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Whitewater River Wild and Scenic River Comprehensive River Management Plan

Environmental Assessment



Forest Service

San Bernardino National Forest

Pacific Southwest Region

Bureau of Land Management Palm Springs-South Coast Field Office

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CHAPTER 1. PURPOSE AND NEED

INTRODUCTION

The San Bernardino National Forest (the Forest) and the Bureau of Land Management Palm Springs-South Coast Field Office (BLM) are proposing to adopt a comprehensive river management plan (CRMP) for the designated sections of the Whitewater River Wild and Scenic River (the river). The CRMP is administrative in nature; the actions proposed here include establishing a final boundary, establishing maximum user capacity levels, and providing programmatic management direction. The CRMP outlines the desired conditions in the river corridor (the area within the proposed final boundary) and proposes management actions to aid in achieving these conditions. However, it does not directly implement any ground-disturbing actions. All future projects in the river corridor would require site-specific National Environmental Policy Act (NEPA) analysis.

The river corridor has been managed as a designated wild and scenic river (WSR) since the 2019 John D. Dingell, Jr. Conservation, Management, and Recreation Act added 28.1 miles of the Whitewater River to the National Wild and Scenic Rivers System. The US Forest Service (FS) and BLM jointly administer Whitewater River. The river segment under FS jurisdiction is part of the Front Country Ranger District of the San Bernardino National Forest. The sections under BLM jurisdiction are part of the California Desert District Office area, administered by the Palm Springs-South Coast Field Office. The designated Whitewater river corridor is also located within the Sand to Snow National Monument, designated by Presidential Proclamation in 2016. The Pacific Crest National Scenic Trail (PCT) also runs through the corridor.

This environmental assessment (EA) has been prepared in compliance with NEPA and other relevant federal laws and regulations. This is not a decision document. Following the 30-day public review of the EA, the FS and BLM responsible officials will document the decision regarding the CRMP in a decision notice and decision record, respectively. The full text of the CRMP, including the User Capacity Analysis and Resource Assessment (appended to the CRMP as Appendix A and Appendix B, respectively), is available to the public and can be accessed at the following link: [San Bernardino National Forest - Home \(usda.gov\)](https://www.usda.gov/san-bernardino-national-forest)

This EA discloses the direct and indirect environmental effects that would result from the Proposed Action and No-Action Alternative. The document is organized into three chapters, as described below:

- **Chapter 1 (Purpose and Need)** includes information on the history of the CRMP, the purpose and need for the CRMP, and how the FS and BLM informed the contents and management direction of the CRMP. Issues and concerns are identified in this chapter.
- **Chapter 2 (Alternatives)** provides a detailed description of the action and alternatives proposed by the FS and BLM. These alternatives were developed based on issues raised by the public or external agencies, concerns within FS and BLM, or some combination of these items.
- **Chapter 3 (Affected Environment and Environmental Consequences)** describes the environmental effects of implementing the Proposed Action or the No-Action Alternative. This analysis is organized by resource, such as scenery, wildlife, recreation, etc. Each resource

section begins with a description of the affected environment and current conditions. These provide a baseline for evaluating and comparing the alternatives.

BACKGROUND

The Wild and Scenic Rivers Act (“the Act” or WSRA) was signed into law in 1968. The Act protects free-flowing waters, water quality, and outstandingly remarkable values (ORVs) of many of our nation’s most spectacular rivers. Some examples of ORVs that may distinguish wild and scenic rivers from others in the region include wildlife, recreation, cultural/historical resources, and geology. The Act safeguards the special character of these rivers, while also recognizing the potential for appropriate use and development. The Act purposefully strives to balance river development with permanent protection for the nation’s most outstanding free-flowing rivers.

Towards these ends, the Act prohibits federal support for actions, such as the construction of dams or other instream activities, that would adversely affect the river’s free flow condition, water quality, or ORVs. Designation neither prohibits development nor gives the federal government control over private property.

For each river, the Act has the following effects:

- River values (free-flowing condition, water quality, and ORVs) are protected and enhanced.
- Dams and other federally assisted water resource projects that would adversely affect river values are prohibited (Section 7 of the Act).
- The creation of a CRMP that addresses resource protection, development of lands and facilities, user capacities, and other management practices necessary to achieve the purposes of the Act is required (Section 3(d)(1) of the Act).

In 2019, Congress passed the *John D. Dingell, Jr. Conservation, Management, and Recreation Act* (Public Law 116-9 or “Dingell Act”). This added 28.1 miles of Whitewater River to the National Wild and Scenic Rivers System. Public Law 116-9 states that approximately 19.1 miles, including four wild segments totaling 18.1 miles and one recreational segment 1 mile in length, are under Forest Service jurisdiction. The other 9 miles are under BLM jurisdiction, which includes 5.4 miles of a wild segment and 3.6 miles of a recreational segment.

Based upon the need for action (see Purpose and Need section), review of public input, and evaluation of river corridor conditions, the CRMP focuses on the following items:

- Resource protection, land use, user capacity, and other management practices
- Protection and enhancement of river values, including free-flowing conditions, water quality, and ORVs
- Compliance with the requirements of the WSRA
- Consideration of tribal values and needs which include that the Whitewater River and vicinity in the past and today is an important ceremonial and traditional gathering area for the Cahuilla people¹. For example, Whitewater Canyon is an important traditional gathering area for the Cahuilla, that includes gathering agave and other plants (Bean and Saubel 1972:32). The

¹ <https://www.blm.gov/programs/national-conservation-lands/california/whitewater-wsr>
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Whitewater Canyon area has high sensitivity to contemporary Cahuilla people and needs more study (Bean et al. 1981).

Classification

The Wild and Scenic Rivers Act requires that rivers or river segments are classified, designated, and administered as either wild, scenic, or recreational. The three classes represent a development scale and serve as a framework for future management; they are not synonymous with the river's ORVs. For example, a river segment may be designated as recreational even if recreation is not considered an ORV for the river.

A 2005 eligibility study conducted as part of the Forest's Land Management Plan development process found Whitewater River eligible for designation. This study initially recommended wild segments. The 2019 Dingell Act then classified recreational and wild segments on the river. The eligibility study conducted as a part of the BLM's California Desert Conservation Area (CDCA) Plan in 2002 recommended that the BLM-managed segments be classified as wild and recreational. Figure 1 shows the location of each segment.

The first wild segment of Whitewater under Forest Service jurisdiction is a 5.8-mile-long section within the North Fork of the river, from the source of the river near Mount San Gorgonio to its confluence with the Middle Fork. The next Forest Service section of the river is a 6.4-mile-long wild segment of the Middle Fork, from the source of the river to its confluence with the South Fork. The third wild segment administered by the Forest Service is the 1.0-mile-long portion of the river in the South Fork that extends from the confluence of the river with the East Fork to the section line between sections 32 and 33, T. 1 S., R. 2 E., San Bernardino Meridian. The Forest Service also administers a recreational segment of the river, 1.0 mile in length. This segment of the South Fork spans the section line between sections 32 and 33, T. 1 S., R. 2 E., San Bernardino Meridian, to the section line between sections 33 and 34, T. 1 S., R. 2 E., San Bernardino Meridian. The final Forest Service wild segment is 4.9 miles in length, extending along the South Fork from the section lines between sections 33 and 34, T. 1 S., R. 2 E., San Bernardino Meridian, to the confluence with the Middle Fork.²

The BLM also administers two segments of the river within the Whitewater Area of Critical Environmental Concern (ACEC): one wild segment 5.4 miles in length, as well as a 3.6-mile-long recreational segment. The wild segment runs along the main stem of the river, from the confluence of the South and Middle forks to the San Gorgonio Wilderness boundary. The recreational segment spans the portion of the main stem from the San Gorgonio Wilderness boundary to 0.25 miles upstream of the southern boundary of section 35, T. 2 R., R. 3 E., San Bernardino Meridian.

² Location descriptions in this section for each designated WSR segment are pulled from the 2019 Dingell Act.
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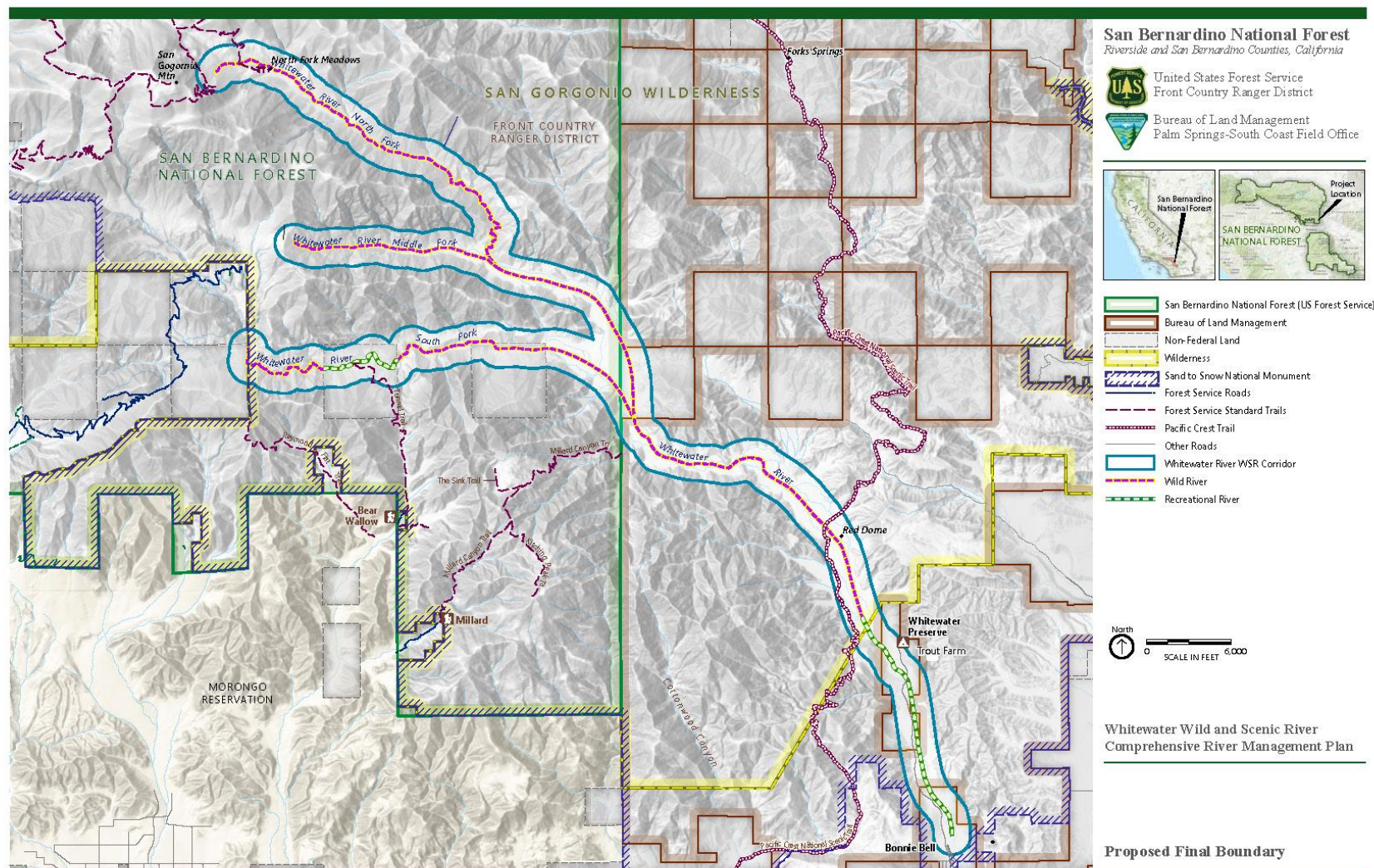


Figure 1. Proposed Final Boundary

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Outstandingly Remarkable Values

The Act requires that each river possess one or more ORVs to qualify for WSR designation. To be described as outstandingly remarkable, a river-related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. While the spectrum of resources that may be considered is broad, all ORVs must be directly river related.

