

UARP Report on Recreational Resources 2022

Sacramento Municipal Utility District

Hydro License Implementation • November 2023

Upper American River Project

FERC Project No. 2101



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Acronyms and Abbreviations

Acronym	Definition
COVID-19	Coronavirus disease
ENF	Eldorado National Forest
FERC	Federal Energy Regulatory Commission
new license	The FERC License for the Upper American River Project 2101 issued July 2014 for which new flow regimes and other terms and conditions were implemented beginning in October 2014
NVUM	National Visitor Use Monitoring Program
SMUD	Sacramento Municipal Utility District
UARP	Upper American River Project
USFS or Forest Service	U.S. Department of Agriculture, Forest Service

1.0 INTRODUCTION AND BACKGROUND

SMUD owns and operates the Upper American River Project (UARP) which is licensed by the Federal Energy Regulatory Commission (FERC). The UARP lies within El Dorado and Sacramento counties, primarily within lands of Eldorado National Forest (ENF). The UARP consists of three major storage reservoirs: Loon Lake, Union Valley, and Ice House (with a combined capacity of approximately 379,000 acre-feet), eight smaller regulating or diversion reservoirs, and eight powerhouses. The UARP also includes recreation facilities containing over 700 campsites, five boat ramps, hiking paths, and bicycle trails at the reservoirs.

This Monitoring Report (Report) addresses monitoring requirements set forth in FERC's Order Issuing New License for the UARP (FERC Project No. 2101), dated July 23, 2014 (FERC 2014) and license Condition No. 42 *Recreation Survey* and Condition No. 48 *Carrying Capacity on Lands Affected by the Project*. Condition No. 42 specifies conducting a recreational survey and preparing a Report on Recreational Resources that is approved by the Forest Service every six years from the date of license issuance (July 23, 2014). The monitoring methodology was developed in consultation with USFS during a meeting held on March 4, 2020. The first monitoring effort planned for 2020 was delayed until 2022 because of the COVID-19 pandemic.¹ This Report presents the 2022 monitoring results.

1.1 CONSULTATION

SMUD consulted with the Forest Service about the 2022 recreation monitoring effort. Dates and subjects of meetings, emails, and phone calls with Forest Service are listed below:

- March 4, 2020. Meeting with SMUD and Forest Staff to discuss monitoring methodology.
- November 17, 2022. SMUD conducted phone interview with Dustin Bell, Wilderness Ranger, Pacific Ranger District to collect anecdotal information about Crystal Basin recreation resources.
- November 17, 2022. SMUD conducted phone interview with Jack Lucido, Assistant Recreation Officer, Pacific Ranger District to collect anecdotal information about Crystal Basin recreation resources.
- November 17, 2022. SMUD conducted phone interview with Kristi Schroder, Assistant Forest Recreation Officer, Eldorado National Forest to collect anecdotal information about Crystal Basin recreation resources.

¹ FERC approved SMUD's request for time extension by order dated February 10, 2021 [accession no. 20210210-3025).

2.0 METHODS

2.1 STUDY AREAS AND STUDY PERIOD

The study area included developed recreation facilities at four UARP reservoirs: Loon Lake Reservoir², Gerle Creek Reservoir, Union Valley Reservoir, and Ice House Reservoir. The types of facilities at these reservoirs include group and family campgrounds, day use areas, and boat launches. The study area also includes North Union Valley Road between West Point Campground and Ice House Road. SMUD collected data from May 29, 2022 (Memorial Day weekend) through October 15, 2022, when the full facility design capacity was available for use as intended without any restrictions on the type of use (e.g., self-contained vehicles only).

2.2 DATA COLLECTION

Data collection methods included: (1) conducting visitor surveys (Section 3.1); (2) conducting staff interviews with those having a working knowledge of recreational use at UARP recreation facilities (Section 3.4); (3) locating, counting the number of vehicles at, and photographing places where visitors park along North Union Valley Road (Section 3.2, Table 13; Appendix E); (4) recording at-one-time observed use and taking representative photographs at boat launch and day use parking areas (Section 3.2, Table 13; Appendix E); (5) recording at-one-time occupancy at campgrounds (Section 3.2, Table 12); and (6) compiling existing use information provided by the Forest Service (Section 3.3). SMUD UARP recreation facilities are shown in Figures 1 through 5

² Excludes Pleasant Campground

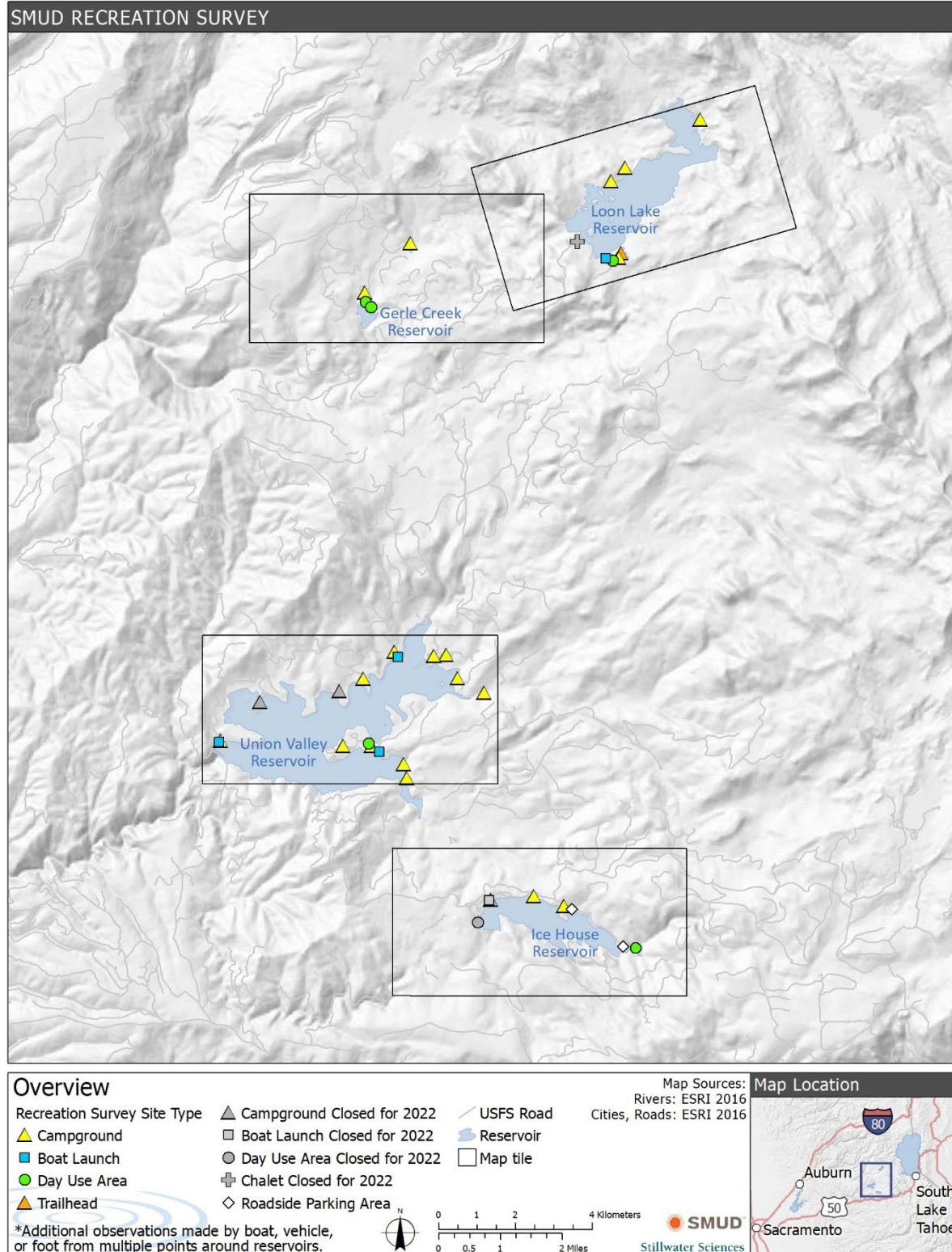


Figure 1. SMUD Upper American River Project recreation facilities.

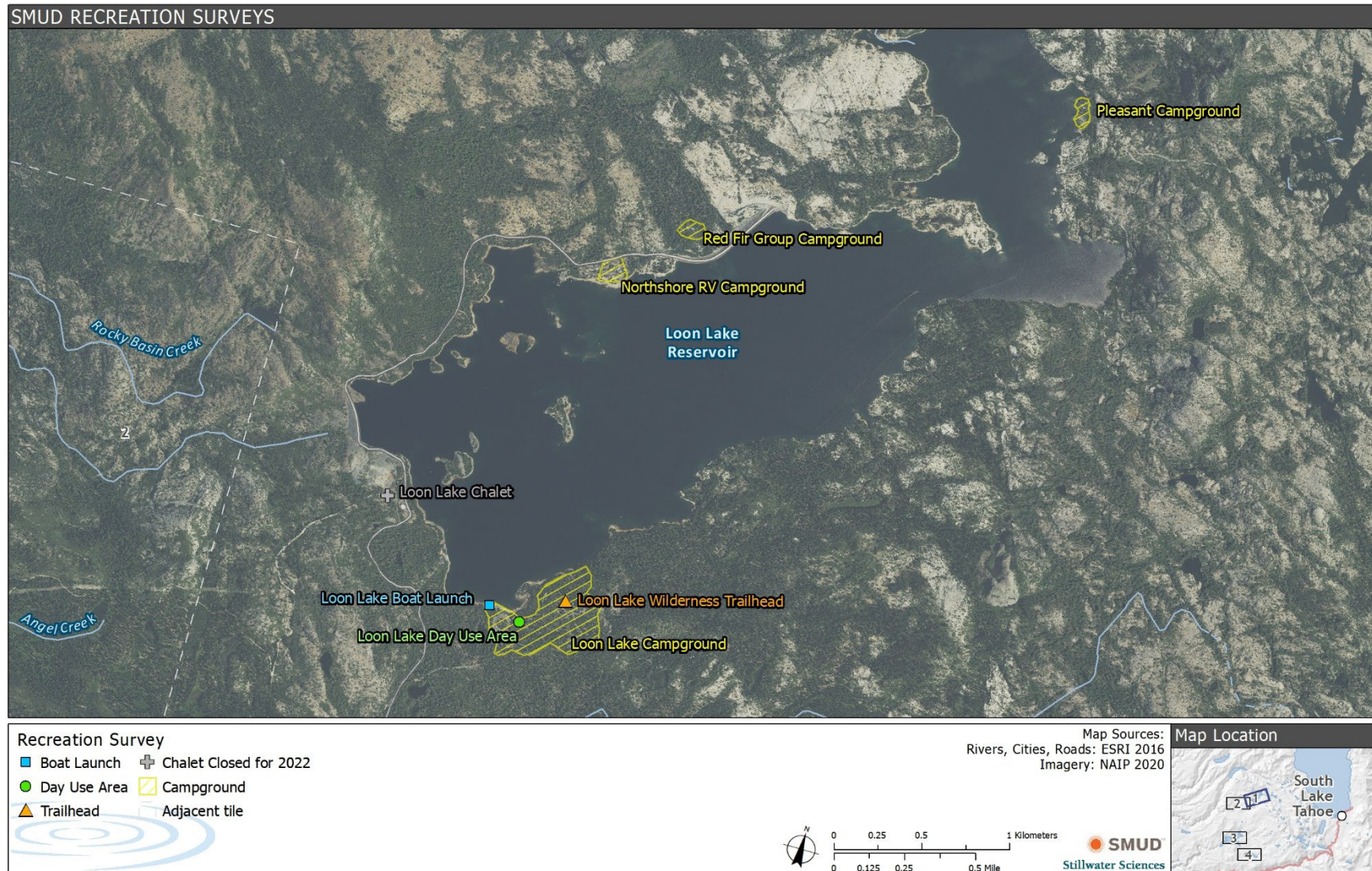


Figure 2. Recreation facilities at Loon Lake Reservoir (Pleasant Campground was not included in the methodology due to remote access).

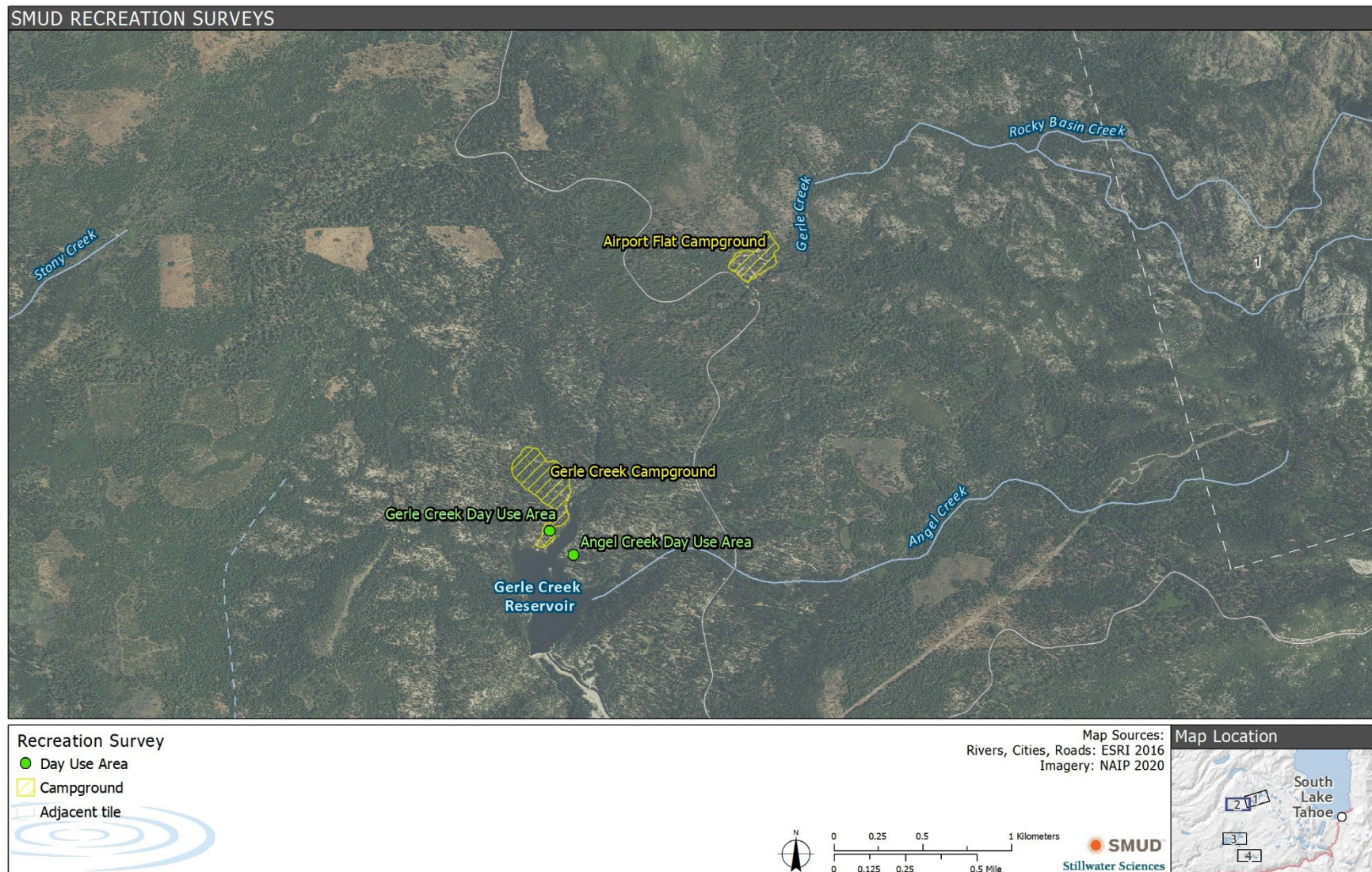


Figure 3. Recreation facilities at Gerle Creek Reservoir.



