



Dewberry[®]

& HydroMet Consulting, LLC



Colorado Flood Threat Bulletin
Colorado Water Conservation Board

Forecasts Provided by  **Dewberry**

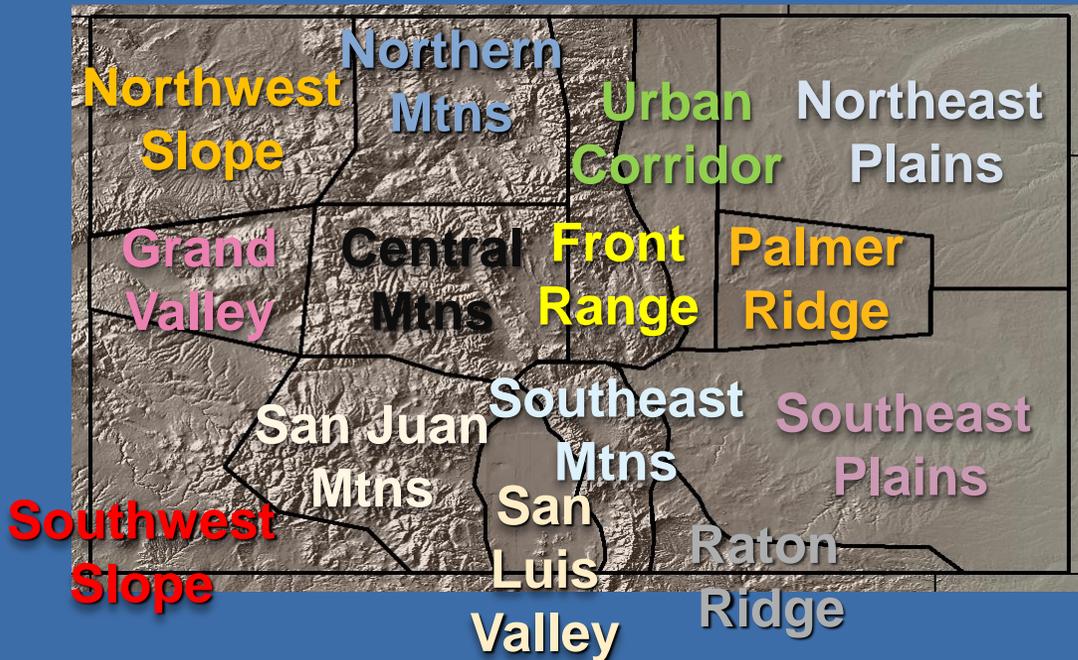
2022 FTB Forecast Season

April 19, 2022 / Water Availability Task Force Meeting

Colorado Flood Threat Bulletin

<https://www.coloradofloodthreat.com>

Objective: Increase lead time for anticipating heavy rainfall over Colorado during the warm season (May – September)

