



### Message from the Superintendent

Dear Friends of the Tuolumne River,

What comes to mind when you think about the Tuolumne River? A wild river flowing through extensive untrammeled wilderness? A relatively accessible, family-friendly place to explore the magnifi-

cently scenic High Sierra? An ancestral, spiritual place? A historic place that has contributed significantly to the way Americans today think about conservation, wilderness, and recreation? A place that compels us to learn about and understand the interrelationships between human use and a fragile High Sierran river ecosystem?

The Tuolumne River—including Tuolumne Meadows—is all of this, and more. But there is a great deal to be done if we are to protect and enhance the important characteristics of the wild and scenic Tuolumne. With two pivotal planning processes before us, it is time to ask, "What kind of place do you want the Tuolumne River to be in the future?"

Since the spring of 2005, Yosemite National Park staff and many of you have been working to develop a strong foundation for a plan that will answer this question. We have explored the values that made the river eligible for inclusion in the national wild and scenic rivers system in 1984. We have listened to the interests and concerns of park visitors and neighbors, gateway communities, culturally associated tribal groups, scientists and scholars, national and local advocacy groups, partners in other agencies, elected officials, and private citizens. We have established criteria for what would or would not be a reasonable consideration for the river corridor. And we have developed a set of tools to begin exploring a range of possible management approaches.

Now we have reached an exciting stage in the planning process. Before we begin developing a range of reasonable management alternatives, we want to pause and share our progress to date. Before we proceed with further work on the plan, we want to get your thoughts. By asking for a full public review of preliminary management concepts prior to developing the detailed alternatives to be analyzed in the upcoming draft environmental impact statement (expected to be released in summer 2009), we hope to ensure that the strongest possible set of alternatives is created and that no reasonable concept is overlooked.

In addition, if these preliminary concepts bring to mind new insights that could inform Tuolumne Meadows Plan proposals, we welcome those ideas, as well. (All comments received during last summer's public scoping process are being considered; there is no need to resubmit comments.)

Inside this workbook you will find summaries of all the work we have accomplished to date. I urge you to review this information and to share your comments, as everything is still subject to revision but will ultimately constitute the basis for much of our subsequent decision making about the river corridor.

You have received this workbook because you are seriously interested in the future of the Tuolumne River. I assure you that your comments at this early stage in the planning will help shape the alternatives we take forward to the next stage of analysis.

Thank you for sharing your passion for Tuolumne by helping to shape its future.

Sincerely,

Michael J. Tollefson

Mile College

### This workbook is organized into the following sections:

Cover photo: The Tuolumne River between Tuolumne Meadows and Glen Aulin.

All photos in this workbook are by the National Park Service except where otherwise noted.

### Pages 5-7 Tuolumne River Planning

An overview of the two plans underway: the Tuolumne River Plan and the Tuolumne Meadows Plan

### Pages 8-9 River Corridor Boundary and Classifications

A map and description of the Tuolumne Wild and Scenic River

### Pages 10-14 The Planning Process

An overview of the National Park Service planning process, describing the milestones included in this workbook and how they relate to decision making for the Tuolumne River

### What's included in this workbook?

THIS TUOLUMNE PLANNING WORKBOOK PROVIDES BACKGROUND INFORmation, tools, and preliminary examples for considering possible management approaches for managing the Tuolumne River corridor. It represents thousands of hours spent in deliberation since 2005 by the planning team, park staff, culturally associated Indian tribes, other agencies, gateway community representatives, and interested members of the public. It also includes a mail-back comment form for your use in sharing your ideas about the kind of place you think the Tuolumne River corridor should be in the future.

### **How to Comment**

Your written comments on this document are welcomed! You may either write a letter and submit it by email, fax, or mail, or complete the enclosed comment form. The comment form poses a set of questions designed to gather your ideas about the draft management prescriptions, the preliminary alternative concepts, and how the river corridor might be zoned to achieve a specific combination of resource conditions and visitor experiences—things that still require considerable discussion and evaluation before the NPS proceeds with further development of the Tuolumne River Plan.



The Tuolumne River near Glen Aulin.

### **Comment Form**

A mail-back form in the center of this workbook, provided so you can share your ideas about the preliminary alternative concepts and the kind of place you think the Tuolumne River and Tuolumne Meadows should be in the future

### Pages 19-27 Draft Management Prescriptions

Preliminary tools for zoning the Tuolumne River corridor for the most desirable mix of resource conditions and opportunities for visitor enjoyment

### National Park Service U.S. Dept. of the Interior

### **Yosemite National Park**

For more information about the Tuolumne River Plan or the Tuolumne Meadows Plan, contact the Yosemite Planning office:

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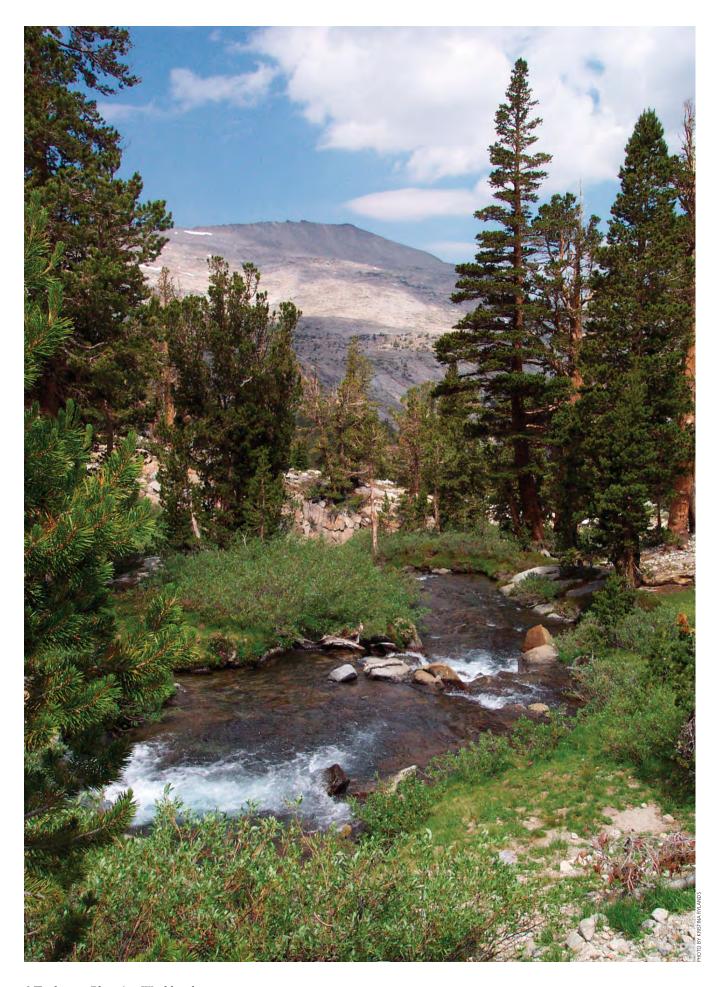
The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

### Pages 15-18 Draft Outstandingly Remarkable Values of the Tuolumne River

Findings to date regarding the unique, rare, or exemplary, river-related values that qualify the Tuolumne River for inclusion in the national wild and scenic river system

### Pages 28-35 Preliminary Alternative Concepts

Preliminary concepts about the kind of place the Tuolumne River corridor might be in the future, and preliminary zoning maps showing how the various management prescriptions might be applied





### Tuolumne River Planning

over the course of the Next two years, two plans are being developed for the Tuolumne area: a comprehensive management plan for the Tuolumne Wild and Scenic River (the Tuolumne River Plan) and an implementation plan for Tuolumne Meadows (the Tuolumne Meadows Plan). A full range of reasonable alternatives will be considered for each plan and analyzed in detail in a joint environmental impact statement.

### **Tuolumne River Plan**

The National Park Service is preparing the Tuolumne Wild and Scenic River Comprehensive Management Plan (Tuolumne River Plan) for the 54 miles of the river within Yosemite National Park. This planning process represents an intensive effort, involving professionals from all aspects of river and park management, in consultation with elected officials, partners in other agencies, park visitors and neighbors, gateway communities, culturally associated tribal groups, scientists and scholars, national and local advocacy groups, and private citizens. The Tuolumne River Plan and its environmental impact statement will rigorously analyze the range of reasonable approaches for managing the river.

Facing page: Near the headwaters of the Lyell Fork.

Top of this page: White Cascade.

### WHAT WILL THE PLAN ACCOMPLISH?

The purpose of the Tuolumne River Plan is to establish the overall vision and goals for the river in Yosemite National Park. The Wild and Scenic Rivers Act specifies that the plan must address two general goals: (1) maintain the free-flowing condition of the river, and (2) protect and enhance what the act calls the river's "outstandingly remarkable values." Elaborating upon this broad guidance, the Tuolumne River Plan will establish more specific goals, in terms of desired conditions for natural resources, cultural resources, and opportunities for visitor experiences.

### **HOW WILL THE PLAN BE USED?**

Once these goals are established in a record of decision at the end of the planning process, they will guide all

subsequent decision making for the river for approximately the next twenty years. The Tuolumne River Plan will then become the guiding document for all activities that occur along the Tuolumne River. Before a project can proceed in the Tuolumne area, park managers must look to the Tuolumne River Plan for guidance on uses and activities that are allowed—and not allowed—in the river corridor. Thus, this document will not sit on a shelf, but will be a well-used, dog-eared reference on every park manager's desk.

The process does not end with publishing the final plan. NPS staff will continuously monitor conditions within the river area and determine whether or not the desired conditions are being achieved and maintained. When

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### Management Plan Elements Required by the Wild and Scenic Rivers Act:

- River corridor boundaries, defining the area to be protected
- River classifications (wild, scenic, recreational), based on the level of development at the time of designation
- Outstandingly remarkable values, the unique, rare, or exemplary, river-related characteristics that make the river worthy of national wild and scenic river designation
- User capacity and associated visitor use impacts
- Section 7 Determination Process to protect the river's free-flowingcondition

For more information on the Wild and Scenic Rivers Act, visit www.rivers.gov

### **Tuolumne River Planning**

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managers consider work and funding priorities, they will look to the Tuolumne River Plan and assess what needs to be done to achieve and maintain the desired conditions specified in the plan. Based on these assessments, they will propose more detailed plans, programs, or projects, which once funded, will become part of the annual work assignments of park resource managers, interpreters, rangers, scientists, facility managers, concession managers, planners, and other staff. Thus, the Tuolumne River Plan will profoundly influence all the work that is accomplished throughout the river corridor and ensure that it is focused on the broad visions, shared with the public, established by the plan.

