Missouri SCORP Professionals Survey

2013-2017 Statewide Comprehensive Outdoor Recreation Plan

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A 2011 survey of outdoor recreation professionals in the state of Missouri, conducted as part of the 2013-2017 Statewide Comprehensive Outdoor Recreation Plan (SCORP)

Executive Summary

This study of outdoor recreation trends and issues in the state of Missouri was commissioned by the Missouri Department of Natural Resources - Division of State Parks to fulfill the federal requirements for the 2012-2017 Statewide Comprehensive Outdoor Recreation Plan (SCORP). The SCORP is a five-year plan, for the years of 2013 through 2017, for meeting the recreational needs of the citizens of the State of Missouri.

The objectives of this study, conducted through a statewide telephone survey of outdoor recreation professionals and local communities, were to identify and assess critical issues, priorities and obstacles related to outdoor recreation facilities and activities in the state of Missouri; and to quantify and assess facility availability, demand and popularity; support components; needed improvements; and unmet recreational needs of various age groups, now and in the future.

This quantitative research study aims to:

- Collect pertinent information pertaining to outdoor recreation in the State of Missouri
- Provide recommendations for further action based on research findings

The key findings and recommendations of this study are:

- **Trails, Playgrounds** and **Multi-use fields** have shown the greatest increases in demand, are expected to grow in popularity and are in greatest need of improvement.
- **Picnic areas, gardens** and **soccer fields** also are increasing in popularity but are not in need of improvement.
- **Camping sites**, **outdoor basketball courts, historic/education sites**, **boating and water sport access sites**, **tennis courts** and **target shooting sites** need improvement but are not increasing as much in popularity.
- **Skate parks** and **dog parks** were most often mentioned as "other" outdoor recreation facilities in need of improvement.
- **Soccer fields** are increasing in popularity and are in greater demand than **baseball/softball fields, football fields**, **outdoor basketball courts**, **golf courses, tennis courts**, and **target shooting sites.**
- **Hunting sites**, **golf courses**, **volleyball courts**, **target shooting sites, tennis courts**, **and outdoor basketball courts**, and **fishing sites s**cored low on all demand and popularity measures.
- **13 to 18 year olds have the most unmet needs** because of the difficulty of getting and keeping them interested**.** Sports fields, water parks/pools and skateboard parks are the most popular activities among 13 to 18 year olds.
- **Trails** are by far the most popular outdoor recreation facility among adults, increasing in popularity as they age.
- **Public transportation** to outdoor recreation in Missouri is inadequate, scoring the lowest of all support-related components measured.
- **Handicapped accessibility** scored high in adequacy, following by **drinking water, restrooms** and **parking**.
- **Future funding** and **funding obstacles** are seen as the most critical issues facing outdoor recreation professionals, even greater among rural respondents.
- **Greatest obstacles** to outdoor recreation improvement include **lack of a consistent funding system**, **availability of future parkland**, **lack of education**, and **low priority/support for recreation.**
- **High priorities** include **education** and **increasing funding for maintenance and operations.**
- **Local crime** and **safety concerns** are not considered major obstacles to improving outdoor recreation in Missouri.

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Background and Research Objectives

Background: This study was conducted for the Missouri Department of Natural Resources, Division of State Parks (hereinafter referred to as the state agency), the agency responsible for the management of Missouri's state parks, to fulfill the federal requirements of the 2013-2017 Missouri SCORP.

The SCORP is a five-year plan, for the years of 2013 through 2017, for meeting the recreational needs of the citizens of the State of Missouri. One requirement of the 2013-2017 Missouri SCORP was to develop a survey of outdoor recreation professionals and providers in order to identity critical issues of statewide importance, and to identify trends and issues impacting the future of outdoor recreation in the State of Missouri.

The state agency contracted the joint venture team of Synergy Group/Pragmatic Research, Inc./James Pona Associates (hereinafter referred to as Synergy/PRI/JPA) to conduct a telephone study among recreation professionals and providers.

Research Problem: Identify critical issues and trends of statewide importance impacting the future of outdoor recreation in Missouri.

Research Objectives: The objectives of this study were to identify and assess critical issues, priorities and obstacles related to outdoor recreation facilities and activities in the state of Missouri; and to quantify and assess facility availability, demand and popularity; support components; needed improvements; and unmet recreational needs of various age groups, now and in the future. These objectives were addressed through eight research questions (tested through 18 survey questions) as outlined below:

- **Research Question 1:** *How available are different types of outdoor recreation facilities in Missouri?*
  - **Research Objectives:**
    - RO1.1 Determine the availability of local outdoor recreation facilities in Missouri.
    - RO1.2 Determine local demand for outdoor recreation facilities in Missouri.
- **Research Question 2:** *What types of outdoor recreation facilities in Missouri are in need of improvement?*
  - **Research Objectives:**
    - RO2.1 Determine the level of improvement needed for outdoor recreation facilities in Missouri.
- **Research Question 3:** *What types of outdoor recreation facilities and activities are popular in Missouri?*
  - **Research Objectives:**
    - RO3.1 Determine the popularity of local outdoor recreation facilities in Missouri over the past five years.
    - RO3.2 Determine the popularity of local outdoor recreation facilities in Missouri in the next five years.
    - RO3.3 Determine which outdoor recreation activities in Missouri are popular among different age ranges.
    - RO3.4 Determine which outdoor recreation activities in Missouri are popular among families
    - RO3.5 Determine the outdoor recreation activities in Missouri that are both popular and in need of improvement.
    - RO3.6 Determine any other outdoor recreation facilities or activities in Missouri that are popular.

- **Research Question 4:** *How adequate are local support components related to outdoor recreation in Missouri?*
    - **Research Objectives:**
        - RO4.1 Determine the adequacy of public restroom facilities related to outdoor recreation in Missouri.
        - RO4.2 Determine the adequacy of parking in relation to outdoor recreation in Missouri.
        - RO4.3 Determine the adequacy of handicap accessibility in relation to outdoor recreation in Missouri.
        - RO4.4 Determine the adequacy of drinking water facilities in relation to outdoor recreation in Missouri.
        - RO4.5 Determine the adequacy of public transportation to outdoor recreation facilities in Missouri.
        - RO4.6 Determine other potential inadequacies related to outdoor recreation facilities in Missouri.
- **Research Question 5:** *How large are outdoor recreation priorities in Missouri?*
    - **Research Objectives:**
        - RO5.1 Determine if increasing funding for outdoor recreation is a high priority in local communities.
        - RO5.2 Determine if maintenance of existing facilities is a high priority in local communities.
        - RO5.3 Determine if education is a high priority in local communities.
        - RO5.4 Determine if improving communication is a high priority in local communities.
        - RO5.5 Determine if improving marketing and public relations efforts are a high priority in local communities.
        - RO5.6 Determine if increased preservation effort is a high priority in local communities.
- **Research Question 6:** *How large are the obstacles to preventing improvements in outdoor recreation in Missouri?*
    - **Research Objectives:**
        - RO6.1 Determine if low priority/support is an obstacle to improving outdoor recreation in local communities.
        - RO6.2 Determine if funding issues are an obstacle to improving outdoor recreation in local communities.
        - RO6.3 Determine if outdoor recreation management is an obstacle to improving outdoor recreation in local communities.
        - RO6.4 Determine if safety is an obstacle to improving outdoor recreation in local communities.
        - RO6.5 Determine if land issues are an obstacle to improving outdoor recreation in local communities.
- **Research Question 7:** *How well are the outdoor recreation needs of various age groups being met?*
    - **Research Objectives:**
        - RO7.1 Determine how well current local outdoor recreation facilities meet the needs of 0 to 5 year olds.
        - RO7.2 Determine how well current local outdoor recreation facilities meet the needs of 6 to 12 year olds.

        - RO7.3 Determine how well current local outdoor recreation facilities meet the needs of 13 to 18 year olds.
        - RO7.4 Determine how well current local outdoor recreation facilities meet the needs of 19 to 34 year olds.
        - RO7.5 Determine how well current local outdoor recreation facilities meet the needs of 35 to 54 year olds.
        - RO7.6 Determine how well current local outdoor recreation facilities meet the needs of 55 years or older.
- **Research Question 8:** *Are there any critical, unidentified issues that impact outdoor recreation in Missouri, or other popular facilities or activities?*
    - **Research Objectives:**
        - RO8.1 Determine any other critical/important issues related to outdoor recreation in Missouri
        - RO8.2 Determine any other outdoor recreation facilities or activities that are popular in Missouri.

Methodology

This study was a conclusive, descriptive, and cross-sectional study conducted using a Computer Assisted Telephone (CATI) Survey. Qualified respondents included parks/outdoor recreation professionals and providers with the following titles: executive director, director, assistant director, deputy director, superintendent, supervisor, senior planner, planner, professor, and assistant professor.

The sample of professionals to be surveyed was provided by the state agency via mailing lists, which were merged and duplicates removed. Six databases were combined -- a Missouri State Parks Association Membership List (574 records), a Federal Agency Contact List (13 records), a SCORP contact list provided by the state agency (129 records), an RTP list related to SCORP (599 records), an MTRB nomination mailing list (25 records), and a Missouri SCORP Trail Advisory Board Member List (8 records), for a total of 1348 records.

The sample of 1,348 records was reviewed by the state agency and narrowed down to 602 unique, relevant records for calling.

Data Collection Instrument and Procedure

SYNERGY/PRI/JPA assisted the state agency in developing the survey instrument. SYNERGY/PRI/JPA programmed the survey to allow for CATI using Ci3 software. The survey was pre-tested among PRI's interview staff to make sure it was clear, easy to understand, flowed and skipped properly.

Of the 602 unique records, a total of n=151 completes were collected, for a response rate of 25.08%. Assuming a population size of 602, a 95% confidence level, and a worst-case 50% percentage, n=151 completes provides a confidence interval of 95% +/- 6.91%

Fieldwork started on May 23rd, 2011, and was finished on June 1st, 2011. 2,520 total telephone dialings were made in 147.00 total hours. Interviews lasted approximately 25.68 minutes on average, and interviewers made an average of 16.69 calls per every complete. On average, one interview was completed every 1.22 logon hours.

Tabulation and Data Analysis Techniques

The following statistical techniques were used to compile this report.

- **Descriptive Statistics:** Includes frequency distributions, means, variances, and other statistical measures. Used to describe the composition of the survey sample and provide preliminary data examinations.
- **One Sample T-Test:** Statistical test that compares the mean score or proportion in a sample to a known population value, e.g. is measure X equal to its known value in the general population? Is the proportion of males/females in the sample equal to the proportion of males/females in the general population?
    - Prior to testing, a level of confidence must be decided upon, typically either 90% or 95%, indicating a 90% or 95% chance that the population mean lies within the confidence interval determined by the sample (i.e. they are statistically equal at the given level of confidence).
    - The one sample t-test requires two mutually exclusive hypotheses to test.
        - H_0 is known as the Null Hypothesis and it assumes there is no statistically significant difference between the sample value and its known value (i.e. the sample mean or proportion and the known value in the general population are statistically equal, e.g. the ratio of males/females in a sample is <u>not</u> statistically significant from the ratio of males/females in the general population).
        - H_1 is known as the alternative hypothesis and it states that the difference between the sample variable and the known value is statistically significant (i.e. the two values are <u>not</u> statistically equal, e.g. sample ratio of males/females is <u>not</u> equal to the population ratio).

- One hypothesis will be rejected and the other will be accepted, depending on the result of the test.
- The result of this test includes a p-value (or sig, i.e. significance).
  - A p-value (or sig) less than 0.05 (p-value or sig < 0.05) indicates significance at the 95% level, i.e. there is a 95% chance that the mean of the two groups are significantly different (i.e. not the same), therefore H_0 (i.e. the values are the equal) is rejected and H_1 is accepted (i.e. the values are different).
  - A p-value less than 0.10 (p-value or sig < 0.10) indicates that the difference between the two groups is statistically significant at the 90% level and there is a 90% chance the true population mean does lies within the defined confidence interval (i.e. the two values are not equal), therefore H_0 (i.e. the measures is the same across both groups) is rejected and H_1 (i.e. the measure is not equal between the two groups) is accepted.
  - A p-value greater than 0.05 (at the 95% level) or greater than 0.10 (at the 90% level) indicate that the two means are not significantly different from each other (i.e. they are equal) at that level, and therefore H_1 (i.e. the groups are not equal) is rejected and H_0 (i.e. the groups are equal) is accepted.
- Dichotomous (i.e. values 1 or 0), mutually exclusive categorical measures (i.e. Yes=1/No=0, Male=0/Female=1) can also have their proportions tested against known population proportions (e.g. testing a sample's proportions of male/female against the known population ratio).

- **Independent Samples T-Test**: Statistical test to assess whether the means of two groups are statistically different, e.g. are males more, less, or equally satisfied compared to females? Is the popularity of X in urban areas greater, less then, or equal to the popularity of X in rural needs?
  - Prior to testing, a level of confidence must be decided upon, typically either 90% or 95%, indicating a 90% or 95% probability that the mean scores between the two groups are the same or different (i.e. they are statistically equal or not equal at the given level of confidence).
  - The independent samples t-test is like the one sample t-test in that it requires two mutually exclusive hypotheses to test, but it differs in that the one sample t-test tests against a known value while the independent samples t-test tests one measure between two groups (e.g. urban satisfaction vs. rural satisfaction) based on a dichotomous mutually exclusive variable from the sample (e.g. Yes/No, Male/Female).
  - The one independent samples t-test requires two mutually exclusive hypotheses to test.
    - H_0 is known as the Null Hypothesis and it assumes that there is no statistically significant difference between the two groups being tested (i.e. the values are statistically equal, e.g. no difference in X between urban and rural).
    - H_1 is known as the alternative hypothesis that the difference between the two values is statistically significant (i.e. the values are not the same, e.g. statistically significant difference in X between urban and rural).
  - One hypothesis will be rejected and the other will be accepted, depending on the result of the test.
  - The result of this test includes a p-value (or sig, i.e. significance).
    - A p-value (or sig) less than 0.05 (p-value or sig < 0.05) indicates significance at the 95% level, i.e. there is a 95% chance that the mean of the two groups are significantly different.
    - A p-value less than 0.10 (p-value or sig < 0.10) indicates that the difference between the two groups is statistically significant at the 90% level and that here is a 90% chance that the two mean values are significantly different, therefore H_0 (i.e. the groups are the equal) is rejected and H_1 (i.e. the groups are not equal) is accepted.
    - A p-value greater than 0.05 (at the 95% level) or greater than 0.10 (at the 90% level) indicate that the measure does not significantly differ between the two groups (i.e. the measure is statistically equal between the two groups at the given test/confidence level), and therefore H_1 (i.e. the groups are not equal) is rejected and H_0 (i.e. the groups are equal) is accepted.

    - Dichotomous, mutually exclusive categorical measures (i.e. Yes=1/No=0 or Male=0/Female=1) can also have their proportions tested against known population proportions (e.g. testing a sample's proportions of male/female among two different groups).
- **Paired Samples T-Test**: Statistical test to assess whether the means of paired variables in the sample are statistically different, e.g. is the popularity of X over the last five years the same as popularity of X in the next five years? Is the level of unmet needs among 19-34 year olds the same as the level of unmet needs among 35-54 year olds?
    - Prior to testing, a level of confidence must be decided upon, typically either 90% or 95%, indicating a 90% or 95% probability that the mean values between the two measures are the same (or different).
    - The paired samples t-test is also like the one sample t-test in that it requires two mutually exclusive hypotheses to test, but it differs in that the one sample t-test tests against a known value while the paired samples t-test tests two variables from the sample against each other.
    - The one sample t-test requires two mutually exclusive hypotheses to test.
        - H_0 is known as the Null Hypothesis and it assumes that there is no statistically significant difference between the two measures being tested (i.e. the means scores are statistically equal).
        - H_1 is known as the alternative hypothesis that the difference between the two values is statistically significant (i.e. the mean scores are <u>not</u> equal).
    - One hypothesis will be rejected and the other will be accepted, depending on the result of the test.
    - The result of this test includes a p-value (or sig, i.e. significance).
        - A p-value (or sig) less than 0.05 (p-value or sig < 0.05) indicates significance at the 95% level, i.e. there is a 95% chance that the means/proportions of the two variables are significantly different.
        - A p-value less than 0.10 (p-value or sig < 0.10) indicates that the difference between the two groups is statistically significant at the 90% level and that here is a 90% chance that the two mean values are significantly different, therefore H_0 (i.e. the groups are the same) is rejected and H_1 is accepted (i.e. the groups are different).
        - A p-value greater than 0.05 (at the 95% level) or greater than 0.10 (at the 90% level) indicate that the two means are not significantly different from each other (i.e. they are statistically equal at the given test level), and therefore H_1 (i.e. the groups are different) is rejected and H_0 (i.e. the groups are the same) is accepted.
- **Crosstab**: Cross-tabulations in order to examine frequencies of observations that belong to specific categories on more than one variable.
    - Independent samples t-tests are conducted among all crosstab columns and statistically significant differences (95%, p<0.05) are flagged in the table using capital letters

Detailed Results

A. Composition of the Sample

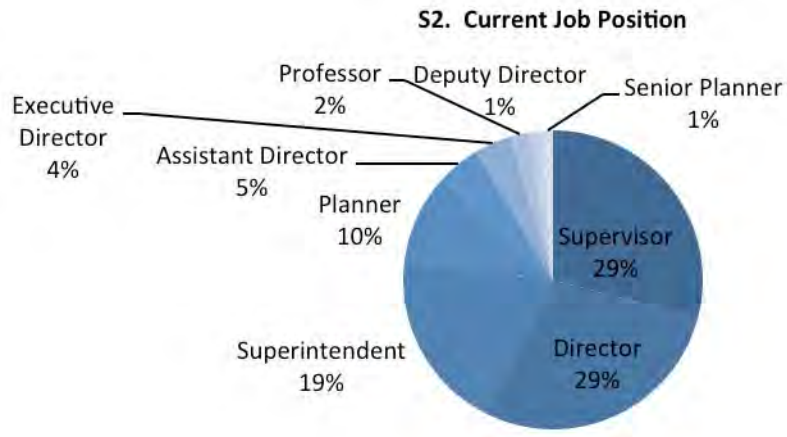
Respondents were asked their zip code and their current job position (Table 1a and Chart 1a).

- **Supervisors** comprised 29.1% (n=44) of the sample
- **Directors** comprised 28.5% (n=43) of the sample
- **Superintendents** comprised 19.2% (n=29) of the sample
- **Planners** comprised 9.9% (n=15) of the sample
- **Assistant Directors** comprised 4.6% (n=7) of the sample
- **Executive Directors** comprised 4.0% (n=6) of the sample
- **Professors** comprised 2.0% (n=3) of the sample
- **Deputy Directors** and **Senior Planners** each comprised 1.3% (n=2) of sample

Table 1a. S2. What is your current job position?

	Frequency	Percent
Executive Director	6	4.0%
Director	43	28.5%
Assistant Director	7	4.6%
Deputy Director	2	1.3%
Superintendent	29	19.2%
Supervisor	44	29.1%
Senior Planner	2	1.3%
Planner	15	9.9%
Professor	3	2.0%
Total	151	100.0%

Chart 1a.



Completes were tabulated per zip code (Table 1b) and sorted from highest number of completes to lowest.

Table 1b. Completes per Zip Code

	Frequency	Percent
64063	7	4.6%
63105	6	4.0%
65101	6	4.0%
65803	6	4.0%
64015	5	3.3%
63131	4	2.6%
65201	4	2.6%
65203	4	2.6%
63122	3	2.0%
63901	3	2.0%
64030	3	2.0%
64068	3	2.0%
64093	3	2.0%
65807	3	2.0%
63021	2	1.3%
63042	2	1.3%
63050	2	1.3%
63084	2	1.3%
63130	2	1.3%
63144	2	1.3%
63301	2	1.3%
63701	2	1.3%
64083	2	1.3%
64089	2	1.3%
64116	2	1.3%
64468	2	1.3%
64505	2	1.3%
65202	2	1.3%
65714	2	1.3%
61433	1	0.7%
63022	1	0.7%
63031	1	0.7%
63040	1	0.7%
63043	1	0.7%
63044	1	0.7%
63101	1	0.7%
63112	1	0.7%
63117	1	0.7%
63119	1	0.7%
63123	1	0.7%
63126	1	0.7%
63127	1	0.7%
63132	1	0.7%
63134	1	0.7%
63135	1	0.7%
63136	1	0.7%

Table 1b. Completes per Zip Code

	Frequency	Percent
63137	1	0.7%
63141	1	0.7%
63304	1	0.7%
63367	1	0.7%
63368	1	0.7%
63376	1	0.7%
63379	1	0.7%
63385	1	0.7%
63401	1	0.7%
63601	1	0.7%
63703	1	0.7%
63755	1	0.7%
63775	1	0.7%
63780	1	0.7%
63801	1	0.7%
63868	1	0.7%
64029	1	0.7%
64050	1	0.7%
64057	1	0.7%
64079	1	0.7%
64085	1	0.7%
64086	1	0.7%
64111	1	0.7%
64119	1	0.7%
64130	1	0.7%
64133	1	0.7%
64150	1	0.7%
64429	1	0.7%
64650	1	0.7%
64701	1	0.7%
65026	1	0.7%
65205	1	0.7%
65211	1	0.7%
65233	1	0.7%
65240	1	0.7%
65301	1	0.7%
65340	1	0.7%
65616	1	0.7%
65721	1	0.7%
65738	1	0.7%
65762	1	0.7%
65802	1	0.7%
65806	1	0.7%
65810	1	0.7%
Total	151	100.0%

Completes per county was calculated based on zip code (Table 1c).

Table 1c. Completes per County

	Frequency	Percent
St. Louis	38	25.2
Jackson	24	15.9
Greene	14	9.3
Boone	13	8.6
Clay	7	4.6
St. Charles	7	4.6
Cole	6	4
Cape Girardeau	4	2.6
Butler	3	2
Cass	3	2
Christian	3	2
Johnson	3	2
Buchanan	2	1.3
Franklin	2	1.3
Jefferson	2	1.3
Nodaway	2	1.3
Platte	2	1.3
Scott	2	1.3
Caldwell	1	0.7
Clinton/DeKalb	1	0.7
Cooper	1	0.7
Lincoln	1	0.7
Marion	1	0.7
Miller	1	0.7
New Madrid	1	0.7
Ozark	1	0.7
Perry	1	0.7
Pettis	1	0.7
Ray	1	0.7
Saline	1	0.7
St. Francois	1	0.7
St. Louis City	1	0.7
Total	151	100

Completes in urban vs. rural areas were computed based on zip code (Table 1d).

Table 1d. Urban or Rural by Zip Code (from 2000 census)

	Frequency	Percent
Rural	15	9.9
Urban	136	90.1
Total	151	100

Finally, completes per area code were computed based on contact phone number (Table 1e and Chart 1b).

Table 1e. Area Code (by telephone number)

			Frequency	Percent
Kansas City-West (816)			41	27.2
St. Louis-East (314)			34	22.5
Northeast-Central-Southeast (573)			33	21.9
Southwest (417)			18	11.9
East-Central (636)			17	11.3
Northwest (660)			8	5.3
Total	151	100		

Chart 1b.


MISSOURI
Area Code Map
N
Iowa
Lancaster
Nebraska
Trenton
Chillicothe
Paris
660
Excelsior Springs
816
Marshall
Columbia
636
314
Illinois
JEFFERSON CITY
Kansas
Camdenton
573
Park Hills
Eldorado Springs
417
Kentucky
Neosho
West Plains
Poplar Bluff
Branson
Alton
Oklahoma
Arkansas
0 50 mi
0 50 km
Tennessee
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B. RESEARCH QUESTIONS (RQ1 – RQ8)

1. Research Question 1 (RQ1)

- ***How available are different types of outdoor recreation facilities in Missouri?***

Research Objective 1.1 (RO1.1)

- **Determine the availability of local outdoor recreation facilities in Missouri.**

We asked respondents to rate outdoor recreation facilities in their communities by answering questions 1 through 4 of the survey (Q1. Need of Improvement, Q2. Local Demand, Q3. Popularity over the Last Five Years, and Q4. Popularity in the Next Five Years).

Respondents rated the Need of Improvement for local facilities, with a score of 1 being "No Need of Improvement and 5 being "Extreme Need of Improvement." If a facility is not available it was scored as a 9 and recoded as a missing value.

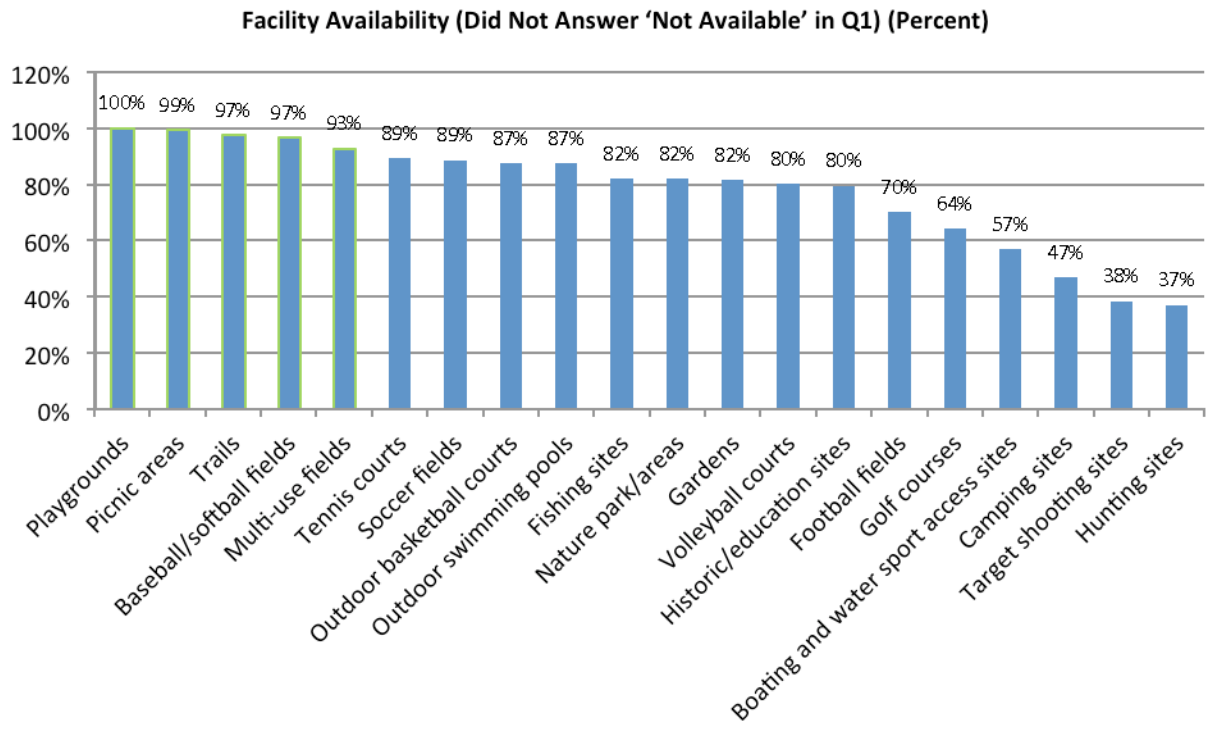
We determined Facility Availability by the percentage of respondents that did not answer 'Not Available' in Q1. Availability percentages were sorted from high to low (Table RO1.1a and Chart RO1.1a).

- **100%** of respondents (n=151) indicated the availability of **Playgrounds** (100%, n=151).
- Greater than **90%** (n=136) of respondents indicated the availability of **Picnic areas** (99.3%, n=150), **Trails** (97.4%, n=147), **Baseball/softball fields** (96.7%, n=146), and **Multi-use fields** (92.7%, n=140).
- Greater than **80%** of respondents indicated the availability of **Tennis courts** (89.4%, n=135), **Soccer fields** (88.7%, n=134), **Outdoor basketball courts** and **Outdoor swimming pools** (87.4%, n=132), **Fishing sites** and **Nature park/areas** (82.1%, n=124), **Gardens** (81.5%, n=123), and **Volleyball courts** (80.1%, n=121).
- Greater than **60%** of respondents indicated the availability of **Historic/education sites** (79.5%, n=120), **Football fields** (70.2%, n=106), and **Golf courses** (64.2%, n=97).
- Less than **60%** (n=86) of respondents indicated the availability of **Boating and water sport access sites** (57%, n=86), **Camping sites** (47%, n=71), **Target shooting sites** (38.4%, n=58), and **Hunting sites** (37.1%, n=56).

Table RO1.1a. Facility Available (Did Not Answer 'Not Available' in Q1) (Percent)

Facility Type	Available	**Percent**
Playgrounds	151	**100.0%**
Picnic areas	150	**99.3%**
Trails	147	**97.4%**
Baseball/softball fields	146	**96.7%**
Multi-use fields	140	**92.7%**
Tennis courts	135	**89.4%**
Soccer fields	134	**88.7%**
Outdoor basketball courts	132	**87.4%**
Outdoor swimming pools	132	**87.4%**
Fishing sites	124	**82.1%**
Nature park/areas	124	**82.1%**
Gardens	123	**81.5%**
Volleyball courts	121	**80.1%**
Historic/education sites	120	**79.5%**
Football fields	106	**70.2%**
Golf courses	97	**64.2%**
Boating and water sport access sites	86	**57.0%**
Camping sites	71	**47.0%**
Target shooting sites	58	**38.4%**
Hunting sites	56	**37.1%**

Chart RO1.1a.


Facility Availability (Did Not Answer 'Not Available' in Q1) (Percent)
120%
100%
80%
60%
40%
20%
0%
100%
99%
97%
97%
93%
89%
89%
87%
87%
82%
82%
82%
80%
80%
70%
64%
57%
47%
38%
37%
Playgrounds
Picnic areas
Trails
Baseball/softball fields
Multi-use fields
Tennis courts
Soccer fields
Outdoor basketball courts
Outdoor swimming pools
Fishing sites
Nature park/areas
Gardens
Volleyball courts
Historic/education sites
Football fields
Golf courses
Boating and water sport access sites
Camping sites
Target shooting sites
Hunting sites

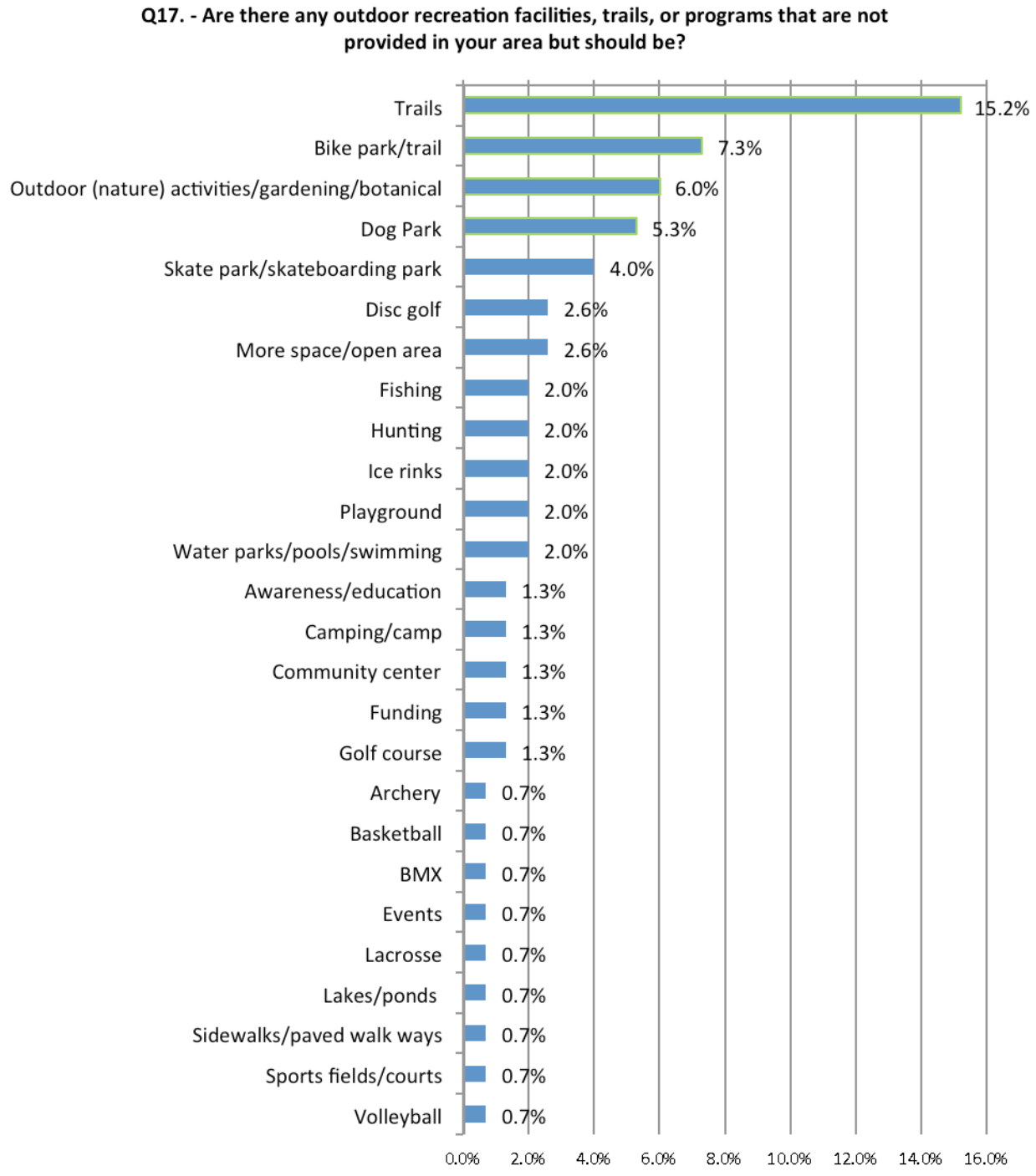
Respondents were asked, "Are there any outdoor recreation facilities, trails, or programs that are not provided in your area but should be?" Responses were coded, tallied, and sorted by count from high to low (Table RO1.1b and Chart RO1.1b).

- **Nothing** had the highest frequency with **51.7%** (n=78).
- **Trails** had the 2nd highest frequency **15.20%** (n=23).
- **Bike park/trail had** (7.30%, n=11), **Outdoor (nature) activities/gardening/botanical** (6.0%, n=9), and **Dog park** (5.3%, n=8) were all mentioned by at least **5%** of respondents.

Table RO1.1b. Q17 Frequencies - Are there any outdoor recreation facilities, trails, or programs that are not provided in your area but should be?

Code	Response	Responses		Percent of Cases
		N	Percent	
28	Trails	23	12.60%	15.20%
12	Bike park/trail	11	6.00%	7.30%
43	Outdoor (nature) activities/gardening/botanical	9	4.90%	6.00%
11	Dog park	8	4.40%	5.30%
10	Skate park/skateboarding park	6	3.30%	4.00%
14	Disc golf	4	2.20%	2.60%
23	More space/open area	4	2.20%	2.60%
101	Fishing	3	1.60%	2.00%
102	Hunting	3	1.60%	2.00%
26	Ice rinks	3	1.60%	2.00%
24	Playground	3	1.60%	2.00%
20	Water parks/pools/swimming	3	1.60%	2.00%
35	Awareness/education	2	1.10%	1.30%
41	Camping/camp	2	1.10%	1.30%
16	Community center	2	1.10%	1.30%
34	Funding	2	1.10%	1.30%
15	Golf course	2	1.10%	1.30%
45	Archery	1	0.50%	0.70%
33	Basketball	1	0.50%	0.70%
44	BMX	1	0.50%	0.70%
47	Events	1	0.50%	0.70%
46	Lacrosse	1	0.50%	0.70%
18	Lakes/ponds	1	0.50%	0.70%
49	Sidewalks/paved walk ways	1	0.50%	0.70%
21	Sports fields/courts	1	0.50%	0.70%
30	Volleyball	1	0.50%	0.70%
96	Nothing	78	42.90%	51.70%
99	Other	5	2.70%	3.30%
	Total	182	100.00%	120.50%

Chart RO1.1b.


Q17. - Are there any outdoor recreation facilities, trails, or programs that are not provided in your area but should be?
Trails 15.2%
Bike park/trail 7.3%
Outdoor (nature) activities/gardening/botanical 6.0%
Dog Park 5.3%
Skate park/skateboarding park 4.0%
Disc golf 2.6%
More space/open area 2.6%
Fishing 2.0%
Hunting 2.0%
Ice rinks 2.0%
Playground 2.0%
Water parks/pools/swimming 2.0%
Awareness/education 1.3%
Camping/camp 1.3%
Community center 1.3%
Funding 1.3%
Golf course 1.3%
Archery 0.7%
Basketball 0.7%
BMX 0.7%
Events 0.7%
Lacrosse 0.7%
Lakes/ponds 0.7%
Sidewalks/paved walk ways 0.7%
Sports fields/courts 0.7%
Volleyball 0.7%
0.0% 2.0% 4.0% 6.0% 8.0% 10.0% 12.0% 14.0% 16.0%

Research Objective 1.2 (RO1.2)

- **Determine local demand for outdoor recreation facilities in Missouri.**

All respondents were asked to rate the local demand of local facilities using an interval scale from -3 to 3, where -3 = "Demand much lower than supply," -2 = "Demand lower than supply," -1 = "Demand slightly lower than supply," 0 = "Demand is about right," 1 = "Demand slightly higher than supply," 2 = "Demand higher than supply," and 3 = "Demand much higher than supply". All respondents provided valid answers and there were no missing values.

Local Demand mean scores ($\bar{x}$) were computed for all facility types and sorted from high to low (Table RO1.2a and Chart RO1.2a). A mean score of 0 indicates that the supply currently matches the demand. A mean score above 0 indicates that demand is higher than what is currently being supplied. A negative score indicates that demand is lower than what is currently being supplied.

- **Trails** ($\bar{x}$ =1.69), **Playgrounds** ($\bar{x}$ =1.16), and **Multi-use fields** ($\bar{x}$ =1.11) had means between **1.0** (Slightly Higher) and **2.0** (Higher), indicating that demand is Slightly Higher to Higher than what is currently being supplied.
    - **Trails** had the smallest standard deviation at **1.266**, indicating lower variance for demand of **Trails.**
- **Picnic areas** ($\bar{x}$ =0.94), S**occer fields** ($\bar{x}$ =0.93), **Baseball/softball fields** ($\bar{x}$ =0.74), **Gardens** ($\bar{x}$ =0.72), **Nature park/areas** ($\bar{x}$ =0.60), **Fishing sites** ($\bar{x}$ =0.55), **Outdoor swimming pools** ($\bar{x}$ =0.49), **Football fields** ($\bar{x}$ =0.47), **Boating and water sport access sites** ($\bar{x}$ =0.29), **Camping sites** ($\bar{x}$ =0.23)**, Outdoor basketball courts** ($\bar{x}$ =0.22), **Historic education sites** and **Hunting sites** ($\bar{x}$ =0.21), **Tennis courts** ($\bar{x}$ =0.14), and **Target shooting sites** ($\bar{x}$ =0.01) all had mean scores above 0.0.
    - Of these, **Target shooting sites** had the smallest standard deviation at **1.046**, indicating lower variance for demand of **Target shooting sites**.
- **Golf courses** ($\bar{x}$ =-0.11) and **Volleyball courts** ($\bar{x}$ =-0.13) were the only two facility types with a negative mean, indicating that demand is slightly lower than what is currently being supplied.

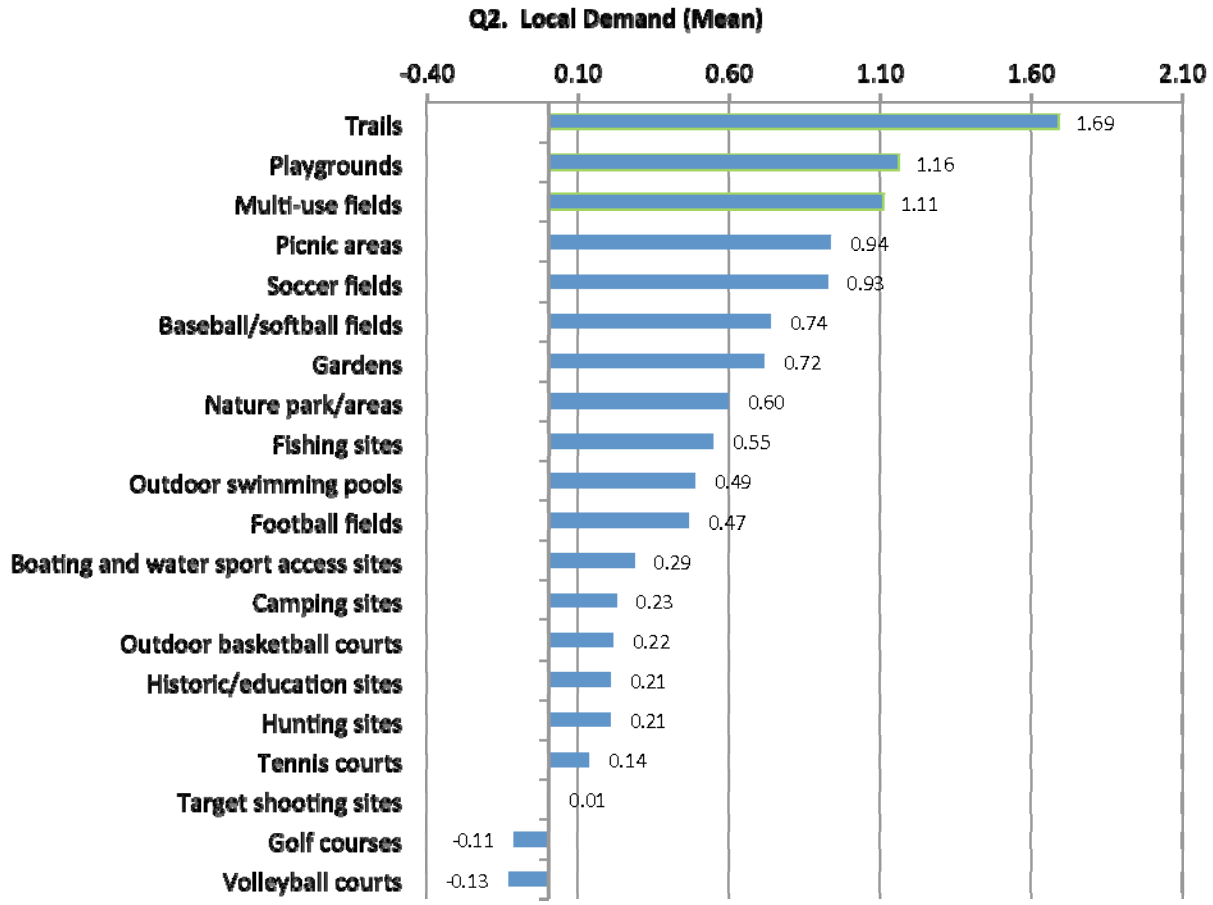
Table RO1.2a. Statistics – Q2. Local demand

Facility Type	N	**Mean**	Std. Deviation	Std. Error Mean
Trails	151	**1.69**	1.266	0.103
Playgrounds	151	**1.16**	1.312	0.107
Multi-use fields	151	**1.11**	1.438	0.117
Picnic areas	151	**0.94**	1.367	0.111
Soccer fields	151	**0.93**	1.374	0.112
Baseball/softball fields	151	**0.74**	1.408	0.115
Gardens	151	**0.72**	1.471	0.120
Nature park/areas	151	**0.60**	1.250	0.102
Fishing sites	151	**0.55**	1.300	0.106
Outdoor swimming pools	151	**0.49**	1.612	0.131
Football fields	151	**0.47**	1.451	0.118
Boating and water sport access sites	151	**0.29**	1.379	0.112
Camping sites	151	**0.23**	1.322	0.108
Outdoor basketball courts	151	**0.22**	1.395	0.114
Historic/education sites	151	**0.21**	1.179	0.096

Table RO1.2a. Statistics – Q2. Local demand

Facility Type	N	**Mean**	Std. Deviation	Std. Error Mean
Hunting sites	151	**0.21**	1.417	0.115
Tennis courts	151	**0.14**	1.291	0.105
Target shooting sites	151	**0.01**	1.046	0.085
Golf courses	151	**-0.11**	1.206	0.098
Volleyball courts	151	**-0.13**	1.365	0.111

Chart RO1.2a.



