## $0 \%$ THRIVE

 Regional Partnership$\square$ THE UNIVERSITY OF TENNESSEE CHATTANOOGA

Preliminary Report

## Survey Sample Description (Non-random)

A total of 632 people responded to the survey, representing 17 activity groups. Nearly two-thirds of respondents were female (62\%) and the average age was 47 . Diversity of education and income was well-represented, but ethnic diversity was lacking, especially when compared to regional census data.


- Asian/Pacific Islander 0.5\% ■ Black 0\%
- Hispanic 1.1\%
- Native-American 0.6\%
- Other $1 \%$




## Recreation Participation

Popular activities included Hiking, Horseback Riding, Camping, Mountain Biking and Running. Of significant interest is the breakdown of primary and secondary activities. Flatwater paddling and camping, for instance, are more popular as secondary and tertiary activities. These may not be a primary pull factor for tourists, but they can prolong visits and encourage return visits. Horseback riders do not commonly participate in other outdoor activities, but hiking is enjoyed by all.
(Note: As this is not a random survey and not all user groups responded equally, user totals are less relevant than primary, secondary, and tertiary data).


## ACTIVITY CATEGORIES

To simplify the data, a factor analysis was conducted on the activities to see which ones "cluster" together (i.e. users participate in both). This provides insight into similarities in users across activity groups for collaboration, marketing, and recreation planning. The best grouping resulted in six categories, with clusters illustrated below (in blue). The new clusters were named based on the highest loading variable (column names). Some items (i.e. camping) were not unique across categories, and some loaded negatively (i.e. birding, horseback) within their clusters, meaning they are very different from the others in the cluster.

| Rotated Component Matrix ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Component |  |  |  |  |  |
| Activities | Runners | Hikers | Fishing | Cycling | ClimbWW | Specialized |
| RoadRun | 0.688 | -0.029 | -0.044 | 0.018 | -0.127 | 0.038 |
| TrailRun | 0.680 | 0.004 | -0.142 | -0.010 | 0.160 | -0.009 |
| Camping | -0.385 | -0.150 | -0.266 | 0.312 | -0.015 | 0.304 |
| Horseback | -0.224 | -0.819 | -0.094 | 0.124 | -0.224 | -0.160 |
| Hiking | -0.273 | 0.574 | -0.212 | 0.166 | -0.442 | 0.117 |
| Flatwater | -0.305 | 0.397 | -0.067 | -0.074 | 0.155 | -0.164 |
| Fishing | -0.059 | 0.076 | 0.788 | 0.041 | -0.019 | -0.014 |
| Hunting | -0.068 | -0.115 | 0.731 | 0.021 | -0.001 | 0.055 |
| Mtn Bike | -0.047 | 0.085 | -0.028 | -0.664 | 0.185 | -0.141 |
| Birding | 0.111 | 0.253 | 0.065 | 0.597 | 0.007 | -0.350 |
| Cycling | 0.239 | 0.215 | -0.016 | -0.505 | -0.289 | -0.045 |
| Whitewater | -0.125 | 0.026 | 0.007 | -0.033 | 0.719 | -0.105 |
| Climbing | 0.115 | 0.164 | -0.055 | 0.003 | 0.469 | 0.197 |
| Scuba | 0.039 | 0.065 | 0.048 | 0.110 | 0.116 | 0.643 |
| Caving | -0.009 | 0.016 | 0.002 | -0.076 | -0.071 | 0.634 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Items in the same column with scores higher than 0.300 are highly related to one another. Negative scores < - 0.3 ndicate significant differences from others in that column.

These clusters come as no surprise, but there are some interesting highlights. Horseback riders are unique from all other activities and don't often participate in other types of recreation. Climbers and whitewater kayakers may be similar user groups, as are the technical activities of scuba and caving, which require specialized equipment and access. Birders didn' $\dagger$ cluster well with any group, though they are closest to the hikers and flatwater paddlers.

