

NOUS41 KWBC 162130
PNSWSH

Service Change Notice 23-12
National Weather Service Headquarters Silver Spring MD
430 PM EST Thu Feb 16 2023

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From: Edward Myers
 Chief, Coastal Marine Modeling Branch
 NOS Office of Coast Survey

Subject: New Cloud-Based NOAA's nowCOAST Map Viewer and Map Services:
Effective April 3, 2023

NOAA's nowCOAST (<https://nowcoast.noaa.gov/>) is a Geographic Information System (GIS)-based portal that provides situational awareness on present and future environmental conditions for coastal and maritime users and partners by integrating data and information from across NOAA, other federal agencies and regional ocean and weather observing networks via an interactive map viewer and over 40 web mapping services. nowCOAST was developed by the NOAA/National Ocean Service (NOS)/Office of Coast Survey's Coast Survey Development Laboratory and is hosted in NOAA's Integrated Dissemination Program (IDP) Data Centers operated by the National Weather Service (NWS)/NCEP Central Operations, where it has been operationally supported and monitored 24 x 7 since September 2015.

nowCOAST on IDP will be turned off on or about April 3, 2023 and users will be redirected to nowCOAST on Amazon Web Services (AWS), a commercial cloud computing service. Unfortunately, not all the datasets on the present nowCOAST@IDP map services will be available on the nowCOAST cloud-based map services or displayed on the map viewer when nowCOAST@IDP is turned off on or about April 3rd. In addition, the cloud-based nowCOAST will be monitored only 8 x 5 by OCS personnel starting in April.

In preparation for the decommissioning of nowCOAST@IDP, NOS' Coast Survey Development Laboratory is providing an evaluation period for the new cloud-based nowCOAST map viewer and map services from February 27 through March 28, 2023. The evaluation period is being conducted to provide time for users to make changes to consume maps from the new cloud-based map services, investigate alternative map services for those datasets which will not be available from the new nowCOAST map services, and obtain feedback from users.

The cloud-based nowCOAST will be available to users at <https://beta.nowcoast.noaa.gov> on or about February 27, 2023.

The cloud-based nowCOAST map viewer has a similar look and feel of the present viewer, but incorporates new functionality based on suggestions

from partners and users over the past eight years, and evolving Web design methodologies. The new viewer is built using open-source software including OpenLayers, ReactJS, and Material user interface (UI). The viewer is hosted on the AWS. Similar to the present viewer, the new version also has integrated time control slider which auto-adjusts based on the availability of each visible layer's data. Unlike the present nowCOAST map viewer, the cloud-based viewer is mobile-friendly, displaying accurately between desktop, laptops, and mobile devices such as cell phones and tablets.

The cloud-based nowCOAST map services are based on open-source software including GeoServer and GeoWebCache and are also hosted on the AWS. The cloud-based nowCOAST will have the advantage over the present nowCOAST to automatically scale to maintain steady map response times for users during significant weather events (e.g., landfalling hurricanes) or environmental coastal disasters (e.g., oil spills). Similar to the present nowCOAST, the map services provide the latest data and information from NOS, NWS, and the National Environmental Satellite, Data, and Information Service (NESDIS). However, it will provide only Open Geospatial Consortium (OGC) compliant Web Map Service (WMS), but no ArcGIS Representational State Transfer (REST) map services that the present nowCOAST@IDP provides. Unfortunately, the cloud-based nowCOAST map services will not provide services for all the datasets available from the existing nowCOAST at IDP by April 3, 2023.

