Wildfire Matters
A Multi-Faceted Approach to Wildfire Preparedness
Program Objectives  (2020 appraisal)

✧ Prevent civilian and SMFR personnel deaths in wildfire incidents caused by extreme wildfire behavior in managed open spaces, hazards related to structure ignitions, and hazards resulting from evacuations.

✧ Prevent civilian injuries in wildfire incidents caused by extreme wildfire behavior in managed open spaces, hazards related to structure ignitions, and hazards resulting from evacuations.

✧ Decrease firefighter injuries in wildfire incidents caused by hazards resulting from unmanaged fuels, hazards related to structure ignitions, and hazards resulting from evacuations.
Program Objectives  (2020 appraisal)

- Reduce wildfire ignitions caused by improper human behavior such as improper outdoor burning, disposing of smoking materials, operating equipment, misusing heat sources, or improperly maintaining equipment.
- Prevent home ignitions.
- Provide homeowners with knowledge for how to reduce wildfire risk on their properties (structures and landscaping).
- Limit wildfire growth to less than one acre in 90% of fires.
- Limit property damage to under $1,000 in 90% of interface fires.
- Evacuate 90% of targeted residents when evacuations are required.
287 Square Miles of Interface

- Wildfire-prone ecosystems
- Cherry Creek, Chatfield State Parks
- Highline Canal Trail, Cherry Creek Trail
- South Platte Park
- Highlands Ranch Open Space
- Lockheed Martin Foothills
- Endemic, Exotic Vegetation
- Parks, Open Space Galore
- Residents, Visitors, Residents who are homeless
- Embers can land anywhere...
Creating a Fire-Adapted District

- Community Risk Reduction Bureau
- Public Information Office
- Operations
- Fire Marshal’s Office
- Dispatch
- GIS
- Analytics
- Fleet Bureau
- Training Bureau
- Board of Directors
Creating a Fire-Adapted District

- Wildfire Resource Positioning
- Annual Wildland Fire Refresher
- Tactical Mapping
- Home Ignition Zone Assessments
- Firewise Communities
- Ignition Resistant Construction Guide
- Grant Collaboration
- Community Mitigation Facilitation
- Ready, Set, Goat!
- Leveraging Media for CRR
Wildfires per Year

- 2016: 79
- 2017: 81
- 2018: 77
- 2019: 56
- 2020: 144
Wildfire Locations (> 1 acre)
Wildfire Causes in 2020

- Human: 41%
- Not Human: 5%
- Undetermined: 54%
Human-Caused Wildfires in 2020 (52)
## Wildfire Damage (2016-2020)

<table>
<thead>
<tr>
<th>Date</th>
<th>Acres Burned</th>
<th>Direct Damage Estimate</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/11/2016</td>
<td>1.0</td>
<td>$100,000</td>
<td>Kornbrust Circle, Lone Tree</td>
</tr>
<tr>
<td>10/28/2016</td>
<td>205.0</td>
<td>$20,000</td>
<td>Chatridge 1</td>
</tr>
<tr>
<td>3/4/2018</td>
<td>0.3</td>
<td>$15,000</td>
<td>6800 S Ivy Way, Centennial</td>
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<tr>
<td>8/11/2020</td>
<td>18.7</td>
<td>$10,000</td>
<td>Hiddenbrook Court, Highlands Ranch</td>
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<tr>
<td>11/27/2017</td>
<td>0.2</td>
<td>$5,000</td>
<td>6800 S Ivy Way, Centennial</td>
</tr>
<tr>
<td>6/26/2018</td>
<td>2.5</td>
<td>$5,000</td>
<td>Tomahawk Road, Parker</td>
</tr>
<tr>
<td>9/23/2020</td>
<td>0.1</td>
<td>$3,000</td>
<td>University Blvd, Centennial</td>
</tr>
<tr>
<td>3/17/2017</td>
<td>0.1</td>
<td>$3,000</td>
<td>Cantitoe Lane, Cherry Hills Village</td>
</tr>
<tr>
<td>4/18/2017</td>
<td>0.1</td>
<td>$3,000</td>
<td>Hilltop Road, Parker</td>
</tr>
<tr>
<td>4/26/2020</td>
<td>0.1</td>
<td>$3,000</td>
<td>Hilltop Road, Parker</td>
</tr>
</tbody>
</table>
The 6 E's of Community Risk Reduction

- Education
- Engineering
- Economic Incentives
- Enforcement
- Emergency Response
- Empowerment
Emergency Response

✧ All SMFR firefighters are trained in wildland firefighting during their initial academy and annually.

