

2023 STUDY

Valdese Lakeside Park

Economic Impact

This report details visitation, economic impact and return on investment of amenities of Valdese Lakeside Park.

Key Stats

Projected Annual Economic Impact

\$1,242,309

Visits

375 Per Day

136,974 Per Year

Highest Day

660 People

Growing By

7.4% Every Month





EXECUTIVE SUMMARY

For several years, Friends of the Valdese Rec (FVR) board member Zakk Heile has collected scattered visitation numbers for various trails at Valdese Lakeside Park (VLP). As attendance started reaching shocking numbers, Zakk recommended getting complete visitation numbers and analyzing the economic impact of the park.

His timing could not have been better in a time when more grantors are asking for attendance numbers and economic impact results.

Concurrently, FVR President Beth Heile had been participating in two programs - Building Outdoor Communities (for Burke County) and Creating Outdoor Recreation Economies (for Valdese). Both stressed the need for economic impact results for outdoor attractions to access funding.

For most, the park story is about individuals and how they use the park to get healthy, destress, exercise their dog, socialize and have quality family time. For funders, it is more about the numbers. This report has plenty of numbers that detail visitation, the significant economic impact and the methodology used.



Friends of the Valdese Rec's mission in organizing was to acquire a 300 acre parcel on Lake Rhodhiss for a passive park. This report will show as more amenities were added and more events were hosted by FVR, attendance grew. Quick timeline of park additions:

- April 2015 - FVR Formed, fundraising started
- March 2018 - Land acquired, FVR marked and maintained existing ATV and sewer easement trails, created map
- July 2019 Kellex Picnic tables added
- April 2020 - Web App of Trail Map by FVR
- May 2020 - Trail to overlook completed by FVR volunteers
- October 2021 - 0.35 section trail off private land completed by FVR volunteers
- December 2021 - 1 mile outer loop built by FVR volunteers
- November 2021 - Parking, restrooms, greenway, overlook
- March 2022 - benches, tables, signage continue to be added
- May 2022 - Dog Park
- July 2022 - Suspension Bridge
- Aug 2022 - Obstacles and picnic table added to Dog Park
- October 2023 - Steps at McGalliard Falls Greenway
- December 2022 - Wildcat Way 0.5 mile by FVR volunteers
- March 2023 - McGalliard Falls side greenway improved
- March 2023 - Story Book Trail installed by FVR volunteers
- April 2023 - Valdese Lakeside Park greenway improved
- April 2023 - New 0.6-mile Lakeside Loop trail by FVR volunteers
- May 2023 - Kayak Launch Fishing Pier started

\$2.7M project so far - with \$960K from the community (individuals, businesses, foundations) and \$1.73M from government agencies (all state grants). Over 3500 FVR volunteer hours.



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ABOUT THE MODEL

This statistical model was designed to depict overall visitation numbers for every trail and amenity at Valdese Lakeside Park. Moving averages were also analyzed, as well as breakdowns by day and time.

Through a survey with over 500 responses, aspects including business impact, resident savings, and town revenue increases were modeled to show the economic impact the park brings to the town and its residents.

Reflecting on the impact and return on investment of amenities was a logical final step. Visitation estimates were created through a conglomerate of sources which were then used to calculate the impact of individual amenities.

PARK VISITATION

How were the visitation numbers collected?

Nine trail cameras were stationed simultaneously at various trails over the course of several months. Linear correlation coefficients were mapped between every possible combination of two trails to determine the best way to generate values for less important trails that could not have a camera stationed at them full time.

Understood trends were also considered. For instance, when the Greenway reopened, the Wilderness Trails saw a decline as the Greenway grew, so Wilderness Trails without a trail camera were correlated to the Wilderness Trail with the highest correlation, not the Greenway or Main Entrance.