Frequencies and percentages were tallied for all respondents (Table RO1.2b).

- **Trails** was the only facility type that had a higher percentage of "Much Higher" responses than any other response, with **33.8%** (n=51) of respondents indicating that demand for trails is much higher than local supply.
- **Playgrounds** had an equal percentage of "Higher" responses as "About Right," with **26.5%** (n=40) respondents indicating that demand for playgrounds is either higher than local supply or about right.

Table RO1.2b. Q2. Local Demand – Frequencies

Facility Type	Much Lower	Lower	Slightly Lower	About Right	Slightly Higher	Higher	Much Higher
Baseball/softball fields	2% (3)	3.3% (5)	10.6% (16)	**30.5% (46)**	23.8% (36)	16.6% (25)	13.2% (20)
Outdoor basketball courts	5.3% (8)	4% (6)	12.6 (19)	**43.7% (66)**	18.5% (28)	7.9% (12)	7.9% (12)
Boating and water sport access sites	6.6% (10)	2% (3)	4.6% (7)	**54.3% (82)**	15.9% (24)	7.9% (12)	8.6% (13)
Camping sites	4% (6)	6% (9)	6% (9)	**55% (83)**	13.2% (20)	8.6% (13)	7.3% (11)
Fishing sites	2% (3)	2.6% (4)	6.6% (10)	**48.3% (73)**	20.5% (31)	7.3% (11)	12.6% (19)
Football fields	2% (3)	7.3% (11)	7.9% (12)	**45% (68)**	12.6% (19)	12.6% (19)	12.6% (19)
Gardens	2% (3)	5.3% (8)	5.3% (8)	**39.7% (60)**	20.5% (31)	8.6% (13)	18.5% (28)
Golf courses	6% (9)	6% (9)	10.6% (16)	**57.6% (87)**	13.9% (21)	2% (3)	4% (6)
Historic/education sites	3.3% (5)	4.6% (7)	7.9% (12)	**51.7% (78)**	21.2% (32)	7.3% (11)	4% (6)
Hunting sites	6% (9)	4% (6)	4.6% (7)	**61.6% (93)**	7.3% (11)	5.3% (8)	11.3% (17)
Multi-use fields	2% (3)	2% (3)	4% (6)	**31.1% (47)**	20.5% (31)	17.2% (26)	23.2% (35)
Picnic areas	0% (0)	4% (6)	7.9% (12)	**31.8% (48)**	19.2% (29)	20.5% (31)	16.6% (25)
Playgrounds	1.3% (2)	1.3% (2)	4.6% (7)	**26.5% (40)**	22.5% (34)	**26.5% (40)**	17.2% (26)
Soccer fields	1.3% (2)	2.6% (4)	5.3% (8)	**35.1% (53)**	20.5% (31)	17.9% (27)	17.2% (26)
Outdoor swimming pools	7.3% (11)	4% (6)	6.6% (10)	**37.7% (57)**	16.6% (25)	14.6% (22)	13.2% (20)
Tennis courts	3.3% (5)	7.3% (11)	11.9% (18)	**46.4% (70)**	15.9% (24)	11.3% (17)	4% (6)
Trails	0.7% (1)	0.7% (1)	3.3% (5)	14.6% (22)	19.9% (30)	27.2% (41)	**33.8% (51)**
Volleyball courts	6% (9)	9.3% (14)	16.6% (25)	**43.7% (66)**	13.9% (21)	6% (9)	4.6% (7)
Target shooting sites	4.6% (7)	2.6% (4)	6% (9)	**69.5% (105)**	10.6% (16)	4% (6)	2.6% (4)
Nature park/areas	0.7% (1)	4% (6)	6.6% (10)	**46.4% (70)**	17.9% (27)	15.2% (23)	9.3% (14)

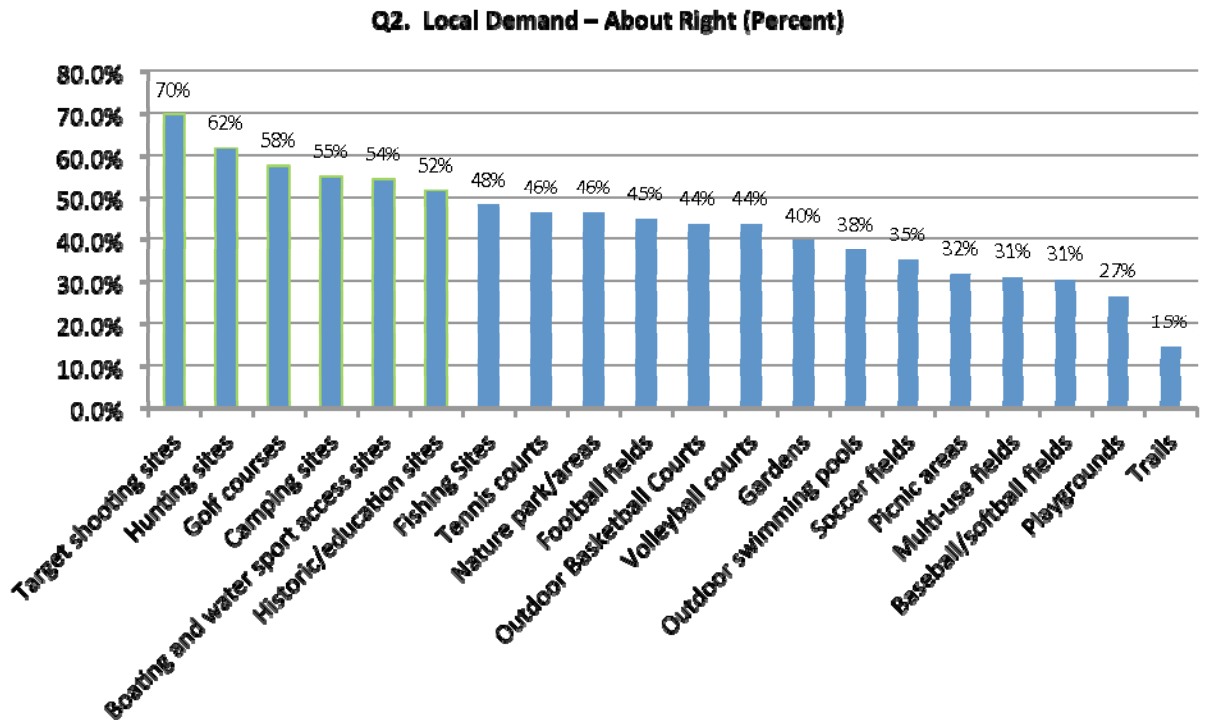
Local Demand frequencies were sorted by the percentage of responses indicating “About Right” and sorted from high to low (Table RO1.2c and Chart RO1.2b).

- **Target shooting sites** (69.5%, n=105), **Hunting sites** (61.2%, n=93), **Golf courses** (57.6%, n=87), **Camping sites** (55%, n=83), **Boating and water access sites** (54.3%, n=82), and **Historic/education sites** (52%, n=78) all had **50%** or more "About Right" responses, indicating that local supply meets demand for those facility types.

Table RO1.2c. Q2. Local Demand – Frequencies – Demand About Right

Facility Type	Much Lower	Lower	Slightly Lower	**About Right**	Slightly Higher	Higher	Much Higher
Target shooting sites	4.6% (7)	2.6% (4)	6% (9)	**69.5% (105)**	10.6% (16)	4% (6)	2.6% (4)
Hunting sites	6% (9)	4% (6)	4.6% (7)	**61.6% (93)**	7.3% (11)	5.3% (8)	11.3% (17)
Golf courses	6% (9)	6% (9)	10.6% (16)	**57.6% (87)**	13.9% (21)	2% (3)	4% (6)
Camping sites	4% (6)	6% (9)	6% (9)	**55% (83)**	13.2% (20)	8.6% (13)	7.3% (11)
Boating and water sport access sites	6.6% (10)	2% (3)	4.6% (7)	**54.3% (82)**	15.9% (24)	7.9% (12)	8.6% (13)
Historic/education sites	3.3% (5)	4.6% (7)	7.9% (12)	**51.7% (78)**	21.2% (32)	7.3% (11)	4% (6)
Fishing Sites	2% (3)	2.6% (4)	6.6% (10)	**48.3% (73)**	20.5% (31)	7.3% (11)	12.6% (19)
Tennis courts	3.3% (5)	7.3% (11)	11.9% (18)	**46.4% (70)**	15.9% (24)	11.3% (17)	4% (6)
Nature park/areas	0.7% (1)	4% (6)	6.6% (10)	**46.4% (70)**	17.9% (27)	15.2% (23)	9.3% (14)
Football fields	2% (3)	7.3% (11)	7.9% (12)	**45% (68)**	12.6% (19)	12.6% (19)	12.6% (19)
Outdoor Basketball Courts	5.3% (8)	4% (6)	12.6% (19)	**43.7% (66)**	18.5% (28)	7.9% (12)	7.9% (12)
Volleyball courts	6% (9)	9.3% (14)	16.6% (25)	**43.7% (66)**	13.9% (21)	6% (9)	4.6% (7)
Gardens	2% (3)	5.3% (8)	5.3% (8)	**39.7% (60)**	20.5% (31)	8.6% (13)	18.5% (28)
Outdoor swimming pools	7.3% (11)	4% (6)	6.6% (10)	**37.7% (57)**	16.6% (25)	14.6% (22)	13.2% (20)
Soccer fields	1.3% (2)	2.6% (4)	5.3% (8)	**35.1% (53)**	20.5% (31)	17.9% (27)	17.2% (26)
Picnic areas	0% (0)	4% (6)	7.9% (12)	**31.8% (48)**	19.2% (29)	20.5% (31)	16.6% (25)
Multi-use fields	2% (3)	2% (3)	4% (6)	**31.1% (47)**	20.5% (31)	17.2% (26)	23.2% (35)
Baseball/softball fields	2% (3)	3.3% (5)	10.6% (16)	**30.5% (46)**	23.8% (36)	16.6% (25)	13.2% (20)
Playgrounds	1.3% (2)	1.3% (2)	4.6% (7)	**26.5% (40)**	22.5% (34)	26.5% (40)	17.2% (26)
Trails	0.7% (1)	0.7% (1)	3.3% (5)	**14.6% (22)**	19.9% (30)	27.2% (41)	33.8% (51)

Chart RO1.2b.



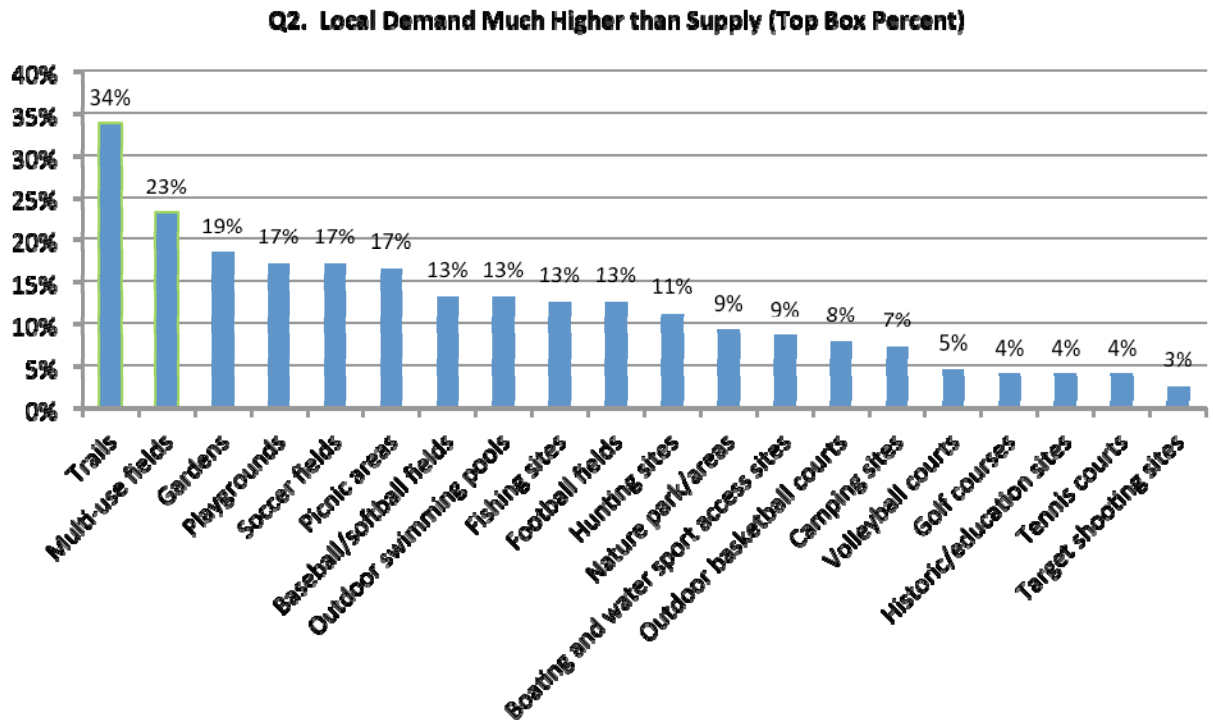
Local Demand frequencies were sorted by the percentage of responses indicating "Much Higher" (i.e. Local demand is much higher than supply) and sorted from high to low (Table RO1.2d and Chart RO1.2c).

- **Trails** had the highest Top Box percentage (number of respondents who selected "Much Higher" Local Demand) at **33.8%** (n=51). More than 1/3rd of respondents indicated that local demand for trails is much higher than supply. No other facility type had a top percentage greater than 23.2, a 10.6% difference, indicating that local demand for trails, more than any other type of facility, is much higher than supply.
- **Multi-use fields** had the second highest number of "Much Higher" responses at **23.2%** (n=35).
- **Gardens** (18.5%, n=28), **Playgrounds** and **Soccer fields** (17.2%, n=26), and **Picnic areas** (16.6%, n=25) all had top box percentages between **15%** and **20%**, indicating that local demand is higher than local supply for those facility types.
- **Baseball/softball fields** and **Outdoor swimming pools** (13.2%, n=26), **Fishing sites** and **Football sites** (17.2%, n=26), and **Hunting sites** (11.3%, n=17) all had top box percentages between **10%** and **15%**, indicating that local demand is higher than supply for those facility types, but not as high as it is for the above mentioned facility types.

Table RO1.2d. Q2. Local Demand – Frequencies – Demand Much Higher than Supply (Top Box Percent)

Facility Type	Much Lower	Lower	Slightly Lower	About Right	Slightly Higher	Higher	**Much Higher**
Trails	0.7% (1)	0.7% (1)	3.3% (5)	14.6% (22)	19.9% (30)	27.2% (41)	**33.8% (51)**
Multi-use fields	2% (3)	2% (3)	4% (6)	31.1% (47)	20.5% (31)	17.2% (26)	**23.2% (35)**
Gardens	2% (3)	5.3% (8)	5.3% (8)	39.7% (60)	20.5% (31)	8.6% (13)	**18.5% (28)**
Playgrounds	1.3% (2)	1.3% (2)	4.6% (7)	26.5% (40)	22.5% (34)	26.5% (40)	**17.2% (26)**
Soccer fields	1.3% (2)	2.6% (4)	5.3% (8)	35.1% (53)	20.5% (31)	17.9% (27)	**17.2% (26)**
Picnic areas	0% (0)	4% (6)	7.9% (12)	31.8% (48)	19.2% (29)	20.5% (31)	**16.6% (25)**
Baseball/softball fields	2% (3)	3.3% (5)	10.6% (16)	30.5% (46)	23.8% (36)	16.6% (25)	**13.2% (20)**
Outdoor swimming pools	7.3% (11)	4% (6)	6.6% (10)	37.7% (57)	16.6% (25)	14.6% (22)	**13.2% (20)**
Fishing Sites	2% (3)	2.6% (4)	6.6% (10)	48.3% (73)	20.5% (31)	7.3% (11)	**12.6% (19)**
Football fields	2% (3)	7.3% (11)	7.9% (12)	45% (68)	12.6% (19)	12.6% (19)	**12.6% (19)**
Hunting sites	6% (9)	4% (6)	4.6% (7)	61.6% (93)	7.3% (11)	5.3% (8)	**11.3% (17)**
Nature park/areas	0.7% (1)	4% (6)	6.6% (10)	46.4% (70)	17.9% (27)	15.2% (23)	**9.3% (14)**
Boating and water sport access sites	6.6% (10)	2% (3)	4.6% (7)	54.3% (82)	15.9% (24)	7.9% (12)	**8.6% (13)**
Outdoor Basketball Courts	5.3% (8)	4% (6)	12.6% (19)	43.7% (66)	18.5% (28)	7.9% (12)	**7.9% (12)**
Camping sites	4% (6)	6% (9)	6% (9)	55% (83)	13.2% (20)	8.6% (13)	**7.3% (11)**
Volleyball courts	6% (9)	9.3% (14)	16.6% (25)	43.7% (66)	13.9% (21)	6% (9)	**4.6% (7)**
Golf courses	6% (9)	6% (9)	10.6% (16)	57.6% (87)	13.9% (21)	2% (3)	**4% (6)**
Historic/education sites	3.3% (5)	4.6% (7)	7.9% (12)	51.7% (78)	21.2% (32)	7.3% (11)	**4% (6)**
Tennis courts	3.3% (5)	7.3% (11)	11.9% (18)	46.4% (70)	15.9% (24)	11.3% (17)	**4% (6)**
Target shooting sites	4.6% (7)	2.6% (4)	6% (9)	69.5% (105)	10.6% (16)	4% (6)	**2.6% (4)**

Chart RO1.2c.



Cross-tabs – Urban or Rural/Local Demand

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **local demand**, and urban and rural mean scores were tested for significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in demand between rural and urban areas and H_1 = different levels of demand between urban and rural areas (Table RO1.2e and Table RO1.2f).

- **Picnic areas** (p=.009) was the only facility type to show significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =0.07, n=136) scored higher than **Rural** respondents ($\bar{x}$ =1.04, n=15), indicating that the local demand for **Picnic areas** is significantly higher in urban areas than rural areas.
- **Outdoor swimming pools** (p=.055), **Tennis Courts** (p=.055), and **Boating and water sport access sites** (p=.089) all had significant differences between urban and rural at the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted).
    - **Boating and water sport access** sites was the only statistically significant facility type where **rural** demand ($\bar{x}$ =0.87, n=15) scored higher than **urban** demand ($\bar{x}$ =0.23, n=136).
    - **Rural** respondents scored negatively for both **Outdoor swimming pools** ($\bar{x}$ =-0.27, n=15) and **Tennis courts** ($\bar{x}$ =-0.47, n=15) indicating demand is slightly lower than local supply, while urban respondents indicated the opposite – urban demand for **Outdoor swimming pools** and **Tennis courts** is slightly higher than local supply.

Cross-tabs – Area Code/Local Demand

Respondents were classified by **telephone area code**, cross tabulated by **local demand**, sorted high to low by overall mean (Table RO1.2a) and mean scores were tested against each other for significance (95%) using an

independent sample t-test, with H_0 = null/no difference in local demand between urban and rural areas and H_1 = difference in local demand between urban and rural areas (Table RO1.2g).

- **East-Central (636)** (n=17) area code had the most statistically significant differences, as compared to other regions, with 10 differences among five facility types ($p < 0.05 = H_0$ rejected and H_1 accepted)
    - **Soccer fields** ($\bar{x}$ =0.9, n=151) scored significantly higher in **East-Central** (**636)** ($\bar{x}$ =1.5, n=17) compared to **Kansas City-West (816)** ($\bar{x}$ =0.7, n=41)
    - **Baseball/softball fields** ($\bar{x}$ =0.7, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.4, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.23, n=34) and **Southwest (417)** ($\bar{x}$ =0.4, n=18)
    - **Gardens** ($\bar{x}$ =0.2, n=151) scored significantly higher in **East-Central** (**636)** ($\bar{x}$ =1.1, n=17) compared to **Kansas City-West (816)** ($\bar{x}$ =0.2, n=41)
    - **Camping sites** ($\bar{x}$ =0.2, n=151) scored significantly higher in **East-Central** (**636)** ($\bar{x}$ =1.1, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.1, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.3, n=33), and **Kansas City-West (816)** ($\bar{x}$ =0.2, n=41)
    - **Historic/education sites** ($\bar{x}$ =0.2, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.0, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.1, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.0, n=33), and **Kansas City-West (816)** ($\bar{x}$ =0.1, n=41)
- **Southwest (417)** (n=18) and **Northwest (660)** (n=8) area codes both had the second most statistically significant differences, as compared to other regions, with two differences among two facility types ($p < 0.05 = H_0$ rejected and H_1 accepted)
    - **Gardens** ($\bar{x}$ =0.2, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.1, n=18) compared to **Kansas City-West (816)** ($\bar{x}$ =0.2, n=41)
    - **Camping sites** ($\bar{x}$ =0.2, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =0.6, n=8) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.3, n=33)
    - **Hunting sites** ($\bar{x}$ =0.2, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.8, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.1, n=34)
    - **Target shooting sites** ($\bar{x}$ =0.0, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =0.5, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.3, n=34)
- **Northeast-Central-Southeast (573)** (n=33) had one statistically significant difference, as compared to other regions, among one facility type ($p < 0.05 = H_0$ rejected and H_1 accepted)
    - **Target shooting sites** ($\bar{x}$ =0.0, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.2, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.3, n=34).

2. **Research Question 2 (RQ2)**

   - ***What types of outdoor recreation facilities in Missouri are in need of improvement?***

   Research Objective 2.1 (RO2.1)

   - **Determine the level of improvement needed for outdoor recreation facilities in Missouri.**

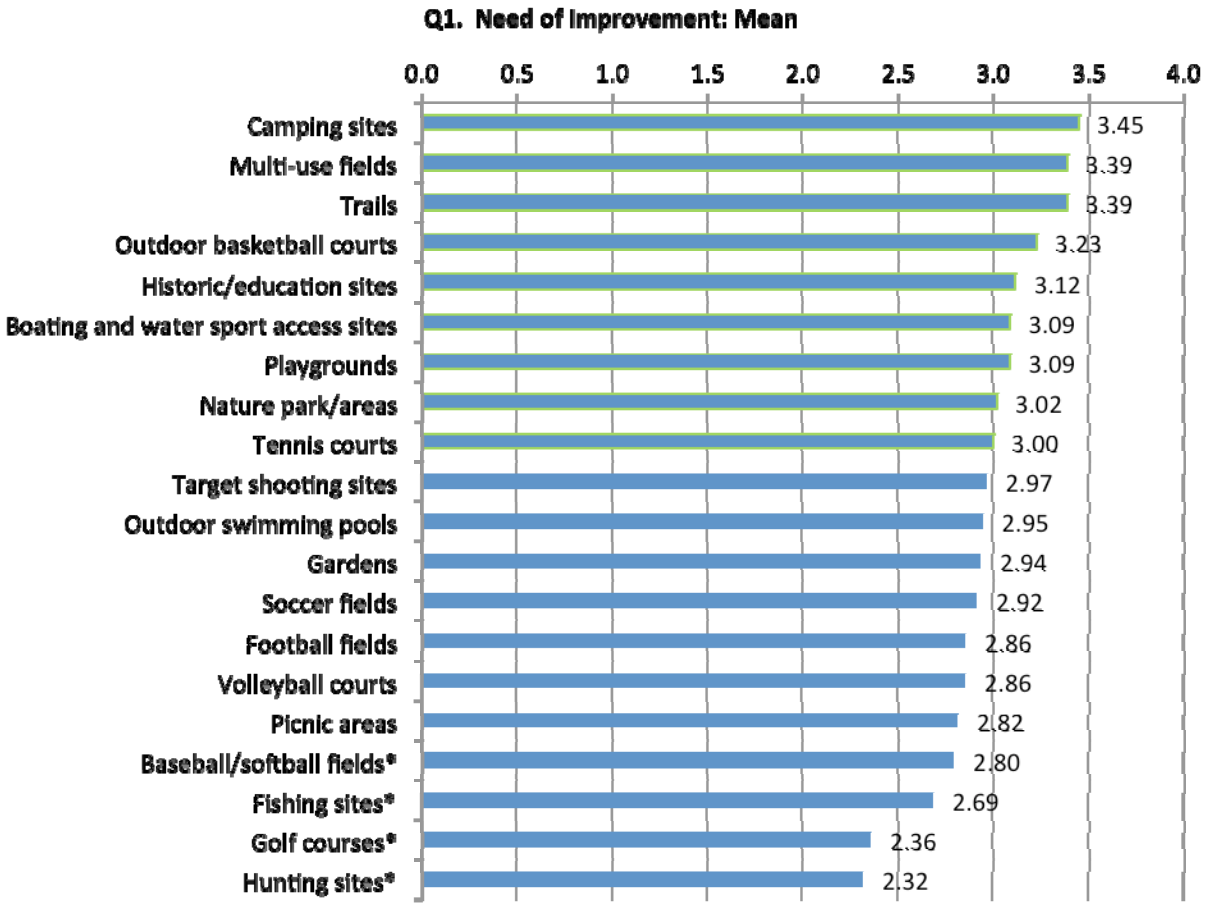
All Need of Improvement mean scores were sorted from high to low (Table RO2.1a and Chart RO2.1a).

- **Camping sites**, **Multi-use fields**, **Trails**, **Outdoor basketball courts**, and **Historic/education sites** were the top five facility types in need of improvement.
  - **Camping sites** had the highest mean score ($\bar{x}$) with **3.45** (**47%**, n=71)
  - **Multi-use fields** had a mean score ($\bar{x}$) of **3.39** (**92.7%**, n=140)
  - **Trails** had a mean score ($\bar{x}$) of **3.39** (**97.4%**, n=147)
  - **Outdoor basketball courts** had a mean score ($\bar{x}$) of **3.23** (**87.4%**, n=132)
  - **Historic/education sites** had a mean score ($\bar{x}$) of **3.12** (**79.5%**, n=120)
- **Boating and water sport access sites**, **Playgrounds**, **Nature park/areas**, and **Tennis courts** all had means greater than the midpoint of 3.0 indicating at least a moderate need of improvement.
  - **Boating and water sport access sites** had a mean score ($\bar{x}$) of **3.09** (**57%**, n=86)
  - **Playgrounds** had a mean score ($\bar{x}$) of **3.09** (**100%**, n=151)
  - **Nature park/areas** had a mean score ($\bar{x}$) of **3.02** (**82.1%**, n=124)
  - **Tennis courts** had a mean score ($\bar{x}$) of **3.00** (**89.4%**, n=135)
- The following types of facilities all had averages below the midpoint of **3.0**, indicating a less than moderate need of improvement.
  - **Target shooting sites** ($\bar{x}$ =2.97, 38.4%, n=58)
  - **Outdoor swimming pools** ($\bar{x}$ =2.95 , 87.4%, n=132)
  - **Gardens** ($\bar{x}$ =2.94, 81.5%, n=123)
  - **Soccer fields** ($\bar{x}$ =2.92, 88.7%, n=134)
  - **Football fields** ($\bar{x}$ =2.86, 70.2%, n=106)
  - **Volleyball courts** ($\bar{x}$ =2.86 , 80.1%, n=121)
  - **Picnic areas** ($\bar{x}$ =2.86, 99.3%, n=150)
  - **Baseball/softball fields** ($\bar{x}$ =2.82, 96.7%, n=146)
  - **Fishing sites** ($\bar{x}$ =2.68, 82.1%, n=124)
- **Golf courses** and **Hunting sites** were the only two facility types with mean scores less than a **2.50.**
  - **Golf courses** ($\bar{x}$ =2.36, 64.2%, n=97)
  - **Hunting sites** ($\bar{x}$ =2.32, 37.1%, n=56)

Table RO2.1a. One-Sample Statistics – Q1. Need of improvement

Facility Type	N	Mean	Std. Deviation	Std. Error Mean
Camping sites	71	**3.45**	1.263	0.150
Multi-use fields	140	**3.39**	1.397	0.118
Trails	147	**3.39**	1.368	0.113
Outdoor basketball courts	132	**3.23**	1.341	0.117
Historic/education sites	120	**3.12**	1.310	0.120
Boating and water sport access sites	86	**3.09**	1.428	0.154
Playgrounds	151	**3.09**	1.311	0.107
Nature park/areas	124	**3.02**	1.349	0.121
Tennis courts	135	**3.00**	1.440	0.124
Target shooting sites	58	**2.97**	1.337	0.176
Outdoor swimming pools	132	**2.95**	1.515	0.132
Gardens	123	**2.94**	1.456	0.131
Soccer fields	134	**2.92**	1.425	0.123
Football fields	106	**2.86**	1.444	0.140
Volleyball courts	121	**2.86**	1.287	0.117
Picnic areas	150	**2.82**	1.351	0.110
Baseball/softball fields	146	**2.80**	1.124	0.093
Fishing sites	124	**2.69**	1.409	0.127
Golf courses	97	**2.36**	1.284	0.130
Hunting sites	56	**2.32**	1.416	0.189

Chart RO2.1a.



Frequencies and percentages were tallied for all respondents based on those answering as well as based on the total sample (Table RO2.1b).

- **Multi-use fields** was the only facility type that had more "Extreme Need" responses than any other response.
    - **27.9%** (n=21, N=140) of those answering indicated an extreme need of improvement.
    - **25.8%** (n=21) of the total sample indicated an extreme need of improvement.
- **Hunting sites**, **Golf courses**, **Fishing sites**, **Football fields**, and **Tennis courts** all had more "No Need at All" responses than any other response.
    - **Hunting sites** (42.9%, n=24, N=56), **Golf courses** (37.1%, n=36, N=97), **Fishing sites** (29%, n=36, N=124), **Football fields** (26.4%, n=28, N=106), and **Tennis courts** (21.5%, n=29, N=135) all had "No Need at All" responses above **20%** based on those answering (i.e. facility is available).
    - **Hunting sites** (15.9%, n=24), **Golf courses** (23.8%, n=36), **Fishing sites** (23.8%, n=36), **Football fields** (18.5%, n=28), and **Tennis courts** (19.2%, n=29) all had "No Need at All Responses" responses above **15%** based on the total sample (N=151).

Table RO2.1b. Q1. Need of improvement Frequencies (percent of total sample, percent of those answering, and count)

Facility Type	No Need At All 1	2	3	4	Extreme Need 5
Baseball/softball fields	11.9% 12.3% (18)	**29.1%** **30.1%** **(44)**	**29.1%** **30.1%** **(44)**	19.2% 19.9% (29)	7.3% 7.5% (11)
Outdoor Basketball Courts	14.6% 16.7% (22)	9.3% 10.6% (14)	21.9% 25% (33)	**24.5%** **28%** **(37)**	17.2% 19.7% (26)
Boating and water sport access sites	11.3% 19.8% (17)	8.6% 15.1% (13)	**13.2%** **23.3%** **(20)**	11.3% 19.8% (17)	12.6% 22.1% (19)
Camping sites	5.3% 11.3% (8)	4% 8.5% (6)	**13.2%** **28.2%** **(20)**	**13.2%** **28.2%** **(20)**	11.3% 23.9% (17)
Fishing Sites	**23.8%** **29%** **(36)**	13.2% 16.1% (20)	21.9% 26.6% (33)	10.6% 12.9% (16)	12.6% 15.3% (19)
Football fields	**18.5%** **26.4%** **(28)**	10.6% 15.1% (16)	15.2% 21.7% (23)	13.9% 19.8% (21)	11.9% 17% (18)
Gardens	20.5% 25.2% (31)	9.9% 12.2% (15)	**21.2%** **26%** **(32)**	13.2% 16.3% (20)	16.6% 20.3% (25)
Golf courses	**23.8%** **37.1%** **(36)**	10.6% 16.5% (16)	16.6% 25.8% (25)	9.3% 14.4% (14)	4% 6.2% (6)
Historic/education sites	11.9% 15% (18)	13.9% 17.5% (21)	**20.5%** **25.8%** **(31)**	19.2% 24.2% (29)	13.9% 17.5% (21)
Hunting sites	**15.9%** **42.9%** **(24)**	6% 16.1% (9)	6.6% 17.9% (10)	4.6% 12.5% (7)	4% 10.7% (6)
Multi-use fields	14.6% 15.7% (22)	9.3% 10% (14)	19.9% 21.4% (30)	23.2% 25% (35)	**25.8%** **27.9%** **(39)**
Picnic areas	22.5% 22.7% (34)	21.2% 21.3% (32)	19.2% 19.3% (29)	**24.5%** **24.7%** **(37)**	11.9% 12% (18)
Playgrounds	15.9% 15.9% (24)	17.9% 17.9% (27)	23.8% 23.8% (36)	**26.5%** **26.5%** **(40)**	15.9% 15.9% (24)
Soccer fields	21.9% 24.6% (33)	12.6% 14.2% (19)	**20.5%** **23.1%** **(31)**	18.5% 20.9% (28)	15.2% 17.2% (23)
Outdoor swimming pools	24.5% 28% (37)	11.3% 12.9% (17)	13.2% 15.2% (20)	**21.2%** **24.2%** **(32)**	17.2% 19.7% (26)
Tennis courts	**19.2%** **21.5%**	16.6% 18.5%	16.6% 18.5%	**19.2%** **21.5%**	17.9% 20%

Table RO2.1b. Q1. Need of improvement Frequencies (percent of total sample, percent of those answering, and count)

Facility Type	No Need At All 1	2	3	4	Extreme Need 5
	(29)	(25)	(25)	**(29)**	(27)
Trails	14.6% 15% (22)	9.9% 10.2% (15)	20.5% 21.1% (31)	**27.2%** **27.9%** **(41)**	25.2% 25.9% (38)
Volleyball courts	17.9% 22.3% (27)	8.6% 10.7% (13)	**30.5%** **38%** **(46)**	13.2% 16.5% (20)	9.9% 12.4% (15)
Target shooting sites	7.3% 19% (11)	6.6% 17.2% (10)	**10.6%** **27.6%** **(16)**	7.9% 20.7% (12)	6% 15.5% (9)
Nature park/areas	16.6% 20.2% (25)	11.3% 13.7% (17)	**21.2%** **25.8%** **(32)**	20.5% 25% (31)	12.6% 15.3% (19)

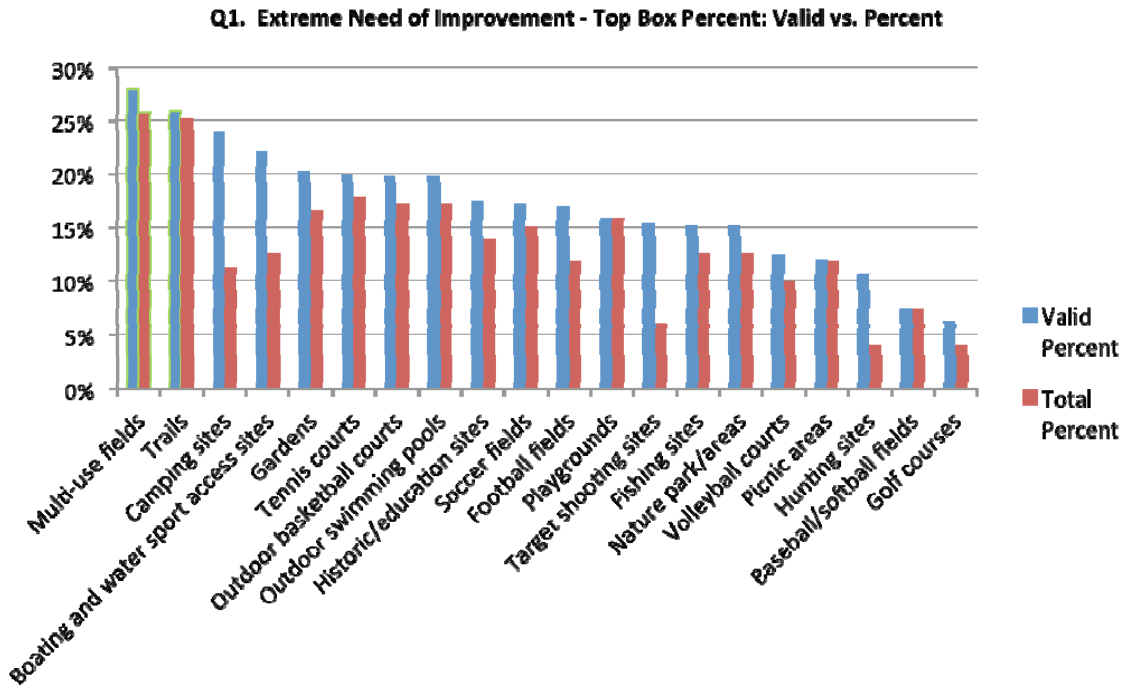
Need of Improvement Top Box Scores (percent of respondents that scored a 5 = "Extreme Need" for Need of Improvement) were computed for all facility types among those that answered (Valid Percent) as well as for the percentage that answered among the entire sample (Total Percent, including Missing values and respondents that answered Not Available) and sorted by Valid Percent (Table RO2.1c and Chart RO2.1b).

- **Multi-use fields** (27.9%, n=39) and **Trails** (25.9%, n=38) both had top box percentages **above 25%** for both valid and total percent, indicating a very large need of extreme improvement among all respondents.
- **Camping sites** (23.9%, n=17), **Boating and water sport access sites** (22.1%, n=19), **Gardens** (20.3%, n=25), and **Tennis courts** (20%, n=27) had top box percentages between **20%** and **25%** among respondents that answered, indicating a large need of extreme improvement.
    - Due to the lower availability of **Camping sites** (47% Availability, n=71) and **Boating and water sport access sites** (57% Availability, n=86), the total percentage of respondents indicating Extreme Need of Improvement is much lower overall, 11.3% (n=17) and 12.6% (n=19)
- **Outdoor basketball courts** and **Outdoor swimming pools** (19.7%, n=26), **Historic/education sites** (17.5%, n=21), **Soccer fields** (17.2%, n=23), **Football fields** (17.0%, n=18), **Playgrounds** (15.9%, n=24), **Target shooting sites** (15.5%, n=9), and **Fishing sites** and **Nature park/areas** (15.3%, n=19) all had top box percentages between **15%** and **20%** among respondents that answered, indicating a moderate to large need of extreme improvement.
    - Due to the lower availability of **Target shooting sites** (38.4% Availability, n=58), the total percentage of respondents indicating Extreme Need of Improvement is much lower overall at 6.0% (n=9).
- **Volleyball courts** (12.4%, n=15), **Picnic areas** (12.0%, n=18), **Hunting sites** (10.7%, n=6), **Baseball/softball fields** (7.5%, n=11), and **Golf courses** (6.2%, n=6) all had top box percentages between **0%** and **15%** among respondents that answered, indicating a lower need of extreme improvement.
    - Due to the lower availability of **Hunting sites** (37.1% Availability, n=56) and the somewhat limited availability of **Golf courses** (64.2% Availability, n=97), the total percentage of respondents indicating Extreme Need of Improvement is much lower overall at 4.0% (n=6).

Table RO2.1c. Q1. Need of Improvement – Extreme Need of Improvement – Top Box Percent (Valid and Total)

Facility Type	Extreme Need	Total Answering	Percent Answering	**Valid Percent**	Total Percent
Multi-use fields	39	140	92.7%	**27.9%**	25.8%
Trails	38	147	97.4%	**25.9%**	25.2%
Camping sites	17	71	47.0%	**23.9%**	11.3%
Boating and water sport access sites	19	86	57.0%	**22.1%**	12.6%
Gardens	25	123	81.5%	**20.3%**	16.6%
Tennis courts	27	135	89.4%	**20.0%**	17.9%
Outdoor basketball courts	26	132	87.4%	**19.7%**	17.2%
Outdoor swimming pools	26	132	87.4%	**19.7%**	17.2%
Historic/education sites	21	120	79.5%	**17.5%**	13.9%
Soccer fields	23	134	88.7%	**17.2%**	15.2%
Football fields	18	106	70.2%	**17.0%**	11.9%
Playgrounds	24	151	100.0%	**15.9%**	15.9%
Target shooting sites	9	58	38.4%	**15.5%**	6.0%
Fishing sites	19	124	82.1%	**15.3%**	12.6%
Nature park/areas	19	124	82.1%	**15.3%**	12.6%
Volleyball courts	15	121	80.1%	**12.4%**	9.9%
Picnic areas	18	150	99.3%	**12.0%**	11.9%
Hunting sites	6	56	37.1%	**10.7%**	4.0%
Baseball/softball fields	11	146	96.7%	**7.5%**	7.3%
Golf courses	6	97	64.2%	**6.2%**	4.0%

Chart RO2.1b.



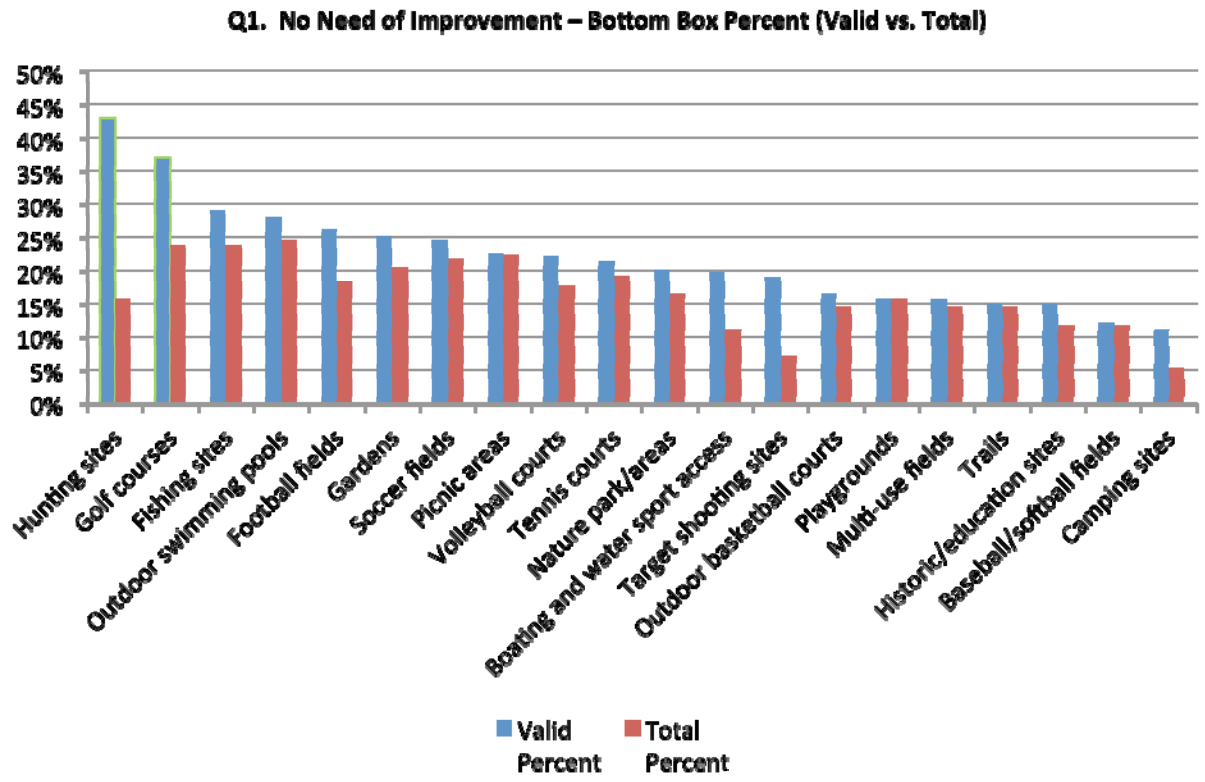
Need of Improvement Bottom Box Scores (percent of respondents that scored a 1 = "No Need at All" for Need of Improvement) were computed for all facility types among respondents that answered (Valid Percent) as well as for the percentage of respondents that answered among the entire sample (Total Percent, including Missing values and respondents that answered Not Available) and sorted by Valid Percent (Table RO2.1d and Chart RO2.1c).