Figure 4. Recreation facilities at Union Valley Reservoir.

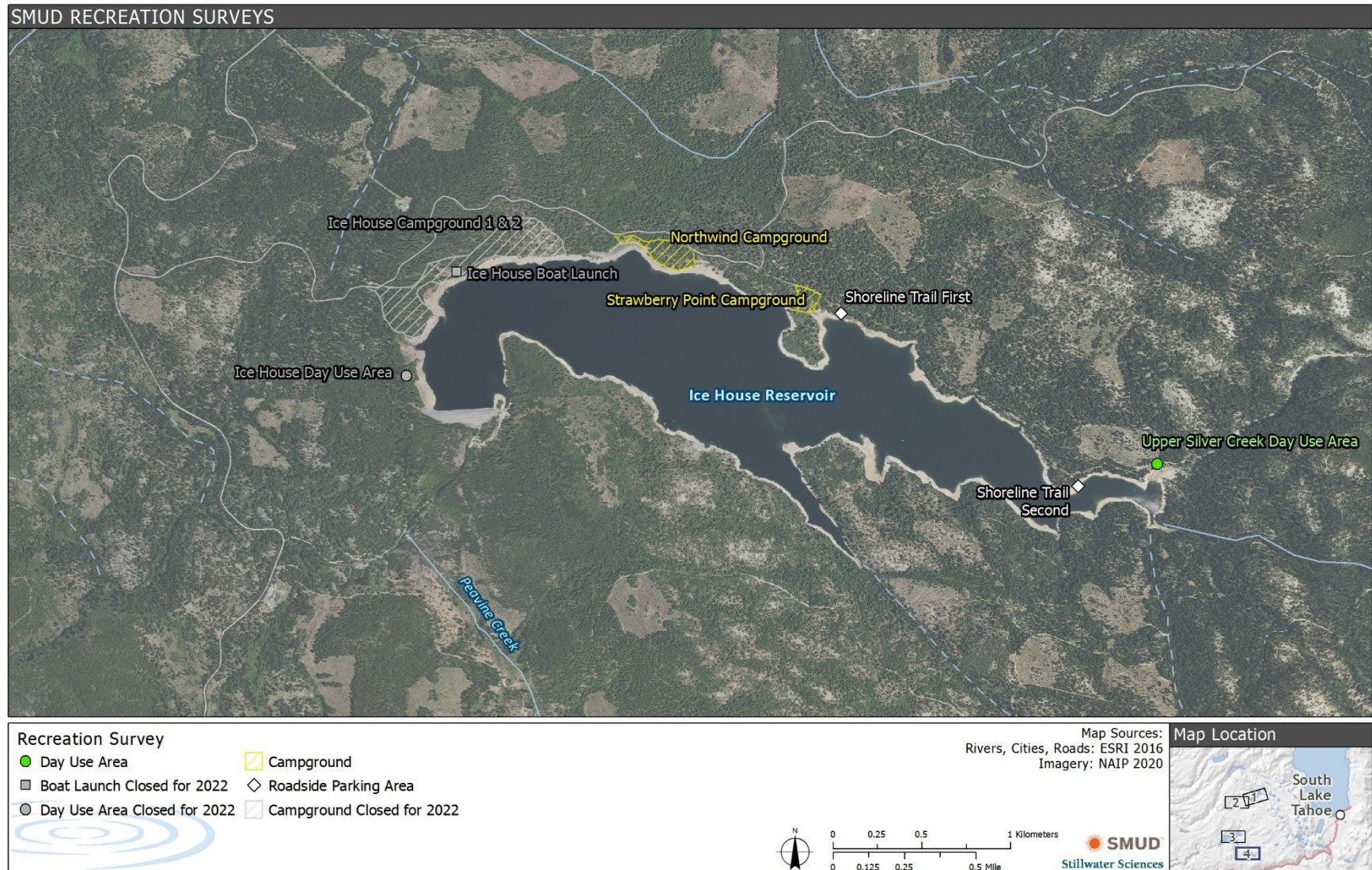


Figure 5. Recreation facilities at Ice House Reservoir.

2.3 VISITOR SURVEYS

2.3.1 Schedule, Data Collection, and Locations

The target sample size was calculated based on a recent total visitation estimate of 400,000 (from SMUD's 2015 FERC Form 80 submittal), a confidence level of 95 percent, and a margin of error of ± 7 percent. This calculation results in a sample size of about 200 visitor surveys spread across all UARP family and group campgrounds, day use areas, and boat launches. Facility and areas closed to public use because of reconstruction activities were not monitored and their corresponding number of planned surveys were deducted from the 200-visitor survey target used for sampling purposes. During 2022 monitoring, SMUD collected more than the planned number of surveys (146) by collecting 194 surveys during the peak season (Memorial Day weekend through Labor Day). SMUD also collected 19 surveys during the off-peak season (day after Labor Day through October 31, which was less than the target of 28 surveys.

Visitor surveys were conducted using a stratified sampling approach across all study sites in peak and off-peak seasons on holiday weekends, weekends, and weekdays (Table 1). Peak season surveys were conducted on 19 sampling days from May through Labor Day weekend which included at least 1 day on each of 2 of 3 holiday weekends; 2 weekend days/month and 3 weekdays/month. Off-peak season surveys were conducted on 4 sampling days between the day after Labor Day and October 31 which included 1 weekday/month and 1 weekend day/month. Within each facility visitors were selected at random to participate in the survey. SMUD monitored recreation use and conducted visitor surveys on the dates shown in Table 1.

Table 1. Recreation Monitoring Dates in 2022.

Peak/Off-Peak/Holiday	Weekend	Weekday	Holiday
Holiday	--	--	May 28 (Saturday) July 4 (Monday) September 5 (Monday)
Peak Season	June 11 (Saturday) June 26 (Sunday) July 10 (Sunday) July 17 (Sunday) August 20 (Saturday) August 21 (Sunday)	June 1 (Wednesday) June 10 (Friday) June 27 (Monday) July 11 (Monday) July 18 (Monday) ¹ July 27 (Wednesday) August 10 (Wednesday) August 22 (Monday) August 23 (Tuesday) August 24 (Wednesday) ²	
Off-Peak Season	October 9 (Sunday) October 16 (Sunday)	October 5 (Wednesday) October 21 (Friday)	

¹ Spot counts at Loon Lake Reservoir were not conducted during this survey date due to crew illness.

² Spot counts were only conducted at Loon Lake Reservoir to make up for the missing counts from the survey conducted on 7/18/2022.

SMUD trained survey staff in proper survey procedures to ensure professional, consistent, unbiased, and quality data collection. Visitor surveys were conducted in-person and responses were collected using an electronic tablet device. Survey staff recorded conditions that may have affected visitor participation (e.g., weather) and situations that may have prevented accomplishing surveys as planned (e.g., unsafe conditions, road closures).

It is important to note that during the 2022 monitoring period some facilities and areas were not open for public use because they were undergoing major renovation or construction. Additionally, the Forest Service issued an order on September 9, 2022 that closed access to all UARP recreation facilities in response to the Mosquito Fire. Forest Order 03-22-17 was issued on September 22, 2022 which revised the area of closure and reopened roads that allowed access to UARP recreation facilities. Recreation surveys resumed on October 5, 2022 once sites were confirmed as open. For these reasons, surveys and use observations during the off-peak season were only conducted at Northwind Campground, Strawberry Point Campground, Airport Flat Campground, West Point Boat Launch, and Upper Silver Creek Day Use Area.

During 2022 monitoring, SMUD surveyed a total of 29 visitors on holidays, 73 visitors on weekends, and 92 visitors on weekdays during the peak season (Table 2). SMUD collected 19 survey responses on weekends and weekdays during the off-peak season. Table 1 also reports 7 incidences when staff unsuccessfully attempted to collect a survey but the visitor (1) refused to participate in the survey, (2) was not at least 18 years of age, or (3) had already participated in the 2022 survey.

Table 2. Number of Target and Completed Visitor Surveys by Reservoir and Facility.

Reservoir	Target no. of surveys in 2022 (peak)			No. of surveys collected in 2022 (peak)			Target no. of surveys in 2022 off-peak)		No. of surveys collected in 2022 (off-peak)	
	HD	WE	WD	HD	WE	WD	WE	WD	WE	WD
Ice House Reservoir										
Ice House Campground 1 & 2	Closed for 2022									
Northwind Campground	2	4	6	3	6	6	2	1	2	1
Strawberry Point Campground	1	4	5	2	6	8	1	1	2	1
Upper Silver Creek Day Use Area	0	2	2	0	2	1	0	0	0	0
Ice House Day Use Area	Closed for 2022									
Ice House Boat Launch	Closed for 2022									
Total	3	10	13	5	14	15	3	2	4	2
<i>(no. of refusals, under 18 yrs or previously surveyed visitors)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>1</i>
Union Valley Reservoir										
Fashoda Campground	0	1	2	3	3	6	1	1	0	0
Wench Creek Campground	1	4	6	0	5	7	1	1	0	0
Jones Fork Campground	1	1	2	2	2	2	0	0	0	0
Sunset Campground	1	4	6	1	5	7	1	1	0	0
Yellowjacket Campground	1	4	6	2	5	7	1	1	0	0
Camino Cove Campground	Closed for 2022									
West Point Campground	1	1	1	1	2	0	0	0	0	0
Wolf Creek Campground	1	2	4	1	3	4	0	0	0	0
Lone Rock Campground (walk-in)	0	0	1	1	0	1	0	0	0	0
Azalea Cove Campground (walk-in)	0	0	1	1	0	1	0	0	0	0
Wench Creek Group Campground	0	0	1	1	0	0	0	0	0	0
Big Silver Group Campground	0	1	1	0	1	1	0	0	0	0
Wolf Creek Group Campground	Closed for 2022									

Reservoir	Target no. of surveys in 2022 (peak)			No. of surveys collected in 2022 (peak)			Target no. of surveys in 2022 off-peak		No. of surveys collected in 2022 (off-peak)	
	HD	WE	WD	HD	WE	WD	WE	WD	WE	WD
Fashoda Day Use Area	0	1	2	0	2	2	1	0	0	0
Yellowjacket Boat Launch	0	1	2	0	1	2	0	0	0	0
Sunset Boat Launch	0	1	2	0	1	2	1	0	0	0
West Point Boat Launch	0	1	2	0	1	1	1	0	2	2
Total	6	22	39	13	31	43	7	4	2	2
<i>(no. of refusals, under 18 yrs or previously surveyed visitors)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>0</i>
Gerle Creek Reservoir										
Airport Flat Campground	0	1	1	0	2	1	1	0	5	4
Gerle Creek Campground	1	2	3	3	3	4	0	1	0	0
Gerle Creek Day Use Area	0	0	1	0	1	1	0	0	0	0
Angel Creek Day Use Area	0	0	1	0	1	1	0	0	0	0
Total	1	3	6	3	7	7	1	1	5	4
<i>(no. of refusals, under 18 yrs or previously surveyed visitors)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>N/A</i>	<i>N/A</i>	<i>1</i>	<i>0</i>
Loon Lake Reservoir										
Loon Lake Chalet	Closed for 2022									
Loon Lake Campgrounds	2	5	7	3	6	9	1	2	0	0
Northshore Recreational Vehicle (RV) Campground	1	3	5	1	5	7	1	1	0	0
Red Fir Group Campground	0	1	1	0	1	0	0	1	0	0
Loon Lake Day Use Area and Boat Launch ¹	2	6	10	4	9	11	2	2	0	0
Total	5	15	23	8	21	27	4	6	0	0
<i>(no. of refusals, under 18 yrs or previously surveyed visitors)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>N/A</i>	<i>N/A</i>	<i>0</i>	<i>0</i>
All Sites	15	50	81	29	73	92	15	13	11	8

Reservoir	Target no. of surveys in 2022 (peak)			No. of surveys collected in 2022 (peak)			Target no. of surveys in 2022 off-peak		No. of surveys collected in 2022 (off-peak)	
	HD	WE	WD	HD	WE	WD	WE	WD	WE	WD
<i>(no. of refusals, under 18 yrs or previously surveyed visitors)</i>	N/A	N/A	N/A	1	0	4	N/A	N/A	1	1

Notes:

HD = Holiday (Memorial Day, Independence Day, or Labor Day) weekend (Saturday, Sunday or Monday)

WE = weekend (Saturday or Sunday)

WD = weekday (Monday through Friday)

N/A = Not applicable to target number of surveys

¹ Target interviews for Loon Lake Day Use Area and Loon Lake Boat Launch combined from methodology

2.3.2 Visitor Survey Content

Survey questions were developed to solicit information from visitors about the following items listed in License Condition No. 42:

- Changes in kinds of use and use patterns (e.g., facilities used, places visited);
- Visitor preferences regarding (1) activities, (2) kinds and sizes of recreational vehicles, and (3) day and overnight use; and
- Sense of crowding (as an indicator of carrying capacity [also specified in Condition No. 48])

Survey questions were mapped to one or more of these items to analyze the survey responses. SMUD summarized all response frequencies as well as the sorted response frequencies by facility and type of survey day (e.g., holiday weekend, peak, off-peak). Appendix A provides the questions used for conducting the visitor surveys.

