



Weather for Responders

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NWS Rapid City

14 April 2021

Topics to cover & objective

- How to contact NWS
- Situational awareness/Planning
 - NWS sites, observations, radar, etc.
- Spot requests
- Requesting DSS (Decision Support Services)
- FYI/Miscellaneous
- Questions

Objective → Familiarize yourself with the various web sites + resources available to maintain weather awareness

Ultimate goal → Better preparedness for incidents, improved ability to respond, and increased safety awareness (as it pertains to weather)



How to contact NWS

- Call “Rapid City Weather”
 - SD State Radio: NWS-W talkgroup
 - WYOLINK Radio: NWS RC talkgroup
- 605-341-7435 (local or cell)
 - 800-684-4163
- Twitter: *@NWSRapidCity*

Situational Awareness/Planning

NWS website:
weather.gov




  **NATIONAL WEATHER SERVICE**
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, ST" or ZIP code
Enter location ...
[Location Help](#)


Warm in the Northern Plains and Upper Midwest

Mild, warm and above average temperatures are expected the next several days in the northern Plains and Upper Midwest. Meanwhile, a system will drop from the south-central Plains to Florida over the next couple of days with some rain and thunderstorms. Finally, locally heavy rain and mountain snow is expected across the Pacific Northwest into northern California the next few days. [Read More >](#)

 ACTIVE ALERTS FORECAST MAPS RADAR RIVERS, LAKES, RAINFALL AIR QUALITY SATELLITE PAST WEATHER


MY FORECAST

Rapid City SD




Fair
49°F
9°C [Get Detailed info](#)

Tonight



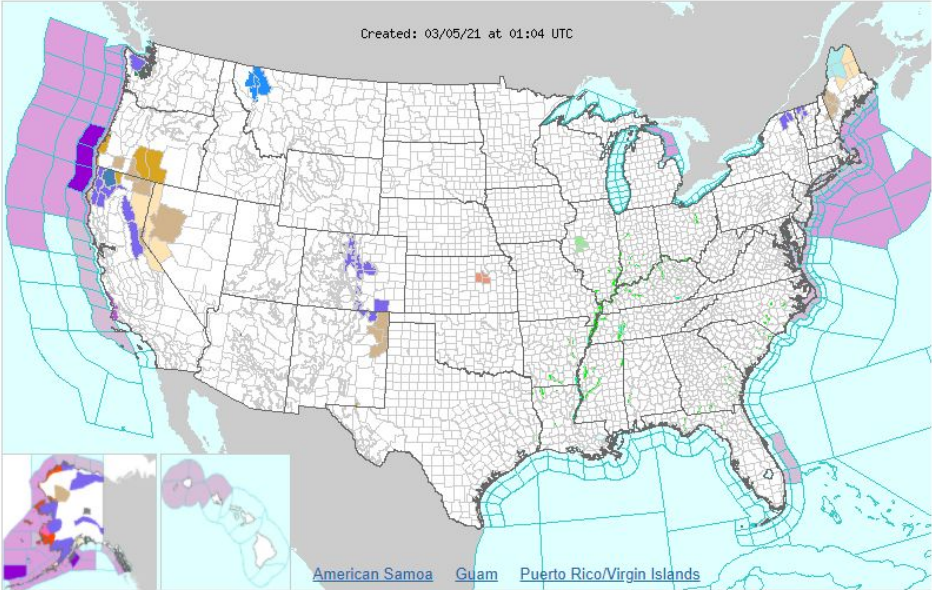
Mostly Clear
Low: 34°F

Friday



Sunny
High: 62°F













[change location](#)



Created: 03/05/21 at 01:04 UTC

[American Samoa](#) [Guam](#) [Puerto Rico/Virgin Islands](#)

Click on the map above for detailed alerts or [Public Alerts in XML/CAP v1.1 and ATOM Formats](#)

 Blizzard Warning	 Winter Weather Advisory	 Hazardous Seas Warning	 Flood Watch
 Winter Storm Warning	 Wind Chill Advisory	 Lake Wind Advisory	 Extreme Fire Danger
 High Wind Warning	 Flood Advisory	 Special Weather	 Special Weather

Local forecast by "City, St" or ZIP code

[Location Help](#)

News Headlines

- [KNBN-TV becomes a StormReady® Supporter](#)

MY FORECAST
Rapid City SD

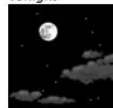


Fair

49°F

9°C [Get Detailed info](#)

Tonight



Mostly Clear
Low: 34°F

Friday



Sunny
High: 62°F

[change location](#)

NWS Forecast Office Rapid City, SD

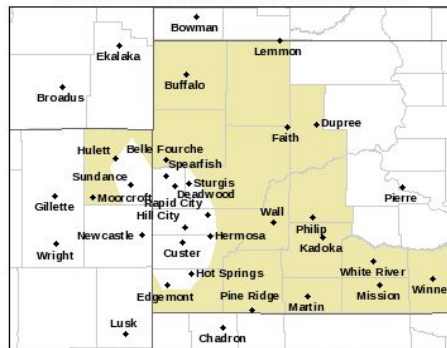
[Weather.gov](#) > Rapid City, SD

Rapid City, SD

Weather Forecast Office

[Current Hazards](#)
[Current Conditions](#)
[Radar](#)
[Forecasts](#)
[Rivers and Lakes](#)
[Climate and Past Weather](#)
[Local Programs](#)

Click a location below for detailed forecast.



