An Estimation of Visitor Use in Little Cottonwood, Big Cottonwood, and Millcreek Canyons

Prepared by:
Chase C. Lamborn M.S.
Steven W. Burr Ph.D.

Institute of Outdoor Recreation and Tourism
Utah State University
Logan, UT

February 29, 2016

Introduction

The following presents an estimation of annual visitor use in the Tri-Canyon area—Little Cottonwood, Big Cottonwood, and Millcreek Canyons—of the Central Wasatch Mountains. The methodology is also presented to show how the annual visitor use estimates were calculated. The materials used to generate the annual visitor use are as follows: vehicle traffic counts from the Utah Division of Transportation (UDOT), the average number of people per vehicle from the Central Wasatch Visitor Use Study, and ski area visitation numbers. Table 1 below presents the average number of people per vehicle by area.

Table 1: Average Number of People Per Vehicle by Area

Area	Average People Per Vehicle
Dispersed	
Little Cottonwood Dispersed	1.81
Big Cottonwood Dispersed	2.05
Millcreek Canyon Dispersed	1.71
Wasatch Back Dispersed	1.44
Resorts	
Brighton Ski Resort	2.79
Solitude Ski Resort	2.97
Alta Ski Resort	2.57
Snowbird Ski Resort	2.31

N = 2794

It is important to keep in mind that we were unable to accurately exclude non-recreational visitors from the dispersed use estimates in Little Cottonwood Canyon and Big Cottonwood Canyon. Therefore, the estimates for these two areas include non-recreational users. All other use estimates should closely represent the actual amount of use those areas receive.

Little Cottonwood Canyon Visitor Use Estimate

UDOT reports an average of 5,560 vehicles traveling up and down Little Cottonwood Canyon (LCC) per day in 2013. This number was divided by two to get the number of vehicles traveling in one direction. It was then multiplied by 365 to get the total number of vehicles entering LCC a year:

> (5,560 vehicles traveling up and down LCC / 2) = 2,780 vehicles entering LCC per day * 365 = 1,014,700 vehicles entering LCC in 2013

The Central Wasatch Visitor Use Study (CWVUS) found the average number of people per vehicle for non-resort users in LCC was 1.81, and the average number of people per vehicle for Alta Ski Resort was 2.57, and the average number of people per vehicle for Snowbird Ski Resort was 2.31. In addition, the CWVUS found that 69% of Alta visitors rode in a personal vehicle, and 74% of Snowbird visitors rode in a personal vehicle. In 2011/2012, Alta reported 364,090 skier days and Snowbird reported 418,100 skier days, which totals 782,190 skier days over the 2011/2012 season in LCC. With this information, we calculated the number of vehicles used to travel to the ski resorts:

> (364,090 skier days for Alta * .69 traveled in a personal vehicle) = 251,222 people drove to Alta to ski / 2.57 people per vehicle = 97,751 vehicles used to access Alta

(418,100 skier days for Snowbird * .74 traveled in a personal vehicle) = 309,394 people drove to Snowbird / 2.31 people per vehicle = 133,936 vehicles used to access Snowbird

97,751 vehicles used to access Alta + 133,936 vehicles used to access Snowbird = 231,687 vehicles used to access the LCC ski resorts

The number of vehicles used to access the LCC ski resorts was subtracted from the total number of vehicles entering LCC over a year:

1,014,700 vehicles entering LCC per year - 231,687 vehicles used to access LCC ski resorts = 783,013 non-resort user vehicles

The number of non-resort vehicles was then multiplied by the average number of people per vehicle to get the number of non-resort visitors:

783,013 non-resort user vehicles * 1.81 people per vehicle = 1,417,253 non-resort visitors in LCC per year

The number of resort visitors was then added to the number of non-resort visitors which given an approximation of the total number of people visiting LCC per year:

782,190 resort visitors + 1,417,253 non-resort visitors = 2,199,443 LCC visitors per year

This number does not account for the residents of Alta (approximate population of 400), ski resort personnel, and service vehicles that travel in and out of LCC. These people should be excluded from the recreational use estimate. A high estimate for non-recreational users in LCC would be around 200,000, which when subtracted from the use estimate calculated above equals around two million recreational visitors a year.

Big Cottonwood Canyon Visitor Use Estimate

UDOT reports 4,170 vehicles going into and coming out of Big Cottonwood Canyon (BCC) per day in 2013. This number was divided by two to get the number of vehicles entering BCC. It was then multiplied by 365 to get the number of vehicles entering BCC per year.

(4,170 vehicles traveling up and down BCC / 2) = 2,085 vehicles entering BCC per day * 365 = 761,025 vehicles entering BCC per year

The Central Wasatch Visitor Use Study found the average number of non-resort skier per vehicle was 2.05. The average number of people per vehicle traveling to Brighton Ski Resort was 2.79, and the average number of people per vehicle traveling to Solitude Ski Resort was 2.97. The CWVUS also found that 87% of both Brighton and Solitude users rode in a personal vehicle to access the ski resorts. Over the 2011/2012 ski season, Brighton reported 392,882 skier day and Solitude reported 180,103 skier days. The number of skier days was multiplied by the percent of people who rode in personal vehicles to access the resorts to get the number of people who drove to the resorts. The number of people who drove to the resorts was then divided by the average number of people per vehicle to get the number of vehicles traveling to the resorts.

