

REC-2 RECREATION FACILITIES USE ASSESSMENT CAMERA STUDY ADDENDUM

**KERN RIVER No. 3 HYDROELECTRIC PROJECT
*FERC PROJECT No. 2290***

PREPARED FOR:



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LIST OF ACRONYMS AND ABBREVIATIONS

AI	artificial intelligence
CS	Confidence Score
FERC	Federal Energy Regulatory Commission
Forest Service	U.S. Forest Service
KR3	Kern River No. 3
NFKR	North Fork Kern River
Project	Kern River No. 3 Hydroelectric Project (FERC Project No. 2290)
QA/QC	quality assurance and quality control
SCE	Southern California Edison
SD	standard deviation
SQF	Sequoia National Forest
SUP	Special Use Permit
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On May 30, 2024, the Federal Energy Regulatory Commission (FERC) issued a Determination on Requests for Study Modifications and New Studies, Project No. 2290-122, Accession No. 20240530-3030 (FERC, 2024) directing Southern California Edison (SCE) to collect additional data regarding commercial and non-commercial boating activities on the North Fork Kern River (NFKR) to provide FERC staff sufficient information to inform potential license conditions (section 5.9(b)(5)). Therefore, FERC modified the *REC-2 Recreation Facilities Assessment Study Plan* requiring a camera study to be performed for one calendar year as follows:

“...staff still do not have the necessary information to inform potential license conditions [section 5.9(b)(5)]. The Whitewater Boating Study’s Desktop Review includes no information about the amount of non-commercial boating use. The results of the structured interviews and single flow survey for the Whitewater Boating Study, and the visitor questionnaire for the Recreation Facilities Use Assessment provide information about types of watercrafts used, flow preferences, and the number of boaters represented in the sample, but they do not provide monthly or annual estimates of non-commercial river use in the project area. Additionally, while SCE consulted stakeholders in their initial attempts to install cameras, they did not consult with stakeholders regarding the spot and calibration count variances. For these reasons, we do not approve SCE’s study variance.

Instead, SCE should work with Sequoia National Forest to install cameras at all river access locations along the Fairview Dam bypassed reach and above Fairview Dam to Johnsondale Bridge to capture: (1) use-estimates including percent capacity at all river access locations; (2) activity-type estimates, specifically commercial vs. non-commercial boaters, including the type of watercrafts used. The cameras should be deployed for one calendar year and capture use at reasonable intervals to record boating activity, or set to sense motion, depending on camera placement and its ability to detect movement at the river access.”

This Camera Study Addendum complements the *REC-2 Recreation Facilities Use Assessment Final Technical Memorandum* that was provided in Appendix E.2 of the Final License Application (SCE, 2024c) and describes the results from implementation of the yearlong camera study as described in the *REC-2 Recreation Facilities Use Assessment Camera Study Plan* (SCE, 2024c). Specifically, it addresses FERC’s request to capture use estimates and activity-type estimates (commercial and non-commercial boating, watercraft types) at river access site above (1.9-mile segment above Fairview Dam) and

along the Fairview Dam Bypass Reach.¹ While not specifically identified by FERC's request, the Camera Study Addendum also provides these estimates for the NFKR below the Kern River No. 3 (KR3) Powerhouse at the KR3 Powerhouse Whitewater Put-in/Take-out, which is the only FERC-approved recreation facility associated with the Project).

2.0 STUDY GOALS AND OBJECTIVES

The primary goal of this REC-2 Camera Study Addendum was to collect additional information on recreational boating use levels at river access sites on the NFKR from Johnsondale Bridge to Fairview Dam and along the Fairview Dam Bypass Reach. The objectives of this Camera Study Addendum, as outlined in FERC's Determination on Requests for Study Modifications and New Studies (FERC, 2024), included:

1. Document and estimate river-focused recreation use including validating use estimates and percent capacity (as noted in the REC-2 Final Technical Memorandum) at river access sites, and
2. Compile estimates of other use characteristics at each study site including:
 - (1) commercial and non-commercial whitewater boating recreation use levels, and
 - (2) types of watercraft.

3.0 STUDY AREA AND STUDY SITES

The river access recreation sites included in the REC-2 Study Plan included locations along the approximately 1.9-mile reach of the NFKR from Johnsondale Bridge to the Fairview Dam, the Fairview Dam Bypass Reach, and near the KR3 Powerhouse at SCE's Put-in/Take-out location (Figure 3-1). Many of these river access locations are aligned with the whitewater boating runs/segments along the NFKR, as described in the *REC-1 Whitewater Boating Level 1 Interim Technical Memorandum* (SCE, 2024a).

SCE installed a total of 18² cameras in 15 locations, which include a mix of parking areas at river access locations (12 locations with 13 total cameras), as well as locations with river views along the NFKR (3 locations with 3 total cameras). The river access locations with cameras included non-fee day-use/dispersed camping sites or road shoulder pull-off locations that provide access to the whitewater boating runs/segments along the NFKR. The camera locations are listed in Table 4.1-1 along with the whitewater boating segment associated with each site. Per the direction of the U.S. Department of Agriculture, U.S. Forest Service (Forest Service), cameras were not allowed at developed (fee based) campgrounds.³ Representative photographs from each of the river access sites included in this REC-2 Study Plan Addendum are provided in Appendix A.

¹ Fairview Dam Bypass Reach is defined as the approximately 16-mile segment of the NFKR from Fairview Dam down to the KR3 Powerhouse.

² SCE installed two additional cameras at the Powerhouse Put-in/Take-out location in January 2025 due to potential obstruction from vegetation of the river-access location. Starting January 8, 2025, SCE used the photographs captured from the alternative locations for the remainder of the study.

³ Fairview Campground, Gold Ledge Campground, Hospital Flat Campground, Thunderbird Group Campground, Camp 3 Campground, Headquarters Campground, and Halfway Group Campground.

Table 4.1-1. Recreation Sites, Camera Locations, and Whitewater Boating Runs

REC-2 ID ^a	Camera ID	Site Name	Site Type	Whitewater Boating Run (Put-in/Take-out)
Kern River Above Fairview Dam – River Access Sites				
1	1	Johnsondale Bridge River Access	Day Use	<ul style="list-style-type: none"> • Limestone Run (put-in) • Forks of the Kern Run (take-out)
2	2	Brush Creek Dispersed Camping	Dispersed Camping	<ul style="list-style-type: none"> • Limestone Run^b • Brush Creek (take-out)
4	3	Willow Point Whitewater Take-out	Day Use	<ul style="list-style-type: none"> • Limestone Run (take-out)
Fairview Dam Bypass Reach – River Access Sites				
	4	Upstream of Roads End Picnic Site and Whitewater Put-in	Shoulder pull-off	<ul style="list-style-type: none"> • Fairview Run (non-commercial put-in)
5	5	Roads End Picnic Site and Whitewater Put-in	Day Use	<ul style="list-style-type: none"> • Sidewinder / Bombs Away Run (take-out) • Fairview Run (put-in)
8	6	Calkins Flat Dispersed Camping	Dispersed Camping	<ul style="list-style-type: none"> • Fairview Run (take-out) • Chamise Gorge Run (put-in)
11	8	Ant Canyon Dispersed Camping	Dispersed Camping	<ul style="list-style-type: none"> • Salmon Falls Run (take-out) • Gold Ledge Run (put-in)
15	10	Corral Creek Picnic Site and Whitewater Take-out	Day Use	<ul style="list-style-type: none"> • Gold Ledge Run (take-out) • Thunder Run (put-in)
19	11	Thunderbird Whitewater Put-in/Take-out	Day Use	<ul style="list-style-type: none"> • Thunder Run (take-out) • Cable/Camp Run (put-in)
20	12	Camp 3 Whitewater Put-in/Take-out	Day Use	<ul style="list-style-type: none"> • Thunder Run (take-out) • Cable/Camp Run (put-in)
23	13	Riverkern Beach Picnic Site	Day Use	<ul style="list-style-type: none"> • Cable/Camp 3 Run (take-out) • Riverkern Beach Run (put-in) • Lickety Split Run (put-in)

REC-2 ID ^a	Camera ID	Site Name	Site Type	Whitewater Boating Run (Put-in/Take-out)
Fairview Dam Bypass Reach – River Views^c				
	7	Chamise Gorge Run	River Run	<ul style="list-style-type: none"> • Chamise Gorge Run • Salmon Falls Run (downstream)
	9	NFKR Gold Ledge Run	River Run	<ul style="list-style-type: none"> • Gold Ledge Run
	14	NFKR Above KR3 Powerhouse	NFKR view	<ul style="list-style-type: none"> • Riverkern Beach Run
Kern River Below the KR3 Powerhouse^d				
24	15	KR3 Powerhouse Whitewater Put-in/Take-out (upstream view installed on power pole from Dec 1–Jan 7)	Day Use	<ul style="list-style-type: none"> • Riverkern Beach Run (take-out) • Lickety Split Run (put-in)
24	16	KR3 Powerhouse Whitewater Put-in/Take-out (downstream view installed on power pole from Dec 1–Jan 7)	Day Use	<ul style="list-style-type: none"> • Riverkern Beach Run (take-out) • Lickety Split Run (put-in)
24	17	KR3 Powerhouse Whitewater Put-in/Take-out (upstream view installed on fence near KR3 offices from Jan 8–Nov 30)	Day Use	<ul style="list-style-type: none"> • Riverkern Beach Run (take-out) • Lickety Split Run (put-in)
24	18	KR3 Powerhouse Whitewater Put-in/Take-out (downstream view installed on fence near KR3 offices from Jan 8–Nov 30)	Day Use	<ul style="list-style-type: none"> • Riverkern Beach Run (take-out) • Lickety Split Run (put-in)

KR3 = KERN River No. 3; NFKR = North Fork Kern River

Notes:

^a Site numbers referenced in the *REC-2 Recreation Facilities Use Assessment Final Technical Memorandum*.

^b “Brush Creek is not typically used as a NFKR whitewater put-in or take-out by non-commercial boaters and is only used by commercial outfitters when the Johnsondale Bridge loading zone is too crowded, or occasionally as a launch site for paying guests.” (email communication from Kern River Boaters dated 3/17/2023, refer to REC-2 Technical Memorandum, Appendix E [SCE, 2023]).

^c Cameras in these locations provided views of specific sections of the river between river access sites.

^d Two additional cameras (17 and 18) at the Powerhouse Put-in/Take-out location were installed January 2025 due to potential obstruction from vegetation of the river access location. Starting January 8, 2025, SCE used the photographs captured from the alternative locations for the remainder of the study.

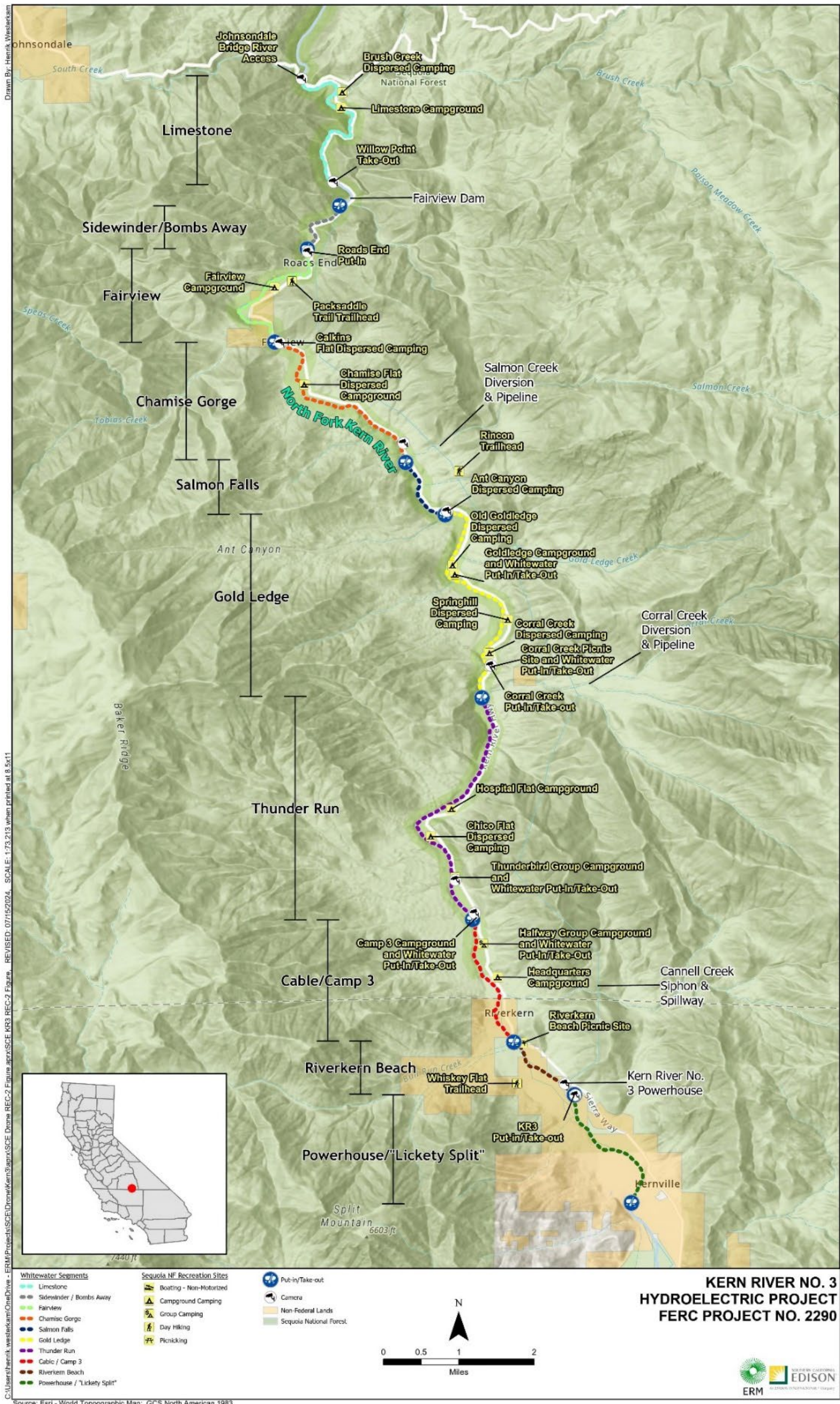


Figure 4.1-1. Whitewater Runs and Recreation Sites Above Fairview Dam and Along Fairview Dam Bypass Reach.

4.0 METHODS

To accomplish the goals and objectives of the REC-2 Camera Study Addendum, SCE used trail cameras to record visitor use at 15 locations along the NFKR from Johnsondale Bridge and along the Fairview Dam Bypass Reach (Section 3.0). The cameras were in place to record visitor use (specifically, whitewater boating use, as well as people and parked vehicles) for 1 year (December 1, 2024, through November 30, 2025) and provided the basis to derive quantitative estimates of recreation use trends and patterns, specifically targeting whitewater boating use, and other key metrics as directed by FERC (FERC, 2024).

4.1. STUDY PLAN VARIANCES

The REC-2 Camera Study Addendum was conducted as outlined in FERC's Order approving the modified Study Plan (FERC, 2024). Minor data loss occurred with a few cameras during photo downloads but constituted less than 3 percent of the total data collected (see Section 4.3, *Camera Use and Photograph Management*, for additional information). As noted in Section 4.3, the minor data loss (corrupt photograph files) does not constitute a study gap or Study Plan variance and does not impede the analysis conducted to meet the study goals and objectives.

4.2. CAMERA INSTALLATION

SCE installed high resolution trail (outdoor) cameras that included a 120-degree detection angle at the river access and other locations listed in Section 3.0, *Study Area and Study Sites*. The cameras were secured to SCE power poles where possible, or attached to trees, posts, or other landscape features. SCE installed the cameras in inconspicuous locations at each site to help minimize the potential for vandalism or theft. The cameras were positioned to allow adequate viewing of the river ingress/egress location and adjacent parking areas that boaters are most likely to use. Photographs were stored on high capacity secure digital (SD) memory cards installed in each camera.

As listed in Table 4.1-1, there are three river views of the Fairview Dam Bypass Reach that provide views of specific sections of the river between access sites: Chamise Gorge Run, NFKR Gold Ledge Run, and NFKR above KR3 Powerhouse. For these three river-reach viewing segments, the viewing length of the river segment was considered when selecting final camera placement to provide for the longest viewing segment possible. Additionally, to further help address any potential privacy concerns, the cameras were positioned such that they minimized views of restroom facilities, whenever feasible.

Following review of initial photographs in December 2024, SCE deployed two additional cameras (Cameras 17 and 18) in January 2025 at the KR3 Powerhouse (in addition to the two existing cameras already deployed at this location). SCE reviewed the photos from both locations and determined that the views from the alternative locations provide the best coverage. From December 1, 2024, through January 7, 2025, photos from the initial viewpoint were used. Starting January 8 and continuing through November 30, 2025, SCE used the camera view from the alternative placement.

4.3. CAMERA USE AND PHOTOGRAPH MANAGEMENT

SCE programmed the cameras to take one photograph every 5 minutes (as suggested by both the Forest Service and boaters during consultation). This programmed schedule resulted in 12 photographs every hour, resulting in 144 photos per day / per camera over the 12-hour period of daily data collection.

SCE routinely deployed staff to check that the cameras were functioning and to download photos. SCE collected photos and checked the cameras every 2 to 3 weeks to help minimize potential data losses. All downloaded photographs were then organized electronically by site and date and subject to a quality assurance and quality control (QA/QC) check (e.g., date, time, location, field of view). All digital files were subject to SCE's electronic data storage and backup processes.

There was no loss of cameras from theft or damage over the course of the study. However, during the photograph save to the camera SD card and transfer process (from the camera SD memory cards to the long-term storage site), some individual photographs and a few blocks of photographs did not save or transfer properly and were corrupted (unable to recover). The loss of individual photographs is attributable to documented characteristics and failure modes of SD card flash storage rather than deficiencies in field protocols or post-processing procedures. While data loss and corruption rates are rarely publicized, SD cards exhibit non-zero failure and corruption rates even under normal operating conditions. Anecdotal information based on use and testing indicate that consumer grade SD cards (similar to the ones used in the camera study) may exhibit annual failure or corruption rates of 1 to 3 percent under normal usage. This percent may increase substantially under certain conditions, including continuous-write or from being exposed to harsh environmental conditions (including being used outdoors). Data corruption typically appears as progressive section read errors instead of complete SD card failure. Consequently, data loss may be isolated to specific files or time periods rather than affecting the entire SD card.