- **Hunting sites** (42.9%, n=24) and **Golf courses** (37.1%, n=36) both had bottom box percentages **above 30%** among respondents that answered, indicating a high level of not needing improvement.
    - Due to the lower availability of **Hunting sites** (37.1% Availability, n=56) and the somewhat lower availability of **Golf courses** (64.2% Availability, n=97), the valid percentage is much higher than the total percentage, indicating a very low need of improvement among respondents with those facilities available.
- **Fishing sites** (29%, n=36), **Outdoor swimming pools** (28%, n=37), **Football fields** (26.4%, n=28), and **Gardens** (25.2%, n=31) all had bottom box percentages between **25%** and **30%** among respondents that answered, indicating a high level of not needing improvement.
- **Soccer fields** (24.6%, n=33), **Picnic areas** (22.7%, n=34), **Volleyball courts** (22.3%, n=27), **Tennis courts** (21.5%, n=29) and **Nature park/areas** (20.2%, n=25) all had bottom box percentages between **20% and 25%** among respondents that answered, indicating a high level of not needing improvement.
- **Boating and water sport access sites** (19.8%, n=17), **Target shooting sites** (19.0%, n=11), **Outdoor basketball courts** (16.7%, n=22), **Playgrounds** (15.9%, n=24), **Multi-use fields** (15.7%, n=22), **Trails** (15.0%, n=22), **Historic/education sites** (15.0%, n=18), **Baseball/softball fields** (11.9%, n=18), and **Camping sites** (5.3%, n=8) all had bottom box percentages between **10%** and **20%**, indicating a need for improvement.

Table RO2.1d. Q1. Need of Improvement – No Need of Improvement at All – Bottom Box Percent (Valid and Total)

Facility Type	No Need at All	Total Answering	Percent Answering	**Valid Percent**	Total Percent
Hunting sites	24	56	37.1%	**42.9%**	15.9%
Golf courses	36	97	64.2%	**37.1%**	23.8%
Fishing sites	36	124	82.1%	**29.0%**	23.8%
Outdoor swimming pools	37	132	87.4%	**28.0%**	24.5%
Football fields	28	106	70.2%	**26.4%**	18.5%
Gardens	31	123	81.5%	**25.2%**	20.5%
Soccer fields	33	134	88.7%	**24.6%**	21.9%
Picnic areas	34	150	99.3%	**22.7%**	22.5%
Volleyball courts	27	121	80.1%	**22.3%**	17.9%
Tennis courts	29	135	89.4%	**21.5%**	19.2%
Nature park/areas	25	124	82.1%	**20.2%**	16.6%
Boating and water sport access sites	17	86	57.0%	**19.8%**	11.3%
Target shooting sites	11	58	38.4%	**19.0%**	7.3%
Outdoor basketball courts	22	132	87.4%	**16.7%**	14.6%
Playgrounds	24	151	100.0%	**15.9%**	15.9%
Multi-use fields	22	140	92.7%	**15.7%**	14.6%
Trails	22	147	97.4%	**15.0%**	14.6%
Historic/education sites	18	120	79.5%	**15.0%**	11.9%
Baseball/softball fields	18	146	96.7%	**12.3%**	11.9%
Camping sites	8	71	47.0%	**11.3%**	5.3%

Chart RO2.1c.



Cross-tabs – Urban or Rural/Need of Improvement

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **need of improvement**, and mean scores for urban and rural areas were tested for significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in improvement between urban and rural and H_1 = different improvement needs between urban and rural.

- **Golf courses** (p=.086) was the only facility type to show significant differences between urban and rural at the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted) (Table RO2.1e).
    - **Urban** respondents ($\bar{x}$ =2.44, n=87) scored higher than **Rural** respondents ($\bar{x}$ =1.70, n=10) for **Golf courses**, indicating that the need of improvement for **Golf courses** is significantly higher in urban areas than rural areas (Table RO2.1f)

Cross-tabs – Area Code/Need of Improvement

Respondents were classified by **area code**, cross tabulated by **need of improvement**, sorted high to low by overall mean (Table 1b), and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in improvement and H_1 = different improvement needs (Table RO2.1g).

- **East-Central (636)** (n=17) area code had the most statistically significant differences, other regions, with 19 differences among nine facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).

- **Camping sites** ($\bar{x}$ =3.5, n=71) scored significantly higher in **East-Central** (**636)** ($\bar{x}$ =4.3, n=10) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.1, n=16) and **Kansas City-West (816)** ($\bar{x}$ =3.0, n=20).
- **Multi-use fields** ($\bar{x}$ =3.4, n=140) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =3.9, n=16) compared to **St. Louis-East (314)** ($\bar{x}$ =3.1, n=34).
- **Historic/education sites** ($\bar{x}$ =3.1, n=120) scored significantly higher in area code **(East-Central) (636)** ($\bar{x}$ =3.8, n=13) compared to **St. Louis-East (314)** ($\bar{x}$ =2.9, n=26).
- **Boating and water sport access sites** ($\bar{x}$ =3.1, n=86) scored significantly higher in **East-Central (636)** ($\bar{x}$ =4.0, n=10) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.8, n=21) and **Kansas City-West (816)** ($\bar{x}$ =2.8, n=24).
- **Playgrounds** ($\bar{x}$ =3.1, n=151) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =3.8, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =2.8, n=34) and **Southwest (417)** ($\bar{x}$ =2.7, n=18).
- **Outdoor swimming pools** ($\bar{x}$ =2.9, n=132) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =3.3, n=13) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =1.8, n=8).
- **Gardens** ($\bar{x}$ =2.9, n=123) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =4.2, n=12) compared to **all other area codes.**
- **Soccer fields** ($\bar{x}$ =2.9, n=134) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =4.1, n=16) compared to **St. Louis-East (314)** ($\bar{x}$ =2.8, n=31), **Southwest (417)** ($\bar{x}$ =2.2, n=17), **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.8, n=30), and **Kansas City-West (816)** ($\bar{x}$ =2.9, n=32).
- **Hunting sites** ($\bar{x}$ =2.3, n=56) scored significantly higher in area code **East-Central (636)** ($\bar{x}$ =3.0, n=8) compared to **Northwest (660)** ($\bar{x}$ =1.2, n=5).

- **Kansas City-West (816)** (n=41) area code had the second highest number of statistically significant differences, as compared to other regions, with seven differences among four facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
  - **Multi-use fields** ($\bar{x}$ =3.4, n=140) scored significantly higher in area code **Kansas City-West (816)** ($\bar{x}$ =3.8, n=35) compared to **St. Louis-East (314)** ($\bar{x}$ =3.1, n=34).
  - **Outdoor swimming pools** ($\bar{x}$ =2.9, n=132) scored significantly higher in area code **Kansas City-West (816)** ($\bar{x}$ =3.3, n=34) compared to **St. Louis-East (314)** ($\bar{x}$ =2.4, n=29) and **Northwest (660)** ($\bar{x}$ =1.8, n=8).
  - **Tennis courts** ($\bar{x}$ =3.0, n=135) scored significantly higher in area code **Kansas City-West (816)** ($\bar{x}$ =3.4, n=34) compared to **St. Louis-East (314)** ($\bar{x}$ =2.7, n=31), **Southwest (417)** ($\bar{x}$ =2.6, n=17), and **Northwest (660)** ($\bar{x}$ =2.2, n=8).
  - **Volleyball courts** ($\bar{x}$ =2.9, n=121) scored significantly higher in area code **Kansas City-West (816)** ($\bar{x}$ =3.2, n=32) compared to **St. Louis-East (314)** ($\bar{x}$ =2.5, n=29).
- **Northeast-Central-Southeast (573)** (n=33) area code had the third highest number of statistically significant differences, as compared to other regions, with six differences among three facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
  - **Target shooting sites** ($\bar{x}$ =3.0, n=58) scored significantly higher in area code **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.8, n=16) compared to **East-Central (636)** ($\bar{x}$ =2.6, n=8), **Northwest (660)** ($\bar{x}$ =2.2, n=5), and **Kansas City-West** ($\bar{x}$ =2.4, n=12).
  - **Outdoor swimming pools** ($\bar{x}$ =2.9, n=132) scored significantly higher in area code **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.2, n=30) compared to **St. Louis-East (314)** ($\bar{x}$ =2.4, n=29) and **Northwest (660)** ($\bar{x}$ =1.8, n=8).
  - **Hunting sites** ($\bar{x}$ =2.3, n=56) scored significantly higher in area code **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.3, n=15) compared to **Northwest (660)** ($\bar{x}$ =1.2, n=5).

- **Northwest (660)** (n=8) had the fourth highest number of statistically significant differences, as compared to other regions, with four differences among one facility type ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Trails** ($\bar{x}$ =3.4, n=147) scored significantly higher in area code **Northwest (660)** ($\bar{x}$ =4.5, n=8) compared to **all other area codes except East-Central (636)**

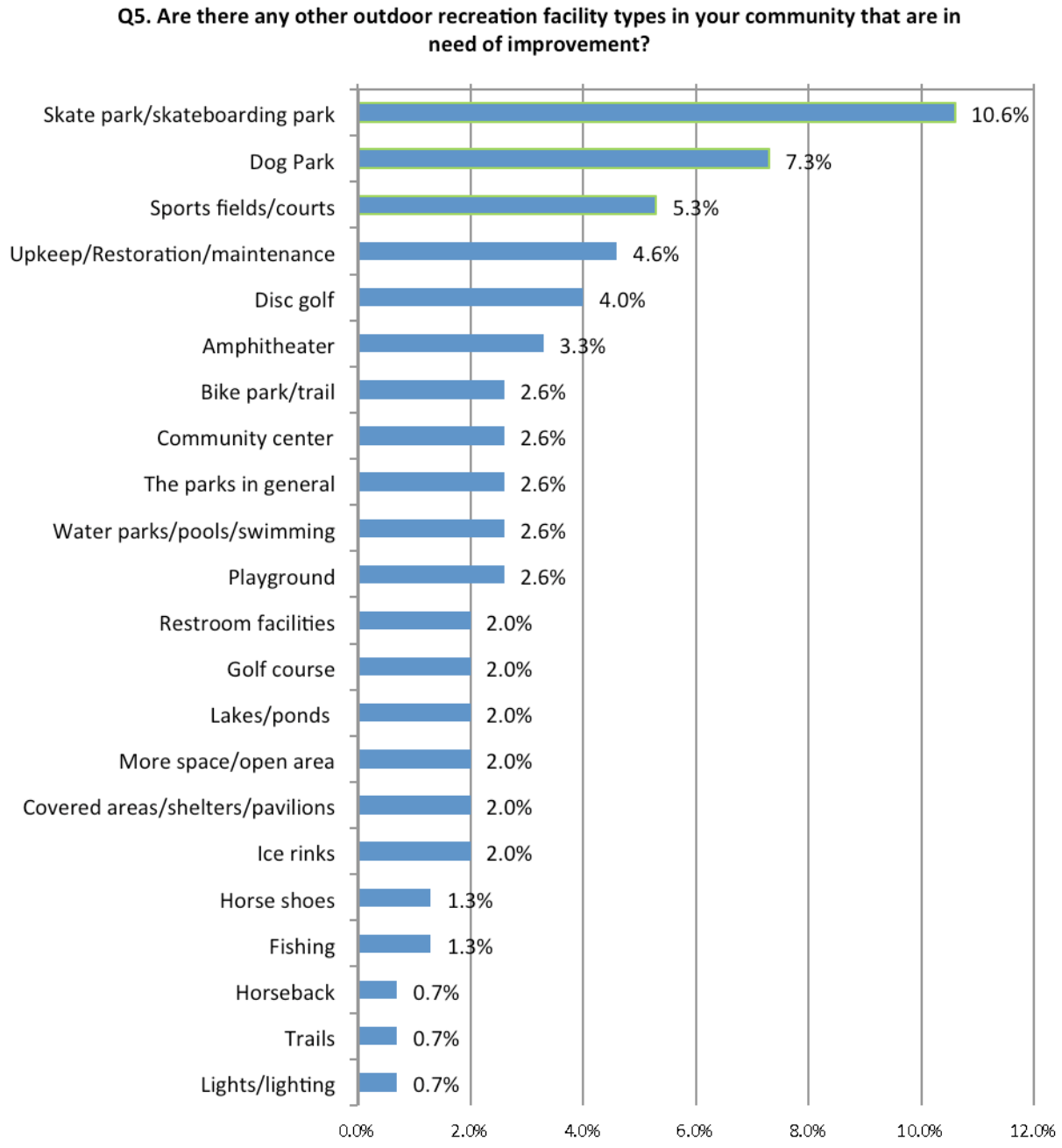
Respondents were asked the **open-ended question "Are there any other outdoor recreation facility types in your community that are in need of improvement?"** Responses were coded, tabulated, and sorted by frequency from high to low (Table RO2.1h and Chart RO2.1h).

- **Nothing** (51.7%, n=78) was mentioned by more than **50%** of respondents.
- **Skate park/skateboarding park** (10.6%, n=16) was the only facility type mentioned by more than **10%** of respondents.
- **Dog Park** (7.3%, n=11), and **Sports fields/courts** (5.3%, n=8) were the only other facilities to be mentioned by more than **5%** of respondents.

Table RO2.1h. Q5 Frequencies (open ended) – Are there any other outdoor recreation facility types in your community that are in need of improvement?

Code	Response	Responses		Percent of Cases
		N	Percent	
10	Skate park/skateboarding park	16	8.70%	10.60%
11	Dog Park	11	6.00%	7.30%
21	Sports fields/courts	8	4.40%	5.30%
38	Upkeep/Restoration/maintenance	7	3.80%	4.60%
14	Disc golf	6	3.30%	4.00%
17	Amphitheater	5	2.70%	3.30%
12	Bike park/trail	4	2.20%	2.60%
16	Community center	4	2.20%	2.60%
19	The parks in general	4	2.20%	2.60%
20	Water parks/pools/swimming	4	2.20%	2.60%
24	Playground	4	2.20%	2.60%
13	Restroom facilities	3	1.60%	2.00%
15	Golf course	3	1.60%	2.00%
18	Lakes/ponds	3	1.60%	2.00%
23	More space/open area	3	1.60%	2.00%
25	Covered areas/shelters/pavilions	3	1.60%	2.00%
26	Ice rinks	3	1.60%	2.00%
22	Horse shoes	2	1.10%	1.30%
101	Fishing	2	1.10%	1.30%
27	Horseback	1	0.50%	0.70%
28	Trails	1	0.50%	0.70%
39	Lights/lighting	1	0.50%	0.70%
96	Nothing	78	42.60%	51.70%
99	Other	7	3.80%	4.60%
	Total	183	100.00%	121.20%

Chart RO2.1h.


Q5. Are there any other outdoor recreation facility types in your community that are in need of improvement?
Skate park/skateboarding park 10.6%
Dog Park 7.3%
Sports fields/courts 5.3%
Upkeep/Restoration/maintenance 4.6%
Disc golf 4.0%
Amphitheater 3.3%
Bike park/trail 2.6%
Community center 2.6%
The parks in general 2.6%
Water parks/pools/swimming 2.6%
Playground 2.6%
Restroom facilities 2.0%
Golf course 2.0%
Lakes/ponds 2.0%
More space/open area 2.0%
Covered areas/shelters/pavilions 2.0%
Ice rinks 2.0%
Horse shoes 1.3%
Fishing 1.3%
Horseback 0.7%
Trails 0.7%
Lights/lighting 0.7%
0.0% 2.0% 4.0% 6.0% 8.0% 10.0% 12.0%

3. **Research Question 3 (RQ3)**

- ***What types of outdoor recreation facilities and activities are popular in Missouri?***

Research Objective 3.1 (RO3.1)

- **Determine the popularity of local outdoor recreation facilities in Missouri over the past five years.**

All respondents were asked to rate the popularity of local facilities over the last five years using an ordinal scale from -3 to 3, where -3 = "Popularity decreased a lot," -2 = "Popularity decreased," -1 = "Popularity decreased a little," 0 = "No change in popularity," 1 = "Popularity increased a little," 2 = "Popularity increased," and 3 = "Popularity increased a lot". All respondents provided valid answers and there were no missing values.

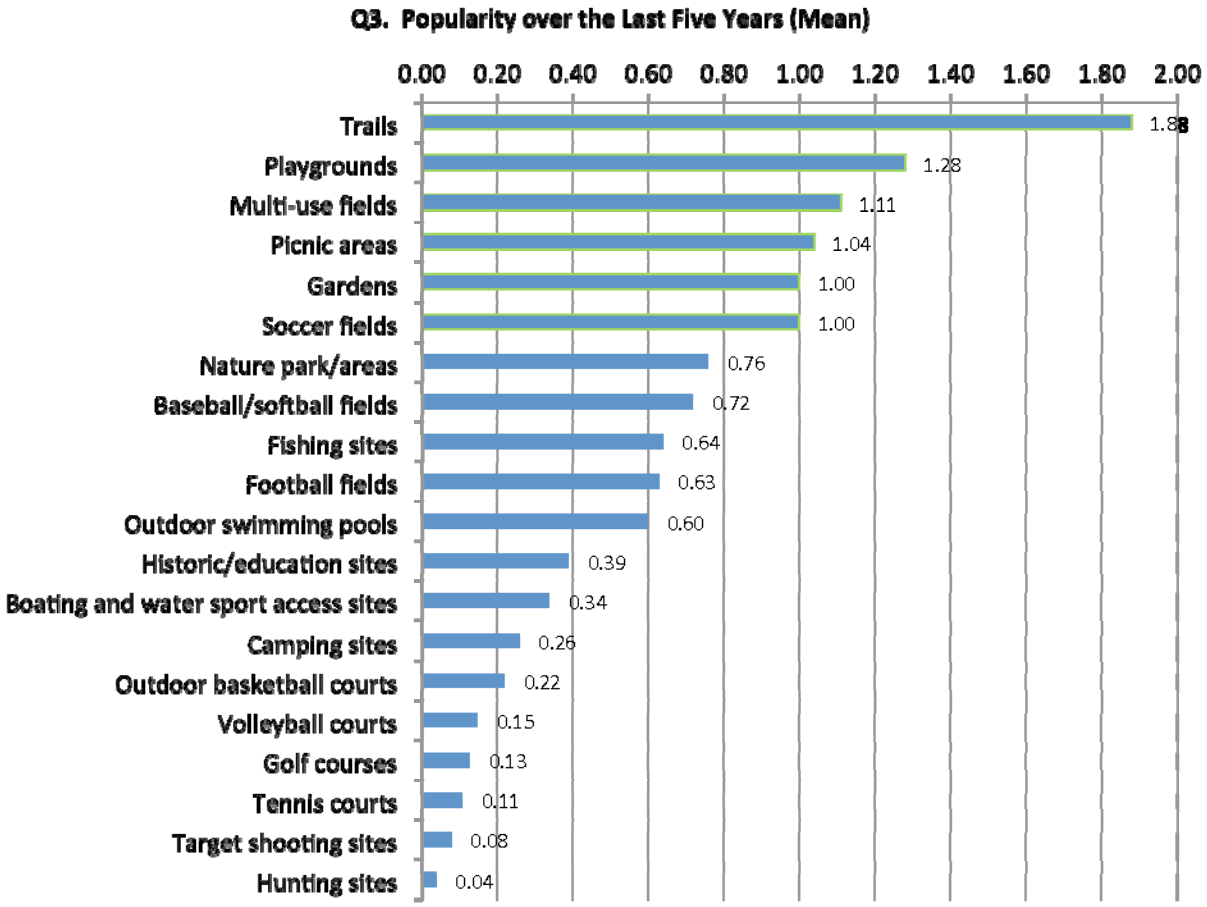
Mean scores were computed for all facility types and sorted from high to low (Table RO3.1a and Chart RO3.1a).

- **Trails** ($\bar{x}$ =1.88), **Playgrounds** ($\bar{x}$ =1.28), **Multi-use fields** ($\bar{x}$ =1.11), **Picnic areas** ($\bar{x}$ =1.04), **Gardens** and **Soccer fields** ($\bar{x}$ =1.00) all had mean scores between **1.0** and **2.0**, indicating that popularity has increased for those facility types over the last five years.
    - **Trails** had the lowest standard deviation at **1.107** indicating low variance among **Trail** popularity.
- All other facility types had mean scores between **0.0** and **1.0.**
    - **Target shooting sites** was the only facility type with standard deviation below 1.0, at **0.942**, indicating low variance among **Target shooting site** popularity.

Table RO3.1a. Statistics – Q3. Popularity over the Last Five years

Facility Type	N	**Mean**	Std. Deviation	Std. Error Mean
Trails	151	**1.88**	1.107	0.090
Playgrounds	151	**1.28**	1.197	0.097
Multi-use fields	151	**1.11**	1.307	0.106
Picnic areas	151	**1.04**	1.221	0.099
Gardens	151	**1.00**	1.451	0.118
Soccer fields	151	**1.00**	1.414	0.115
Nature park/areas	151	**0.76**	1.198	0.098
Baseball/softball fields	151	**0.72**	1.383	0.113
Fishing sites	151	**0.64**	1.313	0.107
Football fields	151	**0.63**	1.412	0.115
Outdoor swimming pools	151	**0.60**	1.470	0.120
Historic/education sites	151	**0.39**	1.194	0.097
Boating and water sport access sites	151	**0.34**	1.189	0.097
Camping sites	151	**0.26**	1.251	0.102
Outdoor basketball courts	151	**0.22**	1.089	0.089
Volleyball courts	151	**0.15**	1.246	0.101
Golf courses	151	**0.13**	1.224	0.100
Tennis courts	151	**0.11**	1.421	0.116
Target shooting sites	151	**0.08**	0.942	0.077
Hunting sites	151	**0.04**	1.221	0.099

Chart RO3.1a.



Frequencies and percentages were tallied for all respondents (Table RO3.1b).

- **Trails** was the only facility type that had a higher percentage of "Increased a Lot" responses than any other response, with **35.8%** (n=54) of respondents indicating that the popularity of **Trails** has increased a lot in the past five years.
- **Playgrounds** had a larger percentage of "Increased" responses than any other response, with **35.8%** (n=54) respondents indicating that the popularity of **Playgrounds** has increased over the past five years.
- **Multi-use fields** had a larger percentage of "Increased a Little" responses than any other response, with **28.5%** (n=43) respondents indicating that the popularity **of Multi-use fields** has increased a little.

Table RO3.1b. Q3. Popularity over the Last Five Years – Frequencies

Facility Type	Decreased a Lot	Decreased	Decreased a Little	No Change	Increased a Little	Increased	Increased a Lot
Baseball/softball fields	0.7% (1)	3.3% (5)	13.9% (21)	**32.5% (49)**	17.9% (27)	19.2% (29)	12.6% (19)
Outdoor basketball courts	2% (3)	4.6% (7)	10.6% (16)	**48.3% (73)**	21.9% (33)	11.9% (18)	0.7% (1)
Boating and water sport access sites	3.3% (5)	2.6% (4)	4% (6)	**57.6% (87)**	17.2% (26)	9.3% (14)	6% (9)
Camping sites	3.3% (5)	4% (6)	7.3% (11)	**57% (86)**	12.6% (19)	9.3% (14)	6.6% (10)
Fishing sites	1.3% (2)	4% (6)	5.3% (8)	**45.7% (69)**	17.2% (26)	15.2% (23)	11.3% (17)
Football fields	0.7% (1)	5.3% (8)	10.6% (16)	**41.1% (62)**	11.9% (18)	17.2% (26)	13.2% (20)
Gardens	2% (3)	3.3% (5)	5.3% (8)	**29.8% (45)**	20.5% (31)	19.9% (30)	19.2% (29)
Golf courses	3.3% (5)	6.6% (10)	10.6% (16)	**49% (74)**	17.2% (26)	10.6% (16)	2.6% (4)
Historic/education sites	0.7% (1)	4.6% (7)	11.3% (17)	**46.4% (70)**	17.9% (27)	13.9% (21)	5.3% (8)
Hunting sites	5.3% (8)	5.3% (8)	5.3% (8)	**62.9% (95)**	11.3% (17)	5.3% (8)	4.6% (7)
Multi-use fields	1.3% (2)	2% (3)	6% (9)	21.9% (33)	**28.5% (43)**	25.2% (38)	15.2% (23)
Picnic areas	0.0% (0)	2% (3)	5.3% (8)	**31.8% (48)**	21.2% (32)	27.2% (41)	12.6% (19)
Playgrounds	0.7% (1)	1.3% (2)	4% (6)	20.5% (31)	23.8% (36)	**35.8% (54)**	13.9% (21)
Soccer fields	1.3% (2)	3.3% (5)	4.6% (7)	**33.8% (51)**	17.2% (26)	21.2% (32)	18.5% (28)
Outdoor swimming pools	4.6% (7)	3.3% (5)	6.6% (10)	**38.4% (58)**	17.2% (26)	19.2% (29)	10.6% (16)
Tennis courts	4.6% (7)	9.3% (14)	13.9% (21)	**36.4% (55)**	17.9% (27)	13.9% (21)	4% (6)
Trails	0% (0)	0% (0)	3.3% (5)	9.9% (15)	17.9% (27)	33.1% (50)	**35.8% (54)**
Volleyball courts	3.3% (5)	5.3% (8)	12.6% (19)	**50.3% (76)**	12.6% (19)	12.6% (19)	3.3% (5)
Target shooting sites	2.6% (4)	3.3% (5)	3.3% (5)	**74.2% (112)**	9.3% (14)	5.3% (8)	2% (3)
Nature park/areas	0.7% (1)	2.6% (4)	4.6% (7)	**41.7% (63)**	20.5% (31)	21.9% (33)	7.9% (12)

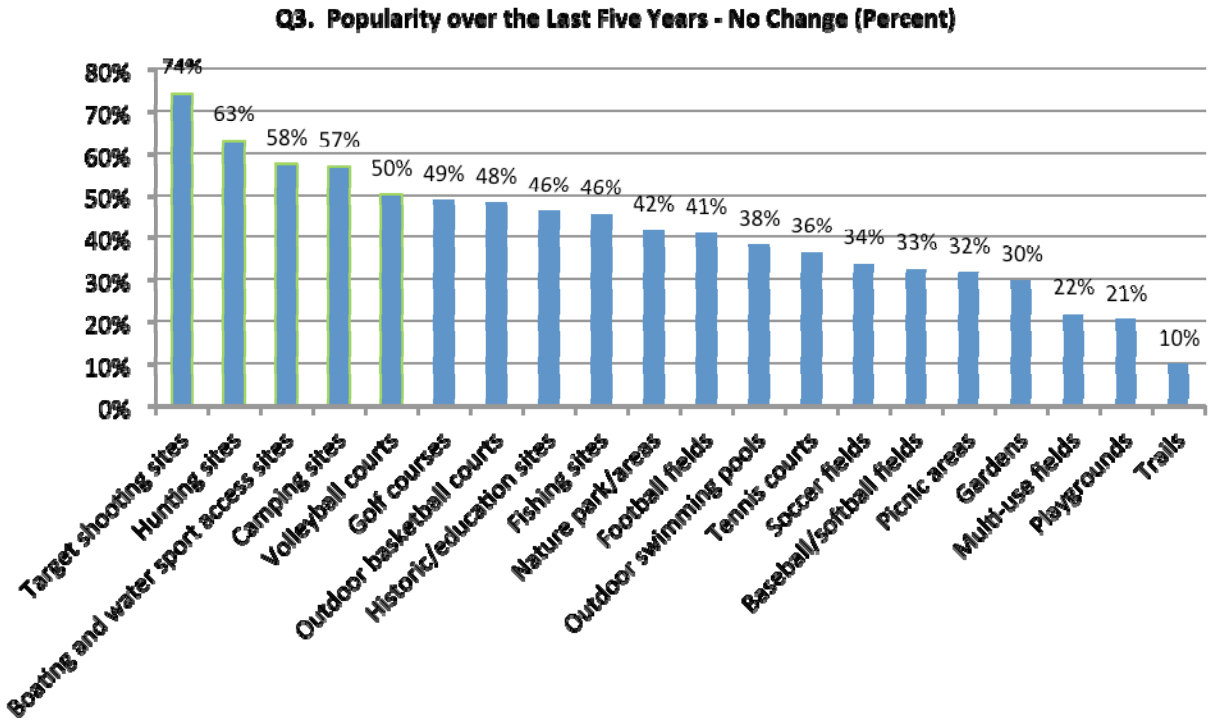
Popularity over the Last Five Years frequencies were sorted by the percentage of responses indicating "No Change" and sorted from high to low (Table RO3.1c and Chart RO3.1b).

- **Target shooting sites** (74.2%, n=112), **Hunting sites** (62.9%, n=95), **Golf courses** (57.6%, n=87), **Boating and water access sites** (57.6%, n=87), **Camping sites** (57%, n=86), and **Volleyball courts** (50.3%, 76) all had **50%** or more "No Change" responses, indicating that the popularity of those facilities over the last five years has remained the same.

Table RO3.1c. Q3. Popularity over the Last Five Years – Frequencies - No Change in Popularity

Facility Type	Decreased a Lot	Decreased	Decreased a Little	**No Change**	Increased a Little	Increased	Increased a Lot
Target shooting sites	2.6% (4)	3.3% (5)	3.3% (5)	**74.2% (112)**	9.3% (14)	5.3% (8)	2% (3)
Hunting sites	5.3% (8)	5.3% (8)	5.3% (8)	**62.9% (95)**	11.3% (17)	5.3% (8)	4.6% (7)
Boating and water sport access sites	3.3% (5)	2.6% (4)	4% (6)	**57.6% (87)**	17.2% (26)	9.3% (14)	6% (9)
Camping sites	3.3% (5)	4% (6)	7.3% (11)	**57% (86)**	12.6% (19)	9.3% (14)	6.6% (10)
Volleyball courts	3.3% (5)	5.3% (8)	12.6% (19)	**50.3% (76)**	12.6% (19)	12.6% (19)	3.3% (5)
Golf courses	3.3% (5)	6.6% (10)	10.6% (16)	**49% (74)**	17.2% (26)	10.6% (16)	2.6% (4)
Outdoor basketball courts	2% (3)	4.6% (7)	10.6% (16)	**48.3% (73)**	21.9% (33)	11.9% (18)	0.7% (1)
Historic/education sites	0.7% (1)	4.6% (7)	11.3% (17)	**46.4% (70)**	17.9% (27)	13.9% (21)	5.3% (8)
Fishing sites	1.3% (2)	4% (6)	5.3% (8)	**45.7% (69)**	17.2% (26)	15.2% (23)	11.3% (17)
Nature park/areas	0.7% (1)	2.6% (4)	4.6% (7)	**41.7% (63)**	20.5% (31)	21.9% (33)	7.9% (12)
Football fields	0.7% (1)	5.3% (8)	10.6% (16)	**41.1% (62)**	11.9% (18)	17.2% (26)	13.2% (20)
Outdoor swimming pools	4.6% (7)	3.3% (5)	6.6% (10)	**38.4% (58)**	17.2% (26)	19.2% (29)	10.6% (16)
Tennis courts	4.6% (7)	9.3% (14)	13.9% (21)	**36.4% (55)**	17.9% (27)	13.9% (21)	4% (6)
Soccer fields	1.3% (2)	3.3% (5)	4.6% (7)	**33.8% (51)**	17.2% (26)	21.2% (32)	18.5% (28)
Baseball/softball fields	0.7% (1)	3.3% (5)	13.9% (21)	**32.5% (49)**	17.9% (27)	19.2% (29)	12.6% (19)
Picnic areas	0% (0)	2% (3)	5.3% (8)	**31.8% (48)**	21.2% (32)	27.2% (41)	12.6% (19)
Gardens	2% (3)	3.3% (5)	5.3% (8)	**29.8% (45)**	20.5% (31)	19.9% (30)	19.2% (29)
Multi-use fields	1.3% (2)	2% (3)	6% (9)	**21.9% (33)**	28.5% (43)	25.2% (38)	15.2% (23)
Playgrounds	0.7% (1)	1.3% (2)	4% (6)	**20.5% (31)**	23.8% (36)	35.8% (54)	13.9% (21)
Trails	0% (0)	0% (0)	3.3% (5)	**9.9% (15)**	17.9% (27)	33.1% (50)	35.8% (54)

Chart RO3.1b.



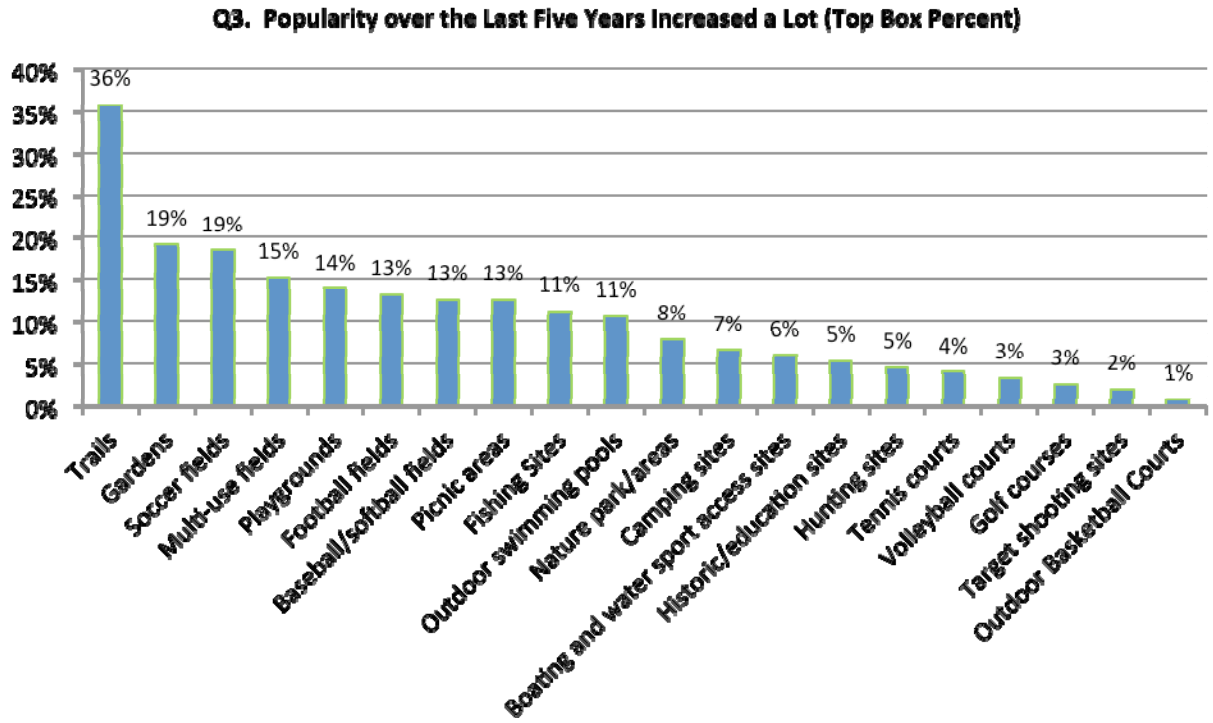
Popularity over the Last Five Years frequencies were sorted by the percentage of responses indicating "Increased a Lot" (i.e. popularity has increased a lot over the last five years) and sorted from high to low (Table RO3.1d and Chart RO3.1c).

- **Trails** had the highest top box percentage at **35.8%** (n=54), meaning that more than 1/3rd of respondents indicated that popularity for **Trails** has increased a lot in the in past five years. No other facility type received more than 19.2% "Much Higher" responses, a 16.6% difference, indicating that the popularity of **Trails** has increased a lot over the last five years, more than any other type of facility.
- **Gardens** (19.2%, n=29), **Soccer fields** (18.5%, n=28), and **Multi-use fields** (15.2%, n=23) all had top box percentages between **15%** and **20%**, indicating that the popularity of **Gardens**, **Soccer fields** and **Multi-use fields** has increased a lot over the past five years.
- **Playgrounds** (13.9%, n=21), **Football fields** (13.2%, n=20), **Baseball/softball fields** and **Picnic areas** (12.6%, n=19), and **Fishing sites** (11.3%, n=17) all had top box percentages between **10%** and **15%**, indicating that the popularity of **Playgrounds, Football fields**, **Baseball/softball fields** and **Picnic areas**, and **Fishing sites** has increased a lot, but not as much as the above mentioned facility types.

Table RO3.1d. Q3. Popularity over the Last Five Years – Frequencies – Popularity Increased a Lot (Top Box Percent)

Facility Type	Decreased a Lot	Decreased	Decreased a Little	No Change	Increased a Little	Increased	**Increased a Lot**
Trails	0% (0)	0% (0)	3.3% (5)	9.9% (15)	17.9% (27)	33.1% (50)	**35.8% (54)**
Gardens	2% (3)	3.3% (5)	5.3% (8)	29.8% (45)	20.5% (31)	19.9% (30)	**19.2% (29)**
Soccer fields	1.3% (2)	3.3% (5)	4.6% (7)	33.8% (51)	17.2% (26)	21.2% (32)	**18.5% (28)**
Multi-use fields	1.3% (2)	2% (3)	6% (9)	21.9% (33)	28.5% (43)	25.2% (38)	**15.2% (23)**
Playgrounds	0.7% (1)	1.3% (2)	4% (6)	20.5% (31)	23.8% (36)	35.8% (54)	**13.9% (21)**
Football fields	0.7% (1)	5.3% (8)	10.6% (16)	41.1% (62)	11.9% (18)	17.2% (26)	**13.2% (20)**
Baseball/softball fields	0.7% (1)	3.3% (5)	13.9% (21)	32.5% (49)	17.9% (27)	19.2% (29)	**12.6% (19)**
Picnic areas	0% (0)	2% (3)	5.3% (8)	31.8% (48)	21.2% (32)	27.2% (41)	**12.6% (19)**
Fishing sites	1.3% (2)	4% (6)	5.3% (8)	45.7% (69)	17.2% (26)	15.2% (23)	**11.3% (17)**
Outdoor swimming pools	4.6% (7)	3.3% (5)	6.6% (10)	38.4% (58)	17.2% (26)	19.2% (29)	**10.6% (16)**
Nature park/areas	0.7% (1)	2.6% (4)	4.6% (7)	41.7% (63)	20.5% (31)	21.9% (33)	**7.9% (12)**
Camping sites	3.3% (5)	4% (6)	7.3% (11)	57% (86)	12.6% (19)	9.3% (14)	**6.6% (10)**
Boating and water sport access sites	3.3% (5)	2.6% (4)	4% (6)	57.6% (87)	17.2% (26)	9.3% (14)	**6% (9)**
Historic/education sites	0.7% (1)	4.6% (7)	11.3% (17)	46.4% (70)	17.9% (27)	13.9% (21)	**5.3% (8)**
Hunting sites	5.3% (8)	5.3% (8)	5.3% (8)	62.9% (95)	11.3% (17)	5.3% (8)	**4.6% (7)**
Tennis courts	4.6% (7)	9.3% (14)	13.9% (21)	36.4% (55)	17.9% (27)	13.9% (21)	**4% (6)**
Volleyball courts	3.3% (5)	5.3% (8)	12.6% (19)	50.3% (76)	12.6% (19)	12.6% (19)	**3.3% (5)**
Golf courses	3.3% (5)	6.6% (10)	10.6% (16)	49% (74)	17.2% (26)	10.6% (16)	**2.6% (4)**
Target shooting sites	2.6% (4)	3.3% (5)	3.3% (5)	74.2% (112)	9.3% (14)	5.3% (8)	**2% (3)**
Outdoor basketball courts	2% (3)	4.6% (7)	10.6% (16)	48.3% (73)	21.9% (33)	11.9% (18)	**0.7% (1)**

Chart RO3.1c.



Cross-tabs – Urban or Rural/Popularity Last Five Years

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **popularity over the last five years**, and mean scores between urban and rural areas were tested for significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference between rural and urban popularity over the last five years and H_1 = difference in rural and urban popularity over the last five years (Table RO3.1e and Table RO3.1f).

- **Picnic areas** (p=.018) and **Tennis courts** (p=0.040) were the only facility types to show significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =1.12, n=136) scored higher than **Rural** respondents ($\bar{x}$ =0.33, n=15), indicating that the popularity increase of **Picnic areas** over the last five years has been significantly higher in urban areas than rural areas.
    - **Urban** respondents ($\bar{x}$ =0.19, n=136) scored higher than **Rural** respondents ($\bar{x}$ =-0.60, n=15), indicating that the popularity increase of **Tennis courts** over the last five years has been higher in **urban** areas - remaining the same to slightly increasing – while slightly decreasing in popularity in **rural** areas.
- **Outdoor swimming pools** (p=0.063) was the only other facility type to show significant differences between urban and rural at the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =0.68, n=136) scored higher than **Rural** respondents ($\bar{x}$ =-0.37, n=15), indicating that the popularity increase of **Outdoor swimming pools** over the last five years has been higher in **urban** areas - remaining the same to slightly increasing – while very slightly decreasing or not changing in popularity in **rural** areas.

Cross-tabs – Area Code/Popularity Last Five Years

Respondents were classified by **area code**, cross tabulated by **popularity over the last five years**, sorted high to low by overall mean (Table RO3.1a), and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in popularity over the last five years and H_1 = difference in popularity over the last five years (Table RO3.1g).

