

2019 Wildfire Mitigation Plan Metrics

As part of the Wildfire Settlement Agreement approved in Proceeding No. 19AL-0268E, the Company committed to track and report on the following metrics:

- Additional metrics related to completed activities (Program Targets);
- The number of ignitions associated with electric overhead powerlines within the Wildfire Risk Zone (WRZ) and the number of downed transmission and distribution wires within the WRZ (Ignition and Downed Wire Metrics);
- The number of Red Flag Warning Days in Colorado and the communities or areas which experienced Red Flag Warnings, as well as the dates they occurred (Red Flag Warning Metrics);
- The total number of wildfires in the Company’s service territory; and,
- The total actual annual investment in the Wildfire Mitigation Plan, per year.

I. Program Targets

Program targets measure tracking of Wildfire Mitigation Plan programs and activities. Public Service tracks each program and activity against assigned scopes and targets. Some program targets may change depending on the results, interactions with other programs, and as the Wildfire Mitigation Plan evolves based on new information and lessons learned.

Program	2019 Target	2019 Actuals
Protection Review (Feeders)-DIST	97	88
Infrared Inspection (Miles)-DIST	300	430
Wind Loading Analysis Pilot (Structures)-DIST	900	500
Pole Inspection (Poles)-DIST	63,600	69,700
Pole Replacement (Poles)-DIST	3,800	2,305
Substation Relay Upgrade (Panels)-DIST	Engineering	Engineering
System Protection (Reclosers)-DIST	Engineering	Engineering
Secondary Conductor Quantification (Feeders)	70	70
Wind Loading Analysis (Structures)-TRANS	690	511
Infrared Inspection (Miles)-TRANS	2,900	2,900
Intrusive Pole Inspection (Poles)-TRANS	2,851	2,851
Visual Inspection (Miles)-TRANS	2,900	2,900
Defect Corrections (Defects)-TRANS	76	72

II. Ignition and Downed Wire Metrics

Among other things, the Wildfire Mitigation Plan’s programs are intended to reduce equipment or conductor failures that could result in a wire falling to the ground and being a source of ignition. In 2019, the Company began formalizing a process to report on downed power lines. This process was not fully implemented until the beginning of 2020. The effort is referred to as “Wires Down” reporting and covers both distribution and transmission lines. Public Service field personnel that respond to equipment issues and outages have received supplemental training on how to document any observed incidents of distribution or transmission wires on the ground or detached from a pole. These responders, such as linemen and troublemen, not only initiate the process for appropriate repairs, but they also complete a Wire Down Reporting Form, which is collected for further analysis. The information collected includes any evidence of ignition or fire. The information is utilized to assist with analyzing and further hardening the system to prevent facilities from failing and mitigating the risk of wildfire and other public safety hazards.

The 2019 data shown in the table below was compiled from the Company’s Outage Management System, which consists of thousands of entries. The extensive list of outages was reviewed and filtered to find instances of actual and potential downed wires as well as utility equipment ignitions. There was not a consistent reporting mechanism prior to 2020, therefore this list may not be inclusive of all wires down or ignition events. The Company endeavored to review and filter the data to find instances of ignitions and actual and potential downed wires by searching for key terms within the data. Although ignition information is generally available, the information is not always clear, and there may be some duplications included in the values. The values may also include some instances outside the WRZ. The following table lists the information the Company has collected based on the method described above. The process introduced in 2020 will improve data tracking.

2019 Estimated Ignitions and Wires Down Events		
	Downed Wires	Ignitions
Distribution	106	650**
Transmission	1*	0
Total	107	1

*There may be additional wire down events not captured.

**This includes all suspected equipment ignitions in the PSCo service territory and is not limited to the WRZ.

III. Red Flag Warning Metrics

The primary metric for monitoring fire-related weather is the Red Flag Warning. Public Service has meteorologists on staff that are responsible for providing and tracking this information. The National Weather Service, which is part of the National Oceanic and Atmospheric Administration, is the primary source of wildfire warning information. The National Weather Service provides daily updates to Red Flag Warnings as well as Fire Weather Watch. A Red Flag Warning is issued when a combination of temperature, humidity, and wind are expected to combine to produce an increased risk of fire danger. The Company began tracking Red Flag Warning days in 2019 and will continue monitoring Red Flag Warning days in Colorado, as well as the communities or areas which experienced Red Flag Warnings, and the dates they occurred.

