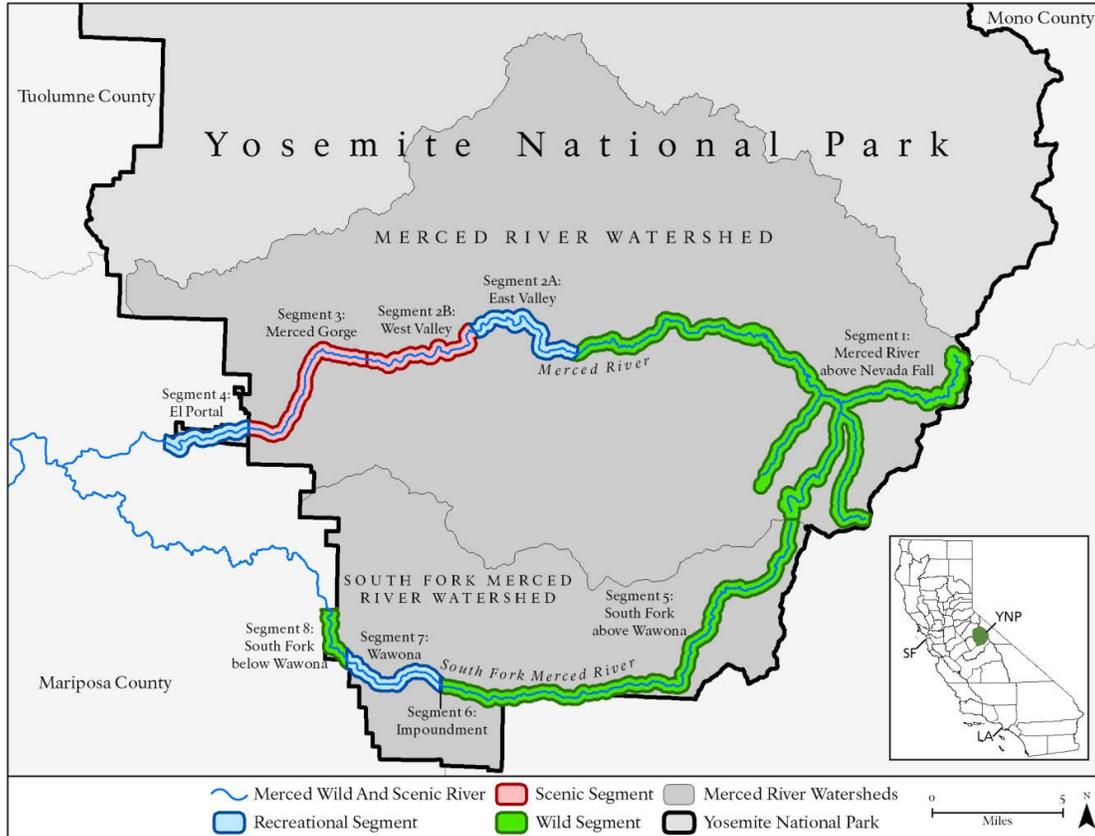


Below are the proposed management conditions relating to boating on the Merced in Yosemite National Park, excerpted from the [Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement](#). This includes conditions from the preferred alternative and the rationale contained in Appendix R. The Final Plan organizes the segments by type (Wild, Scenic, Recreational). Here we organize the river segments in order by number.



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### ***Segment 1: Wilderness above Nevada Fall (Wild Segment)***

Private boating would be allowed in Segment 1. This use would likely consist of short floats, using boats that could easily be carried into this remote area. Only 25 boats per day would be allowed, and a permit would be required as an addition to the wilderness permit required for camping. See Appendix R for additional information on equipment restrictions, open stretches, and put-in and take-out locations.

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## ***Segment 1 – Main Stem Above Nevada Fall***

**Open Section:** Headwaters of the Main Stem Merced River to Half Dome Trail and Merced Lake Trail Junction **Segment Capacity:** 20 people/day **Management Mechanism:** Issued with Wilderness permit for this area

***Rationale for capacity and requiring permits:*** Opening this reach to boating creates a new “water trail” or backcountry route that has not been considered in previous Wilderness quota system decisions. There is a need to identify and track this new use methodically, so backcountry users who plan to boat will have to declare the reaches they will use when they obtain their backcountry permit. This will allow the park to develop use-impact relationships over the long term and adjust capacities if necessary.