Last Map Update: Thu, Mar. 4, 2021 at 7:11:31 pm CST

[Watches,](#)
[Warnings &](#)
[Advisories](#)



[Hazardous Weather](#)
[Outlook](#)



NWS Rapid City:
weather.gov/unr



NWS Rapid City Briefing Page:

https://www.weather.gov/unr/brief_fire



[Summer](#)
[Winter](#)
[Text products](#)

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, St" or ZIP code
Enter location ...
[Location Help](#)


[Weather.gov](#) > [Rapid City, SD](#) > Fire Briefing

Rapid City, SD
Weather Forecast Office


Fire Briefing

Summer	Winter	Fire	Text
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Current Hazards

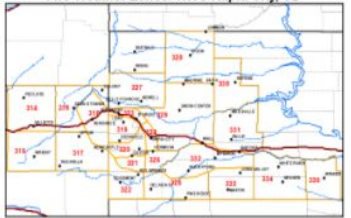


Current Observations

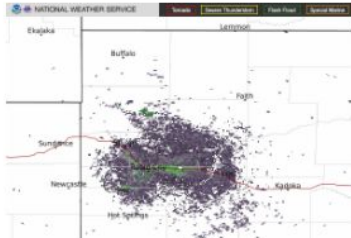


Fire Weather Zones

Fire Weather Zones: NWS Rapid City, SD




Rapid City Radar




Regional Radar

Northern Plains Radar Mosaic
103km Q1, Tuesday, March 22 2021



Bowman Radar



NWS Fire Dashboard:

<https://www.weather.gov/dlh/firepoker>



Fire Weather Dashboard



Help |

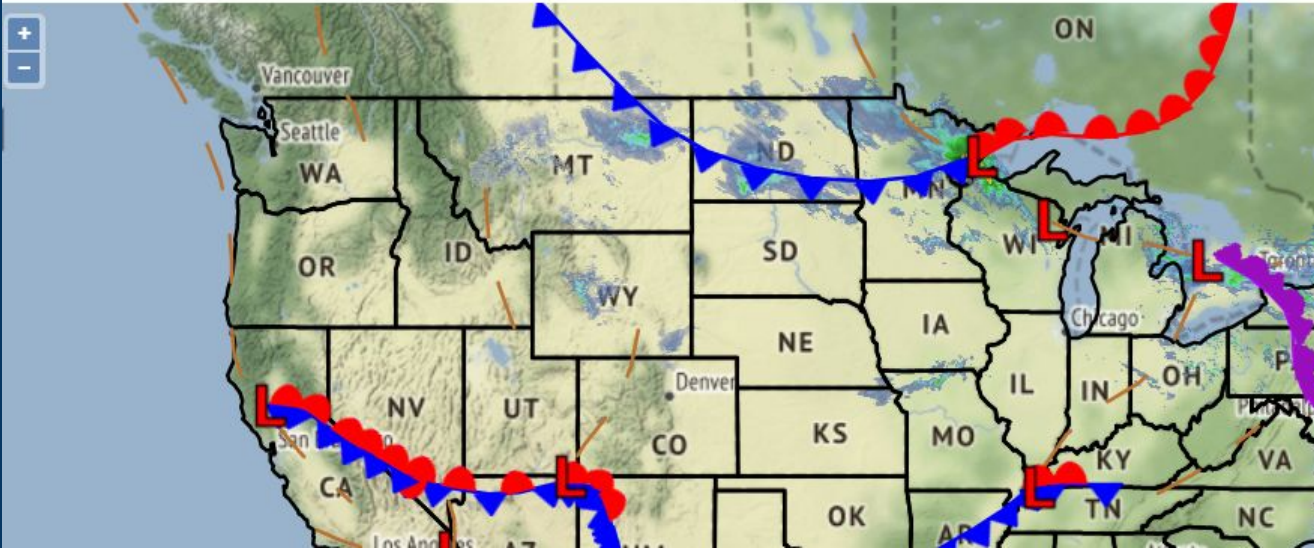


Change Domain |



B

Search...



NWS Rapid City Weather Activity Planner:

<https://forecast.weather.gov/wxplanner.php?site=unr>



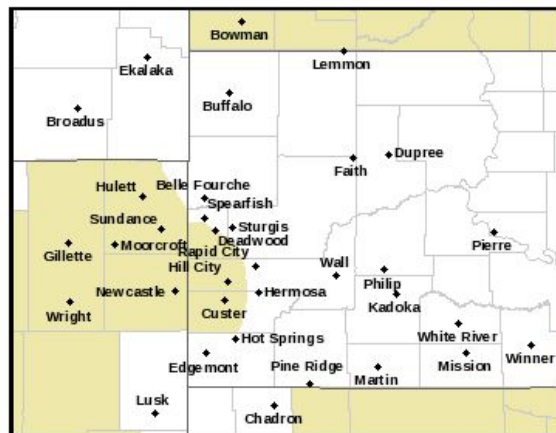
Welcome to the **Weather Activity Planner**. Please enter the range of weather parameters required for your activity. Then, either click the approximate location on the map below, or enter the specific latitude and longitude and hit submit. This will query the forecast grids to find when your weather requirements will be met at the nearest grid point over the next 7 days. Public **comments and suggestions** are encouraged.