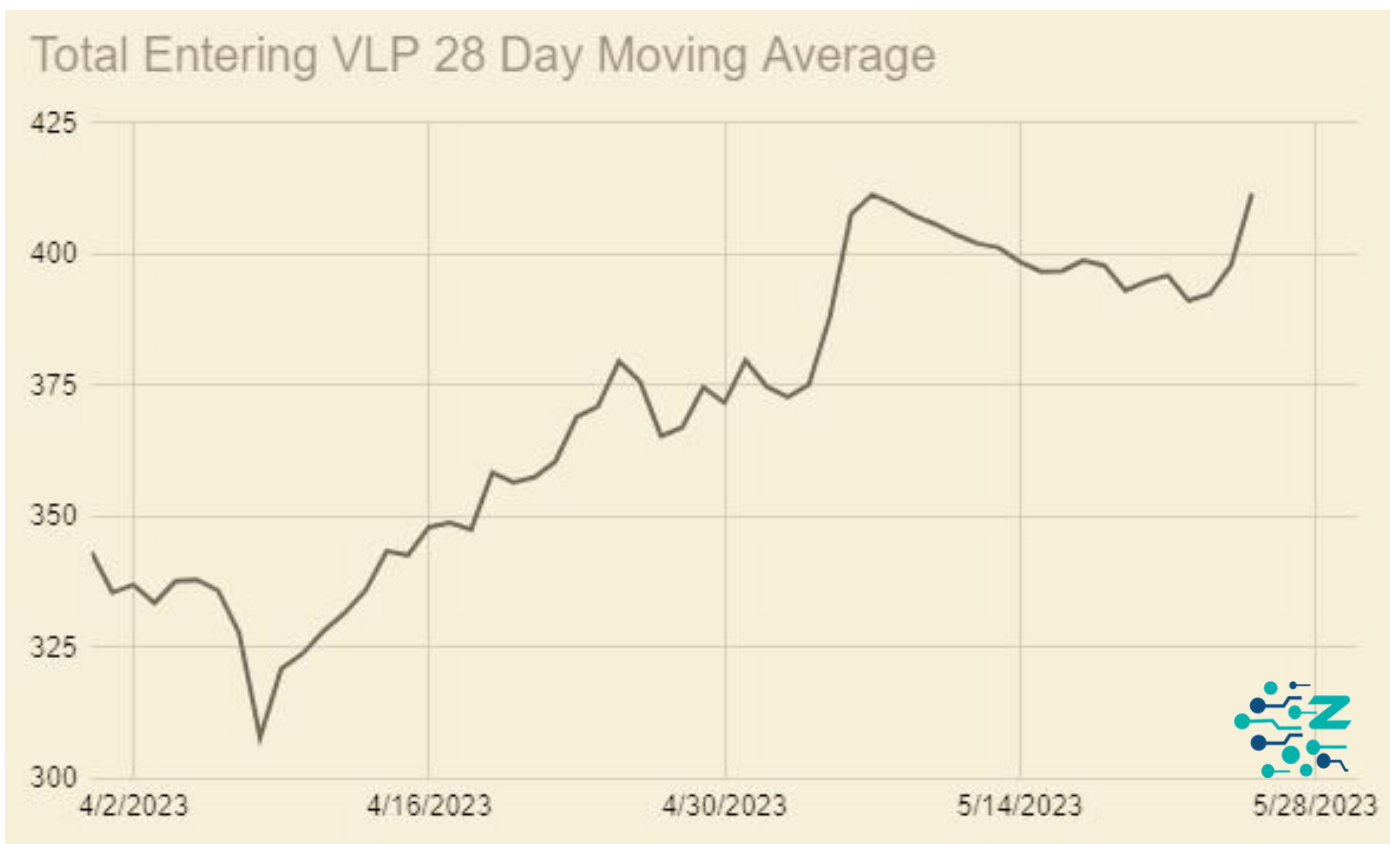
The Outer Loop was broken out into four sections to better map the change in traffic as well as to better map correlation coefficients. Outer Loop Section 1 is between the Open Green and Hoyle Creek Trail, Section 2 is between the Hoyle Creek Trail and Shade Seeker, Section 3 is between Tributary Trail and the Rostan Creek Trail, and Outer Loop Section 4 is between the two ends of the High Line Trail.

The Total Entering VLP quantity includes all trailheads of Valdese Lakeside Park (the Main Driveway Entrance, the McGalliard Falls Greenway, Hoyle Creek Trail at Lovelady Road, and Wildcat Way). In summing these values, they were adjusted by a proven multiple to account for those that hit multiple trailheads during their visit.



