



Tuolumne Planning Workbook



Message from the Superintendent

Dear Friends of the Tuolumne River,

Much has happened in the past year, since we asked for your comments in the 2007 Tuolumne Planning Workbook. The most recent event was the Ninth Circuit Court of Appeals ruling regard-

ing the Merced River Plan, which is another comprehensive plan for a wild and scenic river that the park staff is conducting simultaneously with the Tuolumne River Plan. This ruling provided additional guidance for how to conduct wild and scenic river planning. While the case pertained to the Merced River, the court's direction is being applied to the Tuolumne Wild and Scenic River as well. We believe that the process already underway when the court ruling occurred positioned us well to complete a Tuolumne River Plan that will satisfy the court's concerns about establishing user capacities for the wild and scenic river while evaluating site-specific actions at primary use areas.

A year ago we asked your help in identifying and choosing among the reasonable alternative ways of managing the Tuolumne River in Yosemite National Park. Many of you shared your ideas about the strengths and weaknesses of four broad management approaches suggested by the public involvement and analysis we had conducted to date. Based on your responses and subsequent consideration and discussion by the planning team, those preliminary approaches have now been revised into five alternative management zoning plans, including a preferred alternative, which are now available for your further review and comment.

We hope you will join us now in considering this latest set of management zoning alternatives, how they would affect user capacities within the Tuolumne Wild and Scenic River corridor,

and how they might be translated into site plans for Tuolumne Meadows.

For this workbook the planning team has drafted four preliminary site plan concepts for Tuolumne Meadows—one for each of the four original management zoning alternatives. These concepts explore how functions and facilities might be organized and sited at Tuolumne Meadows to help carry out the intents of the management zoning alternatives. While the planning team has developed a fifth, preferred management zoning alternative for the river, a preferred site plan concept for Tuolumne Meadows has not yet been developed. Your comments about the advantages and disadvantages of the site plan concepts presented in this workbook will provide important information for that more detailed planning. We also invite you to draft your own preferred alternative for how functions and facilities might be organized and sited in Tuolumne Meadows.

This coming fall the planning team will consider your comments and develop a site plan concept for the preferred alternative. Once we are satisfied that we have a full range of reasonable alternatives, we will complete the Draft Tuolumne River Plan/EIS, which is scheduled for release in summer 2009.

For many people, we are entering the most meaningful stage of planning. Thank you for helping us build a strong foundation for the decisions we will make about future opportunities to experience and enjoy what is outstandingly remarkable about the Tuolumne River in Yosemite National Park.

Sincerely,

Michael J. Tollefson

The Purpose of this Planning Workbook

WHEN THE PLANNING FOR THE TUOLUMNE RIVER BEGAN IN 2005, THE National Park Service knew that it would be a complex, multiyear effort. The planning team was determined not to let a summer season go by without presenting a detailed update on the plan's progress to the culturally associated Indian tribes, interested members of the public, and other stakeholders—and to provide opportunities for their input along the way. The purpose of this 2008 Tuolumne Planning Workbook is twofold: (1) to provide a progress report on the planning process, and (2) to give people an opportunity to review and comment on the work to date. This 2008 Tuolumne Planning Workbook revises and builds upon the information published in the July 2007 Tuolumne Planning Workbook. If you do not have a copy of the 2007 workbook, you may access it on line at www.nps.gov/yose/parkmgmt/upload/trpworkbook-web.pdf.

The 2007 and 2008 workbooks consolidate background information, planning tools, and preliminary alternatives for managing the Tuolumne River corridor. They represent thousands of hours spent since 2005 by the planning team, park staff, culturally associated Indian tribes, other agencies, gateway community representatives, and interested members of the public.

As part of the continuing commitment to make public involvement an integral part of every step of Tuolumne River planning, this workbook includes a worksheet and mail-back comment form to gather your ideas and concerns about the current step: the consideration of specific programs and facilities for Tuolumne Meadows. The NPS Tuolumne planning team has begun to develop preliminary site plan concepts for the Tuolumne Meadows area; however, further discussion and analysis are needed before these concepts can be fully developed and a preferred alternative selected. This summer will provide the opportunity to hear from you before the planning team takes that step. All the alternatives will be fully analyzed and formally reviewed in the upcoming *Draft Tuolumne Wild and Scenic River Comprehensive Management Plan/Environmental Impact Statement* (Draft Tuolumne River Plan/EIS) scheduled for release in summer 2009.

How to Comment

- Fill out the comment form included at the back of this workbook and mail it or fax it to the addresses shown in the box to the right.
- Write a letter and submit it by e-mail, mail, or fax.
 - Attend the Planner-for-a-Day Workshop to be scheduled for this summer. Look for postings in Tuolumne Meadows or send us your email address to receive information through the Yosemite electronic newsletter.

COMMENTS ARE DUE SEPTEMBER 15



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

Yosemite National Park

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

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209/379-1294

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yose_planning@nps.gov

Website

www.nps.gov/yose/parkmgmt/trp.htm

The Tuolumne River planning website is continuously updated to contain the most current versions of all the plan elements as they evolve through the planning process. Information published in the 2007 and 2008 Tuolumne Planning Workbooks may be superseded by updated information posted to the website.

This workbook is organized into the following sections:

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Tuolumne River
Planning

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Progress
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Tuolumne River
Management
Alternatives,
including
Preliminary Site
Plan Concepts
for Tuolumne
Meadows

Between
Pages 30-31:
Comment Form

Cover photo: Scoured granite cascade in the Tuolumne River above Hetch Hetchy.

All photos in this workbook are by Kristina Rylands except where otherwise noted.



Bridge along trail to Glen Aulin.

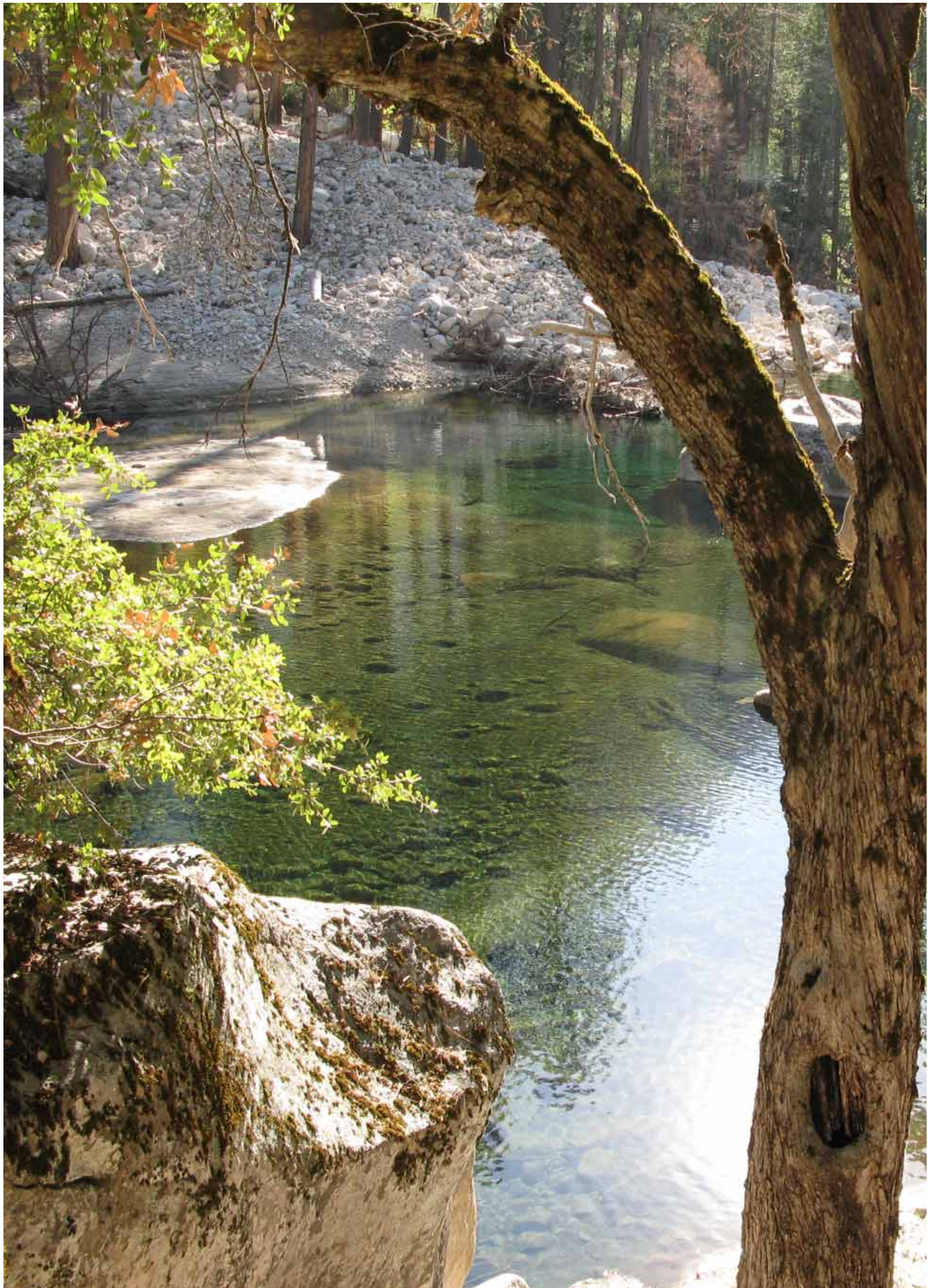


PHOTO BY RON STORK

Overview of Tuolumne River Planning

IN 1984 THE TUOLUMNE WAS DESIGNATED BY CONGRESS as a national wild and scenic river. In compliance with the Wild and Scenic Rivers Act (WSRA), the National Park Service must prepare a comprehensive management plan outlining how it will protect the river’s free-flowing condition and the values that qualified it for designation. The Draft Tuolumne River Plan/EIS will rigorously analyze the range of reasonable approaches for managing the river. When completed, the Tuolumne River Plan will provide long-term guidance for the protection and enhancement of the 54 miles of the Tuolumne Wild and Scenic River in Yosemite National Park.

Planning Process Update

The National Park Service had originally designed Tuolumne River planning as a process containing two distinct plans: a comprehensive management plan for the Tuolumne Wild and Scenic River (Tuolumne River Plan) and an implementation plan for Tuolumne Meadows (Tuolumne Meadows Plan). To implement the management vision of the Tuolumne River Plan, the Tuolumne Meadows Plan site-planning alternatives would tier from the preferred alternative of the Tuolumne River Plan. Both of these separate plans would be analyzed together under a single environmental impact statement.

After considering the 9th Circuit Court of Appeals ruling regarding the Merced River Plan—which ruled, among other things, that “the WSRA requires a single, comprehensive plan that collectively addresses. . .both the ‘kinds’ and ‘amounts’ of permitted use”—park managers decided to expand the scope of the Tuolumne River Plan to include the level of detail that had previously been deferred to a Tuolumne Meadows Plan (the court decision can be viewed online at www.nps.gov/yose/parkmgmt/litigation.htm). Under this new approach each Tuolumne River Plan alternative will include site plans for

both Tuolumne Meadows and Glen Aulin, including specific facilities, facility capacities, and sites to be restored to natural conditions. No separate Tuolumne Meadows Plan will be needed or prepared under this revised process, as this level of detail will be incorporated into the range of Tuolumne River Plan alternatives.

These changes to the planning process will not affect the planning schedule for the Tuolumne River. The Draft Tuolumne River Plan/EIS is still on schedule to be released for review and comment in summer 2009.

Contents of the Tuolumne River Plan

The Tuolumne River Plan will address all the plan elements required by the Wild and Scenic Rivers Act. Detailed information about the river corridor boundaries, classifications, and outstandingly remarkable values is included in the 2007 Tuolumne Planning Workbook and is also posted to the park’s website. Additional information about the work underway to zone the corridor and address user capacity is included in this 2008 workbook. Each of the major elements of the Tuolumne River Plan is summarized below.

RIVER CORRIDOR BOUNDARIES AND CLASSIFICATIONS
The wild and scenic river corridor extends ¼ mile on either side of the river and has been divided into seven segments based on the level of development at the time of designation (wild segments are undeveloped; scenic segments may be accessible in places by road). The segments illustrated on the map (next page) reflect a technical correction that was made as part of this comprehensive planning process to realign the corridor along the true headwaters of the Dana Fork. Hetch Hetchy Reservoir was excluded by Congress when it designated the Tuolumne Wild and Scenic River in 1984.