In 2005, prior to the Whitewater River's designation as a WSR, the Forest initiated an eligibility study of all rivers on the Forest as part of its Land Management Plan development process. This eligibility assessment considered which resources within the Whitewater River designated corridor qualified as ORVs. Similarly, BLM conducted an eligibility study as part of its process for the CDCA Plan Amendment for the Coachella Valley in 2002. Following Whitewater River's designation as a WSR, a virtual workshop was then held on the Forest in March 2021 for the purpose of developing CRMPs for Whitewater River as well as Deep Creek. During that workshop, the resource experts on the CRMP team— comprising representatives from the Forest Service, BLM, and contractors—reviewed each potential outstandingly remarkable value for the river.

Whitewater River's ORVs were next evaluated and confirmed in a Resource Assessment (RA), which was completed in 2022. The RA process consisted of reviewing potential ORVs and determining ORV status, based on the river-related values that contribute to the river's overall character and their significance. The RA can be viewed as Appendix B of the CRMP.

The identified ORVs for the river are identified below in Table 1 and further described in the following section. Certain values did not qualify as ORVs because they did not meet the required criteria. To be considered river related, a value should be located in the river or its immediate environment (generally within one-quarter mile on either side), contribute substantially to the functioning of the river ecosystem, owe its existence to the presence of the river, or some combination of these things. See the Resource Assessment (Appendix B to the CRMP) for additional detail about ORV findings and rationales, as well as the criteria used to define each ORV.

Table 1. Outstandingly Remarkable Values for Whitewater River

	Scenery	Wildlife	Heritage (Historic, Prehistoric, and Cultural)	Recreation
Forest Service	Yes	Yes	No	No
BLM	Yes	Yes	Yes	Yes

PURPOSE OF AND NEED FOR THE PROPOSAL

The purpose is to adopt a CRMP to protect and enhance the values for which the river was designated. This includes free-flowing water, water quality, and the ORVs identified above. Section 3 of the Wild and Scenic Rivers Act (16 USC 1274, as amended) states that a CRMP will be developed for the designated river corridor. By designating Whitewater River as a WSR, Congress directed the FS and BLM to

develop a CRMP for the river, which lies partially under their jurisdiction. The CRMP also identifies potential management actions needed to protect river values.

The need is to develop a plan to integrate management of multiple resources, resource designations, and activities in the river corridor. Management of uses on public lands is necessary in this Congressionally designated area to address private, public, and administrative access needs; protect resources; promote public safety; and minimize conflicts related to the uses of public lands.

PROJECT AREA

Whitewater River is split between Forest Service and BLM jurisdiction. Most of the 28.1 miles of designated river falls under Forest Service jurisdiction in the San Bernardino National Forest. Approximately 90% of the river corridor is within wilderness, and much of it is inaccessible. Whitewater River includes the Forest Service-managed North Fork, Middle Fork, and South Fork, as well as the BLM-managed main stem. Originating on San Gorgonio Mountain, within the San Gorgonio Wilderness, the designated reach of the river flows through the San Bernardino Mountains to the Coachella Valley region. Also included within the project area is the PCT, which provides access to the WSR corridor, intersecting with the river near Red Dome on BLM land before traveling south towards the Wildlands Conservancy's Whitewater Preserve. The Sand to Snow National Monument, extending from BLM lands on the Sonoran desert floor up to over 10,000 feet in the San Gorgonio Wilderness on the Forest, also covers a majority of the project area. The BLM segment of the corridor also includes lands under non-federal jurisdictions, which are not part of the CRMP or EA.

The proposed final Whitewater River boundary would extend beyond the quarter-mile interim boundary line along a 1.27-mile reach of the river. This reach begins approximately 2.4 miles downstream of the confluence of the Whitewater River and the Whitewater River South Fork and terminates in the vicinity of Red Dome. In this reach, the recommended final boundary is quarter-mile on the western bank but extends to as much as 0.33 mile on the east bank. This was necessary to capture the entire valley floor, wherein the active channel migrates from bank to bank, and up the valley walls to capture the horizontal extent of high flow flood events. To counter the increase in boundary width, boundary width reductions were made immediately upstream on the western bank for a reach of approximately 1.9 miles. These boundaries are referred to as the river corridor. Once the final boundary is selected, the boundary description and maps will be forwarded to Congress and published in the Federal Register.

PUBLIC INVOLVEMENT AND TRIBAL CONSULTATION

Public Involvement

The proposal has been listed in the San Bernardino National Forest's Schedule of Proposed Actions (SOPA) since February 2022. A public scoping notice for the availability of the Resource Assessment was posted on the Forest website and was provided to the public and other agencies for comment during the scoping period February 15, 2022, to March 15, 2022. Public notice was also posted on the San Bernardino National Forest homepage and social media channels in addition to being distributed to the newspaper of record, the Idyllwild Town Crier, in a press release on March 3, 2022. Scoping comments

on the *Deep Creek and Whitewater River Resource Assessment* were received from 9 commenters and included concerns about expanded ORVs, fire suppression jurisdiction, and botanical resources.

The EA was posted on the Forest website and was provided to the public and other agencies for a 30-day comment period on November 3, 2023. Comments on the *Deep Creek Wild and Scenic River Comprehensive River Management Plan*, *Deep Creek Wild and Scenic River Comprehensive River Management Plan Environmental Assessment*, *Whitewater River Wild and Scenic River Comprehensive River Management Plan*, and the *Whitewater River Wild and Scenic River Comprehensive River Management Plan Environmental Assessment* were received from one commenter and included concerns about minor editorial revisions and utilizing updated data in the User Capacity Analysis, as well as including clarifications around thru-hike permits. Correspondence was reviewed by the interdisciplinary team in order to address the comments. Table 1 in Appendix A lists the comments received and responses. The interdisciplinary team considered these comments while completing the Final EA.

Tribal Consultation

Tribal consultation for the Whitewater River Wild and Scenic River CRMP was initiated in September of 2020 to the federally recognized tribes in the area. Ongoing updates were provided to the Morongo Band of Mission Indians, San Manuel Band of Mission Indians, and Agua Caliente Band of Cahuilla Indians during quarterly tribal meetings with USFS and BLM. Initial notification and an invitation to consult asked for input to inform the resource assessment phase of the CRMP. Additional input was sought during regularly scheduled agency and tribal-specific consultation meetings throughout 2020 and 2021. Letters and electronic correspondence were sent to the tribes in June of 2021. Advance copies of the draft CRMP were shared with tribes prior to releasing it for public review and comment.

Although no areas of specific concern have been identified, the CRMP provides an additional level of protection to tribal and cultural resources within the river corridors. Monitoring requirements of the CRMP ensure baseline conditions of the ORVs associated with the corridors are maintained and improved as necessary. Tribal consultation efforts are ongoing and will continue through the life of the CRMP and as part of any future proposals tiered to or as a result of the plan.

ISSUES AND IMPACT TOPICS

As defined in NEPA regulations (40 CFR 1500.4[1]), key issues are used in the development of alternatives to the Proposed Action. These key issues are given special consideration by the decision maker when selecting an alternative. Guided by the Forest Plan (Forest Plan or LMP) and BLM's California Desert Conservation Area Plan (CDCA Plan), the interdisciplinary team addressed the key issues identified during internal scoping as well as the public scoping process.

The following key issues were identified during the development of the CRMP:

- Resource protection, including impacts on water quality, hydrology, scenery, wildlife, heritage resources, recreation, and climate change
- Development of lands and facilities
- User capacities

CHAPTER 2. ALTERNATIVES

This chapter describes the alternatives considered for managing the river corridor. The alternatives are compared, providing a basis for choice by the decision maker and the public. The FS and BLM are required by law to develop a CRMP that addresses resource protection, development of lands and facilities, user capacities, and other management practices necessary to meet the purposes of the Act.

No unresolved conflicts emerged from issues that fell within the scope of this project. Thus, this EA evaluates a single action alternative: the Proposed Action, in which the CRMP is adopted. A No-Action Alternative, in which management continues under existing standards and guidelines, applicable law, regulation, policy, Executive Orders, and special area plans (as applicable) with no adoption of the CRMP, is analyzed in this section as well. This No-Action Alternative provides a baseline for comparing environmental impacts related to the Proposed Action.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the CRMP would not be adopted. Selecting not to adopt the CRMP would cause the Forest Service and BLM to be out of compliance with the Act. Section 7 of the Act states that Federal agencies must:

“protect federally designated rivers and congressionally authorized study rivers from the harmful effects of water resources projects. It requires evaluation of federally assisted water resources projects and a determination by the river-administering agency.” (IWSRCC, No Date)

The current Forest Plan, WSRA, and the BLM’s CDCA Plan as amended, would continue to guide administration and management of the Whitewater WSR. Management would also continue to adhere to applicable federal laws, state water quality standards, existing FS policy 2670.32, which directs management for FS Sensitive Species, existing BLM policy manuals 6840, which directs management of BLM Special Status Species (SSS), and 6400, which directs management of wild and scenic rivers, as well as other applicable regulations and policies.

In addition to the Forest Plan and CDCA Plan as amended, the Endangered Species Act (ESA) and Wilderness Act protect the species and wilderness within the river corridor. The ESA regulates the conservation and protection of endangered and threatened species and their habitats, while the Wilderness Act manages wilderness areas to preserve their unique character (Wilderness Act of 1964, Public Law 88–577). The Migratory Bird Treaty Act (MBTA) provides further protection to native bird species within the river corridor. The Bald and Golden Eagle Protection Act of 1940 provides special protections for eagles, prohibiting take, possession, sale, transport, export, or import, as well as restricting potentially disturbing activities in the vicinity of eagle nests. The National Trails System Act (Pub.L. 90-543, as amended) regulates planning and management of National Trails, including the PCT, which runs through the BLM section of the corridor.

Projects proposed in the bed or banks of a designated river require a Section 7 determination under the Act. Section 7 requires evaluation of the effects of proposed water resources projects on river values. Even if the proposed project is outside of the designated river corridor, a Section 7 analysis may be done

if the project would unreasonably diminish the river values present at the date of designation. Such project-specific analyses may include studies such as groundwater modelling.

Under the No-Action Alternative, the interim boundary of “one-quarter mile from the ordinary high water mark on each side of the river” (from Section 4(d) of the Act) would continue to be used for management of the river corridor. A final, detailed river corridor boundary, as required in Section 3(b) of the Act, would not be established.

Scenery management along the river corridor on National Forest System lands would continue to be guided by *Landscape Aesthetics: A Handbook for Scenery Management* (USDA Forest Service 1995). Scenery management along the river corridor on BLM lands would continue to be guided by *BLM Manual 8431 - Visual Resource Contrast Rating* (BLM 1986). No additional management strategies or thresholds would be implemented to accomplish the purpose of the wild and scenic river designation.

PROPOSED ACTION

The Proposed Action is the adoption of the *Whitewater River Wild and Scenic River Comprehensive River Management Plan*, which is incorporated herein by reference. The CRMP addresses both FS- and BLM-managed segments of the river and includes all existing management under the No-Action Alternative. In addition, the CRMP also outlines desired conditions, standards, guidelines, management strategies, and mitigation measures to address issues and fulfill the purpose of the Act. The actions proposed in the CRMP are a combination of continued current management, as described in existing management plans, and additional management elements that were created for the protection of river values. Under the Proposed Action, the Forest Service and BLM would address issues related to improving resource protection and restoration efforts and enhancing signage and interpretation within the river corridor.

Interpretation and Signage

FS segment

Under the Proposed Action, the FS would pursue multiple approaches to help visitors interpret and understand their surroundings in the WSR corridor. The FS would provide signage and/or other resources to interpret the changing landscape and help visitors connect existing conditions with broader ecological processes; it would also provide materials and information to inform visitors of the WSR designation. The exact location design of the signs would be determined at a later date. The FS would also seek to educate the public about the impacts that dam building can have on fish and amphibians. Similarly, the FS would work with the local community to educate them about ways in which to prevent human disturbance within the WSR corridor. This could include education about protecting ORVs as well as proper disposal of pet and human waste, along with Leave No Trace principles generally. The FS would also seek to monitor high use areas for proper waste/trash disposal and adherence to Leave No Trace principles. To further advance public outreach, the FS would seek to engage artists, students, or citizen scientists in documenting visual changes over time from varied viewpoints.