This application generates products from a digital forecast data base. It is intended to allow a user to define and produce a forecast for general planning purposes only. As any weather or hydrologic event evolves, updated forecasts and warnings are issued by the NWS. Customers are urged to obtain the latest official forecast information prior to engaging in any weather sensitive activity, and to monitor forecasts for updates during such activities.

The **Weather Activity Planner** is NOT meant to replace a spot forecast request. **Weather Activity Planner** surface winds are a gridded representation of projected, local surface winds at a 5km or 2.5km resolution. The surface winds returned do NOT account for fuel type, sheltering or slope aspect. Users can select either surface wind speeds or 20 foot winds (if the 20 foot wind grid is available). If precise wind forecasts are needed, please submit a spot forecast request to your servicing Weather Forecast Office.

[\[English Units - Click to Change\]](#)

Element	Min	Max	Element	Min	Max
Temperature (°F) <input type="text"/>	<input type="text"/>	to <input type="text"/>	Surface Wind Direction <input type="text"/>	<input type="text"/>	to <input type="text"/>
Relative Humidity <input type="text"/>	<input type="text"/>	to <input type="text"/>	Sky Cover <input type="text"/>	<input type="text"/>	to <input type="text"/>
Surface Wind Speed (mph) <input type="text"/>	<input type="text"/>	to <input type="text"/>	Precipitation Potential <input type="text"/>	<input type="text"/>	to <input type="text"/>



[Read watches, warnings & advisories](#) [Zoom Out](#)
[Hazardous Weather Outlook](#)

Latitude/Longitude Entry
decimal degrees (i.e. 42.134) or
deg min sec (i.e. 42 23 34)

Latitude:

Longitude:

Use "-" (negative sign) in longitude
for locations in Western
Hemisphere

Last Updated: Mon, Mar. 22 2021 9:27 AM



Storm Prediction Center

N O A A / National Weather Service

HOME NEWS SPC PRODUCTS WEATHER INFO FORECAST TOOLS RESEARCH OUTREACH NWS/NCEP

Search SPC...



NWS Storm Prediction Center (SPC):

<https://www.spc.noaa.gov/>



A Slight Risk of Severe Thunderstorms is Forecast Today and/or Tonight

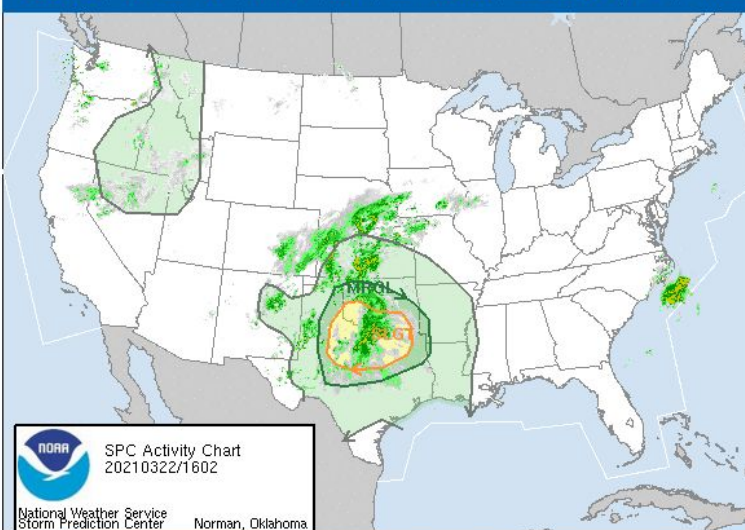
Severe thunderstorms are possible from this afternoon through tonight mainly across parts of north and central Texas, the eastern Texas Panhandle, and western to southern Oklahoma, perhaps reaching the Arklatex area overnight.

» For additional details, see the latest [Day 1 Convective Outlook](#).

» **Critical** fire weather conditions are forecast today. See [details...](#)

» **Critical** fire weather conditions are forecast on Tue (03/23). See [details...](#)

Overview Conv. Outlook Watches MDs Storm Reports Mesoanalysis Fire Hazards



SPC Activity Chart
20210322/1602

National Weather Service
Storm Prediction Center
Norman, Oklahoma

Hazard	Mon (03/22)	Tue (03/23)	Wed (03/24)	Thu (03/25)	Fri (03/26)	Sat (03/27)	Sun (03/28)	Mon (03/29)
Severe	Slight	Marginal	Marginal	Severe	No Area	No Area	No Area	No Area
Fire	Critical	Critical	No Area	No Area	No Area	No Area	No Area	No Area

All Products Watches MDs Outlooks Fire

[Day 1 Fire Weather Outlook](#)
- Categorical Risk: **Critical**
- Issued: 14 minutes ago

[Thunderstorm Outlook](#)
- Issued: 33 minutes ago

[Day 1 Convective Outlook](#)
- Categorical Risk: **Slight**
- Issued: 40 minutes ago

[Day 4-8 Convective Outlook](#)
- Categorical Risk: **Severe**
- Issued: 03/22/2021 at 0846Z

[Day 3 Convective Outlook](#)
- Categorical Risk: **Marginal**
- Issued: 03/22/2021 at 0645Z

Severe Weather Climatology (1982-2011)

2021 Tornado Watch Summary

Did You Know?