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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 program
- Determination process to protect the river’s free-flow ing condition

Facing page: Pool in the Grand Canyon of the Tuolumne River.

Overview of Tuolumne River Planning

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OUTSTANDINGLY REMARKABLE VALUES
Outstandingly remarkable values are defined by the Wild and Scenic Rivers Act as the characteristics that make a river worthy of special protection. These values drive the entire planning process, as all actions and considerations contained in the plan must be consistent with the Wild and Scenic Rivers Act’s mandate to protect and enhance river values. To be considered outstandingly remarkable, a value must meet two criteria: (1) it must be river-related or river-dependent; and (2) it must be unique, rare, or exemplary in a regional or national context. The act states that outstandingly remarkable values can include scenery, recreation, fish and wildlife, geology, history, culture, and other similar values. Accurately and adequately expressing a river’s outstandingly remarkable values provides a foundation for planning and management. Congress directs that the Tuolumne River Plan must address two general goals: (1) maintain the free-flowing condition of the river and (2) protect and enhance the river’s outstandingly remarkable values.

The Tuolumne River has been determined to have the following outstandingly remarkable values:

- Exemplary ecosystems providing habitat for a remarkable diversity of species
- Some of the most extensive subalpine meadow and riparian complexes in the Sierra Nevada
- Exceptionally well-preserved evidence of glacial processes
- Exceptional water quality
- Exemplary diversity of hydrologic features
- Regionally significant archeological evidence of prehistoric travel, trade, and settlement
- Prehistoric resources important for maintaining the cultural and religious traditions of American Indian people

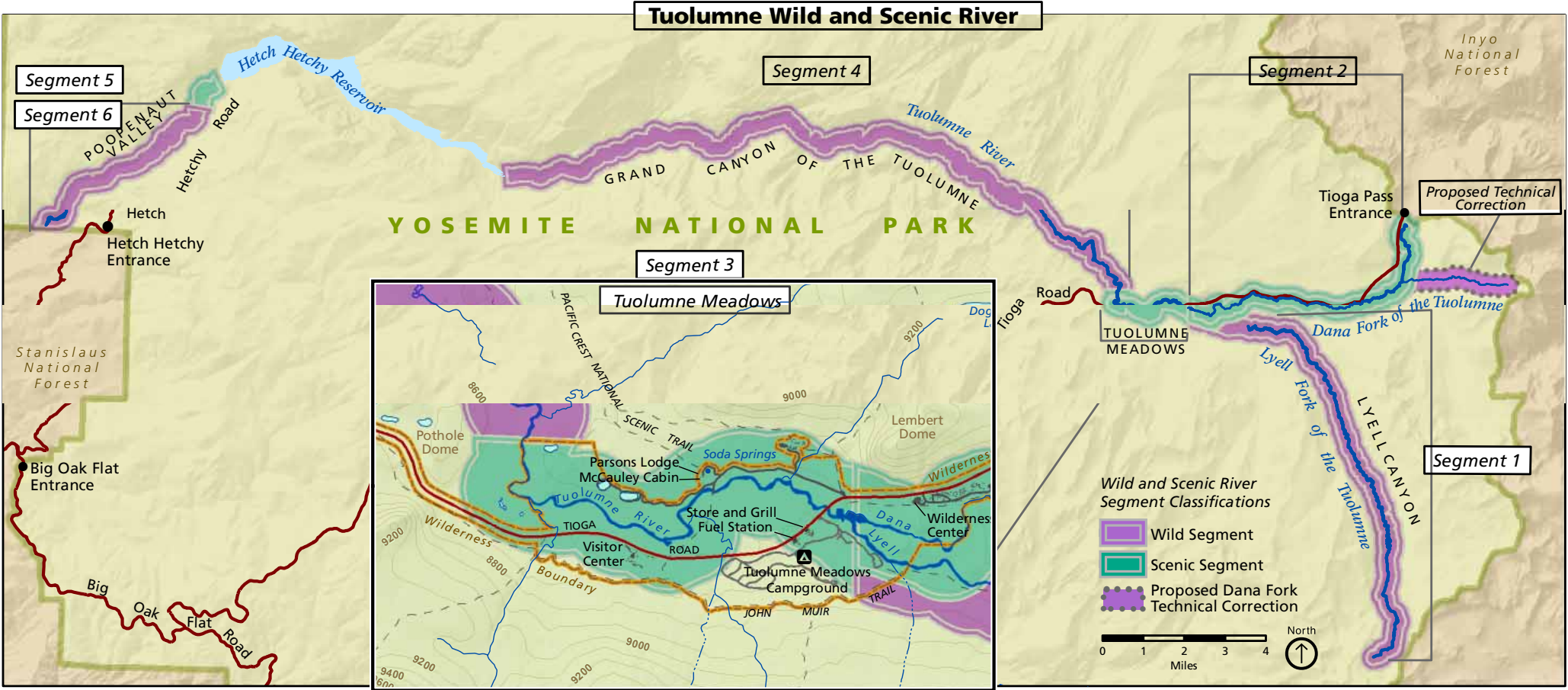
- Nationally or regionally significant evidence of historic trade, travel, recreation, and early conservation activism
- Magnificent scenery with a character unique to the Tuolumne River corridor
- Outstanding opportunities for a diversity of experiences characterized by primitive, unconfined recreation
- Outstanding recreational and educational opportunities that are easily accessible to people of various ages and abilities at Tuolumne Meadows
- Invaluable opportunities to examine natural and cultural resources with high research value

A major component of the Tuolumne River Plan will be a system of management zoning that prescribes desired conditions for these values in a manner that balances them across the river corridor.

DESIRED CONDITIONS AND MANAGEMENT ZONING
If the outstandingly remarkable values are the drivers of the river management plan, the desired conditions are the destination. They express the resource protection and visitor experience goals that the park staff will be committed to achieve. Once the plan is approved,



Tuolumne Falls.



management will focus on determining the actions needed to move from the existing to the desired conditions, then maintaining the desired conditions into the future.

Management zoning is the mechanism used by the National Park Service to map and articulate the appropriate variety of resource conditions and visitor experiences to be achieved and maintained in the different areas of a park. The Tuolumne River Plan uses this process to ensure that the entire spectrum of the river’s outstandingly remarkable values, which includes qualities that may not be wholly compatible with one another, is protected and enhanced. Different zones would place greatest emphasis on different values, with the result that the desired conditions in a certain location could favor some outstandingly remarkable values over others.

Zoning is generally a two-step process: (1) Identify a combination of resource

conditions and associated visitor experiences that complement one another (known as *management prescriptions*), and (2) apply those prescriptions to geographical locations on the map. These color-coded zones express the goals for how various areas should be managed. Different ideas about which resource conditions and visitor experiences should be emphasized in particular areas are explored through zoning alternatives.

Tuolumne planning is currently at the step of exploring management zoning alternatives and comparing their implications for user capacity, management programs, and support facilities. Information related to this step is summarized in this workbook.

DETERMINATION OF USER CAPACITY
In accordance with the Wild and Scenic Rivers Act, the Tuolumne River Plan will establish a user capacity for the river corridor in terms of visitor activities, locations, and use levels. Visitor activities

and locations will be generally directed by management zoning and refined through site planning for Tuolumne Meadows and Glen Aulin. Use levels will be derived from assessments of how much use can be accommodated without degrading the river’s outstandingly remarkable values, consistent with the sideboards established by the management zoning.

The process of determining use levels—including establishing numerical limits and the management actions required to enforce those limits—is currently underway. This work will be analyzed in the Draft Tuolumne River Plan/EIS, to be released next summer. For the purposes of this workbook, general user capacity implications have been outlined for each alternative.

SITE PLANS FOR TUOLUMNE MEADOWS AND GLEN AULIN
The Tuolumne River Plan will include specific proposals for management activities and facilities needed to achieve

the desired conditions and visitor experiences at Tuolumne Meadows and Glen Aulin. Site plan alternatives will be assessed for Tuolumne Meadows, where the range of possible experiences and associated facilities warrants this level of planning. Site planning for Glen Aulin will address levels of service and the utility upgrades needed to maintain the camp operation without unacceptable impacts to resources.

SECTION 7 DETERMINATION PROCESS
The Tuolumne River Plan will outline a process for determining whether any future proposals for water resource projects in the river corridor would be appropriate with its wild and scenic river status, in compliance with section 7 of the Wild and Scenic Rivers Act. The draft process will be reviewed with other plan elements in the Draft Tuolumne River Plan/EIS.



Progress Report: Fall 2007 to Today

PLANNING FOR THE TUOLUMNE RIVER BEGAN BY IDENTIFYING THE river's outstandingly remarkable values (ORVs), including both outstanding natural and cultural resources and outstanding opportunities for visitors to experience them. The next step was to identify the reasonable range of resource conditions and associated opportunities for visitor use and to explore different possible relationships among those values in particular locations. These steps, which resulted in a set of draft management prescriptions and preliminary management zoning maps, were documented in some detail in the July 2007 workbook. This 2008 workbook documents the steps that have been taken since that time to develop a set of five management zoning alternatives, including a preferred alternative, and to begin exploring their implications for user capacity and site planning at Tuolumne Meadows.

Continuing the timeline included in the 2007 workbook, the work that occurred in late 2007 through mid 2008 was as follows:

Discussions with the Public: Summer-Fall 2007

In keeping with the Tuolumne planning team commitment to capitalize on public involvement opportunities while the high country is accessible to the general public, the National Park Service released the 2007 Tuolumne Planning Workbook in July. This document was made available throughout Tuolumne Meadows, with perhaps the most popular distribution location being the Tuolumne Meadows Store and Grill. The purpose of the workbook was to provide interested members of the public with a progress report on the status of the plan, which was midway through a multi-year planning process. For the first time in a Yosemite planning process, public comments were sought on early versions of alternatives. Park staff asked, "Are we on the right track?" "What do you like/dislike about this preliminary range of alternatives?" "What aspects would you like to see carried over into a preferred alternative?"

Throughout the summer, team members met with tribes, the general public, gateway community groups, and also with Tuolumne staff. Tuolumne interpreters made contacts with thousands of park visitors at campfire programs and on ranger-led walks, informing them of the planning process and encouraging them to submit comments and get involved. The planning team and interested members of the public also traveled the river corridor through a series of field trips and backpack excursions that took them up the Dana Fork, up Lyell Canyon, to Glen Aulin, through the Grand Canyon of the Tuolumne, and to the river above Hetch Hetchy Reservoir. This provided a valuable opportunity to discuss river protection issues in the field. In August a public Planner-for-a-Day Workshop took place at Parsons Lodge in Tuolumne Meadows, attended by more than 75 individuals who reviewed, discussed, and commented on the preliminary alternative concepts presented in the workbook.

Upon the closing of the workbook comment period, the planning team reviewed the hundreds of mail-back forms, emails, faxes, and letters. These comments were then used to help inform revisions to management prescriptions and to the range of alternatives. All comments can be viewed on the park's website (please see the website reference in the box on page 9).

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Every step of Tuolumne River planning has been informed by intensive efforts to gather and consider the full range of tribal and public, as well as NPS manager and staff, interests and concerns. If you would like to review all of the comments submitted to date as part of the public scoping conducted in 2006 and the review of the 2007 Tuolumne Planning Workbook, you can find them on the Tuolumne River planning website at: www.nps.gov/yose/parkmgmt/trp.htm

Consultation with Culturally Associated Tribes

Maintaining traditional cultural and religious practices, and passing this knowledge to future generations, is important to the American Indian tribes who find a spiritual foundation for their culture in the land and resources that sustained them for millennia.

The National Park Service consults with culturally associated Indian tribes as part of a government-to-government relationship. Meetings with various tribal councils and an annual all tribal meeting in Yosemite provide opportunities for dialogue and information sharing.

Interested tribal members have participated in Tuolumne River planning workshops, working side-by-side with park planners to establish river values, desired conditions, and preliminary alternative concepts.

Facing page: Public workshop participants discuss concepts presented in the 2007 Tuolumne Planning Workbook.

Progress Report

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What We Heard and Changes Made: Fall-Winter 2007

Informed by the public comments and additional analysis conducted over the summer, the planning team fully developed four management zoning alternatives. Each alternative had a distinctive emphasis, primarily related to Tuolumne Meadows and Glen Aulin, characterized as follows:

Alternative 1. Manage more of the Tuolumne River as wilderness.

