National Park Service
Cultural Landscapes Inventory
2007

Tuolumne Meadows Historic District

Yosemite National Park

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Executive Summary

General Introduction to the CLI

The Cultural Landscapes Inventory (CLI) is a comprehensive inventory of all historically significant landscapes within the National Park System. This evaluated inventory identifies and documents each landscape's location, physical development, significance, National Register of Historic Places eligibility, condition, as well as other valuable information for park management. Inventoried landscapes are listed on, or eligible for, the National Register of Historic Places, or otherwise treated as cultural resources. To automate the inventory, a web-based, national CLI database was created in 2005. The "Web CLI" provides an analytical tool for querying information associated with the CLI.

The CLI, like the List of Classified Structures (LCS), assists the National Park Service (NPS) in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, NPS Management Policies (2001), and Director's Order #28: Cultural Resource Management (1998). Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report on an annual performance plan that is tied to 6-year strategic plan. The NPS strategic plan has two goals related to cultural landscapes: condition (1a7) and progress on the CLI (1b2b). Because the CLI is the baseline of cultural landscapes in the National Park System, it serves as the vehicle for tracking these goals.

For these reasons, the Park Cultural Landscapes Program considers the completion of the CLI to be a service-wide priority. The information in the CLI is useful at all levels of the park service. At the national and regional levels it is used to inform planning efforts and budget decisions. At the park level, the CLI assists managers to plan, program, and prioritize funds. It is a record of cultural landscape treatment and management decisions and the physical narrative may be used to enhance interpretation programs.

Implementation of the CLI is coordinated on the Region/Support Office level. Each Region/Support Office creates a priority list for CLI work based on park planning needs, proposed development projects, lack of landscape documentation (which adversely affects the preservation or management of the resource), baseline information needs and Region/Support office priorities. This list is updated annually to respond to changing needs and priorities. Completed CLI records are uploaded at the end of the fiscal year to the National Center for Cultural Resources, Park Cultural Landscapes Program in Washington, DC. Only data officially entered into the National Center's CLI database is considered "certified data" for GPRA reporting.

A number of steps are involved in completing a CLI. The process begins when the CLI team meets with park management and staff to clarify the purpose of the CLI and is followed by historical research, documentation, and fieldwork. Information is derived from two efforts: secondary sources that are usually available in the park's or regions' files, libraries, and archives and on-site landscape investigation(s). This information is entered into CLI database as text or graphics. A park report is generated from the database and becomes the vehicle for consultation with the park and the SHPO/TPO.

The ultimate goal of the Park Cultural Landscapes Program is a complete inventory of landscapes, component landscapes, and where appropriate, associated landscape features in the National Park System. The end result, when combined with the LCS, will be an inventory of all physical aspects of any given property.

Relationship between the CLI and a CLR

While there are some similarities, the CLI is not the same as a Cultural Landscape Report (CLR). Using secondary sources, the CLI provides information to establish historic significance by determining whether there are sufficient extant features to convey the property's historic appearance and function. The CLI includes the preliminary identification and analysis to define contributing features, but does not provide the more definitive detail contained within a CLR, which involves more in-depth research, using primary rather than secondary source material.

The CLR is a treatment document and presents recommendations on how to preserve, restore, or rehabilitate the significant landscape and its contributing features based on historical documentation, analysis of existing conditions, and the Secretary of the Interior's standards and guidelines as they apply to the treatment of historic landscapes. The CLI, on the other hand, records impacts to the landscape and condition (good, fair, poor) in consultation with park management. Stabilization costs associated with mitigating impacts may be recorded in the CLI and therefore the CLI may advise on simple and appropriate stabilization measures associated with these costs if that information is not provided elsewhere.

When the park decides to manage and treat an identified cultural landscape, a CLR may be necessary to work through the treatment options and set priorities. A historical landscape architect can assist the park in deciding the appropriate scope of work and an approach for accomplishing the CLR. When minor actions are necessary, a CLI park report may provide sufficient documentation to support the Section 106 compliance process.

Park Information

Park Name: Yosemite National Park

Administrative Unit: Yosemite National Park

Park Organization Code: 8813

Park Alpha Code: YOSE

Property Level And CLI Number

Property Level: Landscape

Name: Tuolumne Meadows Historic District

CLI Identification Number: 725308

Parent Landscape CLI ID Number: 725308

Inventory Summary

Completion Status:

Data Collected:	07/10/2006
Data Collection:	Timothy Babalis, Erin Beller, Sueann Brown, Heidi Granke, Robin Pam, Daniel Schaible, Gretchen Stromberg, and Steven Torgerson
Date Entered:	**/**/2007
Data Entry Recorder:	***
Site Visit:	Yes
Date of Concurrence	TBD

Landscape Description

The Tuolumne Meadows Historic District lies on the eastern side of Yosemite National Park northeast of Yosemite Valley in California's Sierra Nevada mountain range. The district is approximately 3.5 miles long by 1 mile wide and includes most of the meadow and those portions of the surrounding lodgepole pine forest where much of the physical development directly associated with the meadow has occurred. The district is owned and managed by the National Park Service, though three areas within it are currently leased by the Delaware North Company, which manages numerous private concessions throughout the park. These leases include the Tuolumne Meadows Lodge and High Sierra Camp, a pack station and corral on the north edge of the meadow, and a store and service station along the Tioga Road. The Tioga Road passes from east to west through the entire length of the meadow along its southern margin. Up until 1973 the Sierra Club owned a 160 acre inholding in the middle of the meadow at Soda Springs, but this property has since passed to National Park Service ownership.

Most development is situated south of the Tioga Road within the verge of the lodgepole pine forest which surrounds Tuolumne Meadows. This concentration is the result of a development plan that was drawn up by Park Service planners in 1929. Its purpose was to minimize impact on the natural and scenic resources of Tuolumne Meadows by consolidating physical development in well-defined clusters along the meadow's southern margins. Though the principles guiding this plan have clearly defined development throughout the district, the plan was never fully realized, and vestiges of earlier development patterns still exist. These include a cluster of structures which once formed the core of the Sierra Club's inholding at Soda Springs; the Park Service's original administrative area at Ranger Camp, which was supposed to be demolished once the development plan was fully realized; and the old Insect Research Station at Bug Camp, which was designed to be temporary but has remained a center for resource management and scientific research in the area to the present day.

The landscape characteristics which contribute to the significance of the historic district are natural systems and features, land use, cluster arrangement, buildings and structures, circulation, views and vistas and archaeological sites. The natural systems and features are what drew development to Tuolumne Meadows in the first place and therefore define the historic district as such. The meadow lies along a natural transportation corridor crossing the Sierra Nevada mountain range from east to west. It represents a natural resting place along this arduous route and eventually drew recreational tourists to the area on account of its intrinsic natural beauty and its advantages as a staging area for excursions into the alpine backcountry. The principal circulation through Tuolumne Meadows is provided by the Tioga Road, which follows a natural east-west corridor through the mountains which has been utilized by humans for at least 8000 years. This road has experienced several realignments within the historic period, and the vestiges of earlier alignments still constitute important local circulation systems. Another important element contributing to the historic circulation patterns within Tuolumne Meadows is the trail system. Nearly all of the current system was constructed by the U.S. Army between 1891 and 1913, and a few elements date back to pre-contact Native American usage. Buildings and structures represent the most visible element of the cultural landscape in Tuolumne Meadows. The vast majority are ephemeral in nature and historically non-contributing. But the largest structures in the district represent significant examples of the historic park rustic style. These include the old visitor contact station, the original campground comfort stations, and the original Road Crew Camp complex. All of these structures have been listed on the National Register of Historic Places. The district also includes one National Historic Landmark—the Parsons Memorial Lodge, designed by the historically-significant Maybeck and White office for the Sierra Club in 1915. Finally, the views and vistas that are inherently part of this river and meadow system have been an important consideration in the siting of nearly all development in and around Tuolumne Meadows. Most development has tried to take advantage of the dramatic views

available in the area, typically on the slight rise at the edge of the forest, where one can look out across the meadow foreground toward the high mountain peaks of the cathedral range in the distant background. Nearly all of the locations designated for development by the 1929 plan would have possessed this view and may have been chosen for this reason as much as to reduce ecological impact to the more fragile meadow system.

Hierarchy Description

Tuolumne Meadows Historic District is a parent landscape and contains one component landscape—Tuolumne Meadows Soda Springs—which will be documented in further detail in a separate CLI. The Tuolumne Meadows Historic District also contains the following developed areas which will be documented as part of this CLI: the Public Campground, the government Administrative Area (Ranger Camp), the Road Crew Camp, the Tuolumne Meadows Lodge and High Sierra Camp, and the Insect Research Station (Bug Camp).