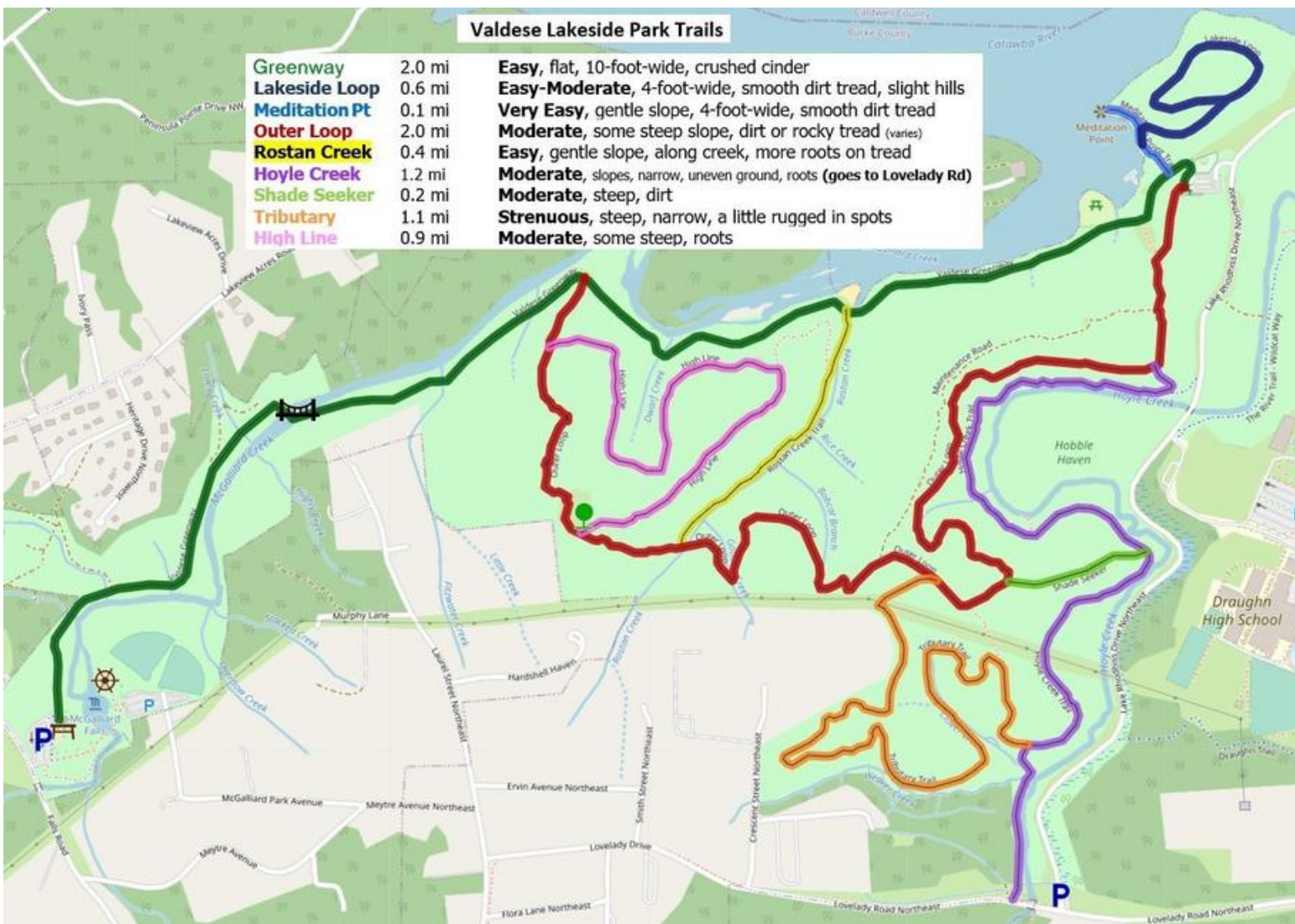
VISITATION GRAPHS

Below is the 28 Day Moving Average for the combination all VLP Trailheads. Each data point is an average of it and the 27 days prior (3/31 goes back to 3/4). This makes the data set appear far less volatile, as a day to day change can be -80% or +400%.