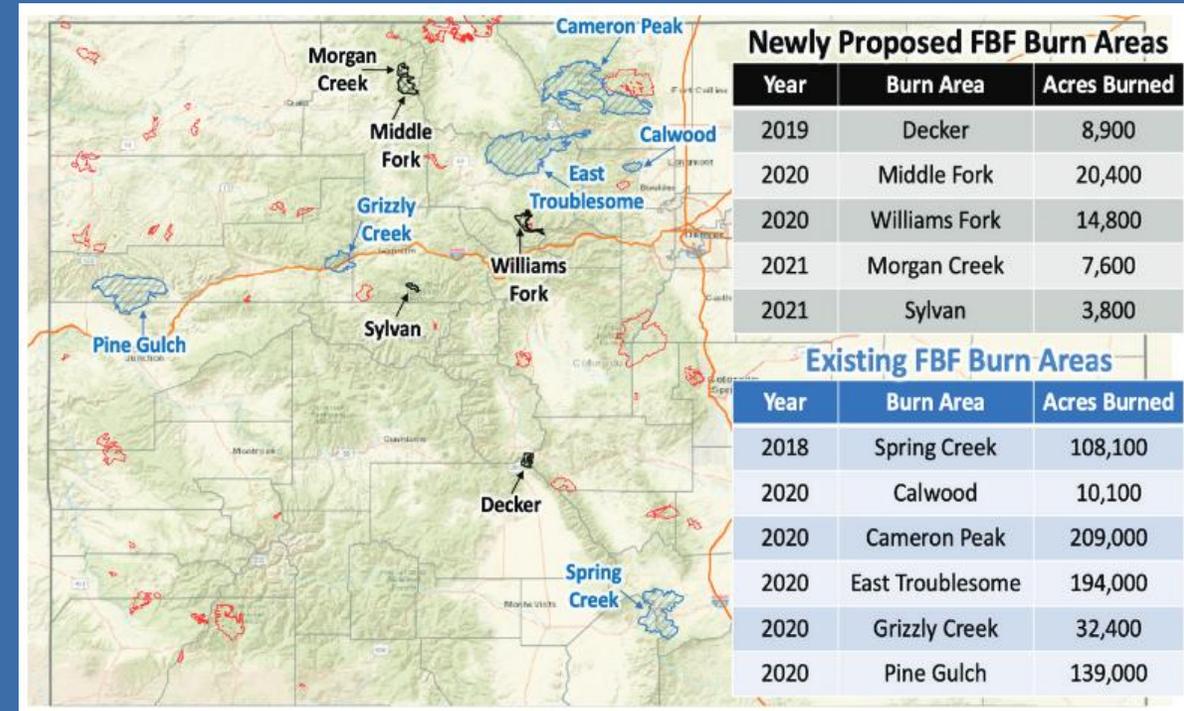


- 14 Forecast Zones with a large range in topography
- Product informs users on heavy rainfall:
 - timing
 - location
 - intensity
 - confidence
 - nature of the threat

Products

- Flood Threat Bulletin (FTB)
 - Issued by 11am daily
 - Identifies areas of flood risk for next 24-hours
 - Possible PM updates
- State Precipitation Map (SPM)
 - Issued by 12 pm daily
 - Recaps the past 72-hours of hydrometeorological conditions
 - Rainfall totals, flooding, antecedent soil conditions
- Flood Threat Outlook (FTO)
 - Issued Monday and Thursday by 3PM
 - Outlook of threat and precipitation totals over the next 15 days
 - Rapid snowmelt, local heavy rainfall, drought development
- Fire Burn Forecast (FBF)
 - Issued by 11 am daily
 - Standalone webpage for 2021

THREAT	EXPECTED PROBABILITY OF FLOODING WITHIN A GIVEN COUNTY
NONE	Less than 10%.
LOW	10-30%
MODERATE	30-60%
HIGH	Greater than 60%.
HIGH IMPACT	Greater than 60% along with a particularly severe threat to life and property.
NWS WARNING	Active NWS (riverine) Flood Warning(s)



Report a Flood

- Date/Time*
- Location*
- Type*
- Hazards*
- Total Rainfall
- Additional Details
- Contact Information

Report a Flood

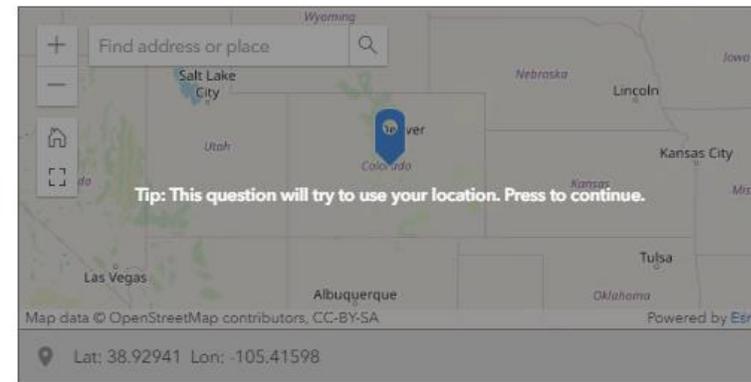
PLEASE NOTE: questions marked with a red asterisk (*) are required.

Event Date/Time*

Please enter the date and time of the flood event.

<input type="text" value="3/16/20"/>	<input type="text" value="04:44 PM"/>
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Event Location*



Map data © OpenStreetMap contributors, CC-BY-SA. Powered by Esri. Lat: 38.92941 Lon: -105.41598

Event Type*

Please Enter the Flood Type

Event Hazards*

<input type="checkbox"/> Minor street flooding	<input type="checkbox"/> Major street flooding (non-drivable)	<input type="checkbox"/> Widespread flooding
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2021 Improvements - Fire Burn Forecast

- Dedicated wildfire burn area forecast page
 - Daily monitoring and threat forecasting of 6 large burn areas
 - Fields include:
 - Multi-variable estimate of antecedent conditions
 - Percentage of burn area that received rainfall
 - Assessment of whether flooding occurred in past 24 hours
 - Threat forecast for next 24 hours
 - Archived daily (blog style) for better awareness during multi-day events

FBF: Fire Burn Forecast for 09-29-2021
September 29, 2021 by COFloodthreat · (Edit)