Alternative 2. Expand opportunities for people to discover and connect with the Tuolumne River.

Alternative 3. Celebrate the cultural heritage of the Tuolumne River.

Alternative 4. Facilitate the recovery of healthy ecological conditions in disturbed meadow and riparian areas.

As part of this step, the draft management prescriptions presented in the 2007 workbook were reevaluated. In response to public input, a new prescription, characterized as the *high-country riparian and meadow zone*, was created to describe a system of management focused on restoring the structural integrity of previously disturbed riparian and meadow areas and intensively managing visitor use to facilitate their recovery and to minimize risks of future use-related impacts. In response to public comments, two other prescriptions, *remote wilderness* and *day-use wilderness*, were combined into a single prescription, with the caveat that use levels in wilderness would increase with proximity to roads and associated increases in



Lyell Canyon and Mammoth Peak.

percentage of day users. The revised draft management prescriptions are summarized on page 13 of this workbook. The full version, which can be compared in detail to the draft prescriptions published in the 2007 workbook, has been posted to the Tuolumne River planning website.

In addition to changes made to the management prescriptions, several changes were made to the alternatives in response to public comments on the preliminary alternative concepts. For example, in response to comments requesting that the plan consider whitewater kayaking as a potential new recreational activity, this has been incorporated into alternative 2. In response to comments requesting that the plan consider the removal of various facilities, including the Glen Aulin High Sierra Camp, this has been incorporated into alternative 1.

In winter 2007 the team further refined desired conditions for each management zoning alternative and then asked *what are conditions today and how do they compare with the desired conditions?* The answers to this question helped identify the changes needed to implement each alternative. This step involved a thorough examination of resource data including (but not limited to) locations of archeological sites, floodplain and wetlands mapping, locations of rare plants, and cultural landscape inventories. This analysis was the basis for projecting implications for management activities, user capacity, and facilities in the river corridor.

The four management zoning alternatives and a fifth, preferred management zoning alternative (which combines elements from the other four) are presented on pages 14, 18, 22, 26, and 30 of this workbook.

What is a Preferred Alternative?

As part of a planning process conducted under the National Environmental Policy Act (NEPA), the agency is expected to disclose the alternative it has determined best meets its mission and the requirements under the law. This *preferred alternative* is identified and evaluated in the environmental impact statement.

Preferred Management Zoning Alternative: Winter 2007-2008

After changes were made to the alternatives in response to public and staff comments, the planning team and park managers took part in a process to identify a preferred alternative. The four management zoning alternatives were evaluated in February 2008 to identify which alternative, or which elements from two or more of the alternatives, would best fulfill the National Park Service’s mission and statutory responsibilities related to the Tuolumne River. The intent at that time was to develop a preferred zoning alternative so that a range of site planning alternatives for the Tuolumne Meadows Plan could be tiered from a single preferred Tuolumne River Plan zoning alternative. Although the Tuolumne River planning process has since been revised to develop Tuolumne Meadows site plan concepts for each of the river management zoning alternatives, the identification of a preferred management zoning alternative remains an important step. Identifying a preferred alternative in the Draft Tuolumne River Plan/EIS to be released in summer 2009 will inform the public of the direction the National Park Service is leaning, recognizing that the preferred alternative might be revised or changed as a result of further public and agency review.

The process used to identify a preferred management zoning alternative for the Tuolumne River is known as Choosing by Advantages (CBA). It is a formal value analysis method that allows multiple variables to be compared along a single scale. In preparation for this value analysis, a preliminary environmental impact assessment was conducted to identify and document the environmental impacts of the four management zoning alternatives.

Both the preliminary impact assessment and the value analysis focused on the degree to which the four alternatives would protect and enhance all the outstandingly remarkable values of the river corridor. Recognizing that there would be no differences among the alternatives in the management of the more than 90 percent of the river corridor that is congressionally designated wilderness, the relative advantages of the alternatives were evaluated for how well they would

- protect and enhance natural resources in Tuolumne Meadows
- protect and enhance cultural resources in Tuolumne Meadows

- provide quality visitor experiences and opportunities for people to connect with the Tuolumne River at Tuolumne Meadows
- improve park operational efficiency

Based on the relatively greater advantages that emerged from alternatives 3 and 4, the planning team created a fifth, preferred management zoning alternative that combined elements of those two alternatives. The preferred alternative has been characterized as

Alternative 5 (Preferred). Honor the traditions of the Tuolumne while looking to the future.

All five action alternatives, together with a no-action alternative, will be analyzed in detail in the upcoming Draft Tuolumne River Plan/EIS.

Preliminary Site Planning Concepts for Tuolumne Meadows: Spring-Summer 2008

In March and April 2008 the planning team worked with landscape architects from the National Park Service Denver Service Center to translate the range of NPS, tribal, and public interests and concerns into site plan concepts for redesigning—including restoring—specific sites within Tuolumne Meadows. The work focused on the desired conditions directed by the management zoning alternatives (which had been informed by internal and external scoping and analysis of scientific data) and how those conditions might best be achieved in terms of arranging functions and facilities at Tuolumne Meadows.

By the end of April, preliminary site plan concepts had been created for the four original management zoning alternatives; however, it was determined that more discussion and analysis would be needed before a preferred site concept could be identified for the preferred management zoning alternative. A decision was made to solicit public comments on the first four concepts and to use that information in the identification of a concept for the preferred alternative.

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West Tuolumne Meadows.

User Capacity Symposium:
February 2008

In February 2008 the National Park Service conducted a three-day Yosemite User Capacity Symposium. The purpose of the event was to further the understanding of and explore approaches to addressing user capacity in national parks and other public lands, including Yosemite National Park, by engaging public land managers, researchers, elected officials, tribes, and the general public in an open dialogue. More than 130 people from around the country participated in the event, representing these various interest groups. Of special note, more than 50 local residents attended—a testament to the local interest this topic generates. (Proceedings will be posted to the park’s website.)

During the course of the facilitated symposium, experts presented diverse viewpoints about user capacity and also real-world, on-the-ground case studies about how user capacity has been addressed across a variety of public lands. Question-and-answer sessions allowed participants to air their concerns and ask difficult questions in a public venue. Additionally, roundtable discussions allowed for members of the public and

Assignment: Due September 15

A primary purpose of this workbook is to solicit your comments about the advantages and disadvantages of the four preliminary site plan concepts created for alternatives 1-4. We also invite you to share your ideas about a site plan concept for the preferred management zoning alternative. Using the comment form at the back of this workbook, you can create your own concept of how functions and facilities might be arranged within Tuolumne Meadows, consistent with the management zoning in the preferred alternative.

other stakeholders to sit around the same table with experts and land managers to engage in more focused discussions. The final day involved field trips in Yosemite Valley led by park staff to further discuss user capacity issues as they affect Yosemite National Park.

Directly following the symposium, the Tuolumne planning team conducted a half-day Planner-for-a-Day Workshop to invite the public to help brainstorm potential indicators to be considered as part of the Tuolumne River Plan monitoring program. This work fed directly into a planning team workshop where the discussions continued. The process of identifying indicators and standards for monitoring is ongoing and will be presented as part of the Draft Tuolumne River Plan/EIS.

Next Steps

This fall the planning team will review your comments and develop a range of detailed site plans for Tuolumne Meadows and Glen Aulin to guide implementation of each of the Tuolumne River Plan management zone alternatives. In early 2009 these alternatives will be analyzed and the document will be prepared for public distribution. When completed, the Draft Tuolumne River Plan/EIS will analyze five action alternatives, each of which will include a management zoning component and a site plan component specific to Tuolumne Meadows.

Concurrent with the more detailed site planning for Tuolumne Meadows, the planning team will also consider the specific management activities and facilities needed to achieve the desired conditions for Glen Aulin. These detailed alternatives will be presented and assessed in the Draft Tuolumne River Plan/EIS.

Tuolumne River
Management Alternatives
Including Preliminary Site Plan Concepts for Tuolumne Meadows

Information Included for Each Alternative

THE FIVE ALTERNATIVES DEVELOPED for the Tuolumne River Plan are presented in this section. Each alternative contains two parts, the first encompassing the river as a whole, and the second focusing specifically on Tuolumne Meadows.


Part one describes each alternative’s distinct management story, illustrating how the river corridor would be zoned to carry out the goals for that approach. The detailed management prescription for each zone are posted on the Tuolumne River planning website and are summarized below.


Part two focuses on Tuolumne Meadows, starting with a summary of the desired conditions for that area. Depending on the alternative zoning, the desired conditions could be very similar to or very different from the existing conditions in Tuolumne Meadows. The presentation for each alternative includes a brief summary of the management actions that would be required to move from existing conditions to desired conditions. The final component of part two is a preliminary site plan concept for Tuolumne Meadows, followed by a summary of the implications for user capacity. The site plan concepts show what facilities might be provided and where they might be located. The concepts also include proposals to restore previously disturbed sites in Tuolumne Meadows.


Summary of Management Prescriptions


The following management prescriptions were used to develop the management zoning alternatives presented in this workbook. The color key pertains to the colors used on the zoning maps. Included here is a summary of each prescription, which in its full version includes detailed statements about desired conditions for natural resources, cultural resources, and visitor experiences, and the kinds and levels of management and development that would be appropriate to achieving and maintaining those conditions. The full versions of the most up-to-date prescriptions have been posted to the Tuolumne River planning website.


Summaries of the desired conditions for Tuolumne Meadows are included with the alternatives presented in this workbook and form the bases for the projections about user capacities and the preliminary site plan concepts.

 Wilderness: Areas in this zone are managed to protect wilderness values, including natural ecosystem function and opportunities for primitive, unconfined recreation. All congressionally designated wilderness must be in this zone, and areas adjacent to designated wilderness may also be included if they are under consideration for wilderness-like management as part of an alternative zoning plan.

 High-Country Riparian and Meadow: Areas in this zone are managed to preserve the ecological integrity of riparian and meadow areas outside designated wilderness to the maximum extent possible. Management of resources and visitor use may be intensive if necessary to restore and protect the integrity of the ecosystem.

 High-Country Experience: Areas in this zone are managed to allow visitors to appreciate and learn about undisturbed natural areas and cultural resources, and to enjoy dispersed, resource-based day-use recreation against a backdrop of the rugged High Sierra.

 High-Country Base Camp: Areas in this zone are managed to provide basic accommodations and services, providing opportunities for visitors to spend a few hours, stay overnight, or stage an excursion into the wilderness supported by road access, 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 reserved for resilient landscapes.

 Tuolumne Heritage: Areas in this zone are managed to protect the cultural landscape character of places where historic sites or structures are prominent and can serve as a platform for visitors to explore how the layering of human experiences over time in the Tuolumne River corridor has contributed in significant ways to the American experience. The preservation or enhancement of the integrity of archeological resources, American Indian traditional cultural properties and places, and historic sites and structures is a critical component of this prescription.

Alternative 1: Manage More of the Tuolumne River as Wilderness

ALTERNATIVE 1 WOULD MANAGE MOST NONWILDERNESS PORTIONS OF THE Tuolumne to enhance their wild character, making more of the river corridor “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.”[†] In particular, this alternative would extend wilderness-like management to significant portions of the Tuolumne Meadows area and Glen Aulin. Tuolumne Meadows would remain outside the congressionally designated wilderness but would be managed as a wild area, emphasizing the preservation of natural systems and processes while providing opportunities for primitive and unconfined recreation as articulated in the Wilderness Act. The Glen Aulin High Sierra Camp is a congressionally designated potential wilderness addition and could be added to designated wilderness.