Winter Storm Severity Index (WSSI)



Winter Storm Severity Index (WSSI)

The WSSI does not depict official warnings and should always be used in context with official NWS forecasts and warnings. For more information, please refer to the following links: [Product/Service Description Document](#), [WSSI Fact Sheet](#), [WSSI Infographic](#), [WSSI Users Guide](#), [Interactive ESRI Story Map](#), [WSSI Future Work](#)

Please provide us your feedback [here](#).

Overall Impact Snow Amount Snow Load Ice Accumulation Flash Freeze Blowing Snow Ground Blizzard

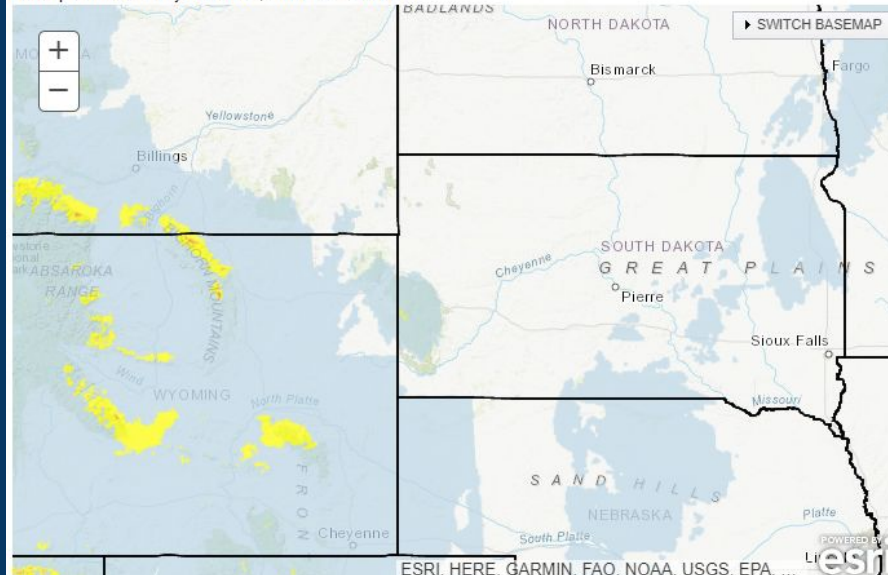
Overall Impact: Maximum impact from any of the components.

Days 1-3 Day 1 Day 2 Day 3

Select Zoom Area:

[Print Map](#)

Winter Storm Severity Index - Effective From Mon, Mar 22, 2021 11 AM ET Through Wed, Mar 24, 2021 08 PM ET
Last Updated: Monday March 22, 2021 11:18 AM ET



Potential Winter Storm Impacts

No Impacts Impacts not expected.
Limited Impacts Rarely a direct threat to life and property. Typically results in little inconveniences.
Minor Impacts Rarely a direct threat to life and property. Typically results in an inconvenience to daily life.
Moderate Impacts Often threatening to life and property, some damage unavoidable. Typically results in disruptions to daily life.
Major Impacts Extensive property damage likely, life saving actions needed. Will likely result in major disruptions to daily life.
Extreme Impacts Extensive and widespread severe property damage, life saving actions will be needed. Results in extreme disruptions to daily life.

