

Timed Entry Reservation Systems in the NoCo Region: Learnings and Trends

Briefing paper for NoCo PLACES 2050 land managers - February 2022

NoCo was formed to protect and conserve natural and cultural resources and provide equitable access and quality recreational experience while at the same time experiencing increased visitation and demand for outdoor recreation on public lands along the Front Range of Colorado. After evaluating this challenge holistically, the group selected the visitor use management strategy of timed entry systems with advanced registration for further investigation. A subcommittee reviewed examples of the systems currently in use in the region to assess the utility and need for this form of visitor management. This paper summarizes the lessons learned from this review and is intended to provide a high-level briefing for those entities that may want to consider timed entry as a visitor use management strategy. This briefing will be accompanied by a separate users guide providing further details and guiding considerations for those wishing to design and implement timed entry systems.

High-level Takeaways

1. Timed entry reservation systems have been proven to reduce the negative impacts of overcrowding by redistributing visitation during the most popular times of day, days of the week, and seasons of the year, to times that are typically less busy.
2. Benefits of reducing the biggest pulses of visitation include reduced impact to natural resources and built infrastructure, reduced visitor conflict, improved safety for visitors and staff, and improved visitor experience.
3. The implementation of any new visitor management strategy such as a timed entry reservation system will likely be met with initial resistance as visitors become accustomed to it. This puts additional resource requirements on public land managers and additional pressures on front line staff.
4. The second year of a timed entry system will be easier than the first due to increased knowledge and acceptance by visitors of the system and staff experience.
5. Any visitor management system will need to be tailored to the specific needs of the location and neighboring properties and will benefit greatly from ongoing evaluation, coordination, and adaptive management.
6. It is important to carefully monitor the potential for displacement of visitor traffic. If the problem of overuse and crowding is just shifted to nearby properties, it may be necessary to take a landscape-scale and/or multi-jurisdictional approach.
7. It is important to ensure that timed entry reservation systems do not result in creating additional barriers to access for historically underrepresented communities.

NoCo Case Studies

The Need for Visitor Management

Often the need for intensive visitor management strategies is felt before it can be formally quantified. Accelerated resource degradation, increased maintenance requirements for infrastructure, or an unpleasant sense of crowdedness for visitors signals this need. Sometimes emergent circumstances such as extreme weather, sudden visitation changes, or other complicating factors make change necessary on an accelerated time scale.

Rocky Mountain National Park (ROMO) was the first jurisdiction to implement a timed entry reservation system in the NoCo region at the beginning of the summer season in 2020. No stranger to high visitation, the park had already implemented a shuttle with regular formal service beginning in 2000 to reduce the number of private vehicles competing for space on the roads and in parking lots. Visitation continued to rise, and beginning in 2012 the shuttle system was no longer sufficient to prevent overcrowding in the busiest areas of the park during the high season. From 2016 to 2019, the park implemented private vehicle restrictions in key locations such as Bear Lake Road and the Wild Basin area. From the start these restrictions became longer and more frequent to where they became too cumbersome to manage as an effective management strategy. In 2020, in response to this increased visitation and also triggered by the need imposed by Covid to enable more social distancing, the park implemented its system.

The Arapahoe and Roosevelt National Forests (ARP) was the second jurisdiction to implement a timed entry system in the region, beginning in the 2021 summer season at Mt. Evans and Brainard Lake. Along with the evident overcrowding on roads and in parking lots at both of these locations, the Forest Service drew on data and conclusions from a Transportation System Alternatives Study conducted under a Sarbanes Transit in Parks grant awarded to the ARP which quantified a need for visitor management. The timing of implementation, the year after ROMO, with some of the same pandemic-induced urgency to flatten the visitation curve, made it quicker to implement and easier to make the case for with visitors.