New WMSs will be available only for the following datasets:

- NOS Coastal and Great Lakes Operational Forecast Systems forecast guidance of surface water currents.
- NOS Surge and Tide Operational Forecast System (STOFS-3D-Atlantic) water level disturbance.
- NOS/OCS BlueTopo (bathymetry).
- NWS weather radar base reflectivity mosaics for the contiguous U.S. (CONUS), Hawaii, Puerto Rico and Alaska.
- NWS/NCEP Global Real-Time Ocean Forecast System (G-RTOFS) forecast guidance of surface water currents.
- NWS watches, warnings, and advisories for land areas and coastal waters.
- NWS/National Hurricane Center (NHC) tropical cyclone forecast information and best track.
- NWS/Central Pacific Hurricane Center (CPHC) tropical cyclone forecast information and best track.
- /NHC potential storm surge flooding maps.
- NESDIS Global Mosaic of Geostationary Satellite Imagery (GMGSI).
- NWS/National Digital Forecast Database (NDFD) weather forecasts.

Map services will not be available for the following datasets:

- NOS/Surge and Tide Operational Forecast System (STOFS-2D-Global) water level forecast guidance (previously called the Global Extratropical Surge and Tide Operational Forecast System).
- NOS Coastal and Great Lakes Operational Forecast Systems forecast guidance of surface water temperature, water levels, and salinity.
- NOAA Vibrio vulnificus probability forecast guidance.
- NESDIS GOES-WEST and GOES-EAST imagery.

- NWS/NCEP Global Real-Time Ocean Forecast System (GRTOFS) forecast guidance of water temperatures, water levels, and salinity.
- NWS/Storm Prediction Center (SPC) Convective Outlooks
- NWS/SPC Fire Weather Outlooks.
- NWS marine warnings for offshore marine forecast zones.
- NWS watches, warnings and advisories for Alaska coastal marine forecast zones.
- Hourly surface weather and marine weather observations from airports, buoys, ships and coastal stations.
- Satellite emulated lightning strike density data supplied by NWS/Ocean Prediction Center (OPC).
- NWS/Real-Time Mesoscale Analysis (RTMA) System hourly surface weather analyses.
- NWS/Multi-Radar Multi-Sensor System (MRMS) Quantitative Precipitation Estimates (QPEs).
- NWS/NCEP Daily Global Near-Surface Temperature Analysis (NSST)
- National Aeronautics and Space Administration (NASA)/ Short-term Prediction Research and Transition Center (SPoRT) twice daily North America sea surface temperature (SST) composite.
- NWS, U.S. Coast Guard (USCG), U.S. Army Corps of Engineers (USACE) and Naval Air Station (NAS) administrative boundaries.
- U.S., Canada and Mexico (counties, towns, province) political boundaries.
- Geo-referenced hyperlinks to point forecast guidance from NOS and NWS forecast models.
- Geo-referenced hyperlinks to NOS tide predictions.
- Geo-referenced hyperlinks to surface weather and marine weather observations.
- Geo-referenced hyperlinks to USGS river gauge observations.
- Geo-referenced hyperlinks to airport aviation weather forecasts (Terminal Aerodrome Forecasts (TAFs)).
- Geo-referenced hyperlinks to NWS fire weather zone forecasts.
- Geo-referenced hyperlinks to state agency air quality forecasts for cities.

Map services for many of the missing data sets will be added to the cloud-based nowCOAST during the next 12 to 24 months. In the meanwhile, users are encouraged to investigate NWS' operationally supported cloud-based map services as an alternative. Information about these NWS map services can be found at:

https://www.weather.gov/media/notification/pdf2/pns22-04_cloud_gis_web_services.pdf

and <https://www.weather.gov/gis/cloudgiswebservices>.

Please provide comments about cloud-based nowCOAST map viewer and map services at:

<https://docs.google.com/forms/d/19APZYGQIR4EIlPxjDv4nFKZPbiGb4158zEipwSeI3VU>

Questions about the new nowCOAST map services and map viewer can be sent to: nowcoast.team@noaa.gov.

For more information, please contact:

John G.W. Kelley
nowCOAST Project Manager
NOAA/NOS/Coast Survey Development Laboratory
john.kelley@noaa.gov

National Service Change Notices are online at:

<https://www.weather.gov/notification/>

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