

Steps to Address User Capacities for Wild and Scenic Rivers



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DISCLAIMER: The paper should not be construed as either legal advice or as the legal opinion of the United States Government or any of its departments or agencies. If you have questions regarding the application of the principles in this paper to a specific situation, you should contact your IWSRCC agency representatives and/or agency counsel.

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A. INTRODUCTION

Section 3(d)(1) of the Wild and Scenic Rivers Act (Act)¹ directs federal river-administering agencies to address user capacities in a comprehensive river management plan (CRMP) prepared for each federally administered component of the National Wild and Scenic Rivers System (National System).² The Act does not define “user capacities.” However, litigation over the past decade has focused primarily on the recreational use component of user capacities.³ The scope of user capacities in this paper more broadly includes visitor use, other public use, and administrative use, with particular emphasis on the recreational aspect of visitor use.⁴

The CRMP’s purpose is to protect and enhance “river values” while providing for public use and enjoyment of the designated wild and scenic river (WSR).⁵ Establishing user capacities is a CRMP decision. River managers develop management actions to ensure that use levels stay within the established capacities, using specific approaches that allow for flexible implementation.

River managers assess impacts from established uses and forecast impacts from reasonably foreseeable new uses when addressing user capacities. The complex relationship between human uses and river values can make this task challenging. A river’s capacity to absorb use without degrading resources and visitor experiences is dependent on several interrelated factors. Designated WSRs are extremely diverse, with varying types and levels of use. Current use can range from levels that threaten river values to levels that are unlikely to threaten river values in the foreseeable future. Even a single WSR may contain multiple segments with varying user capacities. Hypothetical examples will be used throughout the paper to illustrate these concepts.

River managers need to make user capacity decisions in the CRMP even where use levels do not threaten river values or the established desired conditions for those values. Such situations may only involve minimal investment in terms of data collection, monitoring, and analysis to support user capacity decisions. However, river managers should remain aware that future use level changes may require revising user capacity decisions. Changes in use levels that threaten river values would warrant an increased investment in data collection, monitoring, and analysis to support modifying the initial user capacity decision.

¹ 16 U.S. Code 1271-1278, Public Law No. 90-542 (Oct. 2, 1968), as amended. Citations to the Act in this paper are to the sections in the public law, rather than to the sections in the U.S. Code.

² This requirement is limited to federally-administered rivers, as stipulated in the 1986 amendment that added this requirement to the Act. The Act does not require that CRMPs be prepared for rivers designated under Section 2(a)(ii) (i.e., administered by states).

³ See *Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024 (9th Cir. 2008); *American Whitewater v. Tidwell*, No. 13-1960 (4th Cir. Nov. 5, 2014).

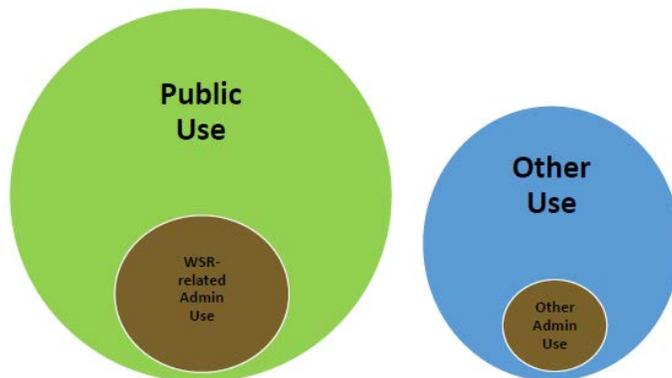
⁴ Refer to the Glossary for more information on the definition of “user capacity” and related concepts.

⁵ The values for which rivers are designated are referred to collectively in this paper as “river values.” See Sections 1, 10(a) of the Act. These include the free-flowing condition, water quality, and outstandingly remarkable values (ORVs).

Because the Act has an explicit user capacities mandate and specific resource protection standards, this technical paper is narrowly tailored to (1) explain the specific user capacity requirements for WSRs and (2) provide a recommended framework for adequately addressing user capacities on WSRs. This paper also builds on and complements the Interagency WSRs Coordinating Council (IWSRCC) CRMP technical report.⁶ User capacity analysis and visitor use management tools are also available from the Interagency Visitor Use Management Council (IVUMC) for broader application to all federal lands and waters where federal agencies are required by law to address visitor capacity.⁷ These tools provide further guidance for practitioners on the “how-to” of visitor use management.⁸

This paper addresses user capacity determinations for public use consistent with applicable law. “**Public use**” is defined here to mean *visitor use and WSR-specific administrative use within the WSR corridor*.⁹ User capacity determinations are not required for “**other uses**,”¹⁰ and thereby are not addressed in this paper. However, other uses are considered in identifying the baseline and current conditions for assessment of user capacities for public use (as described in more detail below under Step 1). Activities on non-federal lands inside a WSR corridor and activities on federal and non-federal lands adjacent to a WSR corridor are considered in assessing baseline and current conditions to the extent these activities could inform decisions on user capacities. This relationship is depicted in Figure 1.

Figure 1: Uses Impacting River Values



The focus of this paper is on uses encompassed within the green circle on the left. While capacities do not need to be set for uses encompassed within the blue circle on the right, impacts of these other uses should be considered when assessing baselines and current conditions and setting capacities for public use.