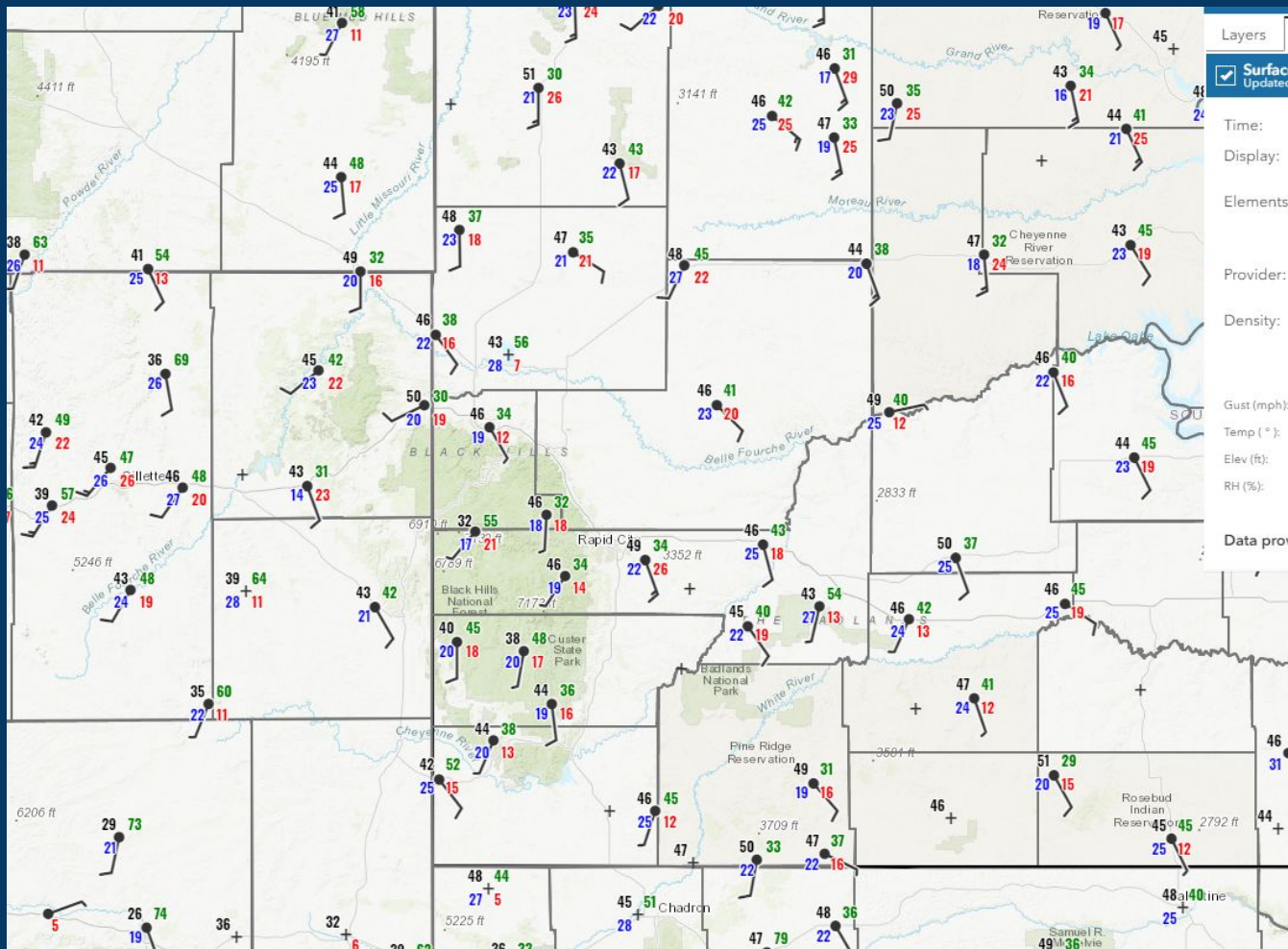
Download Latest WSSI in GIS Format:

- [Download Data in KML](#)
- [Download Data in SHP](#)

Observations



[Fire Weather Snoopers](#)
[Mesowest obs \(map\)](#)
[Fire Weather Dashboard](#)