As you can see, VLP has been in a consistent uptrend this spring and **has averaged 412 people per day in the past 28 days.**

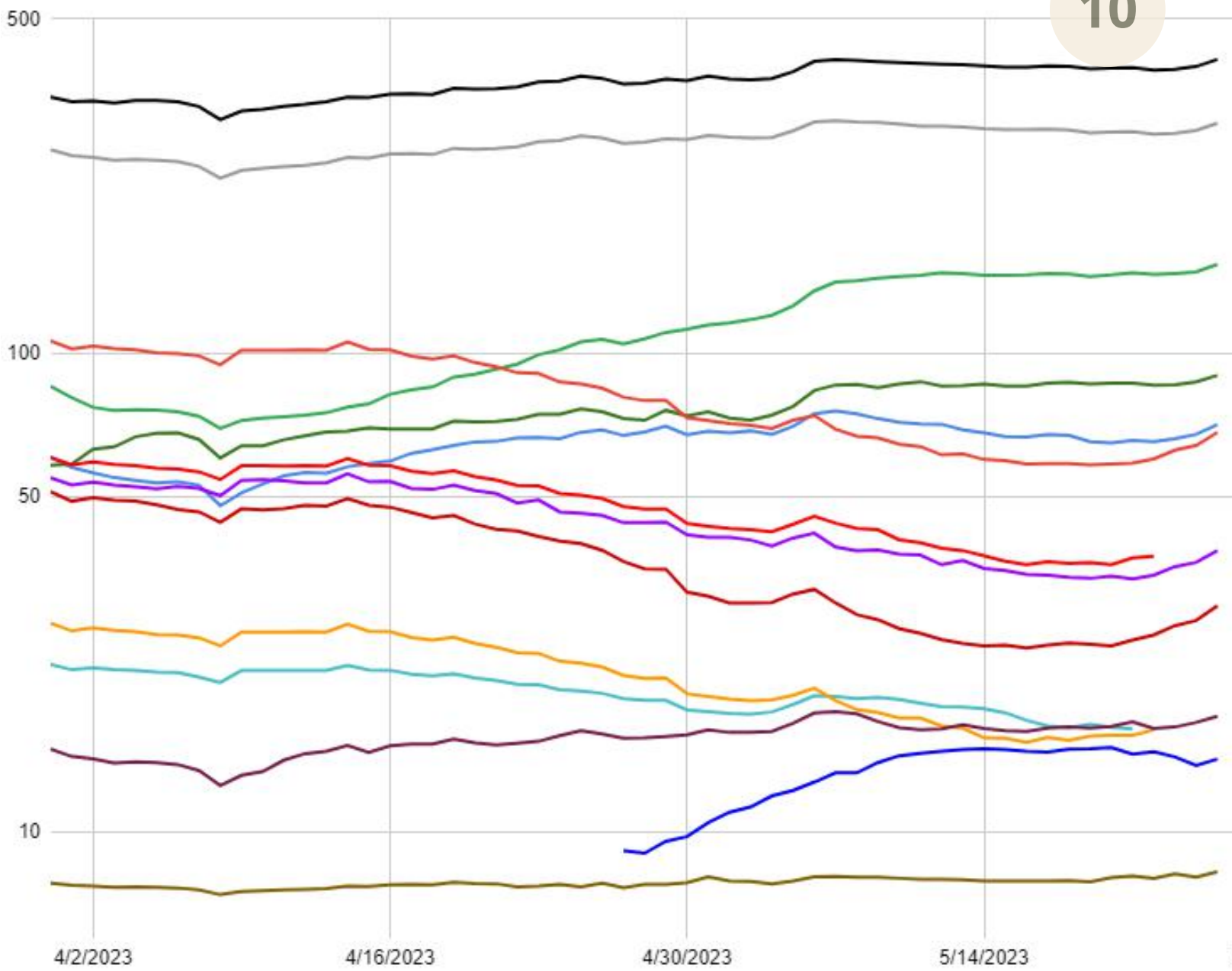
VLP TRAIL MAP



Valdese Lakeside Park is a 300+ acre forested property located just minutes from downtown Valdese. The 2-mile greenway connects McGalliard Falls Park and VLP with a 160-foot suspension bridge. Visitors can also enter the park from Lovelady Road.

Visitation Per Trail 28 Day Moving Average

10



- Total Entering VLP
- Valdese Lakeside Park Main Entrance
- Valdese Lakeside Park Greenway
- Meditation Point Trail
- McGalliard Greenway
- Outer Loop Section 1
- Outer Loop Section 2
- Hoyle Creek
- Lakeside Loop
- Shade Seeker
- Tributary Trail
- Outer Loop Section 3
- Wildcat Way
- Hoyle Creek Entrance



VISITATION BY DAY

Mondays	350
Tuesdays	383
Wednesdays	377
Thursdays	363
Fridays	277
Saturdays	369
Sundays	462

Though Sundays are the most populous, the first Sunday of the month is the strongest of those due to FVR hosting a group walk which has been ongoing since 2018.

