




# Dewberry®

& HydroMet Consulting, LLC



## Colorado Flood Threat Bulletin

Colorado Water Conservation Board

Forecasts Provided by  **Dewberry**

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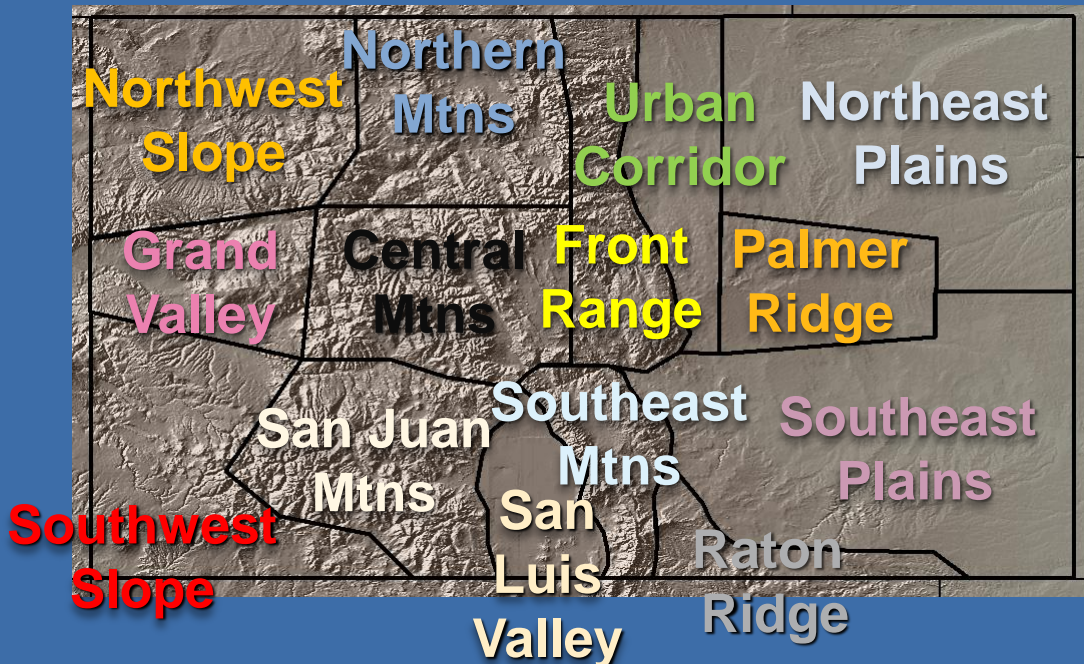
## 2022 FTB Forecast Season

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)

