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Service Change Notice 19-58
National Weather Service Headquarters Silver Spring MD
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From: Michelle Hawkins, Chief
 Severe, Fire, Public & Winter Weather Services Branch

Subject: Changes to the Boundaries of Fire Weather Forecast Zones in
Northeastern Wyoming and Western South Dakota: Effective September 10,
2019

On Tuesday, September 10, 2019, at 100 PM Central Daylight Time (CDT) or
1800 Coordinated Universal Time (UTC), the NWS Weather Forecast Office
(WFO) in Rapid City, SD, (UNR) will modify fire weather zone boundaries
across northeastern Wyoming and western South Dakota.

If September 10, 2019, is declared as a Critical Weather Day, this
implementation will be postponed to Thursday, September 12, 2019.

These changes have been extensively coordinated with the Great Plains
Interagency Dispatch Center Operations Committee and Board of Directors
and other local, state, federal and tribal partners.

New zone numbers are required with this change. The current fire weather
forecast zone numbers in northeastern Wyoming are: WYZ259, WYZ297,
WYZ298, and WYZ299.

The current zone numbers in western South Dakota are: SDZ260, SDZ261,
SDZ262, SDZ263, SDZ264, SDZ265 and SDZ266.

The new fire weather forecast zone numbers in northeastern Wyoming are:
WYZ314, WYZ315, WYZ316, WYZ317, and WYZ318.

The new fire weather zone forecast numbers in western SD are: SDZ319,
SDZ320, SDZ321, SDZ322, SDZ323, SDZ324, SDZ325, SDZ326, SDZ327 (also
covers part of far northeastern WY), SDZ328, SDZ329, SDZ330, SDZ331,
SDZ332, SDZ333, SDZ334 and SDZ335.

The specific details are explained below.

WYZ314 (Northern Campbell) and WYZ315 (Southern Campbell) remain the same
but have new zone numbers (formerly WYZ297 and WYZ259).

WYZ316 (Crook County Plains) and WYZ317 (Weston County Plains) are split
in half at the Crook and Weston County line (formerly WYZ298). The

climatology suggests that there are significant differences in relative humidity and wind speeds between these two new zones. Also, the far northeastern part of Crook County is split off from the Crook County Plains (see SDZ327 below for details).

WYZ318 (Wyoming Black Hills) remains the same but has a new zone number (formerly WYZ299).

SDZ319 (Northern Black Hills) excludes the northern foothills (formerly part of SDZ260) and includes parts of former SDZ262 (Southern Black Hills). This change is driven by the precipitation climatology to focus on the area that receives the greatest rainfall.

SDZ320 (Central Black Hills) excludes the eastern foothills and Southern Black Hills (both formerly part of SDZ262). This change is driven by the temperature and precipitation climatology, which differs from both the northern and southern Black Hills, as well as the eastern foothills.

SDZ321 (Southern Black Hills) excludes the central Black Hills and southern/eastern foothills (formerly part of SDZ262). This change is driven by the temperature and precipitation climatology, which differs from the rest of the Black Hills and surrounding foothills.

SDZ322 (Fall River County Area) excludes the Southern Black Hills and the plains of eastern Fall River and southern Oglala Lakota Counties (formerly part of zones SDZ262 and SDZ263). This change is driven by the warmer and drier climatology of the far southwestern South Dakota plains.

SDZ323 (Northern Foot Hills) is a subset of the Northern Black Hills (formerly SDZ260). The temperature and precipitation in this zone are notably different from the Northern Black Hills.

SDZ324 (Eastern Foot Hills) is a subset of the Northern and Southern Black Hills (formerly in zones SDZ260 and SDZ262). The temperature and precipitation are notably different in this zone from the Northern and Southern Black Hills.

SDZ325 (Custer County Plains) is a subset of the Southern Black Hills and Badlands Area (formerly in zones SDZ262 and SDZ264). The Custer County Plains have a notably different temperature, wind, and precipitation pattern than these former two zones.

SDZ326 (Pine Ridge Area) is a subset of the Southwestern South Dakota zone (formerly SDZ263). The elevated/forested area of the Pine Ridge results in a different wind flow, temperature and precipitation pattern when compared to the far southwestern part of South Dakota.

SDZ327 (Butte County Area) is a subset of the large Northwestern South Dakota zone (formerly SDZ261) and also includes far northeastern Wyoming, including Colony (formerly part of WYZ298). This change is a result of the temperature, precipitation and wind climatology for the area, which is notably different from places to the east.