⁶ *Newly Designated WSRs: Interim Management and Steps to Develop a CRMPs* (March 2010)

⁷ Chartered by the leaders of the National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, and U.S. Army Corps of Engineers. See <http://visitorusemanagement.nps.gov/>

⁸ “Addressing user capacities” and “visitor use management” are overlapping concepts. The IVUMC defines “visitor use management” as “the proactive and adaptive process for managing characteristics of visitor use and the natural and managerial setting, using a variety of strategies and tools to achieve and maintain desired resource conditions and visitor experiences.” This paper’s recommended steps for addressing user capacities also serve as a visitor use management approach on WSRs.

⁹ See definitions for “visitor use” and “WSR-specific administrative use” in the GLOSSARY OF KEY TERMS.

¹⁰ See definition for “other use” in the GLOSSARY OF KEY TERMS.

B. STEPS FOR ADDRESSING USER CAPACITIES

Table 1 provides IWSRCC's recommended approach for addressing user capacities on WSRs. Following the table is a detailed description of how to apply each step of this approach during the development of a CRMP.¹¹ The order of these steps is intended to facilitate understanding of these user capacity concepts and their relationship to one another, as well as how they fit within the CRMP process. But these steps also overlap with several essential pieces of the CRMP process that go beyond strict applicability to user capacities (e.g., identification of baseline and desired conditions) and may be accomplished in a variety of different orders depending of the fit for a particular WSR planning situation.

Table 1: Steps to Address User Capacities for WSRs

Step #	Step Details
1	Describe the baseline and current conditions and uses for the WSR
2	Identify desired conditions for river values and classifications
3	Identify the kinds of use that the WSR corridor can accommodate
4	Identify measurable indicators for the desired conditions
5	Establish thresholds for each indicator
6	Identify triggers that elicit management response
7	Identify management actions to take when triggers are reached
8	Determine the WSR corridor's user capacity
9	Establish a monitoring and adaptive management approach

1. DESCRIBE THE BASELINE AND CURRENT CONDITIONS AND USES FOR THE WSR

The outcome of Step 1 is a description of baseline and current conditions of river values, as well as the existing kinds and amounts of public and other use in the WSR corridor.¹² If the CRMP is being prepared soon after the date of a river's designation and conditions have not changed appreciably, these descriptions may be combined.

a. Identify baseline and current conditions

The baseline conditions are those that existed at the time of the WSR designation and include information on free-flow, water quality, and ORVs. Collect baseline condition information from

¹¹ The [IVUMC](#) is also preparing technical guidance on a variety of relevant topics, such as methods for developing effective visitor use indicators and thresholds. That level of specificity is not included in this paper.

¹² Baseline conditions are the conditions in effect in the year the WSR was designated. Current conditions are the conditions in effect when the CRMP is adopted. The IWSRCC technical paper entitled [Newly Designated WSRs](#) includes a brief description of the baseline conditions that should be identified in a CRMP. The following sections in this paper supplement that guidance with specific attention to user capacities.

a variety of sources. Investigate social and biophysical information documented at the time of designation. Sources for such information include the following:

- Pre-designation studies
- Testimony from the designation process
- Scientific literature and studies related to resource conditions at the time of designation
- River recreation guidebooks
- Interviews with clubs, outfitters, and guides
- Other historic records on past uses

If historic information is limited, estimate baseline conditions using a reasonable evaluation of present conditions. Also discuss baseline conditions with local residents, recreationists, and agency personnel who can provide valuable historical as well as current anecdotal information.

Identify current conditions and compare them to baseline conditions to establish trends. This will provide a basis for determining desired conditions. Identify any decline as well as improvements in baseline conditions since the time of designation.

b. Describe the current amounts and types of use and current management direction

Identify all current uses that can affect visitor experience and river values, as well as existing management direction and decisions related to those uses. Characterize the different kinds of existing public and other use. Identify any known problems where monitoring data indicates declining conditions and quality of visitor experience. Determine reasonably foreseeable future uses and new forms of access. Include a facility and infrastructure inventory to help determine if any existing or proposed developments could affect river values or the WSR's classification. Keep in mind that proposed facilities and infrastructure that would alter a WSR's classification from "wild" to "scenic" or from "scenic" to "recreational" are not permitted.¹³

Consider all existing and reasonably foreseeable public uses and other uses that could impact river values. Also reflect upon use situations that may do one of the following:

- Overlap with the river values in space or time (e.g., mining, hunting, other landowner uses, administrative use, and public access to and through the river corridor; private developments within the corridor; and points of access to the river corridor)
- Occur in the same or a connected geographic area (e.g., grazing, rights-of-way, or roads)
- Affect river values but may be geographically separated from the area (e.g., whitewater boating opportunities occurring on separate segments of the river)

¹³The IWSRCC technical paper entitled [*Management Responsibilities*](#) includes a discussion on the legal intent and management implications of WSR classifications.