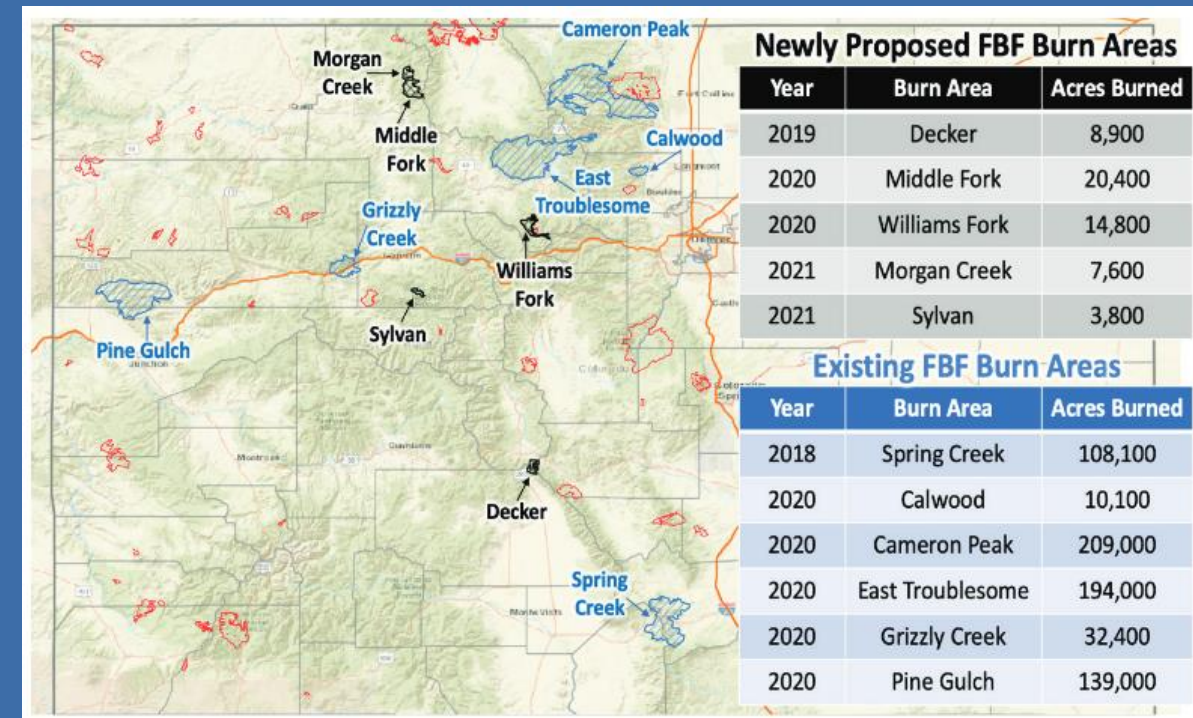


- 14 Forecast Zones with a large range in topography
- Product informs users on heavy rainfall:
  - timing
  - location
  - intensity
  - confidence
  - nature of the threat

# 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.

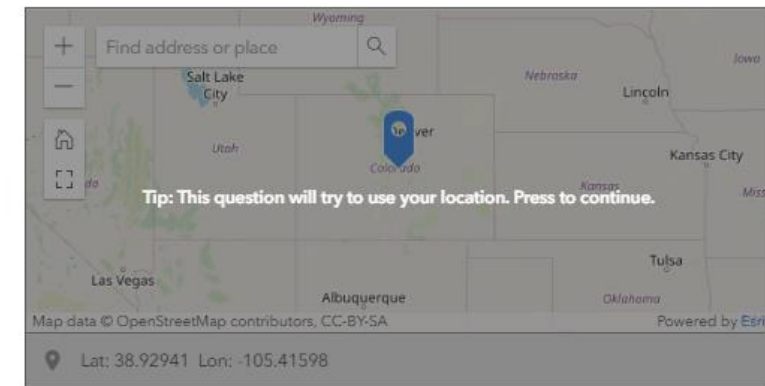
### Event Date/Time\*

Please enter the date and time of the flood event.

3/16/20

04:44 PM

### Event Location\*



### Event Type\*

Please Enter the Flood Type

-Please Select-

### Event Hazards\*

☐ Minor street  
flooding

☐ Major street  
flooding (non-  
drivable)