- **Southwest (417)** (n=18) area code had the most statistically significant differences, as compared to other regions, with 13 differences among seven facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Gardens** ($\bar{x}$ =1.0, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.7, n=18) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33) and **Kansas City-West** ($\bar{x}$ =0.6, n=18).
    - **Nature parks/areas** ($\bar{x}$ =0.8, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.3, n=18) compared to **Northwest (660)** ($\bar{x}$ =0.1, n=8) and **Kansas City-West (816)** ($\bar{x}$ =0.5, n=8).
    - **Baseball/softball fields** ($\bar{x}$ =0.7, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.3, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34).
    - **Boating and water sport access sites** ($\bar{x}$ =0.3, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.9, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =0.2, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.3, n=33), and **Kansas City-West** ($\bar{x}$ =0.1, n=41).
    - **Camping sites** ($\bar{x}$ =0.3, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.7, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.3, n=33).
    - **Golf courses** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.5, n=18) compared to **East-Central (636)** ($\bar{x}$ =-0.4, n=17).
    - **Tennis courts** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.8, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.1, n=34), and **Northwest (660)** ($\bar{x}$ =-0.4, n=8).
- **Northwest (660)** (n=8) area code had 10 statistically significant differences, as compared to other regions, among five facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Soccer fields** ($\bar{x}$ =1.0, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.9, n=8) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33).
    - **Outdoor swimming pools** ($\bar{x}$ =0.6, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.6, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =0.4, n=34) and **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.3, n=33).
    - **Camping sites** ($\bar{x}$ =0.3, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.1, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34) and **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.3, n=33).
    - **Outdoor basketball courts** ($\bar{x}$ =0.2, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =0.5, n=8) compared to **Southwest (417)** ($\bar{x}$ =0.0, n=18).
    - **Golf courses** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.0, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34) and **East-Central (636)** ($\bar{x}$ =1.1, n=17).
    - **Target shooting sites** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.6, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.2, n=34) and **Kansas City-West (816)** ($\bar{x}$ =0.0, n=34).
- **East-Central (636)** (n=17) area code had eight statistically significant differences, as compared to other regions, among five facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).

- **Multi-use fields** ($\bar{x}$ =1.1, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.7, n=17) compared to **Southwest (417)** ($\bar{x}$ =0.9, n=18).
- **Soccer fields** ($\bar{x}$ =1.0, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.4, n=17) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33).
- **Baseball/softball fields** ($\bar{x}$ =0.7, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.1, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34).
- **Historic/education sites** ($\bar{x}$ =0.4, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =0.9, n=17) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.1, n=33), and **Kansas City-West (816)** ($\bar{x}$ =0.2, n=41).
- **Camping sites** ($\bar{x}$ =0.3, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.1, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =-0.3, n=33), and **Kansas City-West (816)** ($\bar{x}$ =0.2, n=41).

- **Northeast-Central-Southeast (573)** (n=33) had five statistically significant differences, as compared to other regions, among three facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
  - **Baseball/softball fields** ($\bar{x}$ =0.7, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.8, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34).
  - **Football fields** ($\bar{x}$ =0.6, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =1.1, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =0.2, n=34) and **Southwest (417)** ($\bar{x}$ =0.3, n=18).
  - **Target shooting sites** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.3, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.2, n=34) and **Kansas City-West (816)** ($\bar{x}$ =0.0, n=41).
- **St. Louis-East (314)** (n=34) had two statistically significant differences, as compared to other regions, among one facility ($p < 0.05 = H_0$ rejected and H_1 accepted).
  - **Gardens** ($\bar{x}$ =1.0, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =1.4, n=18) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33) and **Kansas City-West** ($\bar{x}$ =0.6, n=18).
- **Kansas City-West (816)** (n=41) had one statistically significant difference, as compared to other regions, among one facility type ($p < 0.05 = H_0$ rejected and H_1 accepted).
  - **Baseball/softball fields** ($\bar{x}$ =0.7, n=151) scored significantly higher **Kansas City-West (816)** ($\bar{x}$ =0.8, n=41) compared to **St. Louis-East (314)** ($\bar{x}$ =0.0, n=34).

Research Objective 3.2 (RO3.2)

- **Determine the popularity of local outdoor recreation facilities in Missouri in the next five years.**

All respondents were asked to rate the popularity of local facilities in the last five years using an ordinal scale from -3 to 3, where -3 = "Popularity decreasing a lot," -2 = "Popularity decreasing," -1 = "Popularity decreasing a little," 0 = "Popularity not changing," 1 = "Popularity increasing a little," 2 = "Popularity increasing," and 3 = "Popularity increasing a lot". All respondents provided valid answers and there were no missing values.

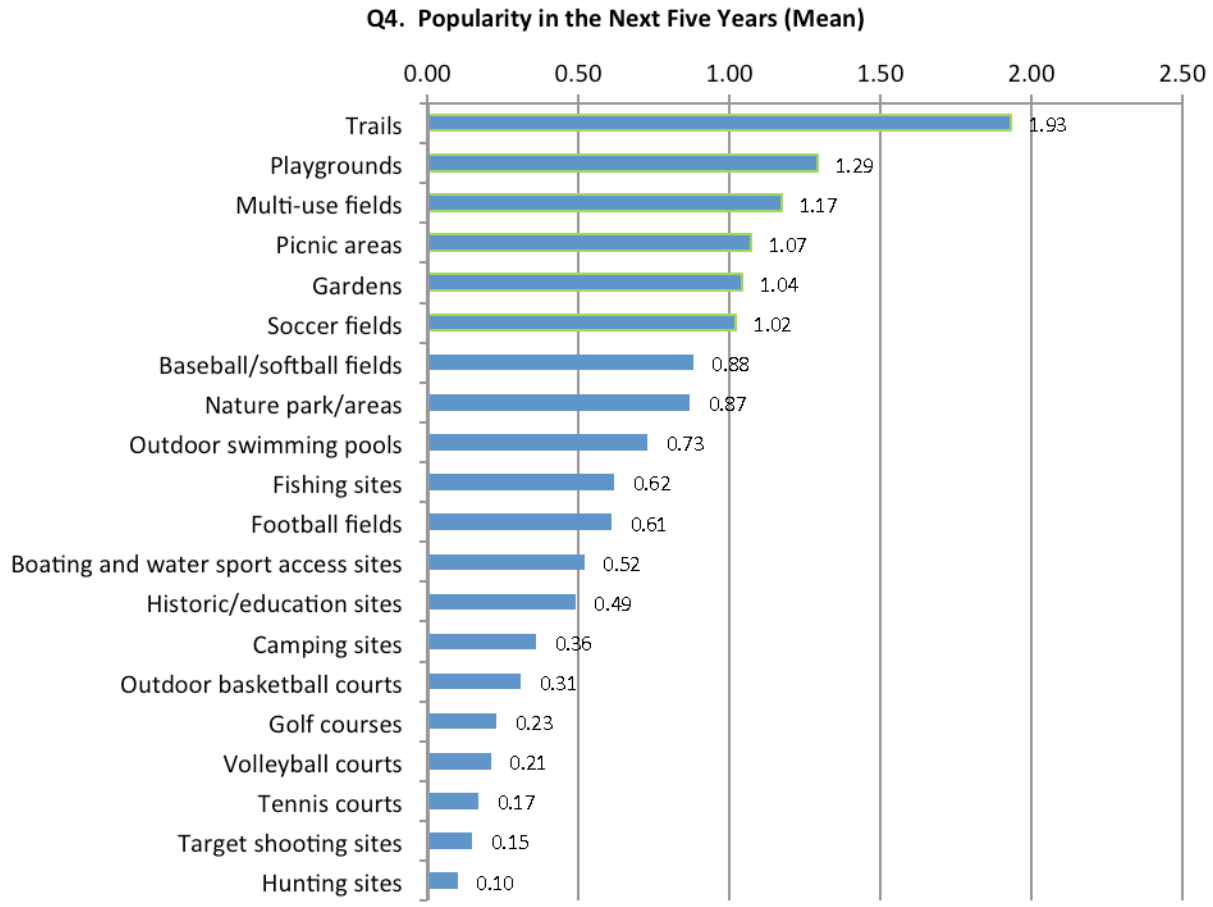
Mean scores were computed for all facility types and sorted from high to low (Table RO3.2a and Chart RO3.2a).

- **Trails** ($\bar{x}$ =1.93), **Playgrounds** ($\bar{x}$ =1.29), **Multi-use fields** ($\bar{x}$ =1.17), **Picnic areas** ($\bar{x}$ =1.07), **Gardens** ($\bar{x}$ =1.04), and **Soccer fields** ($\bar{x}$ =1.02) all had mean scores between **1.0** and **2.0**, indicating that popularity has increased a little or increased for those facility types over the last five years.
    - **Trails** had the lowest standard deviation at **1.102** indicating low variance among **Trail** popularity.
- All other facility types had mean scores between **0.0** and **1.0.**
    - **Target shooting sites** was the only facility type with standard deviation less than 1.0, at **0.976,** indicating low variance among **Target shooting site** popularity.

Table RO3.2a. Statistics – Q4. Popularity in the next five years

Facility Type	N	**Mean**	Std. Deviation	Std. Error Mean
Trails	151	**1.93**	1.102	0.090
Playgrounds	151	**1.29**	1.187	0.097
Multi-use fields	151	**1.17**	1.267	0.103
Picnic areas	151	**1.07**	1.147	0.093
Gardens	151	**1.04**	1.371	0.112
Soccer fields	151	**1.02**	1.334	0.109
Baseball/softball fields	151	**0.88**	1.171	0.095
Nature park/areas	151	**0.87**	1.229	0.100
Outdoor swimming pools	151	**0.73**	1.395	0.114
Fishing sites	151	**0.62**	1.259	0.102
Football fields	151	**0.61**	1.296	0.105
Boating and water sport access sites	151	**0.52**	1.199	0.098
Historic/education sites	151	**0.49**	1.113	0.091
Camping sites	151	**0.36**	1.175	0.096
Outdoor basketball courts	151	**0.31**	1.008	0.082
Golf courses	151	**0.23**	1.092	0.089
Volleyball courts	151	**0.21**	1.145	0.093
Tennis courts	151	**0.17**	1.264	0.103
Target shooting sites	151	**0.15**	0.976	0.079
Hunting sites	151	**0.10**	1.187	0.097

Chart RO3.2a.



Frequencies and percentages were tallied for all respondents (Table RO3.2b).

- **Trails** was the only facility type that had a higher percentage of "Increasing a Lot" responses than any other response, with **38.4%** (n=58) of respondents indicating that the popularity of **Trails** will increase a lot in the next five years.
- **Playgrounds** (37.7%, n=57), **Multi-use fields** (32.5%, n=49), **Picnic Areas** (30.5%, n=46) all had a larger percentage of "Increasing" responses than any other response, indicating that the popularity of **Playgrounds, Multi-use fields,** and **Picnic areas** will increase a lot over the next five years.

Table RO3.2b. Q4. Popularity in the Next Five Years – Frequencies

Facility Type	Decreasing a Lot	Decreasing	Decreasing a Little	No Change	Increasing a Little	Increasing	Increasing a Lot
Baseball/softball fields	0% (0)	2.6% (4)	4.6% (7)	**35.1% (53)**	27.2% (41)	20.5% (31)	9.9% (15)
Outdoor basketball courts	2% (3)	2% (3)	8.6% (13)	**50.3% (76)**	25.2% (38)	11.3% (17)	0.7% (1)
Boating and water sport access sites	3.3% (5)	0.7% (1)	4% (6)	**51.7% (78)**	20.5% (31)	13.2% (20)	6.6% (10)
Camping sites	2.6% (4)	2.6% (4)	5.3% (8)	**56.3% (85)**	17.2% (26)	9.9% (15)	6% (9)
Fishing sites	2% (3)	4% (6)	3.3% (5)	**45% (68)**	19.2% (29)	19.9% (30)	6.6% (10)
Football fields	0.7% (1)	4% (6)	7.3% (11)	**48.3% (73)**	11.3% (17)	18.5% (28)	9.9% (15)
Gardens	2% (3)	2% (3)	4% (6)	**29.8% (45)**	24.5% (37)	19.9% (30)	17.9% (27)
Golf courses	2.6% (4)	4% (6)	7.9% (12)	**52.3% (79)**	19.9% (30)	12.6% (19)	0.7% (1)
Historic/education sites	0.7% (1)	2.6% (4)	7.9% (12)	**48.3% (73)**	21.9% (33)	13.2% (20)	5.3% (8)
Hunting sites	4.6% (7)	4% (6)	5.3% (8)	**64.9% (98)**	9.9% (15)	6.6% (10)	4.6% (7)
Multi-use fields	1.3% (2)	2% (3)	3.3% (5)	24.5% (37)	23.2% (35)	**32.5% (49)**	13.2% (20)
Picnic areas	0% (0)	2% (3)	4.6% (7)	27.2% (41)	26.5% (40)	**30.5% (46)**	9.3% (14)
Playgrounds	0.7% (1)	2% (3)	3.3% (5)	18.5% (28)	25.2% (38)	**37.7% (57)**	12.6% (19)
Soccer fields	1.3% (2)	2% (3)	4.6% (7)	**33.8% (51)**	16.6% (25)	27.2% (41)	14.6% (22)
Outdoor swimming pools	3.3% (5)	1.3% (2)	7.3% (11)	**38.4% (58)**	19.2% (29)	17.9% (27)	12.6% (19)
Tennis courts	3.3% (5)	7.3% (11)	11.3% (17)	**43.7% (66)**	16.6% (25)	17.2% (26)	0.7% (1)
Trails	0% (0)	0% (0)	2% (3)	12.6% (19)	14.6% (22)	32.5% (49)	**38.4% (58)**
Volleyball courts	2.6% (4)	4.6% (7)	7.3% (11)	**57% (86)**	15.2% (23)	9.9% (15)	3.3% (5)
Target shooting sites	2.6% (4)	2.6% (4)	3.3% (5)	**72.2% (109)**	9.3% (14)	7.9% (12)	2% (3)
Nature park/areas	0.7% (1)	2% (3)	4.6% (7)	**39.7% (60)**	17.9% (27)	25.2% (38)	9.9% (15)

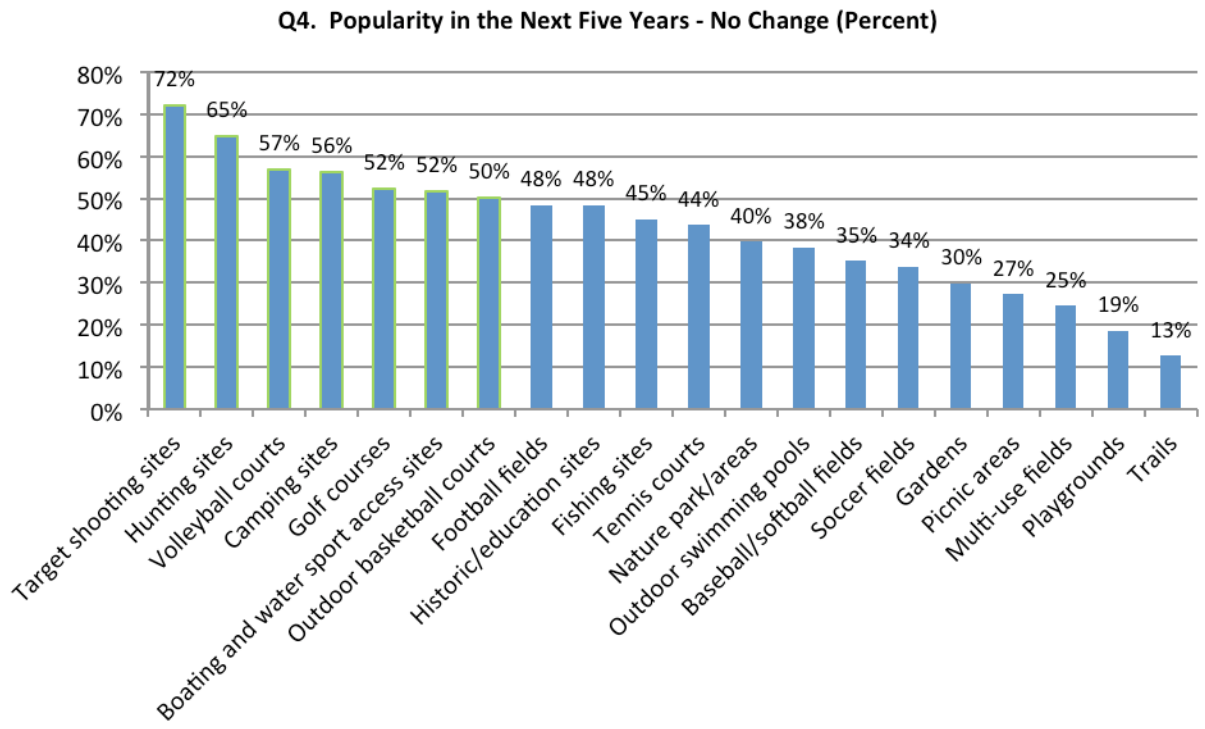
Popularity in the Next Five Years frequencies were sorted by the percentage of responses indicating “No Change” and sorted from high to low (Table RO3.2c and Chart RO3.2b).

- **Target shooting sites** (72.2%, n=109), **Hunting sites** (64.9%, n=98), **Volleyball courts** (57%, 86), **Camping sites** (56.3%, n=85), **Golf courses** (52.3%, n=79), **Boating and water access sites** (51.7%, n=78), and **Outdoor basketball courts** (50.3%, n=76) all had **50%** of more "No Change" responses, indicating that the popularity of those facilities will remain the same over the next five years.

Table RO3.2c. Q4. Popularity in the Next Five Years – Frequencies – No Change

Facility Type	Decreasing a Lot	Decreasing	Decreasing a Little	**No Change**	Increasing a Little	Increasing	Increasing a Lot
Target shooting sites	2.6% (4)	2.6% (4)	3.3% (5)	**72.2% (109)**	9.3% (14)	7.9% (12)	2% (3)
Hunting sites	4.6% (7)	4% (6)	5.3% (8)	**64.9% (98)**	9.9% (15)	6.6% (10)	4.6% (7)
Volleyball courts	2.6% (4)	4.6% (7)	7.3% (11)	**57% (86)**	15.2% (23)	9.9% (15)	3.3% (5)
Camping sites	2.6% (4)	2.6% (4)	5.3% (8)	**56.3% (85)**	17.2% (26)	9.9% (15)	6% (9)
Golf courses	2.6% (4)	4% (6)	7.9% (12)	**52.3% (79)**	19.9% (30)	12.6% (19)	0.7% (1)
Boating and water sport access sites	3.3% (5)	0.7% (1)	4% (6)	**51.7% (78)**	20.5% (31)	13.2% (20)	6.6% (10)
Outdoor basketball courts	2% (3)	2% (3)	8.6% (13)	**50.3% (76)**	25.2% (38)	11.3% (17)	0.7% (1)
Football fields	0.7% (1)	4% (6)	7.3% (11)	**48.3% (73)**	11.3% (17)	18.5% (28)	9.9% (15)
Historic/education sites	0.7% (1)	2.6% (4)	7.9% (12)	**48.3% (73)**	21.9% (33)	13.2% (20)	5.3% (8)
Fishing sites	2% (3)	4% (6)	3.3% (5)	**45% (68)**	19.2% (29)	19.9% (30)	6.6% (10)
Tennis courts	3.3% (5)	7.3% (11)	11.3% (17)	**43.7% (66)**	16.6% (25)	17.2% (26)	0.7% (1)
Nature park/areas	0.7% (1)	2% (3)	4.6% (7)	**39.7% (60)**	17.9% (27)	25.2% (38)	9.9% (15)
Outdoor swimming pools	3.3% (5)	1.3% (2)	7.3% (11)	**38.4% (58)**	19.2% (29)	17.9% (27)	12.6% (19)
Baseball/softball fields	0% (0)	2.6% (4)	4.6% (7)	**35.1% (53)**	27.2% (41)	20.5% (31)	9.9% (15)
Soccer fields	1.3% (2)	2% (3)	4.6% (7)	**33.8% (51)**	16.6% (25)	27.2% (41)	14.6% (22)
Gardens	2% (3)	2% (3)	4% (6)	**29.8% (45)**	24.5% (37)	19.9% (30)	17.9% (27)
Picnic areas	0% (0)	2% (3)	4.6% (7)	**27.2% (41)**	26.5% (40)	30.5% (46)	9.3% (14)
Multi-use fields	1.3% (2)	2% (3)	3.3% (5)	**24.5% (37)**	23.2% (35)	32.5% (49)	13.2% (20)
Playgrounds	0.7% (1)	2% (3)	3.3% (5)	**18.5% (28)**	25.2% (38)	37.7% (57)	12.6% (19)
Trails	0% (0)	0% (0)	2% (3)	**12.6% (19)**	14.6% (22)	32.5% (49)	38.4% (58)

Chart RO3.2b.



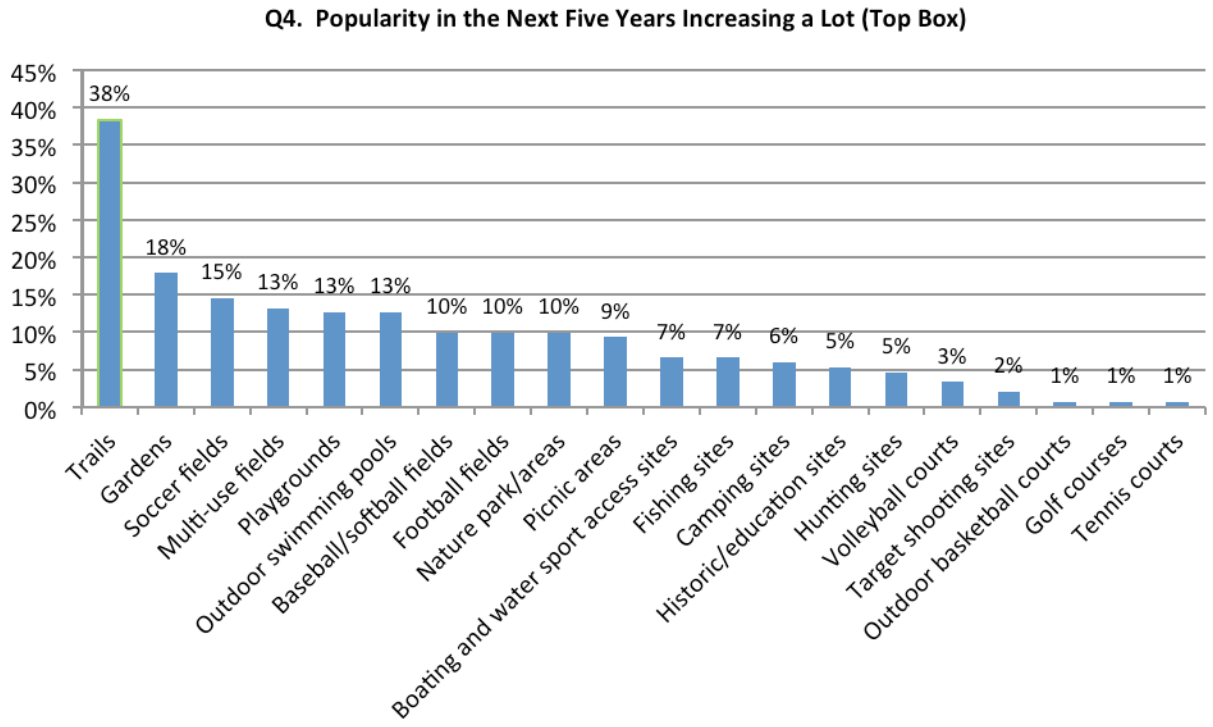
Popularity in the Next Five Years frequencies were sorted by the percentage of responses indicating "Increasing a Lot" (i.e. popularity is predicted to increase a lot over the next five years) and sorted from high to low (Table RO3.2d and Chart RO3.2c).

- **Trails** had the highest top box percentage at **38.4%** (n=58), meaning that more than 1/3rd of respondents indicated that the popularity of **Trails** will increase a lot in the in past five years. No other facility type received more than 17.9% "Much Higher" responses, a 20.5% difference, more than two times as many responses, indicating that the popularity of **Trails** is increasing more than any other type of facility.
- **Gardens** (17.9%, n=27) had a top box percentage between **15%** and **20%**, indicating that the popularity of **Gardens** will increase a lot over the next five years.
- **Soccer fields** (17.9%, n=27), **Multi-use fields** (17.9%, n=27), **Playgrounds** (17.9%, n=27), and **Outdoor swimming pools** (17.9%, n=27) all had top box percentages between **10%** and **15%**, indicating that the popularity of **Soccer fields**, **Multi-use fields**, **Playgrounds** and **Outdoor swimming pools** is increasing but not as much as **Trails** and **Gardens**.

Table RO3.2d. Q4. Popularity in the Next Five Years – Frequencies – Increasing a Lot (Top Box Percent)

Facility Type	Decreasing a Lot	Decreasing	Decreasing a Little	No Change	Increasing a Little	Increasing	**Increasing a Lot**
Trails	0% (0)	0% (0)	2% (3)	12.6% (19)	14.6% (22)	32.5% (49)	**38.4% (58)**
Gardens	2% (3)	2% (3)	4% (6)	29.8% (45)	24.5% (37)	19.9% (30)	**17.9% (27)**
Soccer fields	1.3% (2)	2% (3)	4.6% (7)	33.8% (51)	16.6% (25)	27.2% (41)	**14.6% (22)**
Multi-use fields	1.3% (2)	2% (3)	3.3% (5)	24.5% (37)	23.2% (35)	32.5% (49)	**13.2% (20)**
Playgrounds	0.7% (1)	2% (3)	3.3% (5)	18.5% (28)	25.2% (38)	37.7% (57)	**12.6% (19)**
Outdoor swimming pools	3.3% (5)	1.3% (2)	7.3% (11)	38.4% (58)	19.2% (29)	17.9% (27)	**12.6% (19)**
Baseball/softball fields	0% (0)	2.6% (4)	4.6% (7)	35.1% (53)	27.2% (41)	20.5% (31)	**9.9% (15)**
Football fields	0.7% (1)	4% (6)	7.3% (11)	48.3% (73)	11.3% (17)	18.5% (28)	**9.9% (15)**
Nature park/areas	0.7% (1)	2% (3)	4.6% (7)	39.7% (60)	17.9% (27)	25.2% (38)	**9.9% (15)**
Picnic areas	0% (0)	2% (3)	4.6% (7)	27.2% (41)	26.5% (40)	30.5% (46)	**9.3% (14)**
Boating and water sport access sites	3.3% (5)	0.7% (1)	4% (6)	51.7% (78)	20.5% (31)	13.2% (20)	**6.6% (10)**
Fishing sites	2% (3)	4% (6)	3.3% (5)	45% (68)	19.2% (29)	19.9% (30)	**6.6% (10)**
Camping sites	2.6% (4)	2.6% (4)	5.3% (8)	56.3% (85)	17.2% (26)	9.9% (15)	**6% (9)**
Historic/education sites	0.7% (1)	2.6% (4)	7.9% (12)	48.3% (73)	21.9% (33)	13.2% (20)	**5.3% (8)**
Hunting sites	4.6% (7)	4% (6)	5.3% (8)	64.9% (98)	9.9% (15)	6.6% (10)	**4.6% (7)**
Volleyball courts	2.6% (4)	4.6% (7)	7.3% (11)	57% (86)	15.2% (23)	9.9% (15)	**3.3% (5)**
Target shooting sites	2.6% (4)	2.6% (4)	3.3% (5)	72.2% (109)	9.3% (14)	7.9% (12)	**2% (3)**
Outdoor basketball courts	2% (3)	2% (3)	8.6% (13)	50.3% (76)	25.2% (38)	11.3% (17)	**0.7% (1)**
Golf courses	2.6% (4)	4% (6)	7.9% (12)	52.3% (79)	19.9% (30)	12.6% (19)	**0.7% (1)**
Tennis courts	3.3% (5)	7.3% (11)	11.3% (17)	43.7% (66)	16.6% (25)	17.2% (26)	**0.7% (1)**

Chart RO3.2c.



Cross-tabs – Urban or Rural/Popularity in Next Five Years

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **popularity in the next five years**, and urban and rural means scores were tested for significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in popularity in the next five years between urban and rural areas and H_1 = difference in popularity in the next five years between urban and rural areas (Table RO3.2e and Table RO3.2f).

- **Baseball/softball fields** (0=.032) and **Picnic areas** (p=.032) were the only facility types to show significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =0.95, n=136) scored higher than **Rural** respondents ($\bar{x}$ =0.27, n=15) for **Baseball/softball fields**, indicating that the local demand for **Baseball/softball fields** is significantly higher in urban areas than rural areas.
    - **Urban** respondents ($\bar{x}$ =1.13, n=136) scored higher than **Rural** respondents ($\bar{x}$ =0.47, n=15) for **Picnic areas**, indicating that the local demand for **Picnic areas** is significantly higher in urban areas than rural areas.
- **Trails** (p=0.088) was the only other facility type to show significant differences between urban and rural at the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =1.98, n=136) scored higher than **Rural** respondents ($\bar{x}$ =1.47, n=15), indicating that the local demand for **Trails** is significantly higher in urban areas than rural areas.

Cross-tabs – Area Code/Popularity in Next Five Years

Respondents were classified by **area code**, cross tabulated by **popularity in the next five years**, sorted high to low by overall mean (Table 4a), and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in popularity over the next five years and H_1 = different levels of popularity in the next five years (Table RO3.2g).

- **Southwest (417)** (n=18) area code had nine statistically significant differences, as compared to other regions, among six facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Gardens** ($\bar{x}$ =1.0, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.9, n=18) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33) and **Kansas City-West (816)** ($\bar{x}$ =0.6, n=41).
    - **Baseball/softball fields** ($\bar{x}$ =0.9, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.4, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =0.5, n=34) and **East-Central (636)** ($\bar{x}$ =0.6, n=17).
    - **Nature parks/areas** ($\bar{x}$ =0.9, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.4, n=8) compared to **Northwest (660)** ($\bar{x}$ =0.2, n=8) and **Kansas City-West (816)** ($\bar{x}$ =0.6, n=41).
    - **Camping sites** ($\bar{x}$ =0.4, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.7, n=8) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.0, n=33).
    - **Target shooting sites** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =0.4, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.1, n=34).
    - **Hunting sites** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =1.4, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.1, n=34).
- **East-Central (636)** (n=17) area code had the second most statistically significant differences, as compared to other regions, with six differences among three facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Multi-use fields** ($\bar{x}$ =1.2, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.6, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.9, n=34).
    - **Historic/education sites** ($\bar{x}$ =0.5, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.1, n=17) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.3, n=33), and **Northwest (660)** ($\bar{x}$ =-0.1, n=8).
    - **Camping sites** ($\bar{x}$ =0.4, n=151) scored significantly higher in **East-Central (636)** ($\bar{x}$ =1.1, n=17) compared to **St. Louis-East (314)** ($\bar{x}$ =0.2, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.0, n=33), and **Kansas City-West** ($\bar{x}$ =0.2, n=41).
- **St. Louis-East (314)** (n=34) had three statistically significant differences, as compared to other regions, among two facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Gardens** ($\bar{x}$ =1.0, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =1.4, n=34) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.6, n=33) and **Kansas City-West (816)** ($\bar{x}$ =0.6, n=41).
    - **Nature parks/areas** ($\bar{x}$ =0.9, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =1.2, n=34) compared to **Kansas City-West (816)** ($\bar{x}$ =0.6, n=41).
- **Northeast-Central-Southeast (573)** (n=33) had three statistically significant differences, as compared to other regions, among two facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Football fields** ($\bar{x}$ =0.9, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =1.1, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =0.1, n=34) and **Southwest (417)** ($\bar{x}$ =0.3, n=18).

    - **Target shooting sites** ($\bar{x}$ =0.1, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.4, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =-0.1, n=34).
- **Northwest (660)** (n=8) had three statistically significant differences, as compared to other regions, among two facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Gardens** ($\bar{x}$ =1.0, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.6, n=8) compared to **Kansas City-West (816)** ($\bar{x}$ =0.6, n=41).
    - **Camping sites** ($\bar{x}$ =0.4, n=151) scored significantly higher in **Northwest (660)** ($\bar{x}$ =1.0, n=8) compared to **St. Louis-East (314)** ($\bar{x}$ =0.2, n=34), **Northeast-Central-Southeast (573)** ($\bar{x}$ =0.0, n=33), and **Kansas City-West** ($\bar{x}$ =0.2, n=41).
- **Kansas City-West (816)** (n=41) had two statistically significant differences, as compared to other regions, among two facility types ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Baseball/softball fields** ($\bar{x}$ =0.9, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =1.1, n=41) compared to **St. Louis-East (314)** ($\bar{x}$ =0.5, n=34).
    - **Football fields** ($\bar{x}$ =0.9, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =0.8, n=41) compared to **St. Louis-East (314)** ($\bar{x}$ =0.1, n=34).

Research Objective 3.3 (RO3.3)

- **Determine which outdoor recreation activities in Missouri are popular among different age ranges.**

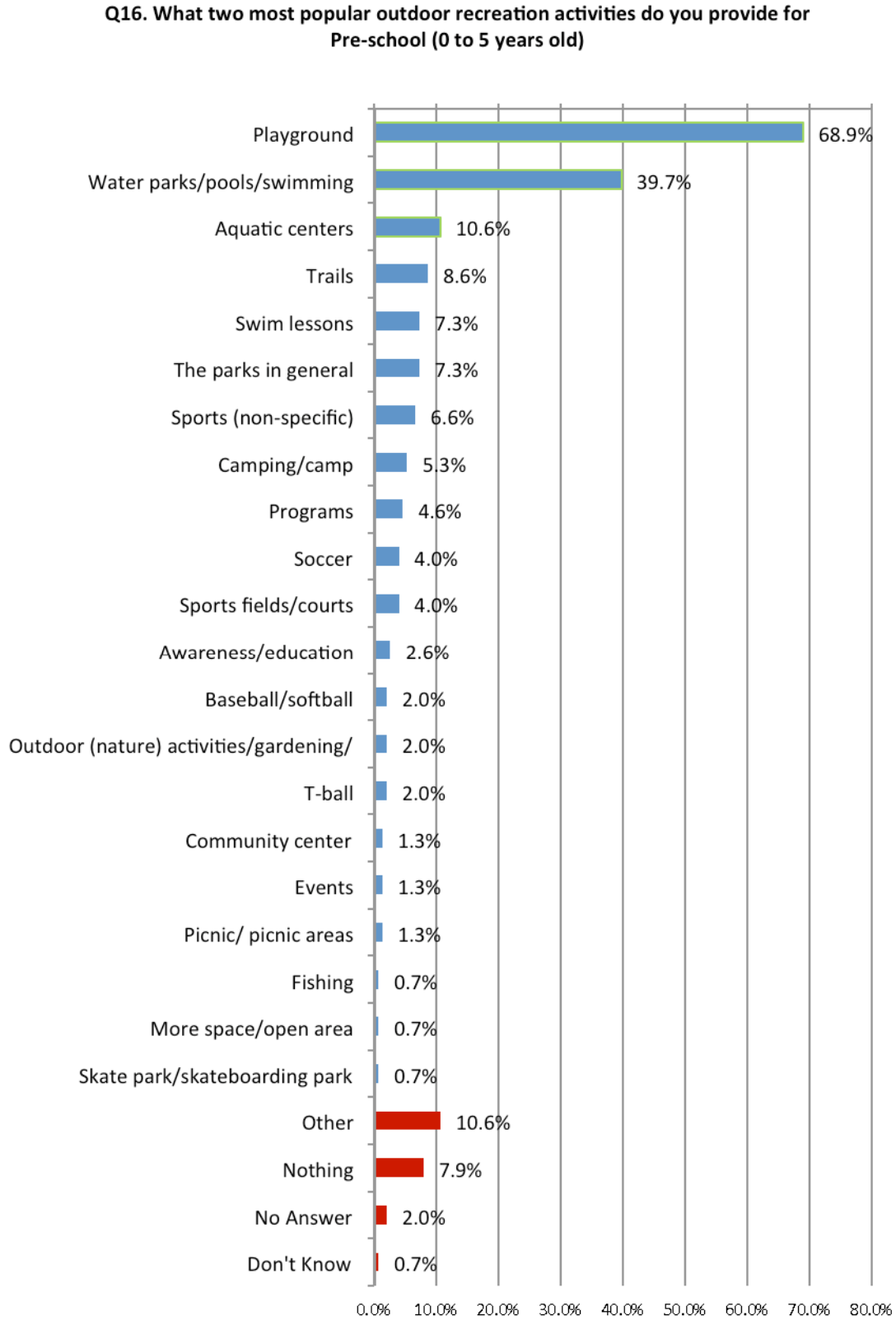
Respondents were asked what the two most popular outdoor recreation activities they provide for different age ranges. For each age range, the results were code, tallied, and sorted from high to low by frequency (Table RO3.3a – Table RO3.3f and Chart RO3.3a – Chart RO3.3f).

- **Pre-school (0 to 5 years old)**
  - **Playground** (68.9%, n=104) was mentioned by more than **65%** of respondents.
  - **Water parks/pools/swimming** (39.7%, n=60) was mentioned by more than **39.7%** of respondents.
  - **Aquatic centers** (10.6%, n=16) was mentioned by more than **10%** of respondents.

Table RO3.3a. Q16_1 Frequencies – Pre-school (0 to 5 years old)

Code	Response	Responses		Percent of Cases
		N	Percent	
24	Playground	104	34.00%	68.90%
20	Water parks/pools/swimming	60	19.60%	39.70%
57	Aquatic centers	16	5.20%	10.60%
28	Trails	13	4.20%	8.60%
62	Swim lessons	11	3.60%	7.30%
19	The parks in general	11	3.60%	7.30%
59	Sports (non-specific)	10	3.30%	6.60%
41	Camping/camp	8	2.60%	5.30%
65	Programs	7	2.30%	4.60%
32	Soccer	6	2.00%	4.00%
21	Sports fields/courts	6	2.00%	4.00%
35	Awareness/education	4	1.30%	2.60%
29	Baseball/softball	3	1.00%	2.00%
43	Outdoor (nature) activities/gardening/botanical	3	1.00%	2.00%
68	T-ball	3	1.00%	2.00%
16	Community center	2	0.70%	1.30%
47	Events	2	0.70%	1.30%
58	Picnic/ picnic areas	2	0.70%	1.30%
101	Fishing	1	0.30%	0.70%
23	More space/open area	1	0.30%	0.70%
10	Skate park/skateboarding park	1	0.30%	0.70%
99	Other	16	5.20%	10.60%
96	Nothing	12	3.90%	7.90%
97	No Answer	3	1.00%	2.00%
98	Don't Know	1	0.30%	0.70%
	Total	306	100.00%	202.60%

Chart RO3.3a


Q16. What two most popular outdoor recreation activities do you provide for Pre-school (0 to 5 years old)
Playground 68.9%
Water parks/pools/swimming 39.7%
Aquatic centers 10.6%
Trails 8.6%
Swim lessons 7.3%
The parks in general 7.3%
Sports (non-specific) 6.6%
Camping/camp 5.3%
Programs 4.6%
Soccer 4.0%
Sports fields/courts 4.0%
Awareness/education 2.6%
Baseball/softball 2.0%
Outdoor (nature) activities/gardening/ 2.0%
T-ball 2.0%
Community center 1.3%
Events 1.3%
Picnic/ picnic areas 1.3%
Fishing 0.7%
More space/open area 0.7%
Skate park/skateboarding park 0.7%
Other 10.6%
Nothing 7.9%
No Answer 2.0%
Don't Know 0.7%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0%

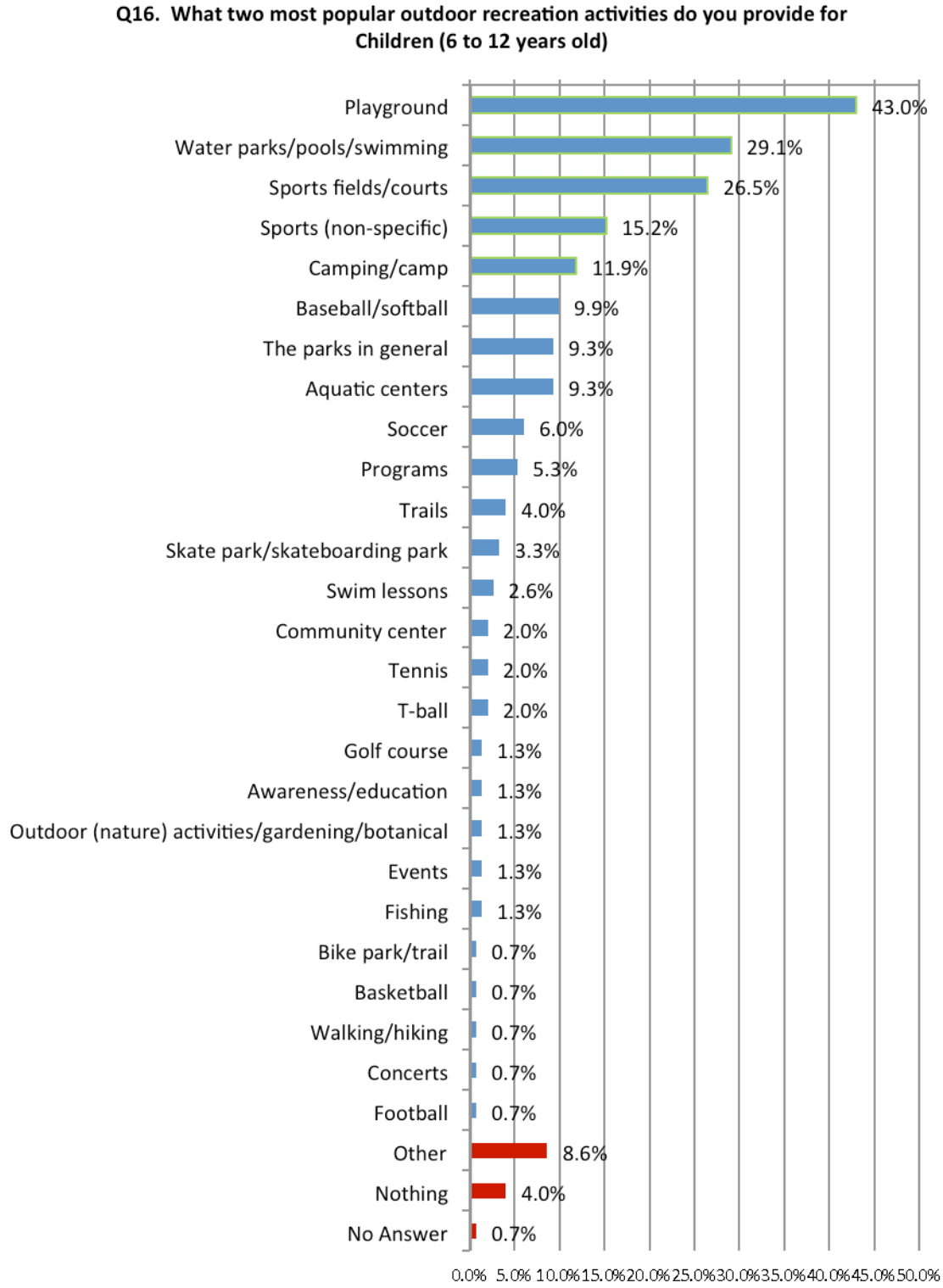
Children (6 to 12 years old)

- **Playground** (43.0%, n=65) was mentioned by more than **40%** of respondents.
- **Water parks/pools/swimming** (29.1%, n=44) and **Sports fields/courts** (26.5%, n=40) were both mentioned by more than **25%** of respondents.
- **Sports (non-specific)** (15.2%, n=23) was mentioned by more than **15%** of respondents.
- **Camping/camp** (11.9%, n=18) was mentioned by more than **10%** of respondents.