2. IDENTIFY DESIRED CONDITIONS FOR RIVER VALUES AND CLASSIFICATIONS

The outcome of Step 2 is a description of the desired conditions for the river values and social setting of the WSR that will protect and enhance all river values while allowing for uses consistent with the Act. Uses should also be consistent with a WSR segment's classification.¹⁴ “**Desired conditions**” are *the resource conditions, visitor experiences and opportunities, and facilities and services that will protect and enhance river values while allowing for uses consistent with the Act.*¹⁵ In addition to river values, identify other relevant resources that could be affected by public and other uses within the WSR corridor. For example, if raptors are present in an area, that resource could be affected by recreational use and the relationship could be identified in the desired conditions, regardless of whether there is a wildlife ORV associated with the WSR. Existing management direction and capacity decisions also provide a relevant starting point to assess any need to change such decisions.

a. Integrate visitor use, other public uses, and administrative uses into desired conditions

Desired conditions for WSRs reflect a thoughtful integration of public and other uses and river values upon which to base meaningful evaluations of user capacities. Desired conditions must at a minimum protect the baseline conditions for all river values. They can also target enhanced conditions for those resources. If desired conditions are set at a level substantially above baseline conditions, distinguish between desired conditions that would protect river values and those that would enhance them.

Clearly link the physical, biological, social, and managerial settings that support the desired recreational experience to conditions that protect and enhance all river values. The social setting description can also help determine how different kinds and amounts of recreational opportunities contribute to the desired recreational experience. A description of a desired recreational experience may include the following:

- A large-scale, contextual overview of the essence of the desired recreational experience in a geographic zone¹⁶
- A description of the desired recreational experience (based on desired physical, biological, social, and managerial factors)
- Reasonable scenarios of the kinds and amounts of recreational uses likely to be consistent with the desired experience and river values

¹⁴ For further information on the protection of conditions based on a WSR's classification, see the [1982 Interagency Guidelines](#) and the IWSRCC's technical paper, [WSR Management Responsibilities](#).

¹⁵ For further information on desired conditions, including examples of desired condition statements, see IVUMC's [Visitor Use Management Framework](#).

¹⁶ The essence of the desired recreational experience may be derived from recreational planning tools such as the Recreation Opportunity Spectrum, recreation “niche,” sense of place mapping, or other systems that help describe social components of a landscape.

When describing the desired recreational experience, avoid reliance on lists of allowed activities and uses. Doing so can hamper future management flexibility to respond to changing uses.¹⁷ River managers need to adapt to new and emerging uses while continuing to focus on desired conditions and the protection of river values. Demand for river-based or river-related uses continues to change, with some activities increasing and others declining.¹⁸ Changes in skill, new equipment, and even entirely new forms of recreation create additional or different types of recreational impacts.

Whether recreation is or is not an ORV for the WSR can also affect how desired conditions incorporate recreational use. When recreation is an ORV, this value must be managed to protect the attributes that made it regionally or nationally significant while also protecting free-flow, water quality, and non-recreation ORVs.¹⁹ When recreation is not an ORV, recreational activities are allowed in furtherance of the “public use and enjoyment”²⁰ and “benefit and enjoyment of present and future generations”²¹ goals of the Act, but must be managed to protect the river’s free-flow, water quality, and non-recreation ORVs.

b. Take into account the WSR classification as wild, scenic, or recreational

Classification of the WSR can also inform the desired conditions, particularly for water quality and free flow. A river’s classification helps establish the range of permissible recreational access and developments that would be consistent with protecting the river’s character and influence visitors’ recreational experiences. The need for additional river access points or recreational infrastructure to support the river’s desired recreation experience should be evaluated within the context of the WSR’s classification.²²

On WSRs classified as wild, which “represent vestiges of primitive America,”²³ recreation takes place in a setting of natural sights and sounds. They are generally inaccessible, except by trail or upstream/downstream access points, thus requiring users to visit by foot, bicycle, horseback, or boat.²⁴ The Act requires that wild rivers be managed to maintain their primitive character. This

¹⁷ Use broad categories such as land and water based, non-motorized and motorized, and overnight and day use in describing allowable uses. This approach allows for variation in specific activities by NEPA alternative to explore social trade-offs during the CRMP process. See IVUMC’s [Visitor Use Management Framework](#) for additional information.

¹⁸ Cordell, H.K. (2008). The latest on trends in nature-based outdoor recreation, *Forest History Today*, Spring, pp. 4-10. Last retrieved on March 2, 2012, <http://www.foresthistory.org/Publications/FHT/FHTSpring2008/Cordell.pdf>.

¹⁹ See IWSRCC’s 1999 Technical Report entitled [The Wild & Scenic River Study Process](#) for guidance on identifying river values, including specific guidance as to what makes a recreational activity “river related or dependent, and rare, unique or exemplary on a comparative scale.” Also, this report highlights the need for managers to have an accurate, current iteration of river values before starting work on a CRMP and discusses recreation ORVs versus non-recreation ORVs in relation to the non-degradation requirement.

²⁰ Section 10(a) of the Act.

²¹ Section 1(b) of the Act.

²² For additional information on WSR classifications, see the [1982 Interagency Guidelines](#).

²³ Section 2(b)(1) of the Act.

²⁴ Or by plane or snow-machine (in Alaska).

precludes river managers from considering additional developments that are inconsistent with the classification.