At Eldorado Canyon State Park (Eldo), Colorado Parks and Wildlife (CPW) piloted a shuttle system beginning the summer of 2021 and staff is currently proposing a timed entry reservation system that is expected to be considered by the Parks and Wildlife Commission (PWC) in the coming months. Eldo has unusually limited access for a Front Range park, with a single dirt two-lane entry road and parking slots limited by steep topography. The park is also bracketed by private land, including both the town of Eldorado Springs just outside its entrance and residences above the park that can only be accessed by driving through it. In 2018, prompted by quickly rising visitation and increased access and safety concerns due to a back-up of visitors waiting to enter the park, CPW initiated a visitor use management planning process to explore options with a diverse stakeholder group. The shuttle pilot came out of this process, and the Visitor Use Management Plan established the need for preventing some of these negative outcomes of overcrowding. The proposal that will go before the PWC is expected to limit the

number of daily visitors on Saturdays, Sundays and holidays. The proposal will go through two levels of discussion with the PWC and include the solicitation of public comment.

Different Settings, Different Strategies

The location and context vary widely for each public property along the northern Front Range, requiring different strategies to respond to increased visitation. Environmental, administrative, and operational factors combined require unique responses to accommodate the different recreational uses for each location in an equitable way. The manner in which the public is engaged in the development and/or implementation of timed entry also varies based on the circumstances.

At ROMO, visitor use metrics informed the design of the first timed entry permit system. The average length of visit to the park was used to determine the number of permits offered for each entry time, with the goal of holding the park to 60% of total capacity in response to the needs of the pandemic. In response to a large number of visitors arriving before or after the reservation window to avoid the reservation system, it was modified in its second year to extend this window for the Bear Lake Corridor, which is the busiest area of the park. The window was reduced for other areas in the park, to enable easier access for local communities and those that didn't have a reservation. The urgency of overcrowding facing the park meant that there was little time for public input in the design of the program, but the Park held two pre-NEPA (National Environmental Policy Act) virtual public meetings in May 2021 and solicited public comment from May 21 through July 26, 2021 in conjunction with the long term visitor use plan.

On the ARP, the Sarbanes capacity study was used to design a system appropriate to each location. The average duration of visit was shorter for Mt. Evans than Brainard, since the former is mainly used for scenic driving while the latter is used for backcountry access and includes overnight use. The reservation windows established reflect this difference. Since the welcome stations for both locations are outside of mobile and wireless signal, preventing the reservation system from being used upon arrival, extra effort was made to communicate with visitors prior about the need for reservations, and accommodations were made for visitors who arrived without a reservation during the first year the system was in place. The need for timed entry was clearly established by the Transportation Systems Alternatives Study and subsequent increase in visitors. Public input was solicited as the program was implemented, however, so adjustments could be made based on public comment and experience.

At Eldo, the visitor shuttle pilot was combined with stricter enforcement of park capacity closures to avoid the entrance station back-up typical on busy days. The change in visitor use and total visitation resulting from this combined strategy was used to inform the design of the timed entry reservation system proposal to limit the number of daily visitors on weekends and holidays that will be presented to the PWC in the coming months. Eldo's recreational uses stratify between rock climbers, who tend to arrive early, bring a lot of equipment, and stay for long periods of time, and other users who tend to arrive for discrete periods during the middle of the day. By implementing visitor management strategies only during the busiest days, CPW

hopes to reduce conflicts, help adjoining landowners and manage visitor expectations while retaining the opportunity for the more gear- and time-intensive uses to continue in the park.

Results and Adaptive Management

The initial results from the trials of timed entry reservations systems by NoCo partners have been largely positive. Initial results show that such systems help to “flatten the curve,” distributing peak visitation over a wider range of days and hours. Though the first season of implementation is resource intensive and can be difficult for both visitors and front line staff, it does become easier as systems improve and as visitors become accustomed to them.

At ROMO, the implementation of the timed entry reservation system successfully kept the park below capacity and spread visitation throughout the day and from weekend spikes into more weekday visits. It was initially met with resistance from visitors who were unaccustomed to or unaware of the new requirement, which made the transition year difficult for front line staff. However, the amount of this kind of conflict dropped off dramatically in the second year the system was in use. Evaluating the system after its first year, adjustments were made to increase the total number of permits issued in response to a 28% rate of no-shows. Changes were also made to differentiate the reservation system for the most heavily used areas of the park from those with less visitation. Overall, the timed entry system met the intended goal of flattening the curve of visitation on busy days, reducing the negative effects of overcrowding during peak hours on staff and visitor experience and infrastructure. The Park intends to continue the timed entry reservation pilot in 2022 and to take the input from their public engagement in 2021 to help inform long-range day use visitor access strategies, including desired conditions, defining zones, and identifying indicators, thresholds, strategies and capacities. They will initiate a formal NEPA process for developing those visitor use access strategies in 2023.