Location Map

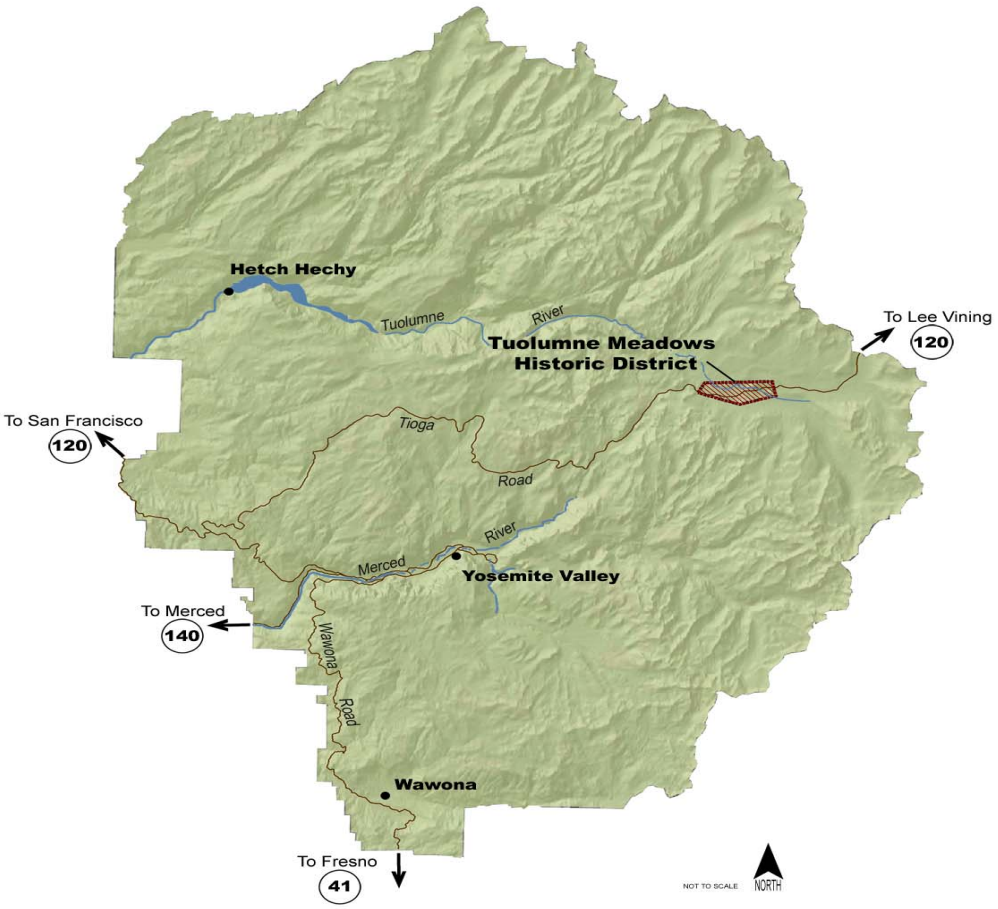
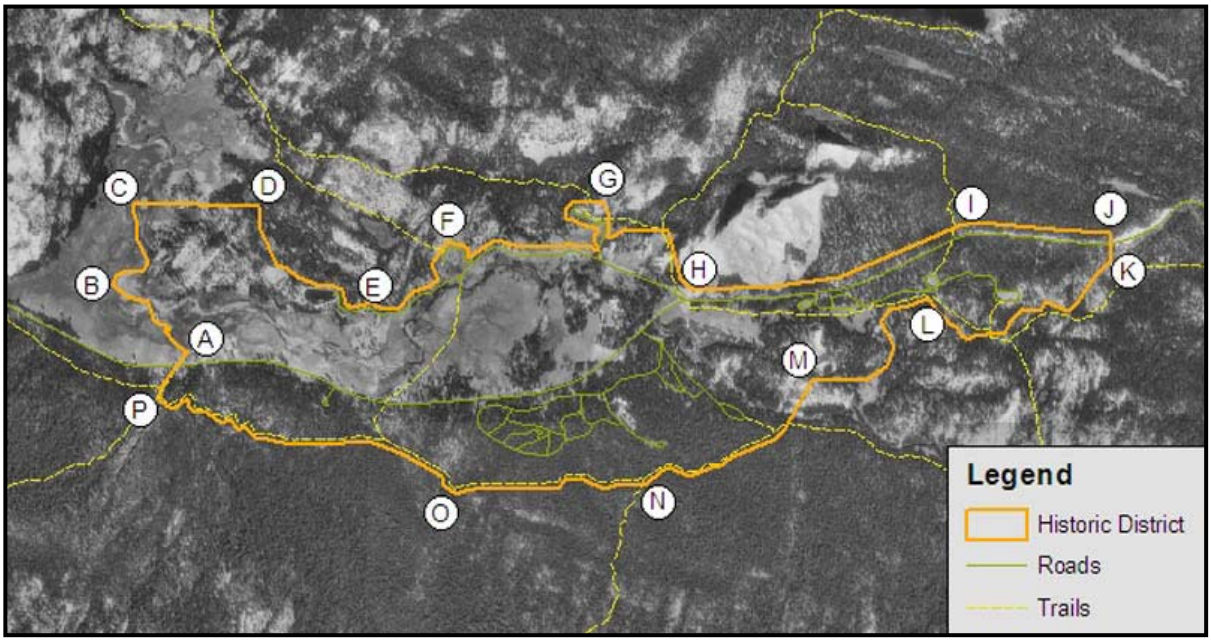


Figure 1. General location of Tuolumne Meadows Historic District within Yosemite National Park

Boundary Description

Boundary Justification
The Tuolumne Meadows Historic District is approximately 3.2 miles long by 1 mile wide. It includes all of the historic development located within Tuolumne Meadows and its immediate borders between the years 1885 and 1961. The district is delineated by the official wilderness boundary as established in 1985 and comprises all of the area *not* included in the wilderness. The district lies along the Tuolumne River between Budd Creek on the west and Gaylor Creek on the east. The wilderness boundary was drawn around the pattern of existing development rather than following a land form or natural feature, though it closely parallels the meadow-forest ecotone because development also did so. The guidelines used by the wilderness planners specified that the boundary should lie 100 feet beyond the outer edge of development, 100 feet from the centerline of any secondary road, and 200 feet from the centerline of the Tioga Road, as these features existed at the time of the designation in 1985. This boundary encompasses the full extent of resources and land area associated with the district's historic significance.

Verbal Description
Starting at the northeast corner of the district, the boundary begins at a point 1740 feet northeast of the Tuolumne Meadows Lodge main building and 184 feet due north of the Tioga Road on the existing wilderness boundary. This point is indicated on the map below by the letter "J." From here the boundary extends due south 460 feet to the Dana Fork and a point 1516 feet east-northeast of the Tuolumne Meadows Lodge building. This point is indicated by the letter "K" on the map. From here the district follows the wilderness boundary in a westerly direction, paralleling the John Muir Trail to the intersection of the Sunrise Trail (segment #91) and the Tenaya Lake Trail (segment #255). This point is indicated by the letter "P" on the map. From here the district boundary extends 741 feet north-northeast to Budd Creek. This point is indicated by the letter "A" on the map. Moving in an easterly direction from Budd Creek, the district follows the wilderness boundary once more to its point of origin. Selected points are indicated on the map on page 9 to provide reference. The coordinates of these points are given in the table below the map. The projection is UTM CONUS NAD27, Zone 11N.



Boundary Description #1: Map illustrating boundary of Tuolumne Meadows Historic District with location of selected reference points. Coordinates of points are given in table below. The boundary is consistent with the 1985 wilderness boundary.

Table of selected coordinates
(UTM CONUS NAD27, Zone 11N)

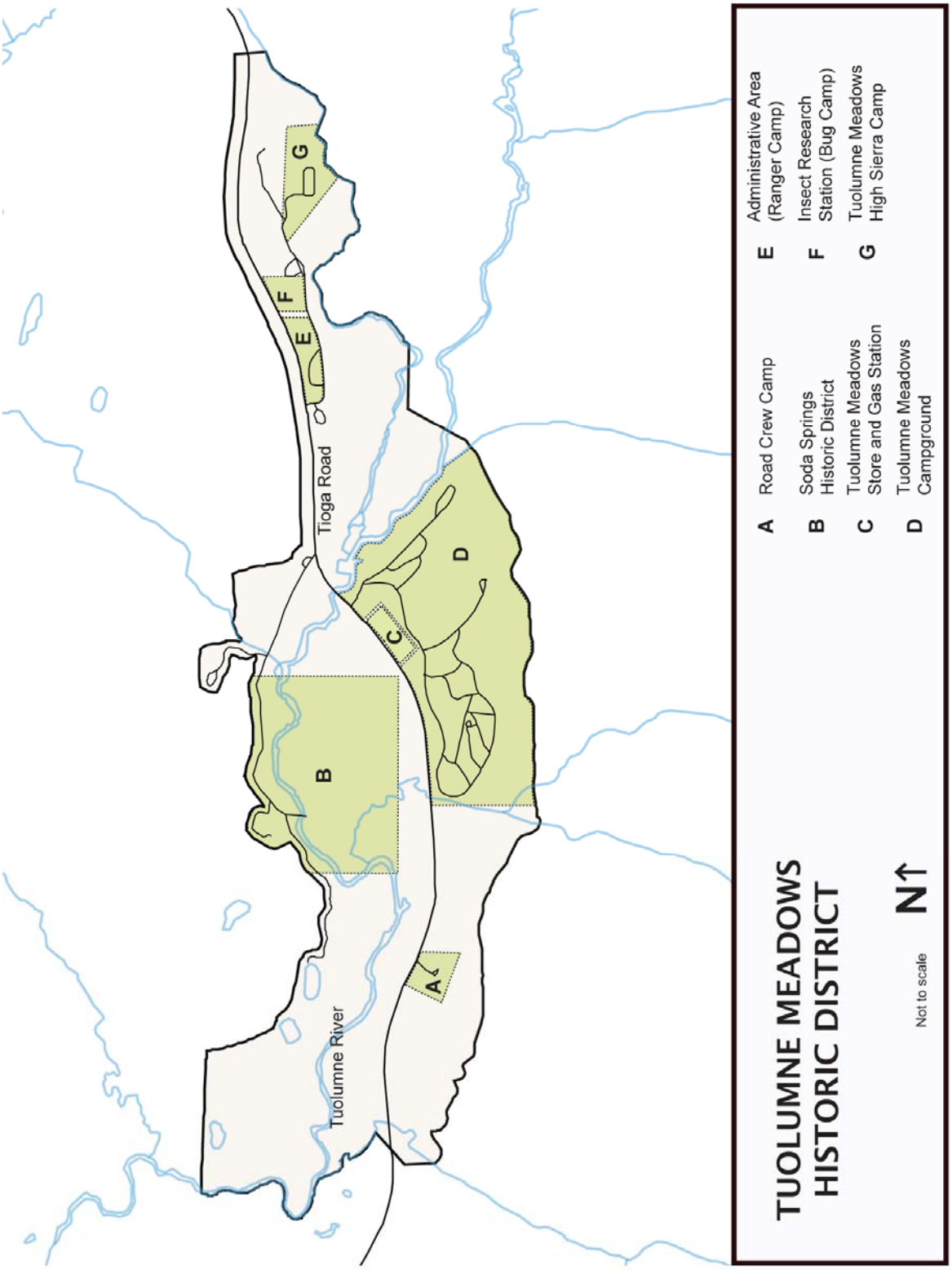
Point	UTM Coordinates	
	Easting	Northing
A	290571	4194307
B	290200	4194654
C	290317	4195084
D	290930	4195065
E	291513	4194564
F	291907	4194877
G	292696	4195080
H	293165	4194627
I	294603	4194983
J	295295	4194924
K	295303	4194795
L	294372	4194576
M	293775	4194170
N	292919	4193634
O	291951	4193588
P	290439	4194127