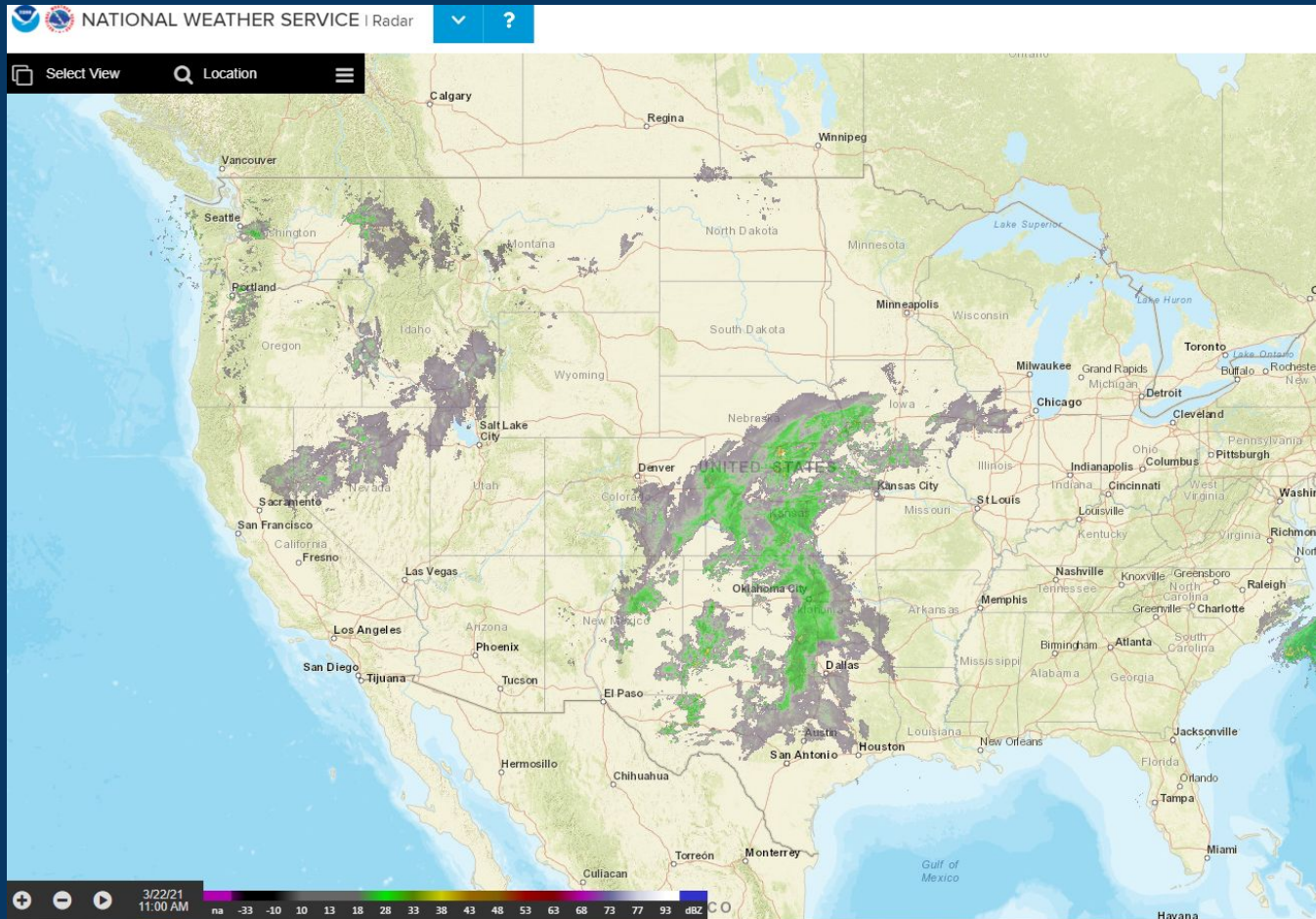


Radar:

<https://radar.weather.gov/>



Radar FAQ



Requesting Decision Support (DSS)

- Public safety officials can request weather support via Google Form:
<http://www.weather.gov/unr/eventsupport>
 - Often in concert with local Emergency Management
- Alternatively, email nws.rapidcity@noaa.gov with information needed, location, when, etc.
- Best Practice
 - Work with EM to obtain event support

Emergency Messages for Incidents

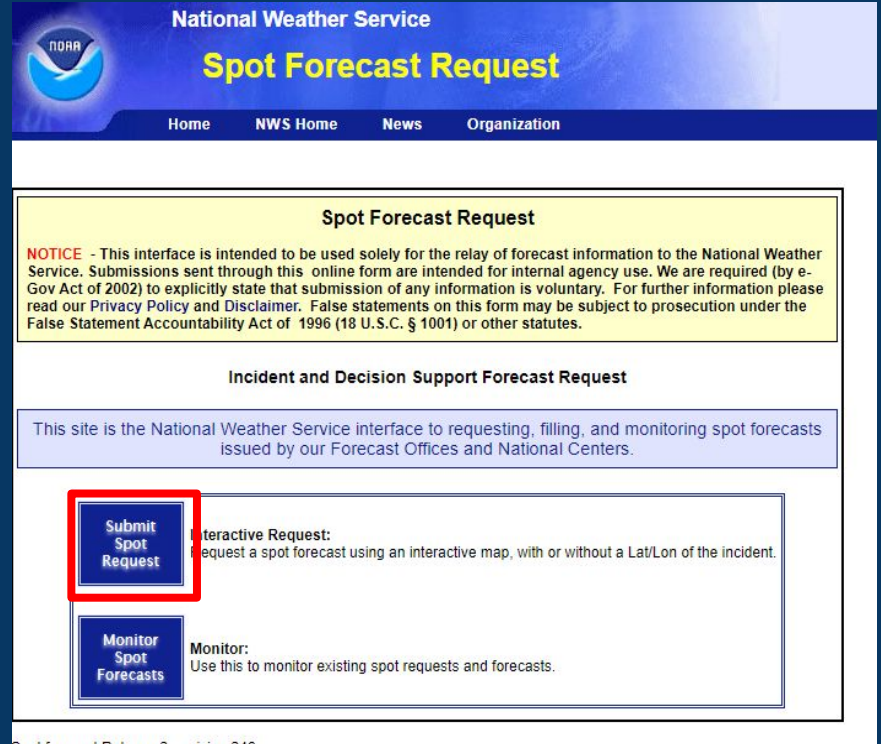
- We can disseminate emergency messages for incidents requiring evacuation or shelter in place
- Broadcast on NOAA Weather Radio with tone alarm, local media through Emergency Alert System
- Work with emergency manager or sheriff on content
 - WHO needs to take action
 - WHY they need to respond (type of incident)
 - WHAT they need to do
 - WHERE they should go
 - HOW to get more information

Request verbal forecast/observations by radio or phone

- Call “Rapid City Weather”
 - SD State Radio: NWS-W talkgroup
 - WYOLINK Radio: NWS RC talkgroup
- 605-341-7435 (local or cell)
 - 800-684-4163

Submitting a Spot Forecast Request

- [Spot Forecast Request](#)
 - [Spot request video from NWS Billings \(~8 minute video\)](#)



The screenshot shows the National Weather Service (NWS) website interface for submitting a spot forecast request. The page has a blue header with the NOAA logo and the text "National Weather Service" and "Spot Forecast Request". Below the header is a navigation menu with links for "Home", "NWS Home", "News", and "Organization". The main content area is titled "Spot Forecast Request" and contains a "NOTICE" section. Below the notice is a section titled "Incident and Decision Support Forecast Request" with a descriptive paragraph. At the bottom, there are two buttons: "Submit Spot Request" (highlighted with a red box) and "Monitor Spot Forecasts".