### WHAT KINDS OF DECISIONS WILL BE MADE BY THE TUOLUMNE RIVER PLAN?

Over the course of the last year—through an extensive involvement process of meetings, workshops, and opportunities to submit written comments—park staff and the public have helped define the range of issues to be addressed in planning for the Tuolumne River, which most notably include the following:

- What is the story of Tuolumne against the greater backdrop of Yosemite Na-tional Park?
- What is the most appropriate natural and cultural resource management within the Tuolumne River corridor?
- What are the most appropriate uses of the Tuolumne Meadows area?

• What are the implications of various management approaches in terms of user capacity?

### **Tuolumne Meadows Plan**

The Tuolumne Meadows Plan will tier off the Tuolumne River Plan and address specific programs and facilities expected to achieve the desired resource conditions and visitor experiences under consideration for the Tuolumne Meadows area.

Site-specific alternatives for Tuolumne Meadows will be developed in spring 2008 through a process similar to the Tuolumne River Plan process.

### WHAT KINDS OF DECISIONS WILL BE MADE BY THE TUOLUMNE MEADOWS PLAN?

During the public scoping period conducted during the summer of 2006, perhaps the comment most voiced was, *Tuolumne Meadows is not Yosemite Valley. It is a unique place offering unique experiences.* Issues to be addressed include the following:

- How can the National Park Service protect the unique character of the Tuolumne Meadows area?
- What facilities are needed to achieve the vision established in the Tuolumne River Plan?
- Are existing facilities located in the most suitable areas for protecting resources and providing services for visitors?



What are the effects of roadside parking in Tuolumne Meadows? What level of employee housing is needed to support operations in Tuolumne Meadows?

• What needs to be done to update aging utilities infrastructure?

### FOOTPRINT AND FACILITIES IN THE TUOLUMNE MEADOWS AREA

For every visible park activity, there are less visible issues and impacts. For instance, for every parking space or picnic table added to an area, services such as bathrooms—and in turn, the sewer infrastructure needed to support them—must be considered. The sewer infrastructure and treatment plant for the Tuolumne area are currently over thirty years old and need to be updated to modern standards. However, before this type of action is taken, decisions must be made on what type, extent, and location of park operations and visitor use should be supported—an answer which will be determined through the Tuolumne River Plan.

### The Tuolumne Meadows Plan will

- Derive its overall guidance from the management prescriptions and zoning established in the Tuolumne River Plan
- Specify management programs and facilities for achieving and maintaining the desired resource conditions and opportunities for visitor experiences established for the Tuolumne Meadows area
- Map where natural areas will be protected or restored and where facilities will be located

Facing page: The Tuolumne River meanders through Lyell Canyon.



### River Corridor Boundary and Classifications

IN 1984 CONGRESS DESIGNATED 83 MILES OF THE Tuolumne River (54 of which are within Yosemite National Park) as part of the national wild and scenic river system. The 1984 designation established a boundary extending ½ mile on either side of the river, the maximum allowed under the Wild and Scenic Rivers Act. The National Park Service has been managing the river corridor pursuant to this boundary, which is shown on the accompanying map (see page 9).

The Wild and Scenic Rivers Act requires that rivers be classified as wild, scenic, or recreational, based on the level of development at the time of designation. The Tuolumne River corridor is divided into six segments, each of which is classified as wild or scenic. No segment of the Tuolumne River in Yosemite National Park meets the criteria for classification as recreational.

According to the act, the terms 'wild' and 'scenic' are defined as follows:

"Wild river areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

"Scenic river areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."

In the 1984 designation, the 8-mile portion of the river impounded by O'Shaughnessy Dam at the Hetch Hetchy Res-

ervoir was determined to be ineligible for inclusion in the wild and scenic river system because it is not free flowing, which is a requirement of the Wild and Scenic Rivers Act.

The Hetch Hetchy Reservoir lies between segments 4 and 5 of the Tuolumne Wild and Scenic River within Yosemite National Park, but it is not, itself, included in the designated river corridor. Therefore, the

management of the reservoir and O'Shaughnessy Dam will not be addressed in the Tuolumne River Plan, except in terms of cumulative impacts in the environmental impact statement.

### **Technical Corrections**

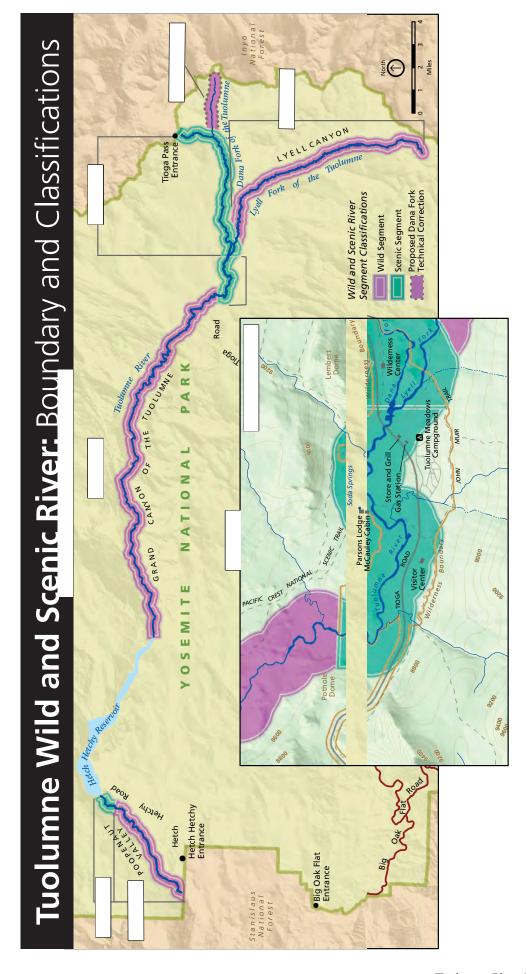
### DANA FORK HEADWATERS BOUNDARY AND CLASSIFICATION CORRECTION

As allowed for in the Wild and Scenic Rivers Act, the river corridor boundary is being reviewed as part of the Tuolumne River Plan. To date, one technical correction has been proposed. In 1979, the National Park Service and U.S. Forest Service published a joint eligibility study for inclusion of the Tuolumne River into the wild and scenic river system. This study identified two tributaries as the primary headwaters of the Tuolumne River: the Lyell Fork and the Dana Fork. However, the accompanying map incorrectly illustrated the Dana Fork as descending from the area near the Tioga Pass entrance station. The Dana Fork actually originates between Mount Dana and Mount Gibbs. When Congress designated the Tuolumne as a wild and scenic river in 1984, the enabling legislation referred to the 1979 eligibility study and map for the location of the headwaters. In consultation with park hydrologists and members of the planning team from the original 1979 study, this planning process will correct the 1979 map error and incorporate the proper Dana Fork into the wild and scenic river boundary.

This headwaters section of the river corridor will be assigned a wild classification, as the portion of the Dana Fork between Mount Dana and Mount Gibbs flows through congressionally designated wilderness.

Other revisions may be proposed as the planning progresses.

Tuolumne W	uolumne Wild and Scenic River Segments and Classifications		
Segment	Classification	Area	
Segment 1	Wild	Lyell Fork	
Segment 2	Scenic	Dana Fork	
Segment 3	Scenic	Tuolumne Meadows	
Segment 4	Wild	Tuolumne Meadows to Hetch Hetchy Reservoir	
Segment 5	Scenic	Below Hetch Hetchy Reservoir to designated wilderness boundary	
Segment 6	Wild	Designated wilderness boundary to western park boundary	







### The Planning Process: From 2005 to Today

A LOGICAL, TRACKABLE RATIONALE FOR DECISION MAKING IS BEING created by first establishing WHY the Tuolumne was designated a national wild and scenic river and WHAT conditions should exist there, then focusing with increasing specificity on HOW to achieve the various conditions over a period of time. Park managers will continuously assess their progress and adjust their activities as necessary through a process called *adaptive management*.

To initiate this system of planning and management for the Tuolumne River, a core planning team was assembled and tasked with developing a comprehensive management plan for the Tuolumne River. Park managers further committed to extensive public involvement in the planning for the Tuolumne River, calling for a diversity of opportunities for public participation at multiple points in the planning process and for public workshops to parallel planning team workshops at key steps as the planning progresses. Interested members of the public have become engaged in the process and will have opportunities to stay engaged throughout the plan's development, not just when a document is released for comment.

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### The Tuolumne Planning Team

A dedicated interdisciplinary core group of Yosemite NPS staff make up the Tuolumne planning team. Team members represent every park division, including

- Interpretation and Education
- Resources Management and Science
- Visitor Protection, including Wilderness Management
- Facilities Management Business and Revenue Management
- Planning
- Office of the Superintendent

Not only do team members possess decades of collective experience, but they were also chosen because of their deep personal connections to the Tuolumne River and Tuolumne Meadows. The project is led by a project manager who reports to the Division of Planning and the park superintendent.

### Overview of Planning for the Tuolumne River

- 1. Focus on WHY the river is important
- Decide WHAT resource conditions and visitor experiences should exist in the river corridor
- 3. Follow through with strategies for HOW the desired conditions and experiences can be achieved

Facing page, top: Public workshop participants discuss desired conditions, February 2007.

Bottom: NPS planning team workshop, January 2007

This page: Public workshop participants begin applying management prescriptions to maps of the river, April 2007.

ORV Report (informs the Tuolumne River Plan)

WHY

Tuolumne River Plan and EIS

> WHY & WHAT

Tuolumne Meadows Plan and EIS

HOW

The Draft and Final EISs for these two plans will be combined.

### The Planning Process

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### WHY is the river important?

**OUTSTANDINGLY REMARKABLE VALUES: 2005** 

The team began the Tuolumne River planning process by focusing on why the Tuolumne was designated a wild and scenic river. In the summer of 2005, the NPS team undertook a comprehensive review of those unique characteristics that make the Tuolumne River worthy of special protection and management. These are the river's outstandingly remarkable values (ORVs), and the Wild and Scenic Rivers Act directs that these values must be protected and enhanced by the managing agency. An Outstandingly Remarkable Values Draft Report was released in June 2006, detailing the criteria and processes used to describe river values and the draft findings to date. That report is posted on the park's website at www.nps.gov/yose/ planning/trp. Over the past year, the draft river values have been refined to briefly summarize the essence of each value and to facilitate its tracking through the planning process. The outstandingly remarkable values are presented on pages 15-18 of this workbook.

### WHAT resource conditions and visitor experiences should exist in the river corridor?

**PUBLIC SCOPING: SUMMER 2006** 

During the summer of 2006, the planning team solicited and compiled ideas, interests, and concerns from members of the public to help in determining the desired conditions for the corridor. People were encouraged to submit comments at one of thirteen public scoping meetings held in communities adjacent to the park and in Tuolumne Meadows. They were also invited to on-site visits at Tuolumne Meadows, and throughout the summer the park interpreters made the topic of planning for Tuolumne's future a central feature of the summer's interpretive ranger programs. The interpretive staff was committed to making sure the public and all park employees and volunteers were aware of the scoping period and that they had multiple opportunities to participate and make comments that would be considered during the planning process.