Regional Context

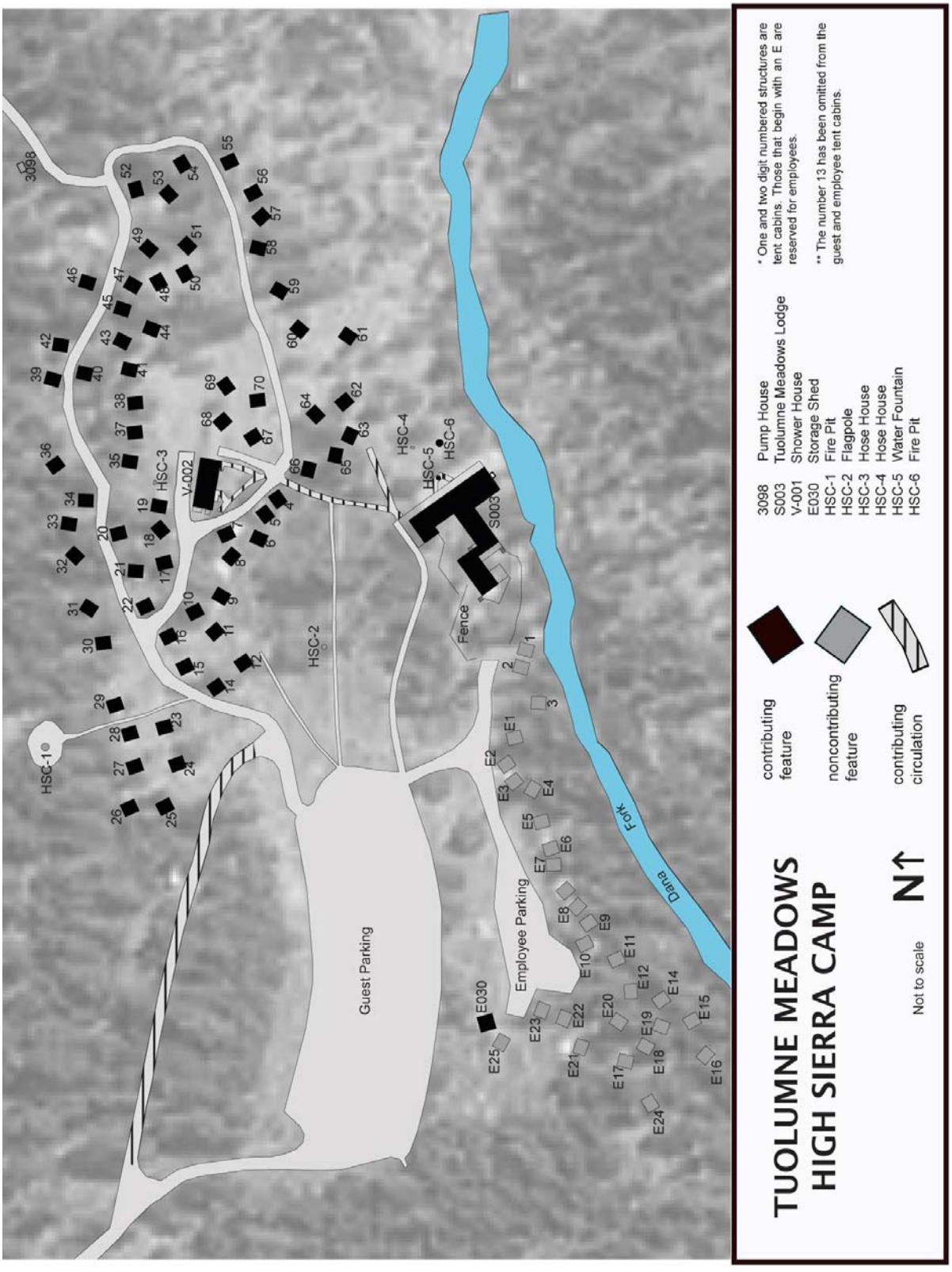
Physiographic Context
Located near the eastern edge of Yosemite National Park, the Tuolumne Meadows Historic District comprises approximately 1,200 acres in the central Sierra Nevada Mountains. The district is situated in a U-shaped valley lying at about 8,600 feet above sea level at the headwaters of the Tuolumne River. The vegetation of the district is a combination of subalpine forest and meadow grassland unique to the Sierra Nevada Mountains.

Political Context
The Tuolumne Meadows Historic District is located in Tuolumne County in California, Congressional District 25. It is currently managed by the National Park Service who took ownership in 1916 of all but 160 acres of the district. In 1973 the final 160 acres of the historic district were purchased from the Sierra Club by the Park Service, and the entire district is now managed by Yosemite National Park. In a partnership that started in 1923, the Tuolumne Meadow Lodge and High Sierra Camp and its associated facilities are managed by the park concessionaire, which is currently the Delaware North Company (DNC). The historic district is bounded by designated wilderness. The Tuolumne River is designated a Wild and Scenic River.

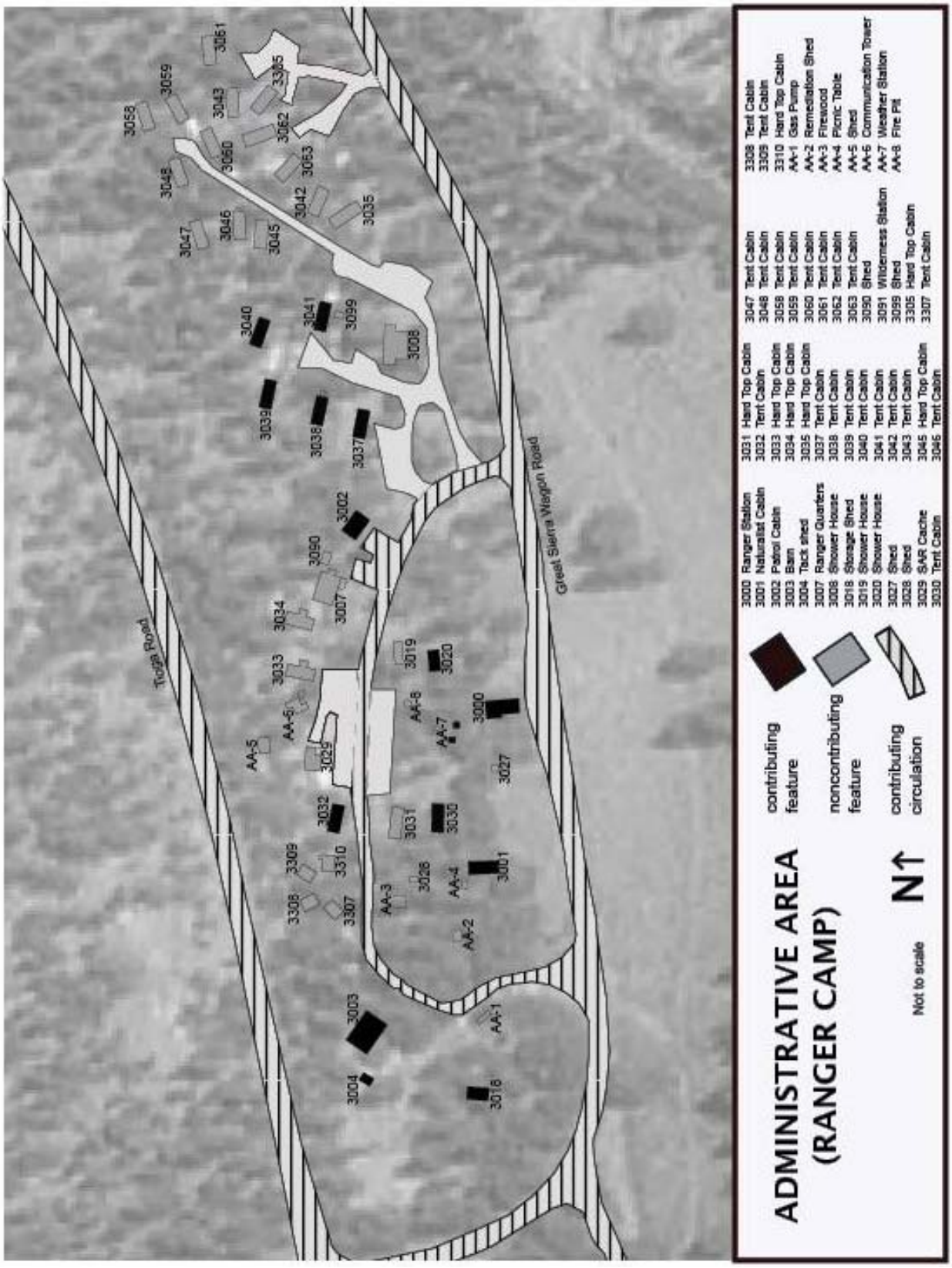
Site Plans



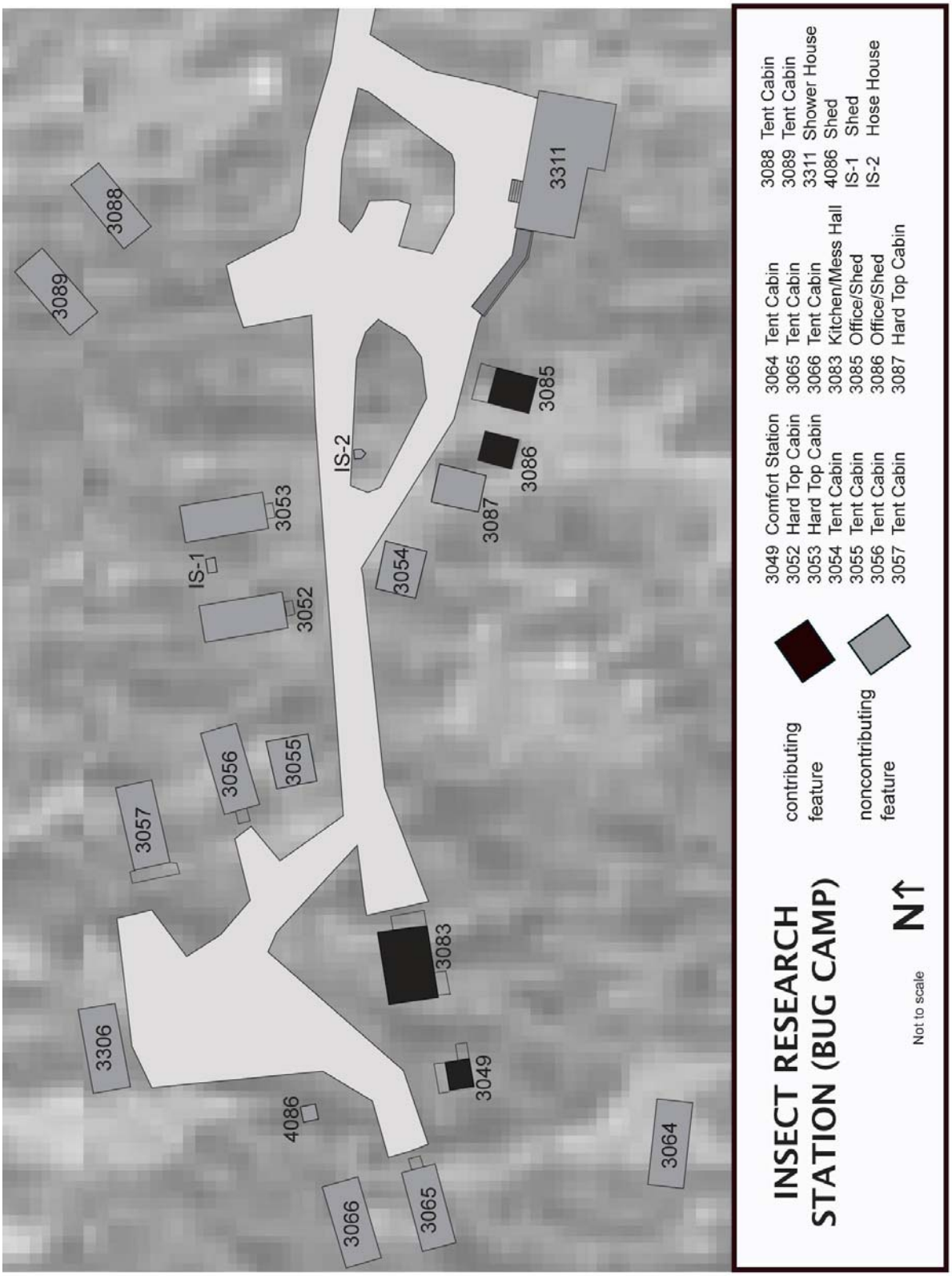
Site Plan #1: Map showing existing development and boundary of Tuolumne Meadows Historic District. (YOSE 2006)