National Weather Service
Spot Forecast Request

Home NWS Home News Organization

Spot Forecast Request

NOTICE - This interface is intended to be used solely for the relay of forecast information to the National Weather Service. Submissions sent through this online form are intended for internal agency use. We are required (by e-Gov Act of 2002) to explicitly state that submission of any information is voluntary. For further information please read our Privacy Policy and Disclaimer. False statements on this form may be subject to prosecution under the False Statement Accountability Act of 1996 (18 U.S.C. § 1001) or other statutes.

Incident and Decision Support Forecast Request

This site is the National Weather Service interface to requesting, filing, and monitoring spot forecasts issued by our Forecast Offices and National Centers.

Submit Spot Request
Interactive Request:
Request a spot forecast using an interactive map, with or without a Lat/Lon of the incident.

Monitor Spot Forecasts
Monitor:
Use this to monitor existing spot requests and forecasts.

Submitting a Spot Forecast Request – Location

Spot Forecast Request

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Request Page

National Weather Service Spot Program Links

Monitor Page

Step 1: Establish incident location using A or B below.

A. Set request location using nearest street address.

Note 1: Valid entries are street address, zip code, city, state, or latitude & longitude.

Note 2: Latitude & Longitude will return the nearest street address. For exact latitude and longitude points use Step B entry below.

Note 3: City, State, and Zip Code will return a geographic centers.

Enter Location

PLOT ADDRESS

- OR -

B. Set request location using latitude & longitude, USNG, left-click on spot location, or drag the map pointer to spot location below.

Note 1: If the map below does not appear you may enter your decimal Lat/Lon below.

Note 2: To start over click the Reload button on your Web Browser.

Note 3: Latitude, Longitude information should be entered in WGS84/NAD83 coordinates in order to ensure accurate forecast locations.

Decimal Degree Latitude, Longitude

West Longitudes Are Negative

Example: 25.6319 -80.2025

49.0291, -95.1926

PLOT

United States National Grid (USNG)

Valid for points between 84N and 80S Latitude

Require 13 character grid - 10 meter precision

Example: 16SUJ23480647

15U UQ 3972 3300

PLOT

Degree, Minute, Seconds

Can accept decimal minutes as an input

Example: 25 deg 19 min 23 sec W

49 deg 1 min 45 sec N

95 deg 11 min 33 sec W

PLOT

Elevation

Latitude & Longitude value used to determine elevation.

If elevation data is in error, changes can be made on the second page of this spot request.

1049 FT

NEW You can now left click on map to place spot location marker



Submitting a Spot Forecast Request – Incident Type

Step 2: Select the incident type for the request.

Set Incident Type

Fire

- Wildfire Prescribed Fire

Hazardous Materials

- HAZMAT Land HAZMAT Inland Waterway HAZMAT Marine

Search and Rescue

- SAR Land SAR Inland Waterway SAR Marine

Marine

Other (Volcano, Earthquake, Special Event)

Step 3: Proceed to detailed incident request form.

After setting your location and incident type above, click on the
'Generate A Spot Request'
button below to proceed to the SPOT request form.

Generate A Spot Request

[Permalink for page bookmark](#)

[Request Page](#)

[National Weather Service Spot Program Links](#)

[Monitor Page](#)

Spot Forecast Request

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Submitting a Spot Forecast Request – Contact & Details

Spot Forecast Request

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Request Page National Weather Service Spot Program Links Monitor Page

Spot Forecast Incident Type: Prescribed Fire

Spot Request Contact Information

(*) **PROJECT NAME:**

For NWS Spot forecast policy, see section 4.0 in NWS Instruction 10-401 at: <http://www.nws.noaa.gov/directives/010/010.htm>

(*) **Requesting Agency:** (*) **Requesting Official:**

(*) **E-mail address:** (*) **Phone number:** **Phone Extension:**

Contact Person: **FAX number:**

Reason For Prescribed Fire Spot Request

- Under the Interagency Agreement for Meteorological Services (USFS, BLM, NPS, USFWS, BIA)
- State, tribal or local fire agency working in coordination with a federal participant in the Interagency Agreement for Meteorological Services.
- Essential to public safety, e.g. due to the proximity of population centers or critical infrastructure.