In all, more than 4,000 distinct comments were captured on flip charts at public meetings, submitted on comment forms available at the park, sent via email, fax, or letter, or entered electronically on the park's website. These comments were coded, sorted, and compiled into a *Public Scoping Report* (released December 2006), which is serving as an essential tool for planning for the Tuolumne Wild and Scenic River and Tuolumne Meadows. The report is available at <a href="https://www.nps.gov/yose/planning/trp">www.nps.gov/yose/planning/trp</a>.



During an onsite visit to Tuolumne Meadows in summer 2006, members of the public discuss issues and share concerns with the planning team.

The comments were then synthesized into approximately a thousand concern statements, each expressing particular (and sometimes conflicting) actions the National Park Service might take in managing the river corridor. Hundreds of hours of analysis, a series of planning team and park staff workshops, and a public workshop have been devoted to reviewing the *Public Scoping Report* and discussing the range of public interests and concerns. This report has emerged as a vital reference document, featuring prominently in all planning team deliberations.

### **DESIRED CONDITIONS: WINTER 2007**

After refining the outstandingly remarkable values of the Tuolumne River and considering the range of public and park staff interests and concerns, the planning team and interested members of the public began to establish *sideboards* for the range of conditions that might be considered desirable for the Tuolumne River. In January and February of 2007, a series of planning team workshops—interspersed with public "Planner for a Day" workshops—took place to envision the types of resource conditions and visitor experiences that should be considered for the river corridor. For each general category of natural or cultural resources (hydrologic, geologic, archeological, historic, etc.) and for each general category of potential uses (visitor enjoyment, American Indian traditional cultural uses, scientific research, etc.) possible conditions were evaluated against the following criteria:

- Would they be consistent with the intent of Congress in designating the Tuolumne Wild and Scenic River and Yosemite National Park?
- Would they be consistent with the laws regulating the use of federal lands, the NPS management policies, and the interagency guidelines for managing wild and scenic rivers?

### Your Comments are Welcome throughout the Process

Opportunities to provide comments on the planning for the Tuolumne River and Tuolumne Meadows did not end with the 2006 public scoping period. The NPS recognizes that as planning progresses for the Tuolumne River, it may have implications for public interests and concerns specific to Tuolumne Meadows. You are welcome to consider the material presented in this Tuolumne Planning Workbook and provide comments.

All input received during the 2006 scoping period will continue to inform the plan. However, if the management concepts presented here inspire new insights, regarding Tuolumne Meadows or ways to manage the river corridor, please send new written comments as described on page 3.

Would they protect and enhance the outstandingly remarkable values of the Tuolumne Wild and Scenic River?

The intent of this step in the planning process was to ensure that all the possible desired conditions considered during subsequent decision making would meet these fundamental criteria. Those that would were considered to be within the sideboards. Those that would not were considered to be outside the scope of this planning process.

A good example of how this process worked is the sideboards for desired visitor experiences, which range from abundant opportunities for primitive and unconfined recreation characterized by personal freedom and self reliance, to a diversity of opportunities for visitors of varying ages and abilities. These sideboards were based on the consideration that both kinds of experiences are outstandingly remarkable values of the river corridor.

### MANAGEMENT PRESCRIPTIONS: SPRING 2007

In March and April 2007, the planning team and the participants in the public planning workshops worked to synthesize the ranges of potential desired conditions for natural and cultural resources and visitor experiences into a set of potential management prescriptions for the river corridor. A management prescription selects complementary natural resource conditions, cultural resource conditions, and opportunities for visitor experiences and combines them into a possible management strategy that could be applied to locations within the river corridor. Once applied to a map of the river corridor, this management prescription becomes known as a management zone.

The ideas generated at the planning team and public workshops have been consolidated into five potential management prescriptions, which are presented on pages 19-27 of this

workbook. Each of these prescriptions is wholly consistent with the laws and policies governing park and river management, but in ways that allow for different approaches to resource management and a variety of visitor experiences. Appropriately applied to locations throughout the river corridor, these prescriptions can ensure the protection and enhancement of the entire spectrum of the river's outstandingly remarkable values.

### ALTERNATIVE CONCEPTS AND ASSOCIATED MANAGEMENT ZONING: SUMMER-FALL 2007

With the set of draft management prescriptions, the planning team and the public now have the tools they need to start thinking about the kind of place the river corridor might be in the future. The management prescriptions are equivalent to a palette of paints that can be used to color and capture on a set of maps a variety of different visions for the river corridor.

Each vision will represent a different management concept (a different story about the kind of place the river corridor might be) and a way of zoning the river corridor to carry out that concept.

Under each management concept, the various management prescriptions must be allocated in ways that protect and enhance the river's outstandingly remarkable values. The challenge is that these values include both natural and cultural processes and features, and also a diversity of visitor experiences, which may create tensions among competing values in specific locations. For instance, providing recreational and educational opportunities for people of various ages and abilities (an ORV) may be in conflict with protecting habitat for plants and animals, especially in sensitive subalpine meadow areas (another ORV). Management zoning will guide managers in how best to sort out these tensions.

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Waterwheel Falls.

### The Planning Process

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In determining how a particular area might be zoned, the planning team must first consider what ORVs occur there, what is (or might be) the area's defining character, and the resiliency of the resources to withstand various types of use. This approach can help identify where it might be appropriate to emphasize one set of resource conditions and associated visitor experiences over another, but always in a way that protects and enhances the outstandingly remarkable values of the river corridor as a whole.

Before the planning team started into this phase of the planning, it asked the participants in the April 2007 public workshop to come up with at least three different ways of painting—or zoning—the river corridor. The maps produced by the public then became an important reference for the planning team, who engaged in a similar exercise during a series of workshops conducted in May 2007. What resulted was a series of preliminary alternative concepts which are contained on pages 28-35 of this workbook.

This critical phase of Tuolumne River planning will require considerably more work. However, one of the purposes of this workbook is to hear the public's interests and concerns related to these broad concepts before deciding upon the appropriate range of alternatives to be considered in the environmental impact statement.

### **Next Steps**

This summer, the planning team will gather comments on the preliminary management concepts for the Tuolumne River Plan and their implications for the Tuolumne Meadows Plan.

By late fall of 2007, a set of alternative management concepts and associated zoning plans for the Tuolumne River Plan will be ready for analysis, and the team will turn its attention to the Tuolumne Meadows Plan. These two plans will be combined into a single document, and the alternatives will be analyzed in a single draft environmental impact statement, which is anticipated for review in summer 2009.

### **Tuolumne Planning Schedule and Opportunities for Public Involvement**

### Summer 2007

Public reviews preliminary management concepts for the Tuolumne River Plan; additional comments welcomed on the Tuolumne Meadows Plan.

### **Opportunities for Public Involvement:**

- Tuolumne Planning Workbook
- Public outreach, site visits, and meetings

### Fall 2007

Alternatives drafted for the Tuolumne River Plan; Tuolumne River Plan stands down while Tuolumne Meadows Plan ramps

### **Opportunities for Public Involvement:**

- Public workshop to discuss preliminary management concepts
- Updates posted to park website

### Winter 2008

Public comments used to identify a reasonable range of management alternatives for the Tuolumne Meadows Plan.

### **Opportunities for Public Involvement:**

Public workshops to consider design concepts for Tuolumne Meadows

### Summer 2008

Public reviews preliminary concepts for Tuolumne Meadows Plan.

### **Opportunities for Public Involvement:**

- Public outreach, site visits, and meetings
- Updates posted to park website

### Winter 2009

NPS prepares Draft Tuolumne River Plan and Tuolumne Meadows Plan Environmental Impact Statement (EIS).

### **Opportunities for Public Involvement:**

- Updates posted to park website
- Monthly open houses

### Summer 2009

Public reviews Draft Tuolumne River Plan and Tuolumne Meadows Plan EIS.

### **Opportunities for Public Involvement:**

- Public comments accepted by mail, fax, email, or at public meetings
- Public outreach, site visits, and meetings

### Fall 2009

Tuolumne River Plan and Tuolumne Meadows Plan Final EIS released

### **Opportunity for Public Involvement:**

Public review of document

### **Late 2009**

If approved, Tuolumne River Plan and Tuolumne Meadows Plan Record of Decision is signed by NPS regional director. Planning process ends; plans may now be implemented.

### Draft Outstandingly Remarkable Values of the Tuolumne River

OUTSTANDINGLY REMARKABLE VALUES ARE DEFINED BY THE WILD AND SCENIC RIVERS ACT AS THE CHARACTERIStics that make a river worthy of special protection. The Interagency Wild and Scenic Rivers Coordinating Council has issued criteria for identifying and defining these values, directing that they must be *river related* and either *unique*, *rare*, *or exemplary in a regional or national context*. Based on these criteria, the Tuolumne River has numerous outstandingly remarkable values, which have been categorized and defined as follows.

### **Ecologic Values**

From the alpine headwaters of the Tuolumne River, through the river's steep descent into the Sierra Nevada foothills, interactions among geologic, hydrologic, and biologic processes sustain a rare diversity of robust, interrelated, and largely intact ecosystems. The entire river corridor is either within or surrounded by designated wilderness, which protects the ecological integrity of these systems.

The unusual extent and influence of glaciation in the Tuolumne River corridor has resulted in extensive low-relief areas, primarily meadows, separated by steep sections of river flowing over bedrock. This stairstep morphology, in combination with exceptional water quality, a seasonal flood regime, and a largely undisturbed river corridor, sustains systems that are remarkable in their size and diversity.



### **ECOSYSTEM VALUES**

### Intact Ecosystems Providing Habitat for a Remarkable Diversity of Species

The interrelated and largely intact ecosystems along the Tuolumne River corridor provide habitat for a remarkable diversity of native plants and animals, including special-status species. Largely intact hydrologic and biologic processes contribute to the integrity of these river-related ecosystems:

- Alpine habitat along the Lyell and Dana Forks, characterized by high plant diversity, is important for numerous plant and animal species, including migratory bird populations and special-status plant, amphibian, and small mammal species.
- Habitat for localized populations of special-status plant species is maintained at mineral springs in Lyell Canyon and Tuolumne Meadows.
- The subalpine meadow systems at Tuolumne Meadows, Dana Meadows, and the
  meadows along the Lyell Fork sustain an exceptional diversity of river-related habitat types
  for plant and animal species, including migratory bird populations and special-status plant,
  amphibian, and bat species.
- Intact river-dependent habitat types, such as pools, riffles, and steep cliffs, between Tuolumne Meadows and Hetch Hetchy Reservoir support a diverse assemblage of species, including special-status bird and bat species.
- Largely intact low-elevation riparian and meadow communities provide habitat for an
  exceptionally diverse assemblage of bird species and several special-status bat species at
  Poopenaut Valley, one of the few undeveloped low-elevation meadow/wetland complexes
  in the region.