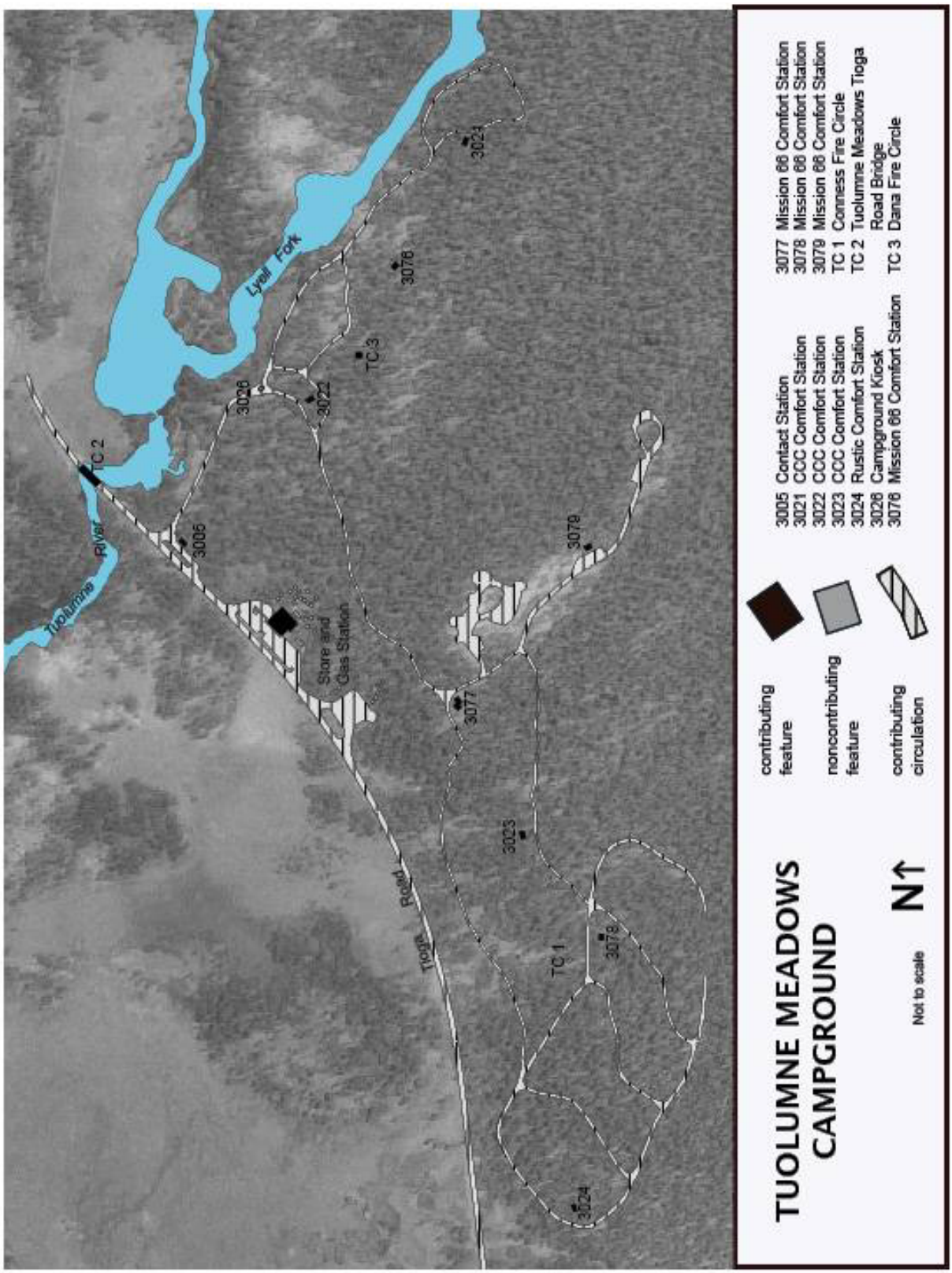
Site Plan #2: Map showing existing development of the Tuolumne Meadows Lodge and High Sierra Camp. (YOSE 2006)



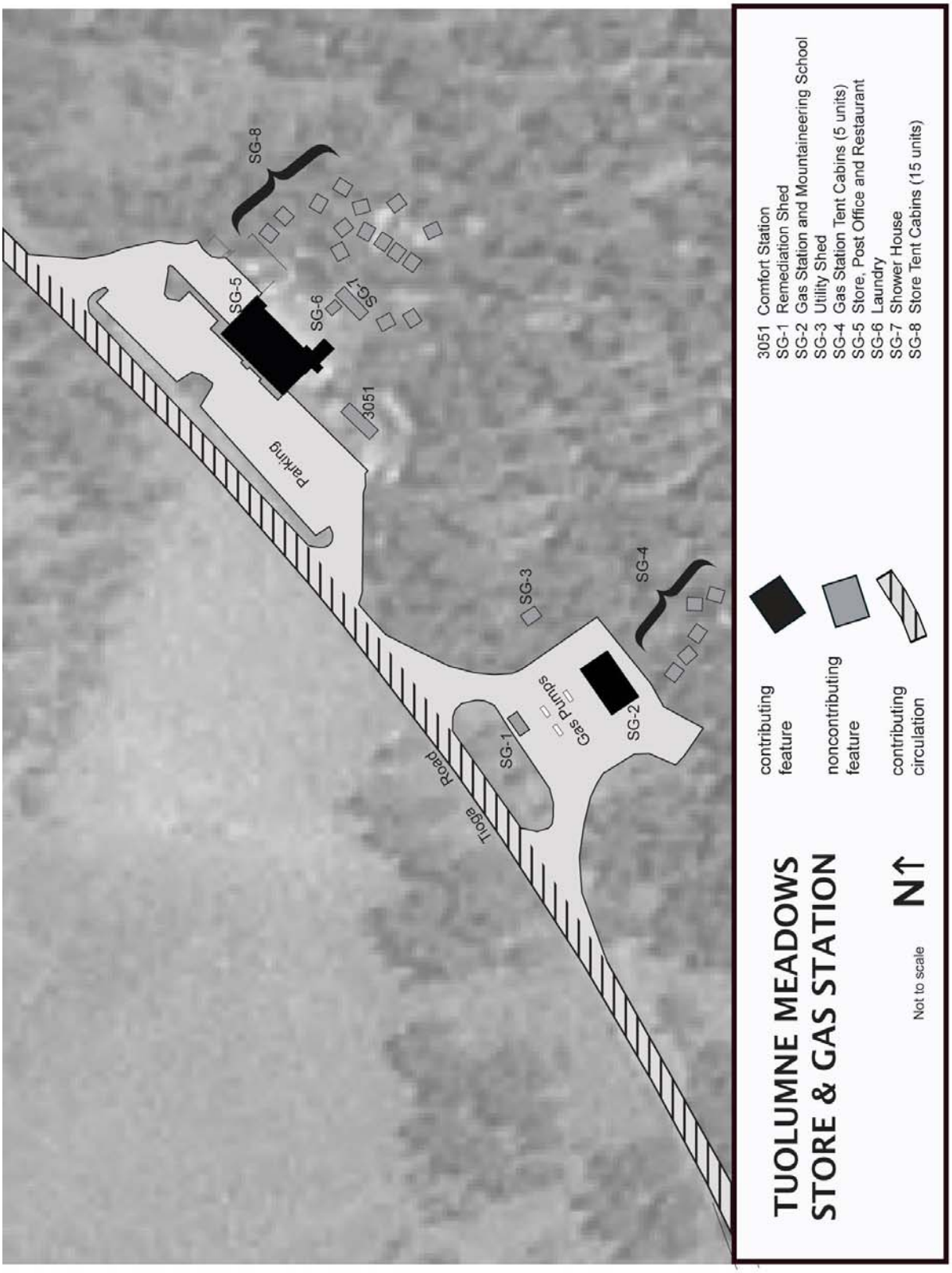
Site Plan #3: Map showing existing development of the Administration Area (Ranger Camp) development. (YOSE 2006)



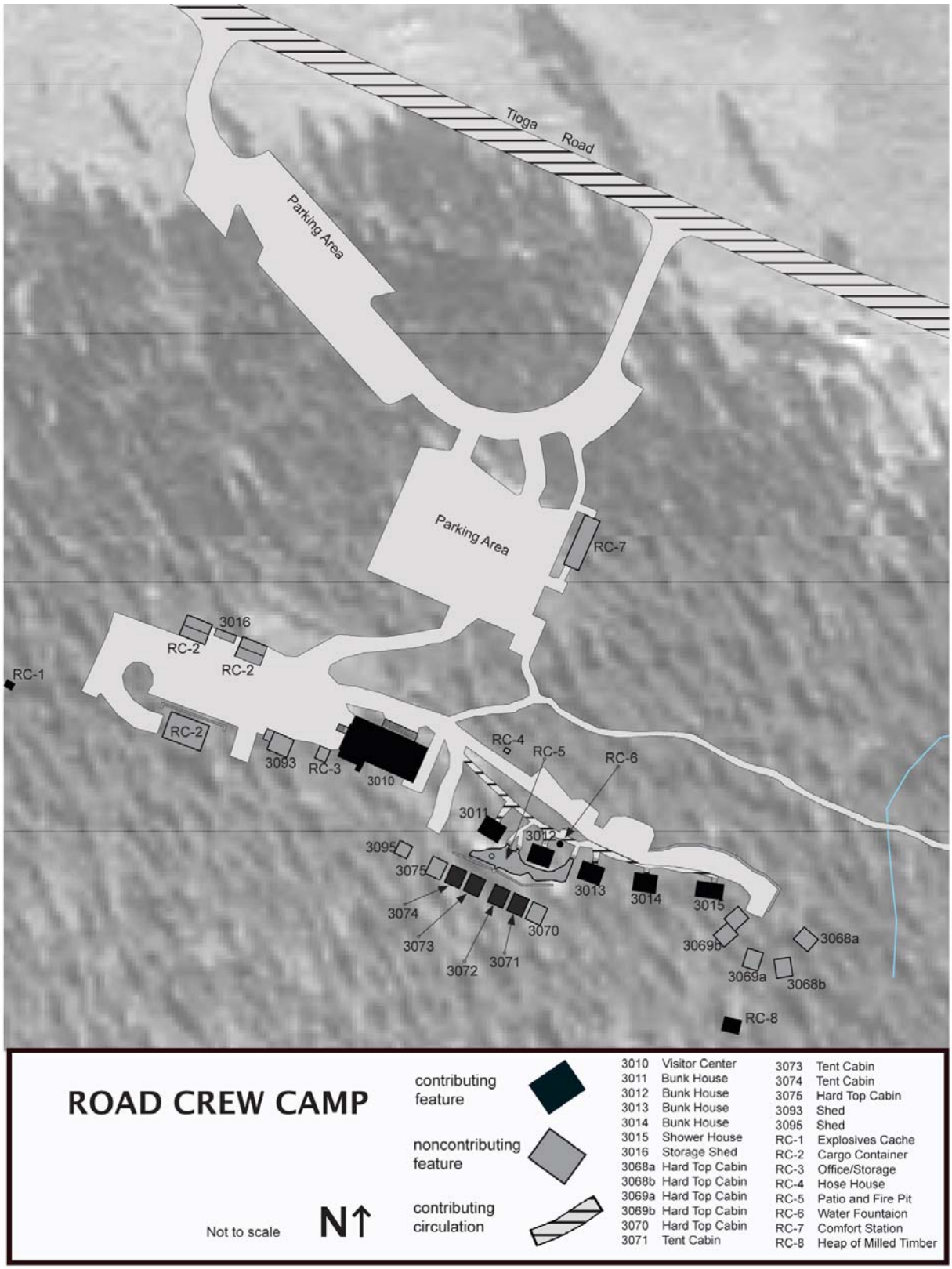
Site Plan #4: Map showing existing development of the Insect Research Station (Bug Camp) (YOSE 2006).