Visitors to WSRs classified as scenic and recreational may experience various types of human activity and development. On these rivers, users may: see and hear cars and trains; use developed campgrounds, picnic areas, and boat ramps; and encounter past modifications of the waterway such as low dams or minor shoreline development. Scenic rivers may be accessible in places by road, and recreational rivers may have numerous parallel or crossing road and railroad access points. Within either of these classifications, river managers have more latitude for considering additional developments than within wild river corridors.

c. Divide the WSR into relevant analysis areas

Where appropriate, divide the WSR into smaller analysis areas to address user capacities effectively. Group the analysis areas together around a common set of conditions or classifications so they can be analyzed and managed as individual units (see Step 4). Base analysis areas on such characteristics as the following:

- WSR classification
- River segment
- ORVs
- Geographic similarities
- Common types of user activities
- Similar desired conditions
- User access levels
- Existing monitoring data
- Development levels (e.g., wild/wilderness/backcountry versus recreational/front country)

For example, a CRMP may establish one analysis area for the river segments with a recreation ORV, and establish another analysis area for segments that do not have a recreation ORV. This approach could help with setting thresholds (see Step 5) or analyzing effects on recreation opportunities and experiences.

d. Identify the need for action by comparing existing and desired conditions

Compare existing conditions (including prior capacity-related decisions) and desired conditions, and identify any potential threats or impediments to achieving desired conditions. When considering existing conditions, include prior capacity-related decisions and other decisions influencing capacities, such as allocating user days to outfitters and guides. This comparison will help identify the need for action to achieve desired conditions, which will inform the scope of action for National Environmental Policy Act (NEPA)²⁵ documents.

²⁵ 42 U.S. Code 4321 et seq.

3. IDENTIFY THE KINDS OF USE THAT THE WSR CORRIDOR CAN ACCOMMODATE

The outcome of Step 3 is a description of the kinds of visitor use, other public use, and administrative use that are consistent with desired conditions for river values and classifications, and therefore can likely be accommodated without crossing thresholds. This step also ties the kinds of public uses to the facilities that support those uses within a given segment or river corridor, which can include lumping uses into broad categories (e.g. motorized vs. non-motorized boating). Facilities may already be in place and designed to provide for specific kinds of public uses, or they may be proposed for future uses that would not exceed thresholds. For instance, a concrete boat launch may be in place, or may be anticipated in the future to allow for certain levels of safe motorized boat launches to maintain water quality and stream bank integrity. Clearly describe the relationship of the kinds of public uses to these facilities and the protection and enhancement of river values. Also identify instances where the impact of certain kinds of public uses on river values depend upon certain facilities being in place.

4. IDENTIFY MEASUREABLE INDICATORS FOR DESIRED CONDITIONS

The outcome of Step 4 is identifying an appropriate set of indicators to measure conditions in the river corridor. An “**indicator**” is *a specific resource or social attribute that can be measured to track changes in conditions associated with human use*. Indicators in combination with thresholds (see Step 5) warn river managers about deteriorating conditions and help river managers assess progress towards attaining desired conditions. To achieve this outcome, include a monitoring program of indicators that are relevant to the desired conditions and allow for repeat measurements at appropriate intervals. Table 2 displays sample river values and possible indicators for measuring the conditions associated with those river values.²⁶

Indicators are not necessary in instances where uses and river values do not impact each other. For instance, the existence of Zion National Park’s canyons along the designated Virgin WSR (which has a geologic ORV) may not be affected by the amount of use within the river corridor, nor would this ORV affect desired social conditions. In this case, it would not be relevant to develop an indicator for the geologic ORV related to social conditions.

²⁶ See other materials from the IVUMC for additional guidance on selecting appropriate indicators.

Table 2: Sample River Values and Indicators²⁷

River Value	Water Quality	Recreation	Historic and Cultural
Indicators	<ul style="list-style-type: none"> • Presence of trash in the corridor • Percentage of campsite that is bare mineral soil (for high, medium, and low-use sites) • Number of social trails • Number of new fire rings or new campsites • Presence of human waste and levels of E. coli 	<ul style="list-style-type: none"> • Number of campsites within sight and/or sound of another campsite • Number of vehicles at one time at trailheads or launch sites • Length of time spent searching for a parking space at trailheads or boat launches • Waiting time to exit the river (remove boat at access point) • Number of boats per mile • Number of people per day • Number of complaints or citations related to use conflicts and visitor behavior • Number of people at one time at key sites or attractions • Number of days visitors must camp within sight or sound of other campers (i.e., camping encounters), forego campsites that are occupied, or share campsites • Percentage of campsite that is bare mineral soil (for high, medium, and low-use sites) 	<ul style="list-style-type: none"> • Number of people camping within a certain distance of historic/cultural site • Number of social trails leading to sites; • Number of people visiting sites; • Number of complaints about impacts to sites • Disturbance of cultural resources • Condition assessment ratings of historic and archaeological sites or districts

²⁷ Not all river values and indicators are reflected in the table.

