, but are not limited to, forward speed, storm size, intensity/wind speed, and precipitation. More information on the NWS forecasted gage data used these simulations can be found at <https://water.weather.gov/ahps/>. More information on the ADCIRC storm surge data used these simulations can be found at <https://cera.coastalrisk.live/>The QPF grids were pulled at 6-hr intervals from [https://ftp.wpc.ncep.noaa.gov/2p5km\\_qpf/](https://ftp.wpc.ncep.noaa.gov/2p5km_qpf/)**

Some assumptions in the HEC-RAS modeling include:

1. Lack of spatially varied hydrologic infiltration or losses of rainwater to groundwater.
2. Lack of some complex drainage features such as pumps, culverts, canals, and some non-federal levees.
3. The HEC-RAS modeling uses NOAA QPF spatial grids for the precipitation occurring over the modeled area over a 7-day period and is spatially varied by two-dimensional flow region.
4. Raised roadways are typically not included in the depth maps. Therefore, some roadways may appear inundated that are not inundated.
5. National Land Cover Database of 2019 (NLCD 2019) was used to define roughness throughout the two-dimensional flow region.

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