RESILIENCY PLANNING

At the state level in Colorado, resilience is defined as "the ability of communities to rebound, positively adapt to, or thrive amidst changing conditions or challenges, including natural disasters and climate change, and maintain quality of life, healthy growth, durable systems, and conservation of resources for present and future generations."

KEY POINTS:

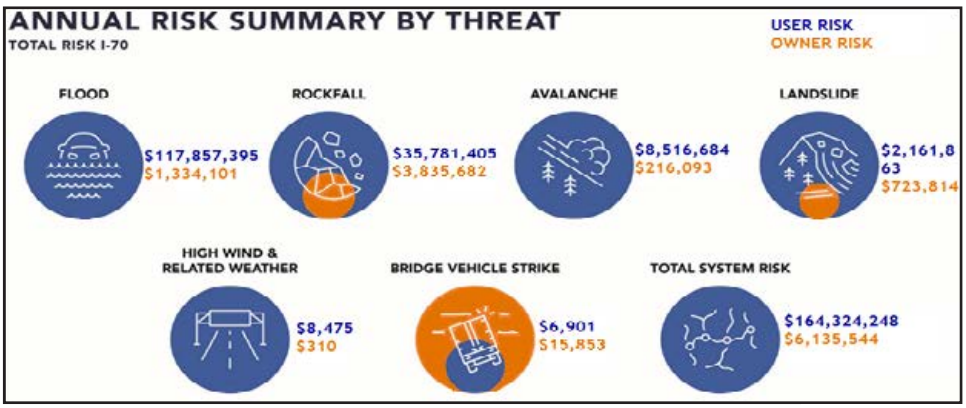
- Resilience became a priority at CDOT after the 2013 flooding event along the Front Range caused severe damage to our roadway network, requiring more than $700 million in repairs.

- Transportation system resilience is the ability to keep roads open and functional in the face of unexpected events and challenges. This may involve resilience of the assets themselves (e.g., design or maintain bridges so they withstand rare, yet catastrophic, flood events), or adaptability of CDOT's operations, maintenance, planning, etc., in the face of stressors and challenges.

- Natural hazards leading to service interruptions and road closures are some of the most common risks CDOT works to mitigate. CDOT partnered with a consultant to launch the I-70 Risk and Resilience Pilot project, which assesses hazards along the entire I-70 corridor within Colorado to identify areas with high probability of losses from a range of threats, such as floods, rock slides, land slides, avalanches, and high wind. CDOT is exploring how information from the pilot project can help with making informed decisions regarding future asset management and prioritization processes.

- The concept of resilience is not only limited to physical threats, although this is the main focus of resilience work in transportation. A more holistic interpretation encompasses various vulnerabilities that prevent a community from adapting and thriving, such as operational and land use changes that negatively impact movement in a corridor.

- CDOT is currently in the process of defining what resilience means for the organization and institutionalizing resilience in the Department so staff and core DOT functions (planning, design, maintenance) can quickly adapt to new challenges.



HOW DOES THIS BENEFIT YOU?

Disasters, physical threats, and unexpected events are going to happen, but their effects do not have to be catastrophic and cause extended road closures.

- Building resilience is like an insurance policy. When we identify a threat and implement a mitigation measure, we buy down the risk to our system in the future.
- Pro-active management of threats before they occur minimizes the resources needed to rebuild and restore service, minimizes the disruptions to peoples' lives and to business activity, and lowers the cost to CDOT and the traveling public in the long run.
- Research on disaster damage, and federal government spending at a national level suggests that every $1 spent on pre-disaster preparedness is worth $6 in terms of future damages it mitigates (NIBS "Natural Hazard Mitigation Saves: 2018 Interim Report"). Yet, researchers note that, at this point, expenditures are more readily approved for post-disaster relief and repair than for programs that fund preventive damage-reduction improvements.

US 34 Big Thompson Canyon Flooding, 2013

I-70 Glenwood Canyon Rockfall, 2016

I-25 tanker fire, 2017

Waldo Canyon Fire, 2012