BLM segment

Under the Proposed Action, BLM would pursue the same “Interpretation and Signage” actions that the FS would implement, as described above. In addition, it would partner with The Wildlands Conservancy (which is a non-profit organization whose Whitewater Preserve is located within the WSR corridor) to coordinate providing educational materials about climate change and its impending impacts to water resources, including the Whitewater River, at the Visitor Center and on signs throughout the corridor (except in wilderness areas). BLM would also improve interpretation of heritage sites at wilderness trailheads or other appropriate points of public entry to help educate the public about changes to land management through the course of history and the consequences arising from land management practices. This may also help the public envision how lands should be managed in the future. In order to limit impacts to well-used areas, BLM would also use interpretation and messaging to encourage visitors to visit other areas of public land units, to limit impacts to heritage areas at risk.

Resource Protection and Restoration

FS segment

Under the Proposed Action, the Forest Service would seek to improve resource protection and restoration throughout the WSR corridor. The FS would aim to plant more native trees to increase shade, nesting, and feeding/foraging diversity for wildlife species. Specifically, the FS would focus plant restoration in areas that have a high likelihood of being protected during a wildland fire event. Restoration activities could include: monitoring invasive species to reduce fuels for wildfire; mitigating invasive species through removal, to help increase water flow; reducing fire spread through invasive grass removal; reducing invasive species and managing vegetation in the headwater area to help increase water levels, reduce temperature, reduce the susceptibility to severe fire, and allow native species to flourish without competition; and controlling non-native plants at lower elevations in favor of other native drought-adapted species. This may include partnering (e.g., with local universities) to have native plants ready to include in restoration efforts. Restoration actions would also include efforts to remove visitor-created dams. To engage with the public, the FS would create a community science water quality monitoring program through the local community and water district.

The FS would also ensure that WSR values were incorporated into other planning efforts such as wildfire management and Land and Resource Management plan revisions.

BLM segment

Under the Proposed Action, BLM would pursue the same “Resource Protection and Restoration” actions that the FS would implement, as described above, with the addition of monitoring for noxious/invasive weeds in the PCT corridor. In addition, it would also pursue specific management actions designed to protect heritage resources. For instance, BLM would eliminate and rehabilitate impacts from social trails and direct visitors to use existing trails or the river channel to reduce erosion and damage to known cultural resources. BLM would also evaluate possible threats from natural processes and/or increased visitation due to the WSR designation. Related to this, BLM may increase its monitoring of recreation use, in partnership with The Wildlands Conservancy, as it anticipates greater visitation pressure. BLM would also include tribes and other interested parties to consider areas of tribal significance and to incorporate tribal ecological knowledge into management planning. Interpretation and signage on or

about the PCT would follow the PCT Comprehensive Management Plan standards. All interpretation regarding the PCT would utilize the interpretive themes outlined in the PCT Foundation Document.

Throughout the corridor, BLM would aim to proactively protect eligible or unevaluated cultural sites in areas of high risk for fire, floods, public use, etc. by continuing/extending fuel treatments in response to climate change and leaving sufficient vegetation in surrounding areas to frame and protect cultural sites from looting.

BLM would also develop management plans for sites eligible for listing on the National Register, to track the success of management activities and modify ineffective activities as needed. Where protection is not possible, BLM may incorporate mitigation actions such as data recovery.

Additional Protections

Additional protections addressed in the CRMP include recommending a final boundary for the river, establishing user capacity levels, implementing thresholds for action, establishing desired conditions for the river corridors, proposing potential future management actions to protect and enhance river values to better align with the WSRA mandate, and proposing monitoring items. These components are addressed in further detail below.

River Boundary

The current interim boundary for the river includes one-quarter mile from the OHWM on both sides of the river, along the wild and recreational segments. The proposed final boundary departs from the interim boundary by extending beyond the quarter-mile interim boundary along a 1.27-mile reach of the river. This reach begins approximately 2.4 miles downstream of the confluence of the Whitewater River and the Whitewater River South Fork and terminates in the vicinity of Red Dome. In this reach the proposed final boundary remains quarter-mile on the western bank but extends to as much as 0.33 mile on the east bank. This was necessary to capture the entire valley floor, wherein the active channel migrates from bank to bank, and up the valley walls to capture the horizontal extent of high flow flood events. To counter the increase in boundary width, boundary width reductions were made immediately upstream on the western bank for a reach of approximately 1.9 miles. The proposed final boundary is shown in Figure 1.

User Capacity

The Wild and Scenic Rivers Act requires that maximum user capacities be identified for each designated river and addressed in the river's associated CRMP (Section 3 (d)(1)). Appropriate management strategies are then developed based on these capacities. User capacity is defined as the maximum number of visitors per day that can be supported by the river without causing degradation or adverse impacts on river values. To estimate user capacity, information on current amounts and types of use is reviewed. Use is typically measured in number of visitors per day, vehicles per day, or campsite occupancy per day. User capacity is generally extrapolated from estimates of current use, types of use, and visitor behavior, although there is no single prescribed method for calculating capacity.

A user capacity analysis was conducted for Deep Creek and Whitewater River Wild and Scenic Rivers, and is included as Appendix A to the CRMP (Otak, Inc. 2023). Goals of this analysis included identifying current usage at the river, determining the kinds of uses the river can support without impacting ORVs,

establishing thresholds of use to prevent degradation of river values, calculating the user capacity, identifying triggers for management action, and establishing adaptive management actions when triggers are exceeded. Examples of these adaptive management actions include educating visitors about low impact camping practices, constraining camping footprints, closing or rehabilitating trails, increasing parking monitoring frequency, and implementing signage or enforcement to keep visitors from camping outside designated areas as well as parking in permissible areas only. These adaptive management actions are thus incorporated as part of this project's Proposed Action. In this EA, and in the CRMP, user capacity is addressed for the wild segments (23.5 miles) and recreational segments (4.6 miles). In the user capacity analysis, the project area was divided into three analysis areas. User capacity was estimated separately for these areas because of the variation in types and amounts of use in each area.

Potential Future Management Actions

In addition to the adaptive management actions in response to changes in use levels described above, the CRMP provides further management direction to meet the requirements of the Wild and Scenic Rivers Act. An additional potential future management action is described below that would protect and enhance the river's free-flowing condition, water quality, and ORVs. This management action is guided by a set of desired conditions for the river, described in further detail in the CRMP.

Although the CRMP and this EA discuss this potential management action to protect and enhance river values, they do not represent commitments or proposals to take the action described. Site-specific actions detailed in these documents would require separate NEPA analysis as well as other appropriate compliance prior to implementation. The Proposed Action of this EA is solely the adoption of the CRMP, not the implementation of any actions described. The potential future management action proposed in the CRMP is described in further detail below.

FS segment

- None.

BLM segment

- Consider introducing BLM permit system for the wild segment of WSR within San Geronio Wilderness. A permit system for through and long distance hikers on the PCT does already exist and is administered in coordination with the PCTA.

Monitoring Plan

In addition to the management actions listed above, the free-flowing condition, water quality, and certain ORVs of the river would be monitored upon adoption of the CRMP. Several potential monitoring items are suggested in the CRMP to address the areas of highest concern in the river corridor. These items include free flow, water quality, heritage resources, wildlife, recreation, and scenery. These are discussed in further detail, along with proposed monitoring actions, in Table 2.

Table 2. Possible Monitoring Items within the River Corridor

Location (FS segments/ BLM segments/ both)	Potential Issue / River Value Addressed	Monitoring Action
FS and BLM segments	Water quality	Conduct surveys of surface water and groundwater to monitor for water quality indicators relative to wildlife, recreation use, and riparian health.
FS and BLM segments	Free flow	Utilize U.S. Geological Survey (USGS) gage station flow monitoring data to evaluate trends in free flow in comparison to precipitation data, climate change and other changes within the watershed, such as changes in riparian vegetation from fires, grazing, or human activities.
FS and BLM segments	Wildlife, scenery, heritage resources, and hydrology impacts from visitor use	Monitor and educate the public at high use areas on proper disposal of trash as well as Leave No Trace principles.
BLM segment	Recreation impacts from visitor use	Increase recreation use monitoring in partnership with The Wildlands Conservancy, in anticipation of greater visitation pressure.
FS and BLM segment	Wildlife impacts from visitor use	Continue surveys for/documentation of FSS and BLM sensitive wildlife species within the WSR corridor.

Land Use Plan Compliance

The alternatives are consistent with the goals, objectives, and direction of the San Bernardino National Forest Plan and 2019 John D. Dingell, Jr. Conservation, Management, and Recreation Act (Dingell Act, Public Law 116-19). The alternatives are also consistent with BLM planning direction, including the CDCA Plan as amended, including the 2016 Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment. Implementation of the No-Action Alternative or the Proposed Action would be consistent with these and with all relevant federal, state, and local laws, regulations, and requirements designed for the protection of the environment, including the Clean Air and Clean Water Act.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section summarizes the affected environment, the potential changes and impacts due to implementation of an alternative, and the basis for comparison of alternatives. Resources determined by

the interdisciplinary team to be potentially affected are identified and analyzed. These include the ORVs relevant to each river segment, as well as other river resource values, such as hydrology.

Resources deemed to be potentially affected by the No-Action and Proposed Action alternatives are hydrology (FS and BLM), scenery (FS and BLM), wildlife (FS and BLM), heritage (BLM) and recreation (BLM).

GENERAL METHODOLOGY FOR ANALYZING IMPACTS

In accordance with the Council on Environmental Quality (CEQ) regulations for implementation of NEPA, direct, indirect, and cumulative impacts are described under each impact topic (40 CFR 1502.16 and 40 CFR 1508.1). To determine impacts, the current condition of each resource analyzed is presented below, followed by a comparison between the alternatives described in Chapter 2.

Direct impacts are caused by the action and occur at the same time and place. Indirect impacts are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Cumulative impacts are defined as “the effects on the environment which results from the incremental effects of the action when added to the effects of other past, present, or reasonably foreseeable actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.1). An interdisciplinary team researched past projects or plans with ongoing effects and reasonably foreseeable future projects to determine the cumulative impacts scenario. A cumulative impacts analysis focuses on cumulative actions that overlap with the project area or that are close enough that impacts from those areas would be observed within the project area and on the resources carried forward for detailed analysis.

Also considered in the impacts analysis is the User Capacity Analysis (Appendix A of the CRMP), which establishes user capacity thresholds and triggers and contains adaptive management strategies to manage use within those capacities.

CUMULATIVE ACTIONS

Past projects or plans with ongoing effects and reasonably foreseeable future projects and plans were identified by an interdisciplinary team to provide the cumulative impacts scenario. The cumulative impacts analysis focuses on cumulative actions that overlap with the project area or that are close enough that impacts from those areas may have been observed within the project area and on the resources (ORVs) carried forward for detailed analysis.

The Forest Service and BLM will be undertaking a management planning process for the Sand to Snow National Monument. The National Monument Plan will be developed with maximum public involvement and will be a collaborative effort between the agencies. The Sand to Snow National Monument Plan will serve as a land management blueprint for Monument lands, which cover the majority of the Whitewater River corridor. As the planning process has just begun and a draft plan is not available for analysis, however, the Monument Plan was not considered a reasonably foreseeable action and therefore unavailable for cumulative effects analysis in this EA.

FOREST SERVICE

Resources determined to be potentially affected by the No-Action and Proposed Action alternatives are hydrology, scenery, and wildlife.

Hydrology

Affected Environment

Current climate change forecasts for the region do not have consensus on whether total annual precipitation will increase or decrease, but there is consensus that large precipitation and drought events will be more severe, and that compared to the historical record, more precipitation will fall as rain rather than snow, thereby reducing snowpack. As a result, it is expected that seasonal base flow will be reduced, whereas large storm event flood flows will increase in frequency and magnitude. Data from Streamflow Metrics: A dataset of modeled flow metrics for streams in the contiguous U.S. for historical and future climate change scenarios, by USDA USFS, Rocky Mountain Research Station, shows increases in mean annual and flood event flow but decreases or nominal increases in base flow as summarized in Table 3 below.