Location

(WGS84 / NAD83 preferred)

(*) **Latitude:** **7.5' Quad:**

(*) **Longitude:**

Elevation:

Feet Feet

(Elevation preferred in feet)

Fire Weather Supplemental Information

Drainage: **Size:** (In Acres)

Aspect: **Fuel Type:**

Sheltering

Full Partial Unsheltered

Submitting a Spot Forecast Request – Weather & Obs

Forecast Information

DELIVER FORECAST	FORECAST STARTING	TIMEZONE
Date: <input type="text" value="03/22/2021"/>	Date: <input type="text" value="03/22/2021"/>	(Local Time)
Time: <input type="text" value="As Soon As Possible"/>	Time: <input type="text" value="12:00"/>	<input type="text" value="MOUNTAIN"/>

Narrative FORECAST FORMAT

This Afternoon	Tonight	Tuesday		Select All Periods
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sky/Weather	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Humidity	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chance of Wetting	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rain	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lightning Activity	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Level	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wind (20 FT)	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mixing Height	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transport Winds	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Haines Index	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Smoke Dispersal	<input type="checkbox"/>

NOAA Hysplit Model

Would you like to include a run of the Hysplit Model with this request? If so please verify your email address above as this will be used to send you the hysplit model run.

YES
 NO

Remarks

Observations

(*) When submitting an observation, the yellow fields are required in addition to at least one weather element.

WX OB 1	WX OB 2	WX OB 3	WX OB 4	WX OB 5
<input type="checkbox"/> Remove Ob	<input type="checkbox"/> Remove Ob	<input type="checkbox"/> Remove Ob	<input type="checkbox"/> Remove Ob	<input type="checkbox"/> Remove Ob
(+)Site: <input style="background-color: yellow;" type="text"/>	(+)Site: <input style="background-color: yellow;" type="text"/>	(+)Site: <input style="background-color: yellow;" type="text"/>	(+)Site: <input style="background-color: yellow;" type="text"/>	(+)Site: <input style="background-color: yellow;" type="text"/>
(+)Date: <input type="text" value="03/22/2021"/>	(+)Date: <input type="text" value="03/22/2021"/>	(+)Date: <input type="text" value="03/22/2021"/>	(+)Date: <input type="text" value="03/22/2021"/>	(+)Date: <input type="text" value="03/22/2021"/>
(+)Time: <input type="text" value="10:45"/> (Local)	(+)Time: <input type="text" value="10:45"/> (Local)	(+)Time: <input type="text" value="10:45"/> (Local)	(+)Time: <input type="text" value="10:45"/> (Local)	(+)Time: <input type="text" value="10:45"/> (Local)
(+)Elev: <input style="background-color: yellow;" type="text"/>	(+)Elev: <input style="background-color: yellow;" type="text"/>	(+)Elev: <input style="background-color: yellow;" type="text"/>	(+)Elev: <input style="background-color: yellow;" type="text"/>	(+)Elev: <input style="background-color: yellow;" type="text"/>
Wind Dir: <input type="text"/>	Wind Dir: <input type="text"/>	Wind Dir: <input type="text"/>	Wind Dir: <input type="text"/>	Wind Dir: <input type="text"/>
Wind Spd: <input type="text"/>	Wind Spd: <input type="text"/>	Wind Spd: <input type="text"/>	Wind Spd: <input type="text"/>	Wind Spd: <input type="text"/>
Temp: <input type="text"/>	Temp: <input type="text"/>	Temp: <input type="text"/>	Temp: <input type="text"/>	Temp: <input type="text"/>
WB: <input type="text"/>	WB: <input type="text"/>	WB: <input type="text"/>	WB: <input type="text"/>	WB: <input type="text"/>
RH: <input type="text"/>	RH: <input type="text"/>	RH: <input type="text"/>	RH: <input type="text"/>	RH: <input type="text"/>
Td: <input type="text"/>	Td: <input type="text"/>	Td: <input type="text"/>	Td: <input type="text"/>	Td: <input type="text"/>
Sky: <input type="text"/>	Sky: <input type="text"/>	Sky: <input type="text"/>	Sky: <input type="text"/>	Sky: <input type="text"/>
Wx: <input type="text"/>	Wx: <input type="text"/>	Wx: <input type="text"/>	Wx: <input type="text"/>	Wx: <input type="text"/>
Rmks: <input type="text"/>	Rmks: <input type="text"/>	Rmks: <input type="text"/>	Rmks: <input type="text"/>	Rmks: <input type="text"/>

Submit Spot Request

Clicking the button below will create a one time spot request.

Radar apps - caution needed

- How to verify if warnings were issued?
 - Ask dispatch if they got a bulletin on LETS
 - WEA
 - Twitter: @NWSRapidCity
 - Can sign up for text and/or email alerts:
<https://inws.ncep.noaa.gov/>
 - Don't select non-precipitation alerts!
 - Call office on phone or radio



Weather Apps in General

- Know what you're getting!
 - Is it for your home location?
 - Or does it follow you?
 - How did you set your home location?
 - Zip code areas are too big (Newell zip code goes almost to Reva, Midland to northwest Mellette Co, west RC (57702) goes into the BH).
- Understand our watches, warnings, and advisories (WWA) are based on forecast zones
 - Central BH zone covers from Deerfield to Johnson Siding to Rockerville
 - Weather & snowfall can vary a lot → look at your point forecast
- Any questions related to weather apps?

Questions?



Comments, questions,
feedback welcome

shane.eagan@noaa.gov

Links:

<https://wxsmc.weebly.com/weather-for-responders.html>

Survey:

<https://forms.gle/SNCoiSDftPScvxti9>

