

## Yosemite National Park Tuolumne Wild and Scenic River Comprehensive Management Plan

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# Outstandingly Remarkable Values

## Decision-Making Process

### **Mandates and Criteria**

Outstandingly remarkable values are defined by the Wild and Scenic Rivers Act as the unique characteristics that make a river worthy of special protection. 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, management, and monitoring activities within a wild and scenic river corridor.

Outstandingly remarkable values were first considered for the Tuolumne River as part of the development of the 1979 Tuolumne Final Study, which established the eligibility of the Tuolumne River for inclusion in the national wild and scenic rivers system. Since the completion of that study, the Interagency Council has issued specific guidance and criteria for identifying outstandingly remarkable values (IWSRCC 1999).

The ORV criteria developed by the Interagency Council can be summarized as follows:

- (1) The value must be river related. To be considered river related, a value must
  - Be located in the river or on its immediate shorelands (generally within ¼ mile on either side of the river) and
  - Contribute substantially to the functioning of the river ecosystem or
  - Owe its location or existence to the presence of the river
- (2) The value must be rare, unique, or exemplary in a regional or national context. To be considered rare, unique, or exemplary, a value should be a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary.

The Interagency Council provides additional criteria for assessment for each ORV category listed in the Wild and Scenic Rivers Act, noting that these criteria may be modified to make them more meaningful to a particular river. The Interagency Council also notes that while no specific national evaluation guidelines have been developed for the "other similar values" mentioned in the Wild and Scenic Rivers Act, agencies may assess additional river-related values, including but not limited to hydrology, paleontology, and botany resources, consistent with the guidance provided.

### **Consultation and Coordination**

Between May and November 2005 the NPS planning team discussed the most current guidance provided by the Interagency Council with each of the park's management divisions and in several all-employee meetings. Various divisions held work sessions to discuss these values. In November

the planning team shared preliminary findings with an Interagency Council representative and obtained additional guidance about the application of ORV criteria.

In December 2005 the National Park Service hosted an interagency Tuolumne River ORV workshop, which was attended by representatives of the National Park Service, the U.S. Forest Service, the U.S. Geological Survey, the City and County of San Francisco Public Utilities Commission, and an American Indian tribe that has cultural associations with the river corridor. The purpose of the workshop was to brainstorm all possible outstandingly remarkable values of the Tuolumne River with experts familiar with the area and who represent a wide range of disciplines. Workshop participants considered potential ORVs based on current guidance provided by the Interagency Council and previous studies and discussions, including the findings of the 1979 Tuolumne Final Study and ideas generated during a one-day workshop held in 1997 as part of the Yosemite Water Management Planning effort.

Workshop results were synthesized into the *Outstandingly Remarkable Values Draft Report for the Tuolumne Wild and Scenic River* (NPS 2006c). The report was available for review as part of public scoping during summer 2006.

## **ORV Refinement**

In 2007 the statements of outstandingly remarkable values were refined to more briefly summarize the essence of each value and to facilitate its tracking through the planning process. The values were organized into eight broad categories, with the summary statement of each value supported by lists of contributing resources, where appropriate. These summarized statements were available for review at a public workshop in February 2007, and as part of the Tuolumne Planning Workbook, distributed in summer 2007.

## **Draft Outstandingly Remarkable Values**

### **Ecological 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 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**

#### ***Exemplary 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. The following biological resources contribute to this value:

- Alpine habitat along the Lyell and Dana Forks, characterized by relatively high plant diversity, is important for numerous plant and animal species, including migratory bird populations and special status plant, amphibian, and small mammal species.
- Mineral springs habitat for localized populations of special status plant species occurs 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.

**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 following geologic resources contribute to this value:

- 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.
- Unusual glacial kettle ponds are located along the Dana Fork.
- 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, including the following:

- 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.
- 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 and modern times, people have developed powerful and enduring relationships with the Tuolumne River corridor. The corridor plays a significant role in maintaining cultural and religious 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. The following sites, eligible for listing on the national register, contribute to this value:

- 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 flanked by concentrations of prehistoric archeological sites containing materials that are uncommon in the region.
- Prehistoric 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 and Religious Traditions of American Indian People***

Traditional use sites and features that are important for maintaining cultural and religious traditions of American Indian people are known to exist 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, Recreation, and Early Conservation Activism***

The Tuolumne River corridor contains numerous sites that are listed (or eligible for listing) on the national register as places of regional or national significance. The following historic resources contribute to this value:

- 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.
- Rustic accommodations within the corridor 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.

## Scenic Values

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

A glacially carved, snowcapped 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 following scenic resources contribute to this value:

- The largest glacier on the western flank of the Sierra Nevada is part of the spectacular high-country views from the Lyell Fork.
- 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 untrammelled 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 following recreational resources and opportunities contribute to this value:

- 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 is associated with the development of nationally distinctive High Sierra lodging.
- 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 that Are Easily Accessible to 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 ecological and sociocultural resources with high research potential. The following resource conditions contribute to this 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.