On the ARP, the implementation of timed entry reservation systems resulted in reduced visitor conflict related to overcrowding, for example fights over parking spaces. Visitor survey responses on recreation.gov, the reservation service for timed entry, were over 90% positive overall. Based on the first year, both Mt. Evans and Brainard Lake intend to continue their systems, and the first year’s results will be used to adjust for a second year.

At Eldo, the overall visitor feedback on the shuttles was positive, with the exception that some of the larger shuttle vehicles made the entry road feel overly tight for other drivers. The pilot program decreased the number of cars in the canyon, reduced the number of cars turned away at the entrance station, and distributed visitors more evenly through the week. Though the program was piloted at a limited scale partially due to social distancing requirements for Covid, results from the first season indicate the system can be scaled to accommodate more people without increasing costs. Though the shuttle route was designed to connect with the broader RTD transportation network, most visitors still connected to it with their personal vehicles. The coincidence of the system with Covid likely skews these numbers.

Key Considerations

These case studies demonstrate a range of responses to increased visitation along the Front Range, as land managers pursue the joint goal of enhancing visitor experiences while reducing the negative impacts of visitation on natural resources. Given the urgency of overcrowding and the complexity of visitor management, several categories of considerations have been pulled from these examples that are listed below and are more thoroughly detailed in the [Timed Entry System User's Guide](#).

1. Clarify your motivations and goals as a land manager in implementing a timed entry system.
2. Coordinate with partners who may be affected.
3. Plan for adaptability to changing conditions - environmental, social, economic, and political.
4. Design the system to match the needs of the location and its patterns of visitation.
5. Prepare policies and enforcement that will respond to visitors appropriately as they learn the new system.
6. Build and/or upgrade the infrastructure needed to manage the system effectively.
7. Plan for additional staff capacity and potential shifts in job duties to help the new system get off the ground.
8. Plan to engage the public with persuasive and educational messaging.
9. Monitor and evaluate the system in a way that will promote continuous improvement.
10. Plan for extra capacity of all types to negotiate the transition in the first season after roll-out.

While difficult to implement at first, there are already indications in the NoCo region that timed entry systems are helping to reduce user conflict, enhance visitor experience, and reduce damage to natural resources and infrastructure.

National Examples¹

Timed entry reservation systems are being implemented as a visitor management tool in other locations around the country, including:

- [Acadia National Park](#), Maine: Between mid-May and October, the park will require timed-entry reservations for visitors who wish to drive Cadillac Summit Road, the three-mile scenic route to the top of the park's highest peak. Thirty percent of the reservations will become available 90 days ahead of the arrival date, and the remainder will be released two days in advance. The fee is \$6 per vehicle.
- [Glacier National Park](#), Montana: From May 27 through Sept. 11, day-use visitors will need a \$2 per-vehicle ticket to access Going-to-the-Sun Road at the West Entrance, the new Camas Entrance and the St. Mary Entrance. (St. Mary opens closer to late June.) A

¹ List of national examples of timed entry reservation systems excerpted from "[National parks and forests bring back reservation systems to control crowds](#)" by Andrea Sachs in *The Washington Post*

separate pass is required to explore the North Fork area via the Polebridge Ranger Station. Tickets could become available as soon as March.