## RESERVED FOR REGIONAL RECREATION DATA

## Group Size



ATV Birding Camp Cave Mtn Bike Cycle Fish Hike Horseback Hunt Flatwater Whitewater Climb RoadRun TrailRun Scuba Other

| Mean | 3.8 | 1.5 | 3.8 | 5.3 | 2.3 | 2.8 | 2.6 | 2.6 | 3.7 | 2.1 | 3.0 | 4.4 | 3.4 | 1.9 | 2.0 | 5.5 | 3.2 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| N | 9.0 | 18.0 | 71 | 3 | 65 | 49 | 21 | 174 | 84 | 15 | 56 | 23 | 31 | 22 | 63 | 2 | 30 |
| Std. <br> Dev | 1.6 | 0.5 | 1.9 | 1.2 | 1.0 | 1.8 | 1.4 | 1.3 | 1.6 | 1.0 | 1.6 | 1.5 | 1.3 | 1.8 | 1.2 | 2.1 | 1.8 |

## Group Composition

## Group composition can be as relevant as group size. Families with children require different accommodations than a group of individual adults. For recreational tourism, families tend to stay longer and spend more, as well.

|  | $\begin{gathered} \text { I go } \\ \text { alone } \end{gathered}$ | Friends | Family | Children | Other | Total N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ATV | 7\% | 47\% | 33\% | 7\% | 7\% | 15 |
| Birdwatching | 34\% | 21\% | 38\% | 7\% | 0\% | 29 |
| Camping | 6\% | 35\% | 40\% | 16\% | 3\% | 132 |
| Caving | 0\% | 44\% | 22\% | 22\% | 11\% | 9 |
| Mtn Bike | 24\% | 47\% | 23\% | 7\% | 0\% | 101 |
| Cycling (road) | 17\% | 43\% | 31\% | 5\% | 5\% | 65 |
| Fishing | 11\% | 31\% | 34\% | 17\% | 6\% | 35 |
| Hiking | 11\% | 36\% | 41\% | 11\% | 1\% | 259 |
| Horseback | 9\% | 54\% | 27\% | 9\% | 1\% | 135 |
| Hunting | 26\% | 26\% | 26\% | 19\% | 4\% | 27 |
| Flatwater | 7\% | 52\% | 33\% | 5\% | 3\% | 75 |
| Whitewater | 3\% | 54\% | 24\% | 11\% | 8\% | 37 |
| Climbing | 6\% | 50\% | 30\% | 14\% | 0\% | 50 |
| Road Running | 54\% | 38\% | 4\% | 4\% | 0\% | 26 |
| Trail Running | 35\% | 36\% | 22\% | 4\% | 2\% | 89 |
| Scuba | 0\% | 40\% | 40\% | 0\% | 20\% | 5 |
| Other | 14\% | 46\% | 28\% | 8\% | 4\% | 50 |

With Whom Do We Recreate?


## Annual (2019) User Days by Activity Type

Activities that are more accessible and require less specialized equipment (i.e. running, birding) are enjoyed more often by users.

Average Annual User Days Per Person


## Recreation Expendifures

Spending varies across user types, as some activities are more resource-intensive. Total expenditures here include only purchases made on a single, "typical" outing, so larger gear purchases are excluded. A conservative estimate can be provided by using the Median score for each participant, as the Mean is skewed by those who spend large amounts. These estimates are for annual spending per person, based on the average number of user days. Total users for each activity category remain unknown, so overall estimates are speculative.

Total Annual Expenditures per person x User Group (Median)


Potential Annual Expenditures per person x User Group (Mean)


|  | ATV | Birding | Camp | Cave | Mtn Bike | Cycle | Fish | Hike | Horseback | Hunt | Flatwater | Whitewater | Climb | RoadRun | TrailRun | Other |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Annual User Days | 16 | 69 | 27 | 28 | 48 | 62 | 31 | 40 | 81 | 23 | 21 | 43 | 39 | 123 | 56 | 46 |
| Mean Trip \$pp | 200 | 104 | 155 | 30 | 74 | 19 | 207 | 51 | 528 | 405 | 75 | 72 | 107 | 139 | 57 | 470 |
| Median Trip \$pp | 200 | 104 | 125 | 30 | 23 | 10 | 50 | 20 | 80 | 200 | 16 | 25 | 30 | 15 | 11 | 185 |
| Annual Median \$pp | 3180 | 7145 | 3348 | 840 | 1074 | 622 | 1548 | 797 | 6493 | 4600 | 330 | 1070 | 1165 | 1845 | 621 | 8516 |
| Annual Mean \$pp | 3180 | 7145 | 4151 | 840 | 3531 | 1158 | 6412 | 2040 | 42859 | 9315 | 1552 | 3080 | 4143 | 17036 | 3202 | 21635 |