FVR does promotions of the event on social media and a monthly newsletter that arrives just before the walk, which subliminally puts it in people's minds for the first Sunday.

The average of the first Sundays of the month is 604.



VISITATION BY TIME

	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
6:00 AM	3.4%	1.0%	1.2%	2.0%	2.7%	3.2%	3.3%
7:00	3.2%	4.1%	3.4%	2.8%	2.3%	5.0%	3.6%
8:00	5.7%	3.9%	6.2%	4.2%	7.9%	8.0%	4.5%
9:00	7.2%	3.8%	8.9%	6.2%	8.8%	8.2%	8.1%
10:00	9.4%	6.8%	8.0%	8.7%	10.6%	11.4%	10.7%
11:00	7.9%	7.7%	6.9%	12.6%	5.9%	9.0%	8.4%
12:00 PM	7.8%	7.0%	9.2%	6.2%	6.8%	7.7%	6.3%
1:00	8.5%	9.4%	10.7%	8.4%	9.5%	7.7%	10.1%
2:00	8.2%	9.1%	8.9%	8.4%	5.6%	7.4%	8.1%
3:00	9.7%	11.6%	7.8%	7.4%	5.0%	6.6%	9.6%
4:00	6.9%	11.5%	8.5%	6.4%	5.2%	4.8%	8.4%
5:00	6.8%	7.7%	4.6%	6.7%	10.1%	5.3%	5.7%
6:00	7.2%	6.8%	6.2%	6.9%	8.6%	5.6%	4.8%
7:00	5.0%	5.8%	5.9%	8.2%	6.8%	4.8%	6.0%
8:00	2.4%	3.3%	2.5%	3.5%	3.8%	4.5%	0.9%
9:00	0.6%	0.4%	1.1%	1.2%	0.7%	0.8%	1.8%

- Each column adds up to 100%.
- Peak times are the darker green.
- 10:00 AM is strong on most days.
- Fridays are the lowest visitation day and the time chart shows the loss is in the evening hours.



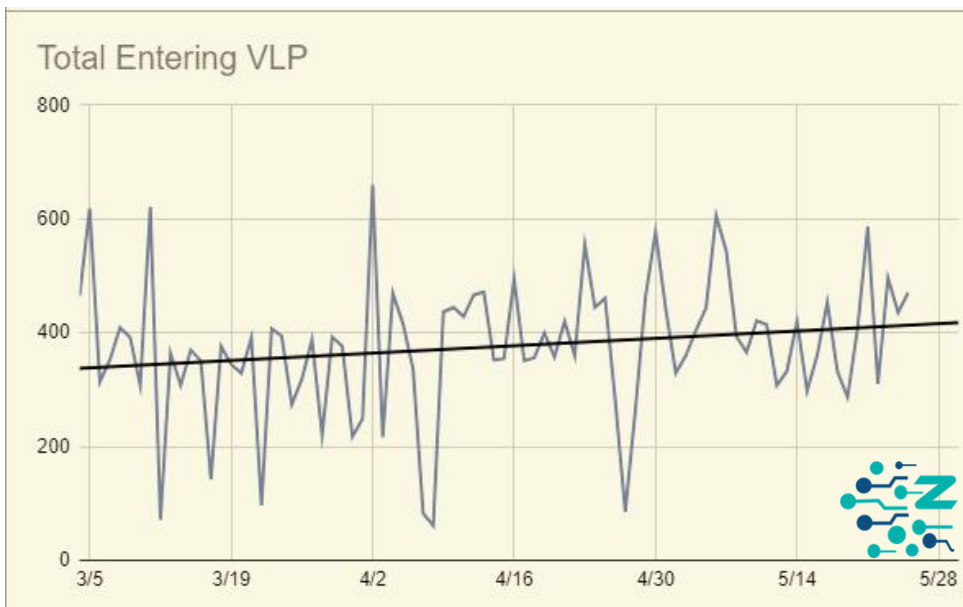
TRAIL CORRELATION

	VLP Main Entrance	VLP Greenway	Meditation Point Trail	McGalliard Greenway
VLP Main Entrance		0.86582	0.79690	0.61472
VLP Greenway	0.86582		0.84395	0.78893
Meditation Point Trail	0.79690	0.84395		0.48816
McGalliard Greenway	0.61472	0.78893	0.48816	
Outer Loop Section 1	0.61234	0.42490	0.58542	0.22217
Outer Loop Section 2	0.59953	0.43463	0.56493	0.20187
Hoyle Creek	0.55875	0.34420	0.54395	0.21787
Lakeside Loop	0.38718	0.26572	0.19897	0.31482
Shade Seeker	0.23954	0.42068	0.34900	0.45958
Tributary Trail	0.19913	0.21647	0.23594	0.23476
Outer Loop Section 3	0.73583	0.70916	0.72266	0.50316