✧ SMFR maintains a wildland fire (special) team that deploys regionally and nationally generating experience not available within district.

✧ On Red Flag Days, all wildfires receive a “large wildfire” response at a minimum.

✧ On Red Flag Days, brush trucks/engines follow other station apparatus.

✧ Wildfire Apparatus is positioned throughout the district. Brush Engines are positioned at wildland stations (20, 39, 41).
Engineering

- Developing Neighborhood Mitigation Plans to identify and prioritize hazard mitigation.
- Collaborate with developers to create fire-adapted neighborhoods based on the Wildfire-Resistant Home Construction and Improvement Guide. (Sterling Ranch, The Canyon, Ridgegate GG)
- Maintain strategic and tactical preplan maps for the district’s main primary wildfire-prone ecosystems.
- Collaborate with partners to evaluate mitigation techniques in order to guide outreach and improve safety for firefighters and civilians.
- Collaborate with FMO, homeowners to reduce risks from sunlight-reflection fires.
Economic Incentives

✧ Contributed to state legislation extending the state income tax credit for wildfire mitigation measures CRS 39-22-104(4)(n).

✧ Able to assist homeowners’ associations, agencies, and individuals with grant applications, mitigation planning and implementation, and education.
Enforcement

- FMO manages the recreational burn program in coordination with county and local burn bans.
- Investigators pursue charges when appropriate in incendiary wildfires.
- Youth Firesetter Intervention Group has expanded roster, guidelines, and resources to address wildfires caused by children.
Education

- Presentations, articles for HOAs, nonprofits, agencies, land managers, etc. on wildfire risk and mitigation.
- Utilizing Ready, Set, Go and Fire-Adapted Communities programs.
- Conducting and evaluating Home Wildfire Risk Assessments.
- Maintaining wildfire danger signs at Stations 39 and 41.
- Collaborating with PIOs to provide educational patrols of frequent-fire areas on Red Flag Days.
Home Wildfire Assessments

- 2016: 42
- 2017: 31
- 2018: 38
- 2019: 51
- 2020: 44
Mitigation Projects

✧ The Pinery
✧ Cherry Creek State Park/Park Place at Cherry Creek
✧ Ponderosa Hills
✧ Hidden Village
✧ Highline Canal Trail
✧ Ready, Set, Goat!
Ready, Set, Goat

- PineRidge
- The Retreat (Castle Pines)
- Glen Oaks
- Estates at Buffalo Ridge
- Daniel’s Ridge
- Starbuck
- BackCountry
CRR Challenges for 2021

- Expanding program delivery to under-represented, isolated populations
- Increasing number of neighborhoods with a collaborative mitigation plan in place (+2)
- Increasing the number of homeowners, HOAs, and other groups that receive wildfire risk reduction programming
- Increasing the utilization of the agency Wildfire-Resistant Home Construction and Improvement Guide
- Expanding social media content
- Conducting evacuation drills for neighborhoods
More CRR Challenges for 2021

- Increasing the number of homeowners who request home wildfire assessments (accreditation recommendation from 5K)
- Monitoring whether homeowners and land manager conduct mitigation after an assessment
- Integrating non-residential occupancies into wildfire mitigation outreach efforts
- Integrating more students into wildfire mitigation and wildfire risk awareness
- Improving objectives to be measurable and realistic
Hi Luz!

Sorry for the delayed response, I've been out of the office for the past week. Lucky me, I get to return to the overnight shifts.

Here is the website I used to find the data for each zone: https://mesonet.agron.iastate.edu/vtec/search.php

These are the yearly stats for the zones 239 thru 241:
Zone 239 - 6 Red Flag Warnings - 2 Fire Weather Watches - 6 Total Events (The Watches preceded the Warnings)
Zone 240 - 8 Red Flag Warnings - 2 Fire Weather Watches - 8 Total Events
Zone 241 - 9 Red Flag Warnings - 2 Fire Weather Watches - 9 Total Events

Here is the website I used to find the data for each office: https://mesonet.agron.iastate.edu/wx/afos/list.phtml?source=BOU&year=2020&month=1&day=1&drange=yes&year2=2020&month2=12&day2=31&view=grid&order=asc

Grand Junction had 61 Red Flag Warning/Fire Weather Watch Events
Pueblo had 73 Red Flag Warning/Fire Weather Watch Events
Boulder had 42 Red Flag Warning/Fire Weather Watch Events
* This doesn't include Yuma, Kit Carson, & Cheyenne counties, they are served by the Goodland Kansas office.

We don't keep monthly stats. However, you may be able to mostly figure out what you are looking for from the above websites.