The survey also included the following three open ended questions:

- “Are there any changes you think should be considered when redesigning this facility?”
- “Is there any additional information you would like to provide about the UARP or this area, in general?”
- “Other than this location, what other areas have, or will you visit during your trip?”

SMUD coded the responses to these questions into general categories for tabulation (e.g., facility condition or maintenance).

2.4 STAFF INTERVIEWS

SMUD conducted three telephone interviews with Forest Service recreation staff who have a working knowledge of SMUD reservoirs and recreation resources throughout the Crystal Basin. Interviews were structured to collect information and context that would complement information reported by the public in the visitor survey. These individuals were also asked to provide information about observed use patterns, trends, and visitor feedback they may have received, including any information that relates to recent facility construction or modifications. Appendix B-1 contains the summarized responses for each interview and Appendix B-2 contains the structured interview talking points. Section 3.4 of this report summarizes the information collected during the interviews.

2.5 AT-ONE-TIME OBSERVATIONS OF NORTH UNION VALLEY ROAD, PARKING AREAS, AND CAMPGROUNDS

Concurrent with collecting visitor survey responses, SMUD recorded at-one-time observed use at UARP recreation areas along North Union Valley Road, parking areas, and campgrounds. Table 3 presents the sampling frequency and information recorded about these locations.

Table 3. At-One-Time Observation Locations, Information Collected, and Frequency¹

Location	Recorded Information	Timing of observations during peak recreation season (May through Labor Day)
North Union Valley Road between Union Valley Dam and Ice House Road ²	Number of vehicles/trailers-at-one-time and representative photographs at each location where vehicles are parked; correlate to mapped locations	1 weekend day a month and 1 holiday weekend day (5 days total). Target mid-day observation.
Project boat launches and day use area parking areas	Number of vehicles/trailers-at-one-time and representative photographs at each location where vehicles are parked; correlate to named facility.	1 weekend day a month and 1 holiday weekend day (5 days total). Target mid-day observation.
Project family and group campgrounds ³	Number of visibly occupied campsites.	1 weekend day a month and 1 holiday weekend day (5 days total). Target Saturday evening or Sunday morning observation.

Note: Vehicles and trailers were tabulated separately.

¹ Survey locations and timing depended on facility opening and closing dates and when the full facility design capacity was available for use as intended.

² Sections of parking areas along North Union Valley Road were closed periodically during peak recreation season due to construction access for the Union Valley Bike Trail.

³ Excludes Pleasant Campground

2.6 ADDITIONAL INFORMATION SOURCES

SMUD requested the following information from the Forest Service to characterize levels of use (Condition No. 42) for the recreation season:

- UARP group and family campground and picnic site occupancy
- Ski patrol reports from winter 2021-2022.
- Desolation Wilderness permits issued for visits near UARP reservoirs
- National Visitor Use Monitoring Program (NVUM) data specific to visitor profiles (e.g., county of residence, age, gender) were queried from the most recent data available on the Forest Service website which was 2017. Data

represents information collected from visitors throughout the entire Eldorado National Forest.

3.0 RESULTS

3.1 Survey Response Summary

3.1.1 Use Pattern Profile

Party sizes reported by survey respondents typically ranged from 1 to 3 people—on average occurring more than 50 percent of the time—and 4 to 6 people—about 30 percent of the time. Party sizes with more than 7 persons were reported in about 16 percent of the survey responses. Party size was fairly consistent across the four reservoirs surveyed. Table 4 summarizes frequencies of party sizes for visitors during peak and off-peak seasons across all four reservoirs.

Table 4. Party Size Frequencies by Reservoir during Peak and Off-Peak Seasons

Party Size (No. of persons)	Frequency of average party size at each reservoir								
	Ice House		Union Valley		Gerle Creek		Loon Lake		Average
	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	
1-3	47%	50%	25%	100%	41%	56%	45%	--	52%
4-6	32%	33%	39%	0%	53%	33%	36%	--	32%
7-10	9%	17%	20%	0%	6%	11%	5%	--	10%
11-15	3%	0%	9%	0%	0%	0%	7%	--	3%
16-20	9%	0%	3%	0%	0%	0%	2%	--	2%
21-30	0%	0%	3%	0%	0%	0%	5%	--	1%
31 or more	0%	0%	0%	0%	0%	0%	0%	--	0%

Note: Loon Lake Campgrounds were closed after Labor Day, likely due to decreasing demand.

Developed recreation facilities at the four surveyed reservoirs provide a mix of overnight and day use facilities. Most survey respondents (75 to 92 percent of all surveyed visitors to the 4 project reservoirs) stayed overnight, and less than 25 percent reported they were there for day use only. The average length of overnight stay was four nights at most of the reservoirs, however the average overnight length of stay at Ice House Reservoir was five nights. Day users reported staying, on average, 6 to 8 hours, (responses ranged from 1 to 10 hours). Table 5 summarizes information about overnight and daytime users' length of stay.

Table 5. Length of Stay for Day and Overnight Use by Reservoir.

Daytime or Overnight Use	Reservoir				
	Ice House	Union Valley	Gerle Creek	Loon Lake	Average
Percent of visitors that typically stayed overnight	80%	86%	92%	75%	83%
Average Length of stay (no. of nights)	5	4	4	4	4
Minimum Length of stay (no. of nights).	1	1	1	1	--
Maximum Length of stay (no. of nights)	14	14	12	14	--
Percent of visitors that typically stayed for the day.	20%	14%	8%	25%	17%
Avg. Length of stay (no. of hours)	8	6	5	5	6
Minimum Length of stay (no. of hours).	6	2	3	1	--
Maximum Length of stay (no. of hours)	10	10	10	8	--

3.1.2 Activity Participation

The Crystal Basin is known for its outdoor activities and between the SMUD reservoirs and Forest Service campgrounds there is no shortage of opportunities for visitors. Survey respondents reported the most popular activities included camping, hiking, swimming/wading followed by canoe/kayaking, general outdoor pleasure activities, viewing scenery, and shoreline fishing. Activity participation in 2022 appears similar to that reported during relicensing studies (SMUD 2005). Figure 6 summarizes response frequencies for visitors' activities by reservoir.

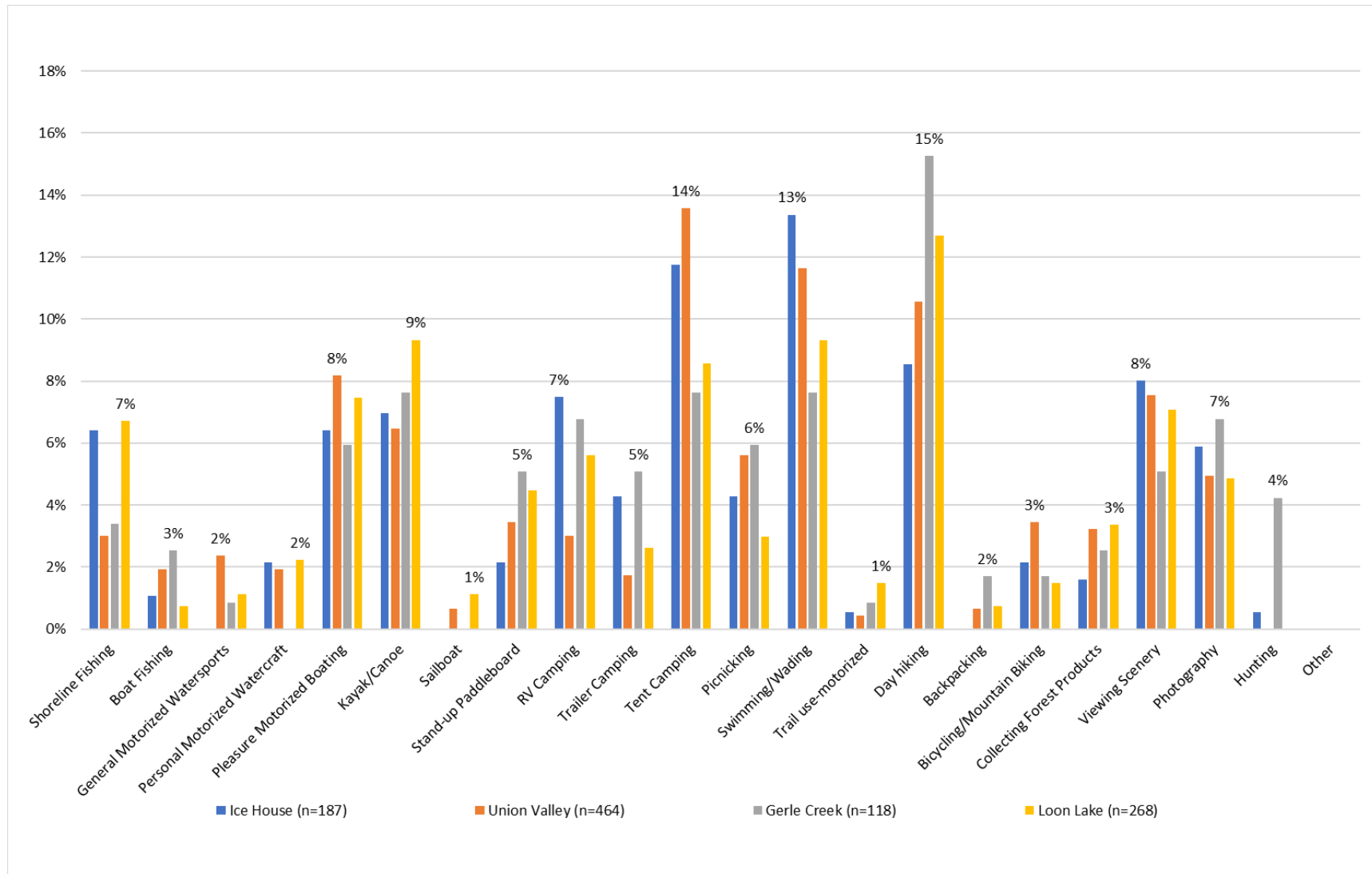


Figure 6. Activity participation by reservoir with highest percentage labeled.

3.1.3 Other Locations Visited by Survey Respondents

Across the four reservoirs surveyed, most survey respondents said they did not visit other nearby locations during their trip. The percentage of respondents that visited other locations during their trip ranged from 21 to 35 percent (Table 6). Other areas visited by survey participants included other SMUD-operated facilities in the UARP, recreation areas other than Crystal Basin in Eldorado National Forest, and Lake Tahoe (Table 6).

Table 6. Other Locations Visited by Survey Respondents.

Reservoir (No. of surveys)	Survey question: <i>Other than this location, what other areas have or will you visit during your trip?</i>	
	No. of respondents	% of respondents
Ice House Reservoir (n= 40)		
Stayed at current location	27	68%
Visited other areas	13	33%
Other areas visited ¹ :	Granite Road dispersed camping, SMUD campsite, Loon Lake, Wrights Lake, Sunset Peninsula, Lake Tahoe, Yellowjacket Campground, Union Valley Reservoir, Silver Creek Day Use Area, Rubicon Trail, Uncle Tom's Cabin	
Union Valley Reservoir (n= 91)		
Stayed at current location	65	71%
Visited other areas	26	29%
Other areas visited ¹ :	Loon Lake, Ice House Boat Launch, Sunset Campground, Wrights Lake, Gerle Creek Day Use Area, Various trailheads, Big Hill Lookout, West Point Campground, Yellowjacket Campground, Yellowjacket Boat Launch, Bassi Falls, Ice House Reservoir, Sunset Campground, Lake Tahoe, Sunset Peninsula, shooting range	
Gerle Creek Reservoir (n= 26)		
Stayed at current location	17	65%
Visited other areas	9	35%
Other areas visited ¹ :	Loon Lake, Bassi Falls, Wrights Lake, Rubicon Trail, Rob's Resort, Uncle Tom's Cabin, personal cabin in the area, Wentworth Springs, Gerle Creek Reservoir, Sunset Archery, Northwind Campground	
Loon Lake Reservoir (n= 56)		
Stayed at current location	44	79%
Visited other areas	12	21%
Other areas visited ¹ :	Loon Lake Campground Group Site 1, Ice House Reservoir, Rubicon Trail, Airport Flat Campground, Rubicon Trail, Loon Lake-Boat-in Areas, Loon Lake Wilderness Trail, Union Valley Reservoir Day Use Area, Bassi Falls Trailhead, Gerle Creek, Yellowjacket Campground, Gold Lake, Northwind, Union Valley Reservoir	

¹ The names of the other areas visited were recorded verbatim from survey respondents.

3.1.4 Facility Condition

Survey respondents were asked to rate the conditions of the recreation site/facility on a scale of 1 to 9. A score of 1 indicates strong disagreement and 9 indicates strong agreement with characterizing the facility as well maintained and in good condition. On average most sites at the four surveyed reservoirs received high ratings of 7 or 8 on this scale, and respondents had no complaints. However, six respondents who rated the facility condition at less than 5 cited deficient: (1) bathroom maintenance, (2) trash/recycling pickup and (3) fire pit cleaning, however, only six of the 213 respondents provided scores of 5 or less. Four of these responses mentioned deficiencies with facility maintenance (e.g., bathroom maintenance, trash/recycling pickup, fire pit cleaning), indicating visitor satisfaction appears more related to the quality of maintenance rather than site amenities. Two responses mentioned (1) an unhelpful campground host; (2) a need for asphalt repair and forest thinning, and (3) a desire for a loading dock at Loon Lake Day Use Area Boat Launch³ to have easier access to water. Table 7 summarizes visitor response frequencies about facility condition.