***Rationale for permit number:*** These capacities are consistent with other backcountry trails that have identified trailhead quotas and zone capacities based on regular use patterns on specific routes. Existing trailhead quotas for this segment range between 10 and 30 people per day and keep encounter rates on most trail sections lower than about 2 per hour. Boating capacity on this new water trail in this river segment is set in the middle of this range and would achieve similar encounter conditions along the river. Estimated demand suggests that use levels are unlikely to approach the capacity on this reach.

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## ***Segment 2: Yosemite Valley (Recreational and Scenic Segments)***

### ***Recreational Values***

• **Boating Opportunities** – Allow up to 295 boats per day through a mix of both private and commercial use in East Yosemite Valley. Allow boating for 45 private boaters in West Yosemite Valley. Boating would be limited to specific stretches of river in Yosemite Valley. Expanded boating opportunities would enhance dispersed recreation along the river corridor.

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- Allow both private boating and commercial rafting in this river segment, and expand private boating access to include additional reaches of the Merced River.
  - Private boating (estimated at 150 boats per day) would be allowed between Lower River Campground and Sentinel Beach/Yellow Pine. The put-ins and take-outs for this river segment (2A) would be located at the Lower River Day-use Area and Sentinel Beach. An additional 45 private boaters would be allowed to float

- between Clark's Bridge and Sentinel Beach. A capacity of 195 private boats per day has been set for this river segment (2A). Additionally, 45 people per day would be allowed to boat in the West Valley segment (2B) (between Sentinel Beach and just below Pohono Bridge).
- Commercial raft rentals would be available for use in the river reach between Stoneman Bridge and Sentinel Beach. This use would be limited to 50 boats-at-one-time (approximately 100 boats per day).
  - See Appendix R for additional information on equipment restrictions, open stretches, and put-in and take-out locations.

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### ***Segment 2a- East Yosemite Valley***

- **Section 1:** Clark's Bridge to Stoneman Bridge and through to Sentinel Beach (private only) **Private use allowed:** 45 people per day
- **Section 2:** Stoneman Bridge to Sentinel Beach (commercial and private uses) **Commercial use allowed:** 50 BAOT (100 boats per day) **Private use allowed:** 150 boats per day.
- **Total Segment Capacity:** 295 boats per day **Commercial use allocation:** Online reservations or at concession reception desks **Private use allocation:** Onsite Self-Registration
- **Monitoring Capacity:** This reach is currently open to both private and commercial boating use. Permits for private use are not required; commercial use, however, is monitored through an NPS contract and/or permit. The NPS will monitor boating use in this section. Boating access will be regulated if excessive access leads to impacts in this segment.
- **Rationale for Capacity:** The capacity for this segment is higher than any other river segment; however it is below historical peak use numbers. Commercial use is set 50% below current use; private use remains roughly the same. Overall this will reduce the number of boats in the view-shed, reduce boating congestion at launch areas and high use beaches, and provide a lower density visitor experience for boaters and shore users. The footprint necessary for commercial rafting operations will be reduced and relocated out of the river corridor. The rafting center at Curry Village will be relocated with a put-in near the vicinity of the Lower Rivers day use area.
- Existing commercial use averages 140 raft rentals per day with peaks just over 200, and commonly produces just under 100 boats at one time on the segment during peak use. The new capacity will reduce commercial rafts about 25% to 50 rafts at one time and 100 rafts per day. In the 2011 river use study, this option had more opposition than support (43% opposed vs. 17% support), but more support than for eliminating raft rentals entirely (80% opposed vs. 7% support). Existing

- private use averages about 90 boats per day with peaks about 130, and may produce as many as 100 boats at one time during early afternoon. The proposed capacities would essentially freeze existing private use at current levels, but reduce at one time use on a few peak days to about 75.
- Currently during the high boating season, there are about 230 boats per day with peak use at about 330 boats per day. The overall limit for this section would be set at 295 boats per day. This number (295) would likely create a peak number of boats at one time of about 175. This number of boats at one time (175) would create conditions that are below the visitor “acceptability” level as found in the 2011 river study.