Feel free to contact me with any questions,
Bernie
Red Flag Warnings and Wildfire Conditions

By Einar Jensen, Risk Reduction Specialist
South Metro Fire Rescue

As winter loosens its grip on our region, there will be more Red Flag Warnings in weather forecasts. Red Flag Warnings describe conditions that make wildfires worse but in themselves do not cause wildfires.

Fire, remember, needs three ingredients: oxygen, heat, and fuel. Before a solid fuel can burn, it must be dry and it must contain enough heat that its molecules break apart into the fuel’s gaseous form.

When a heat source is applied to a solid fuel, the fuel absorbs heat. Initially that heat causes any remaining water content to evaporate as steam. In a process called pyrolysis, the dry fuel absorbs more heat that causes its molecules to vibrate rapidly enough to fragment into the fuel’s gaseous form. It’s this gaseous form that burns in a flame.

There are three components of a Red Flag Warning: low humidity, hot air temperatures, and strong winds. Each of these components contributes to fire danger; together they can supercharge wildfires into raging infernos capable of destroying neighborhoods and injuring or killing people.

Relative humidity is the amount of moisture in the air. When air moisture is higher than fuel moisture, solid fuels absorb moisture from the air. However, when humidity is lower than fuel moisture, the air absorbs moisture from solid fuels. Thus, weather conditions with low relative humidity steal moisture from solid fuels increasing the speed at which they absorb heat for pyrolysis.

Air holds more moisture as its temperature increases because the air expands. Hotter air temperatures also preheat fuels, create tougher working conditions for firefighters, and can drive winds.

Wind results from temperature-induced air movement in the atmosphere. Wind can replace saturated air with dry air around fuels and fan flames with more oxygen. Strong wind can push wildfires into unburned fuels, push fire downslope, and carry embers—airborne chunks of burning fuel—downwind to create new wildfires.

South Metro Fire Rescue and other agencies often increase staffing or adjust the positioning of resources during Red Flag Warnings because of the potential for wildfires to grow and spread more rapidly than usual.

However, it’s critical that residents and visitors also adjust their behavior when the National Weather Service issues a Red Flag Warning. Those are the wrong days for agricultural burns, campfires, fireworks, or careless actions with heat sources.

Give the region’s current drought conditions and anticipated weather patterns, we expect several Red Flag Warnings this summer and autumn.

For information on wildfire preparedness and other safety issues, visit www.southmetro.org or contact us at ReducingRisk@southmetro.org.
SMFR Property Inclusion
Douglas County School District
8218 Carder Ct.

June 7, 2021
Public Hearing
Location
Criteria

• No objection has been filed.
• The property is capable of being served by District facilities.
• Best interest of the District and taxpaying electors.
<table>
<thead>
<tr>
<th>Process</th>
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<tbody>
<tr>
<td><strong>Petition</strong></td>
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<td><strong>Public input</strong></td>
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<td>- Notice of public hearing</td>
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<td><strong>District court</strong></td>
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<tr>
<td><strong>Assessor</strong></td>
</tr>
<tr>
<td><strong>Deadline:</strong></td>
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<tr>
<td>- May 1, 2022</td>
</tr>
<tr>
<td>- Taxes collected in 2023</td>
</tr>
<tr>
<td>- EXEMPT</td>
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</table>
Questions?
Criteria

• No objection has been filed.
• The property is capable of being served by District facilities.
• Best interest of the District and taxpaying electors.
Status of Unification Talks

- Petition
- Public input
  - Notice of public hearing
  - Public hearing
- District court
- Assessor
- Deadline:
  - May 1, 2022
  - Taxes collected in 2023
Questions?
SMFR Property Exclusion
Doellefeld Property
24232 E Canyon Pl, Aurora

June 7, 2021
Public Hearing
Best interest of property, district, county

• Still able to provide economical and sufficient service to all properties within the District's boundaries.

• No effect on employment and other economic conditions in the District and surrounding area.

• The additional cost to be levied on other property within the District if exclusion is granted will be negligible.

• There is economically feasible alternative & similar service available from another special district in the area of the Property.
Criteria

Dual Jurisdiction?
• Aurora notification
  • 2016: “single-plan” exclusions
  • 2018-2020: 13 missing lots

• Property notification
  • Letter #1: September 24, 2020
  • Letter #2: November 2, 2020
  • HOA notification: February 3, 2021
  • Home visit: February 24, 2021

• Petitions received
  • 9 of 13

• Public input
  • Notice of public hearing
  • Public hearing

• District court

• Assessor

• Deadline:
  • May 1, 2022
  • Taxes discontinued in 2023
Questions?