Table 7. Average Ranking of Facility Maintenance and Condition.

Survey question: <i>Please rank the degree to which you agree or disagree with the following statement: The facilities at this location are well maintained and in good general condition. If a statement is not applicable to your visit, please respond N/A.</i> (scale of 1 to 9 where 1=strongly disagree and 9=strongly agree)		
Reservoir / Recreation Site	No. of responses	Average score
Ice House Reservoir	40	8.0
Northwind Campground	18	8.1
Upper Silver Creek Day Use Area	3	8.0
Strawberry Point Campground	19	7.9
Union Valley Reservoir	91	7.9
Fashoda Campground	12	7.6
Azalea Cove Campground (walk-in)	2	6.5
Big Silver Group Campground	2	8.5
Fashoda Day Use Area	4	7.8
Jones Fork Campground	6	7.3
Lone Rock Campground (walk-in)	2	8.0
Sunset Boat Launch	3	8.0
Sunset Campground	13	8.2
Wench Creek Campground	12	7.9
Wench Creek Group Campground	1	8.0

³ Staff recorded the verbatim response which indicates that the visitor was not aware of the existing boat dock at this location.

Survey question: <i>Please rank the degree to which you agree or disagree with the following statement: The facilities at this location are well maintained and in good general condition. If a statement is not applicable to your visit, please respond N/A.</i> (scale of 1 to 9 where 1=strongly disagree and 9=strongly agree)		
Reservoir / Recreation Site	No. of responses	Average score
West Point Boat Launch	6	7.7
West Point Campground	3	8.7
Wolf Creek Campground	8	6.9
Yellowjacket Boat Launch	3	8.7
Yellowjacket Campground	14	8.5
Gerle Creek Reservoir	26	8.1
Airport Flat Campground	12	7.6
Angel Creek Day Use Area	2	8.0
Gerle Creek Campground	10	8.7
Gerle Creek Day Use Area	2	8.5
Loon Lake Reservoir	56	7.7
Loon Lake Campground(s)	18	7.3
Loon Lake Boat Launch	8	7.8
Loon Lake Day Use Area	16	7.3
Northshore Recreational Vehicle Campground	13	8.5
Red Fir Group Campground	1	9.0
Total	213	7.9

3.1.5 Perception of Visitor Crowding

Tables 8 and 9 tabulate survey responses related to levels of perceived crowding at the four surveyed reservoirs during peak and off-peak seasons. About 70 percent of peak and off-peak responses indicate visitors did not feel crowded during their visit to the reservoirs; 29 percent reported slight to moderate crowding, 1 percent of survey respondents reported feeling extremely crowded and these responses were collected during a holiday or peak season weekend at Gerle Creek Campground, Northwind Campground, and Loon Lake Boat Launch.

Table 8. Peak Season Crowding Response Frequencies Tabulated by Facility and Reservoir

Reservoir / Recreation Site	Survey question: <i>How crowded did you feel today at this location?</i>											
	Weekend (% of responses)				Weekday (% of responses)				Holiday (% of responses)			
	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded	Not crowded	Slightly crowded	Moderately crowded	Extremely crowded
Ice House Reservoir												
Northwind Campground	33%	50%	17%	0%	67%	17%	0%	17%	0%	33%	67%	0%
Strawberry Point Campground	67%	17%	17%	0%	75%	13%	13%	0%	50%	50%	0%	0%
Upper Silver Creek Day Use Area	50%	0%	50%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Average	50%	22%	28%	0%	81%	10%	4%	6%	17%	28%	22%	0%
Union Valley Reservoir												
Fashoda Campground	67%	0%	33%	0%	100%	0%	0%	0%	67%	33%	0%	0%
Wench Creek Campground	100%	0%	0%	0%	57%	14%	29%	0%	0%	0%	0%	0%
Jones Fork Campground	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
Sunset Campground	80%	20%	0%	0%	86%	14%	0%	0%	100%	0%	0%	0%
Yellowjacket Campground	100%	0%	0%	0%	71%	0%	29%	0%	50%	0%	50%	0%
West Point Campground	50%	50%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
Wolf Creek Campground	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%
Lone Rock Campground (walk-in)	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%
Azalea Cove Campground (walk-in)	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%
Wench Creek Group Campground	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Fashoda Day Use Area	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Yellowjacket Boat Launch	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%

Reservoir / Recreation Site	Survey question: <i>How crowded did you feel today at this location?</i>											
	Weekend (% of responses)				Weekday (% of responses)				Holiday (% of responses)			
	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded	Not crowded	Slightly crowded	Moderately crowded	Extremely crowded
Sunset Boat Launch	100%	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%	0%
West Point Boat Launch	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Average	64%	12%	2%	0%	62%	9%	15%	0%	30%	24%	11%	0%
Gerle Creek Reservoir												
Airport Flat Campground	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Gerle Creek Campground	33%	0%	33%	33%	75%	25%	0%	0%	33%	0%	67%	0%
Gerle Creek Day Use Area	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Angel Creek Day Use Area	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Average	83%	0%	8%	8%	94%	6%	0%	0%	8%	0%	17%	0%
Loon Lake Reservoir												
Loon Lake Campground(s)	67%	17%	17%	0%	33%	33%	33%	0%	0%	67%	33%	0%
Northshore RV Campground	40%	60%	0%	0%	86%	0%	14%	0%	100%	0%	0%	0%
Red Fir Group Campground	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Loon Lake Day Use Area	83%	0%	17%	0%	67%	22%	11%	0%	0%	0%	100%	0%
Loon Lake Boat Launch	33%	33%	0%	33%	100%	0%	0%	0%	67%	33%	0%	0%
Average	65%	22%	7%	7%	57%	11%	12%	0%	33%	20%	27%	0%
Total Average	66%	14%	11%	4%	73%	9%	8%	1%	22%	18%	19%	0%

Table 9. Off-Peak Season Crowding Response Frequencies Tabulated by Facility and Reservoir

Reservoir / Recreation Site	Survey Question: <i>How crowded did you feel today at this location?</i>							
	Weekend Off-Peak				Weekday Off-Peak			
	(% of responses)				(% of responses)			
	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded	Not at all crowded	Slightly crowded	Moderately crowded	Extremely crowded
Ice House Reservoir								
Northwind Campground	100%	0%	0%	0%	100%	0%	0%	0%
Strawberry Point Campground	50%	50%	0%	0%	100%	0%	0%	0%
Upper Silver Creek Day Use Area	0%	0%	0%	0%	0%	0%	0%	0%
Avg. for reservoir	50%	17%	0%	0%	67%	0%	0%	0%
Union Valley Reservoir								
West Point Boat Launch	100%	0%	0%	0%	100%	0%	0%	0%
Avg. for reservoir	100%	0%	0%	0%	100%	0%	0%	0%
Gerle Creek Reservoir								
Airport Flat Campground	80%	0%	20%	0%	100%	0%	0%	0%
Gerle Creek Campground	0%	0%	0%	0%	0%	0%	0%	0%
Gerle Creek Day Use Area	0%	0%	0%	0%	0%	0%	0%	0%
Angel Creek Day Use Area	0%	0%	0%	0%	0%	0%	0%	0%
Avg. for reservoir	20%	0%	5%	0%	25%	0%	0%	0%

3.1.6 Effects of Recent Site Improvements

Survey respondents who had visited a site before recent improvements were implemented (i.e., sites reconstructed between 2019 and 2022) were asked to rate the effect of the change in the quality of their visit. Across recently improved sites at Union Valley Reservoir, Gerle Creek Reservoir, and Loon Lake Reservoir, 86 percent, 79 percent, and 58 percent of survey participants, respectively, reported that improvements increased the quality of their visit to some degree. At Upper Silver Creek Day Use Area, the only site recently improved at Ice House Reservoir, the one survey respondent reported that changes greatly improved the quality of their visit. Site-specific ratings to the change in quality of visit are provided in Table 10.

Table 10. Effects on the Quality of Visitors' Experience at Sites Upgraded between 2019 and 2022.

Survey Question: SMUD recently made improvements to this site. Did you visit this site before SMUD made these improvements? If so, how did these changes affect the quality of your visit to this site?							
Reservoir/Facility	Total no. of respondents	% of respondents who did not visit this site before improvements were made	No. of respondents who visited the site before improvements were made	% of respondents who visited the site before improvements were made			
				No change to the quality of my visit	Slightly improved the quality of my visit	Moderately improved the quality of my visit	Greatly improved the quality of my visit
Ice House Reservoir							
Upper Silver Creek Day Use Area	3	67%	1	0%	0%	0%	100%
Avg. for reservoir	--	67%	--	0%	0%	0%	100%
Union Valley Reservoir							
Sunset Campground	13	54%	6	0%	0%	67%	33%
Yellowjacket Campground	13	38%	8	25%	0%	38%	38%
West Point Campground	3	33%	2	0%	50%	0%	50%
Azalea Cove Campground (walk-in)	2	50%	1	100%	0%	0%	0%
Yellowjacket Boat Launch	3	33%	2	0%	0%	50%	50%
West Point Boat Launch	6	50%	3	0%	33%	33%	33%
Avg. for reservoir	--	43%	--	21%	14%	31%	34%
Gerle Creek Reservoir							
Gerle Creek Campground	10	30%	7	43%	0%	57%	0%
Gerle Creek Day Use Area	2	50%	1	0%	100%	0%	0%
Angel Creek Day Use Area	2	0%	2	0%	0%	50%	50%
Avg. for reservoir	--	27%	--	14%	33%	36%	17%
Loon Lake Reservoir							
Northshore RV Campground	13	69%	4	0%	25%	25%	50%

Survey Question: <i>SMUD recently made improvements to this site. Did you visit this site before SMUD made these improvements? If so, how did these changes affect the quality of your visit to this site?</i>							
Reservoir/Facility	Total no. of respondents	% of respondents who did not visit this site before improvements were made	No. of respondents who visited the site before improvements were made	% of respondents who visited the site before improvements were made			
				No change to the quality of my visit	Slightly improved the quality of my visit	Moderately improved the quality of my visit	Greatly improved the quality of my visit
Loon Lake Day Use Area	16	63%	6	50%	33%	17%	0%
Loon Lake Boat Launch	8	50%	4	75%	25%	0%	0%
<i>Avg. for reservoir</i>	--	61%	--	42%	28%	14%	17%

3.1.7 Suggestions to Consider When Redesigning Facilities

Survey respondents were asked to provide changes they would like considered when redesigning facilities planned for reconstruction through 2024. Sixty-nine percent of respondents surveyed at the sites scheduled to be reconstructed in the next two years requested changes. Most requested changes at Airport Flat Campground, Fashoda Campground, and Loon Lake Campground included upgrading facilities and site maintenance; a few visitors mentioned additional changes about the facility concessionaire, reservation process, and signage. Two responses collected at Sunset Boat Launch mentioned improving boat launch access and reservoir water level management. Appendix C contains a tabulated summary of suggested site changes.

3.1.8 Additional Comments Provided by Visitors

Survey participants were asked the open-ended question *“Is there any additional information you would like to provide about the UARP, or this area in general?”*. Across all sites and reservoirs, 44 percent of the responses related to site facilities, 31 percent were general comments, and 21 percent were comments about the facility concessionaire, website, signage, and reservations (Table 11). Four percent of responses concerned land use and access (e.g., trails, accessibility) (Table 11). Uncoded survey responses of the comments are provided in Appendix D.

Table 11. Summary of Coded Responses to the Open-Ended Survey Question.

Survey Question: <i>Is there any additional information you would like to provide about the UARP or this area, in general?</i>				
% of comments (coded by theme of responses)				
	Facilities ¹	General ²	Land Use/Access ³	Comments about host company, website, communications, signage, and reservations
Ice House Reservoir				
Northwind Campground	38%	38%	0%	25%
Strawberry Point Campground	29%	47%	0%	24%
Upper Silver Creek Day Use Area	33%	33%	17%	17%
Union Valley Reservoir				
Fashoda Campground	22%	56%	0%	22%
Wench Creek Campground	50%	29%	0%	21%
Jones Fork Campground	50%	25%	0%	25%
Sunset Campground	47%	40%	0%	13%
Yellowjacket Campground	29%	29%	14%	29%
West Point Campground	100%	0%	0%	0%
Wolf Creek Campground	50%	25%	0%	25%
Lone Rock Campground (walk-in)	25%	25%	0%	50%

Survey Question: <i>Is there any additional information you would like to provide about the UARP or this area, in general?</i>				
% of comments (coded by theme of responses)				
	Facilities¹	General²	Land Use/Access³	Comments about host company, website, communications, signage, and reservations
Azalea Cove Campground (walk-in)	33%	67%	0%	0%
Wench Creek Group Campground	0%	0%	0%	100%
Big Silver Group Campground	100%	0%	0%	0%
Fashoda Day Use Area	50%	50%	0%	0%
Yellowjacket Boat Launch	0%	0%	100%	0%
Sunset Boat Launch	50%	50%	0%	0%
West Point Boat Launch	17%	67%	0%	17%
Gerle Creek Reservoir				
Airport Flat Campground	50%	40%	0%	10%
Gerle Creek Campground	42%	25%	0%	33%
Gerle Creek Day Use Area	0%	0%	0%	100%
Angel Creek Day Use Area	100%	0%	0%	0%
Loon Lake Reservoir				
Loon Lake Campground(s)	60%	10%	20%	10%
Northshore Recreational Vehicle Campground	56%	22%	0%	22%
Red Fir Group Campground	0%	0%	0%	0%
Loon Lake Day Use Area	69%	0%	8%	23%
Loon Lake Boat Launch	75%	25%	0%	0%
Average across all surveyed sites	44%	31%	4%	21%

¹ Responses regarding facilities (e.g., site maintenance and cleaning, parking, road conditions)

² General positive feedback and miscellaneous comments (e.g., frequency of visit)

³ Comments regarding land use and access (e.g., trails, accessibility)

3.2 CAPACITY AND OCCUPANCY

Campground occupancy reported in Table 12 is calculated based on the proportion of at-one-time observed use to total number of campsites available from Memorial Day Weekend through October 2022. Across all surveyed campgrounds, the average occupancy was 67 percent of capacity during peak weekends, and 59 percent of capacity on holiday weekends. Occupancy at all campgrounds was above 50 percent of capacity on peak weekends. Five campgrounds, Northwind, Jones Fork, Sunset, Big Silver Group, and Sunset Group were all above 80 percent of capacity on peak weekends. The use level at these campgrounds was still high during peak weekdays however it was lower than use on peak season weekends and notably lower at the walk-in campgrounds which averaged under 30 percent of capacity during these days. On holiday weekends, the highest use capacity occurred at Loon Lake Group Campground 2, Loon Lake Equestrian Group Campground, and Wench Creek Group Campground at 100 percent capacity, and Jones Fork Campground at 97 percent capacity.