Click Here For Table Overview

Print Excel CSV

Fire Name ▲	Max 3hr ▲	Avg 24hr ▲	Burn Area Coverage ▲	Flooding Reported Yesterday? ▲	Today's Threat ▲
Calwood	0.0 in.	0.0 in.	0 %	NO	MODERATE
Cameron Peak	0.6 in.	0.3 in.	>90 %	NO	MODERATE
East Troublesome	0.6 in.	0.3 in.	>90 %	NO	LOW
Grizzly Creek	0.5 in.	0.3 in.	>90 %	NO	LOW
Pine Gulch	1.5 in.	0.5 in.	>90 %	YES	LOW
Spring Creek	0.3 in.	0.4 in.	50 %	NO	NONE

The blue columns represent antecedent conditions from the past 24 hours.

2022 Improvements

- Add 5 new burn areas to FBF
 - Decker, Middle Fork, Morgan Creek, Sylvan, Williams Fork
- Include FBF summary in FTB headline

FTB 09-01-2021: Late Season Monsoon Surge Begins & Elevates the Flood Threat West

September 1, 2021 by [Dana McGlone](#)

Issue Date: Wednesday, September 1st, 2021

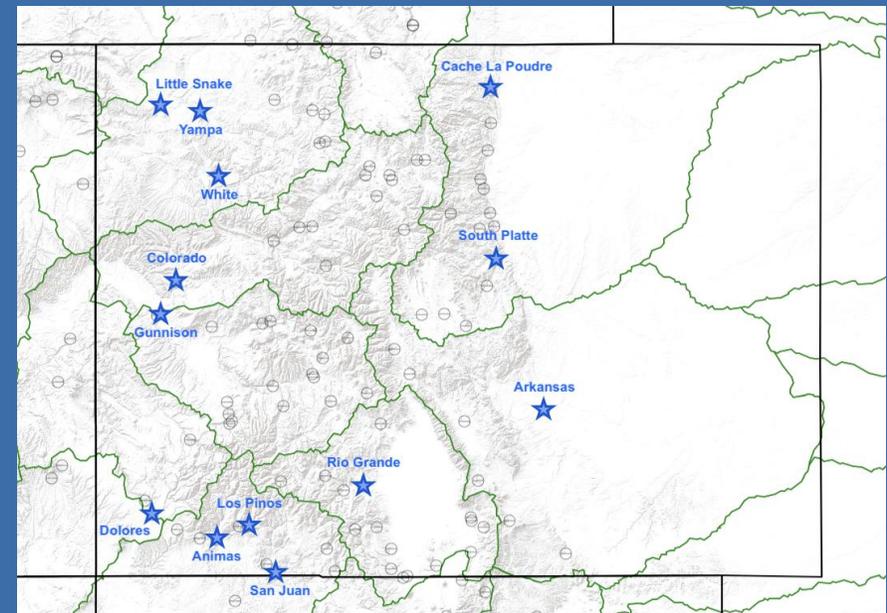
Issue Time: 10:20AM MDT

— A **MODERATE** flood threat has been issued for the Southwest Slope, San Juan Mountains, Northwest Slope and Grand Valley

— A **LOW** flood threat has been issued for the Central Mountains, Northern Mountains, San Luis Valley and Southeast Mountains

— **Fire-Burn Forecast Summary:** 2 burn scars under MODERATE threat, 3 burn scars under LOW threat; [click HERE](#) for more info

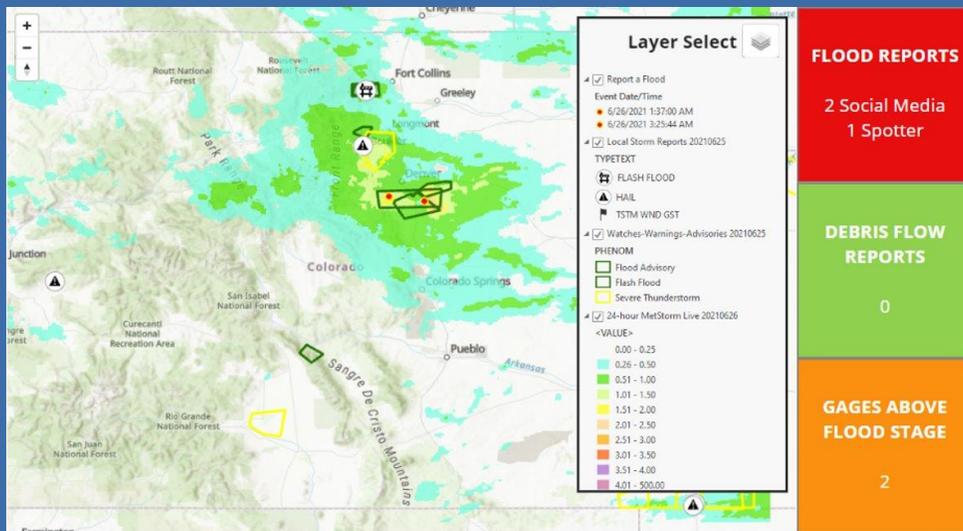
- Provide forecast maps as publicly available GIS download
- Updated MetStorm Live QPE
 - More flexible intra-day durations
 - Interactive, zoomable web-map
- FTO streamflow tracking