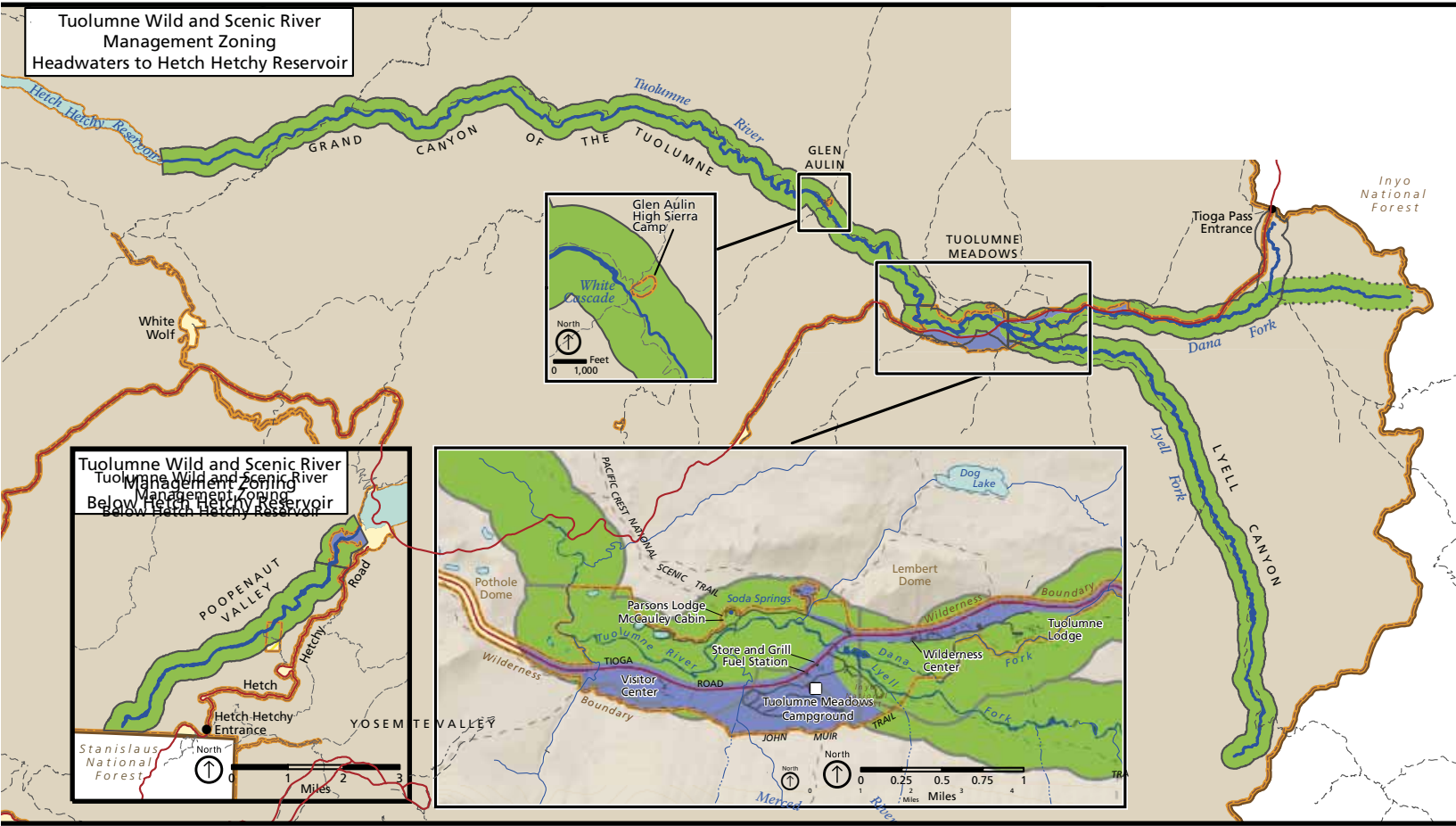
The Tuolumne Meadows area, perched at the confluence of the Lyell and Dana Forks, would be the gateway to a diversity of wilderness experiences. Visitors could enjoy the unspoiled scenery from the roadside, go for a stroll along the river, picnic on a granite slab, enjoy a day hike to a subalpine lake, or embark on a multiday backpacking or stock-packing trip. This wide spectrum of opportunities would allow people of various ages and abilities to appreciate and form a lasting connection with the Tuolumne wilderness. Wilderness staging facilities and a variety of interpretive and educational programs would be provided in upland areas beyond the periphery of the meadows; however, lodging, food service, fuel service, and commercial trail rides would no longer be available. The meadows themselves would remain wild, providing opportunities for primitive, unconfined enjoyment of the river and its surroundings.

The Glen Aulin High Sierra Camp would be removed, the site would be naturalized, and the area would be designated as wilderness.

[†] Quote from the Wilderness Act

In summary, alternative 1 would

- Preserve and sustain wilderness character, including natural ecosystem function and opportunities for primitive, unconfined recreation, in the more than 90 percent of the river corridor that is congressionally designated wilderness.
- Extend wilderness-like management beyond designated wilderness, to include much of Tuolumne Meadows and Glen Aulin.
- Provide a wilderness staging area and a focal point for High Sierra interpretation and education at Tuolumne Meadows.
- Discontinue most amenities at Tuolumne Meadows.
- Remove the Glen Aulin High Sierra Camp.



What would alternative 1 mean for Tuolumne Meadows?

Tuolumne Meadows includes the following outstandingly remarkable values:

Natural Resources

- Extensive subalpine meadow and riparian complex
- Habitat for a remarkable diversity of species
- Exceptional water quality

Cultural Resources

- Historic resources representing early conservation activism and recreation
- Archeological resources representing prehistoric travel and trade

- Traditional use sites important to American Indian people

- Easily accessible recreational and educational opportunities
- Opportunities for primitive, unconfined recreation
- Magnificent scenery

Alternative 1 zoning would commit managers to achieve the following desired conditions for these outstandingly remarkable values:

- Subalpine meadow and riparian areas would be largely intact. Natural ecological processes, such as flooding and fire, would prevail. Meadow and riparian habitats, including the mineral spring habitat at Soda Springs, would sustain a natural distribution, population composition, and interaction of native species, with no decline in special status species.
- Water quality would be excellent.
- Historic buildings and structures that are compatible with wilderness qualities would be preserved.
- The historic landscape and associated historic vistas might undergo change associated with natural changes in vegetation.
- Archeological and American Indian traditional cultural resources would retain their current level of integrity unless threatened by natural ecosystem processes or unless an impact was unavoidable to achieve the desired visitor experience.

- American Indian traditional cultural practices would be perpetuated and enhanced to the maximum extent possible while protecting wilderness qualities.
- The Tuolumne Meadows area would provide a diversity of opportunities for primitive, unconfined recreation. Because of the proximity to roads and other access points, wilderness at Tuolumne Meadows would be expected to receive a greater proportion of day use; visitors would expect more frequent encounters with others and less opportunity for solitude than in a remote wilderness setting.
- Interpretive and educational opportunities would continue, and vehicle-based camping opportunities would remain available. However, most amenities would be eliminated to encourage an experience of greater self-reliance and adventure.

Achieving the desired conditions would require the following management actions:

Natural Resource Management

- Restore previous disturbances to the ecological integrity of meadow and riparian areas using the minimum required management activities, consistent with wilderness qualities.
- Remove incompatible nonhistoric structures (notably the wastewater treatment ponds) from the wilderness zone.
- Manage visitor use to protect sensitive meadow and riparian resources.

Cultural Resource Management

- Remove many of the historic buildings and structures associated with incompatible amenities (see below). Retain Parsons Lodge and McCauley Cabin, but eliminate vehicle access and utilities.
- Manage visitor use to protect sensitive archeological resources.

Visitor Use Management

- Change the character of the visitor experience at Tuolumne Meadows to enhance opportunities for primitive, unconfined recreation. Eliminate incompatible amenities, including overnight lodging, food service, fuel service, and commercial trail rides, and restore the sites.

What might Tuolumne Meadows look like under alternative 1?

Alternative 1 Preliminary Site Plan Concept for Tuolumne Meadows:

Reduce amenities and associated development, including park operations facilities, to enhance wilderness character:

- Remove all Tuolumne Lodge facilities, including the road and employee housing; restore natural conditions; convert area to primitive day use.
- Remove campground A loop road and campsites; restore natural conditions; convert area to primitive day use.
- Remove store, grill, fuel station, mountaineering school, and concession employee tent cabins and restore part of sites to natural conditions (some part would be converted to a picnic area). Add fuel pump at ranger station site to serve administrative fuel needs.
- Remove most concessioner housing and restore natural conditions.
- Remove NPS housing from the Ranger Camp and Bug Camp housing areas; restore natural conditions. Consolidate housing for essential employees at the Road Camp housing area; relocate nonessential housing to Lee Vining or another area outside Tuolumne Meadows.
- Remove wastewater treatment ponds and restore natural conditions. Replace ponds with new facilities near wastewater treatment plant and remove sewer line that currently runs beneath meadow from plant to ponds.

Retain or improve some visitor facilities, maintaining the small-scale, dispersed development pattern:

- Retain campground at approximately same capacity, relocating A loop campsites. Improve site delineation and traffic flow; reopen western campground exit.
- Retain concessioner stable to serve High Sierra camps outside the river corridor (excluding Glen Aulin, which would be closed). Eliminate commercial trail rides. Remove parking along access road and restore natural conditions.
- Retain Lambert Dome parking area and picnic tables.
- Provide picnic area at site currently occupied by store and grill.
- Retain ranger station and wilderness center. Relocate visitor center function near the wilderness center.

Formalize parking and trails, providing the minimum facilities necessary to protect meadow/riparian, archeological, and scenic values:

- Eliminate Tioga Road shoulder parking and social trails; restore natural conditions. Provide scenic pullouts.
- Provide formal parking area and trail across meadow east of Pothole Dome.

- Provide formal parking area and trail connection for Cathedral Lakes west of existing visitor center parking lot.
- Eliminate social trails around informal trailhead for Parsons Lodge; restore natural conditions.
- Provide formal parking area near campground entrance.
- Expand Dog Lake/John Muir Trail parking area.

Preserve selected historic buildings and structures:

- Preserve Parsons Lodge and McCauley Cabin, but eliminate vehicle access and utilities.
- Preserve contributing structures at Road Camp housing area; convert the current visitor center building to employee housing.
- Preserve NPS stable.

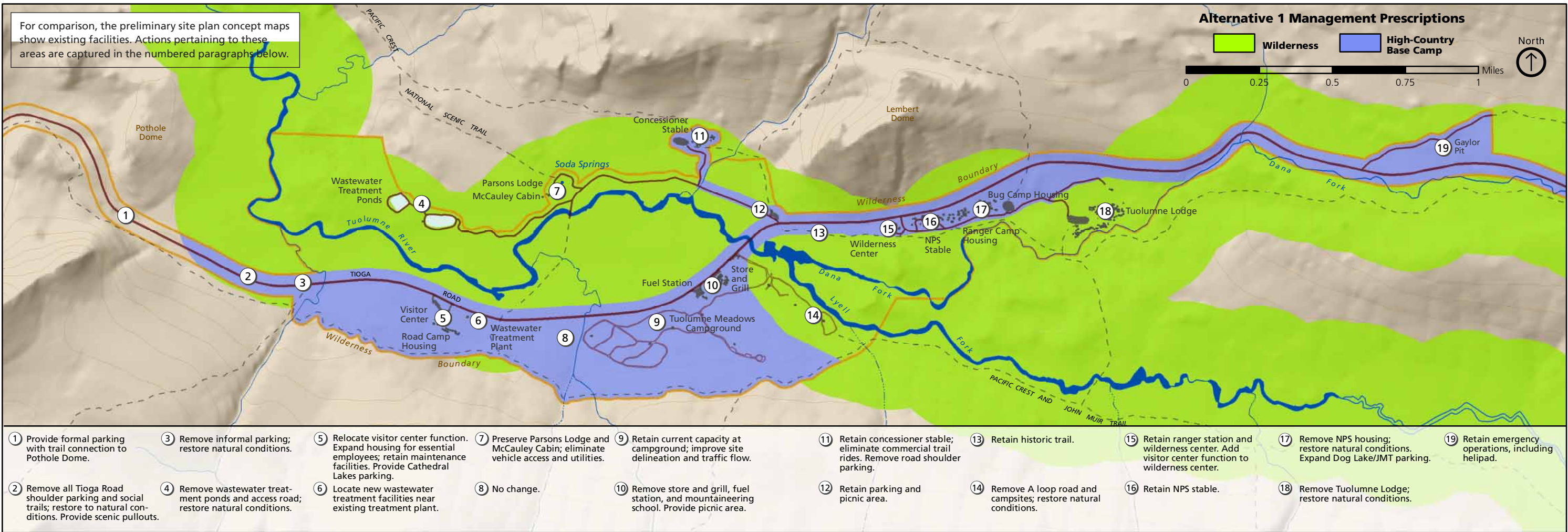
Implications for User Capacity

Visitor Use Levels

- Visitor use levels would be reduced to provide opportunities for solitude and wilderness experiences in an environment that appears undeveloped and pristine.