Table 13 summarizes parking lot utilization at day use sites and boat launches during the study period. Similar to campground utilization, day use and boat launch parking areas are popular during peak weekends and holidays; however, staff rarely observed use at or above capacity. Upper Silver Creek Day Use Area and Shoreline Trail Parking Areas along Lakeshore Road (at Ice House Reservoir) received the highest utilization on peak weekends followed by day use sites and boat launches at Loon Lake Reservoir, Union Valley Reservoir, and Gerle Creek Reservoir. The higher observed use Upper Silver Creek Day Use Area and the Shoreline Trail Parking Areas may relate to visitors' preference to use sites where fees are not charged. Observed utilization on weekdays was much lower than on weekends indicating that the public would easily find parking mid-week. Interestingly, observed holiday occupancy was lower than peak weekend use across all sites except for Loon Lake Day Use Area which received 15 percent more use than during the peak season weekends. Considering the high percentage of users reporting that they are overnight users as compared to day users in the Crystal Basin it's probable that the day use and boat launch sites are utilized by campers driving to other sites (e.g., outside their campground) to explore and participate in activities away from where they are staying overnight.

North Union Valley Road parking counts were collected in 2022 according to the methods described in Section 2.5; however, occupancy could not be determined because construction altered parking availability throughout the survey period. The highest at-one-time vehicle observations along North Union Valley Road during holidays, peak season, and off-peak season were 14, 8, and 2 respectively. On average, nine vehicles were parked along the road on holiday weekends, four vehicles were parked along the road during peak season, and one was parked along the road during off-peak season.

Appendix E contains representative photographs of parking areas collected during monitoring. Photograph captions indicate the number of vehicles counted at the location at the time the photograph was taken.

Table 12. Campground Occupancy Calculated as a Percentage of the Number of Available Campsites, Memorial Day Weekend through October 2022.

Campground	Weekend Occupancy					Weekday Occupancy					Holiday Occupancy	
	Peak Season		Off-peak Season		Study Period	Peak Season		Off-peak Season		Study Period	--	
	No. of obs.	% of capacity	No. of obs.	% of capacity	% of capacity	No. of obs.	% of capacity	No. of obs.	% of capacity	% of capacity	No. of obs.	% of capacity
Ice House Reservoir												
Northwind Campground	6	98%	1	67%	94%	9	77%	1	44%	73%	3	85%
Strawberry Point Campground	6	75%	1	40%	70%	9	54%	1	30%	52%	3	73%
Union Valley Reservoir												
Jones Fork Campground	6	85%	--	--	--	9	64%	--	--	--	3	97%
Lone Rock Campground (walk-in)	6	57%	--	--	--	9	24%	--	--	--	3	47%
Fashoda Walk-In Campground	6	73%	--	--	--	9	29%	--	--	--	3	61%
Sunset Campground	6	92%	--	--	--	9	69%	--	--	--	3	72%
Big Silver Group Campground	6	83%	--	--	--	9	44%	--	--	--	3	33%
Azalea Cove Campground (walk-in)	6	62%	--	--	--	9	14%	--	--	--	3	20%
Wench Creek Campground	6	69%	--	--	--	9	35%	--	--	--	3	57%
Wench Creek Group Campground	6	75%	--	--	--	9	44%	--	--	--	3	100%
Yellowjacket Campground	6	68%	--	--	--	9	50%	--	--	--	3	43%
Wolf Creek Campground	6	55%	--	--	--	9	44%	--	--	--	3	47%
West Point Campground	6	67%	--	--	--	9	19%	--	--	--	3	52%
West Point Group Site	5	20%	--	--	--	7	14%	--	--	--	2	0%
Sunset Group Campground	6	100%	--	--	--	9	67%	--	--	--	3	67%
Gerle Creek Reservoir												
Airport Flat Campground	6	54%	2	60%	56%	9	25%	2	50%	30%	3	51%
Gerle Creek Campground	6	64%	--	--	64%	9	60%	--	--	--	3	55%

Campground	Weekend Occupancy					Weekday Occupancy					Holiday Occupancy	
	Peak Season		Off-peak Season		Study Period	Peak Season		Off-peak Season		Study Period	--	
	No. of obs.	% of capacity	No. of obs.	% of capacity	% of capacity	No. of obs.	% of capacity	No. of obs.	% of capacity	% of capacity	No. of obs.	% of capacity
Loon Lake Reservoir												
Loon Lake Family Loop Campgrounds	6	54%	--	--	--	9	34%	--	--	--	2	47%
Loon Lake Group 1 (walk-in)	6	67%	--	--	--	9	56%	--	--	--	2	50%
Loon Lake Group 2	6	50%	--	--	--	9	56%	--	--	--	2	100%
Loon Lake Equestrian Campground	6	57%	--	--	--	9	12%	--	--	--	2	50%
Loon Lake Equestrian Group Campground	6	67%	--	--	--	9	11%	--	--	--	2	100%
Red Fir Campground	6	50%	--	--	--	9	33%	--	--	--	2	50%
Northshore Recreational Vehicle Campground	6	63%	--	--	--	9	47%	--	--	--	2	54%

Table 13. Day Use and Parking Occupancy¹ Calculated as a Percentage of the Number of Available Parking Spaces, Memorial Day Weekend through October 2022.

Day Use Area/Boat Launch	Weekend Occupancy					Weekday Occupancy					Holiday Occupancy	
	Peak Season During Study Period		Off-peak Season During Study Period ²		Study Period	Peak Season During Study Period		Off-peak Season During Study Period ²		Study Period		
	No. of obs.	% capacity	No. of obs.	% capacity	% capacity	No. of obs.	% capacity	No. of obs.	% capacity	% capacity	No. of obs.	% capacity
Ice House Reservoir												
Upper Silver Creek Day Use Area and Shoreline Trail Parking Areas	6	77%	2	16%	62%	9	19%	2	2%	16%	3	35%
Union Valley Reservoir												
Sunset Boat Launch	6	44%	--	--	--	9	14%	--	--	--	3	38%
Yellowjacket Boat Launch	6	47%	--	--	--	9	31%	--	--	--	3	37%
West Point Boat Launch	6	58%	2	4%	45%	9	24%	2	11%	21%	3	40%
Gerle Creek Reservoir												
Angel Creek Day Use Area	6	38%	--	--	--	9	6%	--	--	--	3	8%
Gerle Creek Day Use Area	6	40%	--	--	--	9	25%	--	--	--	3	26%
Loon Lake Reservoir												
Loon Lake Day Use/Boat Launch	6	49%	--	--	--	9	25%	--	--	--	2	64%
Loon Lake Wilderness Trailhead	6	55%	--	--	--	9	10%	--	--	--	2	36%

¹ Capacity estimated from 2011 Recreation Management Plans (SMUD 2011), Exhibit R drawings, and as-built drawings.

² Facilities were closed because of the Mosquito Fire which threatened public safety and the Forest Service's concessionaire closed the Loon Lake campgrounds after Labor Day, likely due to decreasing demand.

3.3 EXISTING INFORMATION FROM FOREST SERVICE

The following information was collected from the Forest Service to characterize recreation users visiting the Eldorado National Forest.

- Forest Service concessionaire provided 2022 UARP group campground visitation information for the 100 days between May 28 and September 5, 2022 (Appendix F).
- Ski patrol reports from winter 2021-2022 were reviewed. SMUD snowcat use and evidence of its use were reported in about three reports. This is not unusual as SMUD operators use snowcats to access their facilities above snowline during the winter and share the trail with winter recreation visitors.
- Desolation Wilderness permits issued for visits near Loon Lake Reservoir between May 15 and October 15, 2022:
 - 414 permits (1,349 people) that entered and exited at Loon Lake Reservoir;
 - 43 permits (112 people) that originated outside the area and exited at Loon Lake Reservoir; and,
 - 86 permits (310 people) that originated at Loon Lake Reservoir and exited somewhere else.
- National Visitor Use Monitoring Program (NVUM) data specific to visitor profiles (e.g., county of residence, age, gender) were queried from the most recent data available on the Forest Service website which was 2017 (Forest Service 2017). Data represents visitors throughout the entire Eldorado National Forest and not exclusive to the Crystal Basin.
 - Visitor gender profile: almost 66 percent male and 34 percent female.
 - Visitor racial profile: 92 percent identified as White; seven percent as Asian, 3 percent as American Indian/Alaska Native, 1.8 percent as Black and the other 1.2 percent as Hawaiian/Pacific Islander.
 - Place of residence: 4 of the 5 most frequently reported zip codes were for El Dorado County with the other being Sacramento County. These 5 most frequently reported zip codes represent 16 percent of all respondents. This information is consistent with previous studies conducted during relicensing which reported that the majority of visitors to the Crystal Basin are reside in nearby counties.
 - Age distribution:

▪ Under 16 years	16.9 percent
▪ 16-19 years	2.3 percent

▪ 20-29 years	11.6 percent
▪ 30-39 years	15.2 percent
▪ 40-49 years	15.0 percent
▪ 50-59 years	16.8 percent
▪ 60-69 years	17.4 percent
▪ 70+ years	4.8 percent

3.4 FOREST SERVICE STAFF INTERVIEW SUMMARIES

To provide additional context and complement information provided by the visitor survey responses, SMUD conducted three telephone interviews with Forest Service staff in November 2022. The interviews followed a structured format of questions similar to the content of the visitor surveys. Appendix B-1 provides the notes from the full interview and Appendix B-2 provides the structured discussion topics. Interviews were conducted with staff familiar with the SMUD reservoirs and associated recreation areas as well as overall Forest Service management practices within the Crystal Basin; the interview responses allowed staff to supplement the information obtained during the visitor surveys.

Each interview captured the interviewee's perspective about recreation resources within the Crystal Basin. Although those interviewed are familiar with recreation use and the Crystal Basin, some staff provided comments that relate to actions or management that are outside of SMUD's scope of responsibilities relative to the project (e.g., developing equestrian trails) or do not consider SMUD's approved recreation facility development schedule. Paraphrased findings from each individual interview include:

- Backcountry users originating or ending their trips at Loon Lake Wilderness Trailhead are able to hear SMUD helicopter operations in the wilderness; however, SMUD has been great to work with in coordinating access and work at their reservoirs in that area.
- When campground reconstruction projects are planned it is important to ensure the new sites are large enough to accommodate modern vehicles and trailers. Forest Service staff have witnessed visitor's trucks and trailers getting stuck or having difficulty navigating the older campground loops and smaller campground sites like those at Loon Lake Reservoir, especially Loon Lake Equestrian Campground. Forest Service staff recommend future plans consider developing equestrian only trails originating from the equestrian campground to minimize interactions between hikers and equestrians.
- The campgrounds throughout the Crystal Basin are very popular and more popular than ever before. Overall, campgrounds are almost always full during the summer with average groups in one to two vehicles so 4-6

people with group sites occupied in the 20-30 people range. Some of this popularity might be relic from the COVID pandemic when people were getting outside and some of the increased popularity might be related to the recent campground renovations SMUD has completed. Either way, SMUD has done a great job communicating site renovation schedules to the Forest Service and providing top notch amenities for the public. Notably the extension of the bike trail, new campgrounds along the west shore of Union Valley Lake and the upper end of Ice House Reservoir.

- Forest Service staff typically do not hear complaints of crowding or facility needs; however, they do see indirect physical evidence of crowding such as full dumpsters and increased frequency of pumping the restrooms. Most of the day-to-day cleaning and site maintenance is the responsibility of the concessionaire.
- Feedback on the recently reconstructed facilities from the public (as reported to Forest Service staff) has been overwhelmingly positive. The sites are popular as evidenced by high visitation and use numbers throughout the summer.
- Forest Service staff recommended SMUD consider near term projects resolving facilities include the Ski Chalet near Loon Lake Reservoir and constructing interpretive opportunities such as an amphitheater.
- Forest Service staff noted how great it was to have fully functioning campgrounds as a result of the renovations because the original sites had failing water and sanitary systems. Now the public can use fully functioning sites well into the future with little anticipated renovation needs now that they're complete.
- As for trends, staff noted that the popularity of newer camper vehicles (e.g., sprinter vans), larger trailers with more recreational gear like kayaks, boats, bicycles put a wide range of demands on the facilities. One such new demand is the growth in electric bikes (e-bikes) which are much faster than traditional bikes. Although they have not received increased incidents or reports of near misses along the trail, it is something the staff are keeping an eye on as some nearby state parks have already prohibited e-bikes on their trails (to protect other people and pet safety).
- Overall, all three interviews praised SMUD as a partner to upgrade the recreation opportunities and they recognize that the opportunity of having a partner like SMUD affords a different type of recreation experience than other neighboring forests might be able to offer.

4.0 DISCUSSION

4.1 VISITOR USE

Based on observation monitoring data, visitor use was consistent throughout the study period with highest use occurring during peak season. While occupancy at some recreation sites reached capacity on select days, there was always additional capacity available at other recreation facilities in the Crystal Basin. During the 2022 monitoring year several campground closures at Ice House and Union Valley reservoirs likely relocated visitors to the open campgrounds which could have created more crowded conditions than might have existed had all facility capacity been available to the public. However, survey responses did not indicate that visitors felt crowded (Tables 8 and 9).