The blocks of photographs that were corrupted occurred with three cameras on the following dates:

- Camera 9: Gold Ledge Run from January 9 through 31, February 1 through 9, October 1 through 15, and October 22 through 24
- Camera 13: Riverkern Beach Picnic Site from February 12 through February 25
- Camera 16: Powerhouse South from December 15 through December 31 and January 1 through January 5

These blocks, as well as the sporadic corruption of individual photographs constitute less than 3 percent of all photos collected and were not included as part of the analysis. Any use that may have been captured in these missing photographs would have likely been captured in time-adjacent photographs (before and after the missing photograph) or at an adjacent camera put-in/take-out location upstream or downstream. The blocks of data

loss also occurred during non-peak boating timeframes, when minimal river-based recreation use is observed throughout the entire reach. Furthermore, the statistical measures (i.e., standard deviation and confidence intervals) that were calculated for the recorded target objects (i.e., people, vehicles, watercraft) at each river access location acknowledge and account for any variability in the data, including any deviations that may be caused by the limited number of missing individual photographs and corresponding data (descriptive statistics and measures are provided in Appendix D). Therefore, the loss of these photos does not constitute a study gap or Study Plan variance and does not impede the analysis conducted to meet the study goals and objectives (Section 2.0).

4.4. ANALYSIS OF PHOTOGRAPHS

Due to the number of photographs collected and downloaded (more than 800,000), SCE leveraged the capabilities of available artificial intelligence (AI) models to help extract key information and perform initial analyses of the photographs.

4.4.1. AI TOOL AND PROCESS

The AI tool leveraged the capabilities of Google's Gemini 1.5 Pro model, a state-of-the-art large multimodal model. Using the Google Gemini Application Programming Interface, SCE created a custom AI model (based on other tested Google AI models) and incorporated supervised "fine-tuning" calibration to increase the accuracy, precision, and reliability of the tool to identify and count specific features in the collected photographs, including vehicles, people, and watercraft.

4.4.2. MODEL ARCHITECTURE AND FINE-TUNING

The Gemini 1.5 Pro model served as the base foundational architecture for the image analysis (i.e., the process of ingesting, reviewing, and extracting key criteria from the photos). The model's robust visual understanding capabilities provided a strong basis for identifying and classifying objects within the captured images.

SCE data analysts further refined and fine-tuned the Gemini 1.5 Pro model by "training" it using an initial dataset of images from photos captured above and along the Fairview Dam Bypass Reach. This fine-tuning process allowed the model to specialize in recognizing and differentiating the specific objects of interest for the camera study, including:

- People (human figures)
- Vehicles (sedans, sport utility vehicles, vans, trucks, and buses)
- Watercraft (kayaks, rafts, and other watercraft types)

This refinement process enhanced the model's understanding of complex visual patterns, allowing it to better distinguish objects from background noise, adapt to varying lighting conditions, and recognize subtle differences in shape and size. By tailoring the model to specific characteristics of the site, its performance was more reliable and accurate.

4.4.3. IMAGE PROCESSING PIPELINE

SCE's use of the AI model to obtain information on targeted objects of interest (i.e., people, vehicles, watercraft) streamlined the extraction of target data from each photograph by automating the process of uploading and analyzing photographs. This image processing pipeline included the following steps:

1. Image Input—photographs captured by the cameras were uploaded to a cloud-based server, where they were processed by the AI model.
2. Object Detection—the fine-tuned Gemini 1.5 Pro model analyzed each image, detecting the objects of interest.
3. Object Classification—once detected, objects were then classified into their respective categories (e.g., sedan, raft).
4. Object Counting—the model determined or counted the number of objects in each category present in the image.
5. Data Output—the results, including the counts for each object type, were recorded in a structured format for subsequent analysis and reporting.

SCE processed all photos captured each month through this pipeline. Although the photos were regularly downloaded at shorter intervals of time (every 2 to 3 weeks) from the cameras and uploaded to SCE's server, they were only run through the image processing pipeline after all of the photos from an individual month had been collected and uploaded.

4.4.4. PERFORMANCE VALIDATION

SCE established a QA/QC process for the AI-based image analysis tool to evaluate and fine-tune the model's performance to maintain high levels of accuracy and reliability over the yearlong study. The QA/QC process involved the following steps:

Step 1: The first step of the QA/QC process involved re-running a randomized 2 percent sample of all photos collected during a given month (generally between 1,200 and 1,400 photographs) through the image processing pipeline (see Section 4.4.3). The photos in the random sample were passed through the image processing pipeline five times to check for a consistent output (i.e., object count). The output from each of the five additional passes, as well as the original were compared against each other to check for consistency. Photos with inconsistent outputs were then flagged for additional human validation. Following human validation, any updates were then fed back into the model to help it address these inconsistencies.

Step 2: For each run, the model calculated a Confidence Score (CS), which is a prediction on how confident the model's internal certainty was at detecting, classifying, and counting the objects of interest. A high CS (closer to 100) means the model found strong, clear patterns and features in the image that strongly align with what it's looking for (e.g., a

clearly visible kayak behaving like a boat in a well-lit, non-blurry image). A low CS (closer to 1) means the features were less distinct, perhaps ambiguous, obscured by vegetation, blurred, too far away, or presented in a way the model has not frequently encountered in its vast training data. For this analysis, the majority of CS runs for this AI tool were above 95 percent, indicating that the AI model was successful in identifying photographs with objects of interest (see Section 5.1).

Similar to the consistency check described above in Step 1, a random sample of photos each month were re-run to check for consistency in its CS. If a photo received a CS of less than 90 percent, it was then subject to additional human validation, described below.

Step 3: SCE manually reviewed and validated (by human analysts) approximately 3.5 percent (averaging 2,400 photos per month). This subset of photos was randomly drawn from any photos flagged in previous QA/QC steps that included photos with inconsistent outputs (Step 1) and/or a CS of less than 90 percent (Step 2), as well as randomly selected periods during peak summer months. The photographs were visually compared with the model output and corrections were noted, if needed.

Section 5.1, *Data Review*, and Appendix D, *Data Summaries and Other Statistical Analysis*, provide additional details about the outcomes of these QA/QC steps including the manual validation process and any corresponding updates to the data.

4.4.5. USE ESTIMATES (PATTERNS AND TRENDS)

Following the QA/QC process, SCE compiled all of the AI-generated output capturing key metadata such as date, time, camera location, as well as counts of people, vehicles, and watercraft. For vehicles and watercraft, the AI output further detailed multiple subcategories and corresponding counts. Vehicle categories included sedans, SUVs, trucks, vans, buses, and an “other” classification. Watercraft were categorized as small kayaks (hard shell kayaks), large kayaks (inflatable kayaks), small rafts (smaller capacity rafts), large rafts (larger capacity rafts), and an “other” category that primarily included inner tubes, standup paddleboards, and small, non-whitewater rafts. In addition, the data set featured a “likely commercial activity” indicator for photographs the AI tool flagged as potentially capturing commercial whitewater boating activity.⁴ This data marker was applied when the AI tool identified a combination of large rafts, large groups of boaters, and the presence of buses or vans (Appendix D includes a summary of the AI commercial flag output).

For analysis purposes, the camera data was categorized into several location-based groups, including:

- All Sites – all cameras;

⁴ The AI model was initially tested to identify logoed whitewater boating gear. However, this testing was not accurate (i.e., the model had difficulties identifying logos due to the small size of the logos, angle of the boats/gear relative to the camera location, and other factors that made the logos difficult to discern accurately) and so was not used as an indicator of “likely commercial activity.”

- NFKR Above Fairview Dam – Johnsondale Bridge River Access (Camera 1), Brush Creek Dispersed Camping (Camera 2), and Willow Point Whitewater Take-out (Camera 3);
- Fairview Dam Bypass Reach – Upstream of Roads End Picnic Site and Whitewater Put-In (Camera 4), Roads End Picnic Site And Whitewater Put-in (Camera 5), Calkins Flat Dispersed Camping (Camera 6), Ant Canyon Dispersed Camping (Camera 8), Corral Creek Picnic Site and Whitewater Take-out (Camera 10), Thunderbird Whitewater Put-in/Take-out (Camera 11), Camp 3 Whitewater Put-in/Take-out (Camera 12), and Riverkern Beach Picnic Site (Camera 13);
- Fairview Dam Bypass Reach River Views – Chamise Gorge Run (Camera 7), Goldledge Run (Camera 9), and NFKR above KR3 Powerhouse (Camera 14); and
- NFKR Below the KR3 Powerhouse – KR3 Powerhouse Whitewater Put-in/Take-out upstream view (Camera 15/17) and downstream view (Camera 16/18).

Where relevant, the summary results (Section 5.0) are organized by these location-based groups. Results are also categorized by timeframe, including monthly and/or seasonal groupings, as well as by other specific types of days (e.g., weekdays, weekend days, holidays). For recreation day and site capacity utilization estimates, the camera results are also compared to the REC-2 Technical Memorandum (SCE 2024c, Appendix E.2). However, this Camera Study Addendum has a narrower scope, which focused on river/whitewater boating-based use, compared to the broader, more comprehensive recreational use effort of the REC-2 Study scope. As a result, while certain comparisons are possible (e.g., trends, patterns of use), a direct comparison of overall recreational use levels is limited by the differing scopes, methodologies, and timeframes of each study.

4.4.5.1. Recreation Use Estimates and Capacity

For the river access sites, people and vehicle counts provide an indicator of recreation use and capacity. SCE calculated the percentage of photographs with people or vehicles to derive an estimate of the magnitude and patterns of recreation use above and along the Fairview Dam Bypass Reach, as well as below the KR3 Powerhouse. SCE also calculated descriptive statistics (e.g., minimum, maximum, average) and other statistical indicators for each type of count. Specifically, SCE calculated standard deviation⁵ and confidence intervals⁶ to describe the variability in the data. Appendix D, *Data Summaries and Other Statistical Analysis*, includes a summary of descriptive statistics and other

⁵ Standard deviation is a measure of the variation or dispersion of values around a mean (average). A small standard deviation indicates less variability while a large standard deviation indicates greater variability in values.

⁶ A confidence interval captures the range of values between which a true value likely exists (i.e., it quantifies the probability that the interval contains the true value). For example, a 95 percent confidence interval means that if a study was conducted 100 times, the results would fall within the interval in 95 of these studies. A narrow interval is indicative of a higher level of precision while a wider interval indicates less precision.

statistical measures for the photographs and target objects (i.e., people, vehicles, watercraft).

Similar to the REC-2 Study, SCE calculated use estimates at the river access sites using the average vehicle counts along with other parameters from the REC-2 Study, including the following:

- Average Group Size
- Recreation Day Length (12 hours assumed for day use)
- Number of Days (month, season, annual, type of day)
- Average Trip Length

The resulting use estimates are reported as recreation days and presented by location and timeframe.

Based on the REC-2 Study, the parking capacity for a site was defined as the number of vehicles that can be parked at a recreation site at one time based on the number of available parking spaces associated with that site. At several of the river access sites, only a portion of the parking area was captured in the photographs. SCE relied on the visible number of parking spaces to estimate capacity at these sites. Additionally, the road shoulder parking for the put-in location Upstream of Roads End Picnic Site and Whitewater Put-in (Camera 4) and Camp 3 Whitewater Put-in/Take-out (Camera 12) were estimated from Google Earth imagery. Similar to the REC-2 Study, the average number of vehicles was divided by the number of parking spaces to determine capacity.

4.4.5.2. Boating Use Estimates and Trends

Similar to the people and vehicle counts, the watercraft counts provide an indicator of whitewater boating use patterns and trends. SCE calculated the percentage of photographs with watercraft to derive an estimate of the magnitude and patterns of whitewater boating above and along the Fairview Dam Bypass Reach. The estimates of use include the types of boats (i.e., kayak, raft, and other) used on the river and the amount of commercial and non-commercial boating use. For commercial and non-commercial use, SCE relied on the “likely commercial boating” AI flag, as well as a review of a sample of photographs with identified boating use. As with the people and vehicle counts, SCE also calculated descriptive statistics (e.g., minimum, maximum, average), standard deviations, and confidence intervals for the watercraft counts (Appendix D, *Data Summaries and Other Statistical Analysis*). Flow data (Section 4.5, *Hydrology*) over the study period was also presented in conjunction with recorded boating use

4.5. HYDROLOGY

Flow data during the study period were obtained from the two U.S. Geological Survey (USGS) (SCE operated) gages and the U.S. Army Corps of Engineers (USACE) gage in Kernville for flows below the KR3 Powerhouse. The recording gages measure flow in the

Fairview Dam Bypass Reach (USGS gage 11186000, SCE gage 401) and the KR3 Water Conveyance system (USGS gage 11185500, SCE gage 402). Independent from the KR3 Project, the USACE maintains one gage on the NFKR at Kernville, approximately 2 river miles downstream of KR3 Powerhouse. USACE publishes daily flow gage data on its website (USACE, n.d.).

The USGS approved hourly dataset for the two SCE gages associated with Water Year 2025 (October 1, 2024 through September 30, 2025) are available on SCE's Project website (www.sce.com/kr3). Preliminary gage data were compiled for the remainder of the study period (October 1, 2025 through November 30, 2025) are available in Appendix B. Flow data for the gage in Kernville is available on USACE's website.

4.6. COMMERCIAL WHITEWATER USE

Commercial outfitters offer whitewater rafting trips to the public on the NFKR. For commercial rafting trips launching from Johnsondale Bridge above Fairview Dam and along the NFKR Bypass Reach within the Wild and Scenic River Corridor⁷ (not including the Riverkern Beach Picnic Site), the Sequoia National Forest (SQF) manages commercial activities through Special Use Permits (SUPs). Currently, three companies have SUPs with the SQF: Momentum Rafting (formerly Kern River Tours), Sierra South, and Whitewater Voyages. Per their SUP, each company is required to report the total number of people served (user days) to the SQF each season.

SCE also issues Temporary Entry Permits for commercial whitewater outfitters use of the KR3 Powerhouse Whitewater Put-in/Take-out river access site. This river access site is the start of the Powerhouse / Lickety Split river segment located downstream of the KR3 Powerhouse. For the 2025 season, SCE issued six no-fee access permits to commercial outfitters: Momentum Rafting, Sierra South, Whitewater Voyages, Eagle Rafting, Epicosity, and Kern River Company. As a condition of the permit, each company is required to report the total number of people served (user days) to SCE each season.

Refer to Appendix C for total users reported by the commercial outfitters for the 2025 boating season.

5.0 RESULTS

This section presents the results of the Camera Study Addendum. Results of this study also reference, or incorporate as applicable, the previous relicensing FERC-approved Study Plan documents:

1. *REC-1 Whitewater Boating Flow Study Technical Memorandum* (SCE 2023, 2024a, 2024b)
2. *REC-2 Recreation Facilities Use Assessment Final Technical Memorandum* (SCE, 2024c)

⁷ Wild and scenic river corridor extends down to the Kern/Tulare County Line.

The camera study results are organized around FERC’s specific requests in their determination for additional information (FERC, 2024) and the corresponding *REC-2 Recreation Facilities Use Assessment Camera Study Plan* (SCE, 2024c), and includes the following:

- Section 5.1, Data overview (number of photographs)
- Section 5.2, Recreation Use Estimates (including recreation day estimates at river access sites and for whitewater boating)
- Section 5.3, Capacity Utilization
- Section 5.4, Commercial and Non-Commercial Whitewater Boating Estimate
- Section 5.5, Watercraft Types (additional details)

SCE validated the AI-assisted photo analysis through a multi-layered QA/QC process combining automated confidence scoring and targeted manual review. Photographs with lower confidence scores showed occasional minor misclassifications or small over or undercounts, primarily in visually complex conditions, but these discrepancies were limited in magnitude and corrected where identified without applying global dataset adjustments. Overall, the validation demonstrated that the AI tool performed reliably for characterizing relative recreation use patterns and temporal trends when paired with focused human review, consistent with the study’s objectives. A description of the AI model performance and data validation, additional data summaries, and other related supplemental analyses are included in Appendix D.

Additionally, Appendix E.1 provides example photographs from the human validated QA/QC process. These photographs are intended to provide examples where the AI tool correctly identified objects and instances with slight object miscounts by the AI tool, as well as examples of misidentification of objects by the AI tool (see Section 5.1). Appendix E.2 includes examples of photographs from contiguous timeframes at several high frequency river access sites to help contextualize daily use patterns during the peak whitewater boating season and summer months.

5.1. DATA OVERVIEW

During the yearlong data collection process, the cameras recorded 816,940 photographs across all locations. The percentage of photographs with people, vehicles, and watercraft observed during daylight hours throughout the entire study area during the study period is listed in Table 5.1-1 by month.

Neither Table 5.1-1 nor the other summary tables and figures in this Camera Study Addendum include the raw number or count of people, vehicles, or watercraft. As with other time-series camera-based studies, individual objects of interest frequently appear in multiple consecutive photographs at the same river access site, as well as in photographs at multiple river access sites (i.e., at a put-in site and then also at a take-out

site). This results in repeated counts (same person, vehicle, or watercraft) across multiple records and also infers a length of stay exceeding the 5-minute photograph interval (Appendix D provides an estimate of length of stay/site duration for watercraft/boaters at river access sites). While summary statistics and duration metrics (averages and length of stay estimates) can help contextualized observations, reliably quantifying the precise number of unique visitors generally falls outside the scope of this Camera Study Addendum.

Table 5.1-1. Percent of Photographs with People, Vehicles, or Watercraft ^a

Month	People	Vehicles	Watercraft
December 2024	3.91%	24.82%	0.18%
January 2025	3.36%	24.79%	0.04%
February 2025	3.64%	27.84%	0.23%
March 2025	4.90%	30.40%	0.94%
April 2025	9.10%	43.26%	2.32%
May 2025	11.13%	46.98%	4.87%
June 2025	11.56%	52.48%	4.58%
July 2025	13.54%	60.56%	2.38%
August 2025	16.92%	51.65%	3.05%
September 2025	10.94%	39.38%	0.11%
October 2025	8.79%	36.37%	0.03%
November 2025	5.11%	24.47%	0.12%
NFKR Average ^b	8.65%	38.80%	1.61%

NFRK = North Form Kern River

Notes:

^a Indicates the percentage of photographs with at least one observed person, vehicle, or watercraft.