The above shows the linear correlation coefficients between combinations of two trails. The linear correlation coefficient analyzes the strength of the relationship between two items, looking at how precise a linear regression line would be if each item was along one axis. For example, the greenway and the main entrance have a strong correlation and can be extrapolated based on a regression line with sufficient accuracy.

MONTHLY GROWTH RATES

The linear regression trendline below has a slope of 0.925 (visitors/day). In a month this would be 27.75 visitors. Dividing by the average number of visitors/day or 375 gives 7.4%.



Total Entering VLP	7.4%
Main Entrance	4.5%
Valdese Greenway	28.6%
McGalliard Greenway	20.7%
Lakeside Loop	50.5%

A Growth Rate for each trail was determined by taking the slope of the linear regression line (line of best fit) on the original data set. This resulted in a people/day ratio which is given as a monthly percent change or growth rate.



HISTORICAL DATA

Total Entering VLP Historical 28 Day Moving Average



Visitation numbers from past years were estimated through using pockets of trail camera data (adding up to six months in the past), Google Trends, Facebook Analytics, Apple Business Connect, and Strava Heatmap.



Economic Impact

What was measured?

Valdese Business Impact

- Food
- Gas
- Shopping

Town of Valdese Revenue Increase

- Sales Tax
- Property Tax

Valdese Resident Savings

- Healthcare Savings OR Driving Savings



METHODOLOGY

To map Economic Impact, FVR surveyed over 500 people with an in-person survey (300+ people) and an online survey (almost 200 people).

Participants were asked where they were from and how often they visited the park. In addition, they were asked how many times they eat, get gas, and shop solely because of their visit to the park.

Visitors were split into three geographic areas: Valdese, Other Burke County, and Out of County. The expected value of each trip was calculated for each person and averaged together in the geographic profiles. By splitting it out by each trip (knowing how many times people visit), the data were weighted by visits as opposed to by person because the average times for a data set with two data points: food consumption of someone that visits every day versus food consumption of someone that visits once should lean heavily to the more frequent visitor.

Only the in-person survey data were used to determine the proportion of each geography and weighted it by person. In effect, their responses were already weighted because we were far more likely to encounter someone that visits daily than someone that visits once a year.



Based on the in-person surveys,
park visitors are from

- Valdese: 32.7%**
- Other Burke County: 34.0%**
- Out of County: 33.3%**



the following responses were given when asked about spending in Valdese based solely on the park visit. The results combine both survey types (in-person and online). As an example, the chart is showing - From the Out of County visitors, 22.5% said they get food in Valdese solely because they were at the park.

	Food %	Gas %	Shopping %
Valdese	19.4%	13.1%	4.6%
Other Burke County	24.3%	16.7%	14.5%
Out of County	22.5%	18.1%	7.8%



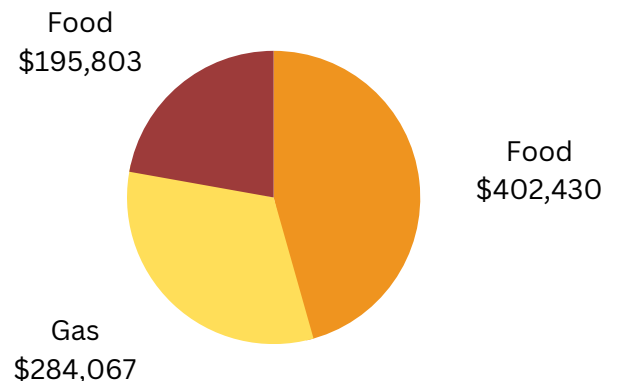
The food cost was estimated to be \$13.00 per person, Gas \$17.00 (\$42.50 total for an average of 2.5 people in a car), and Shopping \$21.00. Based on this, **spending profiles** were developed by taking the expected value of the average person's spending (adding each item's cost multiplied by the percent that do that item)

From	Spending/Visit
Valdese	\$5.23
Other Burke County	\$7.31
Out of County	\$6.75

The average visit by a person from ___ yields ___ in spending solely because of the park.