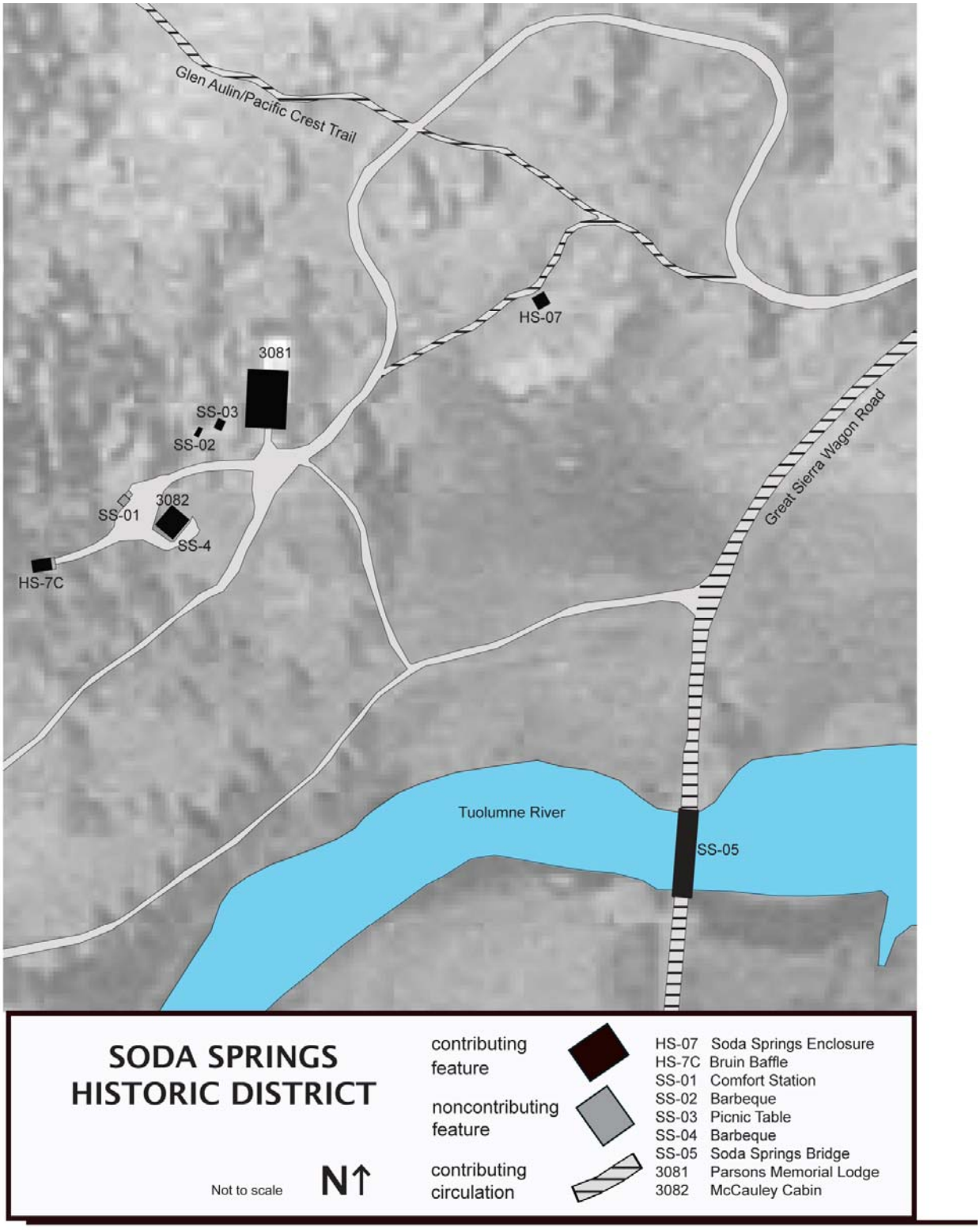
Site Plan #5: Map showing existing development of the Tuolumne Meadows Campground (YOSE 2006).



Site Plan #6: Map showing existing development of the Tuolumne Meadows Store and Gas Station (YOSE 2006).



Site Plan #7: Map showing existing development of Road Crew Camp (YOSE 2006).



Site Plan #8: Map showing existing development of Soda Springs (YOSE 2006).

CHRONOLOGY

Year	Event	Description
4000 BPE	Established	Miwok and Paiute began utilizing the Mono Trail through Tuolumne Meadows for trade route between eastern and western slopes of the Sierra mountains.
1852	Explored	Lt. Tredwell Moore visited and explored Tuolumne Meadows while pursuing a band of Yosemite Miwok.
1857	Developed	Tom McGee improved and blazed the old Mono Trail.
1860	Established	George W. Chase located a mineral claim at Tioga Hill, east of Tuolumne Meadows, but did not develop it.
1863	Explored	Josiah Dwight Whitney, head of the California State Geological Survey, explored Tuolumne Meadows and the surrounding area while surveying state's mineral resources.
1863	Established	While camped at Soda Springs in June of 1863, Whitney's party established the name "Tuolumne Meadows."
1864	Grazed	Severe drought stimulated the sheep industry and encouraged grazing in high mountain meadows, including Tuolumne Meadows.
1869	Grazed	John Muir visited Tuolumne Meadows for first time while working as a shepherd.
1875	Established	Shepherd William Brusky rediscovered George Chase's mineral claim and established four new claims of his own.
1878	Established	Tioga Mining District was organized. It extended west into Tuolumne Meadows as far as Soda Springs. Some 350 individual claims were established here over the next three years.
1878	Inhabited	John L. Murphy established a seasonal homestead on Tenaya Lake along Mono Trail just west of Tuolumne Meadows.
1878	Built	John L. Murphy constructed a simple cabin at Tenaya Lake.
1881	Developed	John Leonard initiated a pack train operation over Mono Trail through Tuolumne Meadows.
1881	Established	Great Sierra Consolidated Silver Company was organized.
1881	Purchased	Great Sierra Consolidated Silver Company acquired most of the existing private claims in Tioga Mining District.
1881	Developed	Great Sierra Consolidated Silver Company opened Great Sierra Mine on Tioga Hill. Dana Village developed around it.

Year	Event	Description
1881	Platted	State engineer William Hammond Hall conducted an official survey of Tuolumne and Merced River watersheds in Yosemite region. He recommended that they be formally reserved.
1882	Abandoned	The Great Sierra Mine closed and Dana Village was abandoned.
1882	Developed	The Great Sierra Tunnel was opened on the east side of the mountains below Tioga Hill. Bennettville was developed around the operation.
1882	Platted	The route of the proposed Great Sierra Wagon Road was surveyed.
1883	Built	The Great Sierra Wagon Road was constructed from Big Oak Flat to Bennettville through Tuolumne Meadows to a supply mine.
1884	Abandoned	The Great Sierra Tunnel was abandoned when the Great Sierra Consolidated Silver Company went bankrupt.
1884	Neglected	The Great Sierra Wagon Road was left to deteriorate.
1885	Inhabited	John Baptiste Lembert established a seasonal homestead at Soda Springs in Tuolumne Meadows and filed a claim under the Homestead Act.
1885	Built	John Lembert constructed a small residential cabin at Soda Springs.
1889	Inhabited	John Muir and Robert Underwood Johnson camp at Soda Springs and discuss initiating a campaign to establish a national park that would include Tuolumne Meadows and the surrounding mountains.
c.1889	Built	Lembert constructed a cabin-like exclosure around several of the soda springs to keep livestock out.
1889	Platted	State engineer William Hammond Hall surveyed the upper reaches of Tuolumne, Merced, and Stanislaus rivers and proposed a system of seven High Sierra reservoirs. One of these would flood Tuolumne Meadows.
1890	Established	Yosemite National Park, incorporating all of Tuolumne Meadows, was established by an act of Congress on October 1. Lembert's quarter section remained a private inholding within the park.
1891	Military Operation	The U.S. Army cavalry was charged with protecting the new Yosemite National Park. Excluding poachers and livestock grazers became their chief responsibility.
1895	Land Transfer	Lembert's homestead claim for 160 acres at Soda Springs was patented on June 28. His property was described as Section 5 of Township 1 South, Range 24 East, Mount Diablo meridian.
1896	Neglected	Lembert's original residential cabin was abandoned after his murder and destroyed sometime between 1896 and 1912.

Year	Event	Description
1898	Sold	John Lembert's brother Jacob sold the Soda Springs homestead to John and Fred McCauley.
1898	Grazed	John McCauley used the Soda Springs homestead as a seasonal pasture for his livestock.
c.1900	Built	The cavalry built or improved trails throughout Yosemite National Park. Most of present trail system in Tuolumne Meadows vicinity was established by this date, but no later than 1913.
1901	Inhabited	First of Sierra Club's Annual Outings departs from Yosemite Valley to camp for a month and explore the Tuolumne Meadows area.
1902	Built	John McCauley built a new cabin for seasonal occupation not far from original Lembert cabin site.
1903	Military Operation	The U.S. Army established a seasonal patrol post at Tuolumne Meadows.
1909	Platted	Joseph N. LeConte surveyed and mapped a route for a proposed High Sierra ridge trail.
1912	Sold	John McCauley sold the Soda Springs property to the Sierra Club.
1913	Military Operation	The U.S. Army withdrew from Yosemite National Park. The park was subsequently managed by a small corps of civilian rangers.
1915	Purchased	Stephen Mather, assistant to the Secretary of the Interior, bought the Great Sierra Wagon Road.
1915	Rehabilitated	The Great Sierra Wagon Road was repaired in order to be opened to automobile tourists later that year.
1915	Altered	The Great Sierra Wagon Road was renamed Tioga Road.
1915	Built	The Sierra Club built Parsons Memorial Lodge at Soda Springs. Bernard Maybeck was the architect.
1915	Built	A bridge over the Tuolumne River, adjacent to Parsons Lodge, was constructed, replacing an original structure of unknown design.
1915	Planned	Development of the proposed High Sierra ridge trail began with the first state appropriation to fund it. The name, John Muir Trail, was chosen and Joseph N. LeConte's 1909 route adopted.
1916	Established	The National Park Service was established and assumed responsibility for management of all national parks. Washington B. Lewis was appointed first superintendent of Yosemite National Park.
1916	Built	The Tuolumne Soda Springs Lodge was constructed by the D.J. Desmond Company on the Dana Fork at the east end of Tuolumne Meadows.
1918	Abandoned	The Tuolumne Soda Springs Lodge closed after the Desmond Company went bankrupt.

Year	Event	Description
1920	Established	The Yosemite National Park Company was established as a reorganization of the bankrupt D.J. Desmond Company.
1923	Altered	The Tuolumne Soda Springs Lodge was upgraded and renamed the Tuolumne Meadows Lodge under the management of the Yosemite National Park Company.
1923	Established	The upgraded Tuolumne Meadows Lodge reopened.
1924	Established	The Yosemite Park and Curry Company (YP&CC) was established when the Yosemite National Park Company and the Curry Company merged.
1924	Built	The Park Service built a government administrative area (Ranger Camp) on the Dana Fork just west of Tuolumne Meadows Lodge. The complex included six substantial buildings: a barn (#3003), a naturalist's cabin (#3001), a patrol ranger's cabin (#3002), a ranger checking station (#3000), a comfort station (#3020), and a mess hall (no building number).
1924	Built	A simple water supply and sewer system were constructed to serve the government administrative area.
c.1926	Built	YP&CC builds small wood frame service station adjacent to original store.
1927	Built	New culverts were installed along the Tuolumne Meadows section of Tioga Road.
1929	Planned	Residential architect John Wosky began preparing a development plan for Yosemite National Park which included specific recommendations for Tuolumne Meadows. The main objectives guiding development at Tuolumne Meadows for the next three decades were laid down in this year.
1930	Built	A utility camp was established in the administrative area (Ranger Camp) to house crew needed for implementation of first stage of Wosky's development plan. The camp included several tent cabins and an addition to the existing mess hall built in 1924.
1930	Built	A small tack room was constructed in the administrative area opposite the barn.
c.1930	Built	A chlorinating house for water supply was constructed above the Tuolumne Meadow Lodge (bldg. #3006).
1931	Built	The utility camp in the administrative area was expanded considerably to accommodate larger work crews. The enlarged camp included: a new dining room, 15 tent cabins, a bath house, and a meat cooler.
1931	Built	A comprehensive water supply system was constructed. It was designed to accommodate a proposed future development in Tuolumne Meadows.
1931	Platted	A public campground area was surveyed and staked out.