^b Totals do not sum due to rounding; the NFKR Average differs from the average of each monthly average due primarily to rounding.

5.2. RECREATION USE ESTIMATES

Overall, the relative percentage⁸ of total people and vehicles observed by month follows a seasonal pattern (Figure 5.2-1). Recreation use is lowest in winter through the start of spring (November through March), increases during the spring shoulder months (April and May), is highest during summer (June through August), and decreases during the fall shoulder months (September and October).

⁸ Relative percent of use was derived by dividing the total number of people or vehicles recorded by month by the total people or vehicles recorded over the entire yearlong camera study.

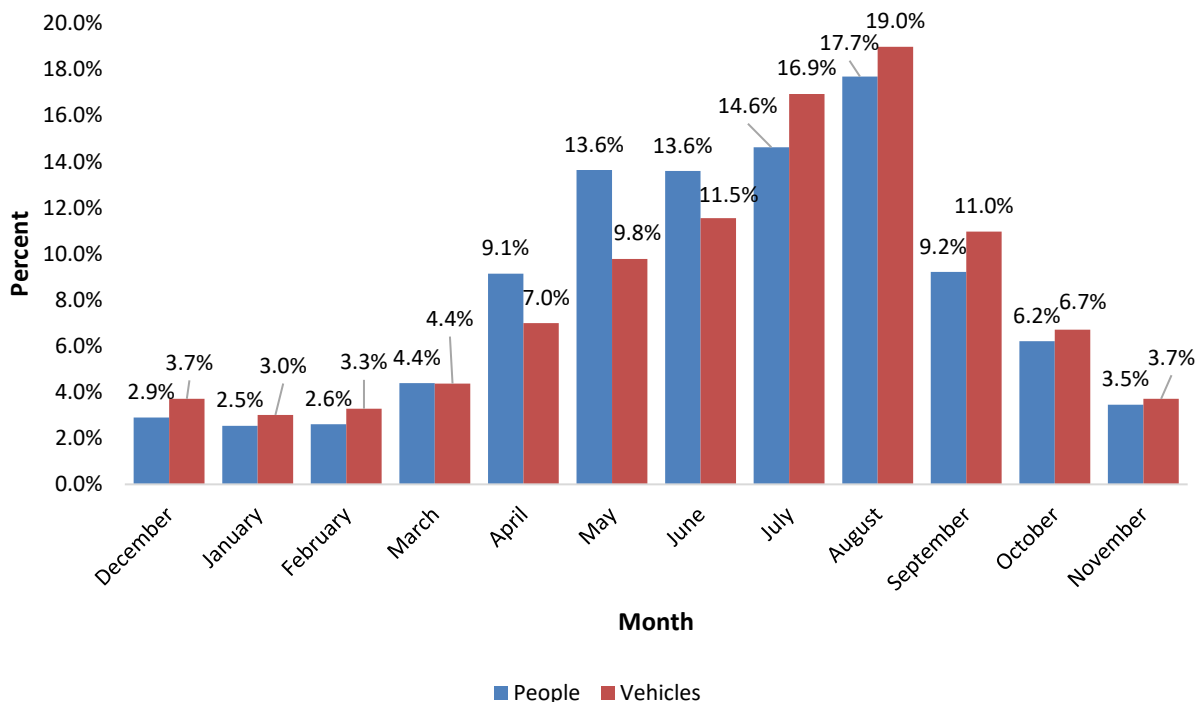


Figure 5.2-1. Annual Pattern of Recreation Use at River Access Site Camera Locations.

This seasonal pattern is evident at the river access sites along the Fairview Dam Bypass Reach, the NFKR above Fairview Dam, and the NFKR below the KR3 Powerhouse. Figure 5.2-2 displays monthly use as a percentage of the total number of people observed during the camera study. Similarly, Figure 5.2-3 displays the relative percentage of vehicles observed by month. These figures highlight monthly patterns and differences in indicators of recreational use (people and vehicles) but are not discrete estimates of people or vehicles. Estimates of recreational use are provided in Section 5.2.1 and 5.2.2, as well as Section 5.2. of the REC-2 Technical Memorandum (SCE, 2024c).

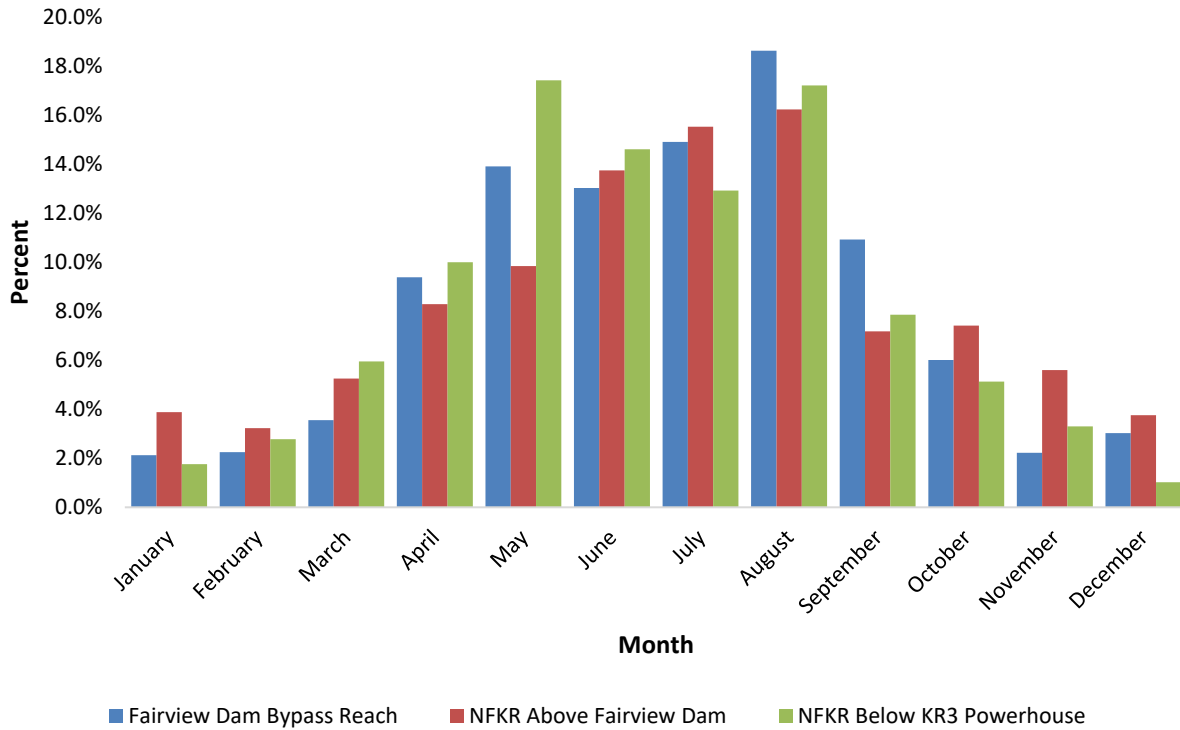


Figure 5.2-2. Annual Pattern of Recreation Use (People) at NFKR Locations.

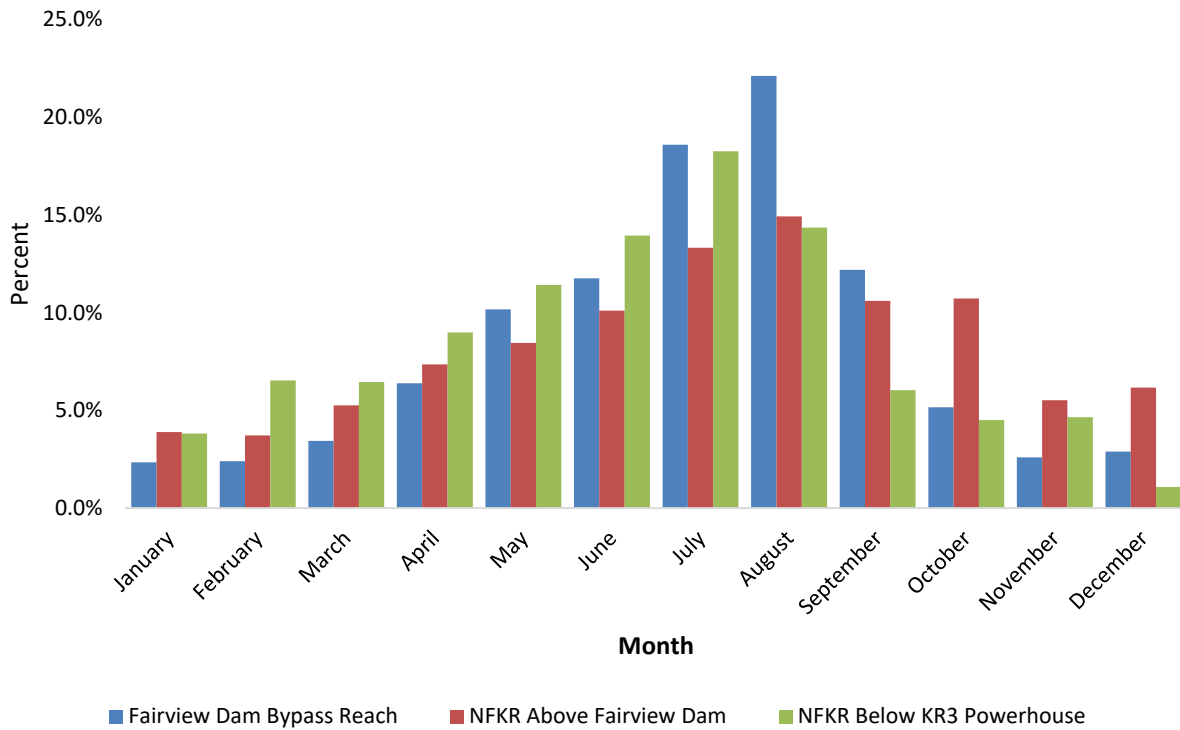


Figure 5.2-3. Annual Pattern of Recreation Use (Vehicles) at NFKR Locations.

The occupancy pattern or percentage of time a river access site is in use (daylight hours) per month was estimated based on the percentage of photographs per month with at least one person or one vehicle in frame.⁹ On an annual basis, at least one person was observed in 9.1 percent of photographs at the river access sites along the Fairview Dam Bypass Reach. This percentage was higher at the access sites both along the NFKR above the Fairview Dam (11.1 percent) and along the NFKR below the KR3 Powerhouse (18.5 percent). Table 1 in Appendix D *Data Summaries and Other Statistical Analysis*, provides the percentage of photographs with people at each river access site and Tables 3, 9, and 15 in Appendix D provide the range (minimum and maximum) number of people recorded in these photographs with people. Tables 3, 9, and 15 in Appendix D also provide other summary statistics including the average number of people, standard deviation, and 95 percent confidence interval for the average.

Figure 5.2-4 displays the percentages of time per month that at least one person was recorded as being on-site. While Figure 5.2-2 and Figure 5.2-4 are similar, they provide two separate indicators of recreation use. Figure 5.2-2 provides the annual pattern of use at the river access sites; that is, it is an estimate of the amount of annual use attributable to each month. On the other hand, Figure 5.2-4 indicates the percentage of time per month that a site is in use (as estimated by the number of photographs with at least one recorded person). Appendix D provides additional site-specific information about each of these indicators of recreation use.

Relative percent of use was derived by dividing the total number of people or vehicles recorded by month by the total people or vehicles recorded over the entire yearlong camera study.
son or vehicle recorded over the entire yearlong camera study.

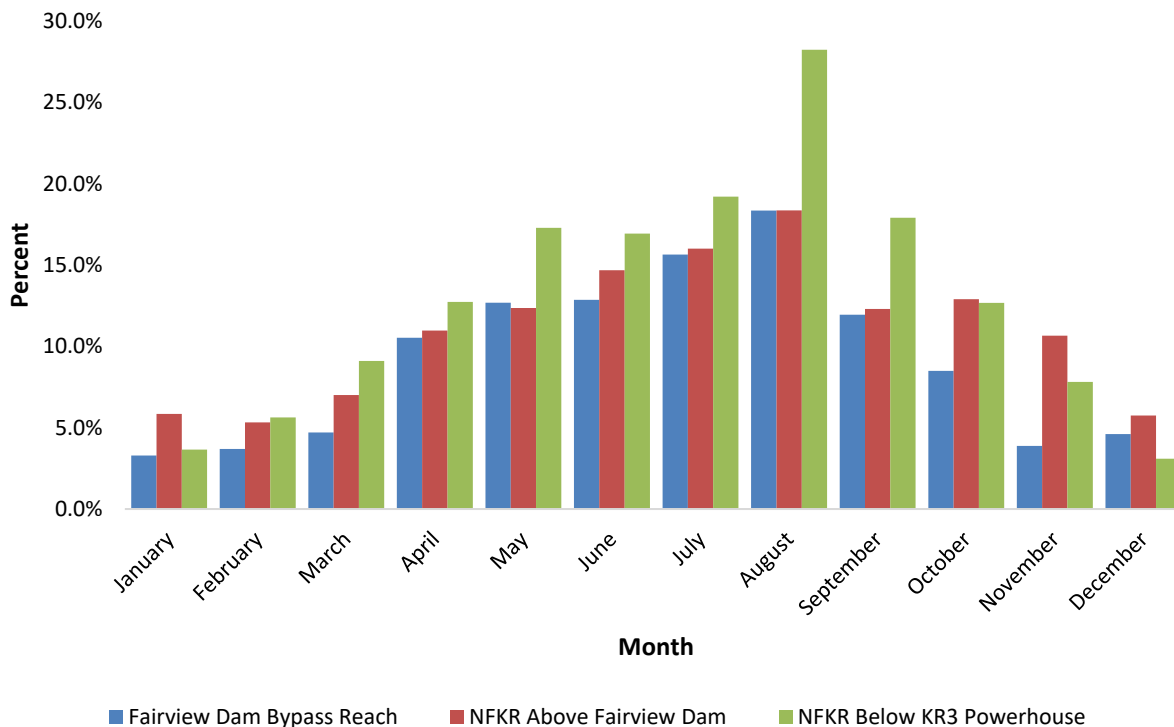


Figure 5.2-4. Monthly Percentage of Time Site in Use (People) at NFKR Locations.

The percentage of time at least one vehicle was recorded on-site provides another indicator of recreation use. On an annual basis, at least one vehicle was observed in 45 percent of photographs at the river access sites along the Fairview Dam Bypass Reach. This percentage at the access sites along the NFKR above the Fairview Dam was 55.3 percent and 37.5 percent at the river access site along the NFKR below the KR3 Powerhouse. Figure 5.2-5 displays the percentages of time per month that at least one vehicle was recorded as being on-site in each of these locations. Table 20 in Appendix D *Data Summaries and Other Statistical Analysis*, provides the percentage of photographs with vehicles at each river access site. Tables 23, 30, and 37 in Appendix D provide the range (minimum and maximum) number of vehicles recorded in these photographs with vehicles; Tables 23, 30, and 37 also provide other summary statistics including the average number of vehicles, standard deviation, and 95 percent confidence interval for the averages.

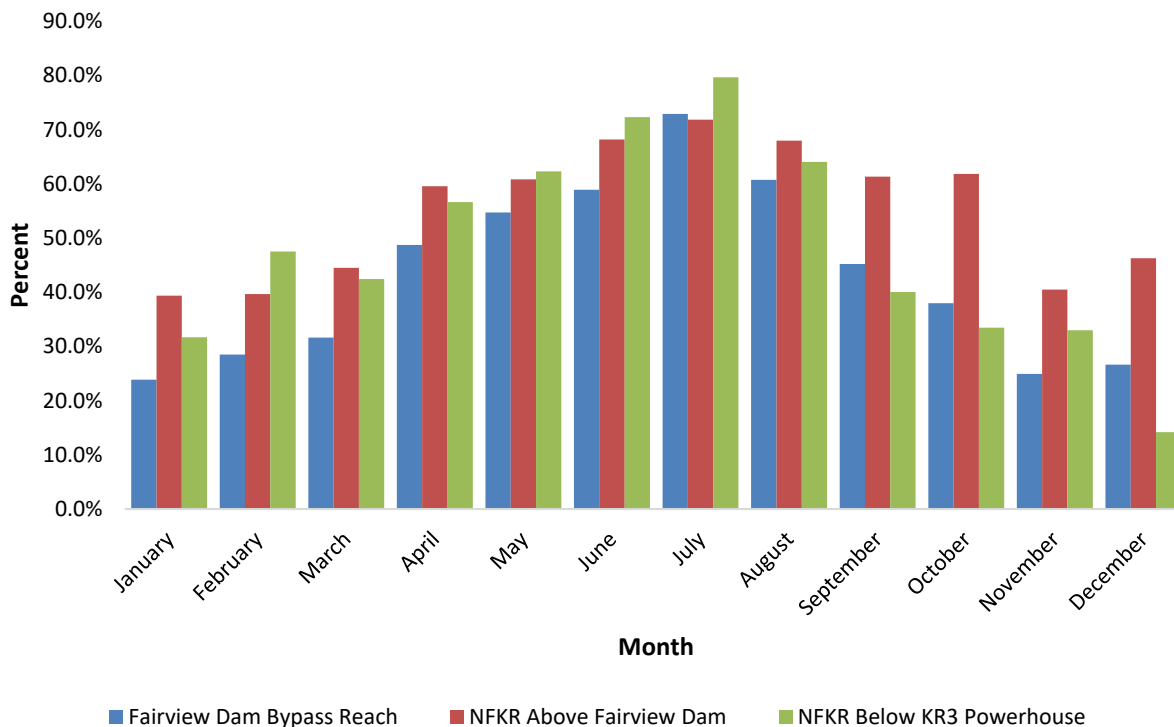


Figure 5.2-5. Monthly Percentage of Time Site in Use (Vehicles) at NFKR Locations.

The differences in estimates of percentage of time a site is in use (Figure 5.2-4 and Figure 5.2-5) is primarily attributable to two related factors: (1) people move around (into and out of the camera frame) and may be obscured by vegetation, dark/shady areas, and other features (e.g., tents); and (2) because of this, the AI tool had a tendency to occasionally undercount people. Due to these factors, the presence of vehicles on-site may be a more accurate indicator of site use compared to people for the camera study.