☐ Widespread  
flooding

# 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

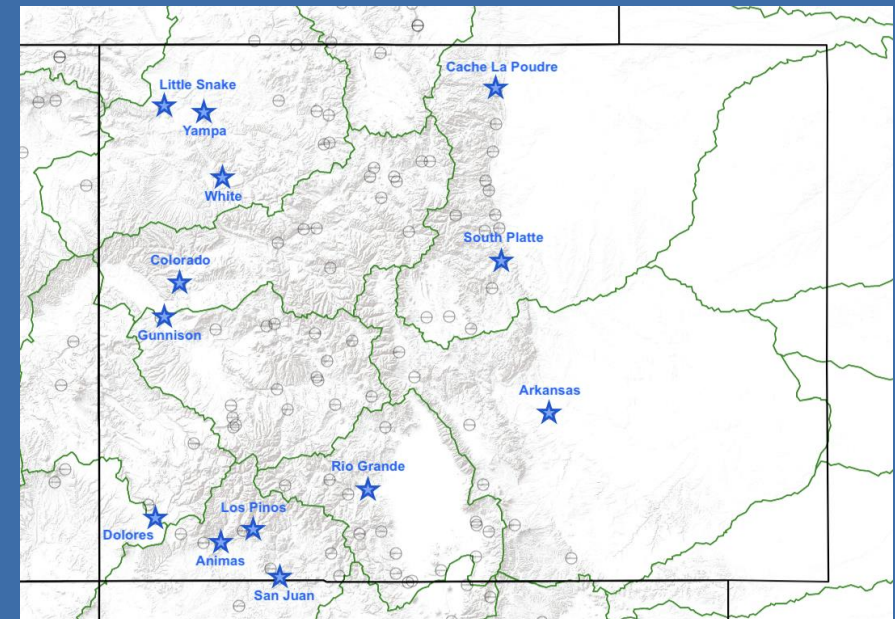
Issue Time: 10:20AM MDT

— 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

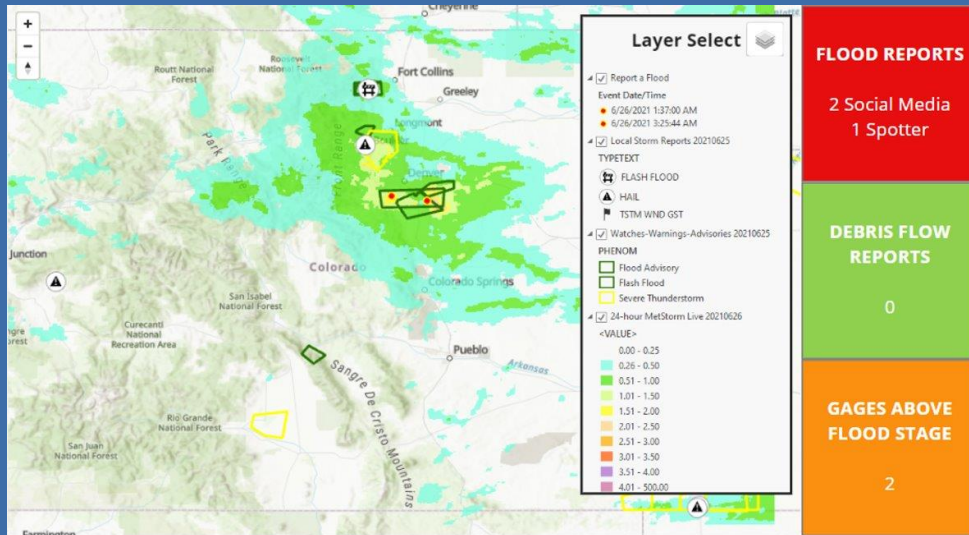
- Provide forecast maps as publicly available GIS download
- Updated MetStorm Live QPE
  - More flexible intra-day durations
  - Interactive, zoomable web-map
- FTO streamflow tracking



# Proposed Program Improvements

## SPM Map Upgrade

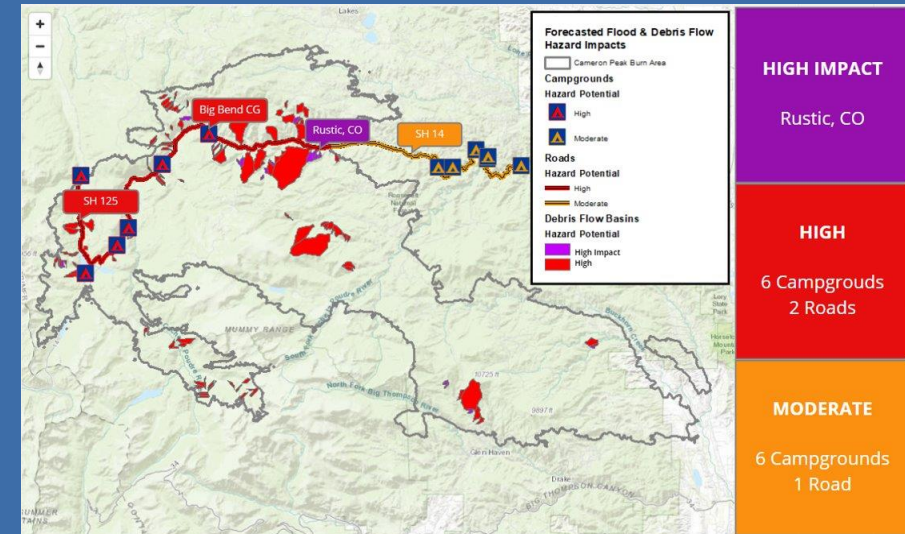
- Include USGS real-time gages
- Scrape social media for flood impacts
- Tiles of NWS local storm reports