Breaking out by geographic location gives a far better extrapolation because of sampling bias in online surveying. One can find the total number of annual visitors in a geographic area by multiplying the total annual visitors by the proportion of visitors in that region. Multiplying this value by the average spending/visit gives the total annual spending in that region. Doing this for all other geographies and summing the results gives the total annual spending in Valdese due to VLP.

Spending in Valdese
due to VLP
\$882,300 Annually
\$2,417 per day





Town of Valdese Sales Tax

The Town of Valdese receives 0.11% of a transaction due to Sales Tax. Of the 6.75%, 4.75% goes to the State of North Carolina, with the county receiving 2% and dispersing it to the county and other municipalities based on population.

This is just the sales tax collected in Valdese, and there is a 15% premium added for those that transact outside of Valdese because of the park, which still increases Valdese Sales Tax.

The cost premium of driving to Valdese from Other Burke County and Out Of County is also added, and the savings from being in Valdese are subtracted. This gives the net sales tax from gas used because of the park.

0.11% of these transactions comes out to **\$2,329** in sales tax revenue for Valdese.

Town of Valdese Property Tax

Based on public studies, a conservative estimate is that the park increases the value of residential properties within 2000 feet of a trailhead by 2.5%.

GIS Data indicates that the value of parcels that meet those criteria is approximately \$16,394,436. The total property value increase due to the park is \$893,497.

With the property tax rate of 5.45%, this gives the Town of Valdese an additional \$22,337 in revenue.

Total Added Revenue: \$24,666



Valdeese Resident Savings

Prior to the park being open, residents of Valdeese had two options.

1. Drive farther to a park
2. Not visit any park

Whichever choice they made would cost them more, whether in having to spend more on healthcare (due to lack of exercise), or more on transportation costs (driving to a park in another town). Now, with the park being open, these act as savings for a resident.

Assumptions

It is assumed that the average Valdeese resident travels 3 miles each direction to reach the park.

Through averaging alternatives, it was assumed that they would have to travel 12 miles each direction to reach another place to exercise, giving a premium of 9 miles each way.

The cost of driving a mile (gas, wear and tear, etc) was taken to be the standard of 56.5 cents.

A function was created to model healthcare savings based on frequency of park visits was created based on national studies.



Healthcare Savings for Valdese Residents

Through online surveys (almost 200), it was estimated that there are 4133 unique visitors to the park every year. This was calculated through the annual number of visits divided by the average number of visits users gave in the online survey. Using the in-person surveys would be biased toward those that attend more frequently.

Summing the number of visits recorded by online surveys and dividing it by the total number of visits provided the survey scale relative to reality. The healthcare savings per Valdese Resident in the online survey were averaged, and multiplied by the scale factor to give an annual savings on healthcare saved by 1351 Valdese residents. A function was created to model the healthcare savings based on analyzing publications from the National Library of Medicine, ScienceDirect, and the National Institutes of Health.

The function returns no savings for less than 12 visits per year, \$909 in annual savings for those that visit once a week, \$1355 for those that visit twice a week, and \$2281 for those that visit every day.

Subtracting the cost of driving 3 miles in each direction for each user based on the 56.5 cent rate for each trip each Valdese Resident takes to the park better portrayed their real savings.

The annual healthcare savings for Valdese Residents equals \$540,593 (\$338 per person).



Driving Savings for Valdese Residents

If a resident wanted to exercise before the park existed, they had to drive. An estimate of 12 additional miles in each direction was used - a net distance of 9 miles.

Knowing the total number of visitors to VLP and what percentage are from Valdese gives the total number of times someone from Valdese visits the park. But, in fairness, we must divide this number by 2.5, an estimate of how many people are in a car. Multiplying this by the net cost per trip ($9 \times 2 \times 0.565$) gives us the total.

The annual driving savings for Valdese Residents equals \$247,378.

Averaging Healthcare and Transportation

From the in-person surveys, it was estimated 70% of people would commute somewhere else, and 30% were substantially less active than they are now.