- [Muir Woods National Monument](#), California: The year-round [reservation system](#) for cars and shuttle bus passengers was established in 2018 to reduce traffic and noise in the old growth redwood grove. The parking pass starts at \$9 for a vehicle up to 17 feet long. The shuttle, which runs weekends and holidays, costs \$3.50 per person age 16 and older; all visitors must reserve a seat on the bus, which boards in nearby Mill Valley. Booking is available 90 days out, with a few spaces reserved for three days in advance.
- [Arches National Park](#), Utah: The park unveiled a pilot timed-entry system for visits from 6 a.m. to 5 p.m., April 3 through Oct. 3. The \$2 per-vehicle tickets will become available on the first day of the month for visits three months ahead. For example, tickets for April entries went on sale shortly after the New Year's holiday; the next date is Feb. 1 for May reservations. The last round will take place on July 1, for three days in October. The park will also release a handful of tickets the day before.
- [Shenandoah National Park](#), Virginia: To relieve congestion on trails to Old Rag Mountain, the park will test day-hike ticketing. Officials are hammering out the details, but the new system could go into effect in March and cap the number at 800 daily visitors.
- [Haleakala National Park](#), Hawaii: To greet the sunrise on Maui's highest peak, visitors arriving by car will need a reservation between 3 a.m. and 7 a.m. The Haleakala National Park Summit Sunrise reservation, which was introduced in 2017, is available up to 60 days in advance and is valid only for the booked day. The \$1 per-car permit also allows guests to park in the four sky-high lots — Summit, Haleakala Visitor Center, Kalahaku and Leleiwi — during the predawn hours. In the winter, the sun starts its ascent a few minutes shy of 7 a.m.
- [Zion National Park](#), Utah: Hikers headed to Angels Landing, the dramatic 1,488-foot-tall rock formation, will need a permit starting April 1. The park will distribute permits through seasonal and day-before online lotteries. The first seasonal lottery kicked off on Jan. 3 and will close on Jan. 20; the permit applies to hikes from April 1 to May 31. Lotteries for other periods are scheduled to open on April 1, July 1 and Oct. 1. The last-minute lottery runs from 12:01 a.m. to 3 p.m. Mountain time. Visitors pay \$6 per application (includes up to six people) to enter either lottery, plus \$3 per person if they nab a permit. The program is scheduled to run through at least February 2023. Visitors do not need a reservation to enter the park.
- [El Yunque National Forest](#), Puerto Rico: On Dec. 20, the tropical rainforest reinstated its \$2 per-vehicle ticketing system for La Mina Recreational Area, along Route 191. Visitors can choose morning (8 to 11 a.m.) or afternoon (11 a.m. to 2 p.m.) entry. Tickets are available 30 days in advance, in addition to a handful of passes released 24 hours beforehand.
- [Arapaho and Roosevelt National Forests](#), Colorado: The Mount Evans Recreation Area, which includes Mount Evans, a member of the 14ers club (peaks that are at least 14,000 feet tall), is closed for the season. When it reopens at the end of May or early June, visitors will need timed-entry reservations to access the highest paved road in North

America. Last year, the fee was \$15 per car, plus a \$2 reservation fee; the pass was valid for three days.

- [Red Rock Canyon National Conservation Area](#), Nevada: Through May 31, the Bureau of Land Management park about 17 miles west of the Las Vegas Strip will require timed-entry permits for the Red Rock Canyon Scenic Drive between 8 a.m. and 5 p.m. Book up to a month in advance or two days in advance. The day pass for the 13-mile drive costs \$15 per vehicle, plus a \$2 processing fee.
- [Gifford Pinchot National Forest](#), Washington state: After closing for more than a year because of the pandemic and a renovation project, the Ape Cave Interpretive Site reopened last May with a new feature: a timed-entry requirement. The \$2 per-car reservation covered visits from 9 a.m. to 5 p.m. during the attraction's tourist season, May 18 to Oct. 31. The booking was good for a two-hour adventure in the Lower or Upper Cave of the third-longest lava tube in North America. Officials are finalizing dates and details for this year.
- [Columbia River Gorge National Scenic Area](#), Oregon: The Multnomah Falls area, which includes the 1925 Multnomah Falls Lodge, hiking trails and the spring-fed water cascade, requires timed-entry tickets from late May through mid-September. The per-person pass costs \$1. Last season, tickets were released two weeks before and two days ahead of the arrival date.