Year	Event	Description
1931	Built	One comfort station (#3024) was constructed in the new campground area. A local cesspool was constructed to serve it.
1931	Platted	A new alignment for the Tioga Road was surveyed and designs prepared for its construction. The new alignment would follow the southern edge of the meadow.
1933	Built	A CCC stub camp was established just east of the government administrative area (Ranger Camp). It included a large mess hall and tents for the enrollees.
1933	Built	Roads and campsites in the public campground were constructed with assistance of CCC labor.
1933	Excavated	A large borrow pit was established by the road contractor at the confluence of the Dana and Lyell Forks to supply aggregate for road and bridge construction. 35,000 cubic yards was removed.
1934	Planned	Yosemite National Park's first master plan was completed. Its recommendations for Tuolumne Meadows remained largely the same as those outlined in the development plan from 1929.
1934	Built	The Tioga Road realignment through Tuolumne Meadows was completed. Construction extended from 1932 through the end of 1934.
1934	Built	The Tuolumne River bridge, which crossed the Tuolumne River just below the confluence of the Dana and Lyell Forks, was built.
1934	Built	Branch water lines were extended into the public campground and hose bibs (hydrants) were installed. Sewer collection lines for the proposed additional comfort stations were also installed.
1934	Built	Roads and campsites were constructed in the public campground.
1934	Built	Three rustic-style comfort stations (#3021, #3022, and #3023) were constructed with CCC labor in the public campground.
1934	Built	The Road Crew Camp was constructed. It included four residential bunkhouses (#3011, #3012, #3013, and #3014), a shower room (#3015), a large mess hall (#3010), a small washroom (#3019), and a gas pump shelter (#3016). A serpentine driveway was also constructed from Tioga Road to the mess hall.
1934	Built	A short sewer collection line and cesspool were installed to serve the Road Crew Camp.
1935	Platted	Architectural drawings were prepared for two permanent ranger residences located near Road Crew Camp.

Year	Event	Description
1935	Built	A fish storage tank and house (#3018) were constructed just east of Road Crew Camp.
1935	Demolished	The original utility camp at old administrative area (Ranger Camp) was demolished by the CCC crew.
1935	Excavated	An additional 60,000 cubic yards of aggregate was removed from the borrow pit at confluence of Dana and Lyell Forks to provide material for paving Tioga Road.
1936	Built	A new rustic-style visitor contact station (#3005) was constructed with CCC labor along Tioga Road at entrance to public campground.
1937	Paved	The Tuolumne Meadows segment of the Tioga Road was paved. Work extended from 1935 to end of 1937.
1938	Built	The John Muir Trail was completed after 23 years of work. It extended from Yosemite Valley to Mount Whitney and passed through Tuolumne Meadows.
1938	Abandoned	The CCC stub camp east of the administrative area (Ranger Camp) was abandoned and dismantled.
1939	Built	The Tuolumne Meadows Lodge was rebuilt and upgraded at same location as the original.
1940	Built	A new store on the Tioga Road was constructed just west of the visitor contact station (#3005). A small island with gas pumps was installed in the parking lot in front of the store.
1940	Demolished	The original wood frame service station in front of the old administrative area (Ranger Camp) was demolished.
1940	Built	A sewer system extension was built to replace the existing system of local cesspools. This included new collection lines that brought sewage to a spray field west of Parsons Lodge via a holding tank and pumphouse (#3017) near Road Crew Camp.
1940	Built	A holding tank and pumphouse (#3017) for the new sewer system were constructed northeast of Road Crew Camp.
1941	Platted	Architectural drawings were prepared for a permanent ranger residence behind visitor contact station (#3005).
c.1950	Altered	Small comfort station (#3019) at Road Crew Camp had been converted to a storage shed by this date. Conversion may have occurred as early as 1935.
c.1950	Demolished	The chlorinating house (bldg. #3006) above the Tuolumne Meadows Lodge was removed.
1950	Rehabilitated	The gas pump shelter (#3016) at Road Crew Camp was rebuilt.
1954	Paved	The parking lot in front of the concessionaire store was enlarged and repaved.

Year	Event	Description
1955	Built	The Insect Research Station (Bug Camp) was established just east of Ranger Camp. It comprised eight structures: a main canvas-roofed building combining laboratory and mess hall, a hard-roofed comfort station, and six tent cabins.
1956	Planned	A Mission 66 prospectus for Yosemite National Park included plans for upgrading and enlargement of development at Tuolumne Meadows.
1957	Built	A more substantial, hard-roofed main building was constructed to replace the original laboratory/mess hall at the Insect Research Station.
1957	Built	A new campfire circle or amphitheater was constructed at the public campground.
1959	Built	A new service station was constructed on the Tioga Road west of the concessionaire store.
c.1960	Built	East oxidation pond was installed adjacent to existing spray field some time after 1953 but before 1966.
1961	Built	250 existing campsites at public campground were upgraded and new fixtures installed.
1961	Built	An organization or group campground was added to existing campground. It consisted of 100 new campsites and was built on a short spur off the main campground loop.
1961	Built	Four new comfort stations (#3076, #3077, #3078, and #3079) were constructed at the public campground. Existing sewer and water lines were extended to accommodate them.
1961	Paved	The Tuolumne Meadows segment of the Tioga Road was repaved. Some sections may have also been widened at this time.
1968	Built	The sewer system was upgraded and existing east oxidation pond enlarged.
1968	Demolished	The gas pump shelter (#3016) at Road Crew Camp was demolished.
1968	Demolished	Small comfort station (#3019) at Road Crew Camp was demolished.
1969	Moved	The fish tank house (#3018) was moved to Ranger Camp and converted to a storage shed.
1969	Built	The Tuolumne Meadows Stables, a pack station operated by the concessionaire, was moved from the Tuolumne Meadows Lodge to the north edge of the meadow on a short drive off the eastern approach to Parsons Lodge. New construction included a large barn and corral, several tent cabins, a comfort station, and an office.

Year	Event	Description
1969	Moved	An existing building from 1924 or 1938 was moved from Tuolumne Meadows Lodge to the new stable area and used as a storage shed.
c.1970	Built	Approximately 20 tent cabins at the Tuolumne Meadows Lodge were rebuilt on concrete foundations with rough stone facing.
c.1970	Built	A second row of tent cabins was constructed behind the original bunkhouses at Road Crew Camp. Exact date of construction is unknown.
c.1970	Built	A group of service and storage sheds was installed west of the Road Crew Camp mess hall. Exact date of action is unknown.
1970	Paved	Several secondary roads were paved. These included the drive to the Tuolumne Meadows Stables, the segment of the Great Sierra Wagon Road from the base of this drive to the Tioga Road, and the short drive accessing Ranger Camp from Tioga Road north of the barn.
1970	Demolished	The 0.5 mile segment of the original Great Sierra Wagon Road running west from Ranger Camp to the Tioga Road was obliterated.
1970	Paved	Several new parking lots were established. These included one just west of Ranger Camp, a trailhead parking area just east of Bug Camp, and a parking area just outside the Tuolumne Meadows Stables.
1973	Land Transfer	The Sierra Club sold its 160 acres at Soda Springs to the National Park Service.
1976	Abandoned	The family campground at Soda Springs closed. This was the end of sanctioned camping within the meadow.
1976	Built	The sewer system was extensively upgraded. This work included construction of a second oxidation pond west of the original, construction of a new pumphouse (#3009), a new sprayfield, and a new sewage receiving station below Road Crew Camp. A dump station for recreational vehicles was also installed.
1976	Altered	The original pumphouse (#3017) was rendered obsolete by the new sewer system. Its holding tank was filled in and the building converted to an employee residence.
1980	Altered	The old mess hall at Road Crew Camp was converted to a visitor center.
c.1980	Paved	Visitor parking lot and driveway extension at Road Crew Camp were paved in association with conversion of site to visitor center.
c.1980	Paved	Path from parking lot to the old Road Crew Camp mess hall was paved in association with conversion of site to visitor center.

Year	Event	Description
c.1980	Built	Visitor comfort station was constructed on northeast end of parking lot at Road Crew Camp.
1998	Altered	The sewer system was upgraded by the City of San Francisco with the installation of new collection lines.

Statement of Significance

Summary and Administrative Background
The Tuolumne Meadows Historic District lies on the eastern side of Yosemite National Park in California's Sierra Nevada mountain range. The district is approximately 3.5 miles long by 1 mile wide, comprising about 1200 acres, and includes most of the meadow along with parts of the surrounding lodgepole pine forest where much of the physical development directly associated with the meadow has occurred. Following an intentional pattern introduced during the 1920s with the master planning process, development is concentrated in several distinct areas throughout the district. Both the master plan and a common theme of outdoor recreation link most of these areas and justify their treatment as a single historic district physically unified by its orientation to the meadow itself. Only one of these developed areas—the Soda Springs—will be documented in a separate CLI as a component landscape of the parent district, because of its unique status as a private inholding throughout the entire period of significance. This status allowed the development of the Soda Springs property to follow a different course from that of the rest of the district.

The Tuolumne Meadows Historic District is strongly characterized by its relationship to the ecological and scenic environment of the meadow itself. The meadow provided the aesthetic draw which encouraged recreational visitation in the first place. It also defined many of the physical limitations as well as opportunities exploited in the architectural and landscape features of the district. This relationship between the built and natural environment has evolved within two broad historical contexts—*outdoor recreation and environmental preservation*; and *architecture, landscape design, and the construction of the visitor experience*—which were established in the Yosemite National Park Multiple Property Document. This document was prepared in 2004 by the University of Nevada at Las Vegas working in consultation with National Park Service historian David Louter. The present Cultural Landscapes Inventory (CLI) record builds upon that document and provides a more detailed analysis of Tuolumne Meadows within the larger context identified by it.

Several National Register properties and one National Historic Landmark property already exist within the Tuolumne Meadows Historic District. These include the Tuolumne Meadows Mess Hall and Bunkhouses (Buildings 3010, 3011, 3012, 3013, 3014, and 3015), listed on the National Register in 1978; and the Tuolumne Meadows Ranger Stations and Comfort Stations (Buildings 3000, 3005, 3021, 3022, and 3023), listed on the National Register in 1978. This CLI record establishes the significance of Tuolumne Meadows as a historic district with boundaries and a period of significance that are different from those established for these individual properties, though it includes them. Its purpose is to identify and evaluate the broader cultural landscape in which these individual developments occur.