Visitor Activities, Services, and Management

- Opportunities for day use would be generally unconfined. Opportunities for overnight use would be reduced by eliminating lodging while retaining camping.
- Overall levels of service and facilities would be lowered, and facilities would generally be limited to those compatible with a self-reliant and adventurous visitor experience.



Alternative 2: Expand Opportunities for People to Discover and Connect with the Tuolumne River

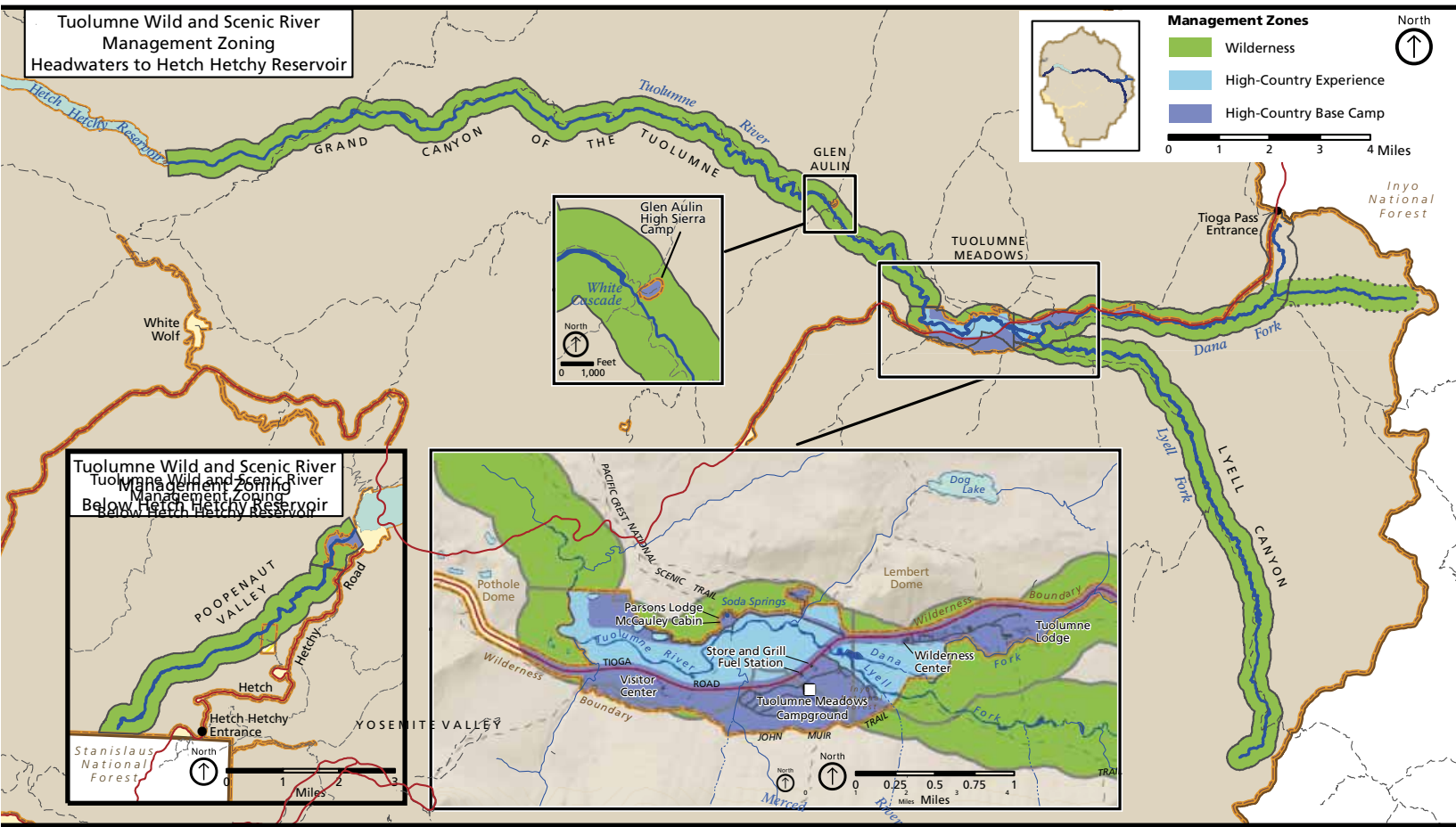
ALTERNATIVE 2 WOULD PROVIDE OPPORTUNITIES FOR A GREATER DIVER- sity of day use intended to encourage resource enjoyment and stewardship by a broad spectrum of visitors, including people discovering the area for the first time. Well-signed trails and interpretive waysides in the high-country experience zone at Tuolumne Meadows would invite people unfamiliar with the area to take walks or short hikes to popular features or places along the river. Such opportunities, coupled with an expanded offering of interpretive programs, would encourage people to forge lasting connections with the Tuolumne and to appreciate the importance of protecting its natural, cultural, and recreational values. Existing opportunities for overnight use would be retained, with no increase in overnight accommodations or food service. The staging of backpacking and stock-packing trips into the wilder- ness would remain a distinctive activity at Tuolumne Meadows, contributing to the character of the area experienced by all visitors. In response to public comment on the 2007 workbook, recreational kayaking would be allowed on portions of the river, pending a determination that impacts could be maintained within standards that would be established to ensure resource protection.

Any potential for changing the natural character of the area or increasing demands on river-related habitats would be avoided by clustering development in ecologically resilient uplands away from the river and by limiting additional visitor facilities to necessary pathways, picnic areas, and information/staging areas.

As in all alternatives most of the river corridor would be managed as wilderness. The Glen Aulin High Sierra Camp would remain open and continue to provide a distinctive overnight recreational opportunity.

In summary, alternative 2 would

- Preserve and sustain wilderness character, including natural ecosystem function and opportunities for primitive, unconfined recreation, in the more than 90 percent of the river corridor that is congressionally designated wilderness.
- Facilitate resource enjoyment and stewardship by a broad spectrum of visitors, including people discovering the area for the first time.
- Provide more diverse opportunities for day use (including allowing kayaking on a portion of the river, pending a determination that impacts could be maintained within established standards).
- Retain opportunities for overnight use at Tuolumne Meadows and Glen Aulin.



What would alternative 2 mean for Tuolumne Meadows?

Tuolumne Meadows includes the following outstandingly remarkable values:

Natural Resources

- Extensive subalpine meadow and riparian complex
- Habitat for a remarkable diversity of species
- Exceptional water quality

Cultural Resources

- Historic resources representing early conservation activism and recreation
- Archeological resources representing prehistoric travel and trade
- Traditional use sites important to American Indian people

Visitor Experience

- Easily accessible recreational and educational opportunities
- Opportunities for primitive, unconfined recreation
- Magnificent scenery

Alternative 2 zoning would commit managers to achieve the following desired conditions for these outstandingly remarkable values:

- Subalpine meadow and riparian areas would be largely intact and sustained by natural ecological processes, such as flooding and fire. Human activity might have minor impacts so long as they did not disrupt natural ecological processes. Meadow and riparian habitats, including the mineral spring habitat at Soda Springs, would sustain a natural distribution, population composition, and interaction of native species, with no decline in special status species.
- Water quality would be excellent.
- Historic, archeological, and American Indian traditional cultural resources would be protected to the maximum extent possible while achieving the visitor experience goals. Where appropriate, selected sites could be interpreted.
- The historic landscape and historic vistas in the high-country experience zone might undergo change associated with natural changes in vegetation.

Achieving the desired conditions would require the following management actions:

Natural Resource Management

- Restore disturbed meadow and riparian areas.
- Manage visitor use to protect sensitive meadow and riparian resources.

Cultural Resource Management

- Preserve Parsons Lodge and McCauley Cabin. Preserve other historic resources unless removal or redesign was necessary to consolidate facilities and achieve visitor experience goals.
- Manage visitor use to protect sensitive archeological resources.

Visitor Use Management

- Expand recreation and leisure opportunities for visitors to connect with the Tuolumne Wild and Scenic River.

What might Tuolumne Meadows look like under alternative 2?

Alternative 2 Preliminary Site Plan Concept for Tuolumne Meadows:

Improve or add pathways, picnic areas, and informational facilities to encourage interaction with the river:

- Provide hike/bike trail connecting facilities along Tioga Road and Great Sierra Wagon Road.
- Add designated bridle path for commercial trail rides and public stock users, to minimize user conflicts.
- Add meadow-walk interpretive trail near visitor center.
- Add picnic area and formal parking east of Pothole Dome.
- Add meadow overlook picnic area with parking at site currently occupied by concessioner stable.
- Add picnic area with parking on south side of Tioga Road.
- Expand picnic area at Lambert Dome; replace vault toilets with comfort station.

Retain or improve facilities supporting easily accessible overnight use:

- Retain Tuolumne Lodge; relocate most concessioner housing to Gaylor Pit.
- Retain campground, relocate some A loop sites to protect sensitive riparian areas. Improve site delineation and traffic flow; reopen western camp-ground exit.

- Provide a public shower/restroom facility in consolidated visitor service area.

Consolidate visitor services to improve efficiency:

- Consolidate visitor center, store and grill, fuel station, mountaineering school, and public shower/restroom facility in vicinity of current store and grill; redesign facilities for better operational efficiency.

Formalize parking and trails to protect meadow/riparian, archeological, and scenic values:

- Eliminate Tioga Road shoulder parking and associated social trails; restore natural conditions. Provide scenic pullouts.
- Provide formal parking area and trail across meadow east of Pothole Dome.
- Provide formal parking area and trail connection for Cathedral Lakes at former visitor center site.
- Provide day parking area and trailhead for Parsons Lodge on south side of Tioga Road.
- Retain Dog Lake/John Muir Trail parking area.

Preserve historic buildings and structures and enhance historic landscapes:

- Preserve Parsons Lodge and McCauley Cabin.
- Preserve structures at the Road Camp, Bug Camp, and Ranger Camp housing areas that are contributing elements to the historic district; use for NPS housing. Remove noncontributing structures and restore sites. Replace removed structures with new housing at Gaylor Pit.

Consolidate park operations facilities to improve efficiency:

- Consolidate ranger station and wilderness center functions in vicinity of former NPS stable.
- Consolidate NPS and concessioner stables, including associated housing, in a new location south of Tioga Road and east of wastewater treatment plant.
- Move much NPS and concessioner housing to Gaylor Pit; upgrade standard housing; provide utility connections. Extend shuttle service and multiuse hike/bike trail to Gaylor Pit.
- Consolidate compatible NPS maintenance activities near the Road Camp housing area. Convert mess hall building for maintenance operations.

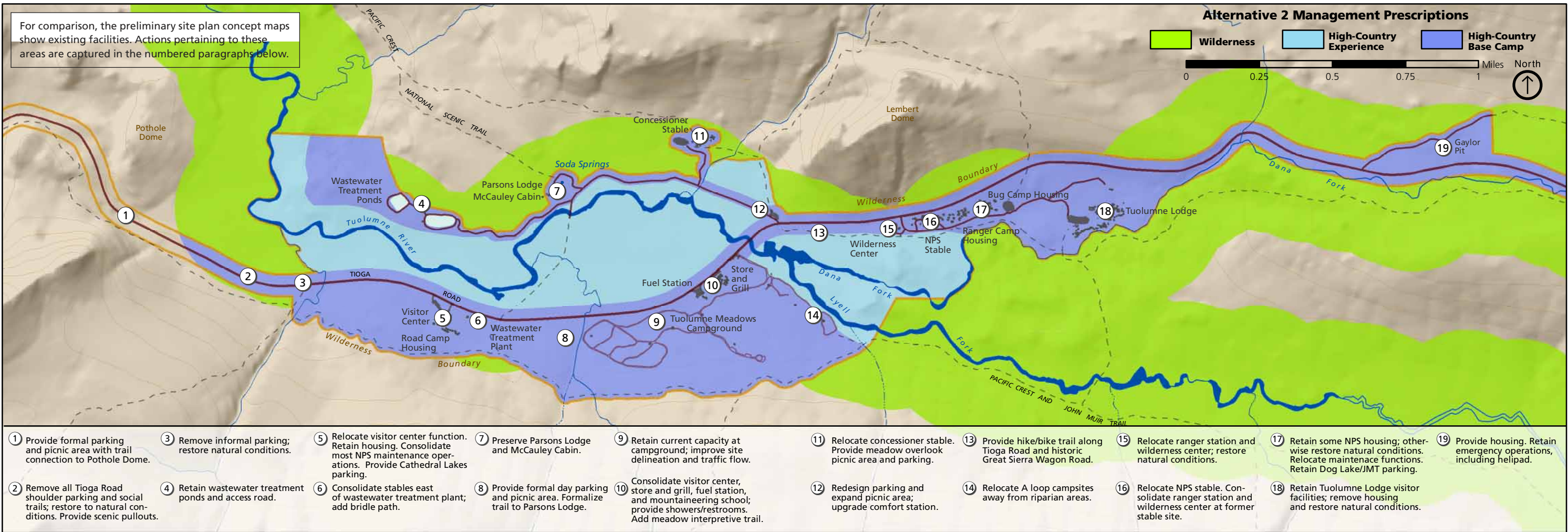
Implications for User Capacity

Visitor Use Levels

- Infrastructure improvements and designs might improve ability to accommodate increased levels of day use in the Tuolumne Meadows and Glen Aulin areas.