Table RO3.3b. Q16_2 Frequencies – Children (6 to 12 years old)

Code	Response	Responses		Percent of Cases
		N	Percent	
24	Playground	65	21.00%	43.00%
20	Water parks/pools/swimming	44	14.20%	29.10%
21	Sports fields/courts	40	12.90%	26.50%
59	Sports (non-specific)	23	7.40%	15.20%
41	Camping/camp	18	5.80%	11.90%
29	Baseball/softball	15	4.90%	9.90%
19	The parks in general	14	4.50%	9.30%
57	Aquatic centers	14	4.50%	9.30%
32	Soccer	9	2.90%	6.00%
65	Programs	8	2.60%	5.30%
28	Trails	6	1.90%	4.00%
10	Skate park/skateboarding park	5	1.60%	3.30%
62	Swim lessons	4	1.30%	2.60%
16	Community center	3	1.00%	2.00%
31	Tennis	3	1.00%	2.00%
68	T-ball	3	1.00%	2.00%
15	Golf course	2	0.60%	1.30%
35	Awareness/education	2	0.60%	1.30%
43	Outdoor (nature) activities/gardening/botanical	2	0.60%	1.30%
47	Events	2	0.60%	1.30%
101	Fishing	2	0.60%	1.30%
12	Bike park/trail	1	0.30%	0.70%
33	Basketball	1	0.30%	0.70%
63	Walking/hiking	1	0.30%	0.70%
66	Concerts	1	0.30%	0.70%
69	Football	1	0.30%	0.70%
99	Other	13	4.20%	8.60%
96	Nothing	6	1.90%	4.00%
97	No Answer	1	0.30%	0.70%
	Total	309	100.00%	204.60%

Chart RO3.3b.


Q16. What two most popular outdoor recreation activities do you provide for Children (6 to 12 years old)
Playground 43.0%
Water parks/pools/swimming 29.1%
Sports fields/courts 26.5%
Sports (non-specific) 15.2%
Camping/camp 11.9%
Baseball/softball 9.9%
The parks in general 9.3%
Aquatic centers 9.3%
Soccer 6.0%
Programs 5.3%
Trails 4.0%
Skate park/skateboarding park 3.3%
Swim lessons 2.6%
Community center 2.0%
Tennis 2.0%
T-ball 2.0%
Golf course 1.3%
Awareness/education 1.3%
Outdoor (nature) activities/gardening/botanical 1.3%
Events 1.3%
Fishing 1.3%
Bike park/trail 0.7%
Basketball 0.7%
Walking/hiking 0.7%
Concerts 0.7%
Football 0.7%
Other 8.6%
Nothing 4.0%
No Answer 0.7%
0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0%

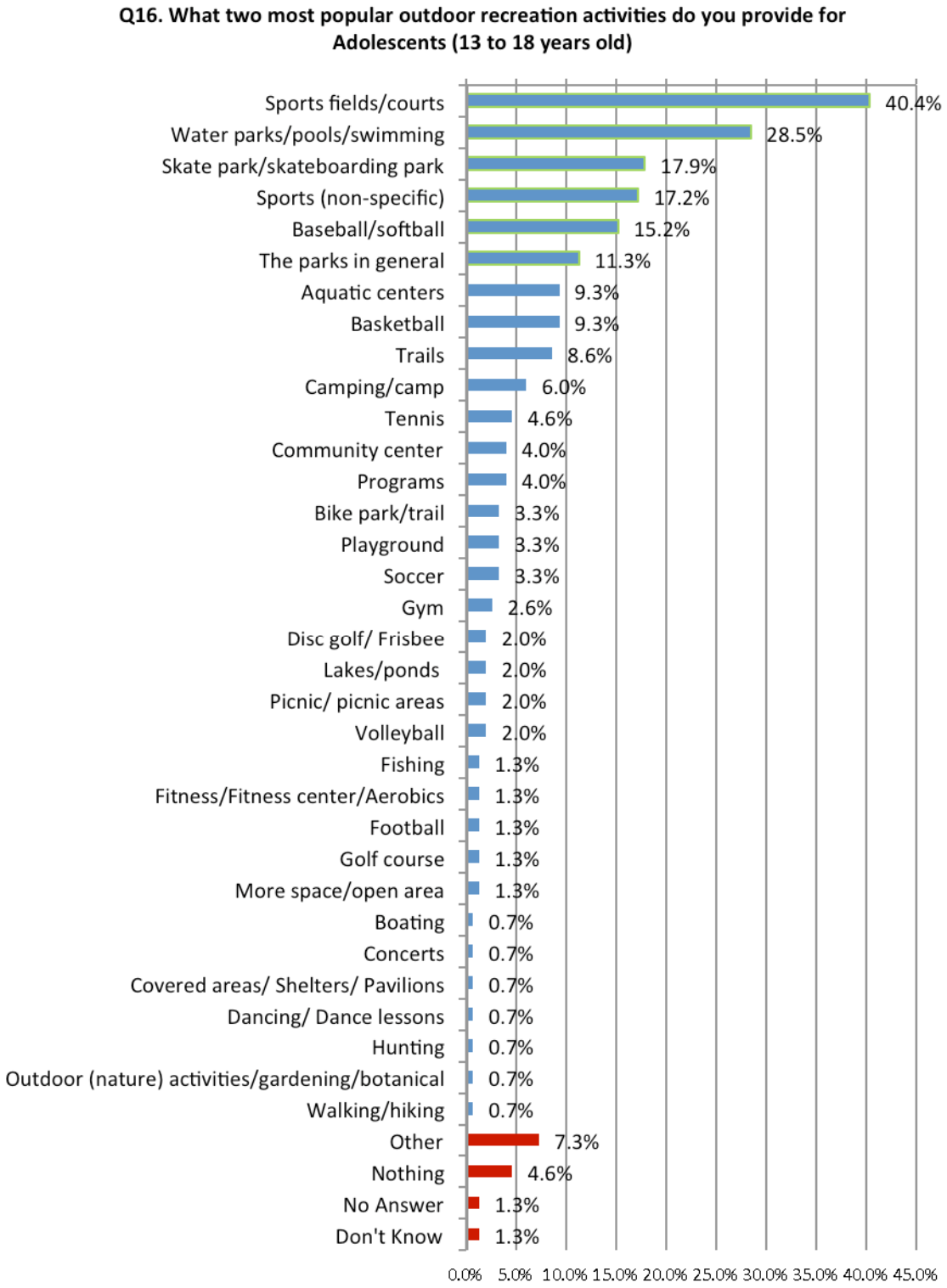
Adolescents (13 to 18 years old)

- **Sports fields/courts** (40.4%, n=61) was mentioned by more than **40%** of respondents.
- **Water parks/pools/swimming** (28.5%, n=43) was mentioned by more than **25%** of respondents.
- **Skate park/skateboarding park** (17.9%, n=27), **Sports (non-specific)** (17.2%, n=26), and **Baseball/softball** (15.2%, n=23) were all mentioned by more than **10%** of respondents.

Table RO3.3c. Q16_3 Frequencies – Adolescents (13 to 18 years old)

Code	Response	Responses		Percent of Cases
		N	Percent	
21	Sports fields/courts	61	18.20%	40.40%
20	Water parks/pools/swimming	43	12.80%	28.50%
10	Skate park/skateboarding park	27	8.00%	17.90%
59	Sports (non-specific)	26	7.70%	17.20%
29	Baseball/softball	23	6.80%	15.20%
19	The parks in general	17	5.10%	11.30%
57	Aquatic centers	14	4.20%	9.30%
33	Basketball	14	4.20%	9.30%
28	Trails	13	3.90%	8.60%
41	Camping/camp	9	2.70%	6.00%
31	Tennis	7	2.10%	4.60%
16	Community center	6	1.80%	4.00%
65	Programs	6	1.80%	4.00%
12	Bike park/trail	5	1.50%	3.30%
24	Playground	5	1.50%	3.30%
32	Soccer	5	1.50%	3.30%
70	Gym	4	1.20%	2.60%
14	Disc golf/ Frisbee	3	0.90%	2.00%
18	Lakes/ponds	3	0.90%	2.00%
58	Picnic/ picnic areas	3	0.90%	2.00%
30	Volleyball	3	0.90%	2.00%
101	Fishing	2	0.60%	1.30%
64	Fitness/Fitness center/Aerobics	2	0.60%	1.30%
69	Football	2	0.60%	1.30%
15	Golf course	2	0.60%	1.30%
23	More space/open area	2	0.60%	1.30%
60	Boating	1	0.30%	0.70%
66	Concerts	1	0.30%	0.70%
25	Covered areas/ Shelters/ Pavilions	1	0.30%	0.70%
67	Dancing/ Dance lessons	1	0.30%	0.70%
102	Hunting	1	0.30%	0.70%
43	Outdoor (nature) activities/gardening/botanical	1	0.30%	0.70%
63	Walking/hiking	1	0.30%	0.70%
99	Other	11	3.30%	7.30%
96	Nothing	7	2.10%	4.60%
97	No Answer	2	0.60%	1.30%
98	Don't Know	2	0.60%	1.30%
	Total	336	100.00%	222.50%

Chart RO3.3c.


Q16. What two most popular outdoor recreation activities do you provide for Adolescents (13 to 18 years old)
Sports fields/courts 40.4%
Water parks/pools/swimming 28.5%
Skate park/skateboarding park 17.9%
Sports (non-specific) 17.2%
Baseball/softball 15.2%
The parks in general 11.3%
Aquatic centers 9.3%
Basketball 9.3%
Trails 8.6%
Camping/camp 6.0%
Tennis 4.6%
Community center 4.0%
Programs 4.0%
Bike park/trail 3.3%
Playground 3.3%
Soccer 3.3%
Gym 2.6%
Disc golf/ Frisbee 2.0%
Lakes/ponds 2.0%
Picnic/ picnic areas 2.0%
Volleyball 2.0%
Fishing 1.3%
Fitness/Fitness center/Aerobics 1.3%
Football 1.3%
Golf course 1.3%
More space/open area 1.3%
Boating 0.7%
Concerts 0.7%
Covered areas/ Shelters/ Pavilions 0.7%
Dancing/ Dance lessons 0.7%
Hunting 0.7%
Outdoor (nature) activities/gardening/botanical 0.7%
Walking/hiking 0.7%
Other 7.3%
Nothing 4.6%
No Answer 1.3%
Don't Know 1.3%
0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0%

Young adults (19 to 34 years old)

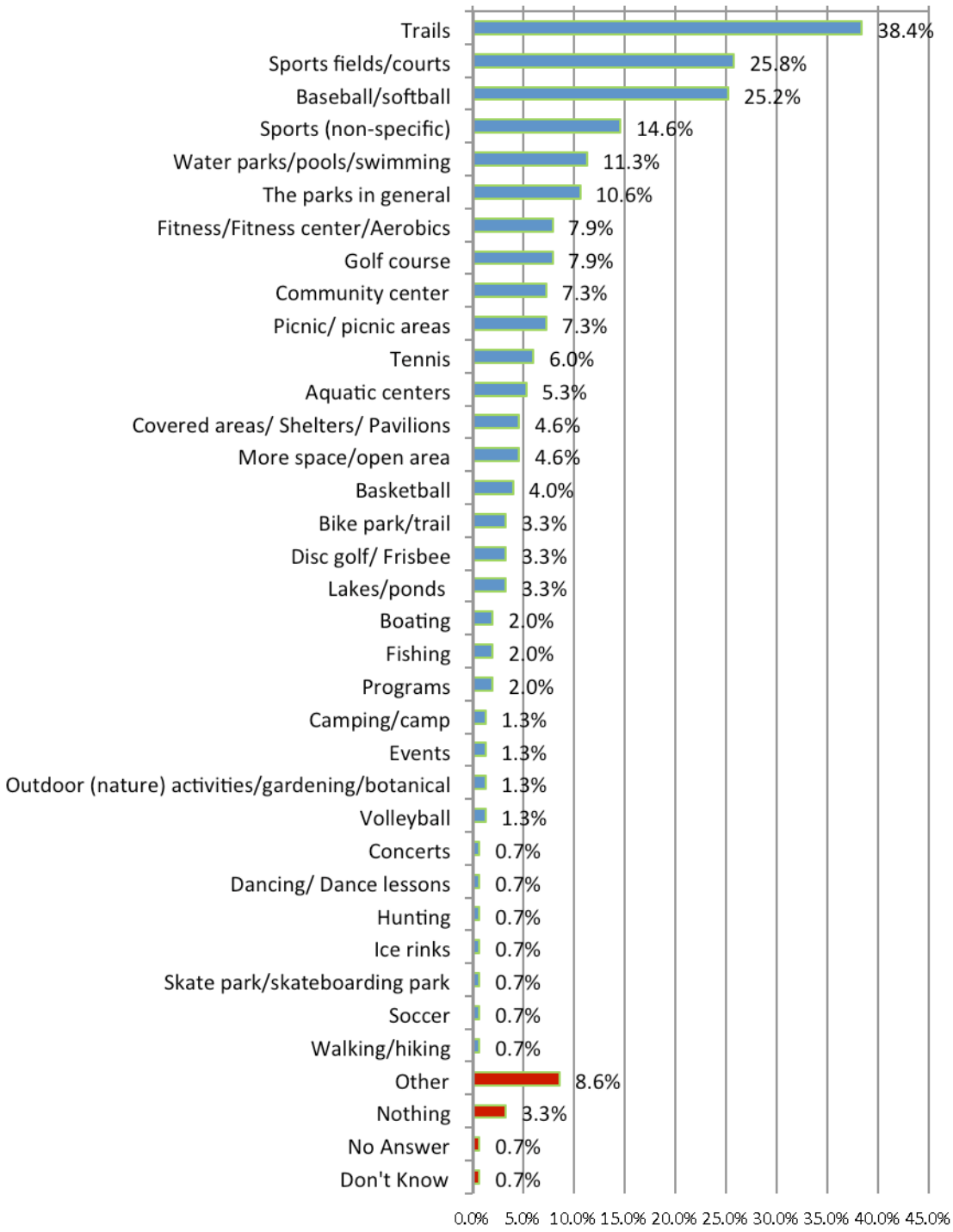
- **Trails** (38.4%, n=58) was mentioned by more than **35%** of respondents.
- **Sports fields/courts** (25.8%, n=39) and **Baseball/softball** (25.2.0%, n=38) were both mentioned by more than **25%** of respondents.
- **Sports (non-specific)** (25.8%, n=39), **Water parks/pools/swimming** (25.8%, n=39), and **The parks in general** (25.8%, n=39) were all mentioned by more than **10%** of respondents.

Table RO3.3d. Q16_4 Frequencies – Young adults (19 to 34)

Code	Response	Responses		Percent of Cases
		N	Percent	
28	Trails	58	17.50%	38.40%
21	Sports fields/courts	39	11.70%	25.80%
29	Baseball/softball	38	11.40%	25.20%
59	Sports (non-specific)	22	6.60%	14.60%
20	Water parks/pools/swimming	17	5.10%	11.30%
19	The parks in general	16	4.80%	10.60%
64	Fitness/Fitness center/Aerobics	12	3.60%	7.90%
15	Golf course	12	3.60%	7.90%
16	Community center	11	3.30%	7.30%
58	Picnic/ picnic areas	11	3.30%	7.30%
31	Tennis	9	2.70%	6.00%
57	Aquatic centers	8	2.40%	5.30%
25	Covered areas/ Shelters/ Pavilions	7	2.10%	4.60%
23	More space/open area	7	2.10%	4.60%
33	Basketball	6	1.80%	4.00%
12	Bike park/trail	5	1.50%	3.30%
14	Disc golf/ Frisbee	5	1.50%	3.30%
18	Lakes/ponds	5	1.50%	3.30%
60	Boating	3	0.90%	2.00%
101	Fishing	3	0.90%	2.00%
65	Programs	3	0.90%	2.00%
41	Camping/camp	2	0.60%	1.30%
47	Events	2	0.60%	1.30%
43	Outdoor (nature) activities/gardening/botanical	2	0.60%	1.30%
30	Volleyball	2	0.60%	1.30%
66	Concerts	1	0.30%	0.70%
67	Dancing/ Dance lessons	1	0.30%	0.70%
102	Hunting	1	0.30%	0.70%
26	Ice rinks	1	0.30%	0.70%
10	Skate park/skateboarding park	1	0.30%	0.70%
32	Soccer	1	0.30%	0.70%
63	Walking/hiking	1	0.30%	0.70%
99	Other	13	3.90%	8.60%
96	Nothing	5	1.50%	3.30%
97	No Answer	1	0.30%	0.70%
98	Don't Know	1	0.30%	0.70%
	Total	332	100.00%	219.90%

Chart RO3.3d.

Q16. What two most popular outdoor recreation activities do you provide for Young adults (19 to 34)



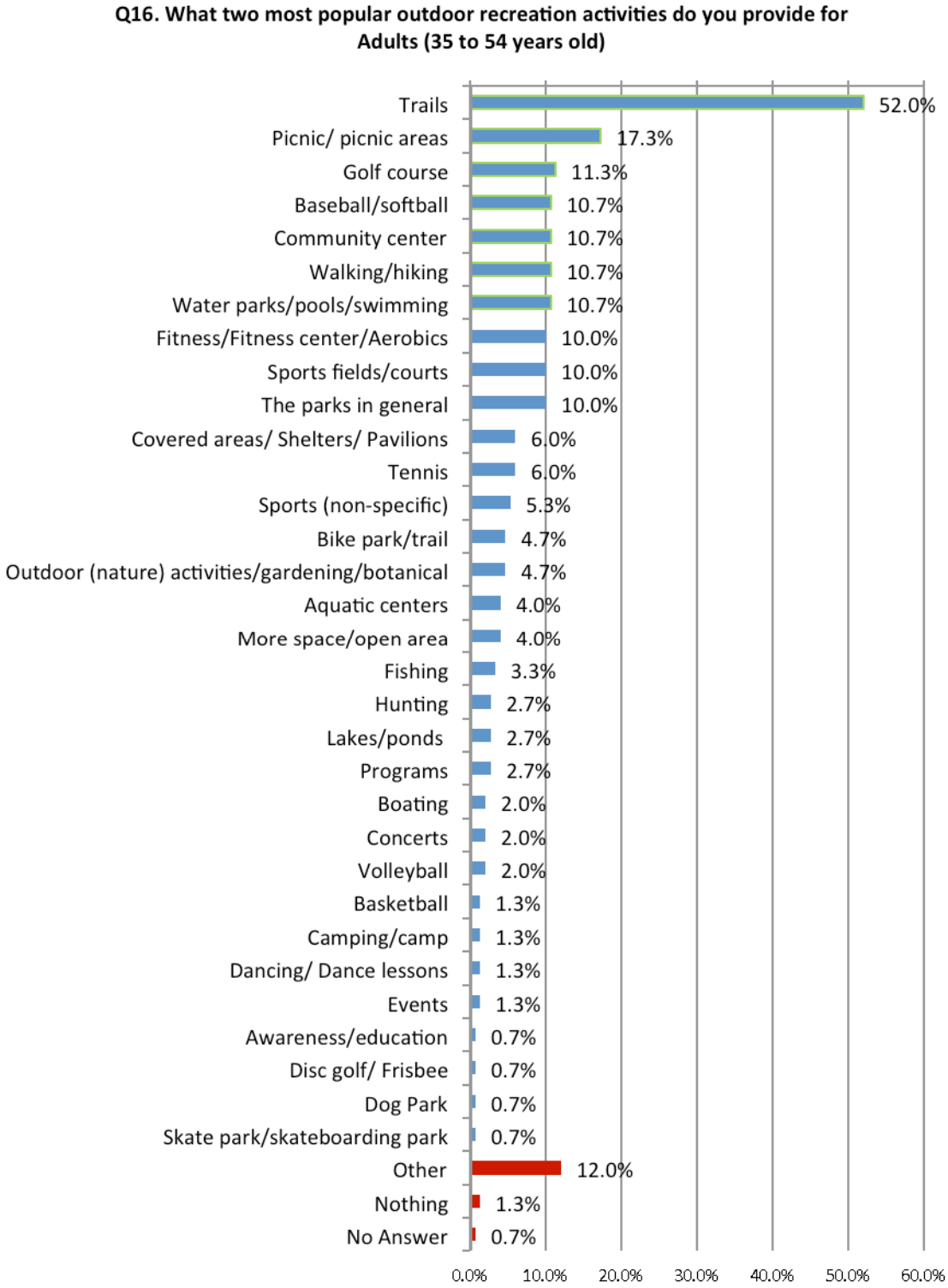
Adults (35 to 54 years old)

- **Trails** (52.0%, n=78) was mentioned by more than 50% of respondents.
- **Picnic/picnic areas** (17.3%, n=26), **Golf course** (11.3%, n=17), **Baseball/softball**, **Community center**, **Walking/hiking** and **Water parks/pools/swimming** (10.7%, n=16) were all mentioned by more than **10%** of respondents.

Table RO3.3e. Q16_5 Frequencies – Adults (35 to 54 years old)

Code	Response	Responses		Percent of Cases
		N	Percent	
28	Trails	78	22.90%	52.00%
58	Picnic/ picnic areas	26	7.60%	17.30%
15	Golf course	17	5.00%	11.30%
29	Baseball/softball	16	4.70%	10.70%
16	Community center	16	4.70%	10.70%
63	Walking/hiking	16	4.70%	10.70%
20	Water parks/pools/swimming	16	4.70%	10.70%
64	Fitness/Fitness center/Aerobics	15	4.40%	10.00%
21	Sports fields/courts	15	4.40%	10.00%
19	The parks in general	15	4.40%	10.00%
25	Covered areas/ Shelters/ Pavilions	9	2.60%	6.00%
31	Tennis	9	2.60%	6.00%
59	Sports (non-specific)	8	2.30%	5.30%
12	Bike park/trail	7	2.10%	4.70%
43	Outdoor (nature) activities/gardening/botanical	7	2.10%	4.70%
57	Aquatic centers	6	1.80%	4.00%
23	More space/open area	6	1.80%	4.00%
101	Fishing	5	1.50%	3.30%
102	Hunting	4	1.20%	2.70%
18	Lakes/ponds	4	1.20%	2.70%
65	Programs	4	1.20%	2.70%
60	Boating	3	0.90%	2.00%
66	Concerts	3	0.90%	2.00%
30	Volleyball	3	0.90%	2.00%
33	Basketball	2	0.60%	1.30%
41	Camping/camp	2	0.60%	1.30%
67	Dancing/ Dance lessons	2	0.60%	1.30%
47	Events	2	0.60%	1.30%
35	Awareness/education	1	0.30%	0.70%
14	Disc golf/ Frisbee	1	0.30%	0.70%
11	Dog Park	1	0.30%	0.70%
10	Skate park/skateboarding park	1	0.30%	0.70%
99	Other	18	5.30%	12.00%
96	Nothing	2	0.60%	1.30%
97	No Answer	1	0.30%	0.70%
	Total	341	100.00%	227.30%

Chart RO3.3e.


Q16. What two most popular outdoor recreation activities do you provide for Adults (35 to 54 years old)
Trails 52.0%
Picnic/ picnic areas 17.3%
Golf course 11.3%
Baseball/softball 10.7%
Community center 10.7%
Walking/hiking 10.7%
Water parks/pools/swimming 10.7%
Fitness/Fitness center/Aerobics 10.0%
Sports fields/courts 10.0%
The parks in general 10.0%
Covered areas/ Shelters/ Pavilions 6.0%
Tennis 6.0%
Sports (non-specific) 5.3%
Bike park/trail 4.7%
Outdoor (nature) activities/gardening/botanical 4.7%
Aquatic centers 4.0%
More space/open area 4.0%
Fishing 3.3%
Hunting 2.7%
Lakes/ponds 2.7%
Programs 2.7%
Boating 2.0%
Concerts 2.0%
Volleyball 2.0%
Basketball 1.3%
Camping/camp 1.3%
Dancing/ Dance lessons 1.3%
Events 1.3%
Awareness/education 0.7%
Disc golf/ Frisbee 0.7%
Dog Park 0.7%
Skate park/skateboarding park 0.7%
Other 12.0%
Nothing 1.3%
No Answer 0.7%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0%

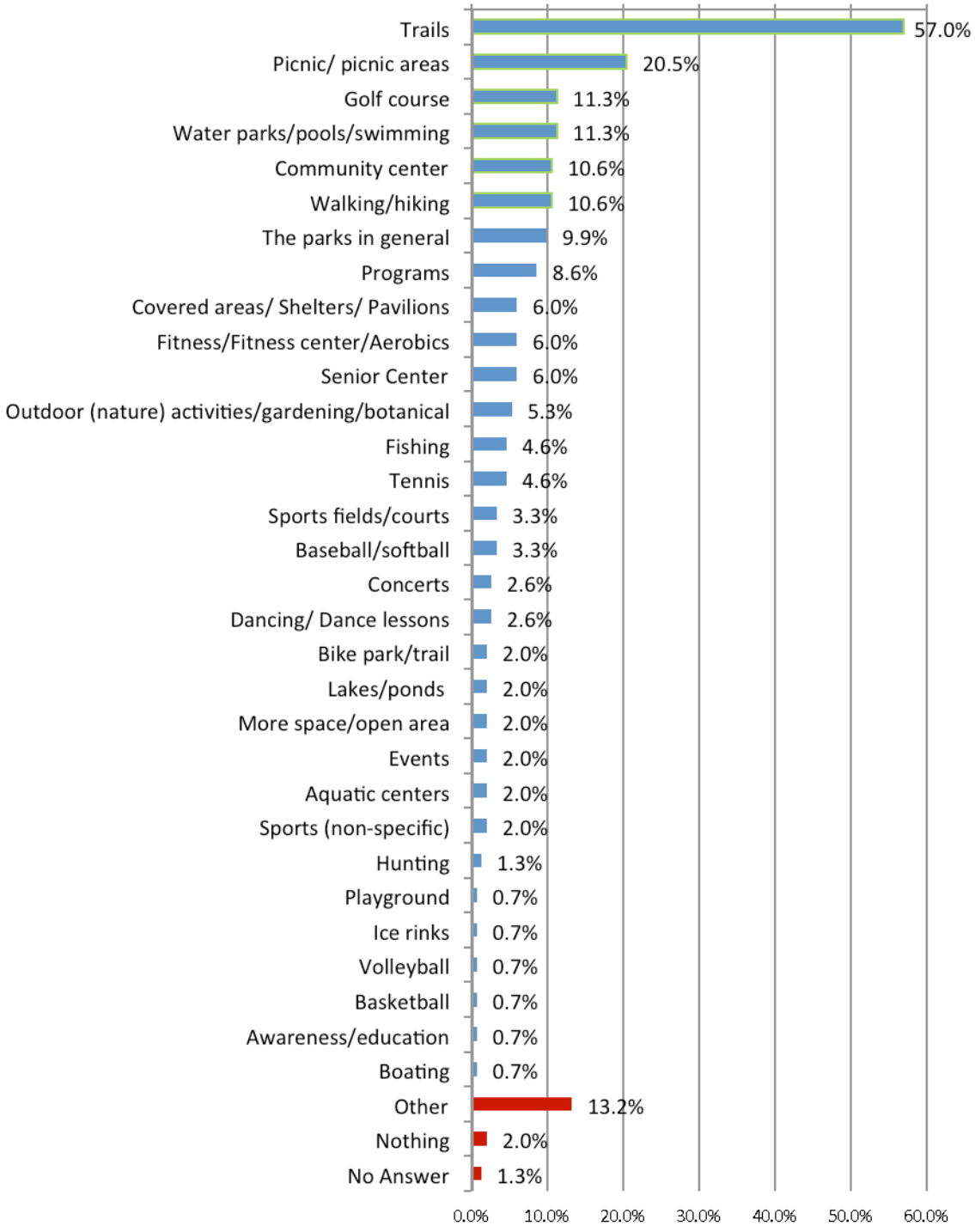
- **Seniors (55 years and older)**
  - **Trails** (57.0%, n=86) was mentioned by more than **55%** of respondents.
  - **Picnic/picnic areas** (20.5%, n=31) was mentioned by more than **20%** of respondents.
  - **Golf course** and **Water parks/pools/swimming** (11.3%, n=17), **Community center** and **Walking/hiking** (10.6%, n=16) were all mentioned by more than **10%** of respondents.

Table RO3.3f. Q16_6 Frequencies – Seniors (55 years and older)

Code	Response	Responses		Percent of Cases
		N	Percent	
28	Trails	86	26.10%	57.00%
58	Picnic/ picnic areas	31	9.40%	20.50%
15	Golf course	17	5.20%	11.30%
20	Water parks/pools/swimming	17	5.20%	11.30%
16	Community center	16	4.90%	10.60%
63	Walking/hiking	16	4.90%	10.60%
19	The parks in general	15	4.60%	9.90%
65	Programs	13	4.00%	8.60%
25	Covered areas/ Shelters/ Pavilions	9	2.70%	6.00%
64	Fitness/Fitness center/Aerobics	9	2.70%	6.00%
71	Senior Center	9	2.70%	6.00%
43	Outdoor (nature) activities/gardening/botanical	8	2.40%	5.30%
101	Fishing	7	2.10%	4.60%
31	Tennis	7	2.10%	4.60%
21	Sports fields/courts	5	1.50%	3.30%
29	Baseball/softball	5	1.50%	3.30%
66	Concerts	4	1.20%	2.60%
67	Dancing/ Dance lessons	4	1.20%	2.60%
12	Bike park/trail	3	0.90%	2.00%
18	Lakes/ponds	3	0.90%	2.00%
23	More space/open area	3	0.90%	2.00%
47	Events	3	0.90%	2.00%
57	Aquatic centers	3	0.90%	2.00%
59	Sports (non-specific)	3	0.90%	2.00%
102	Hunting	2	0.60%	1.30%
24	Playground	1	0.30%	0.70%
26	Ice rinks	1	0.30%	0.70%
30	Volleyball	1	0.30%	0.70%
33	Basketball	1	0.30%	0.70%
35	Awareness/education	1	0.30%	0.70%
60	Boating	1	0.30%	0.70%
99	Other	20	6.10%	13.20%
96	Nothing	3	0.90%	2.00%
97	No Answer	2	0.60%	1.30%
	Total	329	100.00%	217.90%

Chart RO3.3f.

Q16. What two most popular outdoor recreation activities do you provide for Seniors (55 years and older)



Research Objective 3.4 (RO3.4)

- **Determine which outdoor recreation activities in Missouri are popular among families.**

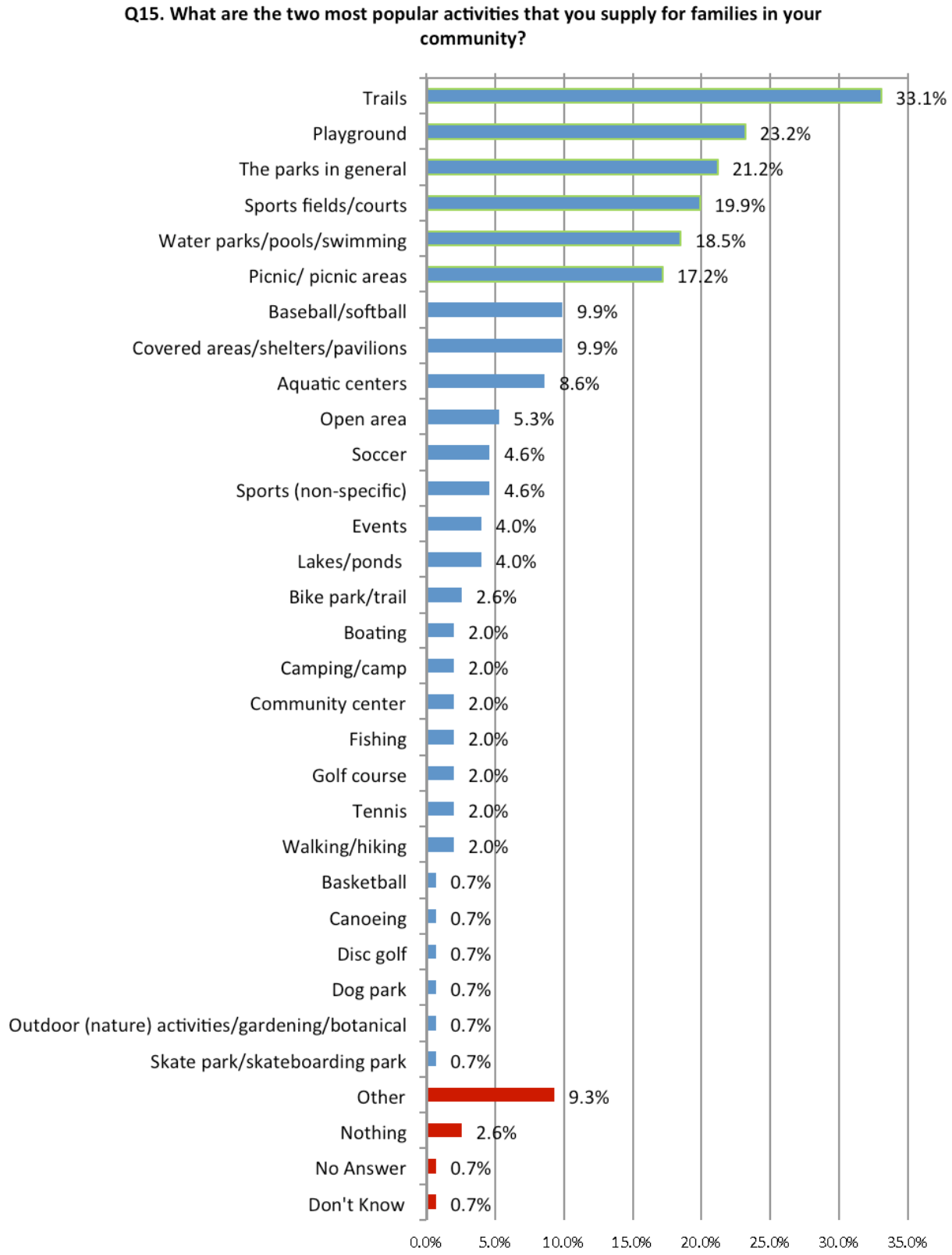
Respondents were asked, "What are the two most popular activities that you supply for families in your community?" All responses were coded, tallied, and sorted from high to low by frequency (Table RO3.4a and Chart RO3.4a).

- **Trails** (33.1%, n=50) was mentioned by more than **33%** of respondents.
- **Playground** (23.2%, n=35) and **The parks in general** (21.2%, n=32) were mentioned by more than **20%** of respondents.
- **Sports fields/courts** (19.9%, n=30), **Water parks/pools/swimming** (23.2%, n=35), and **Picnic/Picnic areas** (17.2%, n=26) were all mentioned by more than **15%** of respondents.

Table RO3.4a. Q15 Frequencies – What are the two most popular activities that you supply for families in your community? – Total Responses

Code	Response	Responses		Percent of Cases
		N	Percent	
28	Trails	50	15.20%	33.10%
24	Playground	35	10.60%	23.20%
19	The parks in general	32	9.70%	21.20%
21	Sports fields/courts	30	9.10%	19.90%
20	Water parks/pools/swimming	28	8.50%	18.50%
58	Picnic/ picnic areas	26	7.90%	17.20%
29	Baseball/softball	15	4.60%	9.90%
25	Covered areas/shelters/pavilions	15	4.60%	9.90%
57	Aquatic centers	13	4.00%	8.60%
23	Open area	8	2.40%	5.30%
32	Soccer	7	2.10%	4.60%
59	Sports (non-specific)	7	2.10%	4.60%
47	Events	6	1.80%	4.00%
18	Lakes/ponds	6	1.80%	4.00%
12	Bike park/trail	4	1.20%	2.60%
60	Boating	3	0.90%	2.00%
41	Camping/camp	3	0.90%	2.00%
16	Community center	3	0.90%	2.00%
101	Fishing	3	0.90%	2.00%
15	Golf course	3	0.90%	2.00%
31	Tennis	3	0.90%	2.00%
63	Walking/hiking	3	0.90%	2.00%
10	Basketball	1	0.30%	0.70%
11	Canoeing	1	0.30%	0.70%
14	Disc golf	1	0.30%	0.70%
33	Dog park	1	0.30%	0.70%
43	Outdoor (nature) activities/gardening/botanical	1	0.30%	0.70%
61	Skate park/skateboarding park	1	0.30%	0.70%
99	Other	14	4.30%	9.30%
96	Nothing	4	1.20%	2.60%
97	No Answer	1	0.30%	0.70%
98	Don't Know	1	0.30%	0.70%
	Total	329	100.00%	217.90%

Chart RO3.4a.


Q15. What are the two most popular activities that you supply for families in your community?
Trails 33.1%
Playground 23.2%
The parks in general 21.2%
Sports fields/courts 19.9%
Water parks/pools/swimming 18.5%
Picnic/ picnic areas 17.2%
Baseball/softball 9.9%
Covered areas/shelters/pavilions 9.9%
Aquatic centers 8.6%
Open area 5.3%
Soccer 4.6%
Sports (non-specific) 4.6%
Events 4.0%
Lakes/ponds 4.0%
Bike park/trail 2.6%
Boating 2.0%
Camping/camp 2.0%
Community center 2.0%
Fishing 2.0%
Golf course 2.0%
Tennis 2.0%
Walking/hiking 2.0%
Basketball 0.7%
Canoeing 0.7%
Disc golf 0.7%
Dog park 0.7%
Outdoor (nature) activities/gardening/botanical 0.7%
Skate park/skateboarding park 0.7%
Other 9.3%
Nothing 2.6%
No Answer 0.7%
Don't Know 0.7%
0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0%

Research Objective 3.5 (RO3.5)

- **Determine the outdoor recreation activities in Missouri are both popular and in need of improvement.**

Mean scores and top box percentages were compiled for all facility types for questions one through four (i.e. Q1. Need of Improvement, Q2. Local Demand, Q3. Popularity over the Last Five Years, and Q4. Popularity in the Next Five Years) and ranked from 1 to 20 based on mean score (Table RO3.5a) and top box percentages (Table RO3.5b).

To prioritize facility types, the rankings were summed to determine a combined, relative ranking index across all four measures. The lowest possible index is a four (Ranked #1 on all four measures), and the higest possible index is an 80 (Ranked #20 on all four measures). Rank percentages indicates what percentage the facility scored out of the highest possible. The lower the score/percentage, the higher the priority.

- **Trails**, **Multi-use fields**, and **Playgrounds** all scored within the top ten on all four measures (based on mean), with only **Playgrounds** scoring outside the top five for need of improvement, indicating that overall they are the facility types the most in need of improvement, have the most unmet demand, have increased in popularity over the past five years and are set to increase in popularity in the next five years more than any other facility type.
    - **Trails**, **Multi-use fields**, and **Playgrounds** were the top three in unmet local demand, popularity over the last five years and popularity in the next five years
- **Picnic areas**, **Gardens**, **Soccer fields**, and **Nature parks/areas** all ranked in the top ten based on local demand, popularity over the last five years, and popularity in the next five years but all except **Nature parks/areas** were not in the top based on need of improvement, indicating that demand is higher than supply, they have increased in popularity and they are increasing in popularity, and current facilties do not need as much improvement as others.
- **Camping sites** ranked number one for need of improvement but was not in the top ten for any of the other measures, indicating that **Camping sites** need the most improvement (where available) but are not in high demand and not as popular as other facility types.

Table RO3.5a. Q1 through Q4 Facility Means, Ranking, and Facility Index Values

	Q1 Rank	n	x̄	Q2 Rank	n	x̄	Q3 Rank	n	x̄	Q4 Rank	n	x̄	Indexed Ranking	Indexed Percent
Trails	**3**	147	3.39	**1**	151	1.69	**1**	151	1.88	**1**	151	1.93	**6**	**7.5%**
Multi-use fields	**2**	140	3.39	**3**	151	1.11	**3**	151	1.11	**3**	151	1.17	**11**	**13.8%**
Playgrounds	**7**	151	3.09	**2**	151	1.16	**2**	151	1.28	**2**	151	1.29	**13**	**16.3%**
Picnic areas	**16**	150	2.82	**4**	151	0.94	**4**	151	1.04	**4**	151	1.07	**28**	**35.0%**
Gardens	**12**	123	2.94	**7**	151	0.72	**5**	151	1.00	**5**	151	1.04	**29**	**36.3%**
Soccer fields	**13**	134	2.92	**5**	151	0.93	**6**	151	1.00	**6**	151	1.02	**30**	**37.5%**
Nature park/areas	**8**	124	3.02	**8**	151	0.60	**7**	151	0.76	**8**	151	0.87	**31**	**38.8%**
Baseball/softball fields	**17**	146	2.80	**6**	151	0.74	**8**	151	0.72	**7**	151	0.88	**38**	**47.5%**
Outdoor swimming pools	**11**	132	2.95	**10**	151	0.49	**11**	151	0.60	**9**	151	0.73	**41**	**51.3%**
Camping sites	**1**	71	3.45	**13**	151	0.23	**14**	151	0.26	**14**	151	0.36	**42**	**52.5%**
Boating and water sport access sites	**6**	86	3.09	**12**	151	0.29	**13**	151	0.34	**12**	151	0.52	**43**	**53.8%**
Historic/education sites	**5**	120	3.12	**15**	151	0.21	**12**	151	0.39	**13**	151	0.49	**45**	**56.3%**
Football fields	**14**	106	2.86	**11**	151	0.47	**10**	151	0.63	**11**	151	0.61	**46**	**57.5%**
Fishing sites	**18**	124	2.69	**9**	151	0.55	**9**	151	0.64	**10**	151	0.62	**46**	**57.5%**
Outdoor basketball courts	**4**	132	3.23	**14**	151	0.22	**15**	151	0.22	**15**	151	0.31	**48**	**60.0%**
Tennis courts	**9**	135	3.00	**17**	151	0.14	**18**	151	0.11	**18**	151	0.17	**62**	**77.5%**
Target shooting sites	**10**	58	2.97	**18**	151	0.01	**19**	151	0.08	**19**	151	0.15	**66**	**82.5%**
Volleyball courts	**15**	121	2.86	**20**	151	-0.13	**17**	151	0.13	**17**	151	0.21	**69**	**86.3%**
Golf courses	**19**	97	2.36	**19**	151	-0.11	**17**	151	0.13	**16**	151	0.23	**71**	**88.8%**
Hunting sites	**20**	56	2.32	**16**	151	0.21	**20**	151	0.04	**20**	151	0.10	**76**	**95.0%**

- **Trails**, **Multi-use fields**, **Gardens**, **Soccer fields**, **Playgrounds**, and **Outdoor swimming pools** were ranked in the top ten (by top box percentage) on all four measures.
- **Football fields**, **Picnic areas**, and **Baseball/softball fields** were ranked in the top ten on local demand, popularity over the last five years, and popularity in the next five years, but were not in the top ten for need of improvement, indicating that demand is higher than supply, popularity has increased in the past five years and is increasing in the next five years, and they do not need as much imprvoment as most other facilities.
- **Boating and water sport access sites**, **Historic/education sites**, **Outdoor basketball courts**, **Tennis courts** were ranked in the top ten for need of improvement but were not ranked in the top ten on any other measures, indicating that they need improvement but are not as popular as some of the other facility types.