### Some of the Most Extensive Subalpine Meadow and Riparian Complexes in the Sierra Nevada

Unusually large basins of alluvial fill, perennially high groundwater conditions, seasonal flooding, and active channel migration combine to sustain some of the most extensive subalpine meadow/wetland complexes in the Sierra Nevada at Tuolumne Meadows, Dana Meadows, and along the Lyell Fork.

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### **Draft Outstandingly Remarkable Values**

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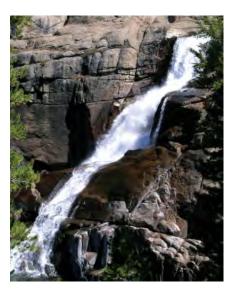


### **GEOLOGIC VALUES**

### **Exceptionally Well-Preserved Evidence of Glacial Processes**

Exceptionally well-preserved geologic features illustrate the unusual extent of glaciation in the Tuolumne River corridor and provide some of the best evidence of glacial processes in the entire Sierra Nevada:

- The Tuolumne River corridor represents one of the most extensive examples of stairstep river morphology in the Sierra Nevada.
- The geomorphology of Lyell Canyon provides a textbook example of a meandering river through a glaciated U-shaped valley.
- Dramatic evidence of glaciation along the Dana Fork, Tuolumne Meadows, and the Grand Canyon of the Tuolumne includes glacial erratics, moraines, roches moutonnées, striations, hanging valleys, and some of the best examples of glacial polish in the United States.
- Poopenaut Valley contains the lowest elevation evidence of glaciation found anywhere in the western Sierra Nevada.



### **HYDROLOGIC VALUES**

### **Exceptional Water Quality**

The exceptional water quality of the headwaters of the Tuolumne River, along the Lyell and Dana Forks, is maintained throughout the river corridor.

### **Exemplary Diversity of Hydrologic Features**

Largely intact hydrologic processes in the Tuolumne River corridor create a diversity of exceptional hydrologic features:

- One of the most extensive examples of stairstep river morphology in the Sierra Nevada creates a series of spectacular cascades and waterfalls between Tuolumne Meadows and Hetch Hetchy Reservoir.
- Unusual glacial kettle ponds are located along the Dana Fork.
- A classic and well-known example of an alkaline spring occurs at Soda Springs.
- Periodic flooding at Poopenaut Valley sustains an unusual diversity of riparian habitats.

### Sociocultural Values

The Tuolumne River's unique combination of prehistoric, historic, scenic, and recreational values distinguishes it from other rivers in the Sierra Nevada and throughout the nation. The sociocultural values of the Tuolumne River corridor extend back at least 6,000 years and span hundreds of generations of diverse groups of people. Visible evidence testifies to the evolving importance of the river corridor as a seasonal hunting and gathering ground, a trans-Sierra trade and travel route, a destination for recreation and leisure, and a place to connect with nature in a wilderness setting.

From prehistoric to historic times, people have developed powerful and enduring relationships with the Tuolumne River corridor. The corridor plays a significant role in maintaining cultural traditions among groups of American Indian people. In a contemporary context the corridor engenders deep personal connections and has figured prominently in the lives, stories, and traditions of generations of visitors.



### PREHISTORIC AND AMERICAN INDIAN CULTURAL VALUES Regionally Significant Archeological Evidence of Prehistoric Travel, Trade, and Settlement

Archeological sites with regionally significant research potential provide evidence of travel, trade, and settlement by groups of American Indian people dating back at least six thousand years. These sites are eligible or potentially eligible for listing on the National Register of Historic Places:

- The oldest known sites, which are found along the Dana Fork, provide evidence of continuous human use and possible environmental change in the region.
- Tuolumne Meadows and the Grand Canyon of the Tuolumne are flankedby concentrations of pre-contact archeological sites containing materials that are uncommon in the region.
- Pre-contact archeological sites in the low-elevation flats, particularly Poopenaut Valley, represent possible year-round use by groups of American Indian people.

### Prehistoric Resources Important for Maintaining the Cultural Traditions of American Indian People

Traditional use sites and features that are important for maintaining cultural traditions of American Indian people are found along the Lyell and Dana Forks, in Tuolumne Meadows, at Pate Valley, and below Hetch Hetchy Reservoir.



### HISTORIC VALUES

### Nationally or Regionally Significant Evidence of Historic Trade, Travel, Settlement, Recreation, and Early Conservation Activism

The Tuolumne River corridor contains numerous sites that are listed (or eligible or potentially eligible for listing) on the National Register of Historic Places as places of regional or national significance:

- Historic sites along the Lyell and Dana Forks attest to their status as regionally important trade and travel routes between the eastern and western Sierra.
- Historic sites in Tuolumne Meadows commemorate the significance of this area as a place inspiring conservation activism on a national scale. Parsons Memorial Lodge is a national historic landmark.
- Historic landscape features and structures associated with the High Sierra Camp Loop represent the development of a nationally distinctive kind of high-country touring.
- Some of the finest examples of historic trail stonework in the nation are found below Tuolumne Meadows.
- Historic landscape features and structures below Hetch Hetchy Reservoir provide evidence of early Euro-American settlement.



### **SCENIC VALUES**

### Magnificent Scenery with a Character Unique to the Tuolumne River Corridor

A glacially carved, snow-capped landscape, through which the Tuolumne River alternately meanders across wide meadows and cascades down steep canyons, creates magnificent scenery with a unique character that people equate with the Tuolumne River corridor:

• The largest glacier on the western flank of the Sierra Nevada is part of the spectacular high-country views from the Lyell Fork.

continued on next page

### **Draft Outstandingly Remarkable Values**

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- Breathtaking views along the Lyell Fork, Dana Fork, and Tuolumne Meadows encompass the meandering river, adjacent meadows, glacially carved domes, and rugged mountain peaks.
- The low-relief topography at Tuolumne Meadows and Dana Meadows allows for magnificent skyward views, including some of the best views of dark night skies in the Sierra Nevada.
- Views within the Grand Canyon of the Tuolumne include steep canyon walls, hanging valleys, and dramatic cascades of falling water.
- The stretch of river below Hetch Hetchy Reservoir offers stunning views of verdant meadows, a glacially carved bedrock valley, large river pools, dramatic canyon walls, and a constricted slot canyon.



### RECREATIONAL VALUES

### Outstanding Opportunities for a Diversity of Experiences Characterized by Primitive, Unconfined Recreation

The untrammeled character of the river corridor, most of which is in designated wilderness, provides outstanding opportunities for a diversity of experiences characterized by primitive, unconfined recreation in a landscape dominated by natural scenery and soundscapes:

- The Pacific Crest Trail, which follows the Lyell Fork and the Tuolumne River through Tuolumne Meadows, offers opportunities to travel one of the country's eight National Scenic Trails.
- The rustic high-country lodging available along the Dana Fork, in Tuolumne Meadows, and above the Grand Canyon of the Tuolumne offers a distinctive type of recreation that is unique in the national park system.
- The Grand Canyon of the Tuolumne offers exceptional opportunities for backcountry excursions through a deep, rugged, and seldom-traveled gorge.
- The recreational opportunities below Hetch Hetchy Reservoir are unusual due to the relative rarity of low-elevation designated wilderness elsewhere in the Sierra Nevada



### Outstanding Recreational and Educational Opportunities for People of Various Ages and Abilities at Tuolumne Meadows

A wide range of recreational opportunities attract people of various ages and abilities to Tuolumne Meadows, where many individuals, families, and groups establish traditional ties with the area. The National Park Service and other organizations focus on the river and adjacent meadows as a centerpiece of nature interpretation and education in the Sierra Nevada.



### SCIENTIFIC VALUES

### Invaluable Opportunities to Examine Natural and Cultural Resources with High Research Value

The largely undisturbed river corridor provides invaluable opportunities to examine ecologic and sociocultural resources with high research value:

- Relatively intact Sierra river ecosystems provide crucial baseline data and basic information on how components of natural and social systems interact and respond to perturbation (e.g., climate change).
- The entire river corridor is either in or surrounded by designated wilderness, which is critical to protecting the integrity and maintaining the scientific value of these resources.

### **Draft Management Prescriptions**

THE TUOLUMNE RIVER PLAN WILL provide long-term guidance about what combinations of resource conditions and visitor experiences will best protect and enhance the outstandingly remarkable values of the Tuolumne Wild and Scenic River. It will provide this guidance through a set of management prescriptions for the river corridor (see "Planning Process," on page 11).

Each management prescription provides specific guidance regarding the desired conditions of natural resources, cultural resources, and opportunities for visitor experiences. Management prescriptions focus on results, rather than actions.

They stop short of planning for specific management activities or facilities; however, they include general direction about the types of management or facilities that would be appropriate to carry out the prescription (e.g., trails vs. paved roads).

General direction about the appropriate types of management or facilities can be equated to a manager's toolbox, from which managers can choose one or more tools to manage resources and/or visitor use. If a manager selects and implements one tool and it proves to be ineffective in achieving the desired resource conditions or visitor experiences,

another tool must be selected and tried until the desired conditions are achieved and maintained over time. This cycle of management action, condition monitoring, and reevaluation is the essence of adaptive management, which the National Park Service has adopted for the management of areas it administers.

The matrix on pages 20-27 compares the management prescriptions currently under consideration for possible application within the Tuolumne River corridor. The table is divided into two parts: The conditions that would be desired under each prescription, and the manager's toolbox for achieving those conditions.

### **Color Key for Management Prescriptions**

The prescriptions currently under consideration for application to one or more areas within the corridor are presented below. These prescriptions may be revised or replaced as the planning progresses.

The **Remote Wilderness** prescription is generally reserved for areas of congressionally designated wilderness that are far enough removed from access roads that considerable time and effort are required to access them. People traveling through these areas may experience a sense of self-reliance and adventure that is not possible in areas managed under other prescriptions.

Day-Use Wilderness generally includes those areas in congressionally designated wilderness that are accessible on a day hike. Areas adjacent to designated wilderness may also be appropriate for this prescription. The level of resource protection in this prescription is the same as in Remote wilderness; the primary difference is an expectation of more day use.

