

Memo

To: Salt Lake County Mayor's Office c/o Deputy Mayor Catherine Kanter

From: Chief Clint Mecham, Unified Fire Authority

Date: June 5, 2020

Re: Assessment of Emergency Management Issues in the Wasatch Front Canyons

Introduction

The Wasatch Front Canyons¹ (the Canyons) pose numerous and complex emergency management/safety issues. No single – or simple – solution exists to address the myriad of issues. In spite of this complexity, numerous groups and agencies have worked diligently over the years to plan for emergencies in these Canyons. That work is documented (in part) by the various plans described below. In addition to those existing plans, multiple federal, state, county and local agencies continue to partner on ongoing efforts to address the needs of the Canyons.

The following memo is intended to provide an overview of some of the more complex emergency issues and related planning efforts. Those issues include: the volume of visitors to the canyons, geographic challenges, governmental and private land ownership, the numerous organizations involved in water systems management, competing land management priorities and the types of threats involved, both natural and man-made. As noted above, no single mitigation effort is capable of addressing all types (and variations) of emergencies, particularly given the inherent unpredictable nature of emergency incidents. Rather, a variety of mitigation, response and recovery strategies and tactics need to be considered.

The volume of visitors to the Canyons has increased over the past decade due to local population increases, as well as an increase in visitors from outside of Utah. As these numbers have risen, the potential threat of wildfires, avalanches and mudslides has increased as well.

Challenges and Certain Tactics

The threat posed by increased level of visitors to the Canyons is intensified by various challenges that are specific to this area. Some of those challenges (and certain tactics to combat them) include:

Geography

The geography and varied terrain of the Canyons prevents simple access and/or egress to the public and public safety officials. There is no obvious solution to overcoming geography when it comes to public safety issues. Factors to consider for any potential solution include the unpredictable location of the incident, travel paths, capacity of transportation volume and suitability for the particular emergency. These factors make evacuation of large numbers of people challenging.

¹ Includes Parleys, Emigration, Millcreek, Big and Little Cottonwood Canyons

For example, certain options, such as aerial transport, can be unreliable. A secondary egress is a potential option. However, even if that option was reasonably feasible to construct, there is no guarantee that it would be viable in practice given the unpredictable nature of the incident's location and path of travel. As a result, multiple strategies and tactics should be considered in an effort to mitigate the effect of geography. Additional potential tactics include creation and reinforcement of safety zones and evacuation procedures, fuels reduction (for fires) and other methods. The location and fluidity of the incident, especially wildfire, will often dictate the available options.

Land Ownership

There are numerous landowners and users within the Canyons, including federal (U.S. Forest Service), state (Utah Division of Natural Resources), local (unincorporated Salt Lake County), Salt Lake City Public Works (watershed) and private (homeowners and resort owners). This multiple ownership/user scenario renders certain tactics (such as fuels reduction) complicated, as the rules governing such actions can change depending upon the situation. For example, much of the property in the Canyons beginning 300 feet from a road is designated wilderness area by the USFS. Due to this designation, options for fuels reduction, firefighting, avalanche, and mud slide abatement are severely restricted or prohibited. In addition, many of these organizations have competing land management priorities that require collaboration and deconfliction.

In spite of these complications, efforts have been made (and continue be pursued) to address fuels reduction as a means to mitigate fires. For example, Unified Fire Authority's Wildland Division, for many years, has engaged in what is known locally as "Chipper Days." This program entails crews from UFA's Wildland Division partnering with the residents and landowners to reduce fuels, where allowed. Residents and crews have removed vegetation from areas around existing structures, shredded/chipped the material and hauled it away for recycling - all in an effort to reduce the fuel load. This program has been employed in the canyons throughout Salt Lake County and is a prime example of the long-term, ongoing, cooperative efforts employed to mitigate fire dangers. UFA also provides regular trainings to educate the public on how to engage in "Firewise" practices. In addition, FCOZ continues to be examined in order to help enhance the ability for fuels to be reduced in some areas.

Water

There are 17 separate and distinct water companies and purveyors in the Canyons. In many cases these organizations have been in existence for decades and have separate systems. The fact that the capacities of these systems differ from system to system creates tactical challenges for emergencies, particularly firefighting. Updating of these systems may be near impossible due to location, geography, and cost. The subject of water rights/ownership further complicates issues regarding water in the Canyons.