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### ***Segment 2b- West Yosemite Valley***

- **Open Section:** Sentinel Beach to Pohono Bridge
- **Segment Capacity:** 45 people/day
- **Management Mechanism:** Monitored until permitting is necessary to manage use
- **Rationale for opening the segment to private boating use:** This segment provides a high quality medium challenge whitewater opportunity that was commonly boated through the mid-1980s. Capacities are set to keep boating densities low and avoid congestion or negatively impact the existing lower density shore-based recreation opportunities in west valley of Yosemite. The 2011 river study showed 43% in support of opening new segments of the valley for boating (22% were opposed).
- **Monitoring Capacity:** Opening this reach to boating creates a new “water trail” in a lower use part of Yosemite Valley (even as many vehicles pass through the reach). There is a need for the park to monitor use and develop use-impact relationships over the long term, which can ensure that use levels are providing high quality experiences and not overwhelming limited parking at existing river access areas. Boating access will be regulated if excessive access leads to impacts in this segment.
- **Rationale for capacity:** The capacity is intended to provide a lower density boating experience than what is offered in the east valley. The primary limiting factors for boating capacities in this area are social conditions (encounters) and very limited parking availability near the take-out (about 15 spaces). Logical calculations (with assumptions about group sizes and craft types) suggest that 45 people per day would probably equate to no more than 25 to 35 boats in 10 to 12 groups, which would produce relatively few on-river encounters. This would be a noticeably lower boating density than proposed for East Valley 2a, but a higher one than found on the wilderness reaches, providing a diversity of visitor opportunities for the entire corridor. Although use is likely to occur during the spring (April, May and June in an average year), parking areas are shared by other

park visitors. It is possible that all of the parking spaces at the takeout may be filled up with a boating capacity of 45 (assumes 3 people per vehicle). However, the park would use an education program at registration to encourage boaters to use bicycle shuttles and other alternatives so that other park visitors are not displaced in the springtime.

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### ***Segment 3: Merced Gorge (Scenic Segment)***

- Under Alternative 5 (Preferred), private boating (likely kayaks) would be allowed in Segment 3. Boaters would be allowed on the river reach starting below Pohono Bridge (in Segment 2) through El Portal (Segment 4). Boaters would be allowed to put in and take out at any of the roadside pull-outs. This use would be restricted to 10 people per day. See Appendix R for additional information on equipment restrictions, open reaches, and put-in and take-out locations.

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### ***Segment 3- The Merced Gorge***

- **Open Section:** Pohono Bridge to Park Line
- **Segment Capacity:** 10 people/day
- **Management Mechanism:** Self-registration and monitor until permitting is necessary to manage use
- **Monitoring Capacity:** This is a very challenging stretch of water (mostly Class V+) and it is unlikely to attract much use. Monitoring through self-registration will help NPS track this use methodically. Use information will allow better estimates of SAR risks and help estimate congestion or parking impacts from allowed boating use. If daily use on this segment is found to be in excess of the stated capacity, a permit system will be implemented to regulate use on this segment.
- **Rationale for capacity:** Parking at boating access locations is limited to small roadside pull-outs that have primarily been used by visitors for short stops on their scenic drives through the park. Ten boaters per day allows two to three small kayaking groups to access this segment of river daily. Estimated demand suggests that use levels are unlikely to approach the capacity on this very challenging reach.

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### ***Segment 4: El Portal (Recreational Segment)***

- Fifty private boaters per day would be allowed on the river in Segment 4. Boaters would be allowed to paddle the stretch of river from below Yosemite View Lodge to beyond the Foresta Bridge (at which point boaters would exit the segment). Boaters would be able to use put-ins and take-outs west of the hotel, at the store/gas station, and at the Red Bud launch site. See Appendix R for additional information on equipment restrictions, open reaches, and put-in and take-out locations.

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### ***Segment 4- El Portal***

- **Open Section:** Below Yosemite View Lodge to Foresta Bridge
- **Segment Capacity:** 50 people/day
- **Management Mechanism:** Self-registration and monitor until permitting is necessary to manage use
- **Monitoring Capacity:** Although this reach is currently open, NPS has little information about use or impacts. Monitoring and self-registration at put-in locations will help NPS identify and track this use methodically. This will allow the park to monitor use and develop use-impact relationships over the long term, which can ensure use levels are providing high quality experiences and not overwhelming limited parking at river access areas. Estimated demand suggests that use levels are unlikely to approach this capacity. Boating access will be regulated if excessive use leads to impacts in this segment.
- **Rationale for capacity:** The limiting factors for boating capacities in this area are social conditions (encounters) and limited parking availability near the put-in (about 15 to 20 spaces at Crane Creek and along the road across from the El Portal store). Logical calculations (with assumptions about group sizes and craft types) suggest that 50 people per day will probably produce few on-river encounters (similar to the West Valley reach). Although use is likely to occur during a short high use season (about three months from late April to early July in an average year), parking areas near the put-in are also used by El Portal residents and other park visitors. The 50 person capacity allows many parking spaces to be utilized by boaters (assuming 3 people per vehicle), but should leave several spaces for other users because some boaters will shuttle their vehicles to the take-out.