High-Country Experience areas are largely undisturbed natural areas outside congressionally designated wilderness, where visitors of varying ages and abilities can appreciate and learn about natural and cultural resources and enjoy dispersed, resource-based day-use recreation against a backdrop of the rugged High Sierra. Intensive resource management may be required to restore natural system functioning to previously disturbed areas; however, emphasis is placed on managing visitor use, rather than resources, to maintain natural conditions into the future. Management activities may be supported by unpaved administrative roads. Facilities to support visitor use are limited to unpaved trails; informational and interpretive signs; and minimal facilities,

such as waterless toilets or boardwalks, needed to protect resources at popular visitor destinations.

The **High-Country Base Camp** is a predominantly natural area with basic accommodations and services, where visitors can spend a few hours, stay overnight, or stage an excursion into the wilderness supported by road access, abundant informational and interpretive programs, campgrounds, and modest levels of food service and lodging. Administrative needs are met by management facilities, employee housing, access roads, and utility infrastructure. This prescription is generally reserved for relatively resilient landscapes. If outstandingly remarkable or highly sensitive resources are included in this zone, design guidelines and mitigation standards ensure their protection.

The **Historic Tuolumne** prescription places the greatest importance on protecting the character and opportunities for visitor exploration of those places where the layering of human experiences over time has contributed in some particularly significant way to the American experience. This prescription is reserved for consideration in developed areas outside congressionally designated wilderness, where historic sites or structures are apparent on the landscape and historic districts provide a tangible link to the past. The preservation or enhancement of the archeological and historic integrity of these properties for continued visitor and administrative use is a critical component of this prescription.

	Remote Wilderness	Day-Use Wilderness
Desired Resource Conditions and As	· · · · · · · · · · · · · · · · · · ·	
Desired Natural Resource Condition	_	
Hydrologic Processes and Features	Natural hydrologic processes occur without human interference. The river is free of unnatural impoundments. Water quality is excellent.	Same as Remote Wilderness
Ecological Processes and Features	Natural ecological processes, such as fl ooding and fire, sustain the inherent integrity of natural and physical resources.  Ecological communities are intact, including the natural distribution, numbers, population composition, and interaction of native species in the context of the ecosystem as a whole.	Same as Remote Wilderness
Geologic Features	Geologic features and processes are intact.	Same as Remote Wilderness
Air Quality	In-park sources of air pollutants are not detect- able, with the exception of smoke associated with the natural role of fire in the ecosystem.	Same as Remote Wilderness
Soundscapes and Lightscapes	Natural soundscapes and lightscapes are as intact as possible.	Same as Remote Wilderness

High-Country Experience	High-Country Base Camp	Historic Tuolumne
Natural hydrologic processes remain largely intact, with some localized management activity to mitigate the impacts of visitor use. The river is free of unnatural impoundments. Water quality is excellent.	Natural hydrologic processes remain largely intact, with some localized management activity to mitigate the impacts of visitor use. Existing unnatural water diversions may remain. Some hydrologic features may be locally affected by disruptions to natural processes; however, features contributing to the outstandingly remarkable values of the river are strictly protected. Also, no disruption to natural hydrologic processes that would diminish natural system functioning in adjacent areas is allowed. Water quality is excellent.	Natural hydrologic processes remain largely intact, with some localized management activity to mitigate the impacts of visitor use or to protect important cultural resources.  The river is free of unnatural impoundments Water quality is excellent.
Same as Remote Wilderness	Natural ecological processes, such as fi re, may be controlled to protect human life and property where such processes pose an unacceptable risk. Ecological communities are as intact as possible with active management.  Concentrated human activity and infrastructure may have localized effects, but not to the extent that would diminish native biodiversity or the overall health of ecological communities in or adjacent to the river corridor.	Natural ecological processes, such as fi re, may be controlled to protect human life and property where such processes pose an unacceptable risk. Ecological communities may be managed to preserve distinct or iconic features of the cultural landscape.  Concentrated human activity and infrastructure may have localized effects, but not to the extent that would diminish native biodiversity or the overall health of ecological communities in or adjacent to the river corridor.
Distinct or iconic geologic features are intact; minimal soil manipulation may take place to achieve or enhance another resource or visitor experience goal.	Same as High-Country Experience	Same as High-Country Experience
Air quality is well above existing standards for in-park pollutants, except when associated with the natural role of fire in the ecosystem.	In-park sources of air pollutants are limited to localized emissions from vehicles and campfires, as well as smoke associated with the natural role of fire in the ecosystem.	Same as High-Country Base Camp
Natural soundscapes and lightscapes are largely intact; however, localized, intermittent occurrences of unnatural sound or light may be associated with visitor and administrative activities.	The sounds and sights automobile traffic, concentrations of people, and overnight facilities are often discernible against the backdrop of natural soundscapes and lightscapes.	Same as High-Country Base Camp

	Remote Wilderness	Day-Use Wilderness
Desired Resource Conditions and A	ssociated Visitor Experiences	
<b>Desired Cultural Resource Conditio</b>	ns	
Archeological resources, American Indian traditional cultural properties, and historic structures, buildings, and landscapes	Archeological resources, American Indian traditional cultural properties, and historic structures, buildings, and landscapes retain their current levels of integrity to the maximum extent feasible while allowing for natural ecosystem processes.  Unimpeded ecological processes may lead to the deterioration or loss of resources, in which case appropriate treatment measures, such as data recovery, are implemented in accordance with the Secretary of the Interior's guidelines.  Surface artifacts are generally left in place as important aspects of site integrity and visitor experience.	Same as Remote Wilderness
American Indian traditional cultural practices	American Indian traditional cultural practices are perpetuated and enhanced to the extent possible without interrupting natural ecosystem function.	Same as Remote Wilderness
Desired Visitor Experiences		
Experience and Setting	Visitors enjoy abundant opportunities for primitive, unconfined recreation, characterized by personal freedom and self-reliance, in an environment that appears pristine to all the senses.	Similar to the Remote Wilderness, except because of the proximity to roads and other access points, day use predominates, visitor use levels are greater, and opportunities for solitude are somewhat reduced.
Interaction with Others	People generally travel alone or in small groups. Encounters with others happen infrequently.	Encounters with other visitors happen occasionally on marked and maintained trails and may be more frequent at key trail junctions, vistas, cascades and swimming spots, and campsites.
Level of Self-Discovery or Interpretive Programs	Enjoyment of natural and cultural resources is generally through self-discovery, with no interpretive signing and only occasional guided hikes.	Same as Remote Wilderness
Recreational Activities	Recreational activities typically include back- packing, private and commercial stock packing, dispersed primitive camping, day hiking, nature study, rock climbing and mountaineering, fish- ing, swimming, and wading. Winter activities typically include cross-country skiing, snowshoe- ing, winter camping, and mountaineering.	Same as Remote Wilderness

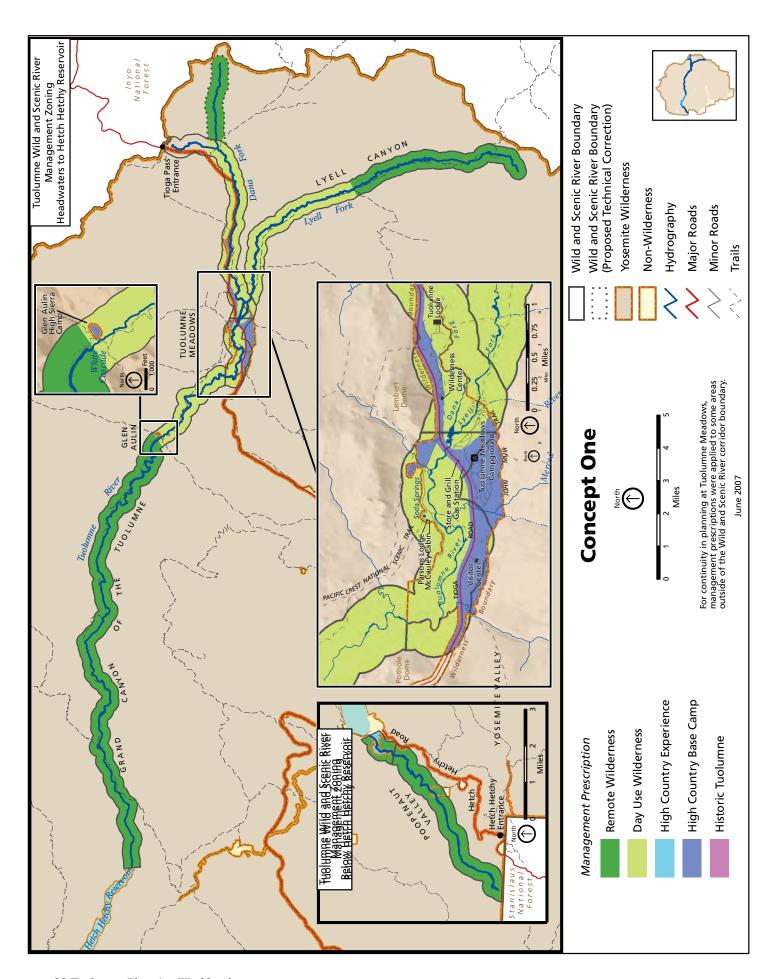
High-Country Experience	High-Country Base Camp	Historic Tuolumne
Archeological and historic resources retain their current levels of integrity to the maximum extent feasible while allowing for natural ecosystem processes.  Ecological processes may lead to the deterioration or loss of resources, in which case appropriate treatment measures, such as data recovery, are implemented in accordance with the Secretary of the Interior's guidelines.  Elements contributing to historic districts may be restored to enhance visitor understanding and enjoyment.  Surface archeological resources may be considered for onsite interpretation.	Archeological and historic resources retain their current levels of integrity to the maximum extent feasible while achieving visitor experience goals. Historic buildings may be rehabilitated for medh use in accordance with the Secretary of the Interior's Standards.  Human activities may affect cultural resources, in which case appropriate treatment measures, such as data recovery, are implemented in accordance with the Secretary of the Interior's Standards.	The preservation, restoration, and rehabilitation of elements contributing to the historic land-scape are strongly encouraged. Historic buildings may retain their current levels of integrity or be restored to an earlier condition. Historic sites and structures that are not contributing elements to the historic landscape may be considered for removal. Sites or structures may be rehabilitated for modern uses that are compatible with the historic character of the landscape. Archeological resources are protected and may be interpreted.
American Indian traditional cultural practices are perpetuated and enhanced to the extent possible while protecting natural ecosystem function and achieving visitor experience goals.  Visitors are invited to learn about American Indian traditional cultural practices in designated areas in ways that do not interfere with traditional activities.	Same as High-Country Experience	American Indian traditional cultural practices are perpetuated and enhanced Visitors are invited to learn about American Indian traditional cultural practices in designated areas in ways that do not interfere with traditional activities.
Visitors enjoy day-use opportunities to experience and learn about the High Sierra and the outstandingly remarkable values of the Tuolumne River corridor in an environment that is suitable for people of varying ages and abilities without losing its inherent naturalness.	Visitors of varying ages and abilities enjoy opportunities for day and overnight use. A variety of recreational, creative, and educational activities are available in a setting characterized by natural scenery and rustic-style facilities.	Visitors of varying ages and abilities enjoy outstanding opportunities to experience and learn about the historic values of the High Sierra in settings that evoke images, understandings, and other perceptions of the past.  Families and groups can share in the same experiences that have been available for generations. Opportunities may include overnight as well as day use, depending on the historic use of the landscape.
Families and groups are attracted to and often establish enduring ties to the area.  Although opportunities for the kind of solitude found in wilderness are not expected, there are ample opportunities for a sense of escaping civilization and finding serenity in nature.	Families and groups are attracted to and often establish enduring ties to the area. Visitors enjoy opportunities to share their Tuolumne experiences as part of the high-country base camp community.	Families and groups are attracted to and often establish enduring ties to the area. Visitors enjoy social opportunities to share their Tuolumne experiences as part of the historical traditions of the area.
Enjoyment of natural and cultural resources may be through self-discovery or may be augmented by guided interpretive walks and/or a moderate amount of on-site interpretation.	Enjoyment of natural and cultural resources through self-discovery is augmented by a full range of interpretive programs	Same as High-Country Base Camp
Recreational activities typically include day hiking and walking, horseback riding, nature study, rock climbing, fishing, swimming, and wading.	Recreational activities typically include motor and bicycle touring, staging for backpacking and stock packing trips into the wilderness, picnicking or camping in designated areas with amenities, day hiking or walking, nature study, rock climbing, fishing, swimming, and wading.	Recreational activities depend upon the historic landscape (for example, whether or not it is roadless) and may include backpacking, day hiking or walking, horseback riding, nature study, rock climbing, fishing, swimming and wading, motor touring, bicycle touring, and camping.