5. ESTABLISH THRESHOLDS FOR EACH INDICATOR

The outcome of Step 5 is setting thresholds that can be used to protect river values and develop user capacities. While the term **“threshold”** may be defined differently within agencies, the term is defined here as *the minimally acceptable condition of an indicator*. Thresholds identify conditions that prevent degradation of a river’s baseline conditions. Consistent with Section 10(a) of the Act, river managers may also move thresholds upward as conditions improve to prevent backsliding of enhanced conditions. Reference thresholds throughout the capacity determination process to ensure that uses are consistent with the protection of baseline conditions and non-degradation of river values.

6. IDENTIFY TRIGGERS THAT ELICIT MANAGEMENT RESPONSE

The outcome of Step 6 is identifying triggers that elicit management responses to prevent thresholds from being crossed. A **“trigger”** is *the predetermined point at which changes in an indicator require a management response to ensure that the threshold for that condition is not crossed*.²⁸ Design triggers to be reached prior to thresholds to prevent the crossing of thresholds and degradation of ORVs. Where appropriate, set more than one trigger that identify levels where action is needed to prevent further decline or to reverse decline. For example, Table 3 shows sample triggers and thresholds for specific indicators. One indicator, camping encounter rate, measures social conditions. In the example, the threshold is an encounter rate between X and Y on 25 percent or more days during the primary season in any two-year period. Following this, the first trigger is set low (meeting this encounter rate on 5 percent of days over a one-year period). Reaching this trigger indicates that action is needed to prevent further decline. Subsequent triggers are set at 5 percent intervals, up to a meeting the encounter rate on 20 percent of days over a one-year period. Since this final trigger is close to the threshold, it acts as a call for immediate action to reverse declining conditions. Step 7 discusses the protocol for taking appropriate management actions if a trigger is reached.

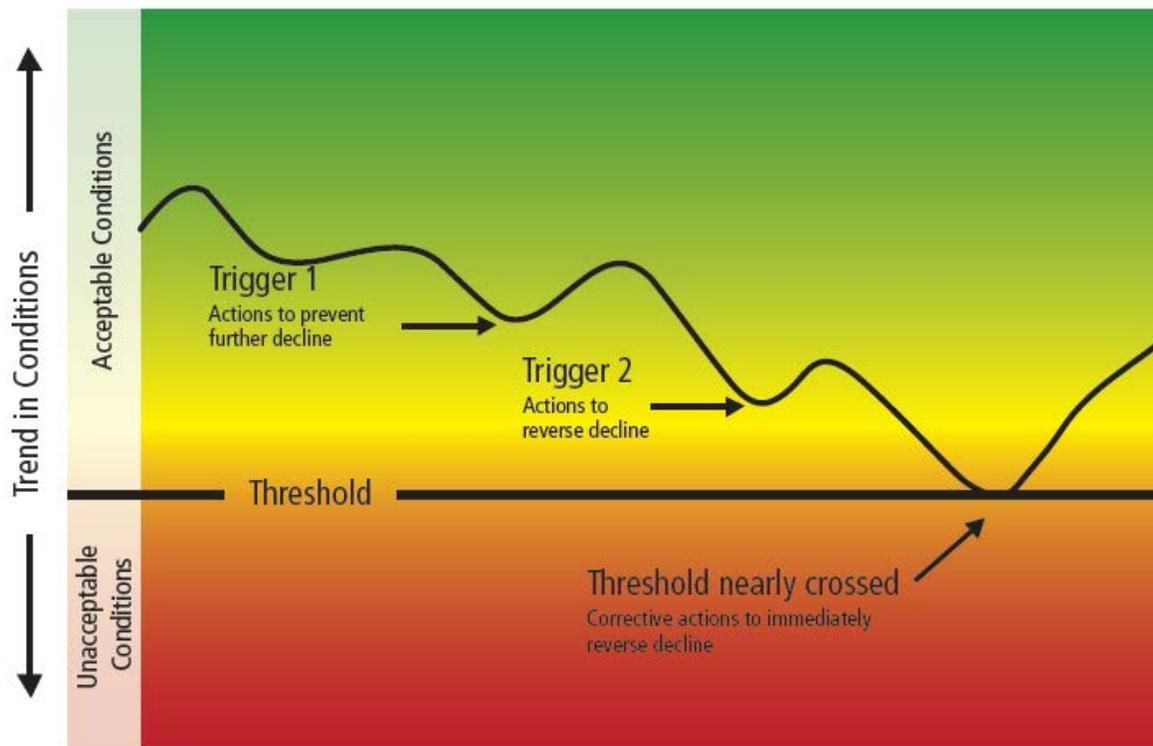
²⁸ River managers may also use triggers to enhance conditions. The need to utilize triggers and the number of triggers to develop may vary depending on the management complexity of the WSR. As the IVUMC’s [Visitor Use Management Framework](#) emphasizes, “in more complex projects and for particularly sensitive resources, triggers may be established in addition to thresholds...A sensitive resource that requires close scrutiny may have multiple trigger points to ensure preventative management responses are taken to avoid eventually crossing the threshold.” (2016, p. 39)

Table 3: Example of Indicators, Triggers, and Thresholds

River Value	Indicator Description	Threshold	Triggers
Recreation	Camping encounter rate	25% of total user days (two out of past three years)	5% (annual) 10% (annual) 20% (annual)
Water Quality/ Scenery/Recreation	% of area that is bare mineral soil for high-use campsites	50%	40%

Figure 2 depicts the relationship between conditions, thresholds, and triggers for a given indicator. The triggers lead to taking appropriate actions to prevent thresholds from being crossed. An indicator may have one or a series of progressive triggers that prompt various management actions if conditions reach those triggers. Step 7 discusses how to develop those management actions.