Visitor Activities, Services, and Management

- Opportunities for day use, including picnicking and interpretive walks, would be expanded.
- Visitor services would be improved through the reorganization and redesign of facilities.
- Visitor flow and management would emphasize personal freedom.



Alternative 3: Celebrate the Cultural Heritage of the Tuolumne River

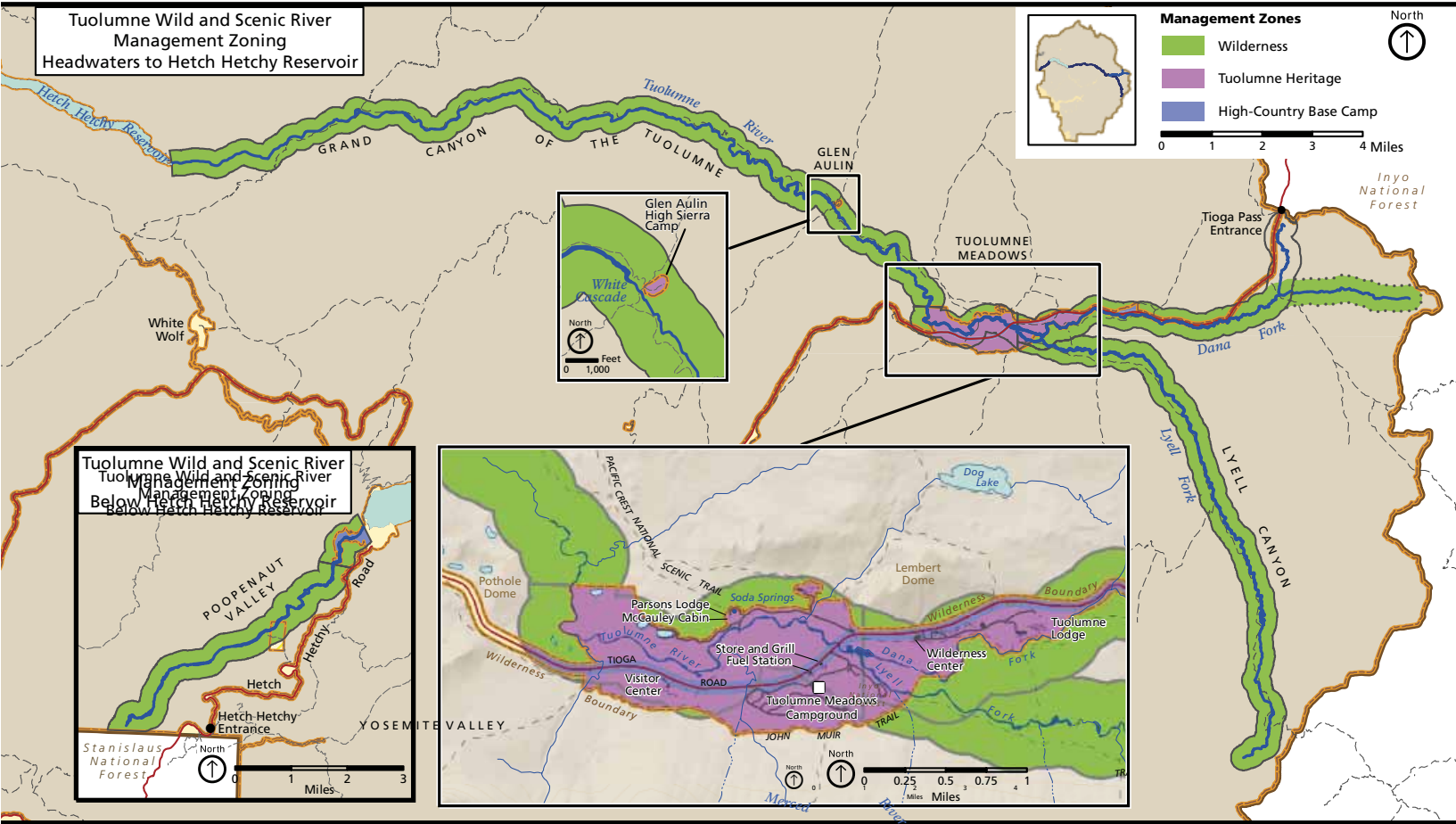
ALTERNATIVE 3 WOULD FOCUS ON PRESERVING AND PERPETUATING THE cultural values of Tuolumne Meadows and Glen Aulin—including the scenic river-dominated landscapes, the historic buildings and structures, the archeological resources, and the continuing traditional cultural practices by associated American Indian tribes—to serve as a platform for celebrating the relationships people have had with the Tuolumne River over thousands of years.

Many of the visitor facilities at Tuolumne Meadows and Glen Aulin date from a time when a trip to the Tuolumne was a rigorous journey and amenities were few. Tuolumne Meadows and Glen Aulin can still offer a classic national park experience, with opportunities to enjoy ranger-guided walks, interpretive programs, public forums at Parsons Lodge, commercial and private horseback riding, camping, and rustic lodging in a historic setting. Many visitors have developed deep personal connections with these areas through repeated experiences shared among generations. These cultural landscapes also remain important to American Indian people for maintaining traditional cultural and religious practices and passing this knowledge to future generations.

In giving primacy to the cultural landscape, this alternative would not endorse perpetuating past patterns of use that proved to be unsustainable, like unmanaged camping in the meadows. The desire to maintain strong, tangible ties with the past would be balanced with lessons from the past, and problems associated with road-side parking, aging utilities, and substandard housing would be resolved. As in all the alternatives the vast majority of the river corridor would be managed as wilderness, and the natural environment would continue to be valued as the most critical component of the landscape.

In summary, alternative 3 would

- Preserve and sustain wilderness character, including natural ecosystem function and opportunities for primitive, unconfined recreation, in the more than 90 percent of the river corridor that is congressionally designated wilderness. Celebrate the cultural heritage of the Tuolumne River corridor by perpetuating American Indian traditional cultural practices, interpreting prehistoric and historic uses, and preserving the opportunity for a classic national park experience.
- Preserve and perpetuate the historic landscape character of the Tuolumne Meadows and Glen Aulin Historic Districts, including the expansive, open meadows at Tuolumne Meadows.
- Retain opportunities for overnight use at Tuolumne Meadows and Glen Aulin.



What would alternative 3 mean for Tuolumne Meadows?

Tuolumne Meadows includes the following outstandingly remarkable values:

Natural Resources

- Extensive subalpine meadow and riparian complex
- Habitat for a remarkable diversity of species
- Exceptional water quality

Cultural Resources

- Historic resources representing early conservation activism and recreation
- Archeological resources representing prehistoric travel and trade
- Traditional use sites important to American Indian people

Visitor Experience

- Easily accessible recreational and educational opportunities
- Opportunities for primitive, unconfined recreation
- Magnificent scenery

Alternative 3 zoning would commit managers to achieve the following desired conditions for these outstandingly remarkable values:

- Subalpine meadow and riparian areas would be managed to preserve the distinctive or iconic natural features of the historic landscape. Cultural resource management activities and concentrated human activity and infrastructure might have localized effects on natural ecological processes, so long as they did not disrupt ecological processes in adjacent wilderness zones or result in a decline in special status species. Natural processes would be allowed to prevail to the greatest extent possible while protecting cultural landscape values.
- Water quality would be excellent.
- The Tuolumne Meadows and the Soda Springs Historic Districts would be preserved or restored to an earlier historic condition. Preservation or restoration would be applied to all historic landscape elements, including historic vistas, vegetation patterns, trails, buildings, and other structures, such as bridges.

- Archeological and American Indian traditional cultural resources would retain their current levels of integrity. Where appropriate, selected sites might be interpreted.
- American Indian traditional cultural practices would be perpetuated and enhanced to the maximum extent possible while achieving resource management and visitor experience goals. Visitors would be invited to learn about American Indian traditional cultural practices in designated areas.
- Visitors would enjoy opportunities for a diversity of easily accessible day and overnight experiences in settings that evoke images, understanding, and other perceptions of the past. Families and groups with strong traditional ties to the area could share their experiences with future generations. The level of activity and social interaction would be relatively high.

Achieving the desired conditions would require the following management actions:

Natural Resource Management

- Manage lodgepole pines to protect the cultural landscape.
- Manage visitor use to protect sensitive meadow and riparian resources.

Cultural Resource Management

- Preserve or restore historic buildings and other cultural landscape elements, including patterns of development and vegetation.
- Manage visitor use to protect sensitive archeological resources.

Visitor Use Management

- Manage visitor use to enhance traditional park experiences.

What might Tuolumne Meadows look like under alternative 3?

Alternative 3 Preliminary Site Plan Concept for Tuolumne Meadows:

Keep the cultural landscape intact for traditional uses:

- Preserve Parsons Lodge and McCauley Cabin; restore bridge structure to its historic appearance.
- Retain concessioner stable.
- Preserve Tuolumne Lodge; relocate those concessioner employee tent cabins that are not contributing elements of the historic district away from the river.
- Preserve all campground loops; modify exterior of newer restrooms to enhance rustic character; improve campsite delineation.
- Preserve store and grill and fuel station. Remove concessioner employee tent cabins and move nonhistoric restroom building to a new location southeast of store.
- Preserve visitor center at its existing location; expand parking to accommodate trailhead for Cathedral Lakes.
- Preserve Road Camp housing area.

- Preserve and enhance historic landscape at the Bug Camp and Ranger Camp housing areas and continue to use for NPS housing; consolidate employee parking.
- Preserve NPS stable.
- Upgrade façade of wilderness center to be compatible with historic landscape character.

Improve or add pathways, picnic areas, and exhibits or signs to facilitate day use:

- Add picnic areas near visitor center and near store and grill.
- Retain Lambert Dome picnic area and parking; redesign comfort station; better identify trail.
- Restore and interpret Great Sierra Wagon Road as a designated trail connecting sites throughout the Tuolumne Meadows area, including Parsons Lodge, Lambert Dome, and Tuolumne Lodge.

Formalize parking and trails to protect meadow/riparian, archeological, and scenic values:

- Eliminate Tioga Road shoulder parking and associated social trails; restore natural conditions. Provide scenic pullouts.
- Eliminate the informal parking area east of Pothole Dome and restore natural conditions.
- Move the Cathedral Lakes trailhead to the visitor center parking area and provide a formal trail connection.
- Retain the Dog Lake/John Muir Trail parking area.
- Provide satellite parking with waterless toilet at Gaylor Pit. Extend shuttle service to Gaylor Pit.

Consolidate park operations facilities to improve efficiency:

- Move the NPS maintenance yard and operations office to the vicinity of the existing wastewater treatment plant. Accommodate essential roads and trails operations at this location.