(392,882 skier days for Brighton * .87 traveled in a personal vehicle) = 341,807 people drove to Brighton / 2.79 people per vehicle = 122,511 vehicles used to access Brighton

(180,103 skier days for Solitude * .87 traveled in a personal vehicle) = 156,689 people drove to Solitude / 2.97 people per vehicle = 52,757 vehicles used to access Solitude

122,511 vehicles used to access Brighton + 52,757 vehicles used to access Solitude = 175,268 vehicles used to access BCC ski resorts

The number of vehicles used to access the BCC ski resorts was subtracted from the total number of vehicles entering BCC over a year.

761,025 vehicles entering BCC per year - 175,268 vehicles used to access BCC ski resorts = 585,757 non-resort user vehicles

The number of non-resort user vehicles was then multiplied by the average number of people per vehicle for non-resort users.

585,757 non-resort user vehicles * 2.05 people per vehicle = 1,200,801 non-resort visitors in BCC per year

The number of non-resort visitors per year in BCC is then added to the number of ski resort visitors to get the total number of visitors is BCC per year.

1,200,801 non-resort visitors in BCC + 392,882 Brighton users + 180,103 Solitude users = 1,773,786 BCC visitors per year

Again, this number does not exclude ski resort personnel and people accessing home, unless those homes are “recreational properties” such as cabins.

Millcreek Canyon Visitor Use Estimate

UDOT does not collect traffic data in Millcreek Canyon. To get these data, a request to place a temporary traffic counter in the canyon was submitted by the District Ranger of the Salt Lake Ranger District, Catherine Kahlow. From this request, UDOT provided hourly traffic counts from 1/29/2015-3/2/2015 and 3/30/2015-5/28/2015, and with these counts we calculated an average of 852 cars entering Millcreek Canyon per day.

The data from the Central Wasatch Visitor Use Study showed the average number of people per vehicle for Millcreek Canyon was 1.71. With these two numbers, we calculated the number of people visiting Millcreek Canyon per day, and then multiplied that number by 365 to estimate annual use.

(852 vehicles enter MCC per day * 1.71 people per vehicle) = 1,456.92 people per day visiting MCC * 365 = 531,775 MCC visitors per year

Total use for Little Cottonwood Canyon, Big Cottonwood Canyon, and Millcreek Canyon

<u>Little Cottonwood Canyon Total Use</u>

1,417,253 non-resort visitors + 782,190 resort visitors = 2,199,443 LCC visitors per year

Big Cottonwood Canyon Total Use

1,200,801 non-resort visitors + 572,985 resort visitors = 1,773,786 BCC visitors per year

Millcreek Canyon Total Use

(852 vehicles enter MCC per day * 1.71 people per vehicle) = 1,456.92 people per day visiting MCC * 365 = 531,775 MCC visitors per year

Total Dispersed and Resort Use

1,417,253 non-resort visitors in LCC + 1,200,801 non-resort visitors in BCC + 531,775 MCC visitors = 3,149,829 dispersed users

782,190 LCC resort visitors + 572,985 BCC resort visitors = 1,335,175 resort users

Total Overall Use

2,199,443 LCC visitors per year + 1,773,786 BCC visitors per year + 531,775 MCC visitors per year = 4,505,004 total use for LCC, BCC, and MCC

Use Figures

Figure 1: Summary of Tri-Canyon Usage

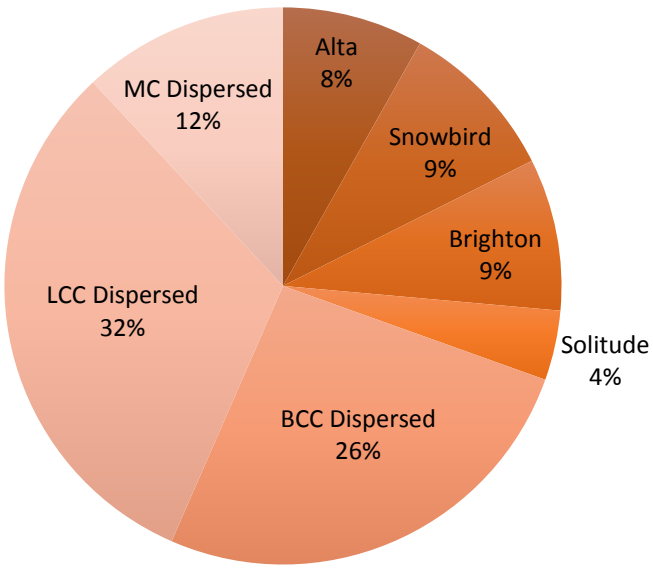

Figure 2: Percentage of Use by Canyon

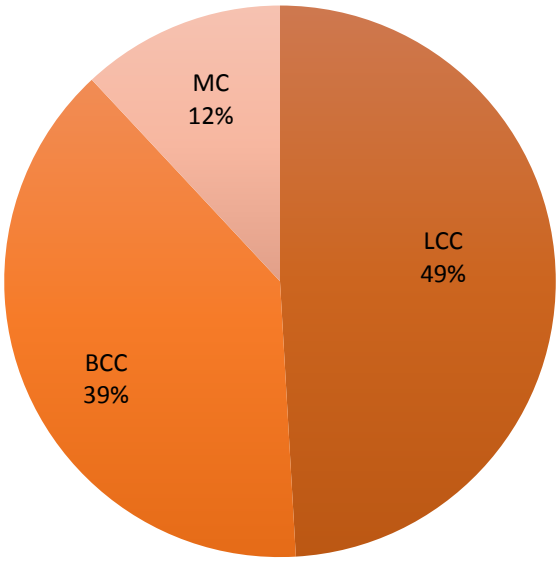

Figure 3: Percent of Dispersed and Resort Use