Whitewater boating use follows a different pattern than the people and vehicle counts. Overall, the relative use pattern, as indicated by the percentage of watercraft (all types) observed by month, is highest in the months of May and June (Figure 5.2-6). This timeframe generally coincides with higher flows in the NFKR. Whitewater boating picks up in March and April as winter snowmelt and spring storms increase and provide flows that are conducive to whitewater boating. Use is also higher in July and August because of periodic higher flows above Fairview Dam and below the KR3 Powerhouse, as well as a transition in type of boating (from whitewater boating to inner tubing) observed in the bypass reach. Section 5.5, *Watercraft Types*, provides additional information about boating patterns and NFKR hydrology.

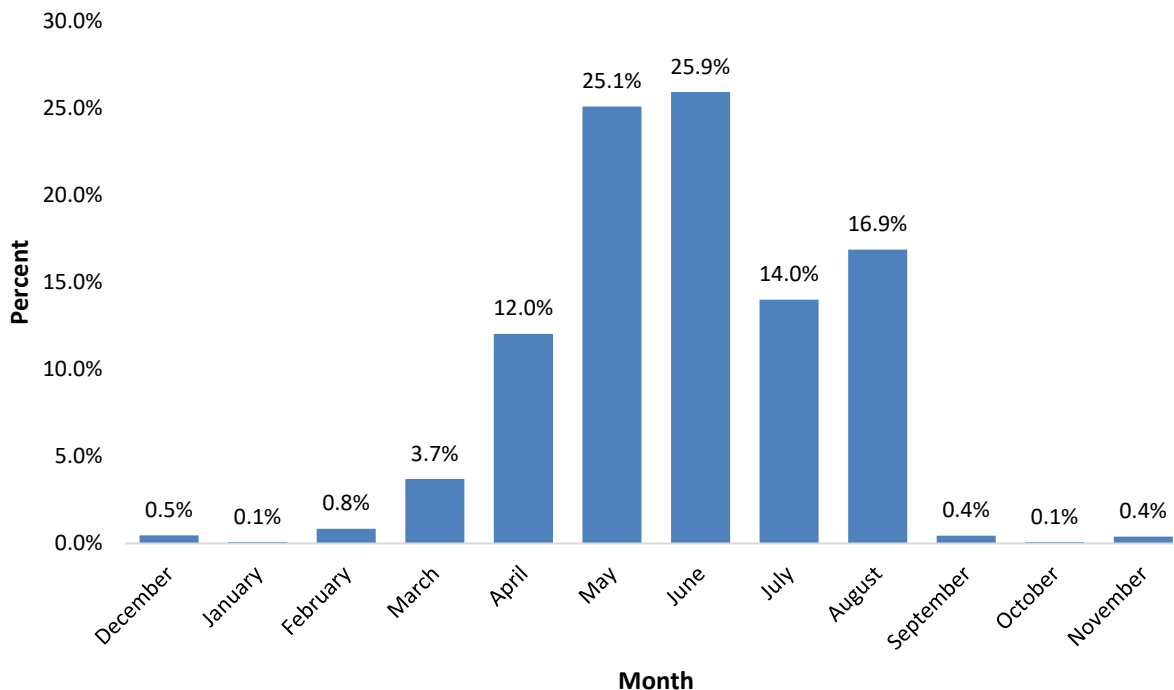


Figure 5.2-6. Annual Pattern of Watercraft Use at All Camera Locations along the NFKR.

This pattern is also evident at the river access sites along the Fairview Bypass Reach, the NFKR above Fairview Dam, and the NFKR below the KR3 Powerhouse. Figure 5.2-7 displays monthly use as a relative percentage of the total number of watercraft (all types) observed during the camera study. Most of the boating use occurs from March through August across all three segments of the NFKR. Similar to the people and vehicle use patterns, Table 42 in Appendix D provides the percentage of photographs with watercraft at each river access site; Tables 48 through 51 (Fairview Dam Bypass Reach), Tables 73 through 76 (Above Fairview Dam), and Tables 98 through 101 (Below KR3 Powerhouse) provide the range (minimum and maximum) number of watercraft (kayaks, rafts, other, and all types) recorded in these photographs with watercraft. These tables also provide summary statistics including the average number of watercraft, standard deviation, and 95 percent confidence interval for the averages.

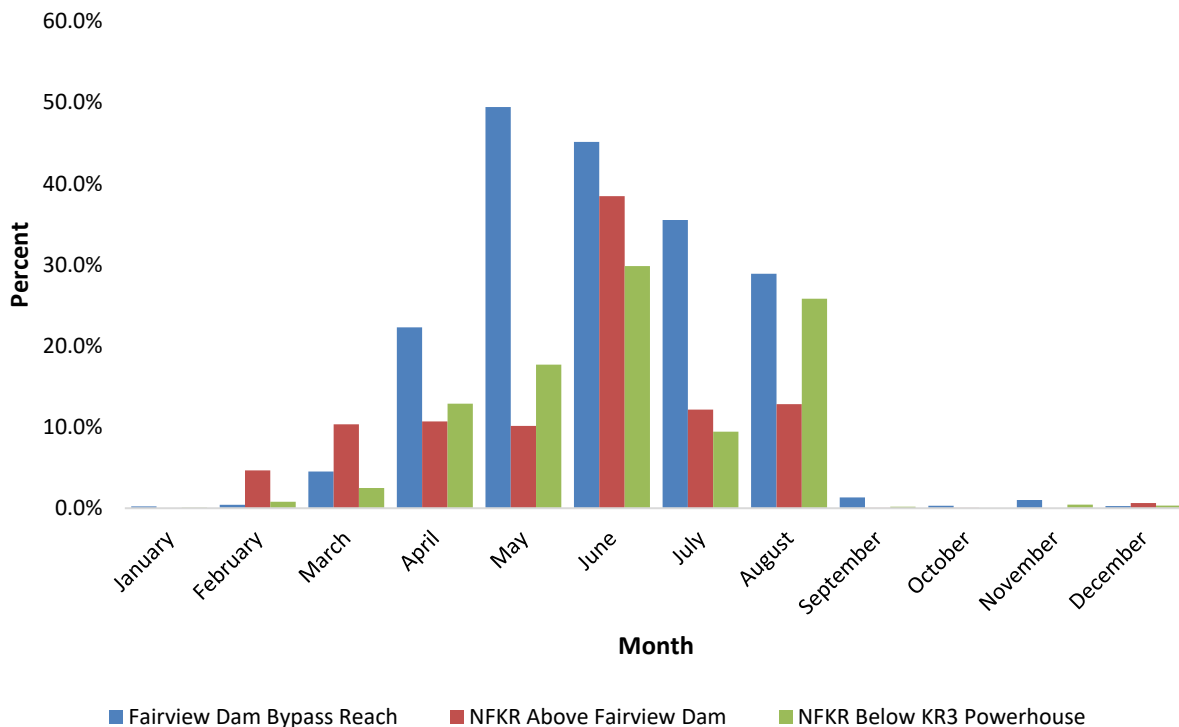


Figure 5.2-7. Annual Pattern of Watercraft Use at NFKR Locations.

On an annual basis, at least one watercraft was observed in under 2 percent of photographs at the river access sites along the Fairview Dam Bypass Reach. This percentage was lower at the access sites along the NFKR above the Fairview Dam (under 1 percent) and higher at the single river access site below the KR3 Powerhouse (about 5 percent). Figure 5.2-8 displays the percentages of time per month that at least one watercraft (all types) was recorded as being on-site. Both Figure 5.2-7 and Figure 5.2-8 show similar patterns of use (most boating use occurs from March through August), but they provide two separate indicators of boating use. Figure 5.2-7 provides the annual pattern of use at the river access sites; that is, it is an estimate of the amount of annual use attributable to each month. On the other hand, Figure 5.2-8 indicates the percentage of time per month that a site is used for boating purposes (as estimated by the number of photographs with at least one recorded watercraft).

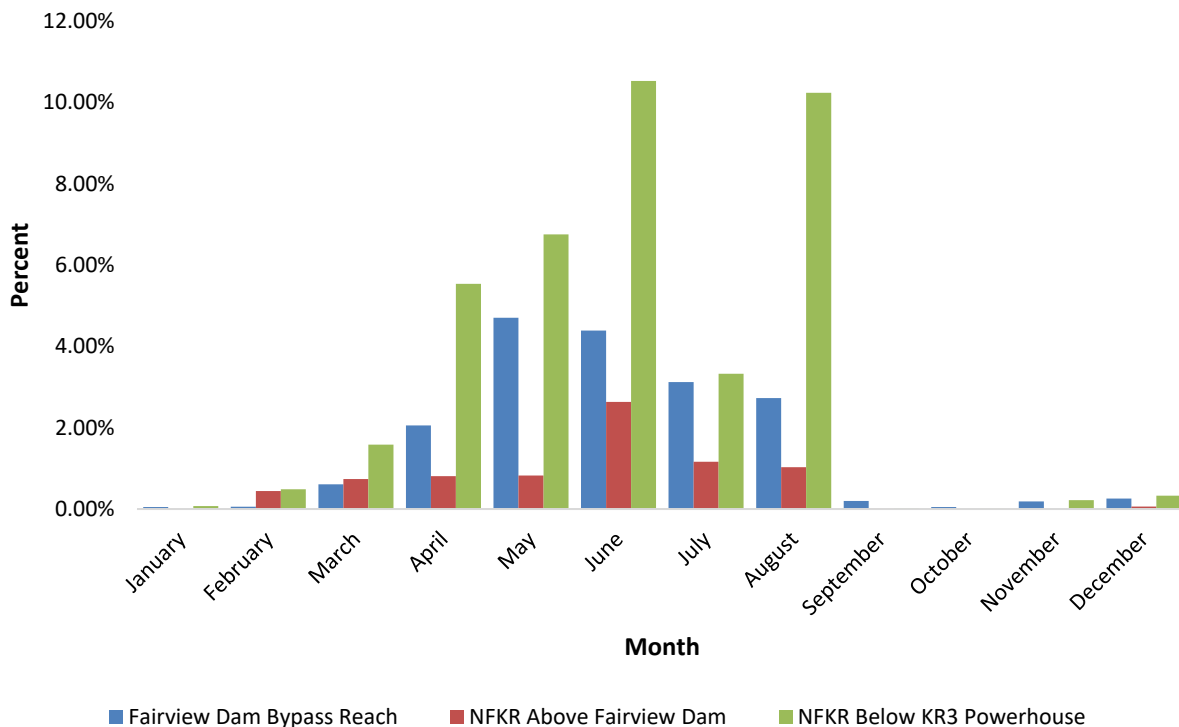


Figure 5.2-8. Monthly Percentage of Time Site in Use (Watercraft) at NFKR Locations.

5.2.1. RECREATION DAY ESTIMATES AT THE RIVER ACCESS SITES

Over the course of the yearlong camera study (December 1, 2024, through November 30, 2025), there were between 57,040 and 61,090 recreation days¹⁰ at the camera river access locations.¹¹ Estimated recreation days by river access site, season, and type of day (weekday, weekend day, and holiday) are provided in Table 5.2-1. At river access sites in the Fairview Dam Bypass Reach, the estimated range of recreation days for the study period was between 30,670 and 32,860 days. The season with the highest number of recreation days was summer (18,380 to 19,530 days), followed by spring (5,160 to 5,550 days), fall (5,100 to 5,520 days), and winter (2,030 to 2,260 days). This is the same pattern of seasonal magnitude of use as the REC-2 Study. The most recreation days by type of day were recorded on weekend days (15,790 to 16,570 days).

The river access sites above Fairview Dam and below the KR3 Powerhouse followed the same general seasonal pattern of use as those in the Fairview Dam Bypass Reach: that is, higher recreation days in the summer and lower recreation days in the non-summer seasons. However, during the camera study period, the season with the second most recorded recreation days at the river access sites above Fairview Dam was winter with

¹⁰ As defined by FERC, a recreation day is each visit by a person to the study site for recreational purposes during any portion of a 24-hour period.

¹¹ As noted in Section 4.4.5.1, recreation days are estimated using the same formula as the REC-2 Study but with camera study-specific vehicle averages (Appendix D).

between 3,970 and 4,160 days. Additionally, the most recreation days by type of day at these sites were recorded on weekdays (11,020 to 11,660 days).

These estimates were compared to the REC-2 Study estimate results and are similar (within the same general range). Any variations in the estimates are primarily due to scope, methodological, and timeframe differences of the two studies. For example, the REC-2 Study estimated recreation days for all sites / site types (day use, camping, trail) while the camera study was focused on a subset of river access sites and day uses only. Additionally, the camera study used a more frequent sampling frame (observations/photographs every 5 minutes) compared to the REC-2 Study. This difference in sampling frame likely translates to a higher degree of accuracy (lower margin of error and tighter corresponding confidence intervals) in the camera study estimates.

Table 5.2-1. Estimated Recreation Visitation (Recreation Days) from December 1, 2024 to November 30, 2025

Location/Site/Season	Recreation Days ^a							
	Weekday		Weekend Day		Holiday		Total	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Bypass Reach								
Roads End Picnic Site								
Winter	40	50	60	70	40	50	140	170
Spring	60	70	50	50	50	60	160	180
Summer	250	270	320	340	100	110	670	720
Fall	100	120	110	110	20	30	230	260
Site Subtotal	450	510	540	570	210	250	1,200	1,330
Roads End Picnic Site and Whitewater Put-in								
Winter	190	210	90	100	40	50	320	360
Spring	60	70	50	50	30	40	140	160
Summer	490	530	440	470	130	150	1,060	1,150
Fall	230	250	220	230	40	50	490	530
Site Subtotal	970	1,060	800	850	240	290	2,010	2,200
Calkins Flat Dispersed Camping								
Winter	30	30	30	30	60	70	120	130
Spring	90	100	1,270	1,330	300	320	1,660	1,750
Summer	1,730	1,790	3,660	3,780	600	680	5,990	6,250
Fall	410	450	830	850	100	140	1,340	1,440
Site Subtotal	2,260	2,370	5,790	5,990	1,060	1,210	9,110	9,570

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Location/Site/Season	Recreation Days ^a							
	Weekday		Weekend Day		Holiday		Total	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Ant Canyon Dispersed Camping								
Winter	40	40	40	40	20	20	100	100
Spring	110	110	150	160	330	360	590	630
Summer	1,110	1,170	1,530	1,600	460	530	3,100	3,300
Fall	340	380	880	910	60	80	1,280	1,370
Site Subtotal	1,600	1,700	2,600	2,710	870	990	5,070	5,400
Corral Creek Picnic Site and Whitewater Take-out								
Winter	70	80	40	50	20	20	130	150
Spring	50	50	110	120	110	130	270	300
Summer	1,200	1,280	1,620	1,710	170	190	2,990	3,180
Fall	50	50	130	140	30	40	210	230
Site Subtotal	1,370	1,460	1,900	2,020	330	380	3,600	3,860
Thunderbird Whitewater Put-in/Take-out								
Winter	50	60	40	40	60	70	150	170
Spring	210	220	320	350	80	100	610	670
Summer	220	230	470	500	170	190	860	920
Fall	160	180	110	120	40	50	310	350
Site Subtotal	640	690	940	1,010	350	410	1,930	2,110
Camp 3 Whitewater Put-in/Take-out								
Winter	80	90	70	80	30	40	180	210
Spring	150	160	190	210	30	40	370	410
Summer	480	510	610	650	110	130	1,200	1,290
Fall	190	200	140	150	50	60	380	410
Site Subtotal	900	960	1,010	1,090	220	270	2,130	2,320
Riverkern Beach Picnic Site								
Winter	690	750	150	170	50	50	890	970
Spring	780	820	260	270	320	360	1,360	1,450
Summer	810	860	1,230	1,290	470	570	2,510	2,720
Fall	180	190	570	600	110	140	860	930

Location/Site/Season	Recreation Days ^a							
	Weekday		Weekend Day		Holiday		Total	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Site Subtotal	2,460	2,620	2,210	2,330	950	1,120	5,620	6,070
Bypass Reach Subtotal	10,650	11,370	15,790	16,570	4,230	4,920	30,670	32,860
Above Fairview Dam								
Johnsondale Bridge River Access								
Winter	2,080	2,150	640	660	400	430	3,120	3,240
Spring	700	740	520	550	110	130	1,330	1,420
Summer	2,700	2,830	620	660	300	360	3,620	3,850
Fall	330	370	270	310	90	120	690	800
Site Subtotal	5,810	6,090	2,050	2,180	900	1,040	8,760	9,310
Brush Creek Dispersed Camping								
Winter	250	270	150	160	90	100	490	530
Spring	560	590	470	500	320	350	1,350	1,440
Summer	2,610	2,730	3,540	3,710	400	480	6,550	6,920
Fall	630	710	540	610	130	170	1,300	1,490
Site Subtotal	4,050	4,300	4,700	4,980	940	1,100	9,690	10,380
Willow Point Whitewater Take-out								
Winter	160	170	140	150	60	70	360	390
Spring	90	100	80	90	70	80	240	270
Summer	740	790	360	380	100	120	1,200	1,290
Fall	170	210	90	100	40	50	300	360
Site Subtotal	1,160	1,270	670	720	270	320	2,100	2,310
Above Fairview Dam Subtotal	11,020	11,660	7,420	7,880	2,110	2,460	20,550	22,000
Below KR3 Powerhouse								
KR3 Powerhouse Whitewater Put-in/Take-out (upstream view)								
Winter	230	250	90	100	90	110	410	460
Spring	370	390	610	640	210	230	1,190	1,260
Summer	530	550	530	550	270	300	1,330	1,400
Fall	520	550	310	320	80	90	910	960
Camera Subtotal	1,650	1,740	1,540	1,610	650	730	3,840	4,080

Location/Site/Season	Recreation Days ^a							
	Weekday		Weekend Day		Holiday		Total	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
KR3 Powerhouse Whitewater Put-in/Take-out (downstream view)								
Winter	90	100	40	50	40	50	170	200
Spring	190	200	330	350	130	140	650	690
Summer	310	320	350	370	170	200	830	890
Fall	210	230	100	110	20	30	330	370
Camera Subtotal	800	850	820	880	360	420	1,980	2,150
Below KR3 Powerhouse Subtotal	2,450	2,590	2,360	2,490	1,010	1,150	5,820	6,230
Total	24,120	25,620	25,570	26,940	7,350	8,530	57,040	61,090

KR3 = Kern River No. 3

Notes:

^a Recreation days estimates are rounded to the nearest multiple of 10.