SDZ328 (Perkins County) is a subset of the large Northwestern South Dakota zone (formerly SDZ261). This change is a result of the

temperature, precipitation and wind climatology for the area, which is notably different from places to the south and west.

SDZ329 (West Central Plains) is a subset of the large Northwestern South Dakota zone (formerly SDZ261). This change is a result of the temperature, precipitation, and wind climatology for the area, which is notably different from places to the northwest and north.

SDZ330 (Ziebach County) is a subset of the Central South Dakota zone (formerly SDZ266). This change is related to the downslope and upslope flow differences to the north and south of the Cheyenne River.

SDZ331 (Haakon County Area) is a subset of the Central South Dakota, Badlands Area, and South Central South Dakota zones (formerly SDZ266, SDZ264, and SDZ265, respectively). There are notable differences in the climatology between this new zone and the former zones.

SDZ332 (Badlands Area) closely resembles the previous Badlands Area (formerly SDZ264) but has been refined to better represent the actual Badlands boundary as well as the terrain.

SDZ333 (Bennett County Area) is a subset of South Central South Dakota (formerly SDZ265). The temperature and precipitation climatology supports a break in this zone.

SDZ334 (Mellette and Todd Counties) is a subset of South Central South Dakota (formerly SDZ265). The temperature and precipitation climatology supports a break in this zone.

SDZ335 (Tripp County) is a subset of South Central South Dakota (formerly SDZ265). The temperature and precipitation climatology supports a break in this zone, especially is it becomes notably more moist toward the east.

Table 1: Current fire weather zones and corresponding Universal Geographic Codes (UGC) for WFO Rapid City, SD

| UGC | Current Fire Weather Zone Name |
|--------|--------------------------------|
| --- | ----- |
| WYZ259 | Southern Campbell |
| WYZ297 | Northern Campbell |
| WYZ298 | Crook and Weston County Plains |
| WYZ299 | Wyoming Black Hills |
| SDZ260 | Northern Black Hills |
| SDZ261 | Northwestern South Dakota |
| SDZ262 | Southern Black Hills |
| SDZ263 | Southwestern South Dakota |
| SDZ264 | Badlands Area |
| SDZ265 | South Central South Dakota |
| SDZ266 | Central South Dakota |

Table 2: Fire weather zones and corresponding UGC for which WFO Rapid City, SD, will issue forecasts and warnings effective September 10, 2019

| UGC | New Fire Weather Zone Name |
|--------|----------------------------|
| --- | ----- |
| WYZ314 | Northern Campbell |
| WYZ315 | Southern Campbell |
| WYZ316 | Crook County Plains |
| WYZ317 | Weston County Plains |
| WYZ318 | Wyoming Black Hills |
| SDZ319 | Northern Black Hills |
| SDZ320 | Central Black Hills |
| SDZ321 | Southern Black Hills |
| SDZ322 | Fall River County Area |
| SDZ323 | Northern Foot Hills |
| SDZ324 | Eastern Foot Hills |
| SDZ325 | Custer County Plains |
| SDZ326 | Pine Ridge Area |
| SDZ327 | Butte County Area |
| SDZ328 | Perkins County |
| SDZ329 | West Central Plains |
| SDZ330 | Ziebach County |
| SDZ331 | Haakon County Area |
| SDZ332 | Badlands Area |
| SDZ333 | Bennett County Area |
| SDZ334 | Mellette and Todd Counties |
| SDZ335 | Tripp County |

Full, graphical descriptions of the old and new fire weather forecast zones are online at:

<http://www.weather.gov/unr/2019firezonechange>

Table 3: NWS watch, warning, and forecast products affected by these changes

| WMO Heading | AWIPS ID | WFO Rapid City Product |
|-------------|----------|--------------------------------|
| ----- | ----- | ----- |
| WWUS83 KUNR | RFWUNR | Fire Weather Watch |
| WWUS83 KUNR | RFWUNR | Red Flag Warning |
| FNUS53 KUNR | FWFUNR | Fire Weather Planning Forecast |

NWS partners and users will need to make necessary changes to their communications systems to accommodate these fire weather forecast zone changes.

A shapefile of the new fire weather forecast zones for WFO UNR is online at:

<https://www.weather.gov/gis/FireZones>

For more information, please contact:

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National Service Change Notices are online at:

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

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