Table RO3.5b. Q1 through Q4 Facility Top Box Percentages, Ranking, and Facility Index Values

	Q1 Rank	n	Top Box % (total)	Q2 Rank	n	Top Box %	Q3 Rank	n	Top Box %	Q4 Rank	n	Top Box %	Indexed Ranking	Indexed Percent
Trails	**2**	38	25.2%	**1**	51	33.8%	**1**	54	35.8%	**1**	58	38.4%	**5**	**6.3%**
Multi-use fields	**1**	39	25.8%	**2**	35	23.2%	**4**	23	15.2%	**4**	20	13.2%	**11**	**13.8%**
Gardens	**6**	25	16.6%	**3**	28	18.5%	**2**	29	19.2%	**2**	27	17.9%	**13**	**16.3%**
Soccer fields	**8**	23	15.2%	**5**	26	17.2%	**3**	28	18.5%	**3**	22	14.6%	**19**	**23.8%**
Playgrounds	**7**	24	15.9%	**4**	26	17.2%	**5**	21	13.9%	**5**	19	12.6%	**21**	**26.3%**
Outdoor swimming pools	**5**	26	17.2%	**8**	20	13.2%	**10**	16	10.6%	**6**	19	12.6%	**29**	**36.3%**
Football fields	**13**	18	11.9%	**10**	19	12.6%	**6**	20	13.2%	**8**	15	9.9%	**37**	**46.3%**
Picnic areas	**14**	18	11.9%	**6**	25	16.6%	**8**	19	12.6%	**10**	14	9.3%	**38**	**47.5%**
Baseball/softball fields	**17**	11	7.3%	**7**	20	13.2%	**7**	19	12.6%	**7**	15	9.9%	**38**	**47.5%**
Fishing sites	**11**	19	12.6%	**9**	19	12.6%	**9**	17	11.3%	**12**	10	6.6%	**41**	**51.3%**
Nature park/areas	**12**	19	12.6%	**12**	14	9.3%	**11**	12	7.9%	**9**	15	9.9%	**44**	**55.0%**
Boating and water sport access sites	**10**	19	12.6%	**13**	13	8.6%	**13**	9	6.0%	**11**	10	6.6%	**47**	**58.8%**
Historic/education sites	**9**	21	13.9%	**18**	6	4.0%	**14**	8	5.3%	**14**	8	5.3%	**55**	**68.8%**
Camping sites	**15**	17	11.3%	**15**	11	7.3%	**12**	10	6.6%	**13**	9	6.0%	**55**	**68.8%**
Outdoor basketball courts	**4**	26	17.2%	**14**	12	7.9%	**20**	1	0.7%	**18**	1	0.7%	**56**	**70.0%**
Tennis courts	**3**	27	17.9%	**19**	6	4.0%	**16**	6	4.0%	**20**	1	0.7%	**58**	**72.5%**
Hunting sites	**20**	6	4.0%	**11**	17	11.3%	**15**	7	4.6%	**15**	7	4.6%	**61**	**76.3%**
Volleyball courts	**16**	15	9.9%	**16**	7	4.6%	**17**	5	3.3%	**16**	5	3.3%	**65**	**81.3%**
Golf courses	**19**	6	4.0%	**17**	6	4.0%	**18**	4	2.6%	**19**	1	0.7%	**73**	**91.3%**
Target shooting sites	**18**	9	6.0%	**20**	4	2.6%	**19**	3	2.0%	**17**	3	2.0%	**74**	**92.5%**

Research Objective 3.6 (RO3.6)

- **Determine any other outdoor recreation facilities or activities in Missouri that are popular.**

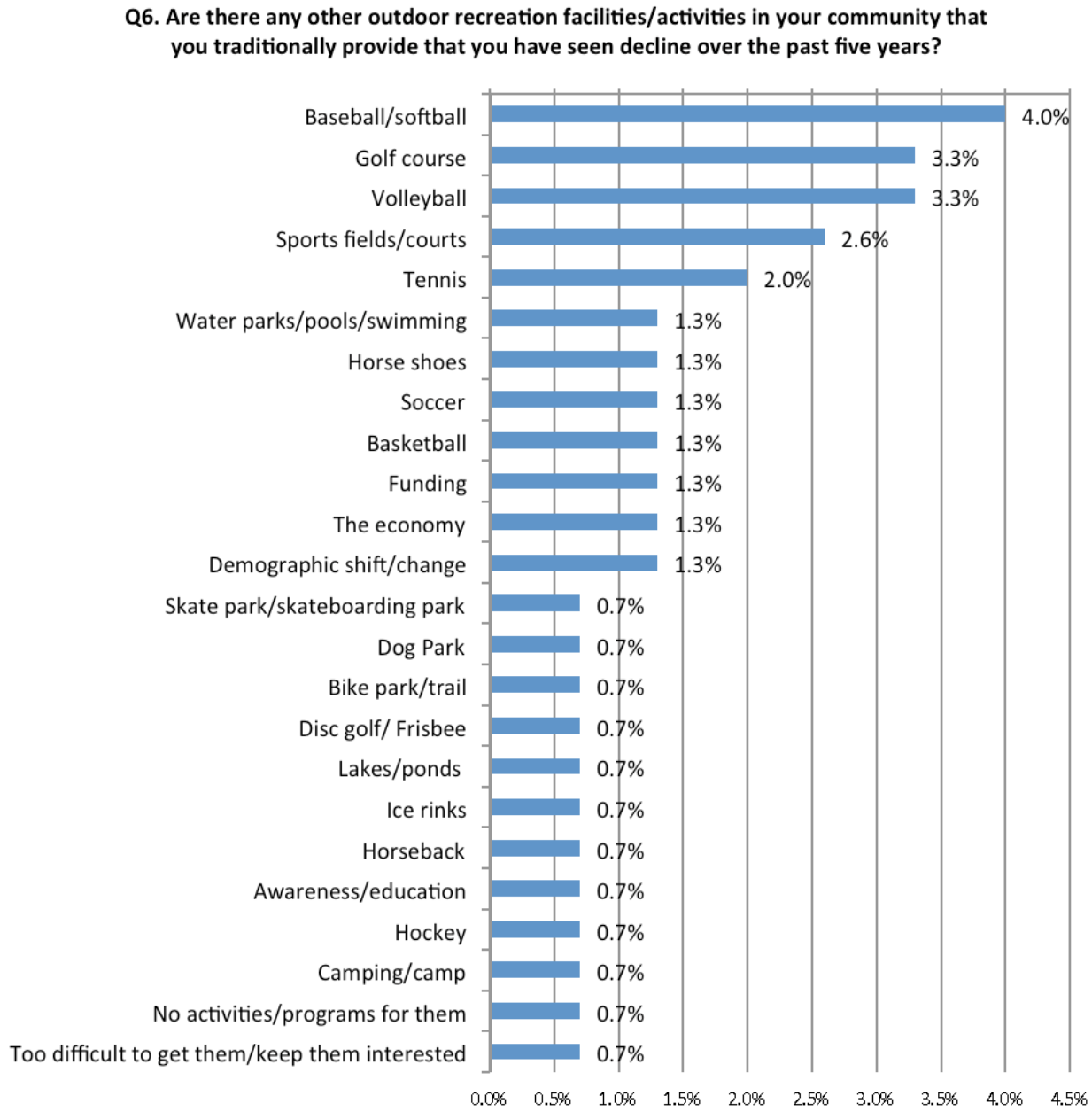
Respondents were asked the open-ended question, "Are there any other outdoor recreation facilities/activities in your community that you traditionally provide that you have seen decline over the past five years?" Responses were coded, tallied, and sorted by frequency (Table RO3.6a and Chart RO3.6a).

- **Nothing** (70.2%. n=106) was mentioned by more than **70%** of respondents.
- **No other facility type** was mentioned by more than **5%** of respondents.

Table RO3.6a. Q6 Frequencies (open-ended) – Are there any other outdoor recreation facilities/activities in your community that you traditionally provide that you have seen decline over the past five years?

Code	Response	Responses		Percent of Cases
		N	Percent	
29	Baseball/softball	6	3.70%	4.00%
15	Golf course	5	3.10%	3.30%
30	Volleyball	5	3.10%	3.30%
21	Sports fields/courts	4	2.50%	2.60%
31	Tennis	3	1.90%	2.00%
20	Water parks/pools/swimming	2	1.20%	1.30%
22	Horse shoes	2	1.20%	1.30%
32	Soccer	2	1.20%	1.30%
33	Basketball	2	1.20%	1.30%
34	Funding	2	1.20%	1.30%
37	The economy	2	1.20%	1.30%
42	Demographic shift/change	2	1.20%	1.30%
10	Skate park/skateboarding park	1	0.60%	0.70%
11	Dog Park	1	0.60%	0.70%
12	Bike park/trail	1	0.60%	0.70%
14	Disc golf/ Frisbee	1	0.60%	0.70%
18	Lakes/ponds	1	0.60%	0.70%
26	Ice rinks	1	0.60%	0.70%
27	Horseback	1	0.60%	0.70%
35	Awareness/education	1	0.60%	0.70%
40	Hockey	1	0.60%	0.70%
41	Camping/camp	1	0.60%	0.70%
50	No activities/programs for them	1	0.60%	0.70%
52	Too difficult to get them/keep them interested	1	0.60%	0.70%
96	Nothing	106	65.80%	70.20%
99	Other	6	3.70%	4.00%
	Total	161	100.00%	106.60%

Chart RO3.6a.


Q6. Are there any other outdoor recreation facilities/activities in your community that you traditionally provide that you have seen decline over the past five years?
Baseball/softball 4.0%
Golf course 3.3%
Volleyball 3.3%
Sports fields/courts 2.6%
Tennis 2.0%
Water parks/pools/swimming 1.3%
Horse shoes 1.3%
Soccer 1.3%
Basketball 1.3%
Funding 1.3%
The economy 1.3%
Demographic shift/change 1.3%
Skate park/skateboarding park 0.7%
Dog Park 0.7%
Bike park/trail 0.7%
Disc golf/ Frisbee 0.7%
Lakes/ponds 0.7%
Ice rinks 0.7%
Horseback 0.7%
Awareness/education 0.7%
Hockey 0.7%
Camping/camp 0.7%
No activities/programs for them 0.7%
Too difficult to get them/keep them interested 0.7%
0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5%

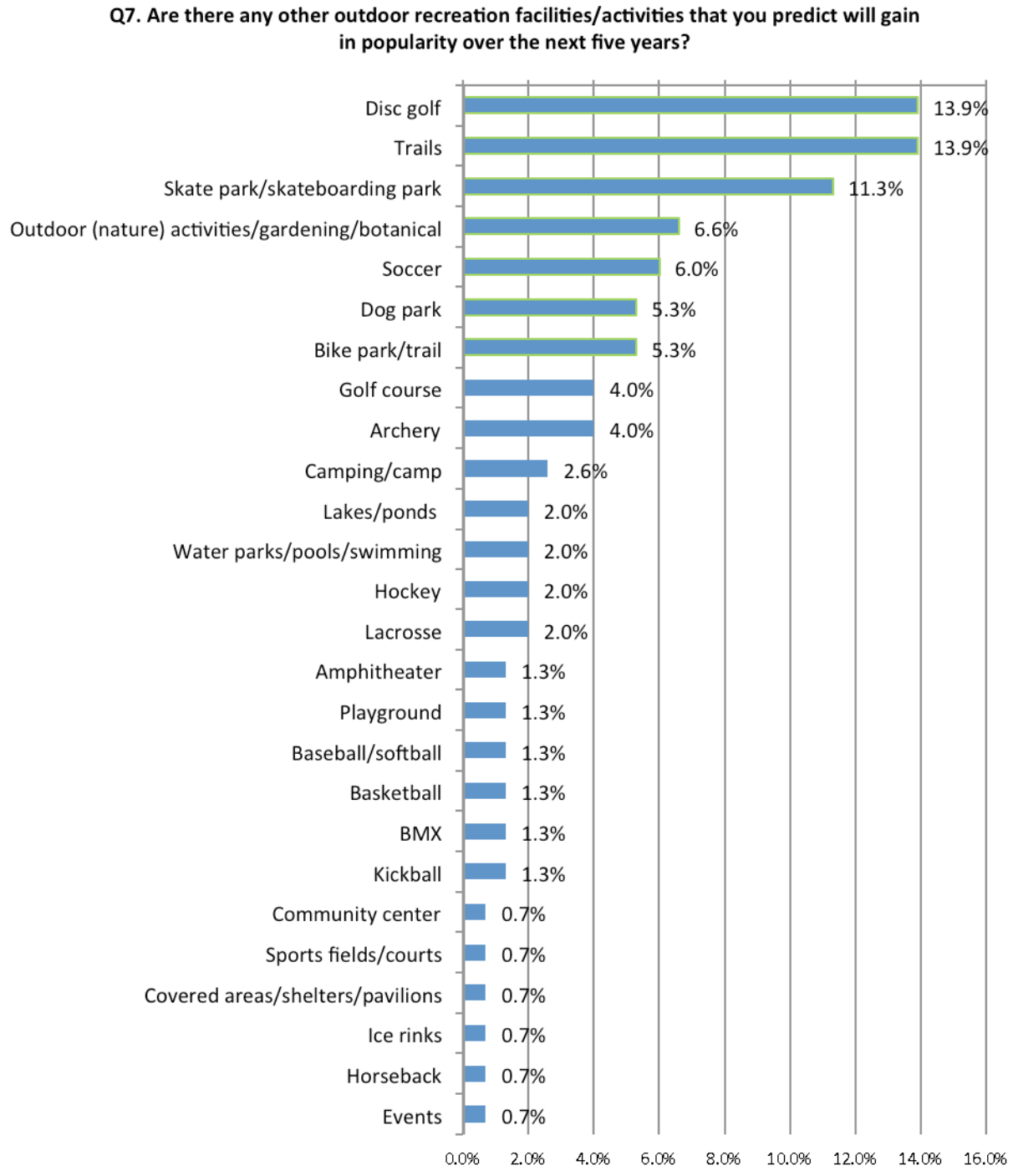
Respondents were asked the **open-ended question, "Are there any other outdoor recreation facilities/activities that you predict will gain in popularity over the next five years?"** Responses were coded, tallied, and sorted by frequency (Table RO3.6b and Chart RO3.6b).

- **Nothing** (25.2%, n=38) was mentioned by more than **25%** of respondents.
- **Disk Golf** and **Trails** (13.9%, n=21), and **Skate park/skateboarding park** (11.3%, n=17) were all mentioned by more than **10%** of respondents.
- **Soccer** (6%, n=9), **Dog park** and **Bike park/trail** (5.3%, n=8) were all mentioned by more than **5%** of respondents.

Table RO3.6b. Q7 Frequencies (open-ended) – Are there any other outdoor recreation facilities/activities that you predict will gain in popularity over the next five years?

Code	Response	Responses		Percent of Cases
		N	Percent	
14	Disc golf	21	11.40%	13.90%
28	Trails	21	11.40%	13.90%
10	Skate park/skateboarding park	17	9.20%	11.30%
43	Outdoor (nature) activities/gardening/botanical	10	5.40%	6.60%
32	Soccer	9	4.90%	6.00%
11	Dog park	8	4.30%	5.30%
12	Bike park/trail	8	4.30%	5.30%
15	Golf course	6	3.20%	4.00%
45	Archery	6	3.20%	4.00%
41	Camping/camp	4	2.20%	2.60%
18	Lakes/ponds	3	1.60%	2.00%
20	Water parks/pools/swimming	3	1.60%	2.00%
40	Hockey	3	1.60%	2.00%
46	Lacrosse	3	1.60%	2.00%
17	Amphitheater	2	1.10%	1.30%
24	Playground	2	1.10%	1.30%
29	Baseball/softball	2	1.10%	1.30%
33	Basketball	2	1.10%	1.30%
44	BMX	2	1.10%	1.30%
48	Kickball	2	1.10%	1.30%
16	Community center	1	0.50%	0.70%
21	Sports fields/courts	1	0.50%	0.70%
25	Covered areas/shelters/pavilions	1	0.50%	0.70%
26	Ice rinks	1	0.50%	0.70%
27	Horseback	1	0.50%	0.70%
47	Events	1	0.50%	0.70%
96	Nothing	38	20.50%	25.20%
99	Other	5	2.70%	3.30%
98	Don't Know	2	1.10%	1.30%
	Total	185	100.00%	122.50%

Chart RO3.6b.


Q7. Are there any other outdoor recreation facilities/activities that you predict will gain in popularity over the next five years?
Disc golf 13.9%
Trails 13.9%
Skate park/skateboarding park 11.3%
Outdoor (nature) activities/gardening/botanical 6.6%
Soccer 6.0%
Dog park 5.3%
Bike park/trail 5.3%
Golf course 4.0%
Archery 4.0%
Camping/camp 2.6%
Lakes/ponds 2.0%
Water parks/pools/swimming 2.0%
Hockey 2.0%
Lacrosse 2.0%
Amphitheater 1.3%
Playground 1.3%
Baseball/softball 1.3%
Basketball 1.3%
BMX 1.3%
Kickball 1.3%
Community center 0.7%
Sports fields/courts 0.7%
Covered areas/shelters/pavilions 0.7%
Ice rinks 0.7%
Horseback 0.7%
Events 0.7%
0.0% 2.0% 4.0% 6.0% 8.0% 10.0% 12.0% 14.0% 16.0%

4. **Research Question 4 (RQ4)**

- ***How adequate are local support components related to outdoor recreation in Missouri?***

Research Objective 4.1 (RO4.1) through Research Objective 4.5 (RO4.5)

- **Determine the adequacy of public restroom facilities related to outdoor recreation in Missouri (RO4.1).**
- **Determine the adequacy of parking in relation to outdoor recreation in Missouri (RO4.2).**
- **Determine the adequacy of handicap accessibility in relation to outdoor recreation in Missouri (RO4.3).**
- **Determine the adequacy of drinking water facilities in relation to outdoor recreation in Missouri (RO4.4).**
- **Determine the adequacy of public transportation to outdoor recreation in Missouri (RO4.5).**

All respondents were asked to rate adequacy of park and recreation related support components in their community, with a score of 1 being "Not at All Adequate" and 5 being "Very Adequate". All respondents provided valid answers and there were no missing values.

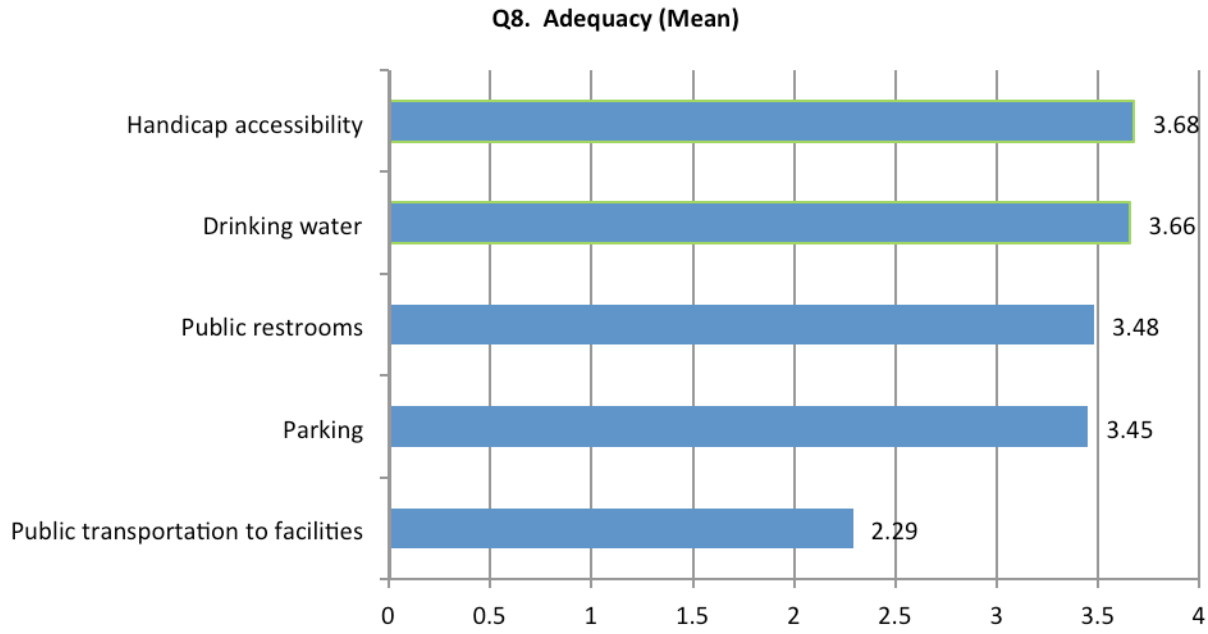
Mean scores were computed for all support components and sorted from low to high (Table RO4.a and Chart RO4.a).

- **Public transportation to facilities** had the lowest mean score at **2.29** and was the only measure to score below the midpoint, indicating that the adequacy of **Public transportation to facilities** is the lowest of all the support related components measured.
    - **Public transportation to facilities** had the highest standard deviation among all the adequacy related measures, indicating that it has the most variance among all the measures.
- **Handicap accessibility** had the highest adequacy mean score of all the support components measured, indicating **Handicap accessibility** is the most adequate support component of all the components measured.

Table RO4.a. Statistics – Q8. Adequacy

Support Component	N	**Mean**	Std. Deviation	Std. Error Mean
Public transportation to facilities	151	**2.29**	1.309	0.107
Parking	151	**3.45**	1.141	0.093
Public restrooms	151	**3.48**	1.154	0.094
Drinking water	151	**3.66**	1.177	0.096
Handicap accessibility	151	**3.68**	1.152	0.094

Chart RO4.a.



Frequencies and percentages were tallied for all respondents (Table RO4.b).

- **Public transportation to facilities** was the only facility type that had a higher percentage of "Not at All Adequate" responses than any other response, with **37.1%** (n=56) of respondents indicating that **Public transportation to facilities** is not at all adequate.
- **Drinking water** was the only facility that had a higher percentage of "Very Adequate" scores than any other response, with **28.8%** (n=45) of respondents indicating that **Drinking water** is very adequate.

Table RO4.b. Q8. Adequacy – Frequencies

Support Component	Very Adequate 5	4	3	2	Not at All Adequate 1
Public transportation to facilities	9.3% (14)	9.9% (15)	18.5% (28)	25.2% (38)	**37.1% (56)**
Parking	19.9% (30)	**31.8% (48)**	27.8% (42)	14.6% (22)	6% (9)
Public restrooms	22.5% (34)	26.5% (40)	**35.8% (54)**	7.3% (11)	7.9% (12)
Drinking water	**29.8% (45)**	29.1% (44)	23.8% (36)	11.9% (18)	5.3% (8)
Handicap accessibility	25.8% (39)	**39.7% (60)**	15.9% (24)	13.2% (20)	5.3% (8)

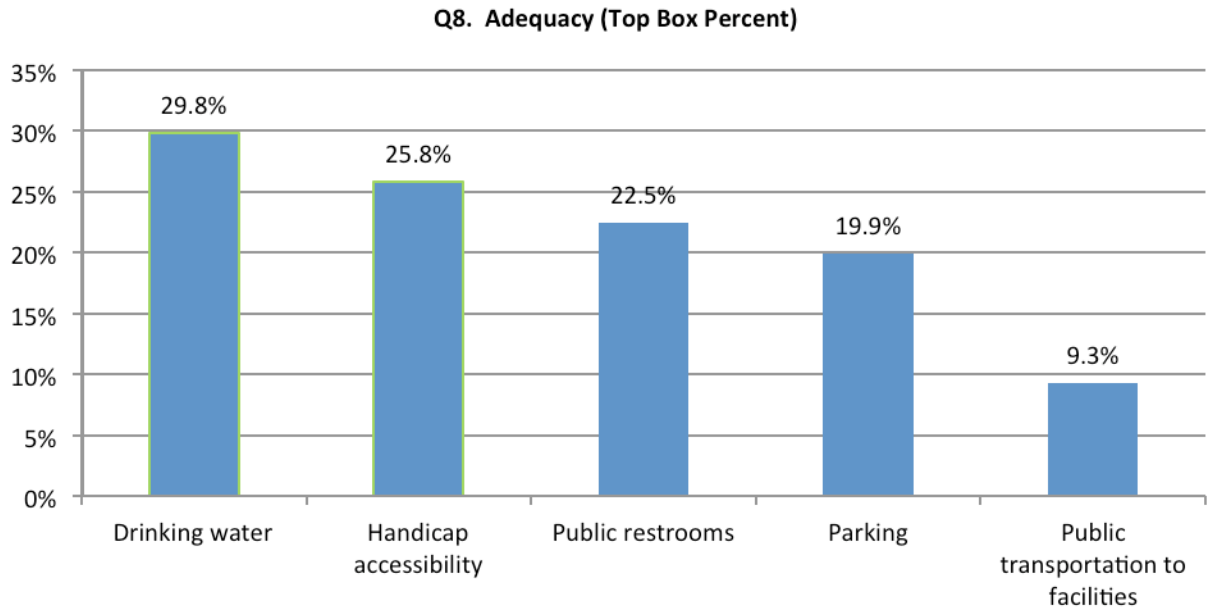
Adequacy frequencies were sorted by the percentage of responses indicating "Very Adequate" (Top Box Percent) and sorted from high to low (Table RO4.c and Chart RO4b).

- **Drinking water** (29.8%, n=45) and **Handicap access** (25.8%, n=39) both had top box percentages greater than **25%**, indicating that more than 1/4th of respondents scored **Drinking water** and **Handicap access** as being very adequate.
- **Public restrooms** (22.5%, n=34) had a top box percentage greater than **20%**, indicating that more than 1/5th of respondents scored **public restrooms** as being very adequate.
- **Parking** (19.9%, n=30) had a top box percentage greater than **15%**, indicating that more than 1/7th of respondents scored **parking** as being very adequate.
- **Public transportation to facilities** (9.3%, n=14) had a top box percentage less than **10%**, indicating that less than 1/10th of respondents scored public transportation to facilities as being very adequate.

Table RO4c. Q8. Adequacy – Frequencies – Very Adequate (Top Box Percent)

Support Component	**Very Adequate 5**	4	3	2	Not at All Adequate 1
Drinking water	**29.8% (45)**	29.1% (44)	23.8% (36)	11.9% (18)	5.3% (8)
Handicap accessibility	**25.8% (39)**	39.7% (60)	15.9% (24)	13.2% (20)	5.3% (8)
Public restrooms	**22.5% (34)**	26.5% (40)	35.8% (54)	7.3% (11)	7.9% (12)
Parking	**19.9% (30)**	31.8% (48)	27.8% (42)	14.6% (22)	6% (9)
Public transportation to facilities	**9.3% (14)**	9.9% (15)	18.5% (28)	25.2% (38)	37.1% (56)

Chart RO4.b.



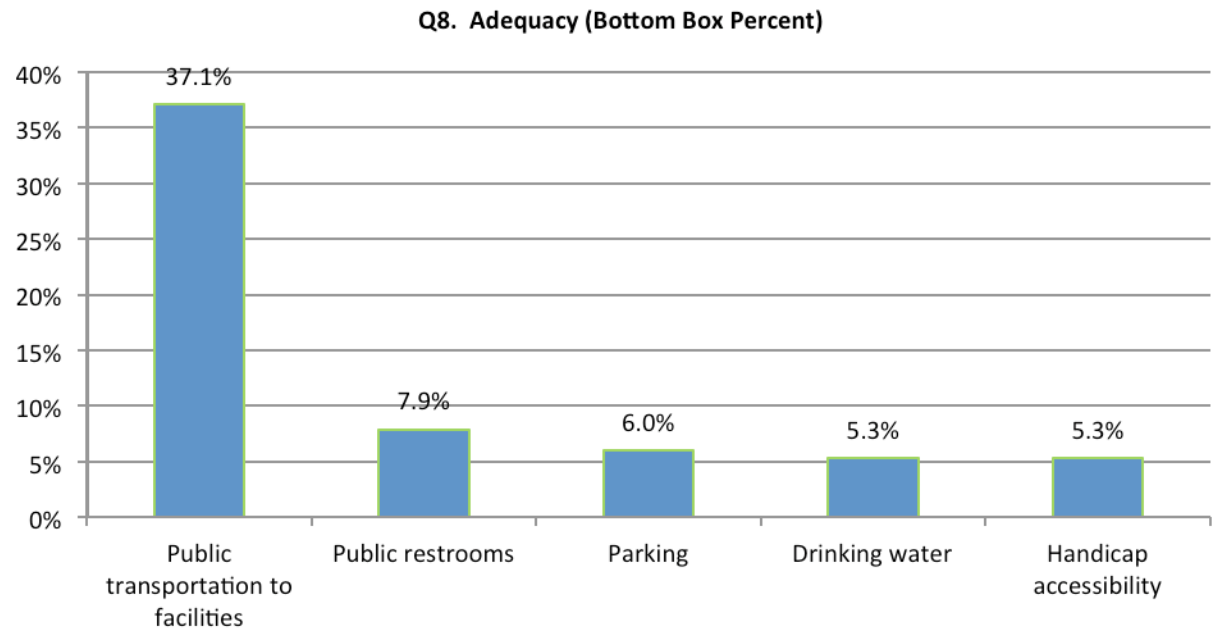
Adequacy frequencies were sorted by the percentage of responses indicating "Not at All Adequate" (Bottom Box Percent) and sorted from high to low (Table RO4.d and Chart RO4.c).

- **Public transportation to facilities** was the only support component that had bottom box score above 10%, with **37.1%** (n=56) of respondents indicating that **Public transportation to facilities** is not at all adequate, indicating that more than 1/3rd of respondents scored **public transportation to facilities** as being not at all adequate.

Table RO4.d. Q8. Adequacy – Frequencies – Not at All Adequate (Bottom Box Percent)

Support Component	Very Adequate 5	4	3	2	**Not at All Adequate 1**
Public transportation to facilities	9.3% (14)	9.9% (15)	18.5% (28)	25.2% (38)	**37.1% (56)**
Public restrooms	22.5% (34)	26.5% (40)	35.8% (54)	7.3% (11)	**7.9% (12)**
Parking	19.9% (30)	31.8% (48)	27.8% (42)	14.6% (22)	**6% (9)**
Drinking water	29.8% (45)	29.1% (44)	23.8% (36)	11.9% (18)	**5.3% (8)**
Handicap accessibility	25.8% (39)	39.7% (60)	15.9% (24)	13.2% (20)	**5.3% (8)**

Chart RO4.c.



Cross-tabs – Urban or Rural/Adequacy

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **adequacy**, and mean scores for urban and rural areas were tested for statistically significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in adequacy between rural and urban areas and H_1 = different levels of adequacy between rural and urban areas (Table RO4.e and Table RO4.f).

- **Public transportation to facilities** (p=.010), **Public restrooms** (p=0.015), and **Handicap accessibility** (0.016) all showed significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =0.07, n=136) scored higher than **Rural** respondents ($\bar{x}$ =1.04, n=15) on , all three measures, indicating that the adequacy of **Public transportation to facilities, Public restrooms** and **Handicap accessibility** is significantly higher in urban areas than rural areas.

Cross-tabs – Area Code/Adequacy

Respondents were classified by **area code**, cross tabulated by **adequacy**, sorted high to low by overall mean (Table RO4.a) and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in adequacy and H_1 = difference in adequacy (Table RO4.g).

- **St. Louis (314)** (n=34) area code had the most statistically significant differences, with three differences among two adequacy measures ($p < 0.05 = H_0$ rejected and H_1 accepted)
    - **Handicap accessibility** ($\bar{x}$ =3.7, n=151) scored significantly higher in **St. Louis East (314)** ($\bar{x}$ =4.1, n=34) compared to **Southwest (417)** ($\bar{x}$ =3.2, n=18).
    - **Drinking water** ($\bar{x}$ =3.7, n=151) scored significantly higher in **St. Louis East (314)** ($\bar{x}$ =4.1, n=34) compared to **Northwest (660)** ($\bar{x}$ =2.6, n=18) and **Kansas City-West (816)** ($\bar{x}$ =3.5, n=41).
- **Northeast-Central-Southeast (573)** (n=33) had one statistically significant difference among one adequacy measure ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Drinking water** ($\bar{x}$ =3.7, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.6, n=33) compared to **Northwest (660)** ($\bar{x}$ =2.6, n=18).
- **Southwest (417)** (n=18) had one statistically significant difference among one adequacy measure ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Drinking water** ($\bar{x}$ =3.7, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =3.5, n=34) compared to **Northwest (660)** ($\bar{x}$ =2.6, n=18).

Research Objective 4.6 (RO4.6)

- **Determine other potential inadequacies related to outdoor recreation facilities in Missouri.**

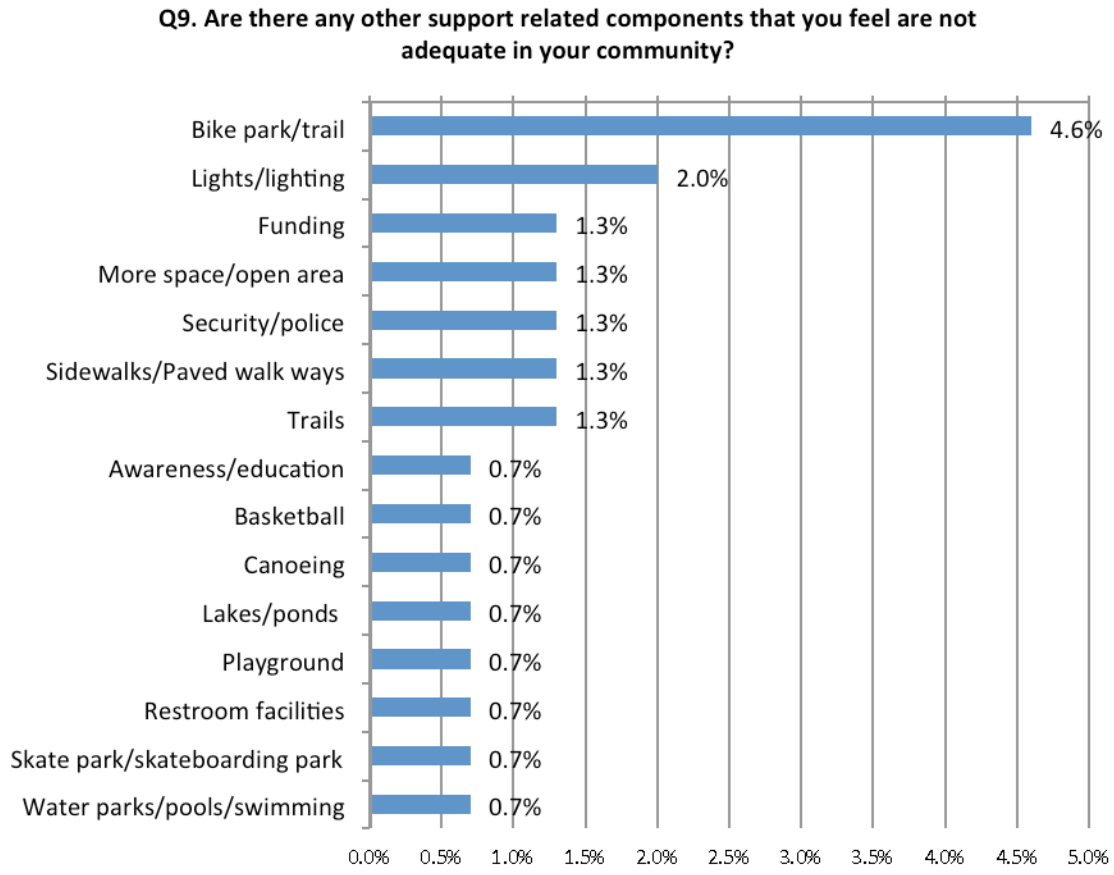
Respondents were asked, "Are there any other support related components that you feel are not adequate in your community?" Responses were coded, tallied, and sort by frequency from high to low (Table RO4.6a and RO4.6a).

- **Nothing** (80.1%, n=121) was mentioned by more than **80%** of respondents.
- **No other components** were mentioned by more than **5%** of respondents.

Table RO4.6a. Q9 Frequencies – Are there any other support related components that you feel are not adequate in your community?

Code	Response	Responses		Percent of Cases
		N	Percent	
12	Bike park/trail	7	4.50%	4.60%
39	Lights/lighting	3	1.90%	2.00%
34	Funding	2	1.30%	1.30%
23	More space/open area	2	1.30%	1.30%
100	Security/police	2	1.30%	1.30%
49	Sidewalks/Paved walk ways	2	1.30%	1.30%
28	Trails	2	1.30%	1.30%
35	Awareness/education	1	0.60%	0.70%
33	Basketball	1	0.60%	0.70%
61	Canoeing	1	0.60%	0.70%
18	Lakes/ponds	1	0.60%	0.70%
24	Playground	1	0.60%	0.70%
13	Restroom facilities	1	0.60%	0.70%
10	Skate park/skateboarding park	1	0.60%	0.70%
20	Water parks/pools/swimming	1	0.60%	0.70%
96	Nothing	121	78.10%	80.10%
99	Other	6	3.90%	4.00%
	Total	155	100.00%	102.60%

Chart RO4.6a.


Q9. Are there any other support related components that you feel are not adequate in your community?
Bike park/trail
Lights/lighting
Funding
More space/open area
Security/police
Sidewalks/Paved walk ways
Trails
Awareness/education
Basketball
Canoeing
Lakes/ponds
Playground
Restroom facilities
Skate park/skateboarding park
Water parks/pools/swimming
4.6%
2.0%
1.3%
1.3%
1.3%
1.3%
1.3%
0.7%
0.7%
0.7%
0.7%
0.7%
0.7%
0.7%
0.7%
0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5% 5.0%

5. **Research Question 5 (RQ5)**

- ***How large are outdoor recreation priorities in Missouri?***

Research Objective 5.1 (RO5.1) – Research Objective 5.5 (RO5.6)

- **Determine if increasing funding for outdoor recreation is a high priority in local communities (RO5.1).**
- **Determine if maintenance of existing facilities is a high priority in local communities (RO5.2).**
- **Determine if education is a high priority in local communities (RO5.3)**
- **Determine if improving communication is a high priority in local communities (RO5.4).**
- **Determine if improving marketing and public relations efforts are a high priority in local communities (RO5.5).**
- **Determine if increased preservation effort is a high priority in local communities (RO5.6).**

All respondents were asked to rate areas of outdoor recreation improvement in terms of priority, with a score of 1 being "Not a Priority at All" and 5 being "High Priority". All respondents provided valid answers and there were no missing values.

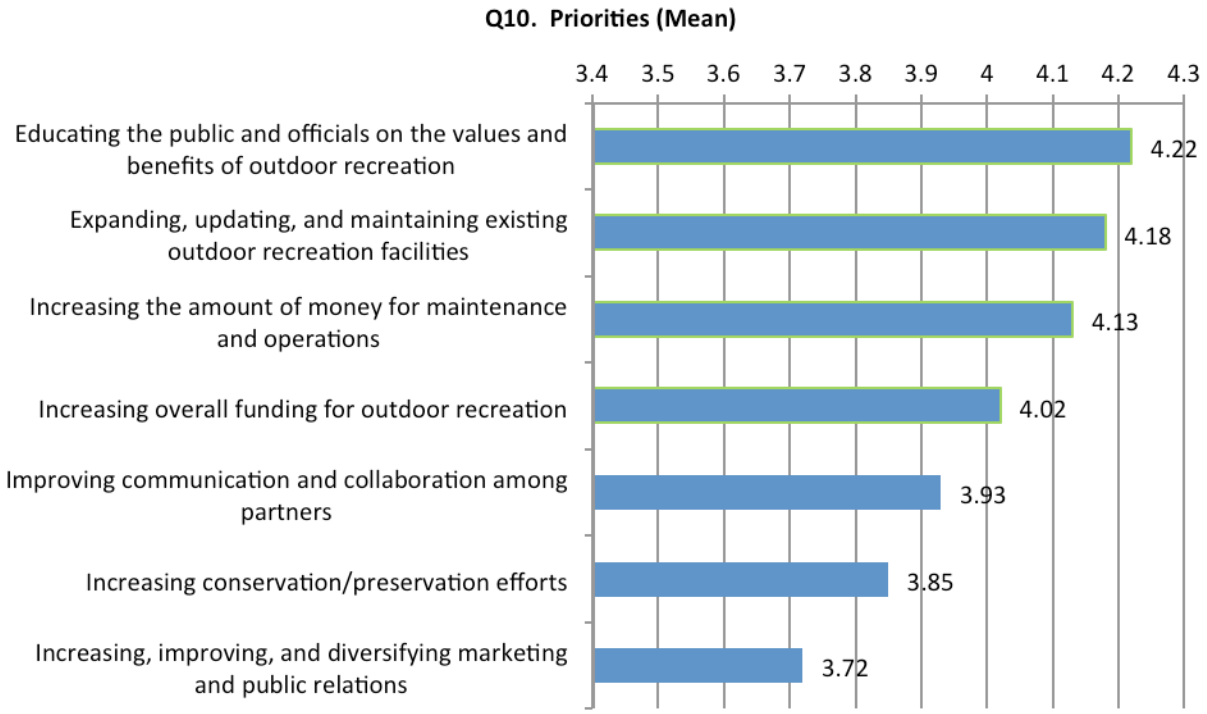
Mean scores were computed for all priorities and sorted from high to low (Table RO5.a and Chart RO5.a).

- **Educating the public and officials on the values and benefits of outdoor recreation** had the highest mean score of **4.22**, indicating that out of all the priority measures, **Educating the public and officials on the values and benefits of outdoor recreation** is considered the highest priority.
- **Expanding, updating, and maintaining existing outdoor recreation facilities** ($\bar{x}$ =4.18), **Increasing the amount of money for maintenance and operations** ($\bar{x}$ =4.13), and **Increasing overall funding for outdoor recreation** ($\bar{x}$ =4.02) all had mean scores greater than **4.0**, indicating that they are high priority among respondents.
- **Improving communication and collaboration among partners** ($\bar{x}$ =3.93), **Increasing conservation/preservation efforts** ($\bar{x}$ =3.85), and **Increasing, improving, and diversifying marketing and public relations** ($\bar{x}$ =3.72) all had mean scores below **4.0**, indicating that they are not as high a priority as the other areas of improvement that were measured.

Table RO5.a. Statistics – Q10. Priorities

Priority	N	**Mean**	Std. Deviation	Std. Error Mean
Educating the public and officials on the values and benefits of outdoor recreation	151	**4.22**	1.019	0.083
Expanding, updating, and maintaining existing outdoor recreation facilities	151	**4.18**	1.001	0.081
Increasing the amount of money for maintenance and operations	151	**4.13**	1.069	0.087
Increasing overall funding for outdoor recreation	151	**4.02**	1.104	0.090
Improving communication and collaboration among partners	151	**3.93**	1.132	0.092
Increasing conservation/preservation efforts	151	**3.85**	1.079	0.088
Increasing, improving, and diversifying marketing and public relations	151	**3.72**	1.163	0.095

Chart RO5.a.