5.2.2. RECREATION DAY ESTIMATES FOR WHITEWATER BOATING

An average occupancy of one person per kayak and six people per raft were used to estimate total number of recreation days from whitewater boating use in the NFKR. Six people were selected based on review of photographs where individual boaters within a raft ranged from 2 people to 8 people, with most commercial rafts carrying 6 to 8 people (Section 5.4). During the peak whitewater boating season (April 1 through July 31), whitewater boating¹² accounted for approximately 7,710 to 8,410 recreation days,¹³ including 655 to 715 recreation days from kayak use and 7,055 to 7,695 recreation days from rafting use (Tables 5.2-2). The number of recreation days attributable to rafting increases to between 9,415 and 10,225 if 8 boaters per raft is used instead of 6. The range in recreation days accounts for the margin of error and corresponding 95 percent confidence interval for the average number of watercraft at each river access site. Section 5, *Watercraft Counts*, of Appendix D provides watercraft averages and the corresponding confidence ranges.

¹² Of the watercraft identified by the AI tool (Section 4.4.1, *AI Tool and Process*), kayaks and rafts were considered whitewater boating watercraft. The "other" category generally captured inner tubes and other types of non-whitewater boating watercraft (Section 5.5, *Watercraft Types*) and therefore were not included in this calculation.

¹³ Whitewater boating recreation days were calculated using a similar formula to recreation days based on vehicles counts (Section 5.2.1, *Recreation Day Estimates at the River Access Sites*). It relied on the average number of boats at each camera location, as well as average number of people per boat and length of stay (duration) on-site.

Table 5.2-2. Estimated Whitewater Boating Recreation Days (Peak Whitewater Boating Season, April 1 through July 31)

Location/Watercraft Type	Recreation Days ^a			
	Weekdays	Weekend Days	Holidays	Total
Kayaks				
Bypass Reach	140–155	205–215	70–70	415–440
Above Fairview Dam	25–25	25–30	10–15	60–70
Below the KR3 Powerhouse	55–65	105–115	20–25	180–205
Subtotal	220–245	335–360	100–110	655–715
Rafts ^b				
Bypass Reach	950–1,035	1,420–1,530	405–440	2,775–3,005
Above Fairview Dam	155–190	225–260	40–55	420–505
Below the KR3 Powerhouse	910–1,035	2,485–2,655	465–495	3,860–4,185
Subtotal	2,015–2,260	4,130–4,445	910–990	7,055–7,695
Total	2,235–2,505	4,465–4,805	1,010–1,100	7,710–8,410

KR3 = Kern River No. 3

Notes:

^a Recreation days estimates are rounded to the nearest multiple of 5.

^b The calculation of recreation days for rafts assumed an average of 6 people per raft.

Based on recreation days, rafting represents about 91 percent of all whitewater boating visitation, while the remaining percentage is attributable to kayaks during the peak whitewater boating season.

Table 5.2-3 provides non-peak season (August 1 through March 30) estimates of whitewater boating recreation days for the Fairview Dam Bypass Reach, the NFKR above Fairview Dam, and the NFKR below the KR3 Powerhouse. Similar to the range of recreation days in Table 5.2-2, the estimates in Table 5.2-3 also account for the margin of error and corresponding 95 percent confidence interval for average watercraft at each river access site.

Table 5.2-3. Estimated Whitewater Boating Recreation Days (Non-Peak Whitewater Boating Season, August 1 through March 30)

Location/Watercraft Type	Recreation Days ^a			
	Weekdays	Weekend Days	Holidays	Total
Kayaks				
Bypass Reach	15–50	20–55	10–45	45–150
Above Fairview Dam	15–40	15–40	15–50	45–130
Below the KR3 Powerhouse	45–55	30–65	30–60	105–180

Location/Watercraft Type	Recreation Days ^a			
	Weekdays	Weekend Days	Holidays	Total
Subtotal	75–145	65–160	55–155	195–460
Rafts ^b				
Bypass Reach	95–230	150–300	245–295	490–825
Above Fairview Dam	30–90	80–160	60–100	170–350
Below the KR3 Powerhouse	370–520	320–470	155–235	845–1,225
Subtotal	495–840	550–930	460–630	1,505–2,400
Total	570–985	615–1,090	515–785	1,700–2,860

KR3 = Kern River No. 3

Notes:

^a Recreation days estimates are rounded to the nearest multiple of 5.

^b The calculation of recreation days for rafts assumed an average of 6 people per raft. The range of rafting-related recreation days increases to between 1,925 and 3,120 if 8 people per raft is used instead.

Overall, approximately 25 percent of annual whitewater boating use occurred during the non-peak whitewater season during the camera study. Similar to the peak whitewater boating season, rafting accounts for a higher percentage of total use (83.9 percent) compared to kayaking (16.1 percent). A majority (77.7 percent) of raft use in the non-peak season is in the months of February, March, and August.

5.3. CAPACITY UTILIZATION

Capacity utilization estimates for the river access sites are listed in Table 5.3-1; these rates are presented as ranges that correspond with the 95 percent confidence interval for average vehicles observed on-site during each of the corresponding time periods. Capacity utilization estimates are provided for annual weekends, summer non-holiday weekends, and summer holiday weekends, and are specific to times when the sites were in use (i.e., there was at least one vehicle recorded on-site). During the camera study, annual weekend capacity utilization when the river access sites were in use ranged from a high of about 34 to 36 percent at the Corral Picnic Site and Whitewater Take-out to a low of 3.3 to 3.4 percent at the Brush Creek Dispersed Camping river access site. The river access sites experienced the highest levels of capacity utilization on either summer non-holiday weekends or summer holidays.

Any differences between the REC-2 and camera study capacity utilization estimates are due to the same scope and methodology differences noted in Section 5.2, *Recreation Use Estimates*.

Table 5.3-1. Estimated Weekend and Holiday Parking Utilization

Location/Site Name	Parking Capacity (Vehicle Spaces)	Annual Weekend Parking Utilization (%)	Summer Weekend Parking Utilization (%)	Summer Holiday Parking Utilization (%)
Bypass Reach				
Upstream of Roads End Picnic Site	7 ^a	20.7–21.2	24.3–25.3	29.5–32.2
Roads End Picnic Site and Whitewater Put-in	25 ^b	7.4–7.7	10.5–11.1	11.2–12.7
Calkins Flat Dispersed Camping	38 ^b	15.6–16.0	26.6–27.5	24.4–27.7
Ant Canyon Dispersed Camping	28	14.0–14.5	20.2–21.1	20.2–23.2
Corral Creek Picnic Site and Whitewater Take-out	8	34.6–35.9	50.8–53.1	48.6–55.0
Thunderbird Whitewater Put-in/Take-out	11	16.0–16.4	18.7–19.6	24.2–27.9
Camp 3 Whitewater Put-in/Take-out	7 ^a	24.8–25.5	31.9–33.4	52.7–59.5
Riverkern Beach Picnic Site	28 ^b	9.7–10.0	14.5–15.2	19.6–23.7
Above Fairview Dam				
Johnsondale Bridge River Access	14	25.9–26.6	30.3–31.9	38.4–44.6
Brush Creek Dispersed Camping	107	3.3–3.4	4.8–5.0	5.5–6.7
Willow Point Whitewater Take-out	18	9.1–9.6	10.7–11.1	11.0–13.0
Below KR3 Powerhouse				
KR3 Powerhouse Whitewater Put-in/Take-out (upstream)	8	27.8–28.4	36.3–37.5	36.7–40.2
KR3 Powerhouse Whitewater Put-in/Take-out (downstream)	12	15.6–16.0	19.6–20.4	22.7–26.2

KR3 = Kern River No. 3

Notes:

^a Parking area/capacity determined through Google Earth imagery.

^b A reduced number of parking spaces were used in this analysis and reflect only visible parking area in photographs.

5.4. COMMERCIAL AND NON-COMMERCIAL WHITEWATER BOATING ESTIMATE

For the purposes of this analysis, rafts (small or large) are generally assumed to represent a higher proportion of commercial whitewater boating use, while kayaks are assumed to represent a higher proportion of non-commercial, private whitewater boating use. These assumptions are based on direct visual observations of photographs and general industry practices observed in whitewater boating. However, the study recognizes that there is overlap between these watercraft types and corresponding boater groups, including privately organized rafting trips, commercial use of support kayaks (Figure 5.4-1), smaller rafts (Figure 5.4-2) and inflatables (large inflatable kayaks, catarafts) that may have been categorized as rafts during the AI object detection process, and concurrent commercial and non-commercial whitewater boating activity (Figure 5.4-3). Accordingly, these assumptions are applied at a general level and are not intended to preclude cross-over use or individual exceptions. Watercraft identified as “other” during the AI object detection process are not included in this estimate of commercial and non-commercial use. These other watercraft were typically non-whitewater boating watercraft (inner tubes and other small inflatables). While these watercraft were generally not used for whitewater boating purposes, they nonetheless represent a substantial amount of the total recorded watercraft use during the camera study and may also represent a portion of the commercial use on the river (Section 5.5).



Figure 5.4-1. Example of Commercial Rafts and Support Kayaks.



Figure 5.4-2. Example of Non-Commercial Raft and Kayaks.



Figure 5.4-3. Example of Concurrent Commercial and Non-Commercial Use.

The relative percentage of rafts and kayaks from all river-access photographs with watercraft in the NFKR are listed in Table 5.4-1. Across the entire year, including the peak whitewater boating season (April 1 through July 31), the percentage split in rafts and kayaks is about 65 percent and 35 percent. Based on the watercraft type assumption described above, most of the rafts were associated with commercial whitewater boaters while the majority of kayaks were used by private, non-commercial boaters.

Table 5.4-1. Relative Percentage of Rafts and Kayaks

	Annual		Peak Whitewater Season	
	Raft	Kayaks	Rafts	Kayaks
Above Fairview Dam	59.7%	40.3%	59.0%	41.0%
Fairview Dam Bypass Reach	67.3%	32.7%	70.7%	29.3%
Below KR3 Powerhouse	72.2%	27.8%	72.0%	28.0%
Total	65.5%	34.5%	64.8%	35.2%

KR3 = Kern River No. 3

To identify and estimate commercial and non-commercial whitewater boating use, SCE applied a tiered, adaptive methodology combining AI-assisted image analysis and targeted manual QA/QC. The AI tool provided a high-precision initial screen by flagging photographs with indicators of potential commercial activity; however, the approach was limited due to its binary nature (presence/absence of commercial use), and so SCE incorporated a manual QA/QC review of a sample of photographs to estimate the number of commercial and non-commercial boats. Together, this adaptive, multi-layered validation approach improved representativeness while maintaining consistency with the study’s objective to characterize relative use patterns rather than produce precise counts. Additional details on the commercial use AI flag can be found in Section 7, *Commercial Use AI Flag*, of Appendix D.

During the manual QA/QC review, SCE reviewed a subset of photographs with watercraft from 56 days across seven high-use river access sites between March 1 and June 15, 2025. The manual review of these sample photographs was specifically oriented on watercraft and revealed that commercial rafts accounted for approximately 59 percent of the total watercraft in this subset of photographs. Specifically, there was an observed 60/40 percent split between commercial and non-commercial watercraft present on-site in both the Fairview Dam Bypass Reach and the area below the KR3 Powerhouse, while the reach above the Fairview Dam had a split of 55 percent commercial and 45 percent non-commercial watercraft present on-site.

This percentage split in commercial and non-commercial whitewater boating use was based on the record of watercraft detected in the photographs. However, it is also important to estimate total number of boaters (individual people), as watercraft capacity varies substantially between watercraft types. While the general split of commercial and non-commercial watercraft is roughly 60/40 percent, the number of boaters on the river is much more heavily weighted toward commercial activity due to difference in watercraft capacity.

An average occupancy of six people per commercial raft and one person per non-commercial kayak were utilized to estimate total number of boaters. Six people were selected based on review of photographs where individual boaters within a raft ranged from 2 people to 8 people, with most commercial rafts carrying 6 to 8 people (Figure 5.4-4). Applying the general split of watercraft (60/40 percent commercial rafts/non-commercial kayaks), the data indicates that approximately 85 to 90 percent of

all boaters on the river are participating in commercial trips, while 10 to 15 percent are non-commercial boaters.



Figure 5.4-4. Example of Commercial Use with 6 to 8 People per Boat.

The percentage split in boater type is similar to the percentage difference in recreation days between rafts and kayaks during the peak whitewater boating season (91 percent and 9 percent respectively; Table 5.2-2). During this peak whitewater boating season, commercial use is heavily skewed towards rafts, while non-commercial use is skewed towards kayaks and other single-occupant types of watercraft. Applying the boater percentage split (90/10 percent) to the peak whitewater boating season recreation day estimates (Table 5.2-2), commercial use may have accounted for 6,940 to 7,570 recreation days while non-commercial use accounted for 700 to 840 recreation days in the peak season during the camera study (see Section 5.2.2 for the whitewater boating recreation day estimates, including a discussion on the range of potential use).

For comparison purposes, Appendix C provides annual outfitter boater numbers provided to the Forest Service and SCE by the permitted outfitters. Under the assumption that each permitted boater accounts for one recreation day, then the total number of reported permitted boaters (10,121 total including 3,204 from Forest Service and 6,917 from SCE) is slightly higher than the range of whitewater boating recreation days attributable to commercial rafting use during the peak whitewater boating season, 7,055 to 7,695 recreation days (assuming 6 people per raft). If 8 people per raft is assumed, then the range of estimated recreation days (9,415 to 10,225) during the peak whitewater season includes the total number of reported permitted boaters.

The Special Use Permit issued by the Forest Service to commercial outfitters for this study includes the river access sites above Fairview Dam (Johnsondale Bridge to Willow Point Take-out) and within the Fairview Dam Bypass Reach within the Wild and Scenic River corridor (the permit does not include Riverkern Beach Picnic Site). This commercial use occurs primarily during the peak whitewater boating season, but also in the early shoulder months of February and March (weather and flow permitting). Including these early shoulder months in the estimate of recreation days attributable to commercial rafting results in a range between 1,750 and 2,235 for the NFKR from Johnsondale Bridge to Camp 3 Whitewater Put-in/Take-out. Using an assumption of 8 rafters per commercial raft increases this range to between 2,345 and 2,910 recreation days.. There are a variety of factors that may have contributed to this difference (Forest Service reported 3,204, Appendix C) including different reporting of use numbers, boat capacity assumptions, and put-in/take-out preferences not captured in this study.

The SCE permitted outfitters use the KR3 Powerhouse Whitewater Put-in/Take-out. This river access site accounted for between 4,720 and 5,180 recreation days attributable to rafting from March 1 through September 30 (general timeframe when outfitters use this site). At 6 people per boat, the recreation day estimate is lower than the self-reported number of commercial boaters at this site (6,917; provided in Appendix C). However, assuming 8 people per commercial raft increases the range to between 6,290 and 6,920 recreation days, which includes the reported number of commercial boaters. There are also a variety of factors that may have contributed to the difference in recreation day estimates and self-reported number of boaters including those mentioned above. Additionally, outfitters provide shuttle service to the KR3 Powerhouse site for individuals to launch inner tube float trips, which are not included in the camera study estimate of whitewater boating recreation days, but which contribute to the outfitter self-reported boaters in particular in July, August, and September.

The commercial and non-commercial use at the Riverkern Beach Access Site is outside of the Wild and Scenic River corridor and thus not included with the Forest Service Special Use Permit reporting requirements. The estimated range of boating recreation days at this site is 1,630 to 1,655 recreation days during the peak whitewater boating season (combined kayak use – 80 to 85 recreation days – and raft use – 1,550 to 1,570 recreation days).

5.5. WATERCRAFT TYPES

During the camera study, rafts (combination of small and large categories) accounted for the highest percentage of recorded watercraft across all river access sites. Section 1.4 in Appendix D provides additional detail on watercraft types and use in the NFKR. Nearly 49 percent of all recorded watercraft were rafts (e.g., commercial rafts, packrafts, catarafts, shredders), while slightly more than 25 percent, respectively, were either kayaks (25.9 percent; combination of small and large categories) or other types of watercraft (25.3 percent) (e.g., inner tubes and other small inflatables). Rafts were also the most recorded watercraft at each of the three NFKR reaches (Figure 5.5-1). Except in the bypass reach where other watercraft were the second most recorded watercraft,

kayaks were the next most recorded watercraft in the other two reaches (Above Fairview Dam and Below the KR3 Powerhouse).

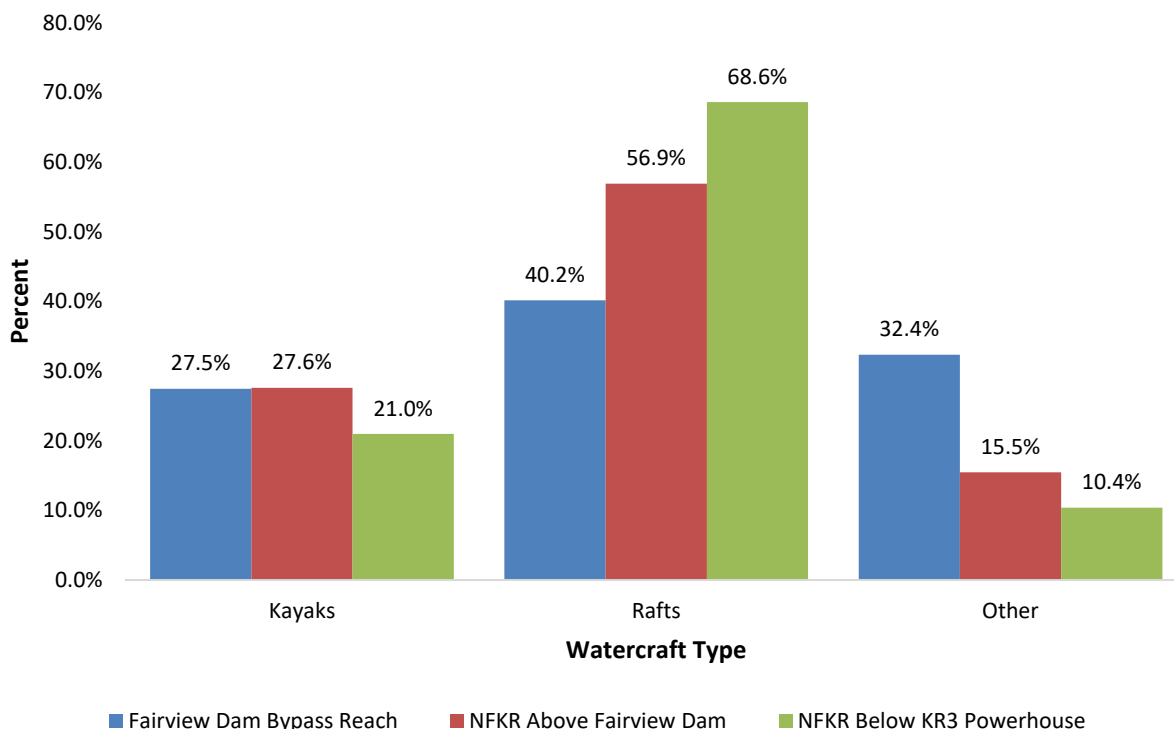


Figure 5.5-1. Types of Watercraft by NFKR Location.