In spite of these challenges, efforts have been made in the past to ensure that adequate water is available in the Canyons to combat fires. For example, a comprehensive study for water supply in the Canyons was recently conducted in conjunction with Insurance Service Organization (ISO). The study revealed that improvements to the water supply system have been made over

the years such that the ISO rating improved from 3 / 3X to 2 / X. ISO ratings use a scale of 1 to 10, with 10 being the worst rating and 1 being the best.

It has been suggested recently by some that the International Fire Code has not been adhered to in the Canyons. That is not accurate. Since 2004, water supply requirements per the current adopted edition of the fire code have been actively required for all new single-family homes and commercial projects in the Canyons. It should be noted, however, that certain properties that predate the current edition of the code have been “grandfathered.” In addition, even with some post 2003 improvements, there have been legal exceptions granted from strict imposition of the code on account of topography, negotiable grades, limited water supply and similar conditions. For example, the fire code permits exceptions so long as equivalent protections are applied - such as self-sufficient fire sprinkler systems, which require less water than a fire hose given the timing of when a sprinkler is used (e.g., when the fire first breaks out, as opposed to upon the arrival of the firefighting team).

Existing Plans

There has been a tremendous amount of attention paid to emergency management (including fire safety) issues in the Canyons over the years. This is evidenced by the work and collaboration of various agencies including the U.S. Forest Service, Utah Division of Forestry, Fire and State Lands, Salt Lake County government, Salt Lake City Public Utilities, local governments, Unified Fire Authority, and other stakeholders. Over the past decade these partnerships have worked to align priorities where possible and address concerns related to public safety. The plans resulting from these efforts, include, but are not limited to:

- Salt Lake County Emergency Operations Plan (EOP)
 - Provides, at a high level, the structure and processes that Salt Lake County utilizes to respond to and recover from an incident.

- Salt Lake County Mitigation Plan (together with annexes)
 - Identifies local threats to the community.
 - Creates mitigation strategies to address those threats.
 - Develops long-term mitigation planning goals and objectives.
 - Fulfills federal, state, and local hazard mitigation planning objectives.

- Salt Lake County Wildfire Protection Plan (SLCo CWPP)
 - Motivates local government, communities, and property owners to organize, plan and take action on issues impacting the safety and resilience of values at risk.
 - Enhances levels of fire resilience and protection in Salt Lake County.
 - Identifies the threat of wildland fires in Salt Lake County.
 - Identifies strategies to reduce the risk of wildfire to structures, infrastructure, and commerce in Salt Lake County.
 - Identifies wildfire hazards, education and mitigation actions needed to reduce risk.

- Transfers practical knowledge through collaboration between stakeholders within Salt Lake County.
- Alta Wildfire Protection Plan (Alta CWPP)
 - Same as Salt Lake County CWPP, but specific for the Town of Alta.
- Big Cottonwood Wildfire Protection Plan (Big Cottonwood Canyon CWPP)
 - Same as Salt Lake County CWPP, but specific to Big Cottonwood Canyon.
- Emigration Canyon Wildfire Protection Plan (Emigration Canyon CWPP)
 - Same as Salt Lake County CWPP, but specific to Emigration Canyon
- Northern Utah Interagency Fire Coordination Center Run Cards
 - These detail what type of assets are to be dispatched to a fire in specific locations.
- Salt Lake County Comprehensive Emergency Management Plan (CEMP), together with annexes (development underway)

These plans continue to be working documents and will evolve based on the dynamic profile of Canyon usage and occupancy. The best solution for public safety will not be found in a single solution. Rather, a variety of options, tactics and tools will provide the best avenue for success during emergency incidents.

In addition, forward thinking strategies and enhanced coordination will also be critical to success. To that end, the UFA, at the direction of Salt Lake County leadership, is currently in the process of transitioning the existing Salt Lake County Emergency Operations Plan (EOP) to a Salt Lake County Comprehensive Emergency Management Plan (CEMP). The goal of the CEMP is to create a strategic document that is the blueprint for Salt Lake County's efforts regarding emergency incident mitigation, preparedness, response and recovery. The CEMP will include annexes that specially address certain types of incidents, such as wildfire and avalanche, in greater detail than the current EOP. The specificity of the CEMP will also further enhance the ability of federal, state, county and local partners to continue to develop even more specific plans in dealing with the wide variety of threats faced by Salt Lake County. It is anticipated that a public engagement process will be conducted in connection with the development of the CEMP.