



Understanding Visitors at Devil's Backbone Open Space

2020 Larimer County Visitor Use Study

Final Report
June 2023

Larimer County
Department of Natural Resources

Colorado State University
Human Dimensions of Natural Resources Department



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Executive Summary

Over the past decade, visitation at Larimer County’s Department of Natural Resources (LCDNR) open space and reservoir park properties has steadily increased with instances of visitor capacity being reached on sites especially near urban areas. The Department prioritized the need to better understand visitors and launched a visitor study in the fall of 2020 at the Devil’s Backbone Open Space (DBOS) near Loveland. Primary objectives of the study were to gain accurate visitor numbers as well as gather and collect data from visitors on a wide range of topics to help guide and inform the department’s management considerations.

Devil’s Backbone Open Space is located on the western edge of the City of Loveland and offers 17.25 miles of natural surface trails that connect to both Horsetooth Mountain Open Space and the City of Fort Collins Coyote Ridge Natural Area. This ~3,000-acre open space offers towering rock formations and long vistas of native shrublands and grasslands and is an extremely popular destination for hikers, mountain bikers, and equestrians. The property was selected because of increased episodes of high visitation, to coincide with a six-month electric motorized bike study, and to gather and collect baseline information for future comparisons. The study sought to estimate the total number of annual visitors using industry standard tools including vehicle counters and trail counters. The visitor survey objectives were to describe visitors in terms of their:

1. Demographic characteristics (e.g., sex, age, place of residence)
2. Prior visitation rates and trip characteristics (e.g., trip duration, activity participation, reasons for visiting)
3. Visitor satisfaction
4. E-bike familiarity and support
5. Perceived conflicts with other visitors
6. Perceived crowding

On-site exit surveys were conducted at DBOS from September to October 2020. The surveys were administered by county staff at two locations; the South Trailhead in west Loveland and the North Trailhead (Blue Sky) in Fort Collins. To achieve a random sampling of open space visitors, a stratified-cluster sampling method was used to determine the sampling proportions at each location during weekdays and weekends. Survey sessions at the South and North Trailheads were conducted in the morning, afternoon, and evening. CSU researchers are highly confident that the administration periods and shifts outlined in this report are consistent with the general patterns of visitors at DBOS. A total of 536 visitors completed the survey at DBOS; 416 at the South Trailhead and 120 at the North Trailhead. The survey results focus on indicators of standards of quality for visitor satisfaction, perceived conflict, and perceived crowding.

Key Findings

Estimated Annual Person Visits

- From August 2021 to July 2022, visitation to DBOS was estimated at 150,000-person visits.

Demographics

- The average DBOS visitor was 43.6 years old.
- The average South Trailhead visitor was slightly more likely to be female (51%) and self-identified as White (92%). The average North Trailhead visitor was more likely to be male (76%) and self-identified as White (93%).

Residency

- Fifty-eight percent (58%) of South Trailhead visitors were *residents* of Larimer County; 42% were non-residents. Eighty-two percent (82%) of North Trailhead visitors were *residents* of Larimer County; 18% were non-residents.
- The average length of residency in Larimer County by *residents* was 12 years at the South Trailhead and 16 years at the North Trailhead. Twenty-one (21%) of residents at the South Trailhead and (9%) at the North Trailhead had lived in Larimer County for one year or less.
- The top primary origin cities by *non-residents* at the South Trailhead included Greeley/Evans (69%), Longmont (18%), and Denver metro (13%); and at the North Trailhead included Greeley/Evans (67%) and the Denver metro area (33%).
- The top primary origin cities of *residents* at the South Trailhead included Loveland (59%), Fort Collins (36%), Berthoud (6%), and Windsor (2%); at the North Trailhead included Fort Collins (78%), Windsor (14%), Loveland (7%), and Berthoud (1%).