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### ***Segment 5: South Fork Merced above Wawona (Wild Segment)***

- Private boating would be allowed in Segment 5. This use would generally consist

of short floats, using boats that could easily be carried into this remote area. A maximum of 25 people per day would be allowed, and boating permits could be obtained in conjunction with the required wilderness permit. See Appendix R for additional information about equipment restrictions, open reaches, and put-in and take-out locations.

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### ***Segment 5 – South Fork Above Wawona***

- **Open Section:** Headwaters of the South Fork Merced River to Swinging Bridge  
**Segment Capacity:** 25 people/day
- **Management Mechanism:** Issued with Wilderness permit for this area
- **Rationale for requiring permits:** Opening this reach to boating creates a new “water trail” or backcountry route that has not been considered in previous Wilderness quota system decisions. There is a need to track this new use methodically, so backcountry users who plan to boat will have to declare the reaches they will use when they obtain their backcountry permit. This will allow the park to develop use-impact relationships over the long term and adjust capacities if necessary. This segment of river is only accessed by backcountry travel or by trails that originate in USFS land.
- **Rationale for permit number:** Consistent with other trail head quotas in this area (which range from 10 to 30 people per day), the capacity is 20 people per day. This segment of river passes through two wilderness zones that permit camping: South Fork Zone (#50) and Johnson Creek Zone (#51). The capacities of these corridors are 15 people per day and 5 people per day respectively. Estimated demand suggests that use levels are unlikely to approach the capacity on this reach.

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### ***Segments 6 and 7: Wawona Impoundment and Wawona (Recreational Segments)***

- **Boating** – Boating would be limited to private use only with a maximum of 50 people per day. The open reach of the river would be from below the Swinging Bridge area to the Wawona Campground, excluding the Wawona impoundment.

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### ***Segment 7- Wawona***

- **Open Section:** Swinging Bridge to Wawona Campground

- **Segment Capacity:** 50people/day
- **Management Mechanism:** Self-registration and monitor until permitting is necessary to manage use
- **Monitoring Capacity:** Although this reach is currently open, NPS has little information about use or impacts. Monitoring will help NPS identify and track this use methodically, This will allow the park to develop use-impact relationships over the long term, which can ensure use levels are providing high quality experiences and not overwhelming limited parking at river access areas. A capacity of 50 people per day assumes 15 (60%) of those spaces are used by boaters, with approximately 3 boaters per car. This provides an opportunity similar to the El Portal segment. Boating access will be regulated if excessive use leads to impacts in this segment.
- **Rationale for capacity:** The limiting factors for boating capacities in this area are social conditions (encounters) and limited parking availability near the river access points (about 25 spaces at Wawona Swinging Bridge) and less than 10 non-camping day use spaces at the campground. Logical calculations (with assumptions about group sizes and craft types) suggest that 50 people per day is likely to produce relatively few on-river encounters (similar to the West Valley and El Portal reaches). The 50 person capacity also allows about 15 of the spaces at Wawona Swinging Bridge (60% of the total) to be utilized by boaters (assuming 3 people per vehicle); this should leave several spaces for other users because many boaters will shuttle their vehicles to the take-out. Estimated demand suggests that use levels are unlikely to approach this capacity.

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### ***Segment 8: South Fork Merced below Wawona (Wild Segment)***

Private boating would be allowed in this segment. Generally, this activity would consist of short floats, with craft that can easily be carried into this remote area. Boating activity would be limited to 25 people per day and a permit would be issued for this use in conjunction with the wilderness permit required for camping. Please see Appendix R for additional information on equipment restrictions, open reaches, and put-in and take-out locations.

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### ***Segment 8 – South Fork Merced River Below Wawona***

**Open Section:** Wawona Campground to Park Line**Segment Capacity:** 25 people/day**Management Mechanism:** Self-registration and monitor until permitting is

necessary to manage use

***Rationale for requiring permits:*** Monitoring through self-registration will help NPS track this use methodically. Use information will allow better estimates of SAR risks and help estimate congestion or parking impacts from allowed boating use. If daily use on this segment is found to be in excess of the stated capacity, a permit system will be implemented to regulate use on this segment.