Monitoring data indicate a slightly different characterization of campground occupancy than information provided by Forest Service staff. Visitation is indeed high at Crystal Basin and Forest Service staff state that campgrounds are almost always fully occupied on peak season weekends. However, monitoring data show peak season weekend occupancy rate ranging from about 54 to 100 percent at UARP family campgrounds, indicating available capacity for visitors, even with some sites closed during the monitoring period. Similarly, parking occupancy rates during peak season weekends ranged from 38 to 77 percent at day use sites and boat launches, indicating available capacity for visitors. SMUD's site-specific data collection provides a more refined facility occupancy characterization than the anecdotal characterization provided by the Forest Service staff.

Overall, SMUD's review of survey responses, interviews and existing information did not reveal any notable changes since relicensing in the types of visitor activities, facility needs, and preferences. Visitors still enjoy a mix of activities and desire improvements such as campgrounds that can accommodate RV's and better restrooms and implementing SMUD's recreation improvement plan is on track to accommodate identified visitor needs and use.

4.2 RECREATION FACILITIES

Overall, visitors found Project recreation facilities were to be in very good condition and well maintained. More than 200 respondents reported high levels of satisfaction with the recreation facilities during their trips and provided positive comments and responses about their experiences at the UARP recreation facilities. Only 5 respondents reported negative experiences which mostly related to lapses in routine maintenance. Some responses to the open-ended question, that offered an opportunity for visitors to provide additional information about their trip, preferred having first-come-first-serve campsites while other respondents preferred reserving campsites. Responses also indicated visitors want reasonable fees charged for campsites. It is important to note that the maintenance activities and the fees are the

responsibility of the Forest Service which contracts facility operation to a third-party concessionaire.

SMUD continues to upgrade facilities as part of the approved recreation implementation plan, which will improve facilities and accommodate visitor use through the license term. About 50 percent of survey respondents who had been to UARP recreation facilities before SMUD completed upgrades thought the facility upgrades improved the quality of their recreational experience. As part of the visitor survey, SMUD also asked respondents if there were any upgrades they would like to see at facilities where improvements are planned in the next two years. There were a number of suggestions including making improvements to bathroom facilities, providing more showers, having access to running water, cleaning restrooms more frequently, providing more RV sites with hookups/pads and dump stations, and updating boat ramps. These recommendations relate to more facilities than just those sites being upgraded in the next two years.

4.3 MONITORING

License Condition No. 42 specifies conducting a recreational survey and preparing a Report on Recreational Resources that is approved by the Forest Service every six years. The first monitoring effort planned for 2020 was delayed until 2022 because of the COVID-19 pandemic⁴; as such, SMUD plans to conduct recreation monitoring again in 2028.

⁴ FERC approved SMUD's request for time extension by order dated February 10, 2021 [accession no. 20210210-3025).

5.0 LITERATURE CITED

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SMUD 2005. Upper American River Project, (FERC No. 2101) Application for New License, Applicant Prepared Preliminary Draft Environmental Assessment. Sacramento Municipal Utility District, Sacramento CA. July 2005

SMUD 2011. Upper American River Project (FERC No. 2101) Recreation Management Plans for Loon Lake, Gerle Creek, Ice House, and Union Valley Reservoirs. Sacramento Municipal Utility District, Sacramento CA. January 2011

APPENDIX A

Visitor Survey Questions

This document contains the set of questions that will be included in the visitor surveys that will be conducted at the study areas listed in the UARP Recreation Survey methodology. The questions below are grouped by the information the visitor responses are intended to provide. When creating the survey instrument the questions will be reordered in a logical sequence to facilitate visitors' responses. Survey data will be collected using a tablet and computer-based survey form. To assist visitors' orientation, a hard copy map of the Crystal Basin will be provided during the survey.

1.0 SITE INFORMATION

Location [Developed site name]

Date and time

General weather conditions

Monitor name

2.0. INTRODUCTION TO VISITORS

My name is [name] and I am conducting a recreation visitor survey for SMUD. I am collecting information about visitor use at the UARP, which includes the Crystal Basin and we are particularly interested in the location you are currently visiting.

3.0 SCREENING

13. Are you willing to take a few minutes to answer a few questions related to your recreation experience?

No [stop, enter reason for refusal and enter as an attempt]

Yes [continue]

2. Have you already participated in a recreation survey here this year? (*Might be able to drop this question.*)

Yes [stop and enter as an attempt]

No [continue]

3. Are you at least 18 years old?

No [stop and enter as an attempt]

Yes [continue]

4.0 PARTY SIZE, PREFERENCE FOR DAY USE OR OVERNIGHT USE

4. Including yourself, how many people and vehicles are in your party today?

Enter 1 (unaccompanied) or number in party

Enter number of vehicles

5. How many hours (for day use) or nights (for overnight) will you spend in this area?

Enter # hours (if day use) _____ or # nights (if overnight stay) _____

6. In general, in order to enjoy your recreational activities at Crystal Basin, do you typically travel from your home for the day or do you typically stay overnight at your destination.

5.0 VISITOR PREFERENCES WITH REGARD TO ACTIVITIES, KINDS AND SIZES OF RECREATIONAL VEHICLES, AND PLACES VISITED

7. Which of the following activities have or will you participate in during this trip?

(record as many as apply—note, this question only applies to the visitor being interviewed and a printed card will be provided to the visitor to aid their verbal response)

<u>Camping</u> • RV [length] • Tent • Trailer	<u>Picnicking</u>	<u>Swimming/wading</u>
<u>Motorized boating</u> • Watersports (e.g., waterskiing, wake boarding) • Personal watercraft • Pleasure/general	<u>Non-motorized boating</u> • Kayak/canoe • Sailboat • Stand-up paddleboard	<u>Angling</u> • Shoreline • Boat
<u>Trail Use (motorized/OHV)</u>	<u>Trail use (non-motorized)</u> • Day hiking • Backpacking • Bicycling/Mountain Biking • Horseback riding	<u>Collecting forest products</u> (e.g., firewood, mushrooms)
<u>Viewing scenery or wildlife</u>	<u>Photography</u>	<u>Hunting</u>
<u>Other (Fill-in)</u>		

8. Other than this location, what other areas have or will you visit during your trip?

Not visiting other places or

List other places _____

9. On a scale of 1 to 9 where 1 indicates strong disagreement and 9 indicates strong agreement, please rank the degree to which you agree or disagree with the following statement: The facilities at this location are well maintained and in good general condition. If a statement is not applicable to your visit, please respond NA.

1	2	3	4	5	6	7	8	9	NA
Strongly disagree					Strongly agree				

If entry is 4 or less, what problem(s) did you have with facilities?

List _____

6.0 SENSE OF CROWDING

10. How crowded did you feel today at this location?

- ☐ Not at all crowded
- ☐ Slightly crowded
- ☐ Moderately crowded
- ☐ Extremely crowded

7.0 FACILITY IMPROVEMENTS

11. SMUD recently made improvements to this site. Did you visit this site before SMUD made these improvements? (*only ask at sites that have been recently changed*)

No, enter NA

Yes, How did these changes affect the quality of your visit to this site?

- ☐ No change to the quality of my visit
- ☐ Slightly improved the quality of my visit
- ☐ Moderately improved the quality of my visit
- ☐ Greatly improved the quality of my visit

12. SMUD will be reconstructing this campground in the next two years. Are there any changes you think should be considered when redesigning this facility? (*only ask this question at facilities that are planned for update in the next 2 years*)

No

Yes, list _____

8.0 OPEN-ENDED QUESTION

13. Is there any additional information you would like to provide about the UARP or this area, in general?

No [Note and conclude interview]

Yes [List and conclude interview]

APPENDIX B-1**Forest Service Interviews and Coordination**

USFS staff interviewed	Date of telephone interview
Dustin Bell, Wilderness Ranger	November 17, 2022
Jack Lucido, Assistant Recreation Officer, Front Country	November 21, 2022
Kristi Schroder, Assistant Forest Recreation Officer	November 28, 2022

Dustin Bell's observations:

Dustin Bell is a backcountry wilderness ranger responsible for Desolation Wilderness which is accessed from points within the front country of the Crystal Basin.

The Crystal Basin is a beautiful area, and the wilderness experience is a huge draw for visitors. Having SMUD as a partner is a blessing as there have been lots of funding and partnering opportunities throughout the Crystal Basin. Given Dustin's responsibility for the backcountry he doesn't have a sense for campground crowding but he does hear public observations that the presence of SMUD helicopters running employees or equipment is audible while in the wilderness.

We have heard from many users that there are some areas within the Loon Lake Equestrian Campground where you can get stuck when trying to get into or out of a campsite loop due to the modern (larger) trailers relative to the smaller roads and campsites. This can be due to poor design or limited space for trailers on one side of the loop. We also hear from equestrian users that there are loops that are too narrow for their trailers, even though they are working hard to stay on the trail. Dustin has witnessed a truck and trailer getting stuck in the campground.

Another interesting point to make is the management of the campgrounds is handled by a third party and it's within their contract to set and collect fees for certain activities including overnight and day use areas. Relatively new is the collection of fees for day use areas which for the public that is used to coming to these areas for

years and not paying is a new and dissatisfactory experience. Dustin noted that most of these day use charges are at sites that are not SMUD facilities, but it is an overall management layer to visitors in the basin.

Finally, we have heard from many people who love the Loon Lake Wilderness Trailhead because it has great access to Rubicon Trail and other wilderness areas where they can go hiking or backpacking.

As for recommendations from the public its worth exploring a connecting trail from the equestrian trail to the trail head as part of the Loon Lake Campground upgrades. SMUD made a lot of improvements with the California Conservation Corps on the trail all the way to Rubicon.

Jack Lucido's observations:

Jack is the assistant recreation officer responsible for front country recreation in the Crystal Basin. His observations originate from direct observation of the public use patterns as well as his interactions with the third-party concessionaire.

Overall, campgrounds are almost always full during the summer with average groups in one to two vehicles so 4-6 people with group sites occupied in the 20-30 people range. As for day use and overnight use, a lot depends on the season as during the winter day use is the predominant use but it is not necessarily associated with SMUD sites because its usually ski trails, rental cabins and the Loon Lake Nordic ski area being popular. When the campgrounds open, use switches to majority overnight with lots of day use sprinkled in. Once the campgrounds open, they're pretty much booked at full occupancy during the summer. There has been a noticeable uptick in day use and with COVID many people started coming to the Basin for short trips. That might be trending back to more normal use patterns this past year.

As for popular activities, camping, lake focused activities on Union Valley and Ice House such as boating, water-based activities. The new bike trail improvements and extension has resulted in a lot of use. Ultimately, it's all about access to the water whether its biking or hiking around the reservoirs or paddling, swimming, boating. In the winter its snowshoeing and Nordic skiing.

As for the public's feedback on the level of maintenance observed, Jack said lots of good things about the renovations at Union Valley and the feedback has been the public is impressed with the renovations. Most of the interactions between the Forest Service and the public centers around fire regulations and closures, Forest Service regulations, legal restrictions and use fees. This is especially the case at day use sites like Wrights Lake. According to Jack, the public has a hard time understanding the day use payment needs whereas they understand the overnight payment system better. Jack reported that the public never comments about SMUD and the sites in this context. As a note, the Forest Service contracts with a concessionaire to

manage the sites and the fees are part of that negotiation which allows the concessionaire to set and collect fees.

As for how the Forest Service receives information relative to visitor crowding, it is rare for the Forest Service to hear about it directly. People generally might say, “wow, it’s a crowded weekend” but it only really gets to the Forest Service if it results in a problem like overfilling bathrooms or trashcans because these services are the responsibility of the concessionaire but if it is bad, people start to vocalize it to anyone around. Interestingly, Jack noted that people come to the area and expect full campsites and that alone is not enough for a complaint on crowding but because sites can be reserved six months in advance and there are only a few for walk ups most people are not complaining about not having access because of crowds. The other way the Forest Service hears about crowding is lack of parking but this is limited to Wrights Lake day use area which is not part of the study.

As for the closures this past season due to the rebuilds, Jack hasn’t heard much from the public but feels that there have been quite a few closures the last few years for the updates, but Jack believes SMUD has done a good job scheduling all the improvements. The public might be missing their favorite spot one year but ultimately, they’re getting a much better product for many years to come.

Lastly, as for public feedback on potential improvements, Jack hasn’t heard anything specific other than people just want the sites to look good and be open. They’re looking for more, bigger campgrounds and parking since the public has had a hard time finding spots. This might have been exacerbated last year as the toughest year with the combination of COVID and closures for rebuilds and wildfires in the region. Use has visibly increased everywhere throughout the National Forest, and it seems like everything is full all the time. Jack can tell because the garbage is filling up faster, bathrooms need pumping more frequently so its work keeping facilities open with high use. All the SMUD improvements are great, but it does bring in more people.

Looking ahead, the Forest Service is keeping an eye on things like e-bikes and e-scooters which are becoming more prevalent. Jack mentioned some California State Parks are not allowing e-bikes however the forest has not yet implemented policy and regulations on these activities. Some bikes are capped at 15 mph, but some are not and Jack can see potential safety conflicts because of their speed and how quiet they are on the trail. They’re not gas motors so noise pollution isn’t the issue, but this is something the Forest Service will monitor in the coming years.

Kristi Schroder's observations:

Kristi Schroder between July 19 and November 15 Kristi was the Acting Forest Supervisor but at the time of the interview her position was Assistant Forest Recreation Officer. Given her position during the study, Kristi admitted she might not have firsthand knowledge of information for the interview but was willing to discuss the topics and help.

Kristi described the typical user group as 3-4 people – standard family size but couldn't speak to the ratio of day users to overnight users. As for most popular activities she named water skiing/boarding (water uses), hiking and fishing.