	Remote Wilderness	Day-Use Wilderness
Management Toolbox		
Appropriate Types and Levels of Ma	nagement	
General Resource Management	Inventory, documentation, and monitoring of cultural and natural resources to ensure timely management response to prevent resource degradation	Same as Remote Wilderness
Management of Natural Resources	Ecological restoration and restoration of fi re regimes to the extent necessary to restore and prevent degradation of wilderness character Scientific activities to improve wilderness stewardship, better understand the role of wilderness in the larger social and ecological landscape, and develop benchmark or reference understanding about ecological systems and their components Consultation with appropriate agencies that may have jurisdiction, such as the U.S. Fish and Wildlife Service	Same as Remote Wilderness
Management of Cultural Resources All treatment of archeological and historic resources must be in accordance with the Secretary of the Interior's Guidelines.	Preservation of resources unless removal is necessary to restore and/or protect critical ecosystem function, in which case appropriate treatment measures are implemented in accordance with law and policy.  Consultation with appropriate groups, including associated American Indian tribes  Provision of areas for American Indian traditional cultural practices in consultation with culturally associated tribes  Consideration of sites with unique features or artifacts, or representative and intact deposits, for scientific study	Same as Remote Wilderness
Management of Visitor Activities	Rerouting trails and eliminating social trails Infrequent interactions with park staff Educating visitors about appropriate use behaviors (e.g., Leave No Trace Ethics) Visitor use dispersal measures (e.g., dispersed camping) Group size limits Temporary area or site closures Permit or reservation system to restrict overnight access Sanctions used to address noncompliant behaviors (e.g., citation issued for not having a wilderness permit)	Rerouting trails and eliminating social trails Occasional interactions with park staff at areas frequented by visitors Educating visitors on appropriate use behaviors (e.g., Leave No Trace Ethics) Visitor use consolidation measures (e.g., designated campsites) Group size limits Temporary area or site closures Permit or reservation system to restrict overnight access Sanctions used to address noncompliant behaviors (e.g., citation issued for not having a wilder-ness permit)

High-Country Experience	High-Country Base Camp	Historic Tuolumne
Same as Remote Wilderness	Same as Remote Wilderness	Same as Remote Wilderness
Relatively intensive management, using the best available technology, to restore biological and physical components of natural systems that have been impacted by human disturbance (such as the introduction of invasive species; the contamination of air, water, and soil; changes to hydrologic patterns and sediment transport; and the disruption of natural processes)  Localized manipulation to maintain features or processes that cannot be sustained naturally because of an ongoing disruption associated with the desired visitor experience  Scientific activities (including inventories, monitoring, and research) to develop the knowledge and tools needed to sustain river and park values Consultation with appropriate agencies that may have jurisdiction, such as the U.S. Fish and Wildlife Service	Control of ecological processes, such as fi re, to protect human life and property.  Relatively intensive manipulation to restore and maintain features or processes that cannot be sustained naturally because of an ongoing disruption associated with concentrated human activity or infrastructure  Scientific activities (including inventories, monitoring, and research) to develop the knowledge and tools needed to sustain river and park values.  Consultation with appropriate agencies that may have jurisdiction, such as the U.S. Fish and Wildlife Service	Control of ecological processes, such as fi re, to protect human life and property Possible management of ecological communities to preserve contributing features of the cultural landscape Relatively intensive manipulation to restore and maintain features or processes that cannot be sustained naturally because of an ongoing disruption associated with concentrated human activity or infrastructure. Scientific activities (including inventories, monitoring, and research) to develop the knowledge and tools needed to sustain river and values Consultation with appropriate agencies that may have jurisdiction, such as the U.S. Fish and Wildlife Service
Similar to Remote Wilderness, with the addition of Consideration of on-site interpretation of historic or archeological resources or American Indian traditional cultural practices	Preservation and, where appropriate, interpretation of resources unless removal is necessary to achieve a visitor experience goal in which case appropriate treatment measures are implemented in accordance with law and policy.  Rehabilitation of historic structures or sites for adaptive use  Consultation with appropriate groups, including associated American Indian tribes  Provision of areas for American Indian traditional cultural practices in consultation with culturally associated tribes  Consideration of sites with unique features or artifacts, or representative and intact deposits, for scientific study	Preservation, restoration, and rehabilitation of the cultural landscape, including historic districts, structures, and sites Removal of noncontributing elements from the historic landscape if recommended through the planning process Scenic vista management Preservation and interpretation, where appropriate, of archeological resources Consultation with appropriate groups, including associated American Indian tribes Provision of areas for American Indian traditional cultural practices in consultation with culturally associated tribes Consideration of sites with unique features or artifacts, or representative and intact deposits, for scientific study
Occasional interactions with park staff, primarily along trails and in locations of concentrated use Use of direct communication to inform visitors of appropriate use behaviors (e.g., signs posting use regulations)  Temporary area or site closures  Sanctions used to address noncompliant behaviors (e.g., citation issued for fishing without a license)	Frequent interactions with park staff Use of direct communication to inform visitors of appropriate use behaviors (e.g., signs posting use regulations) Sanctions used to address noncompliant behaviors (e.g., citation issued for trafficviolation) Temporary area or site closures Reservation system for overnight accommodations	Same as High-Country Base Camp

	Remote Wilderness	Day-Use Wilderness
Management Toolbox		
Appropriate Type and Levels of Acc	ess and Facilities	
Access	Backpacking and stock packing Cross-country skiing and snowshoeing in winter	Day hiking Backpacking and stock packing Cross-country skiing and snowshoeing in winter
Facilities All new facilities outside designated wilderness incorporate universal design concepts, including accessibility for people with disabilities.	Minimal facilities necessary to protect river values and resources, preserve wilderness character, and provide for basic visitor safety, e.g., Unpaved trails Bridges Directional signs at trail junctions	Same as Remote Wilderness
	The following facilities would not be considered appropriate. Under this prescription there would be no: Roads or paved trails Support facilities such as ranger stations, utilities, campgrounds, overnight facilities Interpretive signs or exhibits	Same as Remote Wilderness

High-Country Experience	High-Country Base Camp	Historic Tuolumne
Walking, hiking, horseback riding, stock packing	Vehicle access Walking Bicycling	Walking Possible vehicle access, depending on the historic landscape
Minimal facilities necessary to support protection and visitor enjoyment of natural and cultural resources, e.g., Well-marked unpaved trails, with designated trailheads with directional and informational signs, connecting areas of interest Bridges Minimal unpaved service roads for administrative use Interpretive wayside exhibits Waterless toilet, if needed to protect water quality Boardwalk Fencing Utility corridors	Moderate amount of facilities necessary to meet the visitor experience goals and to support area administration while protecting natural and cultural resources, e.g., Paved roads with turnouts and parking areas Bus stops Bike paths Vehicle and foot bridges Paved and unpaved trails, designated trailheads with informational signs, connecting areas of interest Visitor orientation and interpretive facilities Ample signing Boardwalk Fencing Picnic areas and campgrounds Lodging and food service facilities Fuel station Stable Utilities: Electric power Domestic water and sewer Trash removal Communications systems Administrative facilities: Offi ces Maintenance facilities Employee housing Stable	Historic structures Minimal new facilities necessary to support visitor enjoyment of the historic landscape while protect- ing natural and cultural resources, e.g., Paved and unpaved trails, designated trailheads with informational signs, connecting areas of interest Interpretive wayside exhibits Toilets Fencing Utilities: Electric power Domestic water and sewer Trash removal Communications systems
The following facilities would not be considered appropriate. Under this prescription there would be no: Roads, other than unpaved service roads Paved trails Overnight lodging, camping, or food service Interpretive structures Administrative facilities	The following facilities would not be considered appropriate. Under this prescription there would be no:  Level of development that would change the overall natural character of the area	The following facilities would not be considered appropriate. Under this prescription there would be no:  New structures that are not compatible with the historic landscape character



# Preliminary Alternative Concepts

### Concept 1

### VERVIEW

Concept 1 would protect and enhance river values by maximizing the amount of the Tuolumne River corridor managed as wilderness and enhancing opportunities for wilderness stewardship and enjoyment. It would

- Maximize the protection of wilderness values, including natural ecosystem function and opportunities for primitive, unconfined recreation, by extending wilderness management beyond designated wilderness, to include much of Tuolumne Meadows.
- Provide a wilderness staging area and center for interpretation/education at Tuolumne Meadows and provide for the continued use of the Glen Aulin High Sierra Camp.

## **MANAGEMENT ZONING**

The rationale for management zoning would be as follows:

- To maximize the protection of wilderness values throughout the river corridor, the Remote Wilderness or Day-Use Wilderness Zones would be applied to all congressionally designated wilderness and also to much of Tuolumne Meadows.
- To allow for a staging area for wilderness excursions and facility-based interpretive/educational programs, the High Country Base Camp zone would be applied to upland areas on the south side of Tioga Road at Tuolumne Meadows and to upland areas on the north side of Tuolumne Meadows. This zone would also be

applied to the Glen Aulin High Sierra Camp and to the entire Tioga Road corridor to allow for road maintenance.