***Rationale for permit number:*** This section is most often run by boaters who seek a more technical and noted section of the river outside of the park. The section in the park is technical, however it is a fast moving section where boaters read and run the rapids and quickly move downstream. The 25 person capacity will allow groups to access this segment daily but reduces the likelihood of excessive boating encounters. It is also consistent with capacities set in Segment 5 of the South Fork Merced.

## **BACKGROUND Activity Participation**

### **APPENDIX R BOATING OPPORTUNITIES**

A 2005 visitor survey in Yosemite National Park asked respondents to check participation in common recreation activities, including sightseeing/taking a scenic drive (87%), visiting visitor center (55%), day hiking (48%), painting/photographing (45%), picnicking (30%), camping (13%), climbing (5%), and overnight backpacking (3%). Boating and swimming were not on the activity list in the survey, but were the two most common open-ended responses provided by respondents. Based on a comparison of daily park visits and boating use, the percentage of visitors who boat is probably under 5% even in the peak use summer season, roughly comparable to the numbers who climb or backpack.

#### **Current Reaches Open to Boating**

Commercial and private (non-commercial) boating is currently allowed on a 2.4 mile reach of the Merced in Yosemite Valley between Stoneman Bridge and Sentinel Beach Picnic Area. Private paddling is also allowed on the main stem Merced in El Portal and the South Fork Merced near Wawona. The El Portal reach is roughly 3 miles of Class IV water from the park boundary to Foresta Bridge (and continues downstream on the Forest Service-managed segment of the river). The South Fork reaches include two short tubing runs in the vicinity of Wawona Swinging Bridge and Wawona Campground, and a 23 mile Class V reach from Wawona to El Portal (run by highly skilled kayakers with several portages, typically an overnight trip, mostly downstream of the park boundary).

## **Seasonality and Flows**

Boating on most reaches typically occurs from early May to early August. During periods of high flows (over 6.5 feet at Sentinel Bridge), boating in Yosemite Valley is prohibited for safety reasons (e.g., limited space under bridges). These high flows typically occur for a week or two in late May or early June. By mid-July in a dry year, early August in most years, low flows reduce boating to a few private trips per day. Few boaters use the river at flows less than 100 cfs at Happy Isles. The commercial rafting concession typically operates for about two to three months within this season, from just after the high flow peak and concluding when flows reach approximately 150 cfs at Happy Isles. Kayaking on the Class V SF Merced is more constrained by flows (boaters probably seek medium-low flows during the early to mid-summer run-off).

## **Current Use Levels on Open Boating Reaches**

Peak use levels on the Yosemite Valley reach may exceed 300 boats per day, with about two-thirds commercial rafts (Whittaker and Shelby, 2012). However, more common peak use levels have been about 150 to 250 boats per day. Boating use is allowed only between 10 am and 6 pm and when combined water and air temperature exceeds 100 degrees, with many preferring to boat during warmer afternoons in any case. This creates relatively higher afternoon use peaks, when peaks of 40 boats per hour may pass a given location. Boats also tend to cluster on a few larger beaches toward the end of the boating reach, which may increase boating congestion at specific locations (e.g., Swinging Bridge in Yosemite Valley).

Use levels have not been monitored for the Main Stem in El Portal or on the South Fork. Anecdotal information suggests peak use levels do not exceed a dozen boaters/tubers using the South Fork reaches adjacent to Wawona Campground or Wawona Swinging Bridge at one time on peak summer days, and there are unlikely to be more than a dozen kayaking trips per year on the Class V reach below Wawona Campground. The Class IV reach on the Main Stem in El Portal is boated regularly during spring and early summer higher flows, but probably does not exceed more than a few trips per day.

## **Potential Use Levels on Currently Closed Reaches**

There is demand for additional boating opportunities on other (currently closed) segments of the Merced River. Boating demand on reaches upstream of Happy Isles on the Main Stem, upstream of Wawona on the South Fork, and in Merced Gorge are likely to be very low because of challenging whitewater or the need to carry-in boats on trails. In contrast, boating on the currently closed and road accessible reaches in Yosemite Valley might attract substantial use, particularly the Class II-III reach from Clark's Bridge to Stoneman Bridge, the Class I reach from Sentinel Beach to El Capitan Bridge, or the Class III-IV reach from El Capitan to Pohono.

