

IMPROVING TRANSPORTATION EFFICIENCY AND BUS RIDERSHIP



Capstone Project Executive Summary

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EXECUTIVE SUMMARY

Arapahoe Basin Ski Area is an industry leader in sustainable initiatives and best practices. As part of Arapahoe Basin's ongoing effort to become a more sustainable company, this report seeks to identify current transportation trends and to offer strategies and recommendations to improve transportation efficiency. One of seven primary goals from Sustainability Strategic Plan (2018), transportation efficiency, comprising higher weekend vehicle occupancy and higher bus ridership, will reduce greenhouse gas emissions and fossil fuel usage. Moving past sustainability goals, more efficient transportation will improve access to Arapahoe Basin for populations across the Front Range and Summit County who may not have access to an automobile. To accomplish the objective of improving transportation efficiency and bus ridership, I conducted a vehicle occupancy study, analyzed and compared Snowstang bus ridership data, researched electric vehicle literature, and conducted a transportation survey of frequent Arapahoe Basin visitors.

VEHICLE OCCUPANCY STUDY

There was a 0.32 rider per vehicle increase in vehicle occupancy since 2018. This 0.32 rider increase represents an 18% increase in weekend vehicle occupancy. The previous benchmark was 1.75 riders per vehicle. The new data demonstrates about 2.07 riders per vehicle. The sample size of three weekend, mid-season days is relatively small; however, the previous mark of 1.75 riders per vehicle was also measured on just three dates during a mandated employee carpooling program that included employee vehicles with at least three riders. A-Basin's goal of a 15% increase in vehicle occupancy by 2025 has likely been reached.

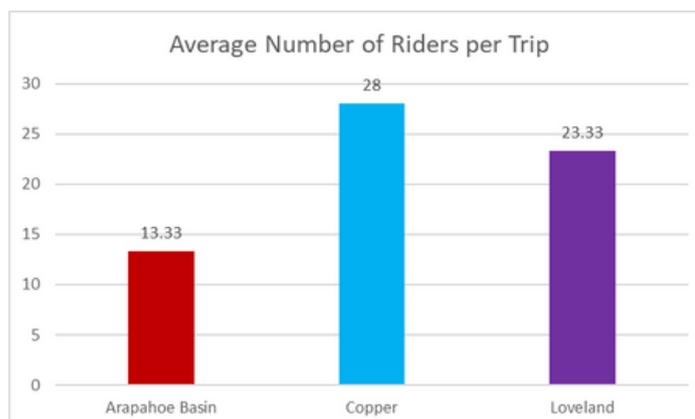
Recommendations for vehicle occupancy are:

- Frequent vehicle occupancy studies
- Collect mid-week vehicle occupancy data
- Strengthen incentives and information campaigns surrounding carpooling

BUS RIDERSHIP ANALYSIS

The Arapahoe Basin Snowstang line had the lowest ridership of the three roundtrip, weekend lines. The total ridership for the season up to April 10th was 46% of Copper's total ridership and 53% of Loveland's total ridership. The A-Basin Snowstang averaged about 13.3 riders per trip or 26% capacity. In comparison, Copper averaged about 28 riders per trip or 55% capacity and Loveland averaged about 23.3 riders or 47% capacity. There was little Summit Stage ridership data provided, but ridership data showed about 10 riders per hour, or 25% of the goal of 40 riders per hour. Recommendations to bolster Snowstang ridership:

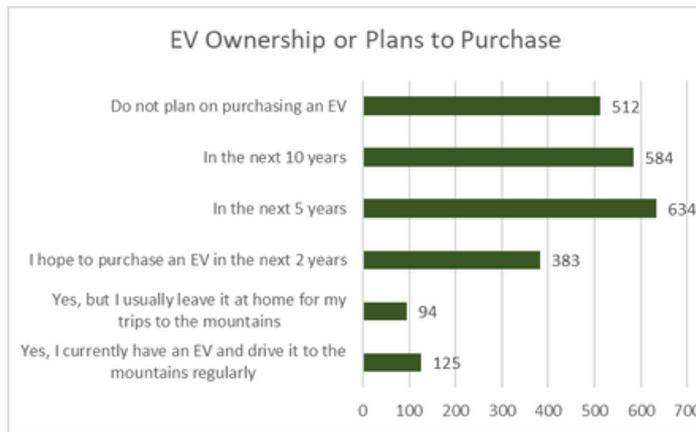
- Communicate with Copper and Loveland to find out if they have any partnerships or groups regularly using their Snowstang lines
- Consider forming their own partnerships with Denver or Golden-based community groups to increase Snowstang ridership



ELECTRIC VEHICLE LITERATURE

A-Basin has been very proactive with EV planning and infrastructure. There are currently 10 EV parking spots with level 2 charging. A-Basin successfully received grant funding from Xcel and the State of Colorado Energy Office. Two laws that apply to A-Basin include the ability to monitor the stations and make sure they are being used only for active charging with the option to issue citations if they are not being used only for active charging and the ability to resale energy for charging. Recommendations for EVs:

- Be proactive with grant funding for more EVSE.
- Plan on fleet electrification when it is economically feasible. With a resounding 78% of frequent A-Basin visitors hoping to own an EV within 10 years, planning to accommodate a rise in EV users will be beneficial



FREQUENT VISITOR SURVEY

The survey received 2,323 responses from a population of 73,200. The response rate for the survey was 3.2%. More than 40% of respondents cited a variety of inconvenience factors like frequency of service, distance from bus stops, and length of time of journey as preventing them from riding the bus to A-Basin. Cost and health and safety concerns were not as important in preventing frequent A-Basin visitors from riding the bus. Recommendations stemming from the transportation survey include:

- Designate areas in the upper lot or Early Risers lot as carpool only
- Share information about the advantages to riding the bus (environmental and other)
- Communicate with CDOT about survey responses
- Share information promoting bus safety (about 70% of respondents are aware of Snowstang).