A. Red Flag Warning Days in 2019

2019 Red Flag Warning Days and Other Weather Tracking													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 total
Red Flag Warnings	0	1	2	2	0	5	6	5	3	10	0	0	34
Red Flag Warning Issued for the Day Ahead	0	0	0	0	0	1	3	0	0	1	0	0	5
Day Ahead Fire Weather Watch	0	1	1	1	0	5	2	4	0	6	0	0	20
2-day ahead FWW	0	0	0	0	0	1	0	0	0	1	0	0	2
SPC Elevated Fire Danger	0	3	2	5	0	4	8	9	12	13	1	0	57
SPC Elevated Fire Danger Issued for the Day Ahead	0	3	2	4	0	4	6	4	8	11	0	0	42
total fire danger days (RFW and/or Elevated Fire Danger)	0	3	3	5	0	6	8	9	12	15	1	0	62
No advance notice of fire danger	0	0	2	2	0	0	3	4	4	3	1	0	17

IV. Communities Which Experienced Red Flag Warning Days in 2019

Community information is gathered from National Weather Service fire zones. Meteorologists track what zones are impacted by Red Flag Warning days and then compile the communities that are within those zones.

Communities Experiencing Red Flag Warning Days in 2019	
Date	Community
3/27/2019	Alamosa, Fort Garland, Del Norte, Saguache
3/29/2019	La Veta Pass, Pueblo, Walsenburg, Trinidad, Thatcher, Pinon Canyon
4/5/2019	Walsenburg, Trinidad, Thatcher, La Junta, Pinon Canyon, Las Animas, Lamar, Springfield
4/9/2019	Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Ordway, La Junta, Pinon Canyon, Eads, Las Animas, Lamar, Springfield, Castle Rock, Elbert, Fondis, Kiowa, Larkspur, Bennett, Byers, Deer Trail, Leader, Agate, Hugo, Limon, Matheson, Forder, Karval, Kutch, Punkin Center, Akron, Cope, Last Chance, Otis, Yuma, Kit Carson
4/10/2019	Trinidad, Thatcher, La Junta, Pinon Canyon, Las Animas, Lamar, Springfield
6/7/2019	Grand Junction, Rifle, Nucla
6/20/2019	Grand Junction, Rifle, Cortez, Nucla, Montrose
6/26/2019	Cortez, Nucla, Montrose
6/27/2019	Grand Junction, Rifle, Cortez, Nucla, Montrose
6/28/2019	Nucla
7/3/2019	Craig
7/4/2019	Craig, Grand Junction, Rifle, Nucla
7/16/2019	Craig, Grand Junction, Rifle, Glenwood Springs, Vail
7/17/2019	Craig, Grand Junction, Rifle, Glenwood Springs, Vail, Cortez, Nucla, Montrose
7/18/2019	Craig, Breckenridge, Eisenhower Tunnel, Winter Park, Estes Park, Nederland, Red Feather Lakes, RMNP
7/19/2019	Craig
8/16/2019	Craig, Grand Junction, Rifle, Cortez, Walden, Gould, North Park, Rand, Spicer, Dillon, Fraser, Granby, Fairplay, South Park, Nucla, Montrose
8/17/2019	Craig, Grand Junction, Rifle, Alamosa, Fort Garland, Del Norte, Saguache, Nucla, Montrose, Gunnison
8/18/2019	Craig
8/22/2019	Craig
8/23/2019	Craig
8/25/2019	Craig, Walden, Gould, North Park, Rand, Spicer, Dillon, Fraser, Granby, Fairplay, South Park, Estes Park, Nederland, Red Feather Lakes, Fort Collins, Hereford, Loveland, Briggsdale, East Pawnee Grasslands, Grover, Pawnee Buttes, Raymer, Stoneham
8/28/2019	Craig, Breckenridge, Eisenhower Tunnel, Winter Park, RMNP
8/29/2019	Craig
9/20/2019	Grand Junction, Rifle, Cortez, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Denver, Aurora, Brighton, DIA, Highlands Ranch, Littleton, Parker, Bennett, Byers, Deer Trail, Leader, Agate, Hugo, Limon, Matheson, Forder, Karval, Kutch, Punkin Center, Nucla, Montrose
9/21/2019	Alamosa, Fort Garland, Del Norte, Saguache, Monument, Black Forest
9/26/2019	Craig
9/29/2019	Dillon, Fraser, Granby, Fairplay, South Park, Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Ordway, La Junta, Pinon Canyon, Eads, Las Animas, Arvada, Boulder, Golden, Lakewood, Longmont, Denver, Aurora, Brighton, DIA, Highlands Ranch, Littleton, Parker, Castle Rock, Elbert, Fondis, Kiowa, Larkspur, Briggsdale, East Pawnee Grasslands, Grover, Pawnee Buttes, Raymer, Stoneham, Eaton, Fort Lupton, Greeley, Roggen, Brush, Fort Morgan, Goodrich, Wiggins, Bennett, Byers, Deer Trail, Leader, Agate, Hugo, Limon, Matheson, Forder, Karval, Kutch, Punkin Center, Crook, Merino, Sterling, Peetz, Akron, Cope, Last Chance, Otis, Yuma, Kit Carson
9/30/2019	Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Fairplay, South Park, Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Ordway, La Junta, Pinon Canyon, Eads, Las Animas, Castle Rock, Elbert, Fondis, Kiowa, Larkspur,