A weighted average of healthcare and transportation yields the following:

	Amount Saved	Weight
Healthcare	\$540,593	30%
Transportation	\$247,378	70%

Total Valdese Resident Savings: \$335,343



Total Economic Impact Valdese Lakeside Park

Valdese Business Revenue Increase \$882,300

Town of Valdese Revenue Increase \$24,666

Valdese Resident Savings \$335,343

Total Economic Impact

\$1,242,309

136,974 Annual Visitors to Valdese
Lakeside Park



IMPACT OF AMENITIES

By averaging the visitation before and after the installation of an amenity, the return on investment based on economic impact can be calculated.

Land Acquisition

Yearly Visitor Increase: 23,250 (23,250 - 0 no park)

Estimated Annual Economic Impact Increase: \$201,866

10 Year Return on Investment: 55.05%

Phase 1 Construction

Yearly Visitor Increase: 33,361

Estimated Annual Economic Impact Increase: \$305,292

10 Year Return on Investment: 246.92%

Suspension Bridge

Yearly Visitor Increase: 30,384

Estimated Annual Economic Impact Increase: \$275,570

10 Year Return on Investment: 1212.24%

Greenway Upgrade

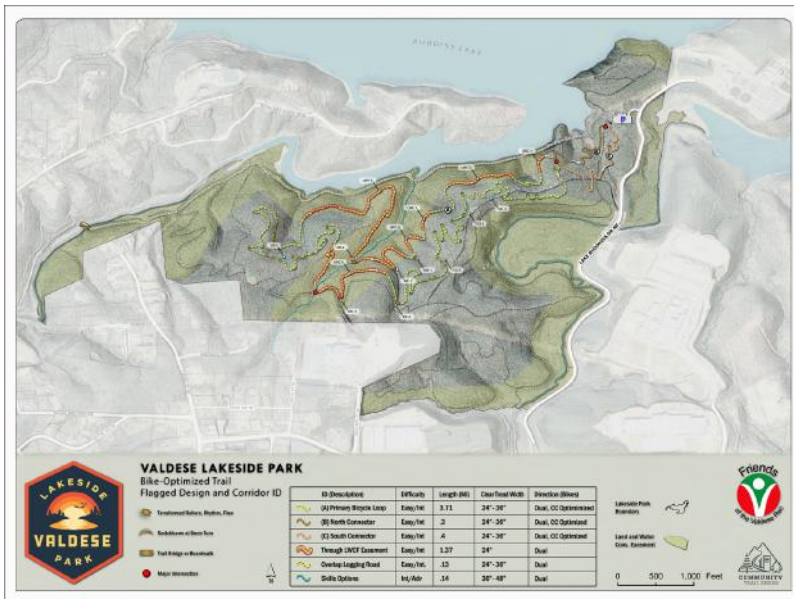
Yearly Visitor Increase: 15,306

Estimated Annual Economic Impact Increase: \$138,819

10 Year Return on Investment: 453.06%



PROPOSED AMENITIES



Mountain Biking 5-Mile Loop

Annual Visitor Increase
14,297

Annual Impact Increase
\$137,762

10 Year ROI: 456.61%



Pavilion Gathering Space

Annual Visitor Increase
12,158

Annual Impact Increase
\$130,948

10 Year ROI
469.34%

SUMMARY

Nine Trail Cameras and 507 Recorded Surveys brought to light the profound impact Valdese Lakeside Park has on the Valdese economy and the community.

Without such a park existing, local businesses would lose almost a million dollars annually in revenue and the local visitors would be facing hundreds of dollars in extra costs annually.

The model will continue to update estimated visitation even when only the main entrance camera is recording data. With that, the Economic and Amenity Impacts will automatically adjust.

The online survey is still open and any new responses will also be automatically pulled into the model.



THANKS

FVR is thankful to Zakk Heile for being able to present the story of Valdese Lakeside Park in numbers. Now, donors, grantors and investors will be gratified in knowing that in addition to improving the quality of life with outdoor recreational opportunities for Valdese residents, their contributions also bring significant economic benefits to Valdese businesses and residents. What a return on investment!

As always, many thanks to our friends. We have a strong community of champions (donors, volunteers, supporters), along with state grants, who made this park happen, and continue to help it improve.



\$2.7M project so far - with \$960K from the community (individuals, businesses, foundations) and \$1.73M from government (all state grants). And over 3500 volunteer hours.

136,974
Annual Visitors



\$1,242,309
Annual Impact

FriendsoftheValdeseRec.org