Figure 2: Indicator Conditions, Thresholds, and Triggers²⁹



²⁹ Adapted from Figure 4 of the [Visitor Use Management Framework](#) (2016, p.40)

7. IDENTIFY MANAGEMENT ACTIONS TO TAKE WHEN TRIGGERS ARE REACHED

The outcome of Step 7 is specifying management actions to take if resource conditions reach triggers to prevent thresholds from being crossed. The intent here is to identify progressively stronger actions to be implemented if resource conditions deteriorate toward thresholds to prevent those thresholds from being crossed.

Ensure that the geographic scale of the proposed management actions is consistent with the identified capacity analysis area, although this may vary throughout the WSR corridor. For example, capacity may be analyzed throughout the entire corridor but one river segment has exceptionally high use. In this situation, identify management actions for corridor-wide conditions, as well as special conditions that apply to only the high-use segment. Highlight those actions that are specifically intended to ensure that thresholds are not crossed and river values are protected.

Discuss the relationship between public use, other use, and achievement of desired conditions when identifying potential management actions to prevent or reverse decline and keep conditions from reaching threshold levels. Also discuss assumptions about how the proposed actions would protect river values and visitor experiences. For example, a management action to reduce camp encounter rates could include allowing camping in designated campsites only (see Table 4). The CRMP would then discuss how the practice of allowing camping only in designated campsites would reduce encounter rates. Another, broader example includes developing or maintaining partnerships with local governments and landowners to protect or enhance streambank vegetation, which would maintain desired conditions for water quality, fish habitat, and scenic values.

a. Tie management actions to triggers that prevent degradation of river values

Develop management actions to be taken if triggers are reached to prevent thresholds from being crossed, thereby avoiding degradation of river values. For instance, Table 4 expands upon Table 3 by describing management actions designed to ensure that the identified river values are protected. The first example will be discussed here in more detail. Within this hypothetical scenario, the recreation ORV includes a desired condition for a certain degree of solitude in one segment of the river. The indicator is measured by a camp encounter rate. Four phases of actions tied to specific triggers would maintain a desired camp encounter rate that does not cross the threshold (i.e., encounter rate between X and Y on 25 percent or more days in two out of the past three years).

Table 4: Management Actions to Protect River Values

River Value	Indicator Description	Threshold	Trigger	Management Action
Recreation	Camp encounter rate	25% of total user days (two out of past three years)	Phase 1: 5% (annual)	Allow camping in designated sites only, establish the number of designated sites and group size limits, potentially expand the number of campsites
			Phase 2: 10% (annual)	Voluntary registration and campsite reservation system
			Phase 3: 15% (annual)	Mandatory registration and campsite reservation system
			Phase 4: 20% (annual)	Limited-entry lottery for campsite permits
Water Quality/ Scenery/ Recreation	% of area that is bare soil for high-use campsites	50% bare ground (two out of past three years)	40% bare ground (annual)	Temporary closure and rehabilitation of campsites and temporary reduction in campsites

In this hypothetical scenario, current conditions are at Phase 1 (i.e., encounter rate between X and Y on 5 percent of days annually) and the immediate plan-level management actions are not too restrictive. These actions include allowing camping only in designated campsites, establishing the total number of designated sites, establishing group size limits, and describing conditions under which there would be options to expand the number of designated campsites.

Also include an assessment of the expected effectiveness of the management actions in protecting the ORVs and achieving the desired conditions. Identify means to measure effectiveness of the management actions after they are implemented.

As the triggers get closer to the threshold, the management actions become progressively stronger. Phase 2 would be prompted at 10 percent and include setting up a voluntary registration and campsite reservation system. Phase 3, initiated at 15 percent, would require a mandatory registration and campsite reservation system. Phase 4, enacted if the encounter rate threshold is met 20 percent of days, annually, would establish a limited-entry mandatory permit system to ensure that the 25 percent threshold is not crossed. Each phase includes triggers (percent days) for the indicator (encounter rate) that would prompt additional actions to change the conditions of use (regulation, campsite reservation, etc.) to prevent degradation.

Also include an assessment of the expected effectiveness of the management actions in protecting the ORVs and achieving the desired conditions. Identify means to measure effectiveness of the management actions after they are implemented, which can then inform future management approaches.

b. Identify and decide upon those capacity-related actions ripe for decision

Describe management actions that are immediately authorized in the CRMP analysis and decision process. Actions that are ripe for decision are the actions most likely to be analyzed and decided upon at the same time as the CRMP due to current or anticipated near-future conditions. The further into the future an action is anticipated to be needed, the less likely the action will be ripe for decision in the CRMP. However, plan-level decisions tend to be longer-term than project-level decisions, often anticipating conditions for 10-20 years into the future. Based on the WSR's unique situation, decide which user capacity-driven management actions are best authorized at the same time as the CRMP, and which management action decisions are more appropriately deferred until a future date. For instance, anticipated rapid population growth in an area near the river corridor might justify the immediate authorization of long-term future actions to prevent future degradation of values, provided the effects of any proposed actions can be meaningfully analyzed.