Table 3. Percent Change in Modelled Streamflow Projections for Forest Service Segment under the Representative Concentration Pathway (RCP) 8.5 scenario

Location	Mean Annual Flow	Base Flow	1.5-Year Flood	25-Year Flood	Number of Winter Floods
Mid Century (2030-2059)					
North Fork Whitewater River	37.23%	-7.24%	144.18%	105.67%	29.63%
Middle Fork Whitewater River	37.32%	-8.21%	146.14%	103.37%	29.32%
South Fork Whitewater River	37.30%	-8.15%	145.46%	103.97%	29.13%
End of Century (2070-2099)					
North Fork Whitewater River	49.80%	3.97%	314.11%	197.93%	44.67%
Middle Fork Whitewater River	50.19%	2.49%	316.66%	196.74%	43.92%
South Fork Whitewater River	50.09%	0.48%	315.68%	196.99%	43.92%

Note: USFS RMRS based on RCP 8.5 (high emissions scenario)

Source: [USFS RMRS 2023a](#), [2023b USFS RMRS](#)

As evident in Table 3, the projected reduction in base flow in combination with increased flood flows and mean annual flow is indicative of a greater amount of precipitation falling throughout the year within single larger storm events. Base flow reductions are projected, however, toward the end of the century those reductions are slightly mitigated. Of greater concern, however, are the increases in flood flows, both in the mid-century and end-of-century projections. The 1.5-year flood is typically associated with the channel defining, or bankfull flow, which separates the flow typically contained within the main channel and that which spills out into the floodplain. Projected increases of approximately 150% to over 300% for flows associated with this event, indicates that flooding will become much more frequent and will put

additional stress on the channel form in its current setting. Furthermore, larger flood events, as indicated in the 25-year flood (equivalent to the flood that has a 4% chance of occurring within a given year) are projected to increase in flood flow by approximately 100% in the near term and over 200% increase by the end of the century. A higher frequency of larger flood events will put additional stress on the current channel and floodplain and may lead a higher rate of sediment transport, bed and/or bank erosion, floodplain erosion and possible channel migration.

Further compounding the effects of increased precipitation and flood flows, are rising air temperatures and the effects it has on changing vegetation and the potential for forest fires within the watershed. Vegetation improves absorption of rainfall, reduces the rate at which runoff flows into receiving channels, and provides bank and floodplain stability, habitat, and cooling effects. A change or reduction in the density or type of vegetation within the watershed may lead to higher rates of runoff and flash flooding. High intensity rainfall events that occur within areas recently destroyed by forest fires often result in increased runoff rates, more intense flash flooding and significant sediment transport from upland soils into the stream valley.

Based on preliminary data, Whitewater River appears to have exceptional water quality. This may be due in part to the fact that the sections of river that are a focus of this report flow mostly through federally managed or conservation partner lands, as well as the San Geronio Wilderness. Potential threats to water quality would likely be short term effects from wildfires, human activity or the feral cattle population, or long-term effects from geologic processes or land erosion.

Impacts of No-Action Alternative

Under the No-Action Alternative, existing federal guidelines, such as those in the Forest Plan and Section 7 of the Act, as well as state water quality standards, would continue to protect water quality in Whitewater River. Section 7 of the Act states that federal agencies must:

“protect federally designated rivers and congressionally authorized study rivers from the harmful effects of water resources projects. It requires evaluation of federally assisted water resources projects and a determination by the river-administering agency.” (IWSRCC, No Date)

However, by not adopting the CRMP, the Forest Service would be out of compliance with Section 3(d)(1) of the Act, which requires the Federal river administering agency or agencies to prepare a CRMP to provide for the protection of river values.

Water quality would potentially be adversely impacted if the physical footprint of camping areas and/or informal trail networks were expanded from recreation use (Otak, Inc. 2023). As a result, the No-Action Alternative would potentially impact hydrology and water quality if additional protections afforded by the CRMP are not adopted.

Impacts of Proposed Action

Under the Proposed Action, impacts would be the same as current management strategies, but would add additional protection for hydrology resources, such as a final boundary, user capacity thresholds, and adaptive management actions triggered by these thresholds. Any proposed water resources projects would have to be reviewed under Section 7 of the Act. This would have no impact on hydrology because this value is already protected by the existing Act. Establishing a final boundary would result in a beneficial

impact because it would include additional protection of the river corridor from activities that may lead to impairments such as increases in sediment runoff, thereby degrading water quality. Similarly, establishing capacity thresholds would have a beneficial impact on water quality because they would afford additional protections due to less impact from recreational use.

Scenery

Affected Environment

The Forest Service segment of Whitewater River is located within the San Gorgonio Wilderness, which is a unique subalpine landscape ranging in elevation from 4,400 feet to 11,502 feet at San Gorgonio Mountain, where the river originates. The wilderness, which spans 101,574 acres, is managed by both the Forest Service and the BLM. It resides within the Sand to Snow National Monument, surrounded by desert to the east.

The North Fork of the river is moderately steep and high in elevation, with canyons, slopes, and narrow ridges in the San Bernardino Mountains. To the northeast lies Ten Thousand Foot Ridge, which provides views of montane meadow, alpine forest, and subalpine forest. Dark, mixed conifer forests and green-gray chaparral blanket the surrounding hillsides as the river's elevation decreases. The river is not always visible, especially during dry summer months, although heavy winter rains and large snow melts can change this dynamic. During the summer, rich, green vegetation against high cliffs, canyon walls, and cobble-strewn wash provides for a colorful view.

One outstanding feature is the stark relief of the landscape, which supplies views from the top of San Gorgonio Mountain. The river corridor also features high desert vegetation, willow scrub, and scattered cottonwoods. The river itself has a rocky bottom with deep pools, although portions of the river are intermittent. At lower elevations lies a sandy and boulder-strewn floodplain.

The Scenic Integrity Objective (SIO) for this river is Very High. The SIOs are objectives that define the minimum level to which landscapes are to be managed from an aesthetics standpoint (USDA Forest Service 2005a). Specifically, a "Very High" SIO generally provides for ecological changes only and refers to landscapes where the valued/desired landscape character is intact with only minute, if any, deviations. None of the remote San Gorgonio Wilderness within which the Whitewater River resides is influenced or altered by humans.

Impacts of No-Action Alternative

Under the No-Action Alternative, the CRMP would not be adopted. Existing state, federal, agency regulations, and current land use plans would therefore continue to guide management of this section of the river without additional guidance/direction from a CRMP to protect river values. Further, no user capacity would be implemented. However, use levels are not anticipated to impact scenery in this section of the river corridor. Further, changes to river management, such as adoption of the CRMP, are not anticipated to alter scenery. Therefore, the No-Action Alternative is not anticipated to have any impacts on scenery.

Impacts of Proposed Action

The Proposed Action is administrative in nature; furthermore, use in the Forest Service section of the river is currently low, and is managed by a wilderness permit system; the Proposed Action is therefore

unlikely to impact scenery values in this section. However, implementation of the actions described in the CRMP could have minor, indirect beneficial impacts on this segment of the river by adding further monitoring use levels and patterns which, if changed in the future, could begin to impact scenery. Implementation of the CRMP would also establish user capacity thresholds and adaptive management actions triggered by these thresholds, thereby affording additional protection of scenic resources due to less impact from unauthorized recreational use.

Wildlife

Wildlife species are addressed in several different categories in this section: threatened and endangered species, Forest Service Sensitive Species, and migratory birds. To determine which species could occur within the analysis area, species occurrence records for the area were reviewed and the habitat requirements of each species were compared with the habitat present in the analysis area. The results of this analysis are summarized in Table 4. Resources used to identify ESA-listed threatened and endangered species within the study area included the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System. These sources were reviewed to determine known populations of listed species in or near the river corridor, as well as suitable habitat within the river corridor. Suitable habitat was considered with respect to life cycle, reproductive phenology, and other relevant habitat requirements. The species identified in this analysis are found in or overlapping the Forest boundaries and have the potential to occur within the river corridor. Some but not all the species identified through this analysis are known to occur in the Whitewater River corridor, while others have the potential to occur based on habitat preferences and the availability of suitable habitat.

Affected Environment

The river corridor provides habitat to a number of rare, threatened, and endangered species. These include the Forest Service Sensitive California spotted owl (*Strix occidentalis*) [federally proposed as endangered], San Bernardino flying squirrel (*Glaucomys sabrinus californicus*), as well as the state threatened southern rubber boa (*Charina umbratica*), and the federally endangered mountain yellow-legged frog (*Rana muscosa*), southwestern willow flycatcher (*Empidonax traillii extimus*), and Least Bell's vireo (*Vireo bellii pusillus*).

Using IPaC, the following federally listed species were identified as potentially occurring within the Whitewater River corridor: Coachella Valley fringe-toed lizard (*Uma notata*) [threatened], desert tortoise (*Gopherus agassizii*) [threatened], arroyo toad (*Anaxyrus californicus*) [endangered], mountain yellow-legged frog (*Rana muscosa*) [endangered], and the monarch butterfly (*Danaus plexippus*).

The river corridor is also home to over 240 species of resident and migratory birds and a number of mammalian predators, including the gray fox (*Urocyon cinereoargenteus californicus*), Western bobcat (*Lynx rufus fasciatus*), mountain lion (*Puma concolor*), and coyote (*Canis latrans*). Portions of the river corridor and nearby area are also part of the Desert Tortoise (*Gopherus agassizii*) Conservation Area, containing designated critical habitat for the species, which is threatened at both the state and federal level and a candidate state endangered species. Whitewater River supports several sensitive state and federally listed species and a wealth of migratory birds and mammals. There are documented occurrences of various threatened, endangered, and candidate species along or near the river. Some or all species may occur within the Whitewater River corridor and Conservation Area.

Table 4. Whitewater River – Riverside and San Bernardino Counties, California
Endangered Species Act – Federally Endangered, Threatened Species, and Proposed List

Common Name	Scientific Name	ESA Species Listing Status	Designated or Proposed Critical Habitat in Corridor?	Known or Likely/Suspected to Occur in Corridor?	Habitat
Birds					
California spotted owl, Southern California/Coastal Distinct Population Segment	<i>Strix occidentalis</i>	Proposed Endangered	Critical habitat is not proposed for the California spotted owl, Southern California/Coastal DPS	Likely. Southern and coastal California in the Coastal, Transverse, San Bernardino, and Peninsular Mountain ranges.	Inhabit older forests that contain structural characteristics necessary for nesting, roosting, and foraging. On the central coast of California and in southern California, the owls are found in riparian /hardwood forests and woodlands, live oak/big cone fir forests, and redwood/California laurel forests. Nests are typically found in areas of high canopy cover, a high number of large trees, and downed trees.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	The project location does not overlap with designated critical habitat.	Yes. Likely/Suspected Current species documented in Big Morongo Canyon Preserve and Area of Critical Environmental Concern located 7 miles north east.	Least Bell's vireos winter in southern Baja California, Mexico, where they occupy a variety of habitats, including mesquite scrub within arroyos, palm groves, and hedgerows bordering agricultural and residential areas.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	The project location is in suitable habitat.	Yes. Suitable habitat is present, but no Critical Habitat	Breeds in vegetation alongside rivers,

Table 4. Whitewater River – Riverside and San Bernardino Counties, California
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Common Name	Scientific Name	ESA Species Listing Status	Designated or Proposed Critical Habitat in Corridor?	Known or Likely/Suspected to Occur in Corridor?	Habitat
				occurs within the corridor. located on a combination of federal, state, tribal, and private lands in Riverside and San Bernardino counties in California.	streams, or other wetlands (riparian habitat). It establishes nesting territories, builds nests, and forages where mosaics of relatively dense and expansive growth of trees and shrubs, near or adjacent to surface water or underlain by saturated soil.
Reptiles					
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	Threatened	No. The project location does not overlap with designated critical habitat.	Unknown. Species known to inhabit sand dunes in Coachella Valley, California, southeast of project area.	Inhabits sand dunes.
Desert tortoise	<i>Gopherus agassizii</i>	Threatened	No. The project location does not overlap with designated critical habitat.	Yes. Mojave population of desert tortoise lives in a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes, and canyons.	Inhabits desert, arid land with sparse vegetation. Typically found in creosote bush, where scattered shrubs provide abundant space for growth of grasses and wildflowers, the favored foods of the species.
Amphibians					
Arroyo toad	<i>Anaxyrus californicus</i>	Endangered	The project location does not overlap with designated critical habitat.	Yes. Suitable habitat is present; a natural body of running water is within the project corridor, Whitewater River.	Habitat consists of narrow and shallow aquatic and riparian areas with slow moving water as well as nearby

Table 4. Whitewater River – Riverside and San Bernardino Counties, California
Endangered Species Act – Federally Endangered, Threatened Species, and Proposed List