Historic Context
The Tuolumne Meadows Historic District is locally significant under National Register Criteria A and C. Under Criterion A—association with historic events or broad patterns of history—the district reflects the emergence of recreational tourism in the high mountains of California and the development of a physical infrastructure to support this use. The district is also significant under Criterion A for its association with early National Park Service master planning, which guided this development; and for its association with the Civilian Conservation Corps and other depression-era relief programs, which implemented much of its construction.

Tuolumne Meadows is significant under Criterion A for the important role it has played in the context of American outdoor recreation as one of the most popular and influential early staging areas for mountaineering in the American West. Naturalist and early mountaineer John Muir was inspired by his

visits to Tuolumne Meadows from as early as 1868 and later planned for its preservation as a national park during a camping excursion here in 1889. The meadow became a seasonal headquarters for the Sierra Club, a mountaineering group which Muir helped found three years later. The Sierra Club used the meadows as a starting point for many of its alpine excursions, and attracted scores of new enthusiasts to the increasingly-popular sport of mountaineering every year. In 1916 members of the Sierra Club were influential in sponsoring the bill that established the National Park Service. Its first director, Stephen Mather, was himself an avid mountaineer and had once participated in a Sierra Club outing. Sharing a common view of Tuolumne Meadows with the Club, the new agency continued to promote its use as a gateway to the high mountains.

This close association with mountaineering helped define the sort of development which took place in Tuolumne Meadows from earliest times, limiting the type and extent of development to what was compatible with the primitive activities cultivated by outdoor recreationists. The earliest recreational infrastructure was introduced in an *ad hoc* manner, catering to the immediate needs of the occasional mountain tourist without reference to any plan or long-term goals. This sort of development began in 1885 with the hospitality provided by John Lembert in his primitive Soda Springs cabin and culminated with the construction of the Tuolumne Soda Springs Lodge in 1916 before any attempt was made to organize development in a more systematic way.

By the late 1920s, however, NPS architects, landscape architects and engineers began to implement a master plan to coordinate and unify development throughout the park. This was an expression of a service-wide design philosophy intended to provide for the public enjoyment of the national parks without compromising their natural and scientific attributes. To ensure that parks were developed in accordance with the principle of balanced resource management, comprehensive "master plans" were devised in order to control the extent and nature of physical development. The preference among the planners who drew them up was for small, concentrated nodes of development distributed widely throughout a park and connected by corridors of scenic trails and highways, but otherwise surrounded and isolated by wilderness. The purpose underlying this pattern of development was the preservation of ecological and scenic integrity so far as possible without sacrificing desirable visitor amenities. The early Park Service planners believed that, by concentrating the services which would inevitably impair the natural resources that visitors came to enjoy, they could isolate their impact to a handful of relatively small and discrete locations and thereby mitigate its overall effects on the larger environment. The master plans they drew up were truly comprehensive, consisting of many sheets of technical drawings with textual supplements appended. Their artfully-rendered plans included designs for buildings, roads, parking areas, trails and trailheads, utilities, park service administrative areas and residential communities. The principle of unified, comprehensive planning which this effort represented ensured that further development within the parks would meet the needs of visitors in the most efficient but least intrusive way. The legacy of the master planning process is still apparent in the physical shape and landscape patterns defining most of the national parks in the United States.

The earliest master plan to cover Tuolumne Meadows was developed between 1929 and 1931 as a component of a more comprehensive plan for all of Yosemite National Park. This plan embodied the most essential characteristics of the National Park Service's master planning philosophy in its earliest form. Proposed development would be concentrated in isolated nodes and organized in such a way that impact on both the natural and scenic environment would be minimized as much as possible without compromising essential visitor services. Existing developed areas like the Tuolumne Meadows Lodge and High Sierra Camp would be integrated within the plan of proposed future development, but their functions would be subordinated to the overall scheme. This meant that some services historically associated with a particular site might be relegated to another location in order to concentrate all services

of the same type in one place. This principle of concentrated development originated in the seminal research of U.S. Forest Service biologist Emilio Meinicke, who argued that such concentration reduced the effects of development on fragile resources. Meinicke's recommendations were directly expressed in the design of the Tuolumne Meadows public campground, one of the first of its kind in the nation. The majority of the Yosemite master plan for Tuolumne Meadows was implemented over the succeeding decade and still contributes substantially to the landscape characteristics defining the district.

The Tuolumne Meadows Historic District is also significant under Criterion A for its association with depression-era federal reconstruction programs, especially the Civilian Conservation Corps. President Franklin Delano Roosevelt implemented the Civilian Conservation Corps in the first month of his presidency, and it soon became one of his most popular and best-remembered programs of the New Deal. The National Park Service was one of the earliest beneficiaries of the CCC, due largely to its master planning effort from the previous few years. Master planning had prepared the Service to put together detailed work outlines on short notice and allowed it to bid successfully for CCC assignments against less-prepared agencies. Within five months after the start of the CCC, camps were established at Yosemite and crews were working on a variety of manual labor jobs. At first, these were relatively unskilled tasks involving landscape clean-up or trail construction. But eventually, the CCC were used for skilled construction of small-scale architecture as well. Much of the Tuolumne Meadows master plan was completed by CCC crews during the five years they resided in the district. Some of the most distinctive and architecturally significant structures in Tuolumne Meadows were built by the CCC, including the rustic comfort stations in the public campground and the visitor contact station. The Road Crew Camp originated as a CCC project, and all of the oldest structures comprising the core of this cluster were built by the enrollees. The site remains an excellent example of CCC design and handicraft.

The Tuolumne Meadows Historic District is also significant under Criterion C—embodying distinctive characteristics of a type, period, method of construction or the work of a master—because it includes outstanding examples of park rustic architecture and naturalistic landscape architecture. Based on 18th and 19th century theories of picturesque beauty, the rustic and naturalistic styles were used extensively in NPS architecture and landscape architecture during the 1920s and 1930s. Designers aimed to harmonize artifice and nature by minimizing the visual impact of constructed development, while accentuating the picturesque qualities of nature. Indigenous rock, lumber, and native plants were the basic materials used by them, so that park architecture and landscape architecture would appear to have evolved organically from the surrounding landscape. Forms of the rustic and naturalistic styles were intended to be subordinate to the natural environment and were to appear hand-crafted or primitive. This design era coincides with the most significant period of development in NPS history, a time when the NPS created what is now recognized as the hallmark style for development in natural areas where the preservation of scenic beauty was desired.

Much of the extensive development which occurred in Tuolumne Meadows during the period of significance reflects a fortunate coincidence between President Roosevelt's depression-era relief programs and park rustic architecture and landscape design. Relief programs like the Civilian Conservation Corps emphasized manual over mechanized labor to maximize employment and placed great value on craftsmanship. The rustic style was perfectly suited to the patient handiwork of the CCC and benefited from such labor being readily available during the depression. Many of the finest examples of the park rustic style in Tuolumne Meadows would, in fact, be difficult to replicate under modern social conditions, and thus they reflect a unique moment in time as much as they embody a distinctive architectural style. This influence of depression-era labor on the realization of rustic design principles has been noted in at least two of the existing National Register nominations—the Tuolumne Meadows Mess Hall and Bunk Houses; and the Tuolumne Meadows Ranger Stations and Comfort Stations. The present CLI

demonstrates that the scope of these influences was considerably wider and affected the entire landscape comprising the Tuolumne Meadows Historic District.

Period of Significance, 1885-1961
The period of significance for the Tuolumne Meadows Historic District extends from 1885 to 1961. The earlier date represents the year that pioneer John Lembert filed the first homesteading claim in Tuolumne Meadows. Lembert lived here seasonally and played host to the occasional visitors who passed through the region, providing advice, hospitality and pasturage for their stock. Even if it was not his explicit intent, Lembert's homestead represented the first stage of recreational development in Tuolumne Meadows, because it provided the earliest services for the recreational tourist. The latter date represents the completion of all Mission 66 improvements for Tuolumne Meadows. Mission 66 has historic significance in its own right as a comprehensive development plan affecting the entire National Park system. This CLI does not argue that development which occurred in Tuolumne Meadows between 1957 and 1961 as a result of Mission 66 planning is significant on the basis of Mission 66 itself. It asserts only that the projects implemented under the Mission 66 process contributed to and culminated the effort to coordinate development which had begun in 1929 with the undertaking of the first NPS master plan for the district.

Integrity
The historic development within Tuolumne Meadows retains all seven aspects of integrity. The developed areas and contributing features remain in their original location, and the district as a whole has not suffered any substantial change in its spatial configuration or size. The original design of the district as proposed in the early master plans is still clearly legible in the present landscape. The designs of many of the contributing architectural and landscape features within this district have also retained their integrity and still convey the ideas and principles of their original style. Many of the original materials used in these features have either been retained and preserved or replaced in kind. The integrity of the historic workmanship has also been largely retained. Maintenance throughout the district still relies on many of the same labor-intensive manual techniques as those used during the period of significance. The setting of the district has not changed. The feelings and associations that were present during the period of significance are still evident and strongly convey the district's historic significance. The modern visitor can readily see the several distinct stages through which recreation-oriented development in the meadow has evolved, from the earliest unmanaged improvements of pioneers like John Lembert, through the Park Service's intentional planning of the 1930s, to the culmination of development with the Mission 66 improvements that began at the end of the 1950s. Although development has been ongoing since the end of this period of significance, subsequent changes are compatible with the historic character and uses within Tuolumne Meadows and do not significantly impact the overall integrity of the historic district.

Physical History

Introduction
Tuolumne Meadows is a broad alluvial plain perched high in the mountains near the eastern escarpment of the Sierra Nevada. It lies about three miles west of Yosemite National Park's eastern boundary at Tioga Pass. The meadow is approximately 8,600 feet above sea level and is surrounded to the north, east, and south by high granite peaks rising to 13,000 feet or more. The comparatively deep soil of the meadow was deposited by the Tuolumne River, which originates in the mountains to the east and slows here for awhile before resuming its precipitous descent down the narrow "Grand Canyon of the Tuolumne" further west.

Tuolumne Meadows stretches approximately three miles east to west, bisecting the normal grain of the Sierra Nevada ridgeline. A cleft in the mountains to the east leads down a steep, but negotiable, canyon to the Mono Basin. To the west, the mountains slope downward at a gentler grade, making a long but relatively easy descent through a succession of different forest types: lodgepole pine, red fir and mixed conifer. This is one of the few good routes across the Sierra, and Native Americans were using it for at least 4000 years before Europeans arrived in the area. [1] Tuolumne Meadows lies in the middle of the route and makes a natural resting spot for travelers along the way. Dense archaeological deposits confirm popular accounts that eastern Paiute and western Miwok stopped here to camp and trade during the summer. [2] Even after the Euro-Americans displaced the Indians, Tuolumne Meadows remained an important place to rest on the journey through the mountains, as it does to this day.