## Full Expendifure Datia for all Catiegories ( $\mathrm{N}=239$ )



| Horseback |  |  | Hunting |  |  | Other |  |  | Flatwater |  |  | Whitewater |  |  | Climbing |  |  | Road Running |  |  | Trail Running |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Med an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an | Mean | Std. Dev | Medi an |
| 528 | 1143 | 80 | 405 | 524 | 200 | 470 | 694 | 185 | 75 | 115 | 16 | 72 | 151 | 25 | 107 | 163 | 30 | 139 | 349 | 15 | 57 | 113 | 11 | 220 | 671 | 30 |
| 356 | 1139 | 90 | 83 | 104 | 50 | 75 | 150 | 0 | 75 | 109 | 25 | 6 | 11 | 0 | 18 | 23 | 20 | 61 | 120 | 0 | 68 | 105 | 0 | 147 | 655 | 19 |
| 232 | 440 | 75 | 90 | 96 | 50 | 169 | 230 | 85 | 165 | 290 | 20 | 53 | 89 | 20 | 117 | 252 | 40 | 184 | 448 | 10 | 89 | 140 | 20 | 129 | 284 | 40 |
| 865 | 2373 | 50 | 175 | 282 | 25 | 67 | 115 | 0 | 46 | 86 | 10 | 169 | 503 | 0 | 66 | 162 | 0 | 23 | 49 | 0 | 61 | 105 | 28 | 313 | 1352 | 20 |
| 47 | 159 | 0 | 10 | 14 | 10 | 250 | 500 | 0 | 153 | 298 | 5 | 5 | 9 | 0 | 0 | 0 | 0 | 33 | 82 | 0 | 23 | 72 | 0 | 30 | 124 | 0 |

## Seasonal Recreation

Planning for seasonal recreation and tourism can maximize local impact and help accommodate various user groups. The Thrive region is largely a "shoulder season" destination, as Spring and Fall provide pleasant weather. However, watersports (paddling, scuba) are popular during the hot summer months, while hunting and climbing keep areas busy throughout the winter.


Overall Participation and Attendance aff events (2019)


## EVENT ATTENDANCE BY ACTIVITY

## EVENT ATTENDANCE/PARTICIPATION

- AttendEvents
- ParticipateEvents



## General site Preferences (All Users)



## Site Preference Catiegories

When Site Preference variables are clustered, we find four logical categories. Of interest is the negative relationship of Accessibility and Wilderness Feel, which requires a delicate balance when planning recreation sites.

| Rotated Component Matrix ${ }^{\text {a }}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Component |  |  |  |
|  | Convenience | Information | Family | Accessible |
| Restrooms | 0.824 | 0.183 | 0.015 | 0.089 |
| Changing Areas | 0.803 | -0.013 | 0.148 | 0.077 |
| Rangers | 0.765 | 0.201 | 0.101 | 0.046 |
| Lights | 0.751 | 0.261 | 0.088 | 0.051 |
| Water Source | 0.557 | 0.277 | 0.366 | -0.023 |
| Online Trail Info | 0.051 | 0.792 | 0.033 | -0.095 |
| Trail Markers | 0.208 | 0.741 | 0.024 | 0.091 |
| Directions to Site | 0.147 | 0.718 | 0.192 | 0.304 |
| Safe Parking | 0.226 | 0.620 | -0.025 | -0.124 |
| Site Maps \& Kiosks | 0.199 | 0.587 | 0.373 | 0.294 |
| Clean \& Maintained | 0.489 | 0.506 | 0.019 | -0.235 |
| Pet Friendly | 0.120 | 0.117 | 0.699 | 0.023 |
| Family Friendly | 0.231 | 0.057 | 0.613 | 0.082 |
| Camping | 0.188 | 0.358 | 0.610 | 0.201 |
| No Cost Activities | -0.061 | -0.124 | 0.494 | -0.131 |
| Accessibility | 0.075 | 0.102 | 0.210 | 0.695 |
| Wilderness Feel | -0.027 | 0.120 | 0.442 | -0.685 |



## SITES LIKELY TO RECEIVE TOURISM DOLLARS

Overall popular businesses would include local restaurants, affordable lodging, gear stores and natural grocers. Chain businesses are less appealing to all users. When viewed by activity category, divergent preferences emerge. Key users for each business type can be seen in the area map below

Overall Average


Likely Customers by Activity Category