Common Name	Scientific Name	ESA Species Listing Status	Designated or Proposed Critical Habitat in Corridor?	Known or Likely/Suspected to Occur in Corridor?	Habitat
					upland areas that are not too widely dispersed. Typical aquatic habitats are bordered by low-elevation hills, scattered vegetation, and sandy, fine gravel, and pliable soils accompanied by rocks of varied size.
Mountain yellow-legged frog	<i>Rana muscosa</i>	Endangered	Yes. The project location overlaps with designated critical habitat.	Yes. Suitable habitat is present; a natural body of running water is within the project corridor, Whitewater River.	Live in high mountain lakes, ponds, tarns, and streams largely in areas that were glaciated. Adults are typically found sitting on rocks along open shorelines, usually where there is little to no vegetation. Breeding habitat consists of ponds, lakes, and streams that do not dry out in the summer, are deep enough to prevent freezing to the bottom in winter, and do not contain fish.
Insects					
Monarch butterfly	<i>Danaus plexippus</i>	Candidate	No.	Potentially. For overwintering months, habitat with a specific microclimate is	Fields, roadside areas, open areas, wet areas, or urban gardens, milkweed and flowering

Table 4. Whitewater River – Riverside and San Bernardino Counties, California
Endangered Species Act – Federally Endangered, Threatened Species, and Proposed List

Common Name	Scientific Name	ESA Species Listing Status	Designated or Proposed Critical Habitat in Corridor?	Known or Likely/Suspected to Occur in Corridor?	Habitat
				needed for protection from the elements, as well as moderate temperatures to avoid freezing. Monarchs living west of the Rocky Mountain range in North America primarily overwinter in California at sites along the Pacific Coast, roosting in eucalyptus, Monterey pines and Monterey cypress trees.	plants are needed for monarch habitat. Adult monarchs feed on the nectar of many flowers during breeding and migration, but they can only lay eggs on milkweed plants.
Flowering Plants					
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Endangered	Yes. The project location overlaps with designated critical habitat.	Yes. The species is restricted to fewer than 25 locations in the Coachella Valley in Riverside County, California. Between Cabazon and Indio, its east-west range is approximately 33 miles, with the exception of six outlying occurrences within a five-mile area of the Chuckwalla Valley.	This species inhabits dunes and sandy flats alongside disturbed margins of washes, as well as in coarse, sandy soils along roadsides.

Source: USFWS 2023d

Forest Service Sensitive

A number of San Bernardino National Forest Sensitive Species are documented to occur in the river corridor or have the potential to occur there (USDA Forest Service 2023), based on their habitat preferences and the available habitat along the river. The likelihood of occurrence was determined based on past reports of the species and the availability of suitable habitat along the river. Several species of note are highlighted below.

San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) habitat is comprised of the San Bernardino National Forest's tree canopy and dense forest and is the southernmost subspecies of Humboldt's flying squirrel. These nocturnal squirrels are smaller than other Humboldt's subspecies feeding primarily on lichens, seeds, and invertebrates (USFWS 2023a).

The southern rubber boa (*Charina umbratica*) is a small nocturnal snake that is known only to exist in the San Bernardino and San Jacinto Mountains. The southern rubber boa can be found in high elevation, high humidity forests, woody areas, and granite outcroppings. Rubber boas' greatest population threats are drying climate and increased wildfire risk although they have some ability to adapt to changing climate conditions (San Bernardino County Public Works 2023).

Migratory Birds/Non-Migratory Birds

San Bernardino National Forest is home to diverse bird habitats and species. The environments birds are found in include mountain lakes and meadows, coniferous forest, oak woodland, riparian woodland, chaparral scrub, desert scrub, and grasslands. These diverse habitats provide homes for bird species that are resident year-round, as well as for birds which utilize that area only for breeding, wintering, or as stop-over sites during spring and fall migrations (USDA Forest Service 2014). The USDA created a checklist of the *Birds of the San Bernardino National Forest* (updated in October 2014) which includes information about habitat, whether the species is a seasonal or long-term resident, and the degree of observability within the San Bernardino Mountain range.

The proposed endangered California spotted owl (*Strix occidentalis occidentalis*) is considered uncommon, but usually can be encountered in small numbers in proper habitat. This species can be found in woodlands: oaks, conifers, oak-conifer associations, and pinyon-juniper trees (USDA Forest Service 2014). The spotted owl is a present, year-round resident and regular breeder in the San Bernardino National Forest.

The endangered Southwestern willow flycatcher (*Empidonax traillii extimus*) is an occasional, rare species within the San Bernardino National Forest. There are no notable records for the willow flycatcher and the species is sighted only a few times per year in proper habitat. This species can be found in riparian, stream side thickets and woodlands. The willow flycatcher is a transient, summer resident nesting but not remaining through the winter. The species migrates through the region during the spring (March-June) or fall (August-November) in the San Bernardino Mountain range.

The endangered Least Bell's vireo (*Vireo bellii pusillus*) is a rare species within the San Bernardino National Forest. There are also no notable records for Least Bell's vireo and it is not expected in the

Forest (USDA Forest Service 2014). Historically this species was found throughout the California Central Valley, but due to habitat loss is now found primarily in coastal southern California (USFWS 2023c). This species inhabits riparian environments, stream side thickets, and woodlands. Least Bell's vireo is a summer resident, nesting but not remaining through the winter, and is considered a regular breeder in the San Bernardino National Forest.

Impacts of No-Action Alternative

Under the No-Action Alternative, Whitewater River would continue to support populations of and habitat for federally listed species, migratory birds, and Forest Service Sensitive Species. Existing management direction in the Forest Plan would continue to be implemented and provide actions that protect federally listed species such as the southwestern willow flycatcher. Habitat for federally listed species and other significant populations would also continue to be managed under existing standards and guidelines, applicable law, regulation, policy, Executive Orders, and special area plans (as applicable). Under the No-Action Alternative, there would continue to be adverse impacts from potential expansion of the physical footprint of camping areas and/or informal trail network due to a continued lack of public education that would keep visitors in designated areas. (Otak, Inc. 2023). As a result, the No-Action Alternative could adversely impact wildlife if additional protections afforded by the CRMP, such as user capacity thresholds and corresponding adaptive management actions are not adopted.

Impacts of Proposed Action

Under the Proposed Action, in addition to current management direction, supplemental protections would be put in place to protect federally listed species, potential habitat for federally listed species, and habitat for federally listed species. These protections include establishing a final river corridor boundary, user capacity thresholds and adaptive management actions triggered by these thresholds, stream restoration, and additional management guidance.

The establishment of a final boundary would provide additional protection of the river corridor from development, which could prevent loss or degradation of habitat, and disturbance to wildlife in the vicinity. Similarly, establishing user capacity thresholds would afford protections from recreational use. Increased interpretive signage on Leave No Trace principles and harmful dam building practices would reduce human impacts and educate visitors about their role in a healthy ecosystem. Management strategies under the Proposed Action would further the protection of wildlife resources. These management strategies include invasive plant removal, particularly invasive grasses. These grasses are particularly harmful as they are often brought in on hikers' shoes and provide fuel for wildfires during dry seasons. Replacing invasive grasses with native plants would increase habitat for nesting, foraging, erosion prevention, and shade. Under the Proposed Action, water quality monitoring would be established using community science for continued community involvement.

The administrative actions implemented under the Proposed Action would strengthen protections for federally listed species, potential/occupied habitat for federally listed species, and habitat for federally listed species. Therefore, the Proposed Action is anticipated to have some indirect beneficial impacts on wildlife on the FS segment of the river.

BLM

Resources determined to be potentially affected by the No-Action and Proposed Action alternatives are hydrology, scenery, wildlife, heritage resources, and recreation.

Hydrology

Affected Environment

Current climate change forecasts for the region do not have consensus on whether total annual precipitation will increase or decrease, but there is consensus that precipitation and drought events will be more severe, and that compared to the historical record, more precipitation will fall as rain rather than snow, thereby reducing snowpack. As a result, it is expected that seasonal base flow will be reduced, whereas large storm event flood flows will increase in frequency and magnitude. Data from Streamflow Metrics: A dataset of modeled flow metrics for streams in the contiguous U.S. for historical and future climate change scenarios, by USDA, USFS, Rocky Mountain Research Station, shows increases in mean annual and flood event flow but decreases or nominal increases in base flow as summarized in Table 5 below.

Table 5. Percent Change in Modelled Streamflow Projections for BLM Segment under the RCP8.5 scenario

Location	Mean Annual Flow	Base Flow	1.5-Year Flood	25-Year Flood	Number of Winter Floods
Mid Century (2030-2059)					
Whitewater River at Bonnie Bell	38.39%	-10.43%	143.92%	93.23%	28.78%
End of Century (2070-2099)					
Whitewater River at Bonnie Bell	54.33%	-4.52%	291.58%	219.39%	37.28%

[Source:](#) USDA Forest Service 2022a

As evident in Table 5, the projected reduction in base flow in combination with increased flood flows and mean annual flow is indicative of a greater amount of precipitation falling throughout the year within single larger storm events. Base flow reductions are projected, however, toward the end of the century those reductions are slightly mitigated. Of greater concern, however, are the increases in flood flows, both in the mid-century and end-of-century projections. The 1.5-year flood is typically associated with the channel defining, or bankfull flow, which separates the flow typically contained within the main channel and that which spills out into the floodplain. With 143.92 and 291.58% increases projected for flows associated with this event, flooding will become much more frequent and will put additional stress on the channel form in its current setting. Furthermore, larger flood events, as indicated in the 25-year flood (equivalent to the flood that has a 4% chance of occurring within a given year) are projected to increase in flood flow by 93.23% in the near term and 219.39% increase by the end of the century. A higher

frequency of larger flood events will put additional stress on the current channel and floodplain and may lead to a higher rate of sediment transport, bed and/or bank erosion, floodplain erosion and possible channel migration.

Further compounding the effects of increased precipitation and flood flows, are rising air temperatures and the effects it has on changing vegetation and the potential for forest fires within the watershed. Vegetation improves absorption of rainfall, reduces the rate at which runoff flows into receiving channels, and provides bank and floodplain stability, habitat, and cooling effects. A change or reduction in the density or type of vegetation within the watershed may lead to higher rates of runoff and flash flooding. High intensity rainfall events that occur within areas recently destroyed by forest fires often result in increased runoff rates, more intense flash flooding and significant sediment transport from upland soils into the stream valley.

Based on preliminary data, Whitewater River appears to have exceptional water quality. This may be due in part to the fact that the designated segments of river flow mostly through federally managed or conservation partner lands, as well as the San Geronio Wilderness. Potential threats to water quality would likely be short term effects from wildfires, human activity or the feral cattle population, or long-term effects from geologic processes or land erosion.

Impacts of No-Action Alternative

Under the No-Action Alternative, existing federal guidelines, such as those in the CDCA Plan as amended and Section 7 of the Act, as well as state water quality standards, would continue to protect water quality in Whitewater River. Additionally, not adopting the CRMP would cause BLM to be out of compliance with the Act. Section 7 of the Act states that Federal agencies must:

“protect federally designated rivers and congressionally authorized study rivers from the harmful effects of water resources projects. It requires evaluation of federally assisted water resources projects and a determination by the river-administering agency.” (IWSRCC, No Date)

Water quality would potentially be adversely impacted from increased recreational use, including the potential expansion of the physical footprint of roadside parking, roadside camping, dispersed camping, and/or informal trail networks could be expanded from recreation use (Otak, Inc. 2023). As a result, the No-Action Alternative could adversely impact hydrology and water quality if additional protections afforded by the CRMP are not adopted.

Impacts of Proposed Action

Under the Proposed Action, impacts would be the same as current management strategies, but would add additional protection for hydrology resources, such as a final boundary, user capacity thresholds, and adaptive management actions triggered by these thresholds. Any proposed water resources projects would have to be reviewed under Section 7 of the Act. This would have no impact on hydrology because this value is already protected by the existing Act. Establishing a final boundary would result in a beneficial impact because it would include additional protection of the river corridor from activities that may lead to impairments such as increases in sediment runoff, thereby degrading water quality. Similarly, establishing capacity thresholds and adaptive management actions triggered by these thresholds would have a

beneficial impact on water quality because they would afford additional protections due to less impact from recreational use.