Communities Experiencing Red Flag Warning Days in 2019	
Date	Community
	Bennett, Byers, Deer Trail, Leader, Agate, Hugo, Limon, Matheson, Forder, Karval, Kutch, Punkin Center, Akron, Cope, Last Chance, Otis, Yuma, Kit Carson, Nucla, Montrose, Gunnison
10/1/2019	Grand Junction, Rifle, Glenwood Springs, Vail, Cortez, Walden, Gould, North Park, Rand, Spicer, Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Fairplay, South Park, Alamosa, Fort Garland, Del Norte, Saguache, Nucla, Montrose, Gunnison
10/2/2019	Glenwood Springs, Vail, Walden, Gould, North Park, Rand, Spicer, Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Fairplay, South Park, Wolf Creek Pass, Creede, Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Gunnison
10/4/2019	Craig, Grand Junction, Rifle, Walden, Gould, North Park, Rand, Spicer, Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Fairplay, South Park, Estes Park, Nederland, Red Feather Lakes, Evergreen, Georgetown, Idaho Springs, RMNP, Nucla
10/5/2019	Walden, Gould, North Park, Rand, Spicer, Breckenridge, Eisenhower Tunnel, Winter Park, RMNP
10/7/2019	Walden, Gould, North Park, Rand, Spicer, Estes Park, Nederland, Red Feather Lakes, RMNP
10/8/2019	Craig, Walden, Gould, North Park, Rand, Spicer, Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Estes Park, Nederland, Red Feather Lakes, RMNP, Pueblo
10/9/2019	Grand Junction, Rifle, Glenwood Springs, Vail, Cortez, Breckenridge, Eisenhower Tunnel, Winter Park, Dillon, Fraser, Granby, Fairplay, South Park, Evergreen, Georgetown, Idaho Springs, Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Ordway, La Junta, Pinon Canyon, Castle Rock, Elbert, Fondis, Kiowa, Larkspur, Forder, Karval, Kutch, Punkin Center, Nucla, Montrose, Gunnison
10/10/2019	Cortez
10/13/2019	Wolf Creek Pass, Creede
10/14/2019	Craig, Steamboat Springs, Hayden, Wolf Creek Pass, Creede, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher
10/17/2019	Craig, Steamboat Springs, Hayden, Grand Junction, Rifle, Glenwood Springs, Vail, Walden, Gould, North Park, Rand, Spicer, Dillon, Fraser, Granby, Fairplay, South Park, Estes Park, Nederland, Red Feather Lakes, Evergreen, Georgetown, Idaho Springs, Wolf Creek Pass, Creede, Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Pinon Canyon, Lamar, Springfield, Yuma, Kit Carson, Nucla, Montrose
10/18/2019	Ordway, La Junta, Eads, Las Animas, Lamar, Springfield
10/19/2019	Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Nucla
10/20/2019	Alamosa, Fort Garland, Del Norte, Saguache, La Veta Pass, Monument, Black Forest, Fort Carson, Colorado Springs, Pueblo, Walsenburg, Trinidad, Thatcher, Ordway, La Junta, Pinon Canyon, Eads, Las Animas, Lamar, Springfield, Castle Rock, Elbert, Fondis, Kiowa, Larkspur, Agate, Hugo, Limon, Matheson, Forder, Karval, Kutch, Punkin Center, Kit Carson
10/21/2019	Pueblo, Walsenburg, Trinidad, Thatcher, La Junta, Pinon Canyon
11/9/2019	Yuma, Kit Carson
11/12/2019	Yuma, Kit Carson