Proposed Program Improvements

SPM Map Upgrade

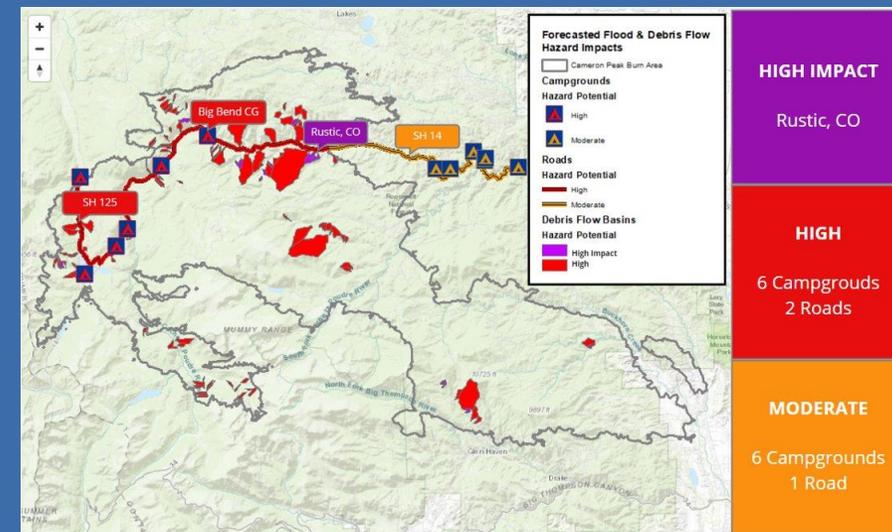
- Include USGS real-time gages
- Scrape social media for flood impacts
- Tiles of NWS local storm reports



End-users get to relevant information quicker, can customize viewable data

Hazard Mapping of FBF Areas

- Overlay potential hazards for each burn area
 - USGS debris flow models
 - Trails, campgrounds, roads



Interactive map for end-users that show potential flash flood impacts

Proposed Program Improvements

Website Redesign

- React application
- Accommodate hosting/access of upgrades
- Provide data access to Flood Threat Polygons and QPE grids
- Forecasts archived by date for easy retrieval
- End-users get to relevant information quicker

The screenshot displays the Colorado Flood Threat Bulletin website. At the top, there are logos for the Colorado Water Conservation Board and Dewberry. The main content area features a news article titled "SPM 06-26-2021: Heavy Rain Across State" dated June 26, 2021. The article includes a summary of heavy rain reports across the state and a remark about flooding near Masonville. Below the text is a map of Colorado showing precipitation levels with a color-coded legend. To the right of the map, there are three summary boxes: "FLOOD REPORTS" with 2 Social Media and 1 Spotter, "DEBRIS FLOW REPORTS" with 0, and "GAGES ABOVE FLOOD STAGE" with 2. The website also has a navigation menu and a forecast archive dropdown.

Outreach

- Training:
 - Pre-monsoon FTB User Training Webinar
- Social Media:
 - Facebook & Twitter: @COFloodUpdates



CO Flood Updates @COFloodUpdates
#FTB: There has been an uptick in moisture over eastern CO, and very heavy rainfall is forecast across the I-25 Corridor & SE Plains today. A HIGH **#COFlood** threat has been issued. Follow your local NWS office for the latest info. **#COWx**

More details here:
<http://www.coloradofloodthreat.com>
<pic.twitter.com/CF5B92qTdA>

#COFlood
#COWx
#COfire

Impressions	13,093
Total engagements	585
Media engagements	428
Detail expands	72
Link clicks	33
Retweets	17
Profile clicks	17
Likes	16
Replies	1
Hashtag clicks	1

Contact Information

- Website: www.coloradofloodthreat.com
 - Daily email service
- Twitter: @COFloodUpdates
- Facebook: @COFloodUpdates
- Program Questions: Dsutley@Dewberry.com
Coloradofloodthreat@gmail.com
- Forecast Questions: HydroMetconsulting@gmail.com