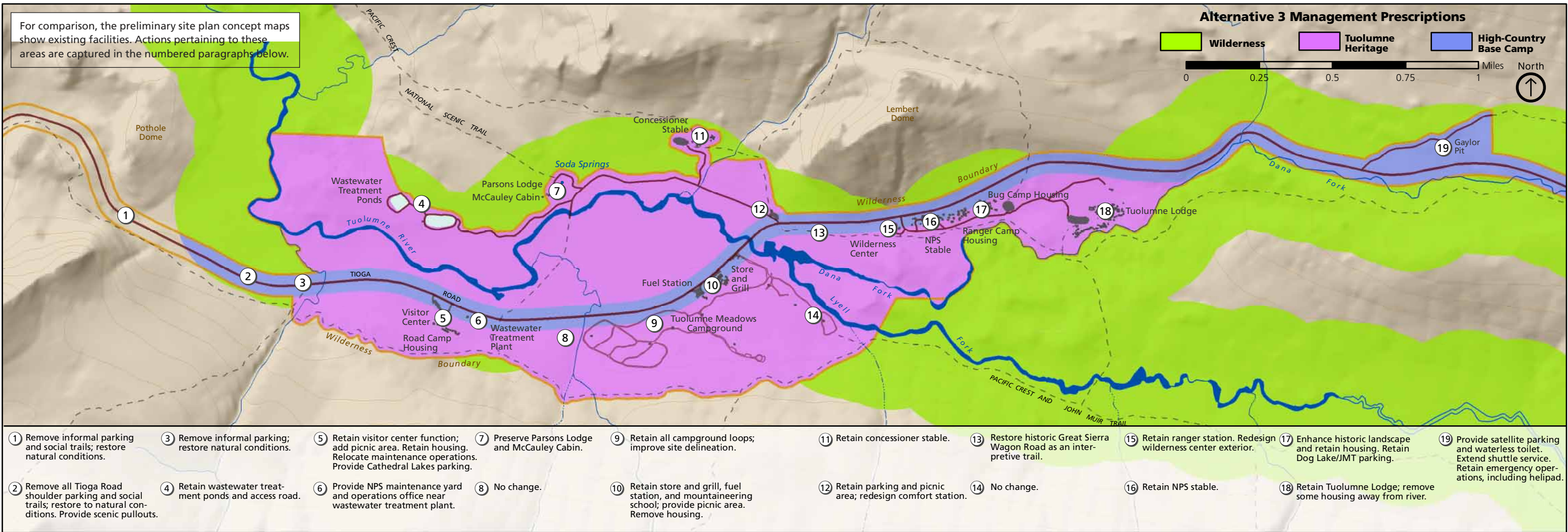
Implications for User Capacity

Visitor Use Levels

- Use levels at crowded attraction sites and along associated trail segments would be reduced to enhance traditional park experiences.

Visitor Activities, Services, and Management

- Traditional outdoor recreation activities, such as guided hikes and overnight camping, would be emphasized.
- Levels of service and facility improvements and redesigns would be constrained by protection of cultural landscape values.



Alternative 4: Facilitate Recovery of Healthy Ecological Conditions in Disturbed Meadow and Riparian Areas

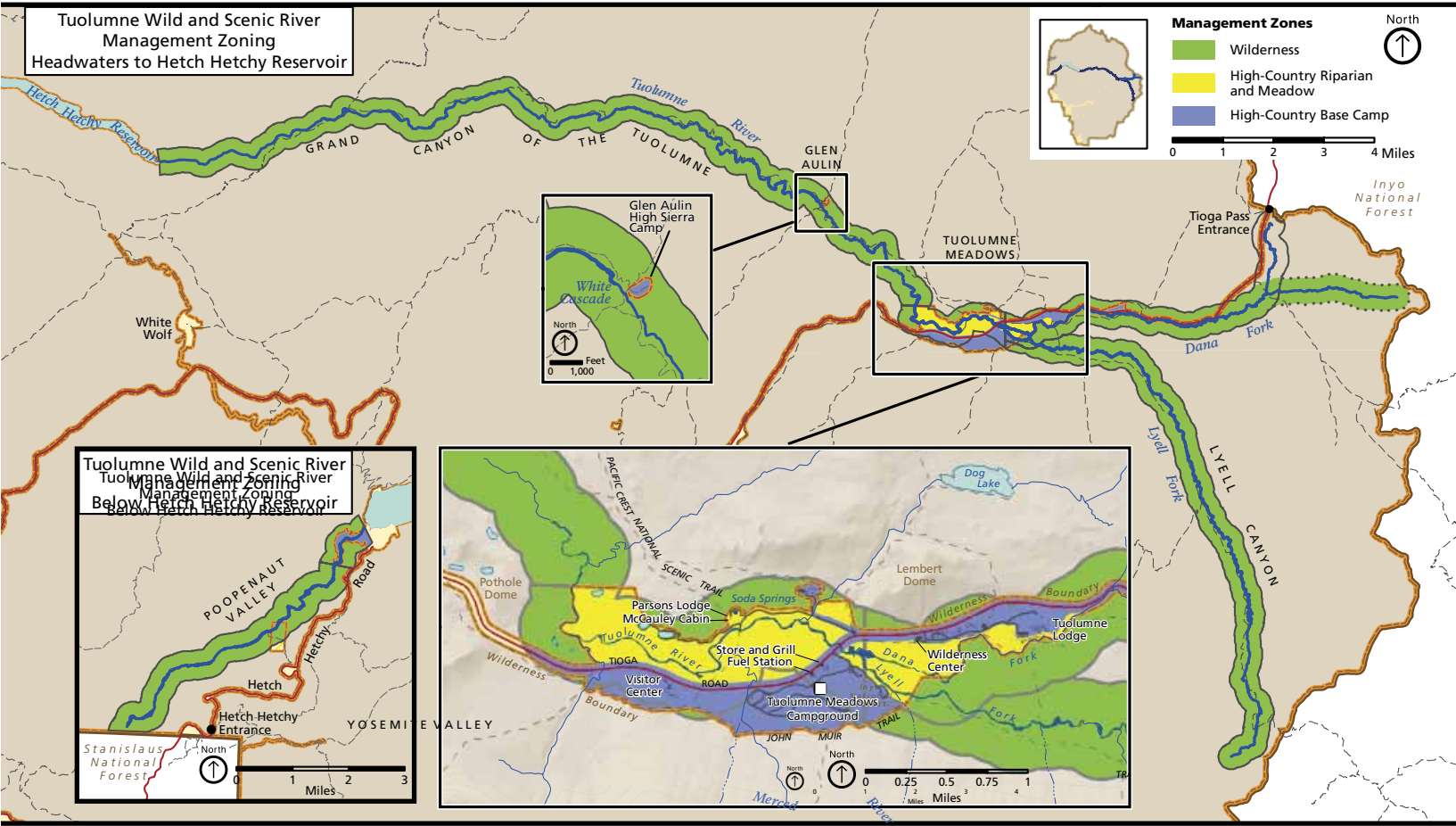
ALTERNATIVE 4 WOULD PLACE THE GREATEST EMPHASIS ON ENHANCING and protecting the integrity and connectivity of river-related ecological communities at Tuolumne Meadows, which are suspected of having been significantly disturbed by historic human uses, including intensive livestock grazing in the late 19th and early 20th centuries. The most current scientific knowledge would be integrated with the knowledge of the American Indian people, who sustainably inhabited the landscape for generations, to analyze and identify the conditions necessary for the ecological recovery and possible expansion of river-related habitats. Natural resource research and management could be intensive and occasionally highly visible at targeted localities. Once its structural integrity was restored, Tuolumne Meadows could serve as a global benchmark for studying the effects of human activities in similar environments.

Opportunities for day and overnight use would be maintained. However, activities at Tuolumne Meadows would be less dispersed and more confined to corridors and specific destinations that would be managed to accommodate use with minimal impacts on ecological processes and systems. Commercial trail rides would be discontinued under this alternative to reduce user conflicts on trails. Interpretive and educational programs would help visitors understand the dynamic and fragile ecosystem and the role they play in the long-term enhancement and protection of this remarkable place.

The Glen Aulin High Sierra Camp would remain open and continue to provide a distinctive overnight recreational opportunity. As in all alternatives the vast majority of the river corridor would be managed as wilderness.

In summary, alternative 4 would

- Preserve and sustain wilderness character, including natural ecosystem function and opportunities for primitive, unconfined recreation, in the more than 90 percent of the river corridor that is congressionally designated wilderness.
- Synthesize science-based information and American Indian knowledge of the ecosystem to identify conditions necessary for the ecological recovery and long-term integrity of river-related habitats at Tuolumne Meadows.
- Support opportunities for day and overnight use at Tuolumne Meadows and Glen Aulin, focused on understanding and experiencing a largely undisturbed natural area.



What would alternative 4 mean for Tuolumne Meadows?

Tuolumne Meadows includes the following outstandingly remarkable values:

Natural Resources

- Extensive subalpine meadow and riparian complex
- Habitat for a remarkable diversity of species
- Exceptional water quality

Cultural Resources

- Historic resources representing early conservation activism and recreation
- Archeological resources representing prehistoric travel and trade
- Traditional use sites important to American Indian people

Visitor Experience

- Easily accessible recreational and educational opportunities
- Opportunities for primitive, unconfined recreation
- Magnificent scenery

Alternative 4 zoning would commit managers to achieve the following desired conditions for these outstandingly remarkable values:

- Subalpine meadow and riparian areas would be intact. Natural ecological processes, such as flooding and fire, would prevail. Meadow and riparian habitats, including the mineral spring habitat at Soda Springs, would sustain the natural distribution, population composition, and interaction of native species characteristic of an undisturbed ecosystem.
- Water quality would be excellent.
- Historic, archeological, and American Indian traditional cultural resources would be protected to the maximum extent possible while achieving the natural resource management and visitor experience goals. Restoration of the ecological integrity of meadow and riparian areas would be expected to preserve the historic expansiveness of the meadows and historic vistas.

- American Indian traditional cultural practices would be perpetuated and enhanced to the maximum extent possible while achieving natural resource management and visitor experience goals.
- Visitors would enjoy opportunities to learn about and experience ecologically intact meadow and riparian habitats at Tuolumne Meadows. Use would be directed to corridors and specific destinations, where the level of social interaction would be relatively high.
- Overnight camping, lodging, food service, and fuel service would remain available, but the facilities supporting those activities might be redesigned and/or relocated to allow for restoration of naturally functioning riparian and wetland areas and to enhance habitat connectivity.

Achieving the desired conditions would require the following management actions:

Natural Resource Management

- Restore previous disturbances to the ecological integrity of meadow and riparian areas through intensive research and management.
- Protect sensitive riparian habitat and enhance habitat connectivity by pulling facilities away from the river at Tuolumne Lodge and the campground A loop, and by removing the wastewater treatment ponds.
- Manage visitor use to protect sensitive meadow and riparian resources.

Cultural Resource Management

- Preserve Parsons Lodge and McCauley Cabin. Preserve other historic resources unless removal or redesign was necessary to protect meadow and riparian processes and achieve visitor experience goals.
- Manage visitor use to protect sensitive archeological resources.

Visitor Use Management

- Intensively manage visitor use, including possibly excluding use from certain areas undergoing intensive resource management or research, to restore and protect meadow and riparian areas.
- Eliminate commercial trail rides to reduce user conflicts on trails.

What might Tuolumne Meadows look like under alternative 4?

Alternative 4 Preliminary Site Plan Concept for Tuolumne Meadows:

Consolidate visitor services and reduce the travel distances between them to enhance efficiency and reduce impacts on habitat:

- Relocate ranger station, wilderness center, and mountaineering school functions to site currently occupied by the store and grill and the fuel station; restore current sites of ranger station, wilderness center, and adjacent parking to natural conditions.
- Consolidate store, grill, and visitor center functions in a new facility in what is now the campground D loop. Eliminate public fuel station (provide a fuel pump for administrative use at ranger station).
- Remove parking, picnic area, and comfort station near Lember Dome and restore natural conditions.

Improve or add pathways, picnic areas, and exhibits or signs to support low-impact day use:

- Add visitor contact station at new parking area for Cathedral Lakes.
- Convert campground A loop road to an interpretive river walk.
- Add picnic area near new visitor center, store, and grill.
- Provide hike/bike trail connecting facilities along Tioga Road and the Great Sierra Wagon Road.
- Formalize trail loops through main visitor service area.

Retain facilities supporting easily accessible overnight use, but move development away from sensitive riparian areas and wildlife corridors:

- Retain Tuolumne Lodge but relocate dining hall and concessioner housing away from river edge.
- Retain campground and redesign, replacing sites eliminated from the A and D loops; improve site delineation and circulation; separate sites by type.

Formalize parking and trails to protect meadow/riparian, archeological, and scenic resources:

- Eliminate Tioga Road shoulder parking and associated social trails; restore natural conditions.
- Consolidate day and overnight parking near visitor center and store/grill (day use only); near wilderness center (overnight parking allowed), and in an expanded Dog Lake/John Muir Trail parking area (for day and overnight use).
- Eliminate informal parking area east of Pothole Dome and restore natural conditions.
- Provide formal parking area and trail connection for Cathedral Lakes on south side of Tioga Road.
- Add formal connecting trail from visitor center to trail to Parsons Lodge.

Preserve historic buildings and structures:

- Preserve Parsons Lodge and McCauley Cabin.
- Preserve historic structures at the Ranger Camp and Road Camp housing areas.