8. DETERMINE THE WSR CORRIDOR'S USER CAPACITY

The outcome of Step 8 is determining “**user capacity**,” which is defined as *the maximum amounts and kinds of public use that a WSR along its entire length or by analysis area can accommodate without degrading river values*. Establish capacities by site, area, or activity, provided that, at a minimum, the overall, corridor-wide maximum number of people is also discussed.³⁰ Describe the relationship between site, area, or activity capacities and the total river capacity. Clearly identify the implications of assumptions regarding projected use levels.

a. Identify a measurable amount of use each analysis area can receive without crossing thresholds

When establishing multiple capacities, describe the basis for determining that a given *amount of use* would meet the desired conditions. This differs from Step 3 where *kinds of uses* are identified. Although the amount of use may vary by analysis area, consider in each calculation the behaviors and likely impacts associated with the recreation opportunities offered, as well as other public uses as identified in the CRMP. It may be helpful to assess which of the WSR's values are most sensitive to public or other uses. Their thresholds can then serve as limiting factors for use that can help guide capacity decisions.

Clearly state assumptions pertaining to management actions that are anticipated to be triggered during the life of the CRMP. Such assumptions can be based upon (1) access point or developed site capacity and permitting systems, (2) regulations that relate to public or other uses such as county building codes, or (3) other factors affecting assumptions about the CRMP indicators that would be used to measure use. If capacities are adopted for areas within the corridor, combine capacities for each analysis area to identify capacities for the entire WSR corridor. Table 5

³⁰ More information on approaches to calculate total capacities is forthcoming in the yet-to-be-released IVUMC's Visitor Capacity Guidebook. For current information and resources, see <https://visitorusemanagement.nps.gov/>.

illustrates capacities identified for three analysis areas that are part of the Snake River Headwaters WSR on the Bridger-Teton National Forest in Wyoming.³¹

Table 5: Example Capacities

WSR + Relevant Information	ORVs	Capacities
<p>Snake River (Hoback Junction to East Table Creek)</p> <ul style="list-style-type: none"> • Recreational classification • Class II whitewater • Heavy use • Great fishing • Most popular access on this stretch is located in important bald eagle habitat, cottonwood gallery critical to foraging 	<p>Ecological/ Wildlife, Scenic, Recreational, Fish, Geologic</p>	<p>50 vehicles per day at Pritchard Boat Ramp</p>
<p>Snake River (West Table BR to Sheep Gulch – Lunch Counter Section)</p> <ul style="list-style-type: none"> • Recreational classification • 80,000-100,000 commercial and 40,000-60,000 noncommercial users in July and August each year • Very cramped take-out • Fixed ramp capacity with no options for expansion 	<p>Recreational (high-use), Ecological/ Wildlife, Scenic, Fish, Geologic</p>	<p>170 commercial boats per day (4 ramp slots, 12 minutes to load a boat; 8.5hrs/day x 60min/hr/ramp slot)</p> <p>145 noncommercial boats per day (same math as above, but averaging 14 minutes to load and leave)</p>
<p>Crystal Creek</p> <ul style="list-style-type: none"> • Scenic classification (where it joins Gros Ventre WSR) • Wild classification (in wilderness upstream) • Some pack-rafting, but mostly trail use • 24 acceptable campsites within the WSR corridor • Gros Ventre Wilderness Action Plan recommended a threshold of no more than ten groups encountered per day in this area 	<p>Ecological/ Wildlife, Scenic, Recreational, Fish, Geologic</p>	<p>20 groups per night for overnight use</p> <p>20 groups per day for day use</p>

³¹ [Snake River Headwaters CRMP](#) (2014), Bridger-Teton National Forest.

b. Establish user capacities that reflect an appropriate quantity of use

River managers almost always come across a history of past uses or strong advocates for maintaining current uses when preparing CRMPs. Do not just repeat what has been done in the past. Instead, base the appropriate quantity of use on an analysis of river values and desired conditions, which may or may not be maintaining current use levels.

Since a river's classifications may also inform user capacity decisions, discuss how classifications relate to potential use development. A river's classification as wild does not necessarily result in a lower user capacity in order to protect resource values. However, river values in a wild segment may be more sensitive to degradation such as bank trampling, erosion, and loss of vegetation due to high levels of use at certain primitive campsites. Due to their increased accessibility, WSRs segments classified as scenic or recreational may be more challenging to manage to protect resource values than wild WSR segments and may require multiple strategies to ensure that desired conditions are achieved. A recreational segment with a parallel road along the WSR and a fish ORV for anadromous coldwater fish species requires great sensitivity to bank trampling and erosion impacts. The user capacities of developed recreational facilities such as launch ramps, picnic areas, developed campgrounds, and scenic overlooks and of the river itself will likely vary. Clearly define the desired recreational experience (e.g., number of social encounters) to be provided at each of these areas and consider using a full range of visitor use management tools to ensure that the desired conditions are met.

c. Support user capacity decisions with information that meets NEPA and agency requirements

The Council on Environmental Quality's regulations guide the need for informed decision making in accordance with NEPA.³² Individual agencies have also established standards for the quality of information needed to support their agency decisions. Follow these guidelines and standards, and use credible scientific expertise to support capacity decisions. The information needed to support capacity decisions may vary depending upon many factors and may come from a variety of sources. Sources can include existing data, published studies, modeling of future scenarios, panels of experts (including local experts), professional judgment, and social and resource surveys. Reducing current use levels may be needed for those rivers that are near or at capacity, and proposing to do so may evoke strong reactions among current users. As a result, the need for public involvement and documentation may be greater than for rivers where use levels are not threatening river values. If additional information is needed before a final capacity decision is made, consider establishing interim capacities and associated actions to ensure that river values will be protected and enhanced until a final decision is made.

