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PNSWSH

Service Change Notice 18-84  
National Weather Service Headquarters Silver Spring MD  
335 PM EDT Thu Aug 16 2018

To:           Subscribers:  
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From:         Douglas C. Young, Chief  
              Digital and Graphical Information Support Branch

Subject: Corrections to Gridded Binary Version Two (GRIB2) Encoding  
Parameters for National Digital Forecast Database (NDFD) Products:  
Effective October 30, 2018

Effective October 30, 2018, changes to certain GRIB2 encoding parameters  
for select NDFD products will be implemented. The following is a detailed  
list of the changes that will take place:

1) Change type of first fixed surface (Section 4, Octet 23) from Ground or  
Water Surface (1) to Specified Height above Ground Level (103). This  
change applies to the following NDFD weather elements:

Maximum Temperature  
Minimum Temperature  
Temperature  
Dew Point Temperature  
Apparent Temperature  
Wind Speed  
Wind Direction  
Wind Gust  
Relative Humidity  
Maximum Relative Humidity  
Minimum Relative Humidity

2) Change scaled value of first fixed surface (Section 4, Octet 25) from 0  
meters to 2 meters. This change applies to the following NDFD weather  
elements:

Maximum Temperature  
Minimum Temperature  
Temperature  
Dew Point Temperature  
Apparent Temperature  
Relative Humidity  
Maximum Relative Humidity  
Minimum Relative Humidity

3) Change scaled value of first fixed surface (Section 4, Octet 25) from 0 meters to 10 meters. This change applies to the following NDFD weather elements:

Wind Speed  
Wind Direction  
Wind Gust

4) Change encoding of Forecast Time value (Section 4, Octet 19; Template 4.8 and Template 4.9) to conform strictly to GRIB2 standards. The Forecast Time specified in Section 4, Octet 19, together with the Reference Time (Section 1, Octets 13-20) defines the start time of the valid time interval. This change applies to the following NDFD weather elements:

Maximum Temperature  
Minimum Temperature  
Maximum Relative Humidity  
Minimum Relative Humidity  
12-hour Probability of Precipitation  
Quantitative Precipitation Forecast  
Snow Amount  
Ice Accumulation  
Forecast Reference Evapotranspiration (FRET)  
FRET Departure from Climatology  
Total FRET  
Storm Surge Threat  
Flooding Rain Threat  
Tornado Threat  
Wind Threat  
Convective Hazard Outlook  
Critical/Extreme-Critical Risk Fire Weather Outlook  
Dry Lightning Thunderstorm Risk Fire Weather Outlook  
Probability of Hail  
Probability of Extreme Hail  
Probability of Tornadoes  
Probability of Extreme Tornadoes  
Probability of Damaging Thunderstorm Winds  
Probability of Extreme Thunderstorm Winds  
Total Probability of Severe Thunderstorms  
Total Probability of Extreme Severe Thunderstorms

5) Change the encoded Parameter Number (Section 4, Octet 11) for the NDFD element WaveHeight from 5 (Significant Height of Wind Waves) to 3 (Significant Height of Combined Wind Waves and Swell).

Sample GRIB2 files with the corrected encoding can be found at:

<https://sats.nws.noaa.gov/~downloads/ndfd/grib2/>

Information on accessing and using NDFD elements is online at:

[https://www.weather.gov/mdl/ndfd\\_home](https://www.weather.gov/mdl/ndfd_home)

For general questions regarding NDFD data, please email:

[nws.ndfd@noaa.gov](mailto:nws.ndfd@noaa.gov)

For technical questions regarding NDFD data, please contact:

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If you have questions regarding this notice, please contact:

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NDFD-related notices are online at:

[https://www.weather.gov/mdl/ndfd TINs](https://www.weather.gov/mdl/ndfd_TINs)

National Service Change Notices are online at:

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

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