Visitation

- Visitors at the South Trailhead averaged 4.1 visits to DBOS in the past 12 months compared with 7.8 average visits at the North Trailhead.
- Sixty-one percent (61%) of *non-residents* and 23% of *residents* visited DBOS for the first time in the past 12 months.
- Twelve percent (12%) of visitors reported that they were **turned away** from visiting DBOS in the past 12 months because the parking lot was full.
- Fifty-eight percent (58%) of visitors at DBOS reported no change in visitation due to COVID-19. Twenty-two percent (22%) reported decreased visitation and 20% reported increased visitation. This response pattern did not differ by gender, age, primary residence, and survey location.

Checked Conditions

- Eighty-three percent (83%) of visitors **did not** utilize any online or social media platforms to check parking and trail conditions prior to their visit to DBOS. Of those that checked conditions, Larimer County's website was the most used source, followed by the COTREX App. Social media was the least utilized source to check conditions.

Group Characteristics

- Visitors at DBOS were more likely to visit with a group than solo. The average group size was 2.45 at the South Trailhead and 2.23 at the North Trailhead. At both trailheads, the number of children in attendance was less than 0.5 during the weekdays and weekends.

Reason for Visiting

- Exercise (59%) was the primary feature that attracted visitors to DBOS at both trailheads. Natural resource values and quality of trails were the other primary features that attracted visitors to the open space.

Activities

- Sixty percent (60%) of South Trailhead visitors listed hiking as their primary activity on the day they completed the survey compared to 10% at the North Trailhead. Mountain biking was listed as the primary activity by 77% of North Trailhead users and 17% of South Trailhead users. Thirteen percent (13%) listed walking dogs and trail running (7%) as their primary activity at the South Trailhead but not at the North Trailhead (0% and 13% respectively).

- At the South Trailhead, primary activities stayed relatively the same on weekdays and weekends.
- At the North Trailhead, there were significant changes in primary activities on weekdays and weekends. Mountain biking was the primary activity reported during the weekdays (91%) and weekends (68%). There was an increase in trail running as the primary activity during weekends (20%) compared to weekdays (2%). Hiking also increased to 12% during weekends compared to 7% on weekdays.
- Visitors use different trails at the south and tend to use multiple trails during their visits. At the South Trailhead, Wild Loop Trail (64%) and the Keyhole Trail (52%) were the most popular trails.

E-Bikes Familiarity and Support

- There was a significant difference regarding visitors' familiarity with e-bikes at the two trailheads. At the North Trailhead, over half of the visitors (57%) reported they were "moderately" to "extremely" familiar with e-bikes, compared to 26% of visitors at the South Trailhead.
- At both trailheads, approximately half of all visitors expressed opposition to e-bikes ranging from slightly opposed to strongly opposed. Thirty-four percent (34%) of North Trailhead visitors and 20% of South Trailhead visitors supported e-bikes on natural surface trails; responses ranged from slightly support to strongly support.

Visitor Satisfaction

- Based on previous meta-analyses, a satisfaction standard for Larimer County park and open space areas was set at 80% or more of visitors should be satisfied with their experience or the services they received.
- Ninety-nine percent (99%) of visitors rated their overall experience at Devil's Backbone Open Space as "good" or "excellent;" findings that exceed the satisfaction standard.

Perceived Conflict

- Interpersonal conflict occurs when the physical presence or behavior of an individual or group interferes with the goals of another individual or group. The literature suggests a standard of no more than 25% of visitors should feel interpersonal conflict.
- Results were within this standard. Seventeen percent (17%) of hikers and mountain bikers or less, indicated having interpersonal conflicts with other hikers and mountain bikers, such as acting unsafely or discourteous, at Devil's Backbone Open Space.

Perceived Crowding

- A comparative analysis of 59 different settings (parking areas, trail system, etc.) and activities (hiking, biking, etc.) suggested five distinct categories of standards for perceived crowding. When $\leq 35\%$ of the visitors feel crowded, density levels in the area are not a problem.
- In general, the 35% level of perceived crowding standard was met at Devil's Backbone Open Space. There were, however, several exceptions (see "Visitor Survey Conclusions"). Most notably, at the South Trailhead, 50% of visitors felt slightly to extremely crowded by other *hikers on the trail*. On weekends this percentage increased to 66%.