Scenery

Affected Environment

The landscape surrounding the BLM segment of the Whitewater River is rich and diverse. Runoff from high elevations has carved steep mountains and narrow canyons with pockets of riparian plant communities at the upper reaches of the river corridor, to dense riparian and canyon plant communities at lower elevations. These lower areas of the river corridor have moderately steep canyon sides. The canyon walls at this segment vary from peach to tan to light and dark gray. Seasonal changes result in a wide array of color variation in the vegetation, which also varies greatly in height along the watershed.

The most visible structure near the river is Whitewater Road, the main road in Whitewater Canyon, which runs along the western side. The small community of Bonnie Bell lies at the end of the canyon. It consists of thirty homes, one above-ground power line, and a ranger station. There are several human-made trails within the river corridor, including part of the PCT. To the southeast and southwest of the river corridor terminus lies a wind farm consisting of numerous turbines that are not visible from the majority of the canyon.

The Whitewater River segment on BLM land within the San Geronio Wilderness were inventoried and given a Class 1 scenic quality rating based on the 2019 Desert Renewable Energy and Conservation Plan (DRECP). Class 2 rating is the given scenic landscape character rating outside of the San Geronio Wilderness. Scenic ratings are based on BLM Visual Resource Management guidelines (BLM 1986) and the 2019 DRECP. The river segment is distinct given its lush vegetation and riparian area, as well as the rarity of water in the surrounding environment. The river corridor is described as beautiful and unique.

Impacts of No-Action Alternative

Under the No-Action Alternative, the CRMP would not be adopted. The existing CDCA Plan, as amended, and state, federal, and agency regulations would therefore continue to guide management of this section of the river. There would be no impacts on scenic resources under the No-Action Alternative because the existing CDCA Plan, as amended, would continue to protect these resources.

Impacts of Proposed Action

The Proposed Action involves adoption of the CRMP. This would provide further guidance on management of this segment of the river, as well as setting user capacity levels and implementing final river boundaries. The CRMP describes several potential management actions at this section that would protect or enhance river values and the condition of the river corridor.

The Proposed Action is administrative in nature; furthermore, visitor activities in the BLM sections of the river are currently concentrated at developed and accessible sites near Whitewater Canyon Road and Whitewater Preserve rather than in the areas of high scenic value in the corridor. The Proposed Action is therefore unlikely to impact scenery values in this section. However, implementation of the actions described in the CRMP could have minor, indirect beneficial impacts on the BLM segment of the river by

monitoring use levels and patterns which, if changed in the future, could begin to impact scenery. Implementation of the CRMP would also establish user capacity thresholds and adaptive management actions triggered by these thresholds, thereby affording additional protection of scenic resources.

Wildlife

The river corridor provides a critical link between the San Bernardino and San Jacinto Mountains, supporting a large amount of quality remote, pristine, and diverse habitat for Desert bighorn sheep (*Ovis canadensis nelsoni*), California spotted owl (*Strix occidentalis occidentalis*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), and arroyo toad (*Anaxyrus californicus*). The riparian habitat seasonally hosts endangered neo-tropical songbirds, including the Least Bell's vireo (*Vireo bellii pusillus*) and Southwestern willow flycatcher (*Empidonax traillii extimus*).

Affected Environment

Threatened, Endangered and Candidate Species

BLM manages habitat for over 200 wildlife, fish, and plant species listed as threatened, endangered, or proposed under the ESA, statewide. The BLM portion of Whitewater River supports unique plant assemblages that provide habitat for a variety of animal, bird, and plant species. This includes a number of special status and/or sensitive species such as the candidate species, yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and the foothill yellow-legged frog (*Rana boylei*). The BLM canyon segment of Whitewater River, home territory of the Wanakik lineage of Cahuilla Indians, provides important habitat for the state and federally listed endangered Southwestern willow flycatcher (*Empidonax traillii extimus*), Arroyo toad (*Anaxyrus californicus*), Least Bell's vireo (*Vireo bellii pusillus*), summer tanager (*Piranga rubra*), yellow warbler (*Steophaga petechia*), yellow-breasted chat (*Icteria virens*), gray vireo (*Vireo vicinior*), and crissal thrasher (*Toxostoma crissale*). This area also provides habitat for state and federally listed endangered Coachella Valley milkvetch (*Astragalus lentiginosus var coachellae*) and triple-ribbed milkvetch (*Astragalus tricarinatus*).

Yellow-billed cuckoos (*Coccyzus americanus occidentalis*) are a medium sized songbird that relies on wooded riparian habitat made up of cottonwoods and willows. Cuckoos forage on caterpillars and moths found in this habitat along with berries foraged from understory shrubbery. While cuckoos can be found throughout the country, the western subspecies is listed as threatened due to loss of habitat due to wildfires and habitat destruction (Audubon 2023a).

The foothill yellow-legged frog (*Rana boylei*) is a California state endangered species that can be found in riparian habitat or in shallow rocky stream beds, never ranging far from a water source. Changes to temperature, precipitation and consequently waterflow are the biggest threats to the foothill yellow-legged frog's habitat (USFWS 2023b).

Summer tanager (*Piranga rubra*) can be found in the river corridor during their spring breeding season. Summer tanagers are known to forage on berries and a wide variety of insects, including stinging insects such as wasps in mid-air. Nesting occurs 10-35 feet above ground, often in oak, pine, or cottonwood canopy (Audubon 2023b).

Impacts of No-Action Alternative

Under the No-Action Alternative, Whitewater River would continue to support populations of and habitat for federally listed species and BLM sensitive species. Existing management direction such as the CDCA Plan as amended, would continue to direct the management for federally listed and proposed species such as the southwestern willow flycatcher. Habitat for federally listed species would continue to be managed under existing policies. Under the No-Action Alternative, there would continue to be adverse impacts from existing and increasing recreational uses, including the potential for the unauthorized expansion of the physical footprint of roadside parking areas, roadside camping, dispersed camping, and informal trail networks. (Otak, Inc. 2023). As a result, the No-Action Alternative could adversely impact wildlife if additional protections afforded by the CRMP are not adopted.

Impacts of Proposed Action

Under the Proposed Action, in addition to current management direction, supplemental protections would be put in place to protect federally listed and proposed species, their habitat, and BLM sensitive species and their habitat. These protections include establishing a final river corridor boundary which permanently protects the river from development impacts, and also provides protection by establishing user capacity thresholds and adaptive management actions triggered by these thresholds.

The establishment of a final boundary would provide additional protection of the river corridor from development, which could prevent disturbance to wildlife in the vicinity. Similarly, establishing user capacity thresholds and adaptive management actions triggered by these thresholds would afford protections from excessive recreational use. Management strategies under the Proposed Action would further the protection of wildlife resources. These strategies include project planning to consider conservation of suitable habitat components over the long term, including avoidance and/or minimization of additional land disturbance activities that could cause direct or indirect adverse effects to federally listed wildlife species (BLM 2008). The BLM would also continue to manage recreation activities within the river corridors in accordance with existing management direction.

The Proposed Action would implement administrative actions that would indirectly strengthen protections for federally listed species, BLM sensitive species, potential/occupied habitat for federally listed species, and habitat for federally listed species. Therefore, the Proposed Action is anticipated to have some indirect beneficial impacts on wildlife in the BLM segment of the river corridor.

Heritage (Historic, prehistoric, and cultural values)

Affected Environment

The river has outstandingly remarkable heritage values within the corridor on BLM land, as discussed above and documented in the CRMP. The Coachella Valley was inhabited by the Cahuilla prior to the founding of the Spanish missions along the coast in 1769. Each lineage of the Cahuilla recognized a tract of land with a range of resources which provided food, medicine, and other raw materials; within each tract, a village settlement was located near a dependable source of water and within reasonable range for procuring staple foods. Whitewater Canyon is the home territory of the Wanakik lineage of Cahuilla Indians, is considered to be an important collecting and gathering area, and contains ceremonial sites and Native American sensitive areas. The specific site of the original Wanakik village is unknown, but several

possible village sites have been identified in Whitewater Canyon based on archaeological data including at Whitewater Bridge or at the mouth of Whitewater Canyon (Gifford 1918; Bean 1960 and 1981; Desert Sun 1960). Research speculates that the Wanakik village was flooded in the winter of 1861-1862, forcing the village inhabitants to relocate to a site near to or at the Whitewater Ranch (Wilson 2019). In 1877, reservations were established in Southern California, and access to lands off-reservation became increasingly difficult to the Cahuilla. The Wanakik people were moved to the Malki reservation at this time; nevertheless, the religious and cultural importance of landscapes, places, and resources off-reservation was remembered. The Whitewater River corridor is predicted to have a high likelihood of significant prehistoric resources, but the area has had limited cultural resource surveys conducted.

Trails connecting residential village sites, special use sites, and locations of resources were important to the Cahuilla. A portion of one of these trails, known as the Cocomaricopa Trail or the Halchidhoma Trail is known to run along the Whitewater River (Johnston and Johnston 1955). This trail section is over 300 meters in length and is assumed to have continued west from Whitewater Canyon to Stubbe Canyon and Morongo, crossing Cottonwood Canyon along the way. In 1956, a camp was recorded at the mouth of Cottonwood Canyon, and apparently along the trail. This association could suggest a link between the settlement at the Whitewater River and the camp at Cottonwood Canyon via this trail. These trail variants exemplify the complexity of native communications through prehistory and formed part of a wider system of native travel corridors linking coastal Southern California native groups with the interior deserts and the Southwest. The trail segment in this area has not been verified in full or evaluated for eligibility for listing in the National Register.

The early 20th century settlement of Bonnie Bell is located at the southern end of the WSR boundary. Use of the property coincides with the development of the paved highway route passing through San Geronimo Pass. During the popularity of homesteading in interior California during the early 1900s, there was an influx of would-be ‘settlers’ seeking relief from respiratory complaints, including tuberculosis. The property appears to have originally been used by tuberculosis patients in circa 1925-1926, although whether it was a dedicated medical facility is unclear. The land that was once the Bonnie Bell settlement is now private property and currently has a small cluster of houses.

Impacts of No-Action Alternative

Under the No-Action Alternative, there would be no change to the conditions or management of heritage resources with the Whitewater River corridor. Sites and other features would continue to serve as important Native American cultural resources, and there would continue to be limited archaeological investigations undertaken. Known heritage sites would be afforded the same consideration and protection as those properties evaluated as eligible to the National Register of Historic Places. The No-Action Alternative would continue to protect access to and the use of sensitive traditional tribal use areas. The BLM would continue to comply with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), which states that the “recovery, treatment, and repatriation of human remains, sacred objects, and objects of cultural patrimony” would be directed to appropriate tribes (25 U.S.C. § 3001-3013). If ancestral human remains were discovered either by intentional excavation or inadvertent discovery, the BLM would consult with any culturally affiliated tribes to develop appropriate procedures for addressing this discovery. Although existing laws and policies would continue to protect heritage resources, if unauthorized informal trail networks and access areas potentially expanded or were degraded by visitor use, this could negatively impact and damage these resources (Otak, Inc. 2023).

Impacts of Proposed Action

Under the Proposed Action, there would be specific administrative management actions implemented to help protect and preserve cultural resources. Documentation of damage or threats from natural processes or increased visitation and the evaluation of eligibility of historic properties (cultural resources) for listing in the National Register of Historic Places (which is mandated by 36 CFR 800 and other relevant federal laws and regulations) would occur, for the management and protections of cultural resources on public lands administered by the BLM.

Protection measures that include physical barriers and routing of hiking trails to avoid or minimize access and impacts to cultural resources, would reduce direct and indirect impacts to cultural resources. Reduced erosion from improved trail design and maintenance would also afford greater protection to cultural resources.

Stewardship and work with volunteer groups to increase monitoring would also help to protect cultural resources. Interpretive signage and kiosks throughout the river corridor would convey the value and importance of the cultural resources in this area to the public.

Additional management and protection for cultural resources would be accomplished with a final boundary that would protect and enhance this river value. Future management may involve some development that does not degrade cultural, or any other river value, and is consistent with the classification of the river segment (wild, scenic, or recreational). Similarly, establishing user capacity thresholds and adaptive management actions triggered by these thresholds would also help to reduce impacts to cultural resources. Overall, the Proposed Action would result in a benefit to cultural resources through avoidance, protection measures, public outreach and education, and adaptive management practices.