Consolidate park operations facilities to improve efficiency and reduce impacts on habitat:

- Remove NPS housing from the Bug Camp and Ranger Camp housing areas and consolidate at the Road Camp housing area. Partially restore Bug Camp housing area to natural conditions.
- Consolidate concessioner housing at the Ranger Camp housing area; adaptively use the current ranger station for housing-related purposes.
- Consolidate NPS and concessioner stables, including associated housing, at concessioner stable site.
- Remove wastewater treatment ponds and restore site to natural conditions. (Replace ponds with new facilities near wastewater treatment plant and remove sewer line that currently runs beneath meadow from plant to ponds.)

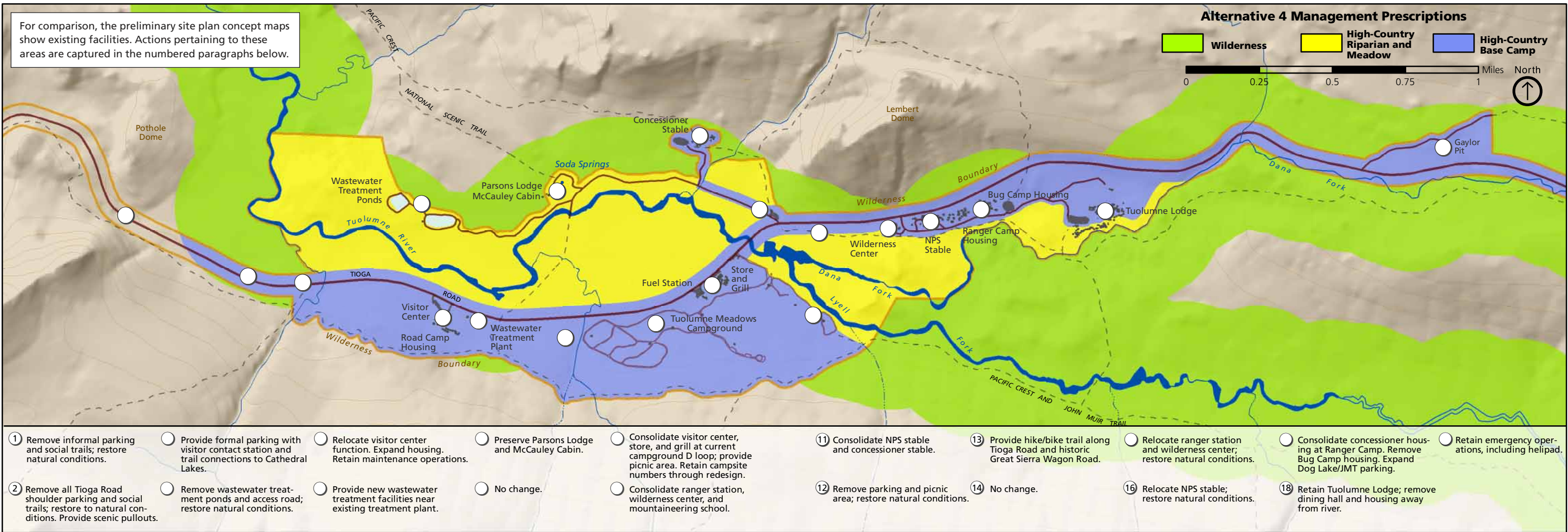
Implications for User Capacity

Visitor Use Levels

- Use levels would not be limited, and use impacts would be mitigated through intensive management.

Visitor Activities, Services, and Management

- Opportunities for day use would become more confined; opportunities for overnight use would be retained.
- Services and facilities would be restricted to resilient sites and consolidated within a minimal footprint to reduce impacts on ecological processes.



Alternative 5 (Preferred): Honor the Traditions of the Tuolumne while Looking to the Future

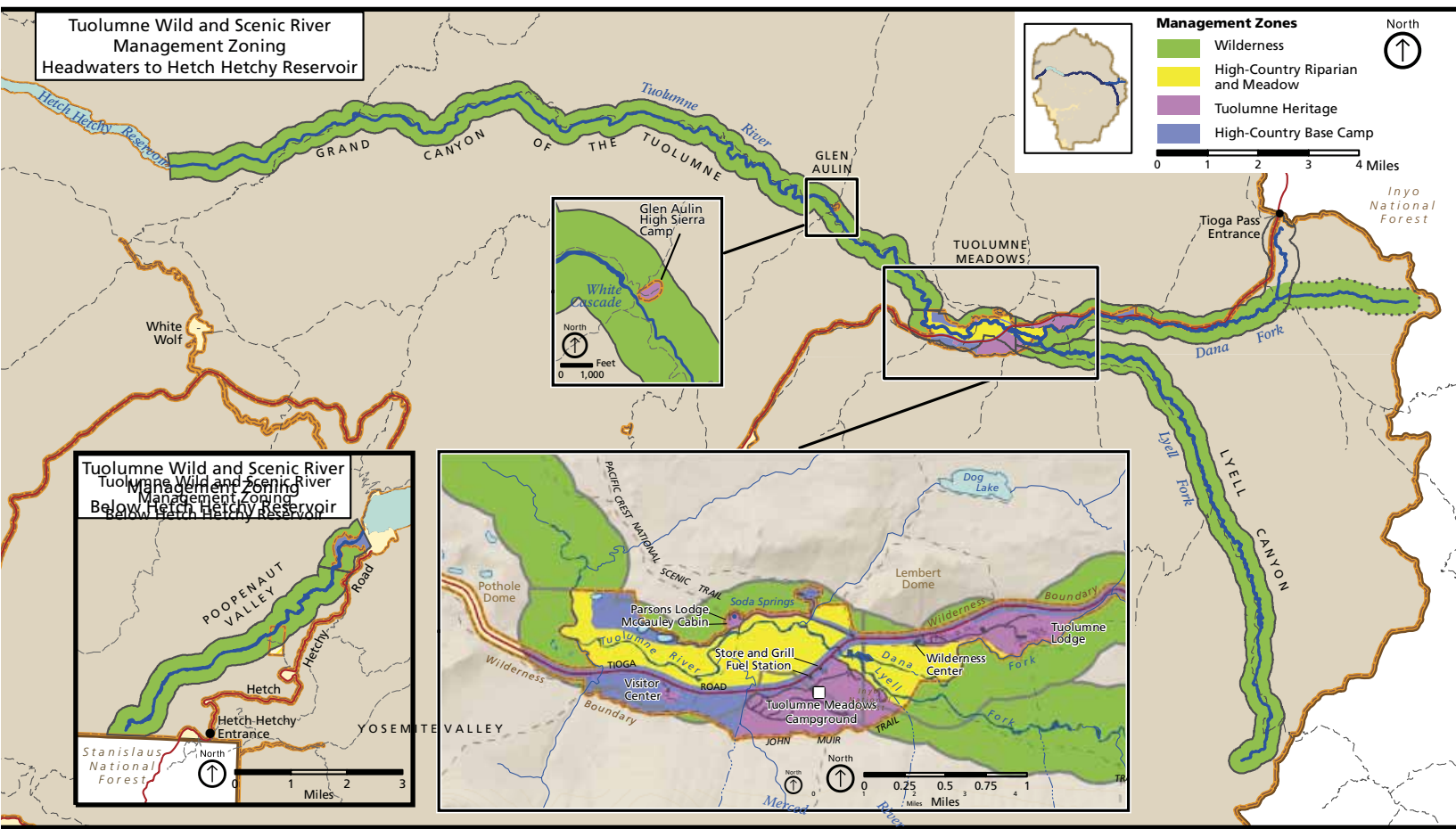
ALTERNATIVE 5 WOULD BUILD UPON A COMMON THEME HEARD FROM associated tribes and the public: Preserve the traditional Tuolumne experience. The Tuolumne River corridor is a largely pristine, ecologically diverse, and in places uncommonly productive natural river environment that has been highly valued by hundreds of generations of people. It is a place of stunning beauty, a wild place to explore, a prehistoric and historic gathering spot, and a center of learning and discovery. These values would be protected and enhanced by balancing the protection of wild areas with protection and enhancement of the outstanding ecological values of Tuolumne Meadows and with protection of much of the historic built environment at Tuolumne Meadows and Glen Aulin.

Management would focus on the Tuolumne as a place of gathering and learning, where generations return to reconnect with valued elements of their natural and cultural heritage. Associated American Indian tribes would continue traditional cultural and religious practices. Visitors would enjoy traditional national park activities, such as backpacking, hiking, and horseback riding; family and group camping; natural and cultural history study; and rustic lodging. In the Tuolumne Meadows area visitor use would be intensively managed and in places confined to corridors to protect the river and the riparian and meadow habitats along its shoreline. Natural resource research and management could be intensive and occasionally highly visible in Tuolumne Meadows.

Much of the historic landscape would be preserved, with some changes to resolve problems such as meadow damage caused by roadside parking, aging wastewater treatment facilities, and substandard employee housing. Modest improvements in picnicking and walking/day hiking opportunities would encourage all visitors, including those who are visiting for the first time, to discover the Tuolumne and forge connections with this place. The built environment would remain small in scale and compatible with natural and cultural values.

In summary, alternative 5 would

- Preserve and sustain wilderness character, including natural ecosystem function and opportunities for primitive, unconfined recreation, in the more than 90 percent of the river corridor that is congressionally designated wilderness.
- Celebrate the natural and cultural heritage of the Tuolumne River corridor by perpetuating American Indian traditional cultural practices and preserving the opportunity for a traditional national park experience in a historic landscape at Tuolumne Meadows and Glen Aulin.
- Identify conditions necessary for the ecological recovery and long-term integrity of river-related habitats at Tuolumne Meadows.
- Improve opportunities for visitors to discover and connect with the Tuolumne River.



What would alternative 5 mean for Tuolumne Meadows?

Tuolumne Meadows includes the following outstandingly remarkable values:

Natural Resources

- Extensive subalpine meadow and riparian complex
- Habitat for a remarkable diversity of species
- Exceptional water quality

Cultural Resources

- Historic resources representing early conservation activism and recreation
- Archeological resources representing prehistoric travel and trade
- Traditional use sites important to American Indian people

Visitor Experience

- Easily accessible recreational and educational opportunities
- Opportunities for primitive, unconfined recreation
- Magnificent scenery

Alternative 5 zoning would commit managers to achieve the following desired conditions for these outstandingly remarkable values:

- Subalpine meadow and riparian areas would be intact. Natural ecological processes, such as flooding and fire, would prevail. Meadow and riparian habitats, including the mineral spring habitat at Soda Springs, would sustain the natural distribution, population composition, and interaction of native species characteristic of an undisturbed ecosystem.
- Water quality would be excellent.
- The Soda Springs and portions of the Tuolumne Meadows Historic Districts included in the Tuolumne heritage zone would be preserved or restored to an earlier historic condition. Other historic resources would be preserved to the maximum extent possible while achieving the visitor experience goals.
- Archeological and American Indian traditional cultural resources in the Tuolumne heritage zone would retain their current levels of integrity. Where appropriate, selected sites might be interpreted. Most remaining resources

would be in the high-country riparian and meadow zone, where they would be preserved unless threatened by natural ecological processes.

- American Indian traditional cultural practices would be perpetuated and enhanced to the maximum extent possible while achieving natural resource management and visitor experience goals. Visitors would be invited to learn about American Indian traditional cultural practices in designated areas.
- Visitors would enjoy opportunities for a diversity of easily accessible traditional national park experiences. Activities and interpretive programs in the meadows and along the river would be directed to corridors and specific destinations that would be managed to accommodate use with minimal impacts on ecological processes and systems.
- Families and groups with strong traditional ties to the area could share their experiences with future generations. The level of social interaction would be relatively high.

Achieving the desired conditions would require the following management actions:

Natural Resource Management

- Restore previous disturbances to the ecological integrity of meadow and riparian areas through intensive research and management.
- Manage visitor use to protect sensitive meadow and riparian resources.

Cultural Resource Management

- Preserve or restore historic buildings and other cultural landscape elements in the Tuolumne heritage zone.
- Manage visitor use to protect sensitive archeological resources.

Visitor Use Management

- Intensively manage visitor use, including possibly excluding use from certain areas undergoing intensive resource management or research, to restore and protect meadow and riparian areas.



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www.nps.gov/yose/parkmgmt/planning.htm

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Above: Driftwood, Tuolumne River.