V. Wildfires in Service Territory

In 2019, actual fire information was collected from a variety of sources, including:

- Indji Watch, a multiple hazard monitoring tool;
- InciWeb, an interagency all-risk incident information management system;
- Colorado Division of Homeland Security and Emergency Management, Department of Natural Resources, and National Forest Service;
- National Oceanic and Atmospheric Administration;
- Internal monitoring or reports from other Xcel Energy real time desks, control centers, individual field workers, the Security Operations Center, the Enterprise Command Center, or Meteorology;
- Local law enforcement reports; and,
- Social media, news outlets, or other media sources.

The following table shows actual fires tracked in 2019, as derived from these sources:

2019 Wildfires in Service Territory		
Start Date	Location	County
4/5	Las Animas	Bent
4/7	Colorado Springs	El Paso
4/8	Gypsum	Eagle
4/8	Lyons	Boulder
4/15	Eagle	Eagle
4/22	Rangley	Rio Blanco
4/27	Durango	LaPlata
5/3	N of Gardner	Huerfano
5/4	exit 128 I-25	El Paso
5/11	N of Durango	LaPlatta
5/20	Loma	Garfield/Mesa
5/27	Woodland Park	Teller
6/20	NW of Durango	Dolores
6/27	North of Dumont and Downieville	Clear Creek
7/4	Beaver Fire	Larimer
7/5	Deep Canyon	Archuleta
7/6	NW of Pueblo	El Paso
7/11	Canyonlands	Fremont
7/11	38.608 latitude, -107.283 longitude	Gunnison
7/14	Bobcat Ridge	Larimer
7/16	Glacier View Meadows	Larimer
7/18	West of Meeker	Rio Blanco
7/19	40.01328 , -108.8098	
7/30	Box Canyon, 6 miles SW of Sedalia	Douglas
8/1	10 miles East of Ignacio	La Plata
8/19	~20 miles SW of Telluride	San Miguel
8/19	~20 miles SW of Telluride	San Miguel

2019 Wildfires in Service Territory		
Start Date	Location	County
8/26	Lost Creek Wilderness	East of Bailey
8/28	Sunrise Court	Glenwood SG.
9/6	28 miles SW of Meeker	Rio Blanco
9/8	Decker	Salida
9/12	West Delores Rim	Durango
9/17	Craig	
9/28	13 miles East of Aspen	Pitkin

For the 2020 wildfire season, guidelines were developed for use in the Public Service operating region to align aspects of wildfire response and provide guidance for response and tracking of wildfires. The guidelines also include communication with Xcel Energy’s Enterprise Command Center, a 24/7 watch floor. The Company plans to continuously improve this process based on lessons learned, new monitoring tools, and any new mitigation strategies.

VI. Actual Investment

The following table describes the actual expenses related to the Wildfire Mitigation Plan in 2019. It includes both capital and operation and maintenance (O&M) expenses for the transmission and distribution business areas.

2019 Actual Investment (Millions)			
	O&M	Capital	Total
Distribution	\$4.365	\$35.531	\$39.896
Transmission	\$1.722	\$7.246	\$8.968
Total	6.087	42.777	\$48.864