Recreation

Affected Environment

Recreational opportunities along the designated sections of the river include swimming, wading, hiking, camping, hunting, picnicking, wildlife viewing, nature photography, and horseback riding; water play is the primary visitor activity throughout the corridor. In the BLM section of the river, access is available via the paved Whitewater Canyon Road; parking areas are available by Whitewater Preserve. The paved road, the nearby PCT, and other trails provide multiple routes of access for visitors. Thus, most of this segment of the river is easily accessible for outdoor recreation.

Wildlife viewing is also a recreation activity in the corridor; species viewed include desert bighorn sheep (*Ovis canadensis nelsoni*) and bird species, including summer tanagers (*Piranga rubra*), vermilion flycatchers (*Pyrocephalus rubinus*), southwestern willow flycatcher (*Empidonax trailii extimus*), and least Bell's vireo (*Vireo belli pusillus*).

In addition to wildlife viewing and waterplay, there are also a wide range of hiking opportunities at the BLM segment of Whitewater River. Hikers access both desert and mountain habitat, including the eastern

slope of San Gorgonio peak. In the southern portion of the wild section of the river, some visitors access the corridor via the PCT.

Recreation opportunities in the river corridor also including hunting. Deer hunting occurs on both Forest Service and BLM land; hunters hike in several miles to access open units. Tags for desert bighorn sheep hunting have also been available in the past in this area.

Impacts of No-Action Alternative

Under the No-Action Alternative, the CRMP would not be adopted. Thus, management of this segment would continue to be governed by existing regulations. Further, if the CRMP were not adopted, no maximum user capacity would be established for this segment. User capacity is the maximum number of visitors per day that can use the river corridor without causing deterioration of river values. The CRMP specifies user capacities throughout the corridor (in its Appendix A) and sets triggers for adaptive management action to limit use levels if they become too high. The CRMP also requires regular monitoring of use levels to determine when capacity is exceeded.

If the CRMP is not adopted, use levels in the corridor would not be regularly monitored, as no user capacity would be put into place. Thus, use levels would fluctuate naturally, with fewer mechanisms in place to limit the number of visitors. If the user capacity is exceeded and management action is not taken, the recreation ORV could be impacted. An excess of visitors to the river segment could result in overcrowding, an increase in waste and debris, and additional human disturbance, all of which could degrade recreational experiences at the river. Thus, under the No-Action Alternative, there may be minor, indirect negative impacts on recreation.

Impacts of Proposed Action

Under the Proposed Action, adoption of the CRMP, a maximum user capacity would be set for the river segment, with associated triggers for adaptive management action. The maximum user capacity for the BLM analysis areas in Whitewater is approximately 540 visitors, or 206 arriving vehicles, per day, based on the number of vehicle arrivals in this section of the corridor. For a more detailed analysis of visitor use in the BLM segments of the Whitewater corridor, broken down into separate analysis areas, see Appendix A. If this capacity is exceeded for a certain period of time, there could be detrimental impacts on recreation due to overcrowding, increased human disturbance, and higher levels of waste and debris.

Upon adoption of the CRMP, use levels at this river segment would be monitored as prescribed in the User Capacity Analysis, at varying intervals or more regularly if needed based on user capacity triggers, to determine whether maximum user capacity has been reached or exceeded. The CRMP establishes both social and resource-based indicators, triggers, and associated management actions. The two social indicators/ triggers/management actions for adaptive management action are parking-based. The resource-based indicators are extent of bare ground from recreation sites and campsites, as well as extent of informal trails. For all indicators, trigger levels indicated the limit of activity beyond which adaptive management actions should be taken to protect river values. Examples include educating visitors about low impact camping practices, constraining camping footprints, closing or rehabilitating trails, increasing parking monitoring frequency, and implementing signage or enforcement to keep visitors from camping

outside designated areas as well as parking in permissible areas only. These management actions would help protect ORVs over the long term.

The adaptive management strategies in the Proposed Action would have beneficial impacts on recreation in this segment of the river by implementing actions that would improve the quality of the recreation experience for all visitors by reducing crowding. Implementation of user capacity adaptive management actions, however, could negatively affect access to parts of the analysis area during some peak periods of use.

FOREST SERVICE AND BLM

Climate Change Adaptation

Affected Environment

The effects of global climate change occur throughout the WSR corridor. To better understand current effects as well as future impacts from climate change, the Forest Service and BLM analyzed climate change trends within the WSR corridor using the *Fourth National Climate Assessment* (NCA4), which is the most recent published assessment by the U.S. Global Change Research Program.³ NCA4 divides the country into 10 climate regions, covering California as part of the Southwest region. To assess existing climate change conditions, the agencies reviewed key climate trends in the Southwest region. They also reviewed county-level information from tools such as the USGS Climate Change Viewer, and other relevant sources. As part of its review of climate trends, the FS and BLM focused on outcomes associated with future scenarios often used in climate change research, called Representative Concentration Pathways (RCPs). RCPs estimate factors such as emissions, GHG concentrations, and particulate matter; various climate models use these data to predict future climate outcomes (USGCRP 2018). Specifically, the agencies assessed outcomes under the RCP4.5 and RCP8.5 scenarios. The RCP4.5 is considered a lower scenario with less warming, in which lower population growth, more technological innovation, and lower carbon intensity occur (USGCRP 2018). The RCP8.5 is associated with more warming and higher population growth, less technological innovation, and higher carbon intensity (USGCRP 2018).

The Southwest is home to the hottest and driest climate in the U.S. Ecosystems vary from deserts and grasslands in the hotter, lower elevations to forests and alpine meadows in cooler, higher elevations (USGCRP 2018). Both naturally occurring and human-caused wildfires are prevalent and affect the forest and shrub cover in the region. NCA4 notes that climate change in particular is altering ecosystem services via substantial vegetation shifts and increases in wildfire-burned areas. Climate change has contributed to the drying of forests in the Southwest, which has made them more susceptible to burning. Specifically, San Bernardino National Forest is one of the most wildfire-prone national forests in the U.S. (Robey 2023). The Forest's arid climate, highly flammable vegetation, steep sloping landscapes, and Santa Ana winds all contribute to the risk of fast-growing, severe fires; changing climate conditions have also led to a longer and more extreme fire season (Robey 2023).

³ USGCRP is currently developing the *Fifth National Climate Assessment* (NCA5) and anticipates releasing this next report in 2023.
Whitewater River CRMP
Environmental Assessment

Regionally, the average annual temperature increased by 1.6 degrees Fahrenheit between 1901-2016 (USGCRP 2018). Droughts caused by low total precipitation in the region are intensified by warming temperatures. Projected higher temperatures in the future may potentially lead to longer, persistent droughts that last more than a decade (known as “megadroughts”) (USGCRP 2018). Drought may also reduce water sources such as lakes and rivers in the area (WCROG, no date).

Climate change forecasts for the region generally indicate that total precipitation will increase per year, will occur in less frequent and more severe rainfall events, and will occur less frequently as snowfall, thereby reducing seasonal snowpack. Data from Streamflow Metrics: A dataset of modeled flow metrics for streams in the contiguous U.S. for historical and future climate change scenarios, by USDA, USFS, Rocky Mountain Research Station shows increases in mean annual and flood event flow but decreases or nominal increases in base flow as summarized in Tables 3 and 5 above.

As evident in Tables 3 and 5, the projected reduction in base flow in combination with increased flood flows and mean annual flow is indicative of a greater amount of precipitation falling throughout the year within single larger storm events. Base flow reductions are projected; however, toward the end of the century those reductions are slightly mitigated. Of greater concern, however, are the increases in flood flows, both in the mid-century and end-of-century projections. The 1.5-year flood is typically associated with the channel defining, or bankfull flow, which separates the flow typically contained within the main channel and that which spills out into the floodplain. With projected increases of approximately 150% to over 300% on the FS segment and 143.92% and 291.58% on the BLM segment, for flows associated with this event, flooding will become much more frequent and will put additional stress on the channel form in its current setting. Furthermore, larger flood events, as indicated in the 25-year flood (equivalent to the flood that has a 4% chance of occurring within a given year) are projected to increase in flood flow by approximately 100% in the near term and over 200% increase by the end of the century on the FS segment and 93.23% in the near term and 219.39% increase on the BLM segment by the end of the century. A higher frequency of larger flood events will put additional stress on the current channel and floodplain and may lead a higher rate of sediment transport, bed and/or bank erosion, floodplain erosion and possible channel migration.

Further compounding the effects of increased precipitation and flood flows, are rising air temperatures and the effects it has on changing vegetation and the potential for forest fires within the watershed. Vegetation improves absorption of rainfall, reduces the rate at which runoff flows into receiving channels, and provides bank and floodplain stability, habitat, and cooling effects. A change or reduction in the density or type of vegetation within the watershed may lead to higher rates of runoff and flash flooding. High intensity rainfall events that occur within areas recently destroyed by forest fires often result in increased runoff rates, more intense flash flooding and significant sediment transport from upland soils into the stream valley.

The Forest Plan acknowledges the ongoing challenges presented by a changing climate and altered natural fire regimes, including forest pest management, the risk to adjacent communities and land, and managing at-risk areas where threatened, endangered, proposed, candidate, and sensitive species live (USDA Forest Service 2005b).

San Bernardino and Riverside counties are expected to experience the following temperature and precipitation changes in future years, as compared to historic conditions:

Table 6. Projected Temperature and Precipitation Changes in San Bernardino and Riverside Counties, California under the RCP4.5 and RCP8.5 Scenarios

	Projected Temperature Change (degrees Fahrenheit) ¹	Projected Precipitation Change (inches per month) ²
San Bernardino County		
RCP4.5	+2.52	+0.01
RCP8.5	+2.99	+0.03
Riverside County		
RCP4.5	+2.37	+0.01
RCP8.5	+2.85	+0.03

Source: Alder and Hostetler 2013a, 2013b

¹ Change is the difference in mean annual temperature (measured in degrees Fahrenheit) between historical data (1981-2010) and the future climatology period from 2025-2049.

² Change is the difference in mean annual precipitation (measured in inches per month) between historical data (1981-2010) and the future climatology period from 2025-2049.

Impacts of No-Action Alternative

Under the No-Action Alternative, the CRMP would not be implemented, and existing plans would continue to guide the management of resources on FS and BLM lands. Management actions to reduce fuels would not be implemented, potentially increasing the project area's susceptibility to burning as the climate trends towards hotter and drier conditions. Climate change trends indicate an overall increase in yearly precipitation totals, however these totals result from an overall reduction in frequency of precipitation events, leading to drier conditions, with an increase in events with shorter duration and higher rainfall intensity, characteristic of flash floods. Drier conditions would reduce water infiltration and lower base flow within stream channels, whereas the increase in shorter, high intensity precipitation events would result in greater variation in channel flow, increased flood frequency and intensity, and higher rates of sediment transport, bed and/or bank erosion, floodplain erosion, and possible channel migration. The changes to the affected environment of the project area resulting from climate change would continue to occur even if the No-Action Alternative were selected. The No-Action Alternative would not impact global climate change processes or the WSR corridor's ability to adapt to climate change because fuel treatments would continue as necessary even under the No-Action Alternative.

Impacts of Proposed Action

To evaluate climate change impacts on the Proposed Action, the FS and BLM reviewed NCA4 to determine the range of effects climate change would have on the implementation of the CRMP. The FS and BLM also considered the impacts of CRMP implementation on the project area's ability to adapt to climate change effects, as well as the impacts of CRMP implementation on global climate change.

As described above in the "Affected Environment" section, the region surrounding the Whitewater River is expected to see an increase in drier forests in the coming years, which makes these areas more

susceptible to wildfires. Management actions to monitor invasive species to reduce fuels for wildfire (described in further detail in the CRMP) would help curb some of this vulnerability to burning and minimize the amount of fuel available for consumption, potentially preserving thousands of acres of the Forest and BLM land and protecting the Whitewater River. Fuel reduction efforts also have the potential to protect other ORVs which depend on the WSR, such as wildlife. For instance, increased wildfire could destroy wildlife habitat. Implementing the Proposed Action which includes management actions responding to climate change would increase the adaptive capacity of the project area ecosystem. In addition, projected drought and flooding in the region would impact the base flow of Whitewater River. As temperatures warm in the future and lead to potential droughts, water levels in the river may be reduced, ultimately affecting the ORVs which owe their existence to the river (WCROG, no date). With projections for total precipitation occurring less frequently and as more severe rainfall events, and occurring less frequently as snowfall, seasonal snowpack would be reduced. As a result, it is expected that daily base flow in the Whitewater River would be reduced, whereas storm event flood flows would increase in frequency and magnitude.