5.5.1. WATERCRAFT TYPES IN THE FAIRVIEW DAM BYPASS REACH

Table 5.5-1 lists the percentage of watercraft type at each river access site. Of the eight river access sites on the Fairview Dam Bypass Reach, kayaks were the most recorded watercraft types at four sites, rafts were the most recorded watercraft type at three sites, and other types of watercraft were the most recorded at one site.

Table 5.5-1. Types of Watercraft at the Fairview Bypass Reach River Access Sites

Site	Kayaks	Rafts	Other
Upstream of Roads End Picnic Site	42.2%	14.2%	43.6%
Roads End Picnic Site and Whitewater Put-in	18.1%	45.2%	36.7%
Calkins Flat Dispersed Camping	48.2%	28.2%	23.6%
Ant Canyon Dispersed Camping	62.6%	27.2%	10.3%
Corral Creek Picnic Site and Whitewater Take-out	58.1%	26.0%	15.9%
Thunderbird Whitewater Put-in/Take-out	40.6%	42.4%	17.0%
Camp 3 Whitewater Put-in/Take-out	51.8%	41.6%	6.6%

Site	Kayaks	Rafts	Other
Riverkern Beach Picnic Site	11.0%	47.0%	42.0%
All River Access Sites^a	26.4%	39.2%	34.3%

Notes:

^a Sum does not total 100 due to rounding.

Figure 5.5-2 displays the monthly percentage of watercraft types used in the Fairview Dam Bypass Reach. Kayaks and rafts were the most commonly recorded watercraft types in March through June; other watercraft (e.g., inner tubes and other small inflatables) were the most commonly recorded type of watercraft in July and August. This boat type pattern corresponds with seasonal changes in river flows. During March through June, higher flows (inflows above Fairview Dam ranged from approximately 600 cfs to over 2,300 cfs) are generally within the optimum flow range for most kayaks and rafts.¹⁴ As flows declined through July and August (inflows decreasing from approximately 700 cfs down to 200 cfs), other types of watercraft (e.g., inner tubes and other small inflatables) were more prevalent. The increase in recorded rafts in August was primarily driven by one site: Riverkern Beach Picnic Site.

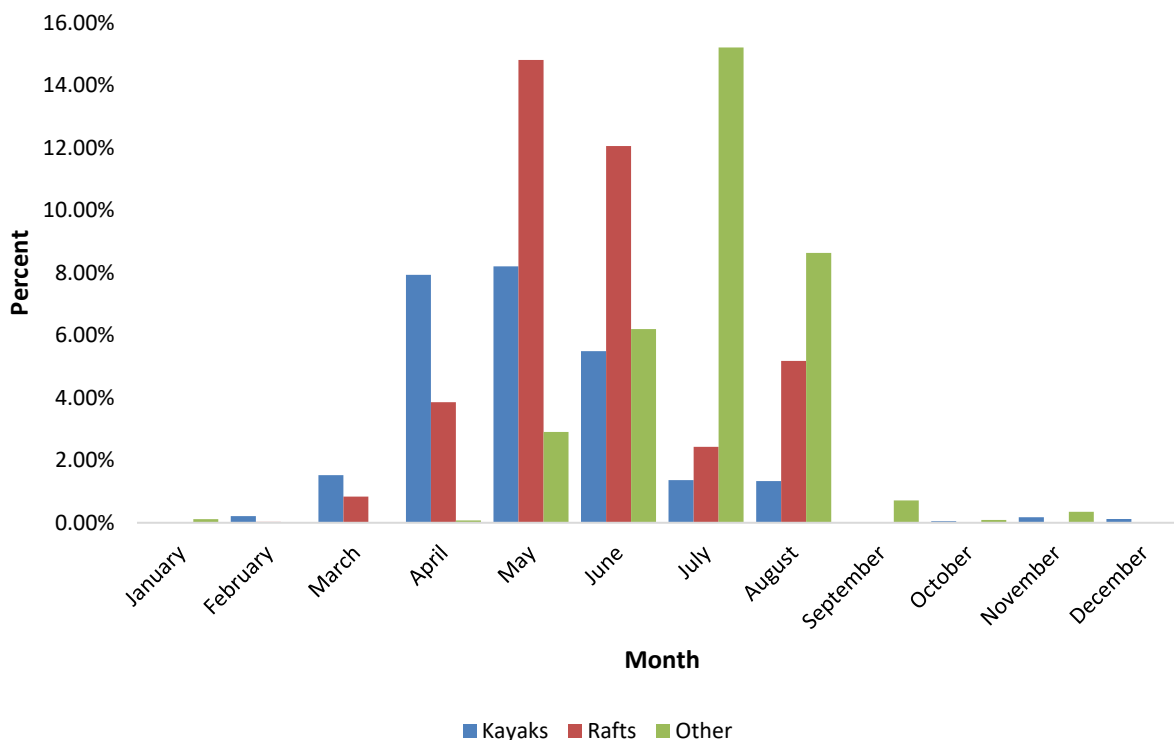
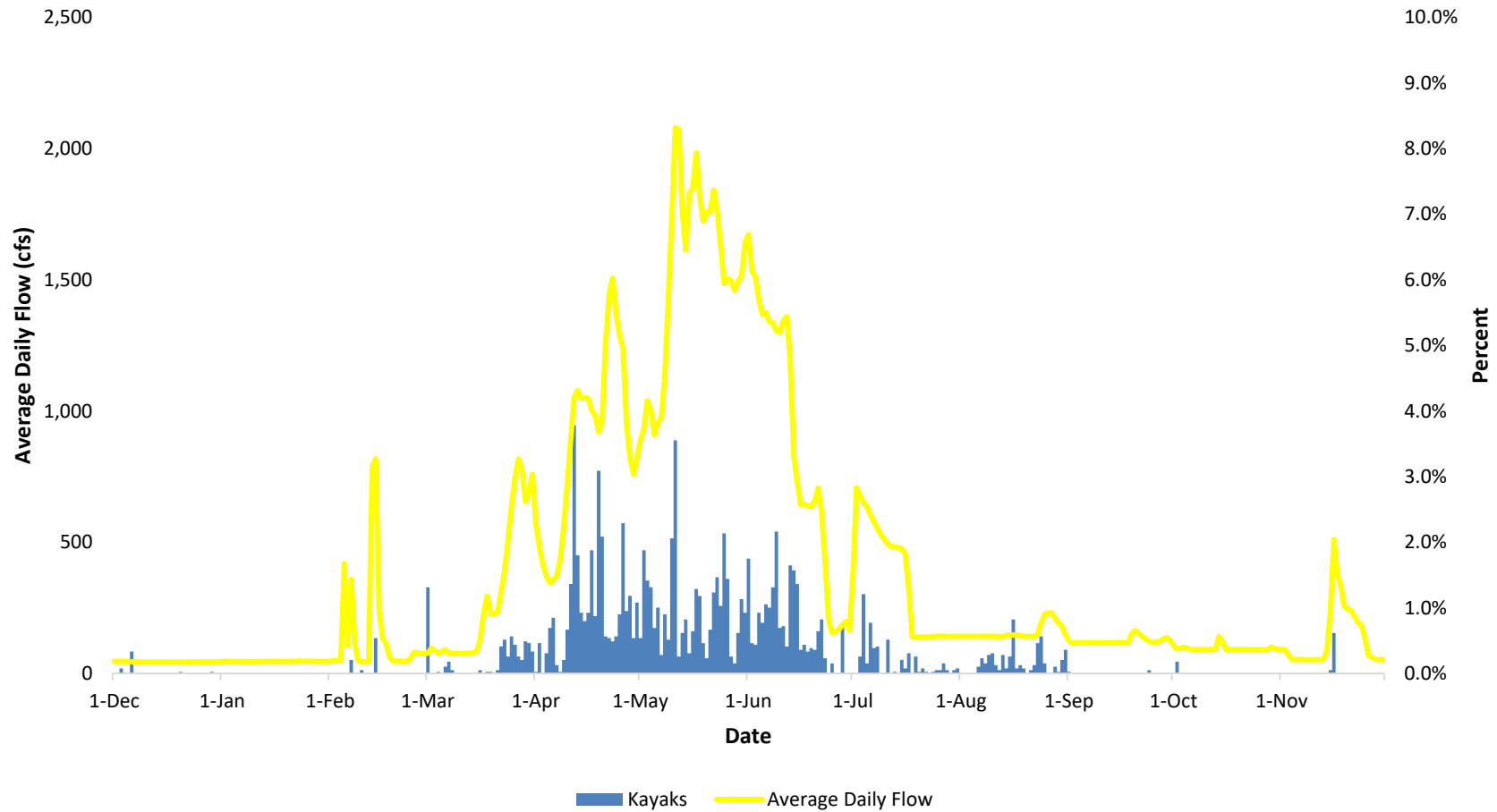


Figure 5.5-2. Annual Pattern of Watercraft Types in the Fairview Dam Bypass Reach.

¹⁴ Refer to REC-1 Whitewater Boating Level 1 Interim Technical Memorandum (SCE, 2024a) for additional information regarding flow preferences.

Over the year-long camera study, watercraft use in the Fairview Dam Bypass Reach changed as streamflow levels changed. Figures 5.5-3, 5.5-4 and 5.5-5 display the average daily flows in the bypass reach (SCE gage 401) along with the relative percent of kayaks, rafts, and other watercraft per day, respectively.



cfs = cubic feet per second

Figure 5.5-3. Relative Percent of Kayaks and Average Daily Flow in the NFKR Fairview Dam Bypass Reach.

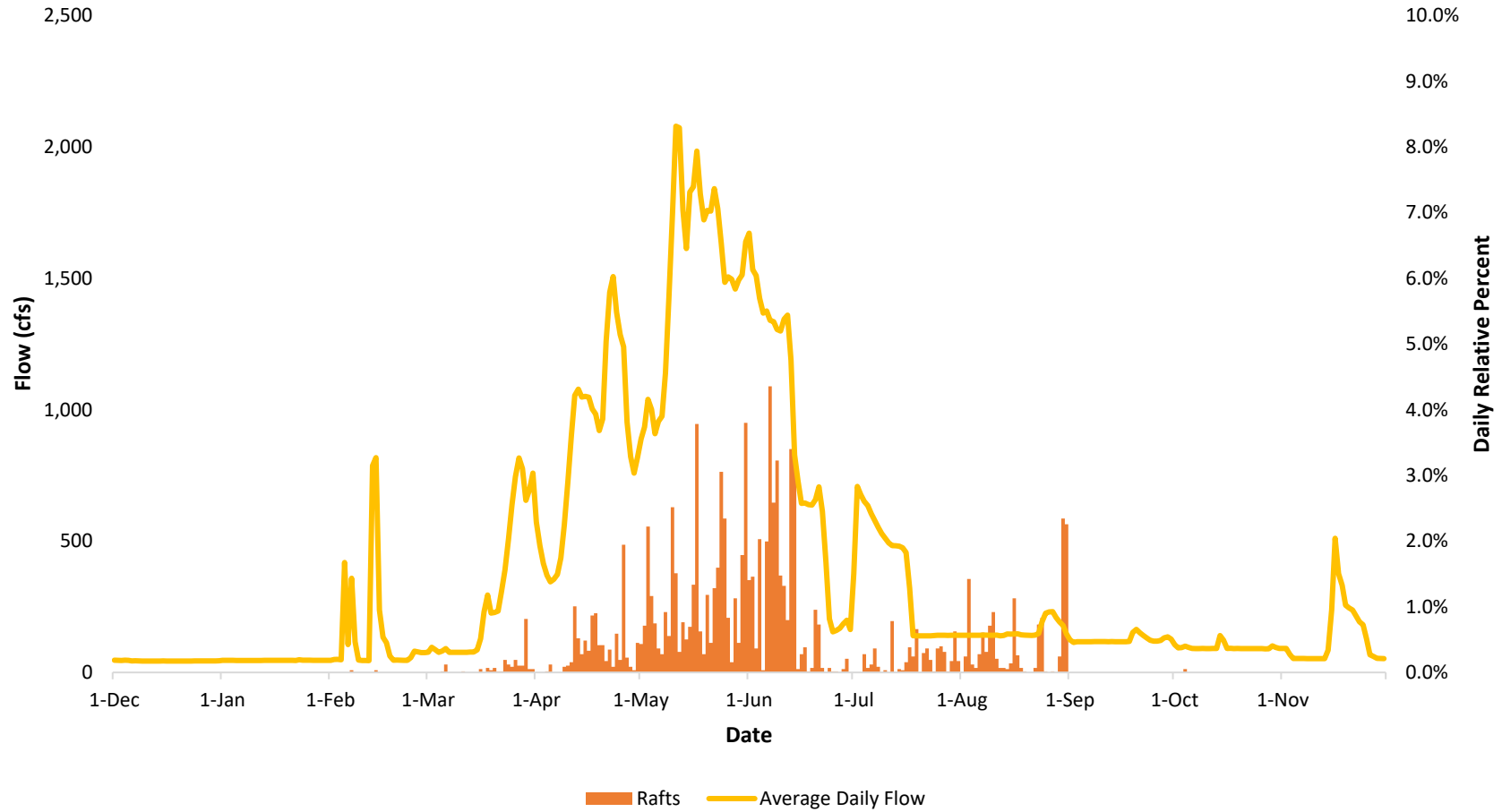
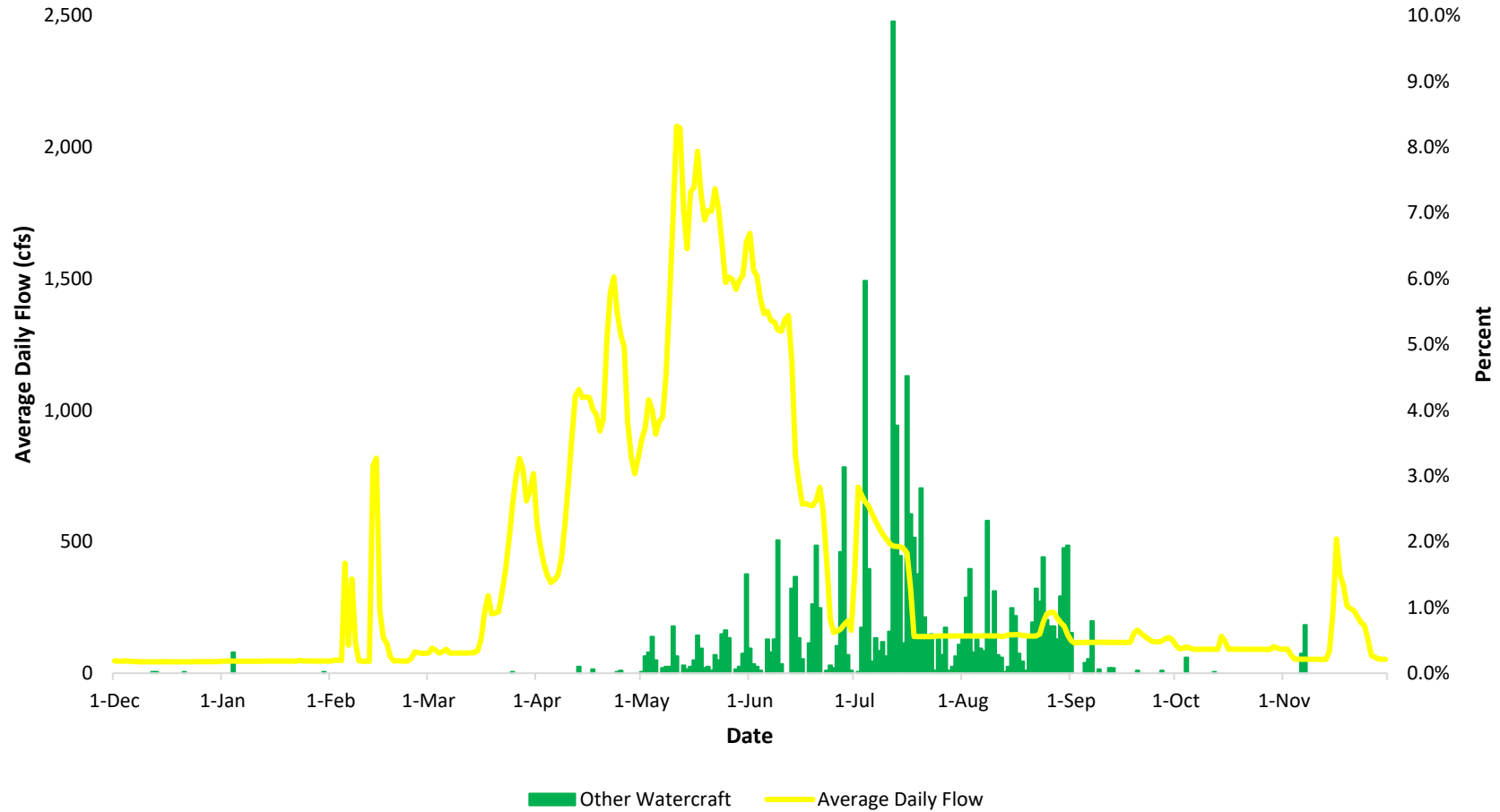


Figure 5.5-4. Relative Percent of Rafts and Average Daily Flow in the NFKR Fairview Dam Bypass Reach.



cfs = cubic feet per second

Figure 5.5-5. Relative Percent of Other Watercraft and Average Daily Flow in the NFKR Fairview Dam Bypass Reach.