As for the level of maintenance needs the Forest Service hears about from the public she indicated the concessionaire does all the heavy cleaning and referred me to talk to Jack who already provided this information. If the Forest Service sees something that needs cleaning when they're in the sites they'll stop and clean it between contractor cleanings.

As for visitor comments to the Forest Service related to crowding Kristi mentioned that complaints go to the concessionaire but she wasn't aware of any complaints. She did recognize that weekends are really full at the campgrounds. Most of the complaints are personal like the number of cars in a spot; or my favorite campground isn't open. Kristi noted that having the Mosquito Fire this year which resulted in closures resulted in additional concentration of people into open sites. During the week there are lots more open sites and people are not on top of each other. Overall, the renovations have resulted in people liking the area even more resulting in more people coming into the Basin. Kristi couldn't really speak to the use levels between peak and off-peak seasons.

As for public feedback on needs for facility improvements, Kristi admitted she was not the best person to speak to this but what she mentioned she hears is need for interpretive areas such as amphitheater which she believes is scheduled in the future. One thing that will be changing in the future is the concessionaire will be allowed to rent equipment at the sites so the public will get opportunities for more paddle boarding/kayak type sports which will be new since the previous concessionaire never had this opportunity in their contract. Kristi did indicate that some of the details need to get worked out and the rentals are probably going to be limited to the larger reservoirs, Ice House and Union Valley. Loon has potential for rentals but the water is much colder and its windy so might be inappropriate for a rental program. Similarly, Gerle Creek Reservoir is much smaller and too many rentals could negatively impact the overall visitor experience there.

Overall, Kristi feels the bike trail is awesome and that the public really enjoys incorporating that into their experience; another way to offer more activities with the public having to use their vehicles in the Basin. Kristi did mention she would like to see more opportunities for education, small or large, to work with people in the

campground. Programming could be from Forest Service or concessionaire; she has to review their contract to see, or a combination in the future. She referenced an existing interpretive association that is interested if there were facilities. A future amphitheater could be small and accommodate 20 people or large and accommodate 100+ people. In the past due to short staffing and lack of funding the Forest Service education program has been a challenge to staff.

Kristi sees the next few years could be different with use shifting to the west side of Union Valley with the new campgrounds but recognizes it could all change with potential wildfires and just have to see where the next set of user impacts will be. The west side of Union Valley has really changed in the last 30 years from extremely difficult, dispersed use sites for high clearance 4x4s to more worn dispersed use trails that could accommodate motorhomes to now, new formal facilities and a vehicle management plan that has teeth to allow rangers to issue tickets for managing undesirable dispersed use.

Overall, this Forest Service district has benefited hugely with SMUD as a partner and through the FERC license/special use permit. SMUD does a great job on the renovations. People always gravitate to water and if going to have lakes it is going to attract public to the water so it is helpful to have a partner that takes pride in their ownership of the recreation opportunities like SMUD.

APPENDIX B-2

Staff Interview Questions

Forest Service Interviews – UARP Recreation Study

Discussion Topics for interviews with FS staff that are derived from the visitor survey tool:

Party Size, Day-Overnight Use

- Characterize the typical party size using the Crystal Basin.
- Characterize the ratio of day use to overnight use in the Basin.

Visitor Preferences

- Characterize the top 3-5 most popular activities in the Crystal Basin.
- Characterize the level of maintenance visitors observe at the facilities they're recreation at.

Crowding

- Characterize how the Forest Service receives information relative to visitor crowding ratings.
- Characterize levels of crowding during Peak Season and Off-Peak Seasons.

Facility Improvements

- Characterize feedback on the recent facility improvements available to the public?
- Characterize feedback from the public on needs for facility improvements?

Any additional information relevant to recreation use and facilities for the 2022 season?

APPENDIX C

Visitor Requested Changes to UARP Recreation Facilities with Plans for Reconstruction between 2022-2024

Survey Question: <i>SMUD will be reconstructing this facility in the next two years. Are there any changes you think should be considered when redesigning this facility?</i>			
	No. of affirmative responses	% of affirmative responses	Changes to consider
Union Valley Reservoir			
Fashoda Campground (n= 12)	10	83%	They would like an earlier check in and out during quiet weekdays.
			They would like more experienced camp hosts and hosts that know the sites.
			The interviewee would like bigger bear boxes, and the land is sloped and difficult to level a tent on. The site would benefit from more level areas to set up tents.
			The interviewee would like more RV hookups.
			The interviewee would like sinks at the site.
			Spots for cars in the sites would be nice.
			It would be great if the site had flushing toilets.
			They would like electric vehicle charging stations. They didn't like that Fashoda is sloped and not flat for setting up tents.
			They would like larger bear boxes and a more level campground area for tents.
			They would like buoys for tying off boats.
			SMUD should install bear boxes with a flat top so you can stack things on top of the box and use it for storage. They would like a place to park closer to the campground sites, a better hand washing station and sinks in the bathrooms.
			He mentioned that the restrooms could use some upgrading and be cleaner.
			The campers would like to have more regular cleanings, lights, and flushable toilets in the bathrooms.
			They would like no construction during the summer, and for the boat ramps to remain open during site constructions and upgrades.
Sunset Boat Launch (n= 3)	2	67%	Sunset boat launch has a bit of a shallow ramp so that could be improved. The dock should be put

Survey Question: <i>SMUD will be reconstructing this facility in the next two years. Are there any changes you think should be considered when redesigning this facility?</i>			
	No. of affirmative responses	% of affirmative responses	Changes to consider
			out on the ramp, it's currently under construction/blocked off.
			Their sailboats needs sandy beaches, which could possibly be improved by shifting the water levels. Last year and this year the water levels were so low it made things difficult with his sailboat.
Gerle Creek Reservoir			
Airport Flat Campground (n= 12)	7	58%	They said they would prefer the site to remain first come first serve.
			They would like better access to water. Water is very difficult to get when most sites are closed. They said that "getting water is horrible."
			Having running water would be nice.
			They would like SMUD to add more deeper and longer parking spots to fit a vehicle with a large trailer.
			They said they it would be nice to have water.
			They would like more frequent bathroom cleanings, and for SMUD to leave the bathrooms and trash open through hunting season. They would like grills on the fire pits.
			They said the bathrooms could use improvement and access to running water would be nice.
			The bathrooms need to be cleaned, fire pits need to be cleaned out, and trash need to be cleaned up. There are potholes that need to be filled. They would also like water to be available at the campsites
Loon Lake Reservoir			
Loon Lake Campground(s) (n= 18)	12	67%	They would like additional and more clear signage within campground for navigation.
			They would like better enforcement of quiet hours for loud neighbors.
			They would like to see bathroom improvements (improve seat condition, emptied more frequently).
			The bathrooms need to be emptied more frequently.
			Make the campground and access roads wider and more RV friendly, some sites need some refurbishing, and some sites are small.
			They would like cleaner bathrooms and more trees.

Survey Question: <i>SMUD will be reconstructing this facility in the next two years. Are there any changes you think should be considered when redesigning this facility?</i>			
	No. of affirmative responses	% of affirmative responses	Changes to consider
			The toilets need to be pumped more often, they would like showers facilities more centrally located to Loon Campground, and would like SMUD to reconstruct parking pads at sites.
			They would like to have water hookups for RV sites, as well as flat, clear areas for RV's to unfurl their awnings and set up chairs under.
			Toilet paper is needed in the bathrooms, they would like more trees cleared in Group Site 1.
			There is standing water in the campsite that needs drainage work.
			They would like the downed trees cleaned up, and need bathrooms stocked with toilet paper.
			They would like the bathrooms cleaned and pumped
			They would like more public showers.
			He said the vault toilets and lantern poles should be updated.

APPENDIX D

Additional Feedback Provided by Survey Respondents

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
Gerle Creek Reservoir		
Airport Flat Campground	Comments about host company, website, communications, signage, reservations	They love this campsite and like that it's free.
	Facilities	The bathrooms are really clean and well stocked.
		The bathrooms are really nice.
		The bathrooms are nice. They shut off the trash cans a week early. It would be nice if they left the trash open through the end of hunting season.
		They mentioned that the bathrooms are dirty and that they like it here.
		They mentioned that having more water sources in the campground would be nice.
	General	They didn't know the other sites were closed until they got here and were originally planning to stay at Loon.
		They really like the campground, it's their first time coming to this campground, their family had positive interactions with all of the hunters staying here.
		They said the campgrounds are excellent and they like how spread out they are.
		They have been coming here 30 years, they like that the dead trees were cut down.
Angel Creek Day Use Area	Facilities	The facilities are nice and would like to thank SMUD
		It would be nice to have running drinking water.
Gerle Creek Campground	Comments about host company, website, communications, signage, reservations	The website doesn't say if the site has potable tap water
		The host is doing a good job.
		She said it was frustrating that all sites were reserved online and they would have to wait for a cancellation to get a spot, but then they would come and most spots would be empty.
		The camp host was nice to their group
	Facilities	More road improvements would be nice
		There's a lot of downed trees that could be chopped up and left by the fire pits.
		The campground is safe and clean, the facilities and location are their favorite out of all the campgrounds.

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
		The shoreline trail implementation is appreciated.
		The newly added bear box was appreciated, they would not want the campsites to be located any closer to each other.
		Cell service would be nice.
		The campground is enjoyable and quiet. They had greater enjoyment due to no motor boats.
		She also mentioned that there were a lot of yellow jackets.
Gerle Creek Day Use Area	Comments about host company, website, communications, signage, reservations	They said it is very difficult to find Gerle Creek campground/day-use on GPS. The lack of cell service and signage got them turned around and they had to ask a ranger for help. Some signs are shot up and difficult to read.
Ice House Reservoir		
Northwind Campground	Comments about host company, website, communications, signage, reservations	They usually stay at Airport flat. They don't like that the price increases after improvements are made. Please don't make any improvements that increase the campground prices.
		They like the way this campground is now and aren't in favor of making improvements/modifications. They like the price of \$10 per site
		They love the first-come first-serve campground style.
		They would like Camino Cove Campground kept as-is due to increased usage and crowding expected after renovations and improvements.
	Facilities	The bathrooms smelled good.
		Camper is seeing lots of overflowing trash so he suggests more monitoring and cleaning of the dump sites
		They like the campground but would like to have water at the campground.
		This visitor has been coming to Ice House reservoir for the last 15 years and appreciated the improvements. They love the Upper Silver Creek Day Use designated parking spots and renovations and like the first come first serve sites.
		They do not want water faucets added to campground facilities.
		She also likes the recently improved, large bear boxes at this site.
	General	He has been camping here for over 15 years and loves it. He doesn't want to go home. He loves the views here and loves camp site 8.
		He is bummed that Ice House is closed for summer, and wondered why construction happens during peak season. He also said the sites at Northwind were overpopulated this weekend. He saw 18+ people at a single site. They were loud/disruptive into the night
		They heard multiple quick succession pistol shots close by on multiple nights during their stay which was concerning. They really liked the campsite.
		She loves coming to this particular site and she and her friends have been coming up to Ice House for the last 20 years. They love it!

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
		They have been coming here for years. They don't like the improvements made to West Point because you can't see the water from the campgrounds and it's not a long hike to the shore from West Point sites.
		Please keep the improvements minimal, there's too much extra stuff
Upper Silver Creek Day Use Area	Comments about host company, website, communications, signage, reservations	They would like clear, updated, accessible information about reserved sites vs walk-ins (they camped at Sunset). They tried to find information online but it wasn't clear. They checked with the host to see which sites were available for first come first serve.
	Facilities	The facilities are in great condition, they like the bathrooms and picnic facilities. They love the amenities here.
	General	She did say it was a little too crowded for her liking This couple is enjoying the day-use area on their last day in the Crystal Basin. They stayed two nights at Sunset peninsula prior to visiting Upper Silver Creek day -use.
	Land use/access	They love the easy access due to renovations.
Strawberry Point Campground	Comments about host company, website, communications, signage, reservations	They ran into an issue with downloading the certificate after the fire permit permitting process.
		They mentioned that it would be nice if the campgrounds stayed open later into the season because the weather is still nice. They said they would like to be able to make more online reservations.
		This couple would like to keep these sites as first come first serve and \$10 per site.
		He loved this campground and would like SMUD to keep the first come first serve sites.
	Facilities	Please stock more fish, and create more campgrounds to reduce crowding and have more areas to explore. Running water would be nice.
		They said that having running water would be nice, and they would like the roads resurfaced to fix the potholes. The bear boxes at this site are nice. They like that the site has recycling, it would be nice if there were specific bins for plastic recycling. They really like this site, it's idyllic.
		Flushing toilets and running water would greatly improve their experience. They noticed more trash than they would like to see and lots of cigarette butts.
		They also said they would like better access to water.
		The bathrooms are in need of help.
	General	They would like a lifetime reservation here!
		They love the site, both for day use and overnight
		They love this campground. They say the sites are spacious and the campground doesn't need any improvements
		The camper has been coming here for years and loves this site
		They like the site and have been coming here monthly since the beginning of summer.
		They love camping at this site

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
		The Upper Silver Creek Day Use Area is nice but now that it's paved it's overcrowded. He liked to run on that trail in the past and now that it's paved it's too difficult on his feet.
		They really like it here.
Loon Lake Reservoir		
Loon Lake Boat Launch	Facilities	They would like to see more spots available for larger trailers, more consistent maintenance of pump stations, and more shade around RV parking spots.
		As far as improvements go, he preferred the parking in its previous location with more shade.
		They love the bear boxes at Loon Lake Reservoir sites
	General	They were curious when the Ice House Boat Launch would open up.
Loon Lake Campground(s)	Comments about host company, website, communications, signage, reservations	The host company is not ideal and should be doing more monitoring of sites. The camper misses the old host company, as he's been coming here for 20+ years.
	Facilities	The bathrooms are in good condition. There are lots of downed trees near the campground
		They would like the area sprayed for mosquitos
		The bear boxes become ovens in the heat so a shade unit needed.
		The bathrooms and trash pickups were not well maintained and took away from their experience
		The bathroom and trash maintenance need work
		The bathrooms are well kept and nice, the campsites provide decent space and a flat area for tents.
	General	They like Loon Lake Reservoir the best out of all the lakes in the area
	Land use/access	The boat ramp accessibility is appreciated.
		There are very few campsites actually near the lake.
Loon Lake Day Use Area	Comments about host company, website, communications, signage, reservations	They miss the old host company
		The host company and Forest Service are not monitoring the bathrooms and trash as frequently.
		If you pay for a campsite do you have to pay for the other amenities as well? Like the boat launch or hiking? They would like more first come first serve sites.
	Facilities	They have been coming here for years, they like the large spaces at day use area and nice picnic tables. Why did they switch the RV campground and boat area parking sides at Loon? It was better when boats parked on the west and RVs parked on the east side
		She misses the old picnic tables that were closer to the water for day use.
		The bathrooms are not in good condition. Theres no toilet paper and it looks like it hasn't been maintained.