## **PROPOSED BEST MANAGEMENT PRACTICES FOR RIVER USE UNDER THE PREFERRED ALTERNATIVE**

No motorized craft would be allowed on any river segment, as provided in 36 CFR 7.16(i).

Boaters would be prohibited from using sensitive resource areas (steep or vegetated banks) when they stop along the river. This should minimize potential impacts from boaters and support natural restoration. Specific put-in and take-out locations would be identified; boaters would not be allowed to use other locations for access.

Large wood (LW) would not be removed to accommodate paddling use, except where safety, resource management, and other issues warrant mitigation (see detailed BMP on large wood management in the river).

Swimming and water play (see definition below) would be allowed on all segments of the river in all alternatives, except where noted in the Superintendents Compendium such as the Emerald Pool area above Vernal Falls (closed for safety).

Based on monitoring of resource and safety concerns, the NPS may review and change the opportunity for boating access.

Boats would be required to be in good condition and designed to handle the class of whitewater on a reach. Rafts for reaches with Class II or higher whitewater must be high performance multi-chamber craft or high performance single-chamber pack rafts designed for whitewater. The number of people in any vessel would not be allowed to exceed the manufacturer's stated capacity.

**Life Preservers and Regulations:** Each boater must have a serviceable, US Coast Guard-approved personal floatation device (PFD) Type I, III, or V. These PFDs must be maintained in good condition in compliance with the USCG standards and must be worn and fastened properly at all times while on the river. All PFDs must have a USCG approved label stating the PFD is designed for whitewater rafting, canoeing, sailing, paddling and/or kayaking. General boating or ski vests are prohibited.

**First Aid:** A first aid kit is required to be carried on all boating trips on Wild segments of river.

**Safety Equipment Requirements:** Boating use on technical reaches (defined as Class II or higher) have additional equipment requirements. These requirements could include restrictions on vessel type as well as rescue and safety equipment that must be carried. These sections include: Segments 1, 3, 4, 5, 8 and Segment 2a above Stoneman Bridge and Segment 2b. Please consult the Superintendent's Compendium for a comprehensive list of these requirements.

## **DEFINITIONS**

“Boating” refers to the use of watercraft such as canoes, kayaks, or rafts that are propelled by paddle/oar and travel downstream for a substantial distance.

“Swimming and water play” refers to visitors swimming in the river, but includes the use of “water toys” (inner-tubes, floatation mattresses, or other similar inflatables) in a localized area. It is assumed that boating involves floating a distance of approximately 500 feet or more on the river, while water play using water toys occurs over a shorter distance (e.g., the length of a beach or campground)..

Boats include craft such as rafts, kayaks, inflatable kayaks, canoes, and pack rafts.

## **ALLOWABLE REACHES FOR BOATING**

Current regulations stipulate that “all free flowing rivers creeks and streams within Yosemite National Park, except the Main Stem and South Fork of the Merced River as defined in this section are closed to the use of any type of vessel designed to carry passengers upon the water and any other device, such as air mattresses or inner tubes, that may be used.” (Yosemite National Park Superintendent’s Compendium 2012 36 CFR

§ 1.5(a)(2); 36 CFR § 1.5(f)) Allowable boating reaches vary by alternative in the plan as specified below. When adopted, the plan will identify additional reaches open to boating.

Guidance from WSR, Secretaries Guidelines and recent court cases indicate that capacities should be used to set both kinds and amounts of use for different reaches. Because many of these segments are open to boating for the first time, the NPS has set initial capacities that allow reasonable access for boating opportunities while protecting river values that include the quality of boating and adjacent riverside experiences. These capacities were based on logical calculations of likely encounters on the new “water trails,” estimated congestion impacts and or facility capacities at limited launching areas, and potential for portage trails or other impacts from boating use.

The capacities are expressed as people per day on Wilderness and lower use reaches to be consistent with backcountry permit systems (and it is similar to boats per day in any case because most boaters will use single person kayaks or pack rafts). On the higher use reaches in Yosemite Valley, capacities are expressed as boats per day. These are the “units of use” responsible for a key impact (boats in view at one time) and are more easily managed in higher use settings.

Responsible boating use that is below capacities would likely require little management beyond use monitoring, and/or self-registration or other permitted programs.