Figures 5.5-3 and 5.5-4 show that whitewater boating use, both kayaks and rafts, tends to follow the availability of higher flows in the Fairview Dam Bypass Reach. For other types of watercraft, use peaks later in the summer when flows are lower (typically less than 500 cfs). A majority of this “other” watercraft use is from inner tubes and other personal inflatables. For example, on July 12, 2025, visitors with inner tubes were present throughout most of the day, causing a spike in the relative percent of use on that date. Figure 5.5-6 shows an example of this inner tube use on July 12 at 2:00 p.m.



Figure 5.5-6. Example Photograph of Inner Tube Use at Riverkern Beach.

5.5.2. WATERCRAFT TYPES ABOVE THE FAIRVIEW DAM

Rafts were the most commonly recorded watercraft type at the river access sites above Fairview Dam (Table 5.5-2). More specifically, rafts were the most recorded watercraft type at two of the river access sites while kayakers were the most recorded watercraft type at the Brush Creek river access site above Fairview Dam. The Brush Creek site is also a location where kayakers can take out of the river from the Brush Creek whitewater run, which is outside of the Project.

Table 5.5-2. Types of Watercraft at the River Access Sites above Fairview Dam

Site	Kayaks	Rafts	Other
Johnsondale Bridge River Access	25.0%	56.9%	18.1%
Brush Creek Dispersed Camping	55.4%	37.3%	7.4%
Willow Point Whitewater Take-out	26.3%	72.5%	1.1%

Site	Kayaks	Rafts	Other
All River Access Sites ^a	27.6%	56.9%	15.5%

Notes:

^a Sum does not total 100 due to rounding.

Figure 5.5-7 displays the relative monthly percentage of watercraft types used above the Fairview Dam. Similar to the bypass reach, kayaks and rafts were the most commonly recorded watercraft types in March through June. In July and August, other watercraft were the most commonly recorded type of watercraft. About 96 percent of the other watercraft in July and August were recorded at the Johnsondale Bridge River Access.

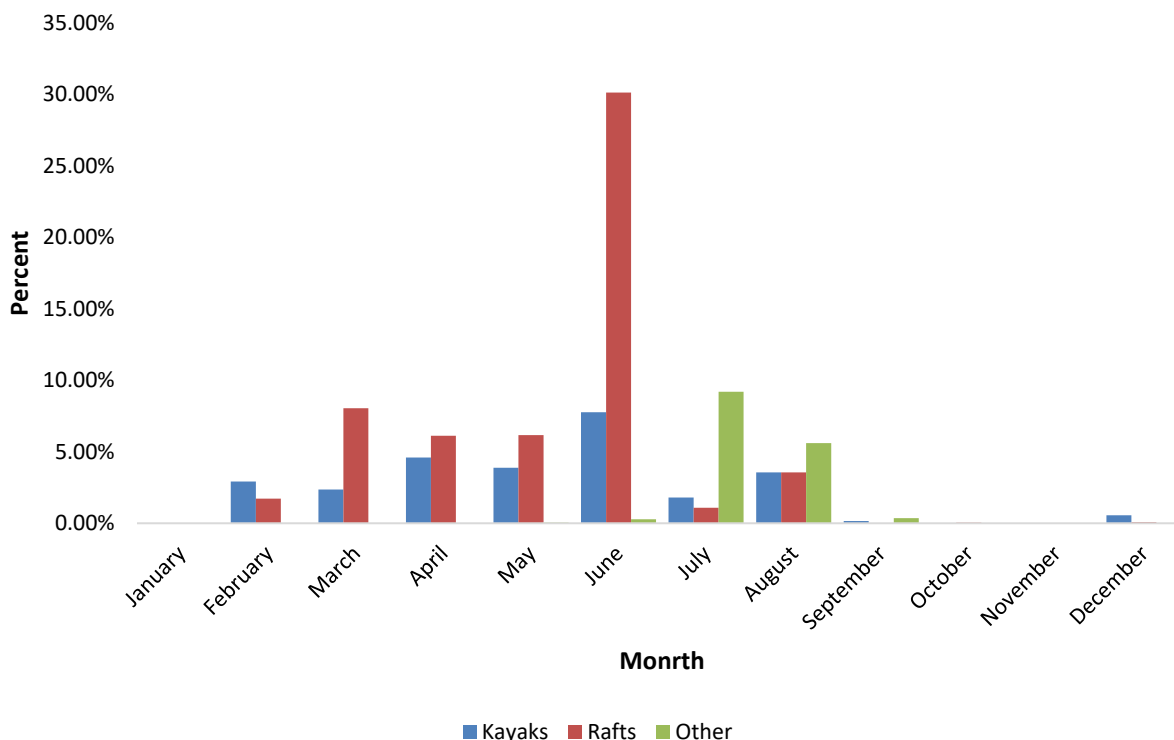
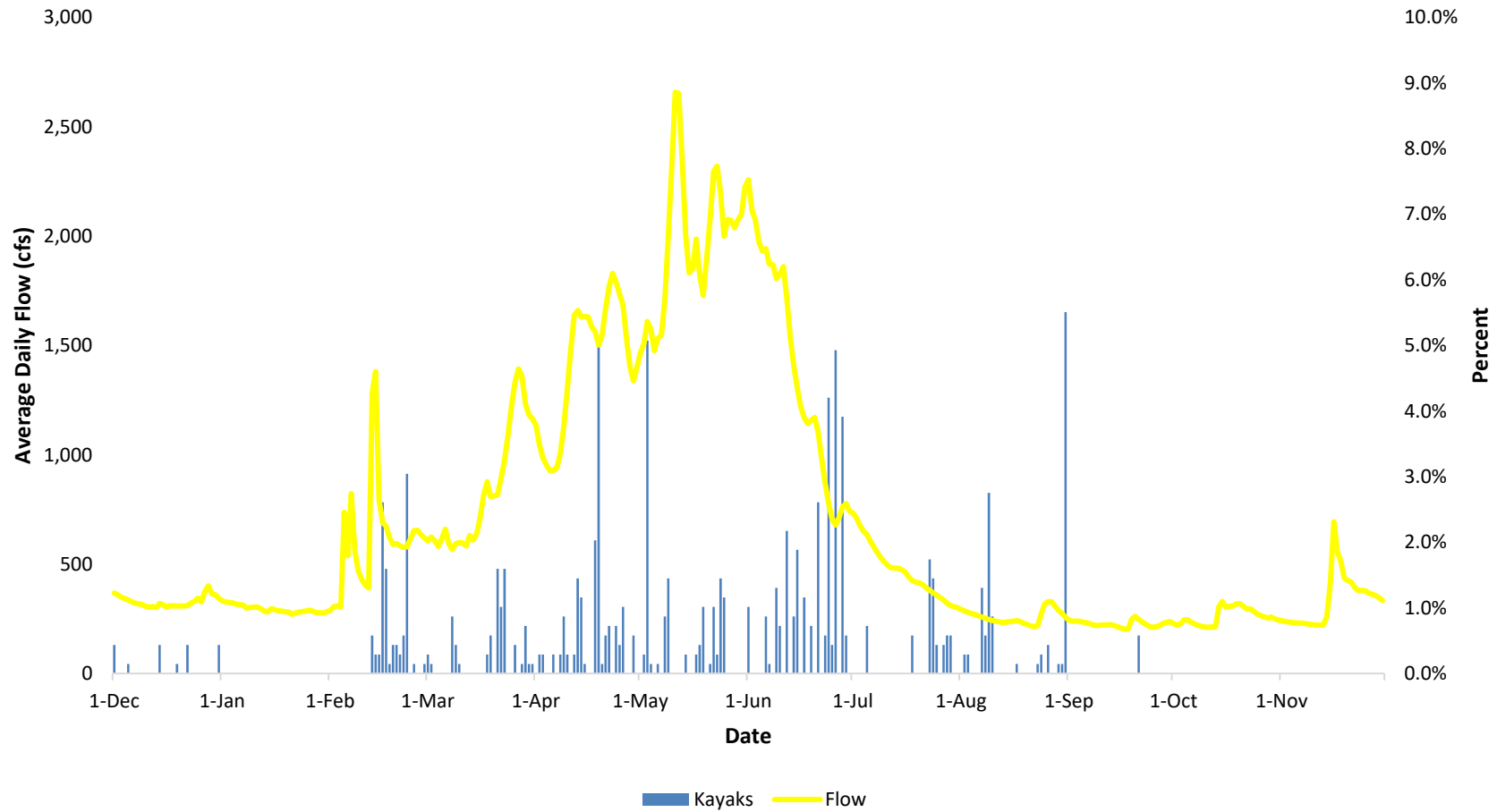


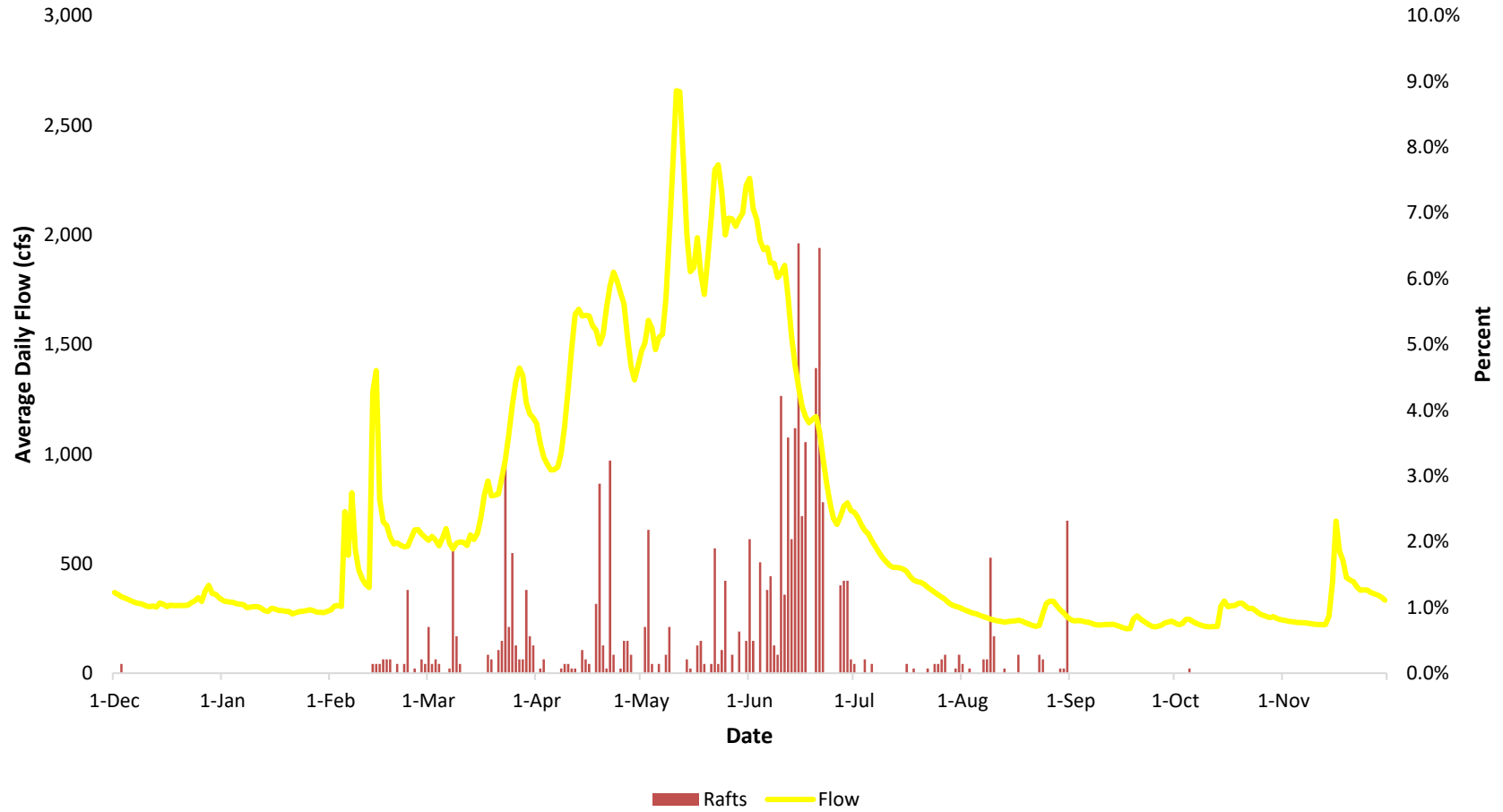
Figure 5.5-7. Annual Pattern of Watercraft Types above Fairview Dam.

Figures 5.5-8, 5.5-9, and 5.5-10 display the average daily flows in NFKR above Fairview Dam (combined SCE gages 401 and 402) along with the relative percent of kayaks, rafts, and other watercraft per day.



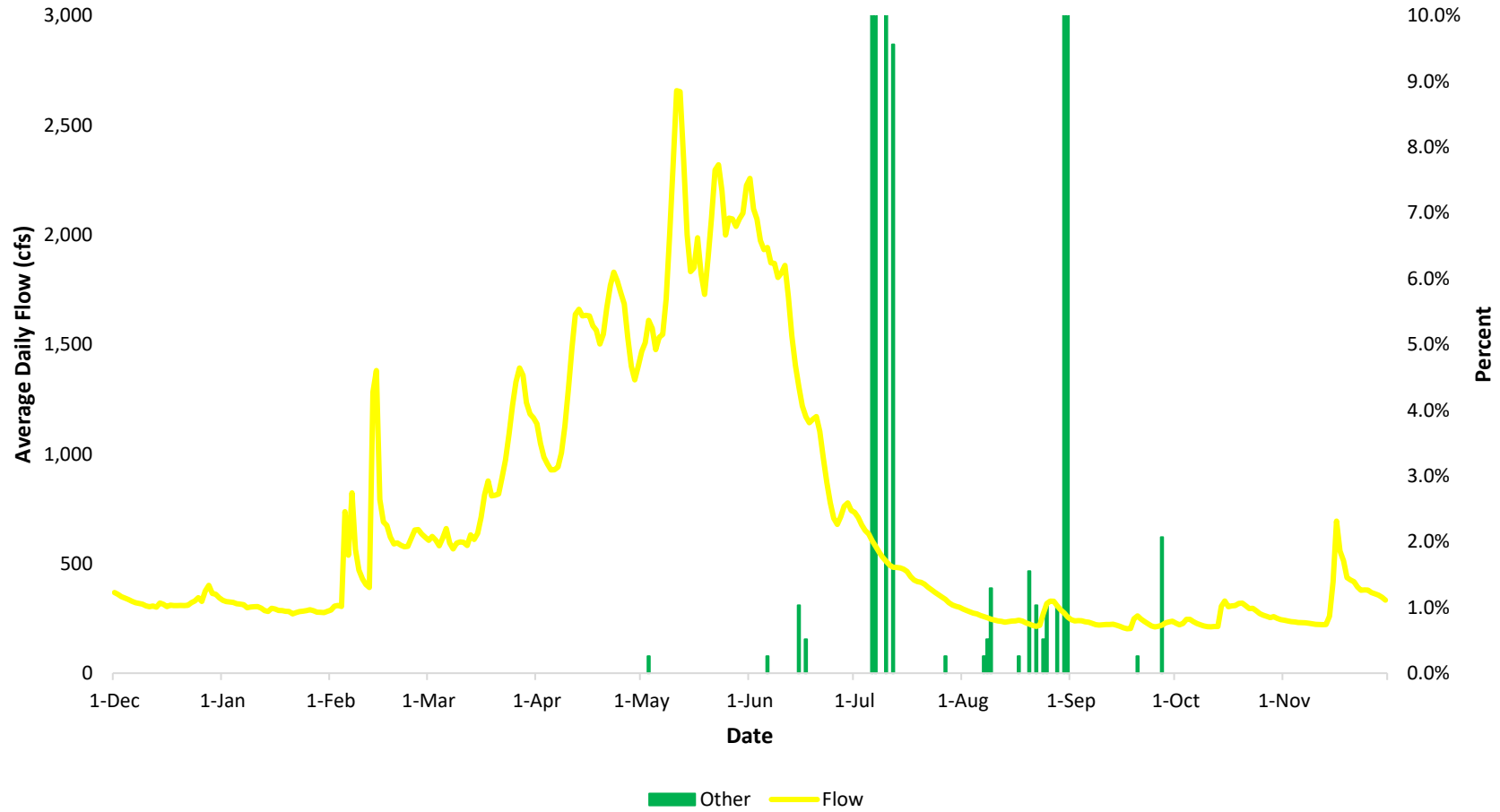
cfs = cubic feet per second

Figure 5.5-8. Relative Percent of Kayaks and Average Daily Flow in the NFKR Above Fairview Dam.



cfs = cubic feet per second

Figure 5.5-9. Relative Percent of Rafts and Average Daily Flow in the NFKR Above Fairview Dam.



cfs = cubic feet per second

Figure 5.5-10. Relative Percent of Other Watercraft and Average Daily Flow in the NFKR Above Fairview Dam.

5.5.3. WATERCRAFT TYPES BELOW THE KR3 POWERHOUSE

Rafts were the most commonly recorded watercraft type at the KR3 Powerhouse Whitewater Put-in/Take-out below the KR3 Powerhouse (Table 5.5-3). Both cameras at this site (upstream and downstream) recorded more rafts than any other type of watercraft during the camera study.

Table 5.5-3. Types of Watercraft at the River Access Sites below the KR3 Powerhouse

Camera/Site	Kayaks	Rafts	Other
Camera 15/17 (upstream)	34.5%	46.7%	18.8%
Camera 16/18 (downstream)	21.0%	68.6%	10.4%
Combined upstream and downstream KR3 Powerhouse Whitewater Put-in/Take-out	24.4%	63.1%	12.5%

KR3 = Kern River No. 3

Figure 5.5-11 displays the relative monthly percentage of watercraft types below the KR3 Powerhouse. Similar to the bypass reach, kayaks and rafts were the most commonly recorded watercraft types in March through June. In July, other watercraft accounted for the most commonly recorded type of watercraft and then rafts were again the most commonly recorded watercraft in August. This may be due to changes in outfitter trip offerings during this time that take advantage of flows below the powerhouse.