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
		The bathrooms are getting dirty and run-down. There needs to be more bathroom maintenance (she observed a broken bathroom lock and no toilet paper available.)
		The bathrooms are not clean. The trash cans are completely full and the area needs more upkeep.
		More picnic tables would be great and it would be nice to have the reservoir more frequently stocked with fish.
		It would be great to have running water at the Loon Lake Day Use Area and/or Campground.
		She said the bathrooms need improvement and better cleaning, but other than that the area is great.
		They would also like the bathrooms and recycling to be emptied more.
		Land use/access
Northshore RV Campground	Comments about host company, website, communications, signage, reservations	They said it is difficult to track down the camp host.
		The e-mail notifications for the reservation prior to arrival were appreciated.
	Facilities	They would like more septic trucks, they said that trucks hit the lower campgrounds first, get filled up and don't come back to hit the upper campgrounds. They had trouble finding campgrounds to empty their RV.
		They appreciated the clean facilities and noticed that the fire pits and bear box food storage amenities appeared new.
		The outhouses should be emptied more often.
		They would like for this campground to be equipped with running water
		There are nice bathrooms, plenty of space around and between campsites.
	General	Loon Lake Reservoir is their favorite place to camp
		They started seeing some thistles in the lower areas of UARP please keep them under control.
Union Valley Reservoir		
Azalea Cove Campground (walk-in)	Facilities	There were noisy campers on Friday night and bathrooms were overflowing by Saturday.
	General	This site has a great view but is a bit windy. They will be back!
		They love this campground. It's their first time in the Crystal Basin area.
Big Silver Group Campground	Facilities	The bathrooms and bear boxes at the campsite are clean and in good condition. They would like to have a group campsite at Ice House Reservoir.
		The bathrooms were clean, they enjoyed the site.
Fashoda Campground	Comments about host company, website,	They would like some way to be able to check the water level and other basic reservoir information online.

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
	communications, signage, reservations	The group was told via text from Royal Elk Park Management that they could park an RV at Fashoda, but were told upon arrival that they couldn't park an RV there and had to move. On the website it lists that there are showers at Fashoda but there aren't any.
	Facilities	There aren't many flat spots.
		They like that there are lots of bathrooms close to the campground sites and the water. They like that the bathrooms are larger.
	General	The site feels safe and they love the cell service
		They are happy campers!
		The visitors were from Holland. They liked that Fashoda was walk-in with no vehicle entry.
		They are a Sierra Club leader and use Fashoda as a staging area in between backpacking trips, they like the campground a lot because of how spread out it is.
		The water and campground are beautiful.
Fashoda Day Use Area	Facilities	The bathrooms not being taken care of.
	General	The water level is great this year, they are grateful for SMUD's efforts
Jones Fork Campground	Comments about host company, website, communications, signage, reservations	The campground website needs updates (more frequent real time updates).
		They think the nightly rate feels fair.
	Facilities	They would like safer roads for kids, keep it small and remote. The bathrooms are kind of unkempt.
		They would like a drinking water spigot, to be allowed to have campfires, and a hose for rinsing.
		They complained about flies in the restrooms.
		Trash was left behind; the site was kind of dirty
		The hand sanitizer bottles in the bathroom were empty. They like that the spot for their tent was flat.
	General	They participated in the SMUD eagle survey.
		They like that it's less crowded at this site than Tahoe. They really love the area, it's their first time visiting the Crystal Basin, they love it and have no big issues.
Lone Rock Campground (walk-in)	Comments about host company, website, communications, signage, reservations	They don't like first come first serve sites.
		She would like to see more monitoring by management at walk in sites.
	Facilities	The bathrooms are nice and stocked.
	General	This is one of the best sites she's ever camped in! She said a party left cardboard in fire pit that was smoking and she had to put it out.

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
Sunset Boat Launch	Facilities	They love the quality of this boat launch. The bathrooms are clean, the water level is good and the parking is spacious
		Sunset boat launch has a nice staging area. He also loves the Ice House boat ramp
	General	Union Valley Reservoir is a great sailing lake.
		He's been coming here for years and loves it.
Sunset Campground	Comments about host company, website, communications, signage, reservations	Please keep fees at the current reasonable price in future.
		They appreciated how campground staff were always available.
	Facilities	She loves the bathroom improvements, improved fire pits, and newly paved roads.
		Keep roadsides (packed clean gravel) maintained at their current state.
		The site feels safe, the showers are clean, there is a lot of toilet paper. She loves the improvements, and especially enjoys bear boxes. She likes how spread out the campsites are.
		They love that Sunset Campground is clean and has large fire pits. The nicely managed forest and trees within the campground are appreciated.
		They love the cell service here. They said showers aren't working properly. Some of the road paths make it difficult to back your trailer or RV in
		The bathrooms are closed at this particular camp loop which makes it difficult for this camper (who has an RV) to access. It's too difficult to drive her RV to a bathroom at another loop, and it's too far to walk.
		She loves the newly paved roads
	General	She loves this site. She's been coming to the basin for over 20 years.
		The water level being high is appreciated.
		It's their first time visiting this area, they like the paved roads and how quiet it is, they enjoy the proximity to the water. They bought a day pass for the campground, the kids love it!
		She's been coming up here for over 20 years and loves it.
		This campsite is quiet and enjoyable for this camper. It is his first time in the Crystal Basin. He likes simple camping and thinks the conditions here are great. He scored the site a 7 just because he's been at more scenic sites elsewhere.
		Keep up the good work.
Wench Creek Campground	Comments about host company, website, communications, signage, reservations	Keep the first come first serve options.
		She thinks staff, hosts and helpers are kind and nice.
		She loves that the campground has a host, and that it's dog friendly.
	Facilities	The bathrooms are well maintained and the flush toilets near the campsite were appreciated
		She likes the clean facilities.

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
		They appreciate the flushing toilets and had a great time camping at this site.
		This visitor also stayed at Airport Flat in past and said that site needs facility updates.
		She appreciates potable water.
		The bathrooms could be a little cleaner, they would like to have power charging stations at the site.
		They would like to see more bathroom maintenance, cleaning, and running water. They like the cleanliness of the campground otherwise, and enjoyed their stay.
	General	They love this spot, there's nice shade here and they like the trees!
		She and her group have been coming here for over 20 years. They noticed an increase in overcrowding over the last 5 years. They noticed the yellowjacket population is at a minimum, so abatement is working. They came from San Jose.
		She thinks this is a great place for families. She and her group came from Tucson AZ
		There were campers playing music and being loud late into the night.
Wench Creek Group Campground	Comments about host company, website, communications, signage, reservations	This camper has visited the UARP for forty years, and within the last four years they noticed a distinct change in quality and pleasure in visiting SMUD campgrounds in the UARP due to a performance decline in campground management (Royal Elk and its hosts).
West Point Boat Launch	Comments about host company, website, communications, signage, reservations	He would like there to be better signage on Ice House Road showing what is open and closed for the season.
	Facilities	They like the area, it's clean and nicely maintained. They would like to have a dock at the boat ramp, they had trouble launching their boat without a dock.
	General	He complained that the fish have parasites. He worked as a contractor for SMUD and has been coming here for 40 years, he really likes the area.
		They love it here, they really like the improvements, they come up to the Basin two times a month.
		He prefers Sunset Boat Launch because of sandier beaches, better parking and boat staging area.
		They have been coming to the area for 30 years, they have seen picnickers using the boat launch ramp for a bbq that prevented people from launching boats. They are frustrated because visitors have not been treating the area or lakes respectfully (leaving trash in area).
West Point Campground	Facilities	They would like to have running water at the campground. The site is very dusty so if this could be reduced that would be great.
Wolf Creek Campground	Comments about host company, website,	They had an unpleasant experience with the camp host. The original camp host was rude and unhelpful when they arrived, the host quit the next day and was replaced by a host from

Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment
	communications, signage, reservations	Yellowjacket who has been great and helpful, they cleaned up the bathrooms that were really dirty.
		She said that the campground host was great.
	Facilities	The campsites and overall campground are clean, they would like the facilities to stay open and clean for the rest of the season.
		The flies in the restrooms are really bad here. The vault toilets are difficult with small children and more spigots with running water would be appreciated
		SMUD is doing a good job keeping the campgrounds clean.
		She mentioned that facilities were better than last time they visited. She also mentioned that flies were a bit of an issue.
	General	Overall they love the area and Camino Cove.
		She said that it had been nice and quiet at the campground.
Yellowjacket Boat Launch	Land use/access	They would like a day use area as they are recreating at the boat launch.
Yellowjacket Campground	Comments about host company, website, communications, signage, reservations	Their general campground experience was made better by the quiet and nice camp host.
		They had a negative experience with the host because the host was rude and unwelcoming.
		The camp hosts are nice.
		They would like more accurate campsite maps for making online reservations, they thought that the campsites were next to each other.
	Facilities	These repeat campers indicated that the recently paved roads enhanced their experience.
		The extra firewood is great and the site looks clean, they like the amount of shade at the site. They would love if the piles were cleaned up.
		He loves the newly paved, wider roads for RV access but misses some of the old sites that were lost in the renovations.
		Running water would be nice too.
	General	They like the campground, they didn't feel crowded even when the campground was full. This is a nice spot.
		They caught no fish caught during four full days of fishing via shoreline and kayak on Union Valley Reservoir.
		He's been coming here for over 30 years. It wasn't as crowded in the past.
		It's a beautiful location for a campground, SMUD is doing a wonderful job maintaining sites.
	Land use/access	They think too many trees were cut during the modifications. The grounds of the site are barren and dusty. They miss the shade.
		SMUD should plant more trees where they were taken out. This provides more space to hang clothes, hammock, etc. and more shade



Survey Question: Is there any additional information you would like to provide about the UARP or this area, in general?		
Location	Response Code ¹	Comment

¹Survey responses were categorized as following: Facilities (e.g., site maintenance and cleaning, parking, road conditions), general (e.g., general positive feedback and miscellaneous comments), or land use and access (e.g., trails, accessibility).

APPENDIX E

Representative Photos

E-1.0 ICE HOUSE RESERVOIR

Figure E-1. Silver Creek Day Use Area on a weekday during the peak season (6/10/22) with one vehicle parked outside of the designated spots and three vehicles parked in designated spots.



Figure E-2. Silver Creek Day Use Area on a weekend during the peak season (6/11/22) with a full parking lot and 29 vehicles present.



Figure E-3. Shoreline Trail First during the peak season (7/17/22) with a large truck parked across multiple parking spaces and blocking access.



Figure E-4. North Ice House Road during the peak season (8/20/22) with overflow parking from Shoreline Trail Second and eight cars parked in undesignated spots.

E-2.0 GERLE CREEK RESERVOIR

Figure E-5. Gerle Creek Day Use Area during the peak season (6/10/22) with 11 vehicles in the parking lot.



Figure E-6. Angel Creek Day Use Area parking lot and overflow parking during the peak season (6/11/22) with four vehicles parked in designated spots.

E-3.0 UNION VALLEY RESERVOIR

Figure E-7. West Point Boat Launch on a holiday weekend (5/28/22) with two vehicles with trailers present



Figure E-8. West Point Boat Launch parking lot on a weekend during the peak season (7/17/22) with nine vehicles and three vehicles with trailers present.



Figure E-9. Sunset Boat Launch parking lot on a holiday weekend (9/5/22) with 15 vehicles, 21 vehicles with trailers, and 6 trailers present



Figure E-10. Sunset Boat Launch parking area on a weekend during the peak season (7/10/22) with six vehicles, 22 vehicles with trailers, and 11 trailers present.



Figure E-11. Sunset Boat Launch on a weekend during the peak season (7/17/22) with “RV Camping only” signs, cones, and caution tape present. One vehicle, 11 vehicles with trailers, and 10 trailers in the parking lot.



Figure E-12. North Union Valley Road during a holiday weekend (9/5/22) near West Point Boat Launch with rainy conditions. 14 vehicles and 4 vehicles with trailers parked along the side of the road.



Figure E-13. North Union Valley Road during the peak season (6/10/22) with designated parking spots closed for construction and three vehicles parked on the side of the road.



Figure E-14. North Union Valley Road during the peak season (6/27/22) with construction trailers parked along the turnouts. Eight vehicles and two vehicles with trailers parked along the side of the road.



Figure E-15. North Union Valley Road during the peak season (8/10/22) with a single truck parked in a designated space along the road. This was the first sighting of the designated parking areas without cones blocking them.

E-4.0 LOON LAKE



Figure E-16. Loon Lake Day Use Area and Boat Launch during a holiday weekend (9/5/22) with 52 vehicles, 11 vehicles with trailers, and 1 trailer present.



Figure E-17. Loon Lake Day Use Area and Boat Launch on a weekday during the peak season (6/27/22) with 17 vehicles and 6 vehicles with trailers present.

APPENDIX F

Group Campground and Day Use Visitation

This information about group campground use was provided by Forest Service concessionaire, Royal Elk Park Management.

Upper American River Project Group Site Visitation Numbers (2022)

Campground	No. of visitors	Comments
Big Silver Group Campground	436	
Loon Lake Group Campground	1,683	*includes Equestrian Group Site
Red Fir Campground	363	
Sunset Group Campground	701	
Wench Creek Group Campground	1,539	
Wolf Creek Group Campground	525	*estimated, this site is First Come First Serve only