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

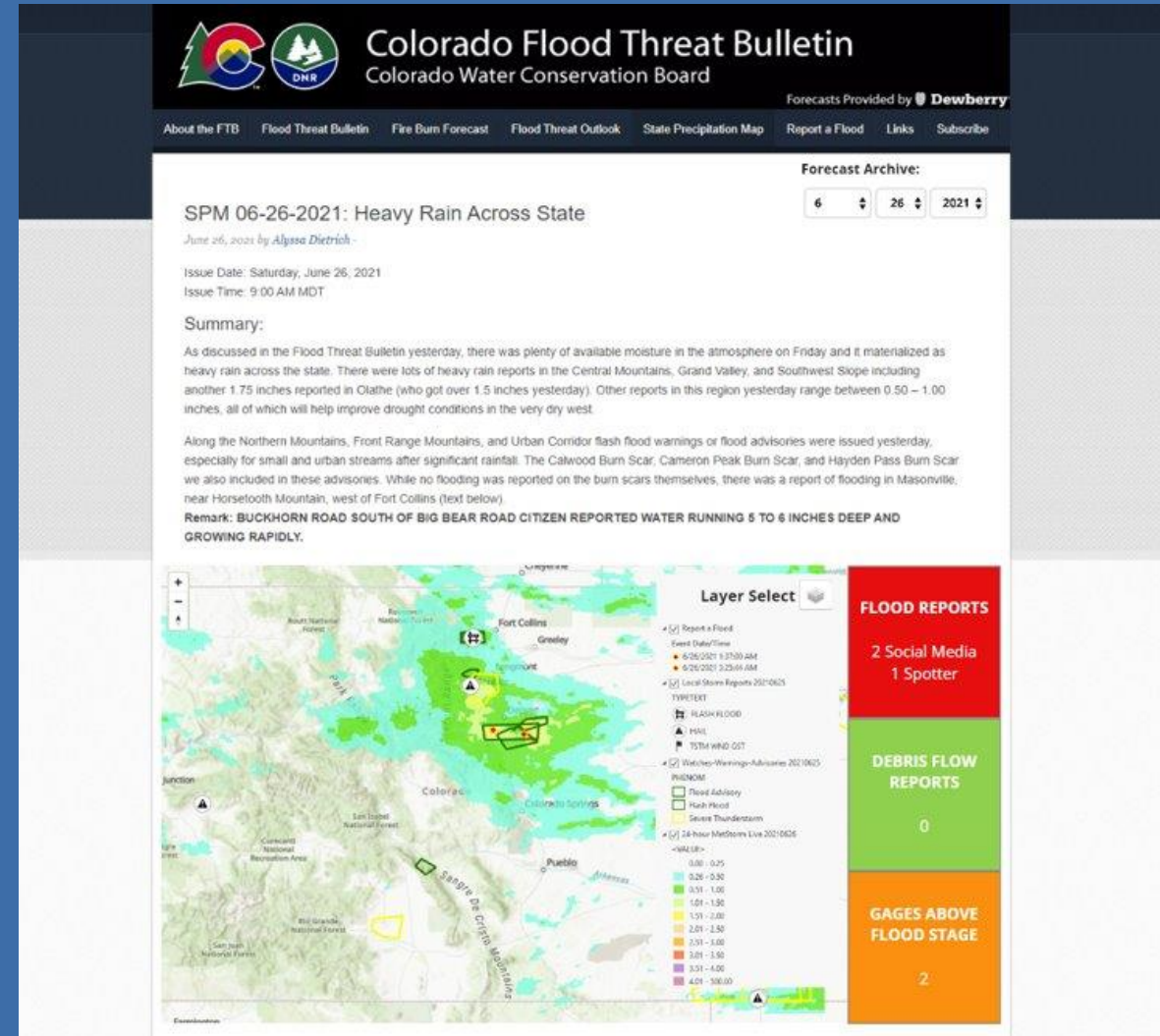


Interactive map for end-users that show potential flash flood impacts

# Proposed Program Improvements

## Website Redesign

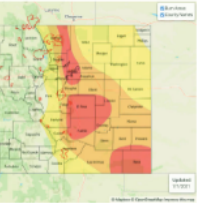
- React application
- Accommodate hosting/access of upgrades
- Provide data access to Flood Threat Polygons and QPE grids
- Forecasts archived by date for easy retrieval
- End-users get to relevant information quicker





# Outreach

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

 <p><b>CO Flood Updates @COFloodUpdates</b> <b>#FTB:</b> There has been an uptick in moisture over eastern CO, and very heavy rainfall is forecast across the I-25 Corridor &amp; SE Plains today. A HIGH <b>#COflood</b> threat has been issued. Follow your local NWS office for the latest info. <b>#COWx</b></p> <p>More details here: <a href="http://www.coloradofloodthreat.com">http://www.coloradofloodthreat.com</a> <a href="pic.twitter.com/CFSB92qTdA">pic.twitter.com/CFSB92qTdA</a></p> <p><b>#COFlood</b> <b>#COWx</b> <b>#COfire</b></p>	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](http://www.coloradofloodthreat.com)
  - Daily email service
- Twitter: @COFloodUpdates
- Facebook: @COFloodUpdates
- Program Questions: [Dsutley@Dewberry.com](mailto:Dsutley@Dewberry.com)  
[Coloradofloodthreat@gmail.com](mailto:Coloradofloodthreat@gmail.com)
- Forecast Questions: [HydroMetconsulting@gmail.com](mailto:HydroMetconsulting@gmail.com)