To allow for continued administrative use and enjoyment by visitors taking short hikes or walks, the High Country Experience zone would be applied to the O'Shaughnessy Dam administrative area outside of designated wilderness.

# GENERAL GUIDANCE FOR TUOLUMNE MEADOWS

The staging area at Tuolumne Meadows would be intended to encourage and support long or short excursions into the wilderness. Enhanced opportunities for primitive, unconfined recreation would be supplemented by a full range of interpretive programs. Visitors of varying ages and abilities could enjoy spectacular scenic vistas of the High Sierra, participate in interpretive programs, or explore the river, the meadow, and the surrounding uplands on day walks or hikes.

Under this concept, amenities would be few. Opportunities for camping would be provided, but lodging and food service would not be available. Wilderness character would be restored to previously developed areas (for example, areas currently occupied by the A loop of the Tuolumne Meadows Campground and the wastewater treatment ponds). These facilities might be replaced in more resilient areas south of Tioga Road. The High-Country Base Camp zone would be large enough to allow for flexibility in determining the best site design (to be accomplished by the upcoming Tuolumne Meadows

Plan); however, any new or relocated facilities would occupy only a portion of the zone.

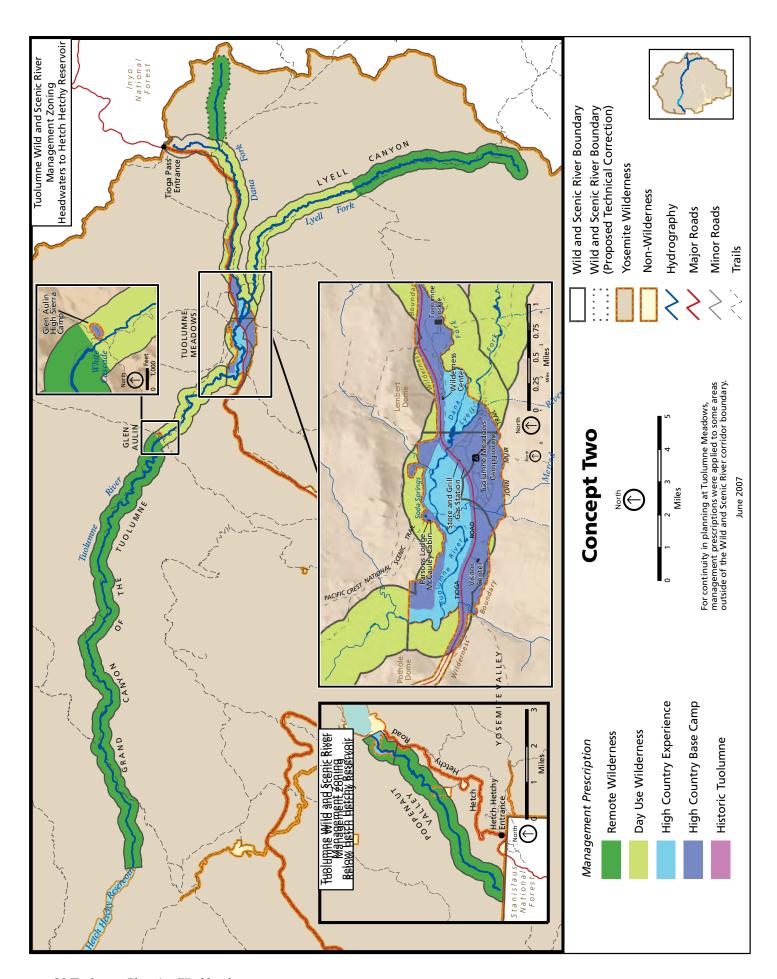
Within the Day-Use Wilderness zone, Parsons Lodge and the Soda Springs Complex would be preserved and interpreted as significant cultural resources; however, the administrative road leading to the structures would be removed, as would all utilities. Other historic buildings in the High-Country Base Camp zone could be retained, rehabilitated for modern uses, or removed.

# **GENERAL GUIDANCE FOR GLEN AULIN**

Under this concept, existing uses of both the High Sierra Camp and the nearby backpacker campground would continue, with management necessary to ensure that impacts remained at or below the levels that existed at the time of the passage of the 1984 California Wilderness Act. New facilities would be limited to those necessary to mitigate impacts on resources. The Glen Aulin High Sierra Camp is located on land that is congressionally designated as a potential wilderness addition. The future continuation of all High Sierra Camps will be determined during planning for the update to the Wilderness Management Plan.

# IMPLICATIONS FOR VISITOR USE LEVELS

The types and levels of use resulting from this alternative would be largely associated with those expected in designated wilderness, where self-reliance, nonmechanized access, and opportunities for solitude are central to the experience.



### Concept 2

### OVERVIEW

Concept 2 would protect and enhance river values by managing most of the river corridor as wilderness and managing nonwilderness areas to maximize the diversity of opportunities for visitor experiences. It would

- Preserve and sustain the wilderness values, including natural ecosystem function and opportunities for primitive, unconfined recreation, of more than 90 percent of the river corridor.
- Maximize the diversity of day and overnight opportunities for visitors of varying ages and abilities to experience the Tuolumne Meadows area, and provide for continued use of the Glen Aulin High Sierra Camp.
- Provide for potentially intensive ecological restoration at Tuolumne Meadows and enhance opportunities for its enjoyment as a largely undisturbed natural area.

## MANAGEMENT ZONING

The rationale for management zoning would be as follows:

- To protect and enhance wilderness values in the more than 90 percent of the river corridor that is included in congressionally designated wilderness, the Remote Wilderness or Day-Use Wilderness zones would be applied to those areas.
- To provide for restoration and enjoyment of Tuolumne Meadows as a largely undisturbed natural area, the High Country Experience zone would be applied to all of the meadows north of Tioga Road and around the confluence of the Dana and Lyell Forks. This zoning would also be applied to the O'Shaughnessy Dam administrative area to allow for

continued administrative use and enjoyment by visitors taking short hikes or walks.

• To maximize opportunities for a diversity of day and overnight experiences at Tuolumne Meadows and Glen Aulin, the High-Country Base Camp zone would be applied to much of the area outside designated wilderness south of Tioga Road (with the exception of the meadow area around the confluence of the Dana and Lyell Forks), the upland areas outside designated wilderness north of Tioga Road, and the Glen Aulin High Sierra Camp. This zone would also be applied to the entire Tioga Road corridor to allow for road maintenance.

# GENERAL GUIDANCE FOR TUOLUMNE MEADOWS

Visitors could enjoy a diversity of opportunities to experience the greater Tuolumne Meadows area, facilitated by interpretive and educational programs and amenities such as hardened trails (which could accommodate wheelchair and/or bicycle use as well as pedestrians), picnic areas, campgrounds, lodging, and limited food service. All facilities would be located in areas of existing development or in upland areas. The extensive riparian/meadow complex at Tuolumne Meadows would be protected as a largely undisturbed natural area.

The intent of this concept would be to engage visitors of various ages and abilities in exploration of the river and meadows, with no increase in indoor visitor service facilities, such as lodging or food service, over what currently exists. Visitor services would generally be located south of Tioga Road in more resilient upland areas away from the river. The north side of the river would be managed for day use only, possibly with picnic areas and hardened trails.

The High-Country Base Camp zone at Tuolumne Meadows would be large enough to allow for flexibility in determining the best site design (to be accomplished by the upcoming Tuolumne Meadows Plan). Facilities might be rearranged; however, whether they were consolidated or dispersed, they would occupy only a portion of the zone, which would remain a predominantly natural area.

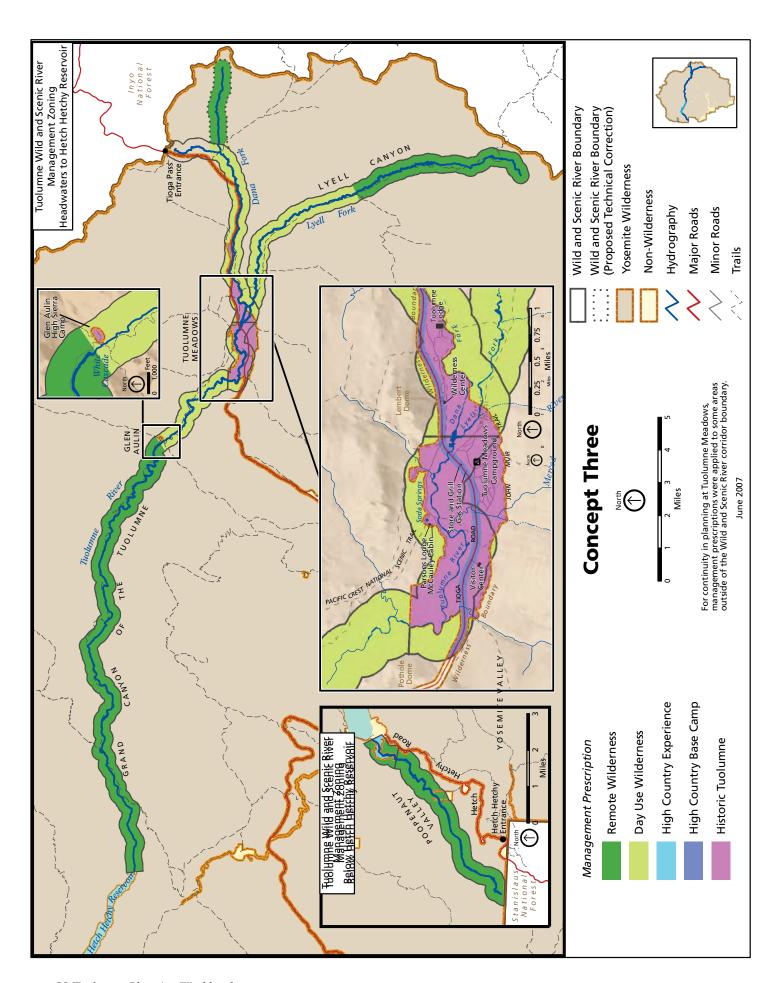
Parsons Lodge and the Soda Springs Complex would be preserved and interpreted as a significant cultural resource. Other historic buildings could be retained, rehabilitated for modern uses, or removed.

# **GENERAL GUIDANCE FOR GLEN AULIN**

Existing uses of both the High Sierra Camp and the nearby backpacker campground would continue, with management as necessary to ensure that impacts remained at or below the levels that existed at the time of the passage of the 1984 California Wilderness Act. New facilities would be limited to those necessary to mitigate impacts on resources. The Glen Aulin High Sierra Camp is located on land that is congressionally designated as a potential wilderness addition. The future continuation of all High Sierra Camps will be determined during planning for the update to the Wilderness Management Plan.

