

# Colorado Roadless Rule ArcGIS Story Map

An internal planning–support tool to assist the US Forest Service Rocky Mountain Regional Office communicate the 2012 Colorado Roadless Rule to land managers and practitioners.

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 Capstone – Spring 2021

## Introduction

The US Forest Service 2012 Colorado Roadless Rule guides management of Colorado Roadless Areas on National Forest System lands. There may be misconceptions that management is not allowed or needed in roadless areas and that the Colorado Roadless Rule itself can be a barrier to sustainable multiple use management. This may leave roadless areas unmanaged, risking increased forest fuel loads and impacts to drinking water sources, infrastructure, and ecosystem services that roadless areas provide.

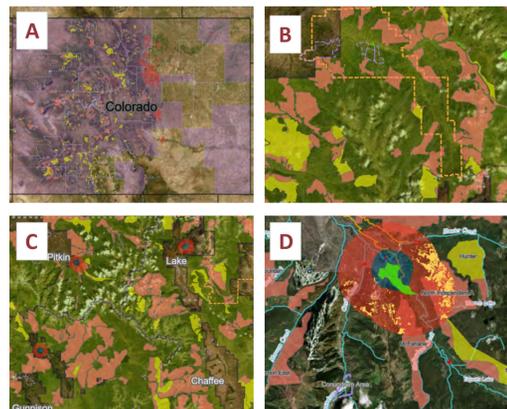
To help dispel these misconceptions, this Capstone explored a different approach to communicating the Colorado Roadless Rule that may not yet be widely used by agencies – visual storytelling with an ArcGIS Story Map. *The Rundown on Roadless* ArcGIS Story Map was created to assist the Forest Service Rocky Mountain Regional Office in communicating the agency's vision for the management and protection of Colorado Roadless Areas to employees, particularly land managers and practitioners in Colorado.

## Materials and Methods

Creation of *The Rundown on Roadless* ArcGIS Story Map followed an iterative workflow, adapted from Esri's Story Map Creation workflow (Esri, 2020).



Embedded web map applications were created and tailored for the audience to be used as a support tool when planning roadless area management activities. The "Community Protection Zones" application shows communities at-risk to large-scale wildfires, Community Protection Zones, and Community Wildfire Protection Plan areas.



The combination of US Forest Service photos, stakeholder contributions, graphics, and interactive maps communicates big ideas and technical information in a practical framework.



## Results: Final Elements of *The Rundown on Roadless* ArcGIS Story Map

One key aim of the ArcGIS Story Map is to dispel the perception that forest management is not needed or allowed in roadless areas. Another aim is to encourage agency land managers and practitioners to become more acquainted with the management guidance provided by the Colorado Roadless Rule, as well as the roadless characteristics and values of Colorado Roadless Areas. Land managers and practitioners can scroll down through *The Rundown on Roadless* ArcGIS Story Map for an engaging and visually appealing, tailored narrative about these issues, roadless areas, and the Colorado Roadless Rule. The embedded web map applications primarily draw from existing Forest Service data but were configured specifically for this ArcGIS Story Map to present a large amount of information in a more accessible framework.

### 1 Introduction

### 5 The Colorado Roadless Rule

### 9 36 C.F.R. Part 294.42 - Prohibition on tree cutting, sale, or removal in CRAs

### 6 The Roadless Landscape

### 10 36 C.F.R. § 294.44 Prohibition on linear construction zones in CRAs

### 3 Background

### 7 Roadless Stewardship

### 11 36 C.F.R. § 294.43 Prohibition on road construction and reconstruction in CRAs

### 4 Characteristics

### 8 by Protection Zones

### 12 Conclusion & Further Readings

## Conclusion

The approach to creating *The Rundown on Roadless* ArcGIS Story Map demonstrated how information about the Colorado Roadless Rule can be more accessible and clearly communicated to the Forest Service audience. When management direction and policy is translated in a more tangible framework, the audience may be more likely to retain the information and apply it in their day-to-day work. This approach could be applied in employee training situations to improve professional development and education methods for better employee outcomes.

Because this Capstone explored methods to improve information accessibility and clarity about the Colorado Roadless Rule, *The Rundown on Roadless* ArcGIS Story Map may contribute to both an individual professional's and the agency's overall comprehension of the Colorado Roadless Rule. This may help facilitate more roadless stewardship work by Ranger Districts and National Forests. Thus, more land managers and practitioners manage roadless areas for the protection of roadless characteristics and values for the long-term.

Although research shows that visual storytelling is a communication tool that can improve comprehension of material, this concept was not tested during the Capstone. Pursuing empirical, controlled studies can help explore the effectiveness of using ArcGIS Story Maps in improving comprehension of material. Agencies should continue exploring ArcGIS Story Maps to communicate information to staff and minimize misunderstandings of large-scale complex issues.



## Bibliography

- Esri. (2020). *Creating Story Maps with ArcGIS – Student Edition*. 93.
- Sanderson, V. (2021, May). *The Rundown on Roadless: Management Forest Service Colorado Roadless Areas with the Colorado Roadless Rule* ArcGIS StoryMaps.

## Acknowledgments

Special thanks to those who provided guidance, data, quotes, and feedback on this Capstone, including:

- Ken Schroepel; Michael Hinke; Jennifer Ambrose; Ruth Esperance; Ken Tu; Sitka Pence; Sarah Synowiec; Taylor Willow; Vanessa Mazal; Colorado State Forest Service; Josh Hicks; Mark Pearson; and David DeBonis.