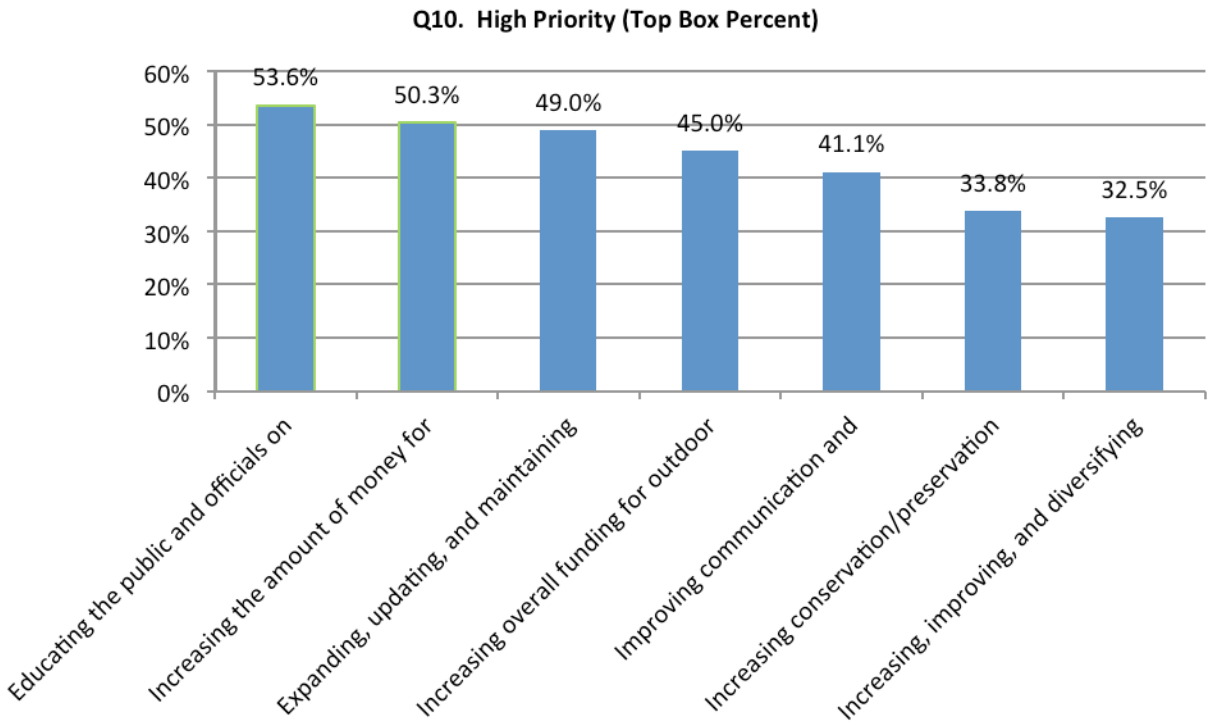
Frequencies and percentages were tallied for all respondents and sorted by the percentage of respondents that answered "High Priority" (Top Box Percent) (Table RO5.b and Chart RO5.b).

- All priority measures had top box percentages above **30%**, indicating that all of them are a high priority.
    - **Educating the public and officials on the values and benefits of outdoor recreation** (53.6%, n=81) and **Increasing the amount of money for maintenance and operations** (50.3%, n=76) both had top box percentages above **50%**, indicating that more than ½ of respondents scored **educating the public and officials on the values and benefits of outdoor recreation** and **increasing the amount of money for outdoor recreation** as being high priority.
    - **Expanding, updating, and maintaining existing outdoor recreation facilities** (49%, n=74), **Increasing overall funding for outdoor recreation** (45%, n=68), and **Improving communication and collaboration among partners** (41.1%, n=62) all had top box percentages above **40%**, indicating that 2/5th of respondents scored **expanding, updating, and maintaining existing outdoor recreation facilities**, **increasing overall funding for outdoor recreation**, and **Improving communication and collaboration among partners** as being high priority.
    - **Increasing conservation/preservation efforts** (33.8%, n=51) and **Increasing, improving, and diversifying marketing and public relations** (32.5%, n=49) all had top box percentages above **30%.**
        - More than 1/3rd of respondents scored i**ncreasing conservation/preservation efforts** as a high priority

Table RO5.b. Q10. Priority – Frequencies – High Priority (Top Box Percent

Priority	Not a Priority at All 1	2	3	4	**High Priority 5**
Educating the public and officials on the values and benefits of outdoor recreation	2.6% (4)	3.3% (5)	17.2% (26)	23.2% (35)	**53.6% (81)**
Increasing the amount of money for maintenance and operations	2% (3)	7.9% (12)	15.2% (23)	24.5% (37)	**50.3% (76)**
Expanding, updating, and maintaining existing outdoor recreation facilities	2% (3)	5.3% (8)	14.6% (22)	29.1% (44)	**49% (74)**
Increasing overall funding for outdoor recreation	3.3% (5)	6.6% (10)	19.9% (30)	25.2% (38)	**45% (68)**
Improving communication and collaboration among partners	4% (6)	7.3% (11)	21.9% (33)	25.8% (39)	**41.1% (62)**
Increasing conservation/preservation efforts	3.3% (5)	7.9% (12)	22.5% (34)	32.5% (49)	**33.8% (51)**
Increasing, improving, and diversifying marketing and public relations	4.6% (7)	10.6% (16)	25.8% (39)	26.5% (40)	**32.5% (49)**

Chart RO5.b.



Cross-tabs – Urban or Rural/Priority

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **priority**, and mean scores for urban and rural areas were tested for statistically significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in priority between rural and urban areas and H_1 = different in priority between rural and urban areas (Table RO5.c and Table RO5.d).

- **Educating the public and officials on the values and benefits of outdoor recreation** (p=0.027) was the only priority to show significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =4.28, n=136) scored higher than **Rural** respondents ($\bar{x}$ =3.67, n=15), indicating that the priority **Educating the public and officials on the values and benefits of outdoor recreation** is significantly larger in urban areas than rural areas.
- **Increasing conservation/preservation efforts** was the only other priority to show significant differences between urban and rural above the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =3.90, n=136) scored higher than **Rural** respondents ($\bar{x}$ =3.40, n=15), indicating that the priority **Increasing conservation/preservation efforts** is significantly larger in urban areas than rural areas.

Cross-tabs – Area Code/Priority

Respondents were classified by **area code**, cross tabulated by **priority**, sorted high to low by overall mean (Table 10a), and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in improvement and H_1 = different improvement needs (Table RO5.e).

- **Kansas City-West (816)** (n=41) area code had three significant differences among three of the priorities:
    - **Educating the public and officials on the values and benefits of outdoor recreation** ($\bar{x}$ =4.2, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =4.5, n=41) compared to **East-Central (636)** ($\bar{x}$ =3.6, n=17).
    - **Improving communication and collaboration among partners** ($\bar{x}$ =4.2, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =4.2, n=41) compared to **St. Louis (314)** ($\bar{x}$ =3.6, n=17).
    - **Increasing, improving, and diversifying marketing and public relations** ($\bar{x}$ =3.7, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =4.0, n=41) compared to **East-Central (636)** ($\bar{x}$ =2.9, n=17).
- **Northeast-Central-Southeast (573)** (n=33) area code had three significant differences among two of the priorities:
    - **Expanding, updating, and maintaining existing outdoor recreation facilities** ($\bar{x}$ =4.2, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =4.5, n=41) compared to **St. Louis (314)** ($\bar{x}$ =3.9, n=17) and **East-Central (636)** ($\bar{x}$ =3.7, n=17).
    - **Increasing, improving, and diversifying marketing and public relations** ($\bar{x}$ =3.7, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.7, n=33) compared to **East-Central (636)** ($\bar{x}$ =2.9, n=17).
- **St. Louis (314)** (n=34) area code had one significant difference among one of the priorities:
    - **Increasing, improving, and diversifying marketing and public relations** ($\bar{x}$ =3.7, n=151) scored significantly higher in **St. Louis (314)** ($\bar{x}$ =3.8, n=34) compared to **East-Central (636)** ($\bar{x}$ =2.9, n=17).

6. **Research Question 6 (RQ6)**

- ***How large are the obstacles to preventing improvement in outdoor recreation in Missouri?***

Research Objective 6.1 (RO6.1) through Research Objective 6.5 (RO6.5)

- **Determine if low priority/support for outdoor recreation is an obstacle to improving outdoor recreation in local communities (RO6.1).**
- **Determine if funding issues are an obstacle to improving outdoor recreation in local communities (RO6.2).**
- **Determine if outdoor recreation management is an obstacle to improving outdoor recreation in local communities (RO6.3).**
- **Determine if safety is an obstacle to improving outdoor recreation in local communities (RO6.4).**
- **Determine if land issues are an obstacle to improving outdoor recreation in local communities (RO6.5).**

All respondents were asked to rate potential obstacles that may prevent outdoor recreation improvement, with a score of 1 being "Not an Obstacle at All" and 5 being "Very Large Obstacle". All respondents provided valid answers and there were no missing values.

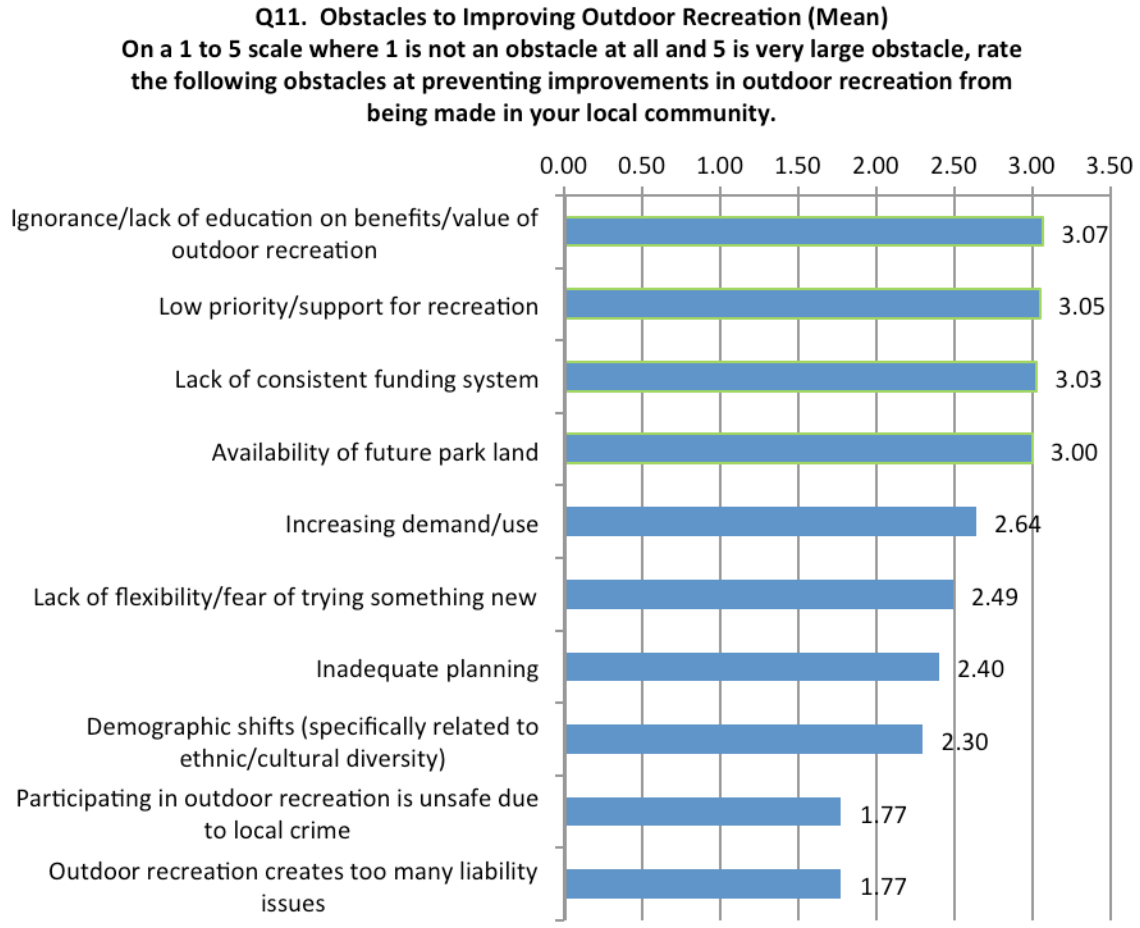
Mean scores were computed for all obstacles and sorted from high to low (Table RO6.a and Chart RO6.a).

- **Ignorance/lack of education on benefits/values of outdoor recreation** ($\bar{x}$ =3.07), **Low priority/support for recreation** ($\bar{x}$ =3.05), **Lack of consistent funding system** ($\bar{x}$ =3.03), and **Availability of future park land** ($\bar{x}$ =3.0) all scored above a 3.0, indicating that they are the largest obstacles to improving outdoor recreation.
- **Increasing demand/use** ($\bar{x}$ =2.64) was the only obstacle to score between **2.5** and **3.0.**
- **Lack of flexibility/fear of trying something new** ($\bar{x}$ =2.49), **Inadequate planning** ($\bar{x}$ =2.40), and **Demographic shifts** ($\bar{x}$ =2.30) scored between **2.0** and **2.5.**
- **Participating in outdoor recreation is unsafe due to local crime** and **Outdoor recreation creates too many liability issues** ($\bar{x}$ =1.77) both scored lower than a **2.0**, indicating that they are the smallest obstacles to improving outdoor recreation.

Table RO6.a. Statistics – Q11. Obstacles to Improving Outdoor Recreation

Obstacle	N	**Mean**	Std. Deviation	Std. Error Mean
Ignorance/lack of education on benefits/value of outdoor recreation	151	**3.07**	1.332	0.108
Low priority/support for recreation	151	**3.05**	1.336	0.109
Lack of consistent funding system	151	**3.03**	1.428	0.116
Availability of future park land	151	**3.00**	1.456	0.118
Increasing demand/use	151	**2.64**	1.282	0.104
Lack of flexibility/fear of trying something new	151	**2.49**	1.351	0.110
Inadequate planning	151	**2.40**	1.201	0.098
Demographic shifts (specifically related to ethnic/cultural diversity)	151	**2.30**	1.232	0.100
Participating in outdoor recreation is unsafe due to local crime	151	**1.77**	1.110	0.090
Outdoor recreation creates too many liability issues	151	**1.77**	0.981	0.080

Chart RO6.a.


Q11. Obstacles to Improving Outdoor Recreation (Mean)
On a 1 to 5 scale where 1 is not an obstacle at all and 5 is very large obstacle, rate the following obstacles at preventing improvements in outdoor recreation from being made in your local community.
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
Ignorance/lack of education on benefits/value of outdoor recreation
3.07
Low priority/support for recreation
3.05
Lack of consistent funding system
3.03
Availability of future park land
3.00
Increasing demand/use
2.64
Lack of flexibility/fear of trying something new
2.49
Inadequate planning
2.40
Demographic shifts (specifically related to ethnic/cultural diversity)
2.30
Participating in outdoor recreation is unsafe due to local crime
1.77
Outdoor recreation creates too many liability issues
1.77

Frequencies and percentages were tallied for all respondents (Table RO6.b).

- Scores on the issues **Participating in outdoor recreation is unsafe due to local crime** (60.3%, n=91), **Outdoor recreation creates too many liability issues** (51%, n=77), **Demographic shifts** (35.1%, n=53), **Lack of flexibility/fear of trying something new** (33.8%, n=51) indicate that they are not large obstacles when it comes to improving local outdoor recreation.
- **Availability of future park land** (24.5%, n=37) had an equal number of "Not an Obstacle at All" responses as "3" (midpoint) responses, indicating that the issue **Availability of future park land** varies among respondents as an obstacle to improving outdoor recreation.

Table RO6.b. Q11. Obstacle – Frequencies

Obstacles	Not an Obstacle at All 1	2	3	4	Very Large Obstacle 5
Low priority/support for recreation	19.2% (29)	10.6% (16)	**33.8% (51)**	18.5% (28)	17.9% (27)
Lack of consistent funding system	19.2% (29)	19.2% (29)	**24.5% (37)**	13.9% (21)	23.2% (35)
Ignorance/lack of education on benefits/value of outdoor recreation	15.9% (24)	17.2% (26)	**30.5% (46)**	16.6% (25)	19.9% (30)
Inadequate planning	27.8% (42)	**28.5% (43)**	26.5% (40)	9.9% (15)	7.3% (11)
Lack of flexibility/fear of trying something new	**33.8% (51)**	17.2% (26)	25.8% (39)	12.6% (19)	10.6% (16)
Increasing demand/use	25.8% (39)	18.5% (28)	**31.1% (47)**	14.6% (22)	9.9% (15)
Demographic shifts (specifically related to ethnic/cultural diversity)	**35.1% (53)**	22.5% (34)	27.2% (41)	7.9% (12)	7.3% (11)
Participating in outdoor recreation is unsafe due to local crime	**60.3% (91)**	15.9% (24)	12.6% (19)	9.3% (14)	2% (3)
Outdoor recreation creates too many liability issues	**51% (77)**	29.8% (45)	11.3% (17)	6.6% (10)	1.3% (2)
Availability of future park land	**24.5% (37)**	11.3% (17)	**24.5% (37)**	19.2% (29)	20.5% (31)

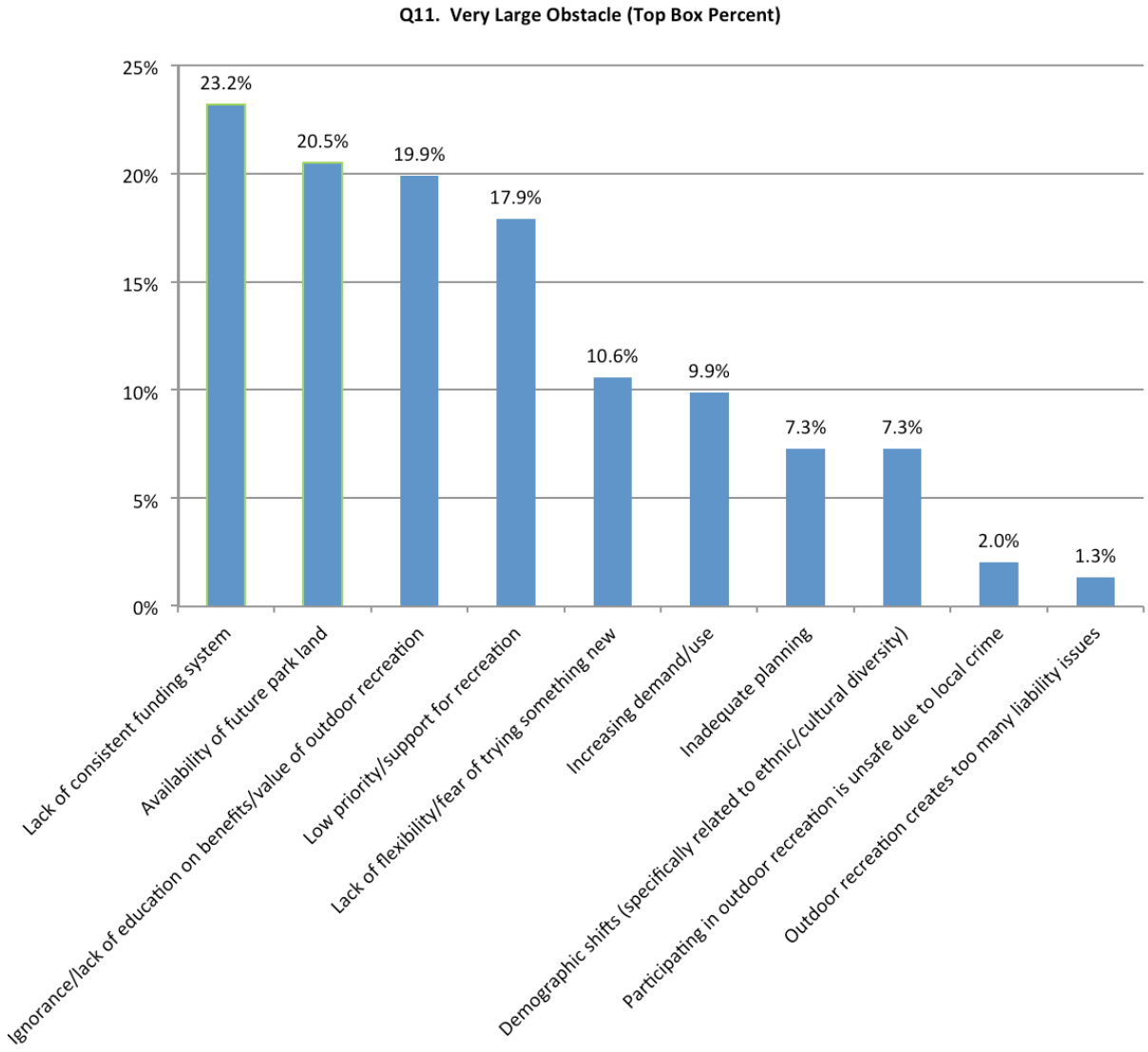
Frequencies and percentages were tallied for all respondents and sorted by the percentage of respondents that answered "Very Large Obstacle" (Top Box Percent) (Table RO6.c and Chart RO6.b).

- **Lack of consistent funding system** (23.2%, n=35) and **Availability of future park land** (24.5%, n=37) both had top box percentages above **20%**, indicating that more than 1/5th of respondents scored **Lack of consistent funding system** and **Availability of future park land** as very large obstacles.
    - The frequency distribution of **Availability of Future park land** (Chart 11d), with a large standard deviation of **1.45**, indicates that **Availability of future park land** has a large amount of variance, indicating the values are more widely distributed around the mean ($\bar{x}$ =3.00).
        - Bottom box score was greater than top box score for Availability of future park land, indicating that opinion was not consistent as to whether or not **Availability of future park land** is an obstacle.
    - The frequency distribution of **Lack of consistent funding system** (Chart 11e) also displayed a high level of variance with a standard deviation of **1.42**, indicating that **Lack of consistent funding system** varies among respondents and is widely distributed around the mean ($\bar{x}$ =3.03).

Table RO6.c. Q11. Obstacle – Frequencies – Very Large Obstacle (Top Box Percent)

Obstacles	Not an Obstacle at All 1	2	3	4	**Very Large Obstacle 5**
Lack of consistent funding system	19.2% (29)	19.2% (29)	24.5% (37)	13.9% (21)	**23.2% (35)**
Availability of future park land	24.5% (37)	11.3% (17)	24.5% (37)	19.2% (29)	**20.5% (31)**
Ignorance/lack of education on benefits/value of outdoor recreation	15.9% (24)	17.2% (26)	30.5% (46)	16.6% (25)	**19.9% (30)**
Low priority/support for recreation	19.2% (29)	10.6% (16)	33.8% (51)	18.5% (28)	**17.9% (27)**
Lack of flexibility/fear of trying something new	33.8% (51)	17.2% (26)	25.8% (39)	12.6% (19)	**10.6% (16)**
Increasing demand/use	25.8% (39)	18.5% (28)	31.1% (47)	14.6% (22)	**9.9% (15)**
Inadequate planning	27.8% (42)	28.5% (43)	26.5% (40)	9.9% (15)	**7.3% (11)**
Demographic shifts (specifically related to ethnic/cultural diversity)	35.1% (53)	22.5% (34)	27.2% (41)	7.9% (12)	**7.3% (11)**
Participating in outdoor recreation is unsafe due to local crime	60.3% (91)	15.9% (24)	12.6% (19)	9.3% (14)	**2% (3)**
Outdoor recreation creates too many liability issues	51% (77)	29.8% (45)	11.3% (17)	6.6% (10)	**1.3% (2)**

Chart RO6.b.


Q11. Very Large Obstacle (Top Box Percent)
25%
20%
15%
10%
5%
0%
23.2%
20.5%
19.9%
17.9%
10.6%
9.9%
7.3%
7.3%
2.0%
1.3%
Lack of consistent funding system
Availability of future park land
Ignorance/lack of education on benefits/value of outdoor recreation
Low priority/support for recreation
Lack of flexibility/fear of trying something new
Increasing demand/use
Inadequate planning
Demographic shifts (specifically related to ethnic/cultural diversity)
Participating in outdoor recreation is unsafe due to local crime
Outdoor recreation creates too many liability issues

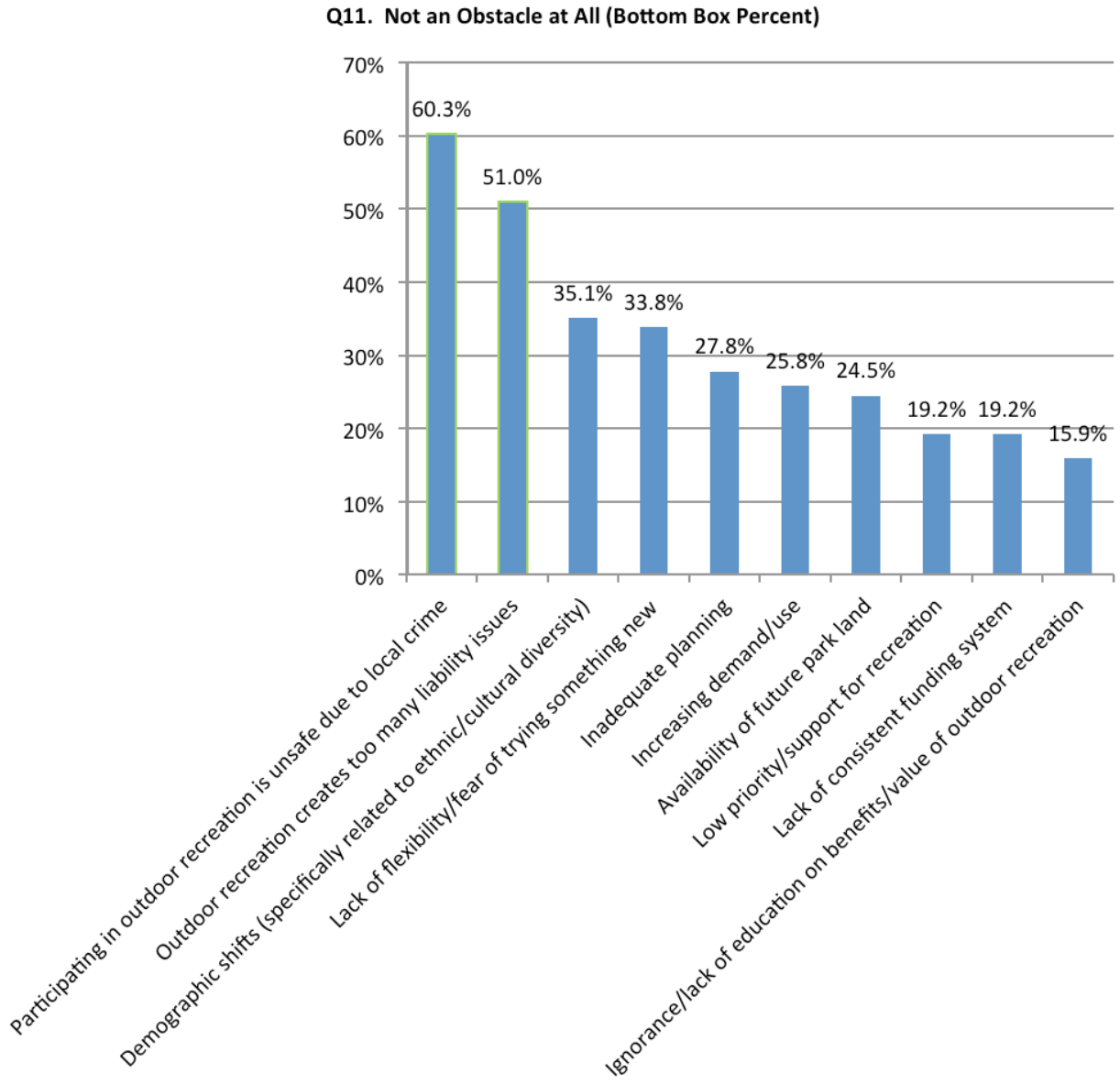
Frequencies and percentages were tallied for all respondents and sorted by the percentage of respondents that answered "Not an Obstacle at All" (Bottom Box Percent) (Table RO6.d and Chart RO6.c).

- **Participating in outdoor recreation is unsafe due to local crime** was the only obstacle that had a bottom box percentage above **60%**, with **60.3%** (n=91) indicating that **Participating in outdoor recreation is unsafe due to local crime** is not an obstacle to improving outdoor recreation.
- **Outdoor recreation creates too many liability issues** had a bottom box score greater than **50%**, with **51%** (n=77) indicating that **Outdoor recreation creates too many liability issues** is not an obstacle to improving outdoor recreation.
- **Demographic shifts** had a bottom box percentage greater than **30%**, with **35.1%** (n=53) – more than 1/3rd – indicating that **Demographc shifts** are not an obstacle to improving outdoor recreation.
- **Inadequate planning** (27.8%, n=42) and **Increasing demand/use** (25.8%, n=39) had bottom box percentages greater than **25%**, indicating that more than 1/4th of respondents indicate that **inadequate planning** and **increasing demand/use** are not an obstacle at all to improving outdoor recreation.
- **Availability of future park land** (24.5%, n=37) had a bottom box percentage greater than **20%**, indicating that more than 1/5th or respondents scored **availability of future park land** as not an obstabcle at all to improving outdoor recreation.
- **Low priority/support for recreation** (19.2%, n=29), **Lack of consistent funding system** (19.2%, n=29), and **Ignorance/lack of education on benefits/values of recreation** (15.9%, n=24), all had bottom box percentages greater than 15%, indicating that 1/7th of respondents scored **Low priority/support for recreation**, **Lack of consistent funding system**, and **Ignorance/lack of education on benefits/values of recreation** as not being an obstacle at all to improving outdoor recreation.

Table RO6.d. Q11. Obstacle – Frequencies – Not an Obstacle at All (Bottom Box Percent)

Obstacles	**Not an Obstacle at All 1**	2	3	4	Very Large Obstacle 5
Participating in outdoor recreation is unsafe due to local crime	**60.3% (91)**	15.9% (24)	12.6% (19)	9.3% (14)	2% (3)
Outdoor recreation creates too many liability issues	**51% (77)**	29.8% (45)	11.3% (17)	6.6% (10)	1.3% (2)
Demographic shifts (specifically related to ethnic/cultural diversity)	**35.1% (53)**	22.5% (34)	27.2% (41)	7.9% (12)	7.3% (11)
Lack of flexibility/fear of trying something new	**33.8% (51)**	17.2% (26)	25.8% (39)	12.6% (19)	10.6% (16)
Inadequate planning	**27.8% (42)**	28.5% (43)	26.5% (40)	9.9% (15)	7.3% (11)
Increasing demand/use	**25.8% (39)**	18.5% (28)	31.1% (47)	14.6% (22)	9.9% (15)
Availability of future park land	**24.5% (37)**	11.3% (17)	24.5% (37)	19.2% (29)	20.5% (31)
Low priority/support for recreation	**19.2% (29)**	10.6% (16)	33.8% (51)	18.5% (28)	17.9% (27)
Lack of consistent funding system	**19.2% (29)**	19.2% (29)	24.5% (37)	13.9% (21)	23.2% (35)
Ignorance/lack of education on benefits/value of outdoor recreation	**15.9% (24)**	17.2% (26)	30.5% (46)	16.6% (25)	19.9% (30)

Chart RO6.c


Q11. Not an Obstacle at All (Bottom Box Percent)
70%
60%
50%
40%
30%
20%
10%
0%
60.3%
51.0%
35.1%
33.8%
27.8%
25.8%
24.5%
19.2%
19.2%
15.9%
Participating in outdoor recreation is unsafe due to local crime
Outdoor recreation creates too many liability issues
Demographic shifts (specifically related to ethnic/cultural diversity)
Lack of flexibility/fear of trying something new
Inadequate planning
Increasing demand/use
Availability of future park land
Low priority/support for recreation
Lack of consistent funding system
Ignorance/lack of education on benefits/value of outdoor recreation

Cross-tabs – Urban or Rural/Obstacles

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **obstacles**, and mean scores for urban and rural areas were tested for statistically significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in obstacles between rural and urban areas and H_1 = difference between obstacles between rural and urban obstacles (Table RO6.e and Table RO6.f).

- **Lack of consistent funding system** (p=0.043) was the only obstacle to show significant differences at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Rural** respondents ($\bar{x}$ =3.73, n=15) scored higher than **Urban** respondents ($\bar{x}$ =2.95, n=136) , indicating that the **Lack of a consistent funding system** is a significantly larger obstacle in rural areas than urban areas.
- **Availability of future park land** (p=0.061) and **Participating in outdoor recreation is unsafe due to local crime** (p=0.065) were the only other obstacles that showed significant differences between urban and rural at the 90% level ($p < 0.10 = H_0$ rejected and H_1 accepted).
    - **Rural** respondents ($\bar{x}$ =3.67, n=15) scored higher than **Urban** respondents ($\bar{x}$ =2.93, n=136), indicating that **Availability of future park land** is a significantly larger obstacle in rural areas than urban areas.
    - **Urban** respondents ($\bar{x}$ =1.82, n=15) scored higher than **Rural** respondents ($\bar{x}$ =1.27, n=15), indicating that **Participating in outdoor recreation is unsafe due to local crime** is a significantly larger obstacle in urban areas than rural areas.

Cross-tabs – Area Code/Obstacles

Respondents were classified by **area code**, cross tabulated by **obstacle**, sorted high to low by overall mean (Table 11a), and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in obstacles between the two area codes and H_1 = difference in obstacles between the two area codes (Table RO6.g).

- **Kansas City-West (816)** (n=41) area code had three significant differences, as compared to other regions, among two of the obstacles ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Ignorance/lack of education on benefits/value of outdoor recreation** ($\bar{x}$ =3.1, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =3.5, n=41) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.8, n=33) and **East-Central (636)** ($\bar{x}$ =2.6, n=17).
    - **Low priority/support for recreation** ($\bar{x}$ =3.1, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =3.3, n=41) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.7, n=33).
- **St. Louis-East (314)** (n=34) area code had three significant differences, as compared to other regions, among two of the obstacles ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Availability of future parkland** ($\bar{x}$ =3.0, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =3.7, n=34) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =2.6, n=33) and **Kansas City-West (816)** ($\bar{x}$ =2.8, n=41).
    - **Outdoor recreation creates too many liability issues** ($\bar{x}$ =1.8, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =2.1, n=34) compared to **Kansas City-West (816)** ($\bar{x}$ =1.6, n=41).

7. **Research Question 7 (RQ7)**

- ***How well are the needs of various age groups being met?***

Research Objective 7.1 (RO7.1) through Research Objective 7.6 (RO7.6)

- **Determine how well current local outdoor recreation facilities meet the needs of 0 to 5 year olds. (RO7.1).**
- **Determine how well current local outdoor recreation facilities meet the needs of 6 to 12 year olds. (RO7.2).**
- **Determine how well current local outdoor recreation facilities meet the needs of 13 to 18 year olds. (RO7.3).**
- **Determine how well current local outdoor recreation facilities meet the needs of 19 to 34 year olds. (RO7.4).**
- **Determine how well current local outdoor recreation facilities meet the needs of 35 to 54 year olds. (RO7.5).**
- **Determine how well current local outdoor recreation facilities meet the needs of 55 years or older. (RO7.6).**

All respondents were asked to rate how well they are able to meet the needs of the following age groups, 0 to 5 year olds, 6 to 12 year olds, 13 to 18 year olds, 19 to 34 year olds, 35 to 54 year olds, and 55 and older, using a 1 to 5 with a score of 1 being "Needs are not Being Met at All" and 5 being "Needs are Being Met Very Well". All respondents provided valid answers and there were no missing values.

Mean scores were computed for all age ranges (Table RO7.a and Chart RO7.a) with the following results, from highest score to lowest score:

- **6 to 12 year olds** ($\bar{x}$ =4.07) had the highest mean score, and the only mean score above 4.0, indicating the needs of 6 to 12 year olds are being met more than any other age group.
- **19 to 34 years olds** ($\bar{x}$ =3.75), **35 to 54 year olds** ($\bar{x}$ =3.75), **55 years and older** ($\bar{x}$ =3.60), and **0 to 5 year olds** ($\bar{x}$ =3.50) all scored between **3.5** and **4.0.**
    - A paired samples t-test was used to test for statistically significant differences between **19 to 34 year olds** ($\bar{x}$ =3.75) and **35 to 54 year olds** ($\bar{x}$ =3.75), with H_0 = null/no difference in needs between **19 to 34 year olds** and **35 to 54 year olds** and H_1 = difference in needs between **19 to 34 year olds** and **35 to 54 year olds** (Table RO7.b and Table RO7c).
        - A p-value of **0.919** indicates that the difference between mean values are not statistically significant ($p > 0.05$ at 95% and $p > 0.10$ at 90%), and therefore the needs of **19 to 34 year olds** are statistically equal to the needs of **35 to 54 year** olds.
- **13 to 18 year olds** ($\bar{x}$ =3.75) was the only age range to score below **3.0**, indicating that **13 to 18 year olds** have the most unmet needs out of all the age ranges.

Table RO7.a. One-Sample Statistics – Q12. Needs Being Met

	N	Mean	Std. Deviation	Std. Error Mean
0 - 5 year olds	151	3.50	1.142	0.093
6 - 12 year olds	151	4.07	0.877	0.071
13 - 18 year olds	151	2.92	1.158	0.094
19 - 34 year olds	151	3.75	0.903	0.074
35 - 54 year olds	151	3.75	0.931	0.076
55 years and older	151	3.60	1.184	0.096

Chart RO7.a.

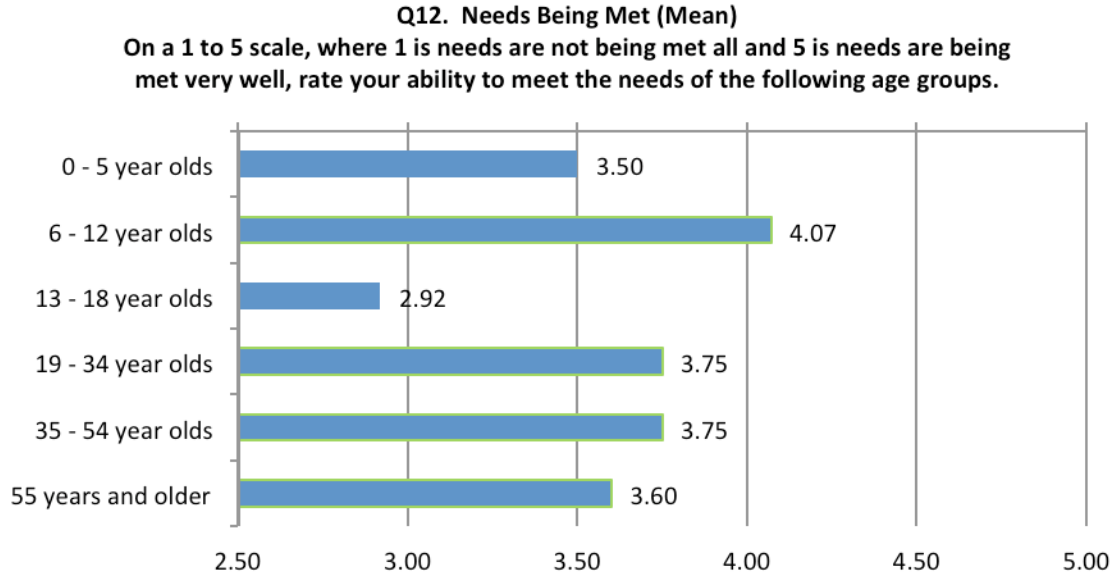
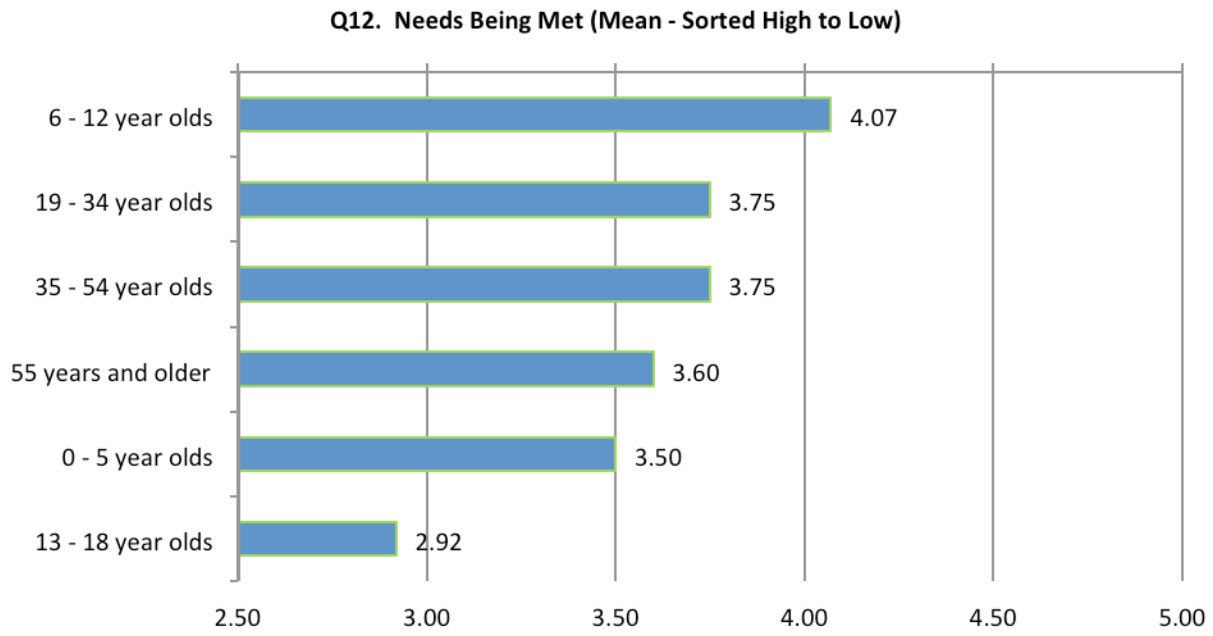


Chart RO7.b.



Frequencies and percentages were tallied for all respondents (Table RO7.d).

- **13 to 18 year olds** (32.8%, n=51) and **13 to 18 year olds** (33.1%, n=47) had more 3/5 scores than any other value, indicating that they have the most unmet needs.
- **19 to 34 year olds** (50.3%, n=76), **6 to 12 year olds** (47%, n=71), **35 to 54 year olds** (39.7%, n=60), and **55 years and older** (29.8%, n=45), all had more 4/5 scores than any other measure, indicating that needs for those age groups are being met better than the others.

Table RO7.d. Q12. Needs Being Met – Frequencies

	Needs not being met at all 1	2	3	4	Needs being met very well 5
0 - 5 year olds	5.3% (8)	13.2% (20)	**31.1%** **(47)**	27.2% (41)	23.2% (35)
6 - 12 year olds	2% (3)	2.6% (4)	15.2% (23)	**47%** **(71)**	33.1% (50)
13 - 18 year olds	11.3% (17)	25.8% (39)	**33.8%** **(51)**	17.9% (27)	11.3% (17)
19 - 34 year olds	2% (3)	7.3% (11)	22.5% (34)	**50.3%** **(76)**	17.9% (27)
35 - 54 year olds	2% (3)	5.3% (8)	30.5% (46)	**39.7%** **(60)**	22.5% (34)
55 years and older	6% (9)	12.6% (19)	24.5% (37)	**29.8%** **(45)**	27.2% (41)

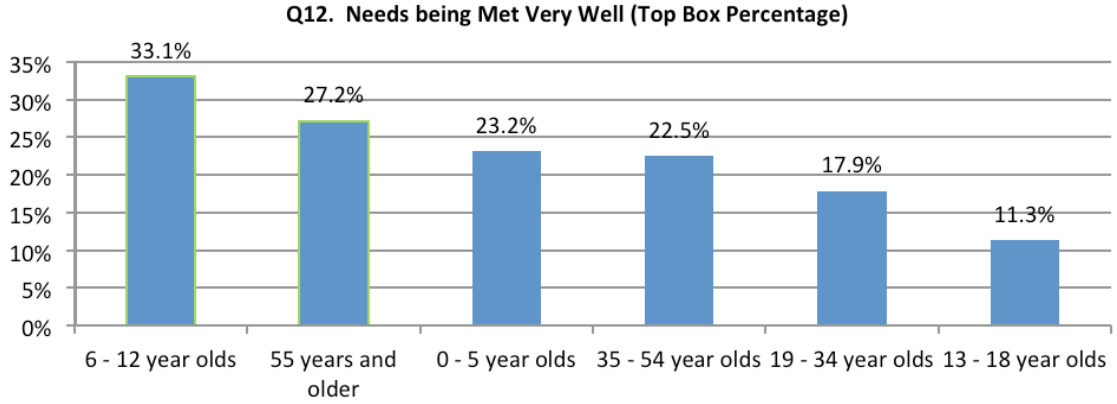
Frequencies and percentages were tallied for all respondents and sorted by the percentage of respondents that answered "Needs Being Met Very Well" (Top Box Percent) (Table RO7.e and Chart RO7.c).