# IMPLICATIONS FOR VISITOR USE LEVELS

As prime High Sierra destinations for backcountry travelers, Tuolumne Meadows and Glen Aulin would be expected to accommodate concentrations of visitor use. Commensurate use levels would be expected to be relatively high, supported by increased flexibility for resource management activities and facility development to protect resources at those locations.



### Concept 3

### OVERVIEW

Concept 3 would protect and enhance river values by managing most of the river corridor as wilderness and maintaining the historic character and traditions of Tuolumne Meadows and Glen Aulin. It would

- Preserve and sustain the wilderness values, including natural ecosystem function and opportunities for primitive, unconfined recreation, of more than 90 percent of the river corridor.
- Ensure the perpetuation of the historic character of Tuolumne Meadows and Glen Aulin, and celebrate the layering of human experiences over time that have contributed significantly to the way Americans today think about conservation, wilderness, and recreation.
- Provide for a diversity of day and overnight opportunities for visitors of varying ages and abilities to experience the Tuolumne Meadows area, giving preeminent consideration to the importance of the historic landscape to the deep personal connections established by generations of visitors.

## **MANAGEMENT ZONING**

The rationale for management zoning would be as follows:

- To protect and enhance wilderness values in the more than 90 percent of the river corridor that is included in congressionally designated wilderness, the Remote Wilderness or Day-Use Wilderness zones would be applied to those areas.
- To ensure the perpetuation of the historic landscape character and its importance to the deep personal connections established by generations of visitors, the Historic Tuolumne zone would be applied to all

of the Tuolumne Meadows area outside designated wilderness and to the Glen Aulin High Sierra Camp. The Historic Tuolumne zone boundary in Tuolumne Meadows would correspond to the recently nominated Tuolumne Meadows Historic District, which is currently under review by the park superintendent and the state historic preservation officer and expected to become recognized within the near future.

- To allow for the maintenance of the Tioga Road, the High Country Base Camp zone would be applied to the Tioga Road corridor.
- To allow for continued administrative use and enjoyment by visitors taking short hikes or walks, the High Country Experience zone would be applied to the O'Shaughnessy Dam administrative area.

# GENERAL GUIDANCE FOR TUOLUMNE MEADOWS

The historic landscape would be preserved or rehabilitated to provide interpretive and educational programs and to support campgrounds, lodging, food service, and park operations in a historic setting that visitors would find little changed over time. Families and groups with strong traditional ties to the area could share similar experiences with future generations. Historic buildings and other contributing landscape features, including spatial organization, circulation, views, and historic vegetation, would be preserved, while those that did not contribute to the historic character of the landscape could be considered for removal.

A full range of educational and interpretive programs would celebrate the rich layering of human and natural history in this area. Visitor enjoyment would be facilitated by amenities such as hardened trails (which could accommodate wheelchair and/or bicycle use as well as

pedestrians), picnic areas, campgrounds, lodging, and food service. All facilities would be located in areas of existing development or in resilient upland areas. Any new facilities would be compatible with the distinctive rustic architecture of the historic landscape and the predominantly natural setting.

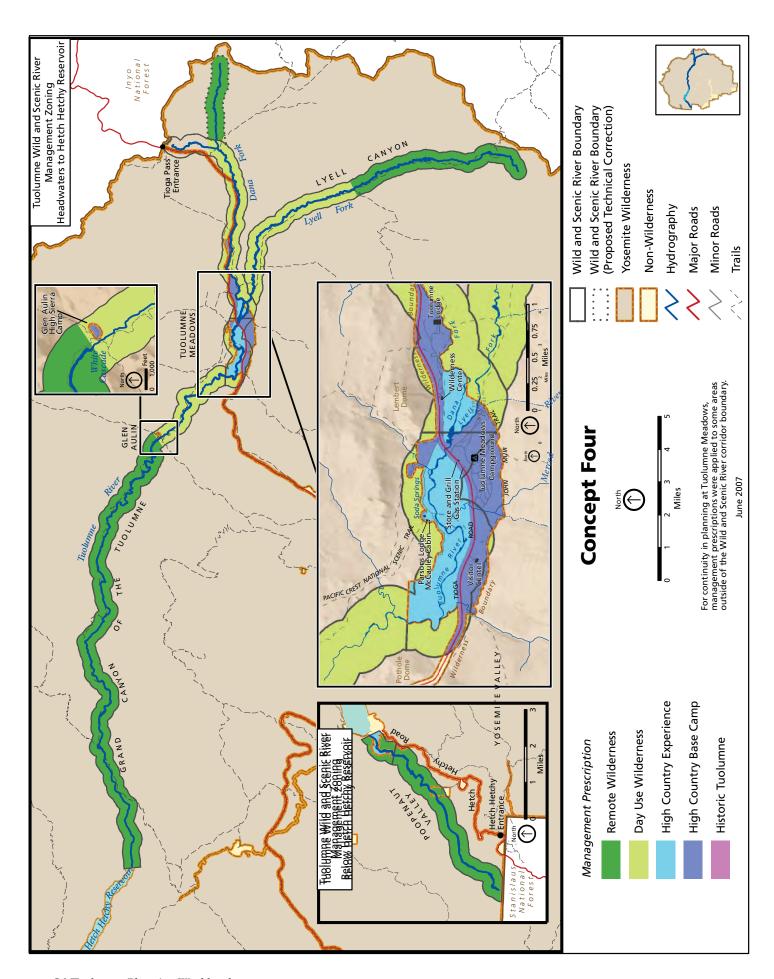
The extensive riparian/meadow complex at Tuolumne Meadows would be protected as a significant part of the historic district. Development would be restricted to the minimal facilities necessary to support resource protection while allowing for visitor enjoyment (for example, unpaved trails, bridges, or fencing). Vista management would ensure the perpetuation of the expansive meadow vistas that are critical elements of the historic character of the landscape.

# GENERAL GUIDANCE FOR GLEN AULIN

The Glen Aulin High Sierra Camp would be managed to preserve and interpret its historic character. The historic architecture of the camp structures would be maintained, and new structures would generally be discouraged unless their purpose was to protect or enhance natural ecosystem processes. The Glen Aulin High Sierra Camp is located on land that is congressionally designated as a potential wilderness addition. The future continuation of all High Sierra Camps will be determined during planning for the update to the Wilderness Management Plan.

# MPLICATIONS FOR VISITOR USE LEVELS

Perpetuation of the historic character of the Tuolumne Meadows and Glen Aulin areas would limit options for future site redesign or redevelopment, which could affect commensurate use levels.



### Concept 4

### OVERVIEW

Concept 4 would protect and enhance river values by managing most of the river corridor as wilderness and managing nonwilderness areas to maximize the understanding, restoration, and enjoyment of naturally functioning ecosystems. It would

- Preserve and sustain the wilderness values, including natural ecosystem function and opportunities for primitive, unconfined recreation, of more than 90 percent of the river corridor.
- Maximize support for scientific research and possibly intensive management to restore natural ecosystem function at Tuolumne Meadows, and enhance opportunities for its enjoyment as a largely undisturbed natural area.
- Support some day and overnight opportunities for visitors of varying ages and abilities to experience the Tuolumne Meadows area, and provide for continued use at the Glen Aulin High Sierra Camp.

### **MANAGEMENT ZONING**

The rationale for management zoning would be as follows:

- To protect and enhance wilderness values in the more than 90 percent of the river corridor that is included in congressionally designated wilderness, the Remote Wilderness or Day-Use Wilderness zones would be applied to those areas.
- of Tuolumne Meadows and its enjoyment as a largely undisturbed natural area, the High-Country Experience zone would be applied to all of the area north of the Tioga Road except the upland area near Lembert Dome, and to the area around the confluence of the Dana and Lyell Forks, extending southward to the

south shore of the Lyell Fork (currently occupied by campground loop A). This zoning would also be applied to the O'Shaughnessy Dam administrative area, to allow for continued administrative use and enjoyment by visitors taking short hikes or walks.

• To allow for the facilities needed to support increased research and resource management activities and some diversity of day and overnight opportunities for visitors to enjoy the Tuolumne Meadows area, the High-Country Base Camp zone would be applied to the upland areas on the south side of Tioga Road, one upland area on the north side of Tuolumne Meadows, and the Tuolumne Lodge area. This zone would also be applied to the Glen Aulin High Sierra Camp and to the entire Tioga Road corridor to allow for road maintenance.

# GENERAL GUIDANCE FOR TUOLUMNE MEADOWS

Scientific and management activities to study and improve ecosystem function would be supported at Tuolumne Meadows, and intensive restoration management would be employed as needed to prevent degradation of natural and physical processes. Visitors would be invited to learn about ongoing research and management through interpretive programs.

Although some diversity of opportunities for day and overnight use would be provided, the emphasis would be on opportunities for visitors to wander along the river and through the meadows either on or off unpaved trails, experiencing them as largely natural and serene places. There would be fewer opportunities for universal access or day use facilitated by hardened trails, picnic areas, or interpretive facilities compared to concept 2. Campgrounds and some lodging and food service would facilitate extended stays, but they might be reduced from levels accommodated in concepts 2 or 3, depending upon the capability of the High-Country

Base Camp Zone to accommodate the facilities needed to support increased research and resource management activities as well as visitor use.

All facilities would be consolidated in resilient upland areas, decreasing the overall footprint of development compared to what currently exists. Campsites and lodge structures would be pulled back from the rivers' edges. Site design and redevelopment would make the greatest use possible of green technologies, making Tuolumne Meadows a model for innovations in sustainable use for the national park system. Parsons Lodge and the Soda Springs Complex would be preserved and interpreted as significant cultural resources. Other historic buildings could be retained, rehabilitated for modern uses, or removed.

# **GENERAL GUIDANCE FOR GLEN AULIN**

Under this concept, existing uses of both the High Sierra Camp and the nearby backpacker campground would continue, with management necessary to ensure that impacts remained at or below the levels that existed at the time of the passage of the 1984 California Wilderness Act. New facilities would be limited to those necessary to mitigate impacts on resources. The Glen Aulin High Sierra Camp is located on land that is congressionally designated as a potential wilderness addition. The future continuation of all High Sierra Camps will be determined during planning for the update to the Wilderness Management Plan.

# **MPLICATIONS FOR VISITOR USE LEVELS**

The types and levels of use resulting from this concept would be consistent with the priority on research and resource management activities. Less area would be zoned for hardened surfaces and structures, compared to concepts 2 and 3, and the areas that were zoned for those facilities would be needed to support increased administrative activities, as well as visitor use.







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