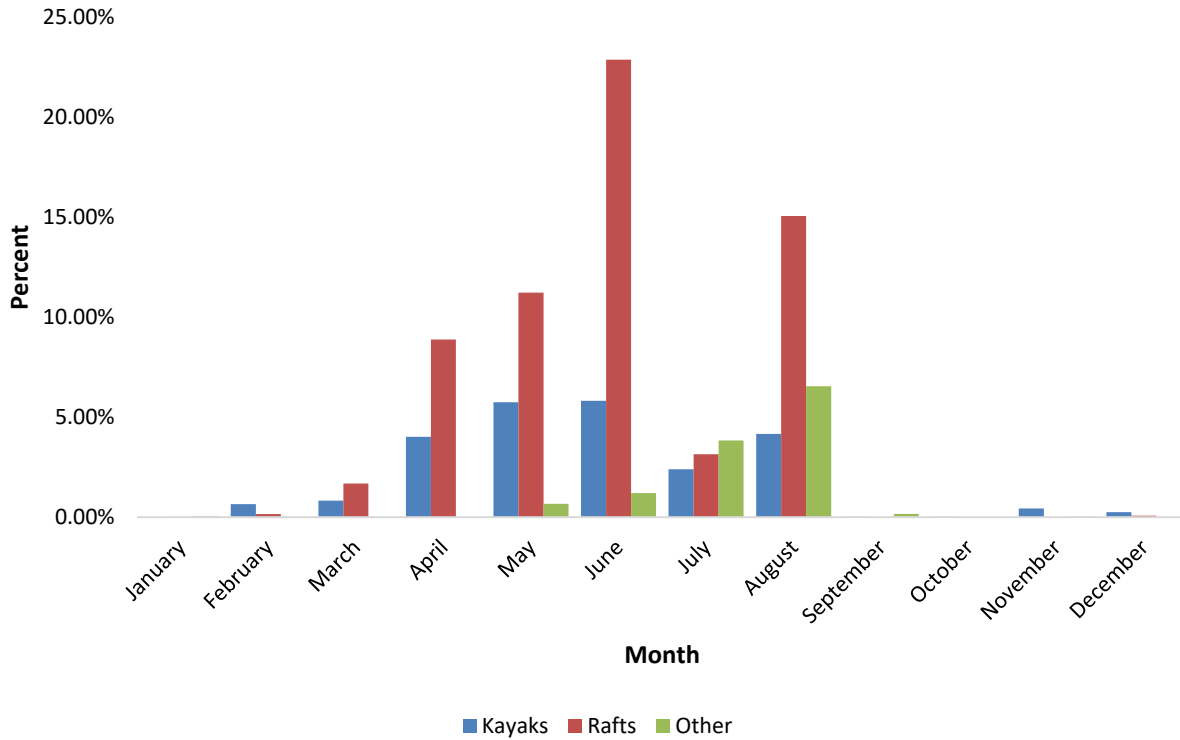
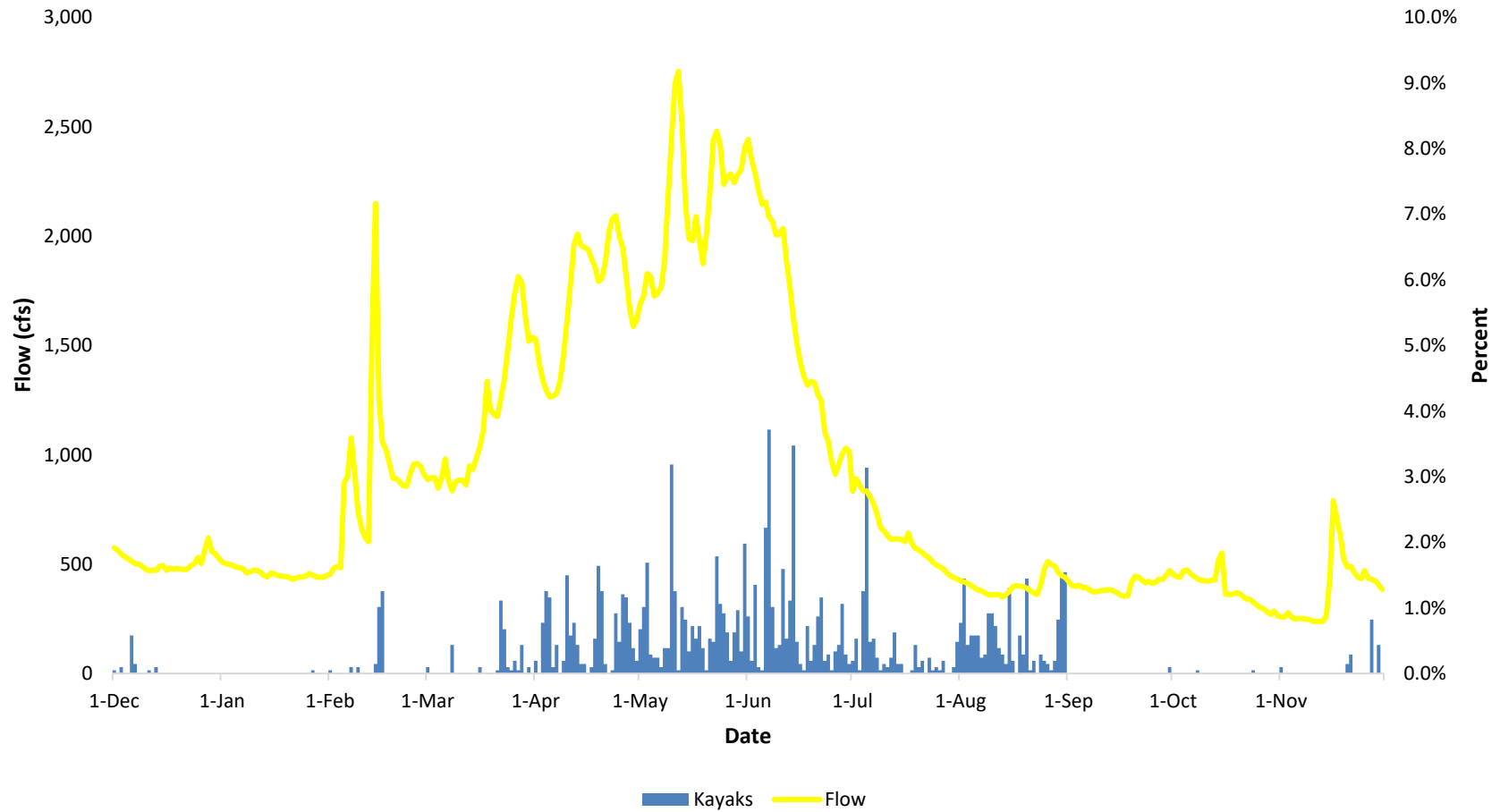


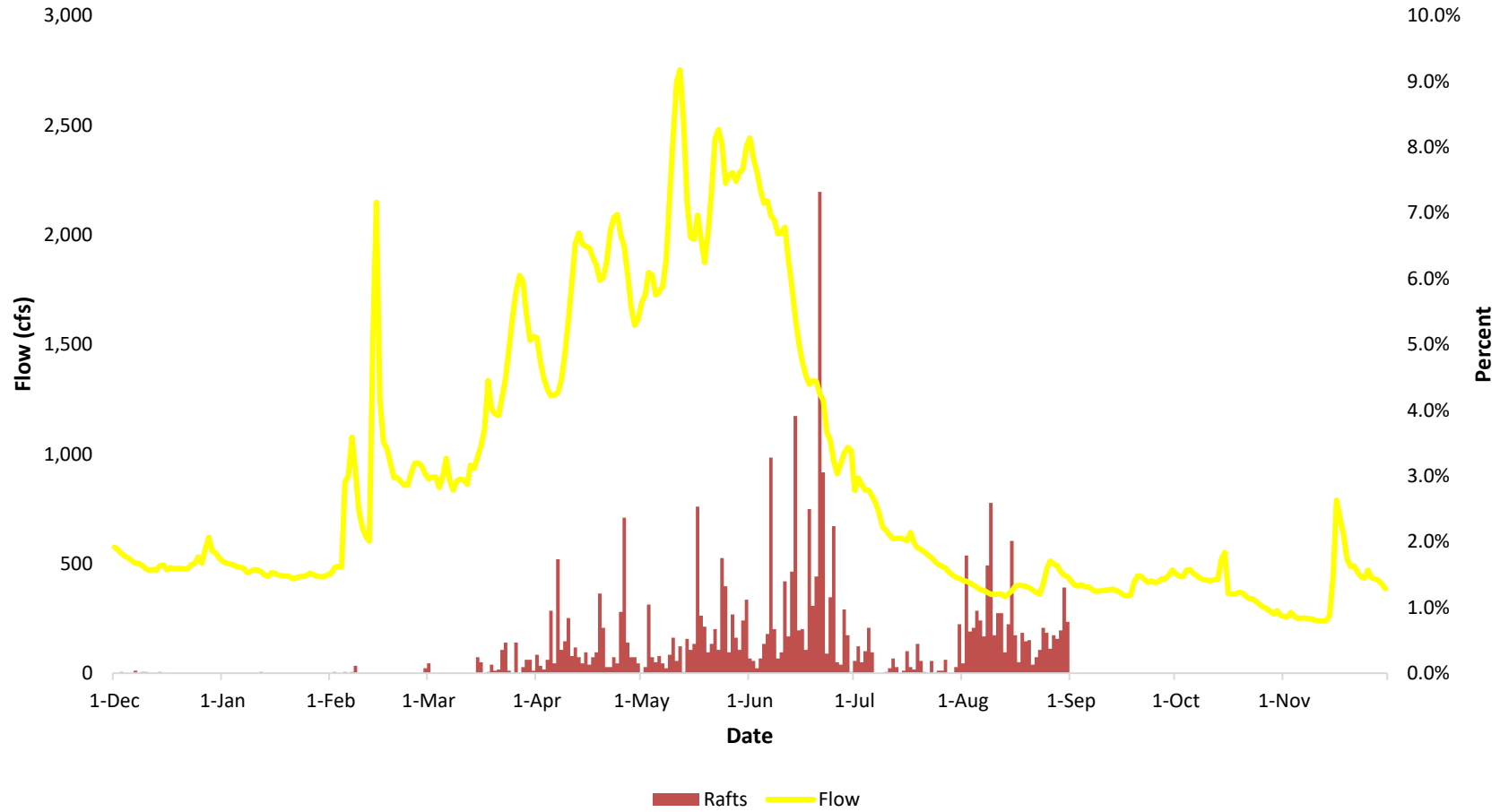
Figure 5.5-11. Annual Pattern of Watercraft Types Below the KR3 Powerhouse.

Figures 5.5-12, 5.5-13, and 5.5-14 display the average daily flows in NFKR below the KR3 Powerhouse (USACE gage in Kernville) along with the relative percent of kayakers, rafts, and other watercraft per day.



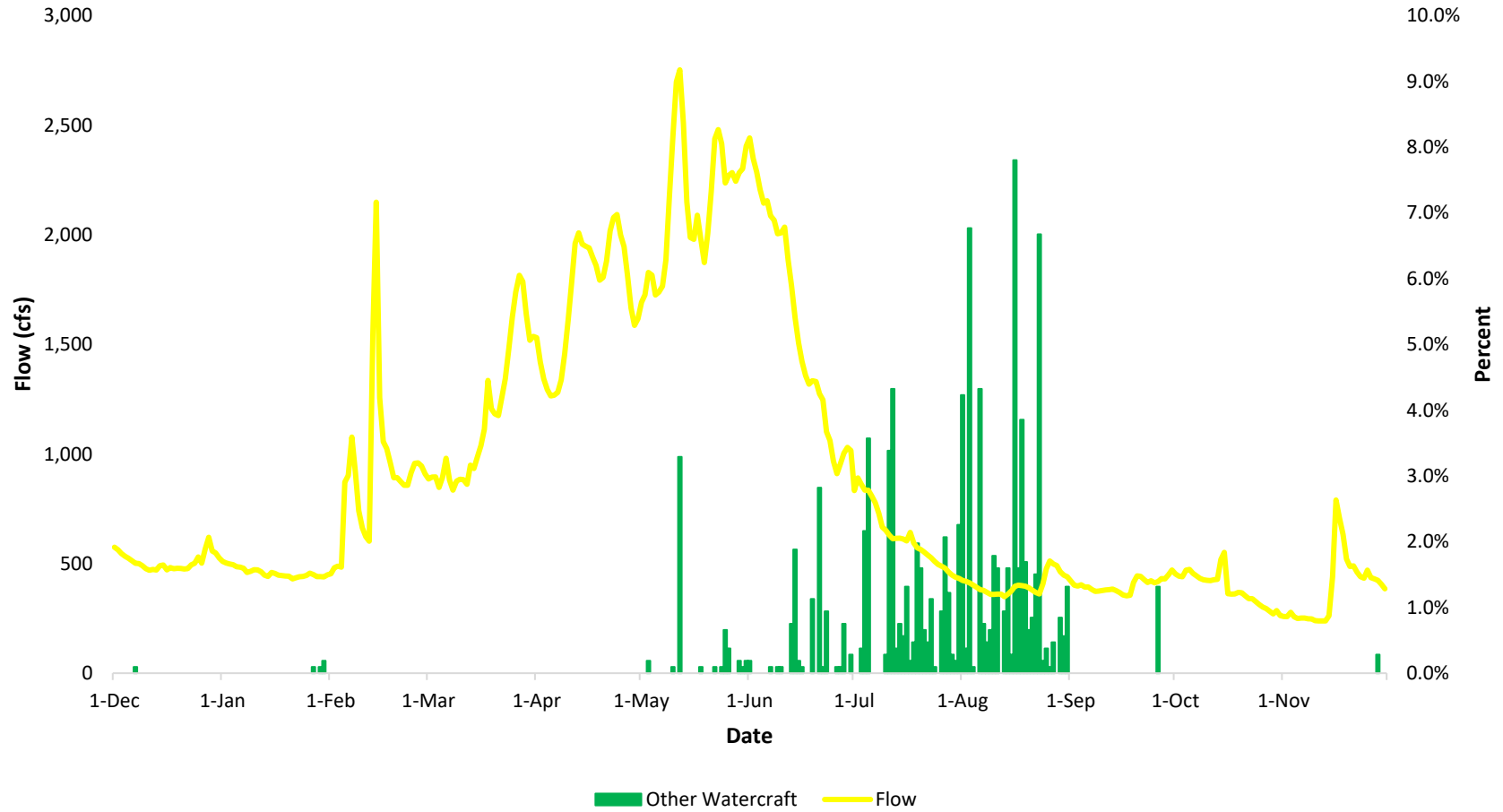
cfs = cubic feet per second

Figure 5.5-12. Relative Percent of Kayaks and Average Daily Flow in the NFKR Below KR3 Powerhouse.



cfs = cubic feet per second

Figure 5.5-13. Relative Percent of Rafts and Average Daily Flow in the NFKR Below KR3 Powerhouse.



cfs = cubic feet per second

Figure 5.5-14. Relative Percent of Other Watercraft and Average Daily Flow in the NFKR Below KR3 Powerhouse.

6.0 STUDY-SPECIFIC CONSULTATION

Per FERC's Determination on Requests for Study Modifications and New Studies issued on May 30, 2024 (FERC, 2024), SCE conducted initial outreach with the Forest Service regarding installation of cameras on Forest Service Lands on June 17 and July 31, 2024. Following these discussions, SCE received an email from the SQF Recreation Lands Officer provisionally approving the initial 13 camera locations. On August 14, 2024, SCE provided the Forest Supervisor with a formal request for approval of the camera locations.

On August 29, 2024, SCE invited other resource agencies and interested boaters to attend a call where SCE provided an update on Forest Service consultation and presented the proposed camera locations. In discussions during and as a follow up to the meeting, boaters provided feedback on the proposed camera locations. In response to their comments, SCE agreed to include three additional camera locations, subject to Forest Service approval.

SCE provided the Forest Service an updated request to the SQF Recreation Lands Officer and Forest Supervisor on September 27, 2024, that included the three additional locations. The Forest Supervisor issued formal approval of the camera locations on October 16, 2024. SCE notified relicensing participants on December 5, 2024, that all cameras have been installed and that the 1-year data collection period began on December 1, 2024.

On April 4, 2025, SCE filed an update with FERC regarding study implementation activities and the continued evaluation of the AI tool for image analysis (FERC Accession No. 20250404-5213). Following this filing, SCE hosted a call with relicensing participants on May 21, 2025, to provide details on the AI analysis and to address questions regarding study implementation.

Copies of relevant filings and supporting documents are provided in Appendix F, *Consultation Record*.

7.0 OUTSTANDING STUDY PLAN ELEMENTS

None, this Study Plan is complete.

8.0 REFERENCES

FERC (Federal Energy Regulatory Commission). 2022. *Study Plan Determination for the Kern River No. 3 Hydroelectric Project*. Accession No. 20221012-3024 October 12.

FERC (Federal Energy Regulatory Commission). 2024. *Determination on Requests for Study Modifications and New Studies*. Accession No. 20240530-3030. May 30.

SCE (Southern California Edison). 2023. *Kern River No. 3 Hydroelectric Project, FERC Project No. 2290-122; Initial Study Report*. Accession No. 20231009-5229. Filed with FERC on October 9, 2023.

SCE (Southern California Edison). 2024a. *Kern River No. 3 Hydroelectric Project, FERC Project No. 2290-122; Request to File Study Results*. Accession No. 20240301-5315. Filed with FERC on March 1, 2024.

SCE (Southern California Edison). 2024b. *Kern River No. 3 Hydroelectric Project, FERC Project No. 2290-122; Addendum to Initial Study Report*. Accession No. 20240329-5136. Filed with FERC on March 29, 2024.

SCE (Southern California Edison). 2024c. *Kern River No. 3 Hydroelectric Project, FERC Project No. 2290-122; Final License Application*. Accession No. 20241122-5261. Filed with FERC on November 22, 2024.

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