- **6 to 12 year olds** (33.1%, n=50) had a top box percent above **30%**, indicating that more than 1/3rd of respondents scored the needs of **6 to 12 year olds** as being very well met.
- **55 years and older** (27.2%, n=41) had a top box percent above **25%**, indicating that more than 1/4th of respondents scored the needs of 55 years and older as being very well met.
- **0 to 5 year olds** (23.2%, n=35) and **35 to 54 year olds** (22.5%, n=34) both had top box scores above **20%**, indicating that more than 1/5th of respondents scored the needs of **0 to 5 year olds** and **35 to 54 year olds** as being very well met.
- **19 to 34 year olds** (17.9%, n=27) had a top box score above **15%**, indicating that more than 1/7th of respondents scored the needs of **19 to 34 year olds** as being very well met.
- **13 to 18 year olds** (11.3%, n=17) had a top score above **10%**, indicating that more than 1/10th of respondents scored the needs of **18 to 34 year olds** as being very well met.

Table RO7.e. Q12. Needs Being Met – Frequencies – Needs Being Met Very Well (Top Box Percent)

	Needs not being met at all 1	2	3	4	**Needs being met very well** **5**
6 - 12 year olds	2% (3)	2.6% (4)	15.2% (23)	47% (71)	**33.1%** **(50)**
55 years and older	6% (9)	12.6% (19)	24.5% (37)	29.8% (45)	**27.2%** **(41)**
0 - 5 year olds	5.3% (8)	13.2% (20)	31.1% (47)	27.2% (41)	**23.2%** **(35)**
35 - 54 year olds	2% (3)	5.3% (8)	30.5% (46)	39.7% (60)	**22.5%** **(34)**
19 - 34 year olds	2% (3)	7.3% (11)	22.5% (34)	50.3% (76)	**17.9%** **(27)**
13 - 18 year olds	11.3% (17)	25.8% (39)	33.8% (51)	17.9% (27)	**11.3%** **(17)**

Chart RO7.c.



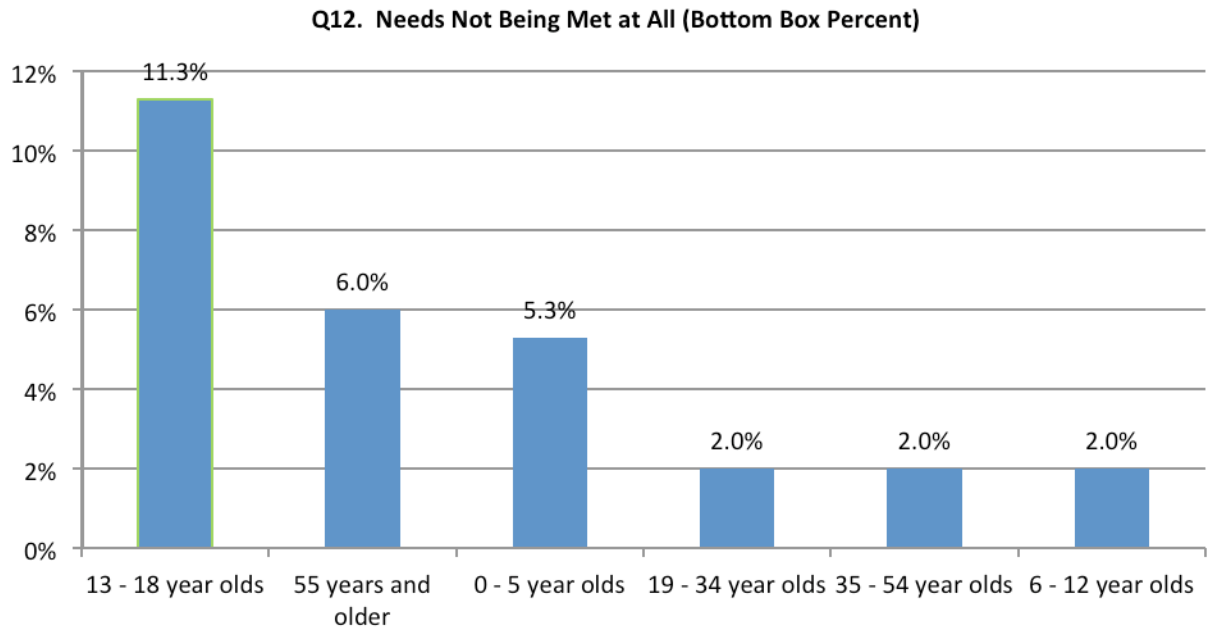
Frequencies and percentages were tallied for all respondents and sorted by the percentage of respondents that answered "Needs not Being Met At All" (Bottom Box Percent) (Table RO7f. and Chart RO7.d).

- **13 to 18 year old** (11.3%, n=17) was the only age segment that had a bottom box percent above **10%**, indicating that more than 1/10th of respondents scored the needs of **13 to 18 year olds** as not being met at all.

Table RO7.f. Q12. Needs Being Met – Frequencies – Q12. Needs Not Being Met at All (Bottom Box Percent)

	Needs being met very well 5	4	3	2	**Needs not being met at all 1**
13 - 18 year olds	11.3% (17)	17.9% (27)	33.8% (51)	25.8% (39)	**11.3% (17)**
55 years and older	27.2% (41)	29.8% (45)	24.5% (37)	12.6% (19)	**6% (9)**
0 - 5 year olds	23.2% (35)	27.2% (41)	31.1% (47)	13.2% (20)	**5.3% (8)**
19 - 34 year olds	17.9% (27)	50.3% (76)	22.5% (34)	7.3% (11)	**2% (3)**
35 - 54 year olds	22.5% (34)	39.7% (60)	30.5% (46)	5.3% (8)	**2% (3)**
6 - 12 year olds	33.1% (50)	47% (71)	15.2% (23)	2.6% (4)	**2% (3)**

Chart RO7.d.



Cross-tabs – Urban or Rural/Age Needs

Respondents were classified as either **urban or rural** (based on zip code), cross tabulated by **age needs**, and mean scores for urban and rural areas were tested for statistically significant differences using an independent samples t-test (95% and 90%) with H_0 = null/no difference in age based needs between rural and urban areas and H_1 = difference between age based needs between rural and urban obstacles (Table RO7.g and Table RO7.h).

- **6 to 12 year olds** (p=0.013) and **35 to 54 year olds** (p=0.014) showed significant differences between urban and rural at the 95% level ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **Urban** respondents ($\bar{x}$ =4.13, n=136) scored higher than **Rural** respondents ($\bar{x}$ =3.53, n=15), indicating that the unmet needs of **6 to 12 year olds** are significantly larger in rural areas than urban areas.
    - **Urban** respondents ($\bar{x}$ =3.83, n=136) scored higher than **Rural** respondents ($\bar{x}$ =3.30, n=15) , indicating that the unmet needs of **35 to 54 year olds** are significantly larger in rural areas than urban areas.

Cross-tabs – Area Code/Age Needs

Respondents were classified by **area code**, cross tabulated by **age needs**, and mean scores were tested against each other for significance (95%) using an independent sample t-test, with H_0 = null/no difference in age needs between the two area codes and H_1 = difference in age needs between the two area codes (Table RO7.i).

- **Kansas City-West (816)** (n=41) area code had three significant differences, as compared to other regions, among three of the age ranges ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **13 to 18 year olds** ($\bar{x}$ =2.9, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =3.0, n=41) compared to **St. Louis-East (314)** ($\bar{x}$ =2.5, n=34).
    - **35 to 54 year olds** ($\bar{x}$ =3.8, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =3.9, n=41) compared to **Northwest (660)** ($\bar{x}$ =3.1, n=8).
    - **55 years and older** ($\bar{x}$ =3.6, n=151) scored significantly higher in **Kansas City-West (816)** ($\bar{x}$ =3.9, n=41) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.1, n=33).
- **St. Louis-East (314)** (n=34) area code had two significant differences, as compared to other regions, among two of the age ranges ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **35 to 54 year olds** ($\bar{x}$ =3.8, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =4.0, n=34) compared to **Northwest (660)** ($\bar{x}$ =3.1, n=8).
    - **55 years and older** ($\bar{x}$ =3.6, n=151) scored significantly higher in **St. Louis-East (314)** ($\bar{x}$ =3.6, n=34) compared to **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.1, n=33).
- **Northeast-Central-Southeast (573)** (n=33) area code had one significant difference among one of the age ranges ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **13 to 18 year olds** ($\bar{x}$ =2.9, n=151) scored significantly higher in **Northeast-Central-Southeast (573)** ($\bar{x}$ =3.1, n=33) compared to **St. Louis-East (314)** ($\bar{x}$ =2.5, n=34).
- **Southwest (417)** (n=18) area code had one significant difference, as compared to other regions, among one of the age ranges ($p < 0.05 = H_0$ rejected and H_1 accepted).
    - **13 to 18 year olds** ($\bar{x}$ =2.9, n=151) scored significantly higher in **Southwest (417)** ($\bar{x}$ =3.2, n=18) compared to **St. Louis-East (314)** ($\bar{x}$ =2.5, n=34).

Respondents were also asked which of the six age groups have the most unmet needs (Table RO7.j and Chart RO7.e) and sorted high to low based on percent (Chart RO7.k).

- **13 to 18 years olds** (48.3%, n=73) had the highest frequency, with **48.3%** of respondents indicating that **13 to 18 year** olds have the most unmet needs.
- **0 to 5 year olds** (18.5%, n=28) and **55 years and older** (18.5%, n=28) tied for the second highest frequency, with **18.5%** of respondents indicating that **0 to 5 year olds** and **55 years and older** have the most unmet needs.
- **6 to 12 year olds** (4.0%, n=6), **19 to 34 year olds** (4.0%, n=6), and **All needs are met** (4.0%, n=6) were all at **4%** (n=6).
- **35 to 54 year olds** (2.6%, n=4) had the fewest mentions of unmet needs out of all the age groups available, at **2.6%.**

Table RO7.j. Q13. Out of the following AGE GROUPS, which one has the MOST unmet needs?

	Frequency	Percent
0 - 5 Year olds	28	18.5%
6 - 12 Year olds	6	4.0%
13 - 18 Year olds	73	48.3%
19 - 34 Year olds	6	4.0%
35 - 54 Year olds	4	2.6%
55 Years and older	28	18.5%
All Needs Are Met	6	4.0%
Total	151	100.0%

Chart RO7.e.

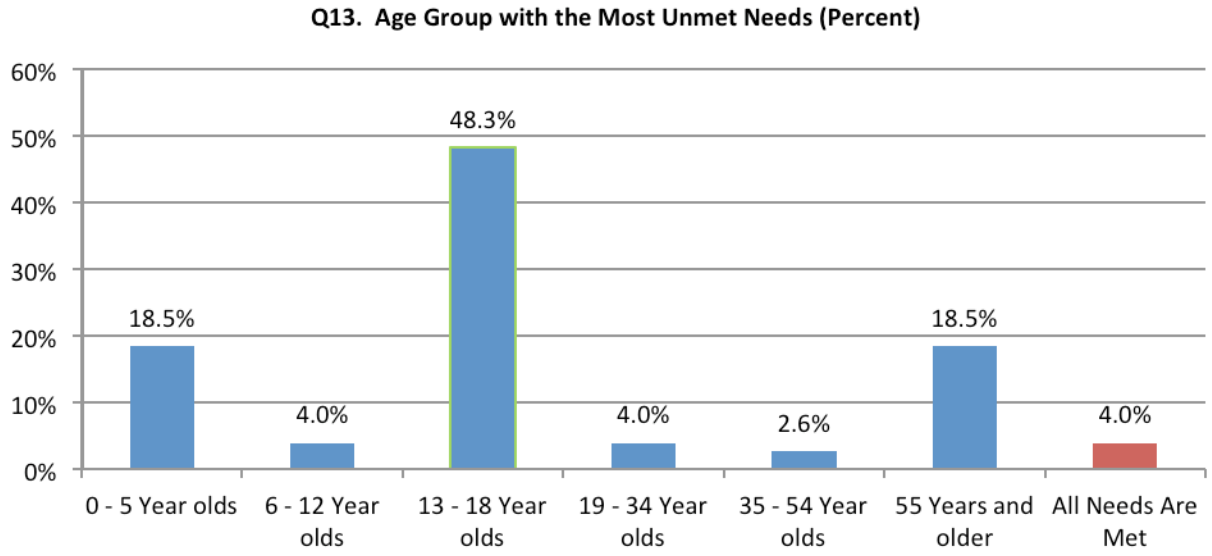
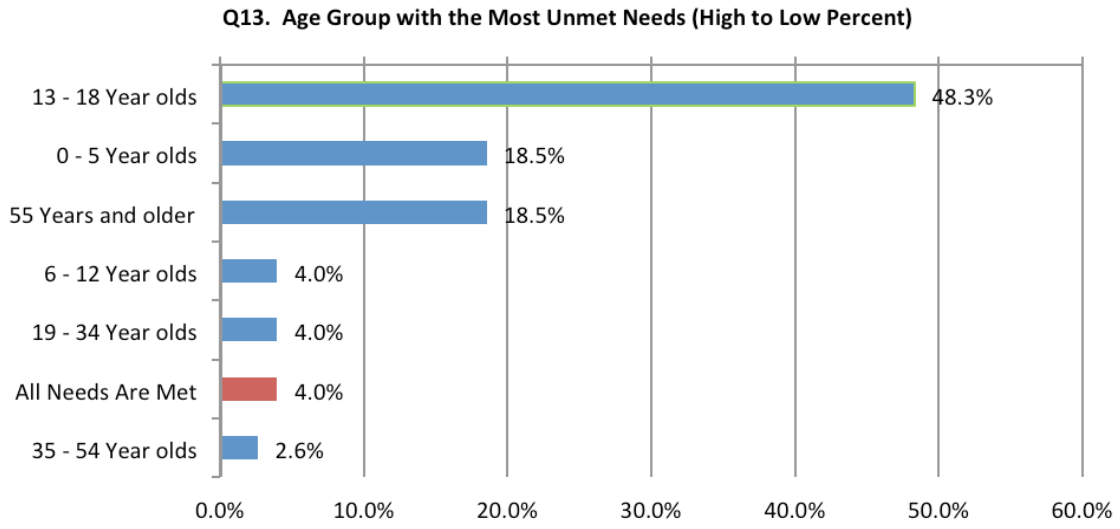


Chart RO7.f.



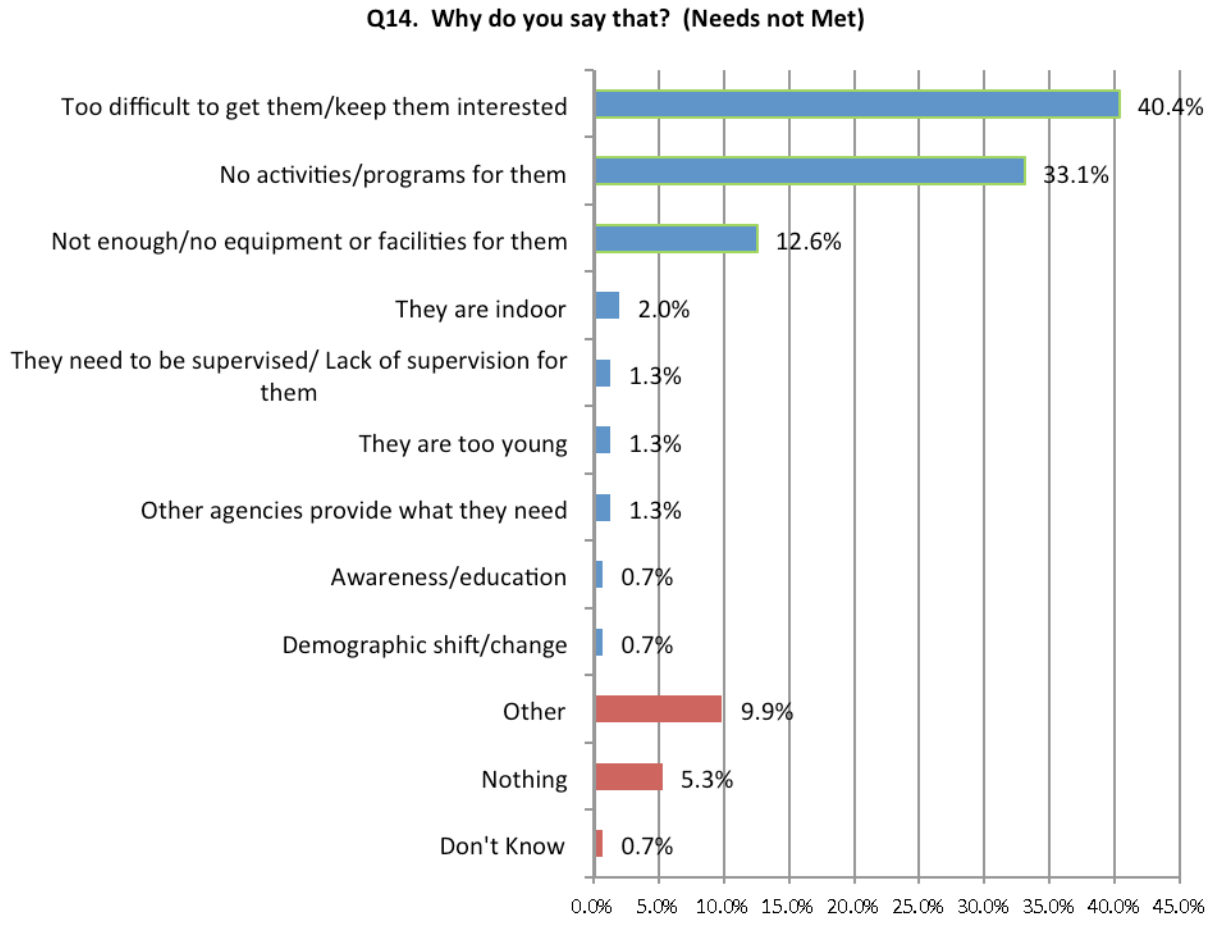
Respondents were asked their reason for choosing a particular age group. Responses were coded, tallied, and sorted from high to low by frequency (Table RO7.k and Chart RO7.g).

- **Too difficult to get them/keep them interested** (40.4%, n=61) was mentioned by more than **40%** of respondents.
- **No activities/programs for them** (33.1%, n=50) was mentioned by more than **33%** of respondents.
- **Not enough/no equipment or facilities for them** (12.60%, n=19) was mentioned by more than **10%** of respondents.

Table RO7.k. Q14 Frequencies – Why do you say that?

Code	Response	Responses		Percent of Cases
		N	Percent	
52	Too difficult to get them/keep them interested	61	37.00%	40.40%
50	No activities/programs for them	50	30.30%	33.10%
53	Not enough/no equipment or facilities for them	19	11.50%	12.60%
55	They are indoor	3	1.80%	2.00%
51	They need to be supervised/ Lack of supervision for them	2	1.20%	1.30%
54	They are too young	2	1.20%	1.30%
56	Other agencies provide what they need	2	1.20%	1.30%
35	Awareness/education	1	0.60%	0.70%
42	Demographic shift/change	1	0.60%	0.70%
99	Other	15	9.10%	9.90%
96	Nothing	8	4.80%	5.30%
98	Don't Know	1	0.60%	0.70%
	Total	165	100.00%	109.30%

Chart RO7.g.


Q14. Why do you say that? (Needs not Met)
Too difficult to get them/keep them interested
40.4%
No activities/programs for them
33.1%
Not enough/no equipment or facilities for them
12.6%
They are indoor
2.0%
They need to be supervised/ Lack of supervision for them
1.3%
They are too young
1.3%
Other agencies provide what they need
1.3%
Awareness/education
0.7%
Demographic shift/change
0.7%
Other
9.9%
Nothing
5.3%
Don't Know
0.7%
0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0%

8. Research Question 8 (RQ8)

- ***Are there any critical, unidentified issues that impact outdoor recreation in Missouri, or other popular facilities or activities?***

Research Objective 8.1 (RO8.1)

- **Determine any other critical/important issues related to outdoor recreation in Missouri.**

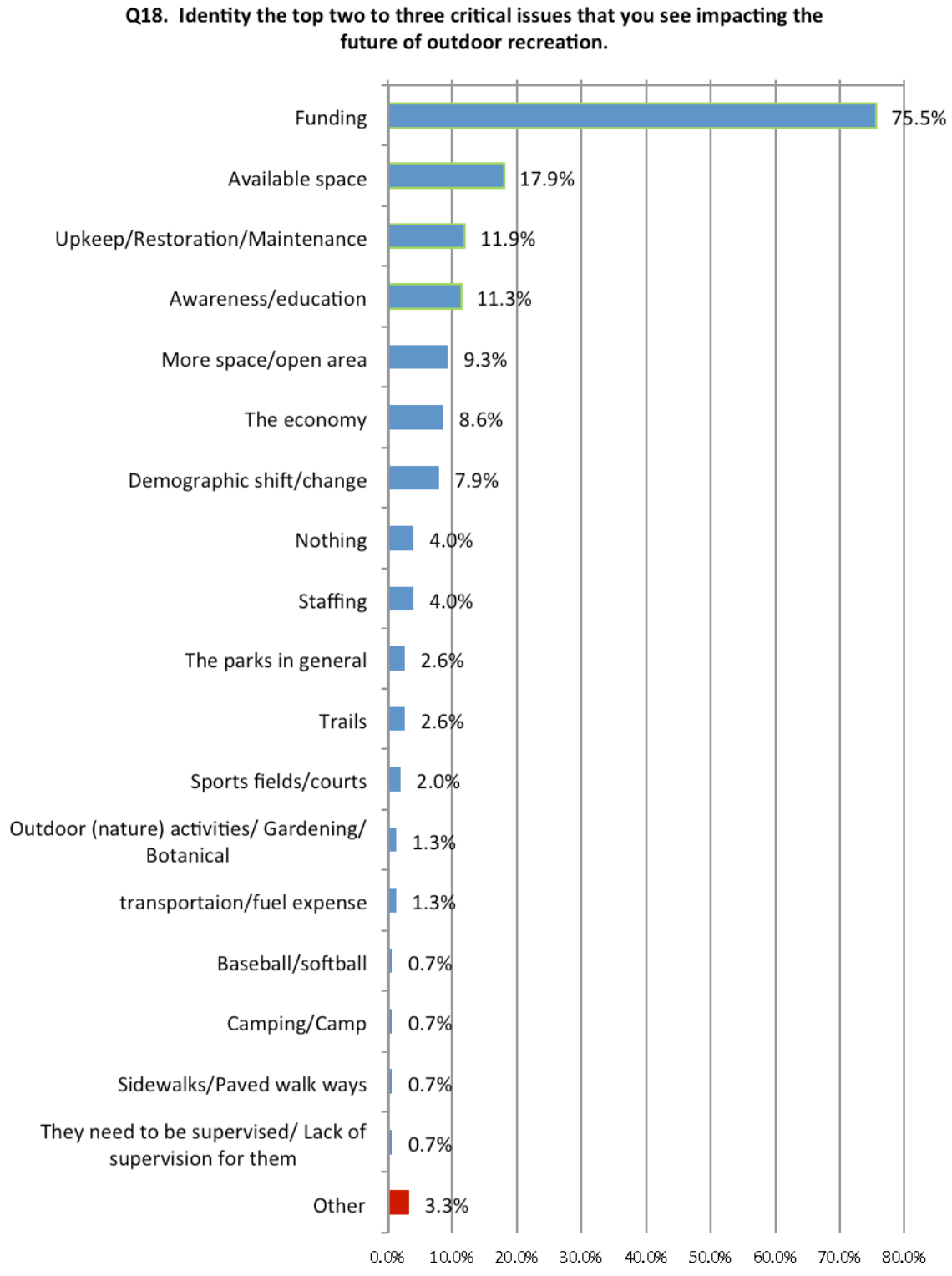
Respondents were asked to identify the top two to three critical issues that they see impacting the future of outdoor recreation (open-ended). Responses were coded, tallied, and sorted from high to low by frequency (Table RO8.1a).

- **Funding** (75.5%, n=114) was mentioned by more than **75%** of respondents.
- **Available space** (17.9%, n=27) was mentioned by more than **15%** of respondents.
- **Upkeep/restoration/maintenance** (11.9%, n=18) and **Awareness/education** (11.3%, n=17) were both mentioned by more than **10%** of respondents.

Table RO8.1a. Q18 Frequencies (open-ended) – Please identity the top two to three critical issues that you see impacting the future of outdoor recreation

Code	Response	Responses		Percent of Cases
		N	Percent	
34	Funding	114	45.40%	75.50%
36	Available space	27	10.80%	17.90%
38	Upkeep/Restoration/Maintenance	18	7.20%	11.90%
35	Awareness/education	17	6.80%	11.30%
23	More space/open area	14	5.60%	9.30%
37	The economy	13	5.20%	8.60%
42	Demographic shift/change	12	4.80%	7.90%
96	Nothing	6	2.40%	4.00%
103	Staffing	6	2.40%	4.00%
19	The parks in general	4	1.60%	2.60%
28	Trails	4	1.60%	2.60%
21	Sports fields/courts	3	1.20%	2.00%
43	Outdoor (nature) activities/ Gardening/ Botanical	2	0.80%	1.30%
104	Transportation/fuel expense	2	0.80%	1.30%
29	Baseball/softball	1	0.40%	0.70%
41	Camping/Camp	1	0.40%	0.70%
49	Sidewalks/Paved walk ways	1	0.40%	0.70%
51	They need to be supervised/ Lack of supervision for them	1	0.40%	0.70%
99	Other	5	2.00%	3.30%
	Total	251	100.00%	166.20%

Chart RO8.1a.


Q18. Identity the top two to three critical issues that you see impacting the future of outdoor recreation.
Funding
75.5%
Available space
17.9%
Upkeep/Restoration/Maintenance
11.9%
Awareness/education
11.3%
More space/open area
9.3%
The economy
8.6%
Demographic shift/change
7.9%
Nothing
4.0%
Staffing
4.0%
The parks in general
2.6%
Trails
2.6%
Sports fields/courts
2.0%
Outdoor (nature) activities/ Gardening/ Botanical
1.3%
transportaion/fuel expense
1.3%
Baseball/softball
0.7%
Camping/Camp
0.7%
Sidewalks/Paved walk ways
0.7%
They need to be supervised/ Lack of supervision for them
0.7%
Other
3.3%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0%

Recommendations

Based on this study of Missouri outdoor recreation professionals and local communities, SYNERGY/PRI/JPA recommends the following:

- **Focus more resources** on:
    - **Trails**
        - Highest unmet demand
        - Expected to increase the most in popularity
            - Most popular activity among families and adults over the age of 18
        - Focus on improving and existing trails as well as creating new ones
            - Very high need of improvement
    - **Multi-use fields**
        - In high demand
        - Expected to increase a lot in popularity
            - Useful for multiple activities
            - Very popular among 13 to 18 year olds and 19 to 34 year olds
        - Focus on improving and maintaining existing fields as well as creating new ones
            - Very high need of improvement
    - **Playgrounds**
        - In high demand
        - Expected to increase a lot in popularity
            - Second most popular activity for families and the most popular activity for children from zero to 12 years old
        - Focus on maintaining existing playgrounds as well as creating new ones
            - Not as much need of improvement as other types of facilities
    - **Picnic areas** and
    - **Gardens**
        - In high demand
        - Expected to increase in popularity
        - Low need of improvement
        - More urgent need in urban areas
- **Focus on Improving** (lower demand and not increasing as much in popularity but in need of improvement):
    - **Camping sites**
        - Low availability but highest need of improvement
        - Has increased in popularity in Central-East (636) area code but decreased in popularity in the Northeast-Central-Southeast (573) area code
    - **Outdoor basketball courts**
    - **Historic/education sites**
    - **Boating and water sport access sites**
    - **Tennis courts**
    - **Target shooting sites**
    - **Meeting the needs of 13 to 18 year olds**
        - Age group with the **most unmet needs**
        - **Multi-use fields** are popular among this age group

        - **Skateboard parks** were mentioned as popular among this age group
        - **Soccer fields** are increasing in popularity and are more in demand than **Baseball/softball fields, Football fields**, **Outdoor basketball courts**, **Golf courses, Tennis courts**, and **Target shooting sites.**
        - **Baseball/softball fields**, **Football fields**, **Volleyball courts**, and **Golf courses** scored lower on need of improvement than the other facility types
    - **Public Transportation to facilities**
        - Scored low in adequacy across the state, and less adequate in rural areas
- **Address issues, obstacles and priorities:**
    - **Future funding and funding obstacles**
        - Most critical issue mentioned
        - More urgent in rural areas
    - **High priorities**
        - **Educating the public and officials on the values and benefits of outdoor recreation**
            - Higher priority in rural areas
            - Lower priority in **East-Central (636) a**rea code
        - **Increasing the amount of money for maintenance and operations**
    - **Large obstacles**
        - **Lack of consistent funding system**
            - Larger obstacle in rural areas
        - **Availability of future park land**
            - Larger obstacle in rural areas
        - **Ignorance/lack of education on benefits/values of outdoor recreation activities**
        - **Low priority/support for recreation**
- **Focus fewer resources** on:
    - **Hunting sites**, **Golf courses**, **Volleyball courts**, **Target shooting sites, Tennis courts**, **Outdoor basketball courts**, and **Fishing sites**
        - Scored low on all demand and popularity measures
        - Focus on improving and maintaining existing facilities
    - **Local crime** and **Safety concerns** did not seem to be an obstacle to improving outdoor recreation

Appendix A - Questionnaire

Introduction

Hello, my name is (INTERVIEWER NAME) and I'm with Pragmatic Research/Synergy Group, Inc. calling on behalf of Missouri State Parks. Missouri is in the process of updating its Statewide Comprehensive Outdoor Recreation Plan (SCORP). In order to plan and improve outdoor recreation in Missouri, we're conducting a brief, 10 - 15 min telephone survey among Outdoor Recreational Professionals in Missouri. All participation is appreciated. The questionnaire should only take about 15 minutes and your answers will be combined and submitted as a whole and therefore your individual identity and any answers you give will remain anonymous.

Is there a director level, superintendent, supervisor, planner, or professor available to go through the questionnaire?

- ❍ Yes (ASK TO SPEAK TO THAT PERSON)/Speaking (IF NOT A GOOD TIME THEN SCHEDULE A CALLBACK)
- ❍ No (ASK ABOUT AVAILABILTY AND SCHEDULE CALLBACK)

Screener

S1. What is your zip code? Zip Code: _____

S2. What is your current position and/or association with the Missouri Parks and Recreation Association? (DO NOT READ LIST. SELECT ONE)

❍ Executive Director	❍ Superintendent	❍ Professor
❍ Director	❍ Supervisor	❍ Assistant Professor
❍ Assistant Director	❍ Senior Planner	❍ Other*
❍ Deputy Director	❍ Planner	

*IF OTHER ASK FOR SOMEONE WITH A TITLE ON THE LIST AND RE-INTRODUCE. ARRANGE CALLBACK TIME IF UNAVAILABLE.

Questionnaire

LIST OF FACILITY TYPES (Q1LIST)

Baseball / softball fields	Golf Courses	Outdoor swimming pools
Outdoor basketball courts	Historic / education sites	Tennis courts
Boating and water sport access sites	Hunting sites	Trails
Camping sites	Multi-use fields	Volleyball courts
Fishing sites	Picnic areas	Target shooting sites
Football fields	Playgrounds	Nature Parks/Areas
Gardens	Soccer fields	

FOR EACH FACILITY TYPE: ASK Q1 THROUGH Q4 THEN MOVE ON THE NEXT FACILTY TYPE

Thinking about the outdoor recreation facilities that your community offers…

Q1. Using a 1 to 5 scale, where 1 is **no need of improvement** and 5 is **extreme need of improvement**, how would you rate the **need of improvement** for your local [INSERT FACILITY TYPE FROM Q1LIST]? (SELECT ONE. SELECT N/A IF FACITILITES ARE NOT OFFERED)

Facility Type	No need of improvement				Extreme need of improvement	
Baseball / softball fields	1	2	3	4	5	N/A
Outdoor basketball courts	1	2	3	4	5	N/A
Boating and water sports access sites	1	2	3	4	5	N/A
Camping sites	1	2	3	4	5	N/A
Fishing sites	1	2	3	4	5	N/A
Football fields	1	2	3	4	5	N/A
Gardens	1	2	3	4	5	N/A
Golf courses	1	2	3	4	5	N/A
Historic / education sites	1	2	3	4	5	N/A
Hunting sites	1	2	3	4	5	N/A
Multi-use fields	1	2	3	4	5	N/A
Picnic areas	1	2	3	4	5	N/A
Playgrounds	1	2	3	4	5	N/A
Soccer fields	1	2	3	4	5	N/A
Outdoor swimming pools	1	2	3	4	5	N/A
Tennis courts	1	2	3	4	5	N/A
Trails	1	2	3	4	5	N/A
Volleyball courts	1	2	3	4	5	N/A
Target shooting sites	1	2	3	4	5	N/A
Nature parks/areas	1	2	3	4	5	N/A

Q2. Would you say that local demand for [INSERT FACILITY TYPE] is much lower, lower, slightly lower, about right, slightly higher, higher, or much higher than what is currently provided, if at all? (SELECT ONE)

Facility Type	Much lower	Lower	Slightly lower	About right	Slightly higher	Higher	Much higher
Baseball / softball fields	❍	❍	❍	❍	❍	❍	❍
Outdoor basketball courts	❍	❍	❍	❍	❍	❍	❍
Boating and water sports access sites	❍	❍	❍	❍	❍	❍	❍
Camping sites	❍	❍	❍	❍	❍	❍	❍
Fishing sites	❍	❍	❍	❍	❍	❍	❍
Football fields	❍	❍	❍	❍	❍	❍	❍
Gardens	❍	❍	❍	❍	❍	❍	❍
Golf courses	❍	❍	❍	❍	❍	❍	❍
Historic / education sites	❍	❍	❍	❍	❍	❍	❍
Hunting sites	❍	❍	❍	❍	❍	❍	❍
Multi-use fields	❍	❍	❍	❍	❍	❍	❍
Picnic areas	❍	❍	❍	❍	❍	❍	❍
Playgrounds	❍	❍	❍	❍	❍	❍	❍
Soccer fields	❍	❍	❍	❍	❍	❍	❍
Outdoor swimming pools	❍	❍	❍	❍	❍	❍	❍
Tennis courts	❍	❍	❍	❍	❍	❍	❍
Trails	❍	❍	❍	❍	❍	❍	❍
Volleyball courts	❍	❍	❍	❍	❍	❍	❍
Target shooting sites	❍	❍	❍	❍	❍	❍	❍
Nature parks/areas	❍	❍	❍	❍	❍	❍	❍

Q3. Has the popularity of [INSERT FACILITY TYPE] decreased, increased, or stayed the same **over the last five years**? Would you say it has decreased a lot, decreased, decreased a little, no change, increased a little, increased, or increased a lot?

Facility Type	Decreased a lot	Decreased	Decreased a little	No change	Increased a little	Increased	Increased a lot
Baseball / softball fields	❍	❍	❍	❍	❍	❍	❍
Outdoor basketball Courts	❍	❍	❍	❍	❍	❍	❍
Boating and water sports access sites	❍	❍	❍	❍	❍	❍	❍
Camping sites	❍	❍	❍	❍	❍	❍	❍
Fishing sites	❍	❍	❍	❍	❍	❍	❍
Football fields	❍	❍	❍	❍	❍	❍	❍
Gardens	❍	❍	❍	❍	❍	❍	❍
Golf courses	❍	❍	❍	❍	❍	❍	❍
Historic / education sites	❍	❍	❍	❍	❍	❍	❍
Hunting sites	❍	❍	❍	❍	❍	❍	❍
Multi-use fields	❍	❍	❍	❍	❍	❍	❍
Picnic areas	❍	❍	❍	❍	❍	❍	❍
Playgrounds	❍	❍	❍	❍	❍	❍	❍
Soccer fields	❍	❍	❍	❍	❍	❍	❍
Outdoor swimming pools	❍	❍	❍	❍	❍	❍	❍
Tennis courts	❍	❍	❍	❍	❍	❍	❍
Trails	❍	❍	❍	❍	❍	❍	❍
Volleyball courts	❍	❍	❍	❍	❍	❍	❍
Target shooting sites	❍	❍	❍	❍	❍	❍	❍
Nature parks/areas	❍	❍	❍	❍	❍	❍	❍

Q4. Do you see the popularity of [INSERT FACILITY TYPE] decreasing, increasing, or staying the same **in the next five years**? Would you say it is decreasing a lot, decreasing, decreasing a little, not changing, increasing a little, increasing, or increasing a lot?

Facility Type	Decrease a lot	Decrease	Decrease a little	No change	Increase a little	Increase	Increase a lot
Baseball / softball fields	❍	❍	❍	❍	❍	❍	❍
Outdoor basketball Courts	❍	❍	❍	❍	❍	❍	❍
Boating and water sports access sites	❍	❍	❍	❍	❍	❍	❍
Camping sites	❍	❍	❍	❍	❍	❍	❍
Fishing sites	❍	❍	❍	❍	❍	❍	❍
Football fields	❍	❍	❍	❍	❍	❍	❍
Gardens	❍	❍	❍	❍	❍	❍	❍
Golf courses	❍	❍	❍	❍	❍	❍	❍
Historic / education sites	❍	❍	❍	❍	❍	❍	❍
Hunting sites	❍	❍	❍	❍	❍	❍	❍
Multi-use fields	❍	❍	❍	❍	❍	❍	❍
Picnic areas	❍	❍	❍	❍	❍	❍	❍
Playgrounds	❍	❍	❍	❍	❍	❍	❍
Soccer fields	❍	❍	❍	❍	❍	❍	❍
Outdoor swimming pools	❍	❍	❍	❍	❍	❍	❍
Tennis courts	❍	❍	❍	❍	❍	❍	❍
Trails	❍	❍	❍	❍	❍	❍	❍
Volleyball courts	❍	❍	❍	❍	❍	❍	❍
Target shooting sites	❍	❍	❍	❍	❍	❍	❍
Nature parks/areas	❍	❍	❍	❍	❍	❍	❍

Q5. Are there any other outdoor recreation facility types in your community that are in need of improvement? (RECORD VERBATIM. PROBE)

Q6. Are there any other outdoor recreation facilities/activities in your community that you traditionally provide that you have seen decline over the past 5 years? Why? (RECORD VERBATIM. PROBE)

Q7. Are there any other outdoor recreation facilities/activities that you predict will gain in popularity over the next five years? Why? (RECORD VERBATIM. PROBE)

Q8. Using a 1 to 5 scale, where 1 is **not at all adequate** and 5 is **very adequate**, how would you rate the adequacy of the following park and recreation related support components in your community? (READ LIST. SELECT ONE)

Facility Support Components	Not at all adequate				Very adequate
Public restrooms	1	2	3	4	5
Parking	1	2	3	4	5
Handicap accessibility	1	2	3	4	5
Drinking water	1	2	3	4	5
Public Transportation to facilities	1	2	3	4	5

Q9. Are there any other support related components that you don't feel are adequate in your community? (RECORD VERBATIM. PROBE)

Q10. Using a 1 to 5 scale, where 1 is **not a priority at all** and 5 is **high priority**, how would rate the priority of the following when it comes to improving outdoor recreation in your community? (READ LIST. SELECT ONE)

Area of Improvement	Not a priority at all				High priority
Increasing overall funding for outdoor recreation	1	2	3	4	5
Increasing the amount of money for maintenance and operations	1	2	3	4	5
Educating the public and officials on the values and benefits of outdoor recreation	1	2	3	4	5
Improving communication and collaboration among partners	1	2	3	4	5
Expanding, updating, and maintaining existing outdoor recreation facilities	1	2	3	4	5
Increasing conservation / preservation efforts	1	2	3	4	5
Increasing, improving, and diversifying marketing and public relations	1	2	3	4	5

Q11. Using a 1 to 5 scale where 1 is **not an obstacle at all** and 5 is **very large obstacle**, how would you rate the following obstacles at preventing improvements in outdoor recreation from being made in your local community? (READ LIST. SELECT ONE)

Potential Obstacle	Not an obstacle at all				Very large obstacle
Low priority / support for recreation	1	2	3	4	5
Lack of consistent funding system	1	2	3	4	5
Ignorance / lack of education on benefits / value of outdoor recreation	1	2	3	4	5
Inadequate planning	1	2	3	4	5
Lack of flexibility / fear of trying something new	1	2	3	4	5
Increasing demand / use	1	2	3	4	5

Demographic shifts (specifically related to ethnic / cultural diversity)	1	2	3	4	5
Participating in outdoor recreation is unsafe due to local crime	1	2	3	4	5
Outdoor recreation creates too many liability issues	1	2	3	4	5
Availability of future park land	1	2	3	4	5

Q12. Using a 1 to 5 scale, where 1 is **needs are not being met all** and 5 is **needs are being met very well**, how would you rate your ability to meet the needs of the following age groups? (READ LIST. SELECT ONE)

Age groups	**Needs are not being met at all**				**Needs are being met very well**
0 – 5 year olds	1	2	3	4	5
6 – 12 year old	1	2	3	4	5
13 – 18 year olds	1	2	3	4	5
19 – 34 year olds	1	2	3	4	5
35 – 54 year olds	1	2	3	4	5
55 years and older	1	2	3	4	5

Q13. Out of the following age groups, which one has the most unmet needs? (READ LIST. SELECT ONE)

- ❍ 0 – 5 year olds
- ❍ 6 – 12 year olds
- ❍ 13 – 18 year olds
- ❍ 19 – 34 year olds
- ❍ 35 – 54 year olds
- ❍ 55 years and older
- ❍ All needs are met (DO NOT READ)

Q14. Why do you say that? (RECORD VERBATIM. PROBE)

Q15. What are the two most popular outdoor recreation resources that you supply for families in your community? (RECORD VERBATIM. PROBE)

Q16. What are the two most popular outdoor recreation activities you provide for the following age categories? (RECORD VERBATIM)

Age Categories	Activity 1	Activity 2
Pre-school (0 – 5 years old)		
Children (6 – 12 years old)		
Adolescents (13 – 18 years old)		
Young Adults (19 – 34 years old)		
Adults (35 – 54 years old)		
Seniors (55 years or older)		

Q17. Are there any outdoor recreation facilities, trails, or programs that are not provided in your area but should be? (RECORD VERBATIM. PROBE)

Q18. Please identify the top 2-3 critical issues that you see impacting the future of outdoor recreation in your community. (RECORD VERBATIM. PROBE)

That was the last question. Thank you for your time.

(THANK AND TERMINATE)