As shown in Tables 3 and 5, increased flood flows projected for the middle and end of the century could result in more frequent flooding that puts additional stress on the channel form. A higher frequency of larger flood events could put stress on the current channel and floodplain and may lead to higher rates of sediment transport, bed and/or bank erosion, floodplain erosion, and possible channel migration. The management actions included under the Proposed Action could help mitigate some of these effects, through efforts to increase tree plantings and natural vegetation along banks to improve bank stabilization, reduce landslide possibilities, and slow the flow of water into the creek to decrease flash floodings. Planting native vegetation also provides habitat and improves the absorption of rainfall which would benefit wildlife species within the WSR corridor that depend on the stability of the river channel.

When considering the impact of the Proposed Action on global climate change, the impacts would be negligible. Some fuels treatment actions in the CRMP propose to monitor invasive species to reduce fuels for wildfire. However, the scale of fuel treatments would be within the WSR corridor and thus be minimal when compared to the full acreage of tree stands in the entire project area. Therefore, there would be no substantial alteration to the carbon cycle (i.e., trees' ability to absorb carbon dioxide in the atmosphere and convert it to oxygen) from fuel treatments when considered in the context of global climate change.

Overall, the Proposed Action would implement the CRMP's management actions, which aim to help the river's ORVs adapt to the effects of climate change and preserve ecosystem health.

OTHER DISCLOSURES

Civil Rights and Environmental Justice

There are no known direct, indirect, or cumulative effects on Native Americans, minority groups, women, or civil rights as a result of this project analysis.

Environmental justice (EJ) is defined by the EPA as the fair treatment and meaningful involvement of all people, regardless of race, color, faith, national origin, or income, in the development, implementation, and enforcement of environmental laws, regulations, and policies. To the extent practical and permitted

by law, all populations are provided the opportunity to comment before any decisions are made and to share in the benefits of government programs and activities affecting human health and the environment. Executive Order 12898 requires federal agencies to identify and address any disproportionately high adverse human health or environmental effects on EJ communities (The White House 1994). An EJ community is generally defined as any low-income community or community of color, as these communities have historically experienced disproportionate impacts of pollution and environmental degradation. The consideration of EJ communities in environmental planning and project development aids in the prevention of the unequal treatment of vulnerable EJ communities that can lead to adverse effects on public health and quality of life.

To identify potential EJ communities near the Whitewater River, EJ screening was performed using the EPA webtool EJSCREEN on July 3, 2023, on three U.S. Census Bureau Block Groups through which the river runs. The Forest Service and BLM analyzed three key indicators to determine whether any communities of concern existed within block groups and thus, within the project area: low-income populations, linguistically isolated populations, and minority populations. For each indicator, the Forest Service and BLM identified thresholds; if any indicator exceeded the threshold, it was considered a community of concern. The thresholds for low-income populations, linguistically isolated populations, and minority populations were 25% or greater, 5% or greater, and 50% or greater, respectively. Considering these thresholds, Block Groups 060710104242 and 060650445211 were found to be communities of concern while Block Group 060710115002 was not (EPA 2023a, 2023b, 2023c). However, the Proposed Action is administrative in nature and does not involve any ground-disturbing activities. Adoption of the CRMP would therefore not have disproportionately high or adverse effects to EJ communities in this area compared to non-EJ communities. Further, scoping has raised no issues or concerns associated with the principles of environmental justice. The Proposed Action is not anticipated to result in substantial environmental hazards or effects to differential patterns of consumption of natural resources. All interested parties will continue to be involved in commenting on the project and the decision-making process for the project.

Congressionally Designated Areas

This EA discusses why the Proposed Action is needed, as well as the effects of the project on the Congressionally designated Whitewater River WSR. The San Geronio Wilderness is present in the project area. However, it was determined that there are no issues and no direct or indirect effects; therefore it was not analyzed in detail in this EA. The PCT also runs throughout the WSR corridor and is a popular recreational activity for visitors. The PCT was authorized by Congress in 1968 under the National Trails System Act. A 1978 amendment to this Act required a comprehensive plan defining the development, management, and use of the trail. The comprehensive plan was developed in consultation with the PCT Advisory Council, the Bureau of Land Management (BLM), the National Park Service, and the governors of California, Oregon, and Washington (USDA Forest Service 1982). In addition to the comprehensive plan, the PCT Foundation Document informs management considerations, decisions, and planning efforts for the PCT. It aggregates legislative history, legal and policy requirements, special mandates, administrative commitments, and trail management directives. It also identifies the trail's nature and purposes, what makes it significant, fundamental resources and values, and interpretive themes (USDA Forest Service 2022). The section of the PCT in the BLM-managed segments of the WSR corridor are also guided by consistency with BLM Manual 6280, *Management of National Scenic and Historic Trails*.

No Congressionally designated areas would be adversely affected by the Proposed Action, which is administrative in nature. No significant irreversible or irretrievable commitment of resources would occur upon adoption of the CRMP because its purpose is to protect and enhance the values of the WSR corridor.

Prime Farm and Forest Lands

The Secretary of Agriculture issued Memorandum 1827 to protect prime farmlands, rangeland, and forest land. Prime forest land describes only non-federal land and is therefore not applicable to lands within the National Forest System, including the WSR corridor. The National Forest lands within the project area would be managed with consideration of impacts to private lands. The project area does not contain any prime farmlands or rangelands. Thus, the Proposed Action is in compliance with the Farmland Protection Act (USDA 1981) and Departmental Regulation 9500-3, Land Use Policy (USDA 1983).

On May 24, 1977, Executive Orders 11988 and 11990 were both issued. Executive Order 11988 (Floodplain Management) outlines guidance related to floodplains, defined as low, flat areas adjacent to water bodies and subject to a one percent or greater chance of flooding in any given year. The Order directs agencies and other project planners to avoid occupancy and modification of floodplains where possible, provide measures to reduce the risk of flood-related loss, and evaluate project impacts on floodplains. The WSR corridor does not fall within a Federal Emergency Management Agency (FEMA) floodplain and therefore the Floodplain Management guidance does not apply.

There would be no direct, indirect, or cumulative adverse effects to prime farmlands, rangelands, prime forest lands, or floodplains as a result of the Proposed Action.

Compliance with Other Policies, Plans, Jurisdictions

The alternatives are consistent with the goals, objectives, and direction of the Forest Plan, the accompanying final environmental impact statement, and the record of decision. The alternatives are also consistent with the CDCA Plan, as amended. Implementation of the No-Action Alternative or the Proposed Action would be consistent with these and with all relevant federal, state, and local laws, regulations, and requirements designed for the protection of the environment, including the Clean Air and Clean Water Act.

Section 106 of the National Historic Preservation Act

Consultation with the California State Historic Preservation Officer (SHPO) was initiated in October 2023 pursuant to Section 106 of the NHPA, as amended, and its implementing regulation found at 36 CFR § 800. The CRMP is considered an “undertaking” as defined at 36 CFR 800.3 and requires analysis regarding the effect of the proposed plan on historic properties. The Area of Potential Effects (APE) for the proposed undertaking is the congressionally defined corridor as identified above. As part of the initial consultation with SHPO, BLM Palm Springs-South Coast Field Office designated the San Bernardino National Forest as Lead Agency for the purposes of NHPA Section 106, pursuant to 36 CFR 800.2 (a)(2) for the Deep Creek and Whitewater River WSRs.

As agreed between agencies and concurred by the SHPO, the *Programmatic Agreement Among the USDA Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer,*

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Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region (Region 5 PA) is the appropriate mechanism to comply with Section 106. Wild and Scenic River Plans are specifically identified as a Class B Screened Undertaking that will have little to no potential to cause effects to historic properties present in the APE [Region 5 PA, Appendix D 2.3 (a)]. The identification of historic properties (36 CFR 800.4) included background research and records reviews conducted for each river corridor by agency personnel and permitted consultants with VHB. The results of the reviews are summarized as part of the heritage values of the CRMP. Although present in both river corridors, this planning effort will have no effect to historic properties eligible for listing or listed in the National Register. Future activities that may be proposed within the WSR corridors will require additional Section 106 review, including, but not limited to field inventory and consultation with the SHPO and tribes.

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APPENDIX A: DRAFT EA COMMENT ANALYSIS

The Draft EA was posted on the Forest website on November 3, 2023. Comments concerning the Draft EA were identified from written correspondence received from the following organization. All correspondence has been reviewed by the interdisciplinary team in order to address the comments.

The following table lists the comments received and responses. The interdisciplinary team considered these comments while completing the Final EA.

Table 1. Draft EA Comments

	Summary of Comments	Commenter	Response
1	There are a significant number of references to either the National Trails Act or the National Trails System Act. These should be edited to reference the National Trails System Act.	PCTA	Revised as suggested throughout Deep Creek and Whitewater EAs and CRMPs
2	There are quite a few references to the PCT Comprehensive Management Plan and the Foundation Document. Periodically in the documents, the comprehensive management plan was noted as (USDA Forest Service 2023). This is correct for the Foundation Document; however, the comprehensive management plan should be noted as (USDA Forest Service 1982).	PCTA	Revised as suggested throughout Deep Creek and Whitewater EAs and CRMPs. Revised Foundation Document citation to 2022, per date on final version.
3	The term “citizen science” is used within the document. This is exclusionary language. In keeping with what we believe to be the intent of that term while making the language more inclusive, we suggest changing that term to “community science.”	PCTA	Revised as suggested throughout Deep Creek and Whitewater EAs and CRMPs
4	For the BLM segments that overlap the PCT, include a reference to ensuring consistency with BLM Manual 6280-Management of National Scenic and Historic Trails which provides the line manager and program staff	PCTA	Revised as suggested in Whitewater EA and CRMP

Table 1. Draft EA Comments

	Summary of Comments	Commenter	Response
	professionals with policies for the management of the PCT.		
5	In the User Capacity Analysis for Deep Creek and Whitewater Wild and Scenic River Corridors document, Pacific Crest Trail Thru-Hike permits, page 19 (page A-27 of the PDF): We recommend utilizing a combination of data that includes the most current permit data by including 2022 data (available on the PCTA website) and 2023 data, as this has the highest level of confidence.	PCTA	Revised User Capacity PCT thru-hiker data in User Capacity Analysis to use 2021 and 2022 data from PCTA website rather than 2019 and 2021. 2023 data were not available at time of publishing.
6	In the User Capacity Analysis for Deep Creek and Whitewater Wild and Scenic River Corridors document, Pacific Crest Trail Thru-Hike permits, page 19 (page A-27 of the PDF): It should be noted that permitted use does not equate to actual use. There are several factors that contribute to this including but not limited to: attrition/injury of permit users and many section permits do not reflect trips that overlap with Whitewater or Deep Creek.	PCTA	In the discussion of thru-hiker permits, the User Capacity Analysis for Deep Creek and Whitewater does acknowledge that “as many as two thirds of permit holders may cancel or not complete their plans...” No change necessary.
7	In the User Capacity Analysis for Deep Creek and Whitewater Wild and Scenic River Corridors document, Pacific Crest Trail Thru-Hike permits, page 19 (page A-27 of the PDF): Additionally, as it’s important to clarify that permit levels are authorized by the Forest Service, we recommend editing “according to the PCTA website” to “On behalf of the USFS, PCTA issues a maximum of 50 permits per day for northbound trips and a maximum of 15 permits per day for southbound trips.”	PCTA	Revised as suggested in User Capacity Analysis.
8	Disclose and discuss water diversion near Banning	Flores, and Loe	This diversion was in place during San Bernardino National Forest’s Land Management Plan (LMP) revision in 2005. A section of the LMP is the section that

Table 1. Draft EA Comments

	Summary of Comments	Commenter	Response
			determined eligibility and recommended designation of Wild and Scenic River on the BDF. During the LMP revision, this diversion was considered as part of the baseline condition of eligibility and the formal WSR designation via the Dingell Act of 2019, did not include instructions to specifically address this diversion, mitigate this diversion, plan for this diversion, or change the diversion.