³² 40 CFR 1500-1508.

9. ESTABLISH A MONITORING AND ADAPTIVE MANAGEMENT APPROACH

The outcome of Step 9 is a monitoring and adaptive management strategy to implement the user management tools identified in the CRMP. This step will help ensure that the quantity and mixture of use do not degrade river values and that management actions are adapted accordingly.

Indicators are a critical aspect of monitoring because they help to determine whether management actions are:

- Implemented as designed
- Effective in preventing degradation and protecting and enhancing river values
- Based on valid assumptions about:
 - User behaviors (e.g., response to designated campsites)
 - Relationship of uses to river values
 - Changes in social perceptions about crowding

a. New information may require a CRMP amendment or capacity adjustment

An adaptive management strategy can be a critical tool to manage user capacity on WSRs. Such a strategy allows using new information to help test assumptions and shape future management approaches.³³ As a result, describe the process for adjusting capacities in a manner commensurate with the complexity, scope, and precision of the capacity decision. Monitoring provides one mechanism for reliably determining when conditions have changed, and for evaluating whether those changed conditions mean the CRMP should be adjusted. The types of new information that may lead to a capacity adjustment include the following:

- Results of monitoring
- Identification of more appropriate indicators and thresholds
- Clarification of the relationship between the level of use and condition of river values
- Changes in visitor use patterns that could affect river values
- Changes in original assumptions, such as management actions to be taken
- Identification of a new ORV or new information about an existing ORV

As a result of monitoring, new information about resource conditions, trends, and the relationship between uses and conditions may indicate that changes in monitoring methods or underlying assumptions need to be incorporated in the CRMP. For instance, the development of new kinds of recreational equipment may change visitor use patterns. One example is the development and emerging use of pack rafts makes previously inaccessible streams accessible. Another example is the rise in geocaching using hand-held GPS units, concentrating visitation in previously undisturbed areas. If the CRMP lacks indicators and thresholds that are sensitive to these changes, the CRMP may need to be amended.

³³ For additional information on adaptive management, see http://www.usgs.gov/sdc/adaptive_mgmt.html.

C. GLOSSARY OF KEY TERMS

The following definitions of key terms are used throughout this paper and were developed based on input from government counsel and the IVUMC.

Desired Conditions – The resource conditions, visitor experiences and opportunities, and facilities and services that will protect and enhance river values while allowing for uses consistent with the Act.

Indicator – A specific resource or social attribute that can be measured to track changes in conditions associated with human use.

Other Use – Use within a WSR corridor other than public use, such as federally authorized mining, forestry, grazing, subsistence hunting and fishing, road use and management, administrative use for other than WSR purposes, and use on non-federal lands in a WSR corridor that have a potential to affect river values. Other use also includes any use on federal or non-federal lands that border upon or are adjacent to a WSR corridor that may substantially interfere with public use and enjoyment of river values.

Public Use – Visitor use and WSR-specific administrative use within a WSR corridor.

River Values – Free-flowing condition, water quality, and the ORVs of each component of the National System, as identified in Section 1(b) of the Act (16 USC 1271). Under the Act, CRMPs for designated rivers must “provide for the protection of” these river values (Section 3(d)(1)) and each river component must “be administered in such manner as to protect and enhance” river values (Section 10(a)).

Threshold – The minimally acceptable condition of an indicator.

Trigger – The predetermined point at which changes in an indicator require a management response to ensure that the threshold for that condition is not crossed.

User Capacity – The maximum amounts and kinds of public use that a WSR collectively or by analysis area can accommodate without degrading river values. At a minimum, each CRMP must deal with or discuss the maximum number of people that can be received on lands in the river corridor controlled by the river manager.

Visitor Use – Human presence within a WSR corridor for recreational purposes, including education, interpretation, inspiration, and physical and mental health.

WSR-Specific Administrative Use – Use within a WSR corridor by the river manager, including ranger patrols, maintenance activities, field research, staff visits to administer contracts or facilities, search and rescue, and interpretative programs for the purpose of protection or enhancement of river values.

D. LIST OF ABBREVIATIONS

Act	Wild and Scenic Rivers Act
CRMP	Comprehensive River Management Plan
National System	National Wild and Scenic Rivers System
NEPA	National Environmental Policy Act
IVUMC	Interagency Visitor Use Management Council
IWSRCC	Interagency Wild and Scenic Rivers Coordinating Council
ORV	Outstandingly Remarkable Values
WSR	Wild and Scenic River