This natural situation on the route between east and west has shaped much of the character of Tuolumne Meadows' development in historic times. The path which Indians used for millennia eventually became the Tioga Road (more or less). The earliest non-Indian development occurred when precious metals were discovered on the east side of the mountains. Looking for an efficient way to transport heavy machinery and ore between the mines and a railhead, the miners built a wagon road through Tuolumne Meadows along the old Indian path. Later development centered around recreation rather than industry, especially after the establishment of the national park in 1890, but the road continued to play a central role, providing a way for tourists to travel deep into Yosemite's high country in relative comfort. Tuolumne Meadows represented a natural staging area for further explorations into the more remote wilderness beyond. Both the Sierra Club and the National Park Service promoted this opportunity to make the high mountains accessible to greater numbers of people, and this common goal laid the foundation for much of the recreational development that followed in Tuolumne Meadows. Providing access to the high country remains one of the principles still guiding Park Service management of the area.

The physical development of Tuolumne Meadows can be divided into several distinct periods. The first period includes sporadic, unrelated development associated with pastoralism and mining up to about 1885. The second period extends from 1885 to 1928 and represents a more intense level of development characterized for the most part by a common interest in recreation. But the development during this period was largely uncoordinated and without plan. The third period extends from 1929 to 1940 and is the most important in terms of defining the character of the Tuolumne Meadows Historic District. It begins with the formation of a comprehensive development plan and extends through its gradual realization until World War II interrupted all further work. The fourth period, from 1941 to 1954, represents a hiatus between development caused by the war and its immediate aftermath. The fifth period begins in 1955 with the resumption of planned development under Director Conrad Wirth's Mission 66 program. This program did not introduce anything new to the overall character and landscape organization of the district. Development during this period resulted in the completion of the program of development begun more than three decades earlier. The final period begins after the completion of the

Mission 66 development in 1961 and extends to the present. A few significant changes are made, but most work consists of maintaining or upgrading the existing utilities, structures and landscapes which have already been established and is consistent with the historic use of the area.

Early History: Pre-1885

Tuolumne Meadows first came to the attention of Anglo-Americans in 1852, during the final act of the Mariposa Indian War. [3] That summer a group of miners prospecting in Yosemite Valley had been attacked and two of their number killed by members of the Yosemite Miwok. In retaliation for the Indians' attack, a detachment of army troops under the command of Lt. Tredwell Moore was sent to Yosemite in June of that year. Already greatly diminished by the previous year's fighting, the Miwok had no desire to engage regular American soldiers and fled over Mono Pass to take refuge among their Paiute allies to the east. Lt. Moore pursued the Indians all the way to the Mono Basin but was unable to capture them. Along the way, however, Moore passed through Tuolumne Meadows, becoming probably the first non-Indian ever to do so. [4] He also explored the eastern slopes of the Sierra all the way down to their foot, collecting samples of gold ore. After abandoning the search for the fugitive Indians, Moore and his men returned the way they had come. While seemingly a failure, this journey would have profound and lasting consequences for the area.

Mining

The ore samples that Lt. Moore brought back attracted the interest of many of the miners working the gold fields on the west side of the Sierra. One of these men, Leroy Vining, set out to retrace Moore's path almost immediately. Vining made it to the Mono Basin where Moore had gathered his samples and prospected around the area for a few years before he gave up mining to establish a homestead and sawmill on Vining Creek. The town of Lee Vining was later named after him. Other prospectors followed Vining east during the next few years, encouraged by new discoveries around the eastern base of the Sierra. In 1857 a shopkeeper named Tom McGee, who owned stores in towns on both sides of the Sierra, cleared and blazed the old Mono Trail from Big Oak Flat to Mono Pass in order to make it easier to pack his supplies across it. This was the first improvement made to the route that would eventually become the Tioga Road. [5]

At this time, knowledge of California's geology and mineral resources was based largely on hearsay. The state government had recognized the need for a more formal investigation into these matters almost since the year of its formation in 1850. Ten years later this desire was finally met with the establishment of the California State Geological Survey, headed by geologist Josiah Dwight Whitney. The Geological Survey spent the next four years traveling the length and breadth of California, meticulously inventorying its natural resources, particularly its mineral wealth. The party reached Yosemite in the summer of 1863 and set up camp at Soda Springs on June 26 of that year. Whitney and his men made a lasting imprint on Tuolumne Meadows by officially giving the place the name it still bears. [6]

Up to this point most of the prospectors traveling the Mono Trail had been intent on getting to the other side of the Sierra without spending much time in between. But in 1860 a small group heading east stopped long enough in Tuolumne Meadows to explore the surrounding country. One of their members, a dentist named George W. Chase, identified a rich silver ledge bisecting a small rocky peak named Tioga Hill about six miles north of Mono Pass. [7] Chase collected samples and erected a claim monument but never returned. Rumors of Chase's lost silver mine became a local legend for the next fifteen years until the ledge was rediscovered by a young shepherd from Sonora. During the summer of 1875, William Brusky was tending his father's sheep, which he had brought up into the mountains to graze on the still-green grass of Tuolumne Meadows, when he found Chase's old claim monument. Familiar with the legends, he knew immediately what he had found and began prospecting. Over the next three years,

Brusky located four claims in the area, which together became known as the Sheepherder Lode. Another lode was later found running parallel to it about 800 feet further south and became known as the Great Sierra Lode. Within a few years the region around Tioga Hill began swarming with miners, most coming up the east side of the Sierra from already established mining communities like Bodie. More than 350 independent claims were eventually made in the Tioga Mining District, which was organized in 1878, which extended eight miles north to south from Tioga Hill to the foot of Bloody Canyon and west into Tuolumne Meadows as far as Soda Springs. Little mining was ever done in Tuolumne Meadows itself with the exception of John Lembert's desultory shaft.

By 1881 the Great Sierra Mining Company had bought up all of the independent claims on Tioga Hill and was reorganized as the Great Sierra Consolidated Silver Company on November 10. The company was owned by a group of New England investors and capitalized at $8 million. The Great Sierra Company originally concentrated its activities directly over the main lode on Tioga Hill, where it sank the Great Sierra Mine. The small company town of Dana Village was established here to support this operation. The remains of several stone cabins, a blacksmith shop, and a small stone powder house are still present, and the site was listed on the National Register of Historic Places in 1978. [8] Early in 1882, the Great Sierra abandoned its operations at Dana Village and began driving a tunnel into the east side of Tioga Hill, hoping to intersect both the Sheepherder and the Great Sierra lodes at an oblique angle from that direction. The tunnelers encountered solid quartzite and soon realized that they would need pneumatic drills to make any effective headway. Eight tons of machinery was ordered and subsequently dragged through the snow on wooden sleds from Lundy on the eastern side of the mountains up to the tunnel at over 9,000 feet. There were no roads to Tioga Hill at that time, and the closest transportation corridor lay on the east side of the Sierra at the foot of a nearly-vertical escarpment almost 4000 feet below the elevation of the mine. The task of raising the heavy equipment up these mountains took over two months and cost the lives of two men.

By May of 1882 the machinery was in place and a new company town called Bennettville was established near the tunnel mouth. But the arduous and costly experience of transporting this equipment up to Bennettville had convinced the company directors that a road to their mine would be a worthwhile investment. The most practical route to the Great Sierra Tunnel, however, was not the shortest. Lundy lay only nine miles to the east, but the difficulty of the terrain in this direction made a road impractical. It had been possible to sled the drilling equipment up this route only during the early spring when snow still lay deep on the ground, and the deaths of two men in an avalanche underscored the risks of traveling in these conditions. The terrain sloped much more gently to the west and passed through sheltered forests rather than over exposed rocky escarpments, but the distance to the nearest road head was nearly 60 miles. Nevertheless, the mining company chose this route along the old Mono Trail, and in late summer of 1882 began surveying its Great Sierra Wagon Road.

Actual construction began that fall, starting from the road's western terminus at Crocker's Station (or Big Oak Flat) and continued only as far as Carl Inn before winter shut down the operation. Work resumed the following season on April 27, and the road was completed on September 4, 1883. It had taken 130 days for a crew of 160 men—many, if not most, of whom were Chinese—to build 56 1/4 miles of road, averaging nearly a half mile of progress each day. The original Great Sierra Wagon Road went from Big Oak Flat east through Aspen Valley to White Wolf, turning south from there to Yosemite Creek and then east again to Tenaya Lake and Tuolumne Meadows, culminating at Bennettville just north of Tioga Pass. The total cost was $61,095.22, at least part of which the directors hoped to recover in tolls. [9]

A Congressional commission which inspected the road in 1899 observed that, "The grades vary from 0 to 10 percent and the width from 10 to 20 feet. The road, however, was skillfully laid out and it may safely

be said that most of it has a grade of only about 3 percent." The commission also noted that the road was "exceedingly well built, the bridges having fine stone abutments, and there is a particularly well-built section of sea wall along the shore of Lake Tenaiya." [10] Much of the care taken in building this road was due to the expectation that it might later be used as a railroad grade. The company directors had actually incorporated the California and Yosemite Short Line the same year they began construction on the wagon road, but the railroad was never built. By the following summer, as the Great Sierra Tunnel reached 1784 feet under Tioga Hill, the Great Sierra Consolidated Mining Company went bankrupt, and all work ceased. It was widely believed at that time that rich ore, estimated to exceed $12 million in value, lay less than 200 feet from the end of the bore. Numerous attempts were later made to restore the company and resume mining, but little ever came of it. [11] The company's other major asset—its wagon road—was also effectively abandoned in 1884, though it never ceased to be used by travelers through the mountains, and calls would be made repeatedly over the next two decades for the owners to either maintain the road or sell it to someone who could. [12]

Pastoralism

The other significant resource industry associated with Tuolumne Meadows and the Sierra high country during the latter half of the nineteenth century was pastoralism, particularly sheepherding. Sheepherders had been entering the mountains since as early as the 1850s. [13] The original impetus that brought them here was the demand for fresh meat by the gold miners, a demand which also benefited the much larger and more established cattle industry. But the mutton industry was given an unexpected boost in 1864 by a severe drought, which virtually destroyed California's prolific cattle herds. [14] Sheep are more resistant to drought and were better able to survive this natural catastrophe, largely because they can be moved more easily to high country pasturage where the grass remains green throughout the summer while lowland grasses are withered and sere. Not only did the drought increase the market for mutton and produce a dramatic surge in the number of sheep, it also drove these rapidly increasing herds further and deeper into the mountains themselves, placing a growing strain on the subalpine meadow ecosystems. Among the numerous seasonal shepherds driving their flocks through the mountain meadows during the 1860s was a young Scotsman named John Muir, who spent his first summer in the Sierra working as a hired hand for a small outfit in 1869. Muir later became an outspoken critic of the sheep industry and a leading conservationist of the American West. He was instrumental in the creation of Yosemite National Park in 1890 and helped found the Sierra Club two years later in order to protect the park, becoming the organization's first president. [15] But in 1869 Muir was only beginning to form the opinions that would later coalesce into a powerful environmental statement. Many of his ideas about sheep grazing began to emerge right then, as his party reached Tuolumne Meadows in late summer and established a camp at Soda Springs. While the sheep grazed on the surrounding wild pastures, Muir spent his idle time exploring the high mountains and growing to love their sublime beauty. He also observed the devastating effect which the sheep appeared to have on the vegetation, especially in the meadows, where they trampled and denuded fragile riparian habitat. Debate remains as to how harmful the effect of sheep grazing truly is, but to Muir's eyes the issue was beyond doubt, and the conclusions he formed that season stayed with him for the rest of his life. [16]

Since sheepherders were itinerant and their presence in the high mountains seasonal, they introduced few permanent features on the landscape. Their most lasting impact was the effect on vegetation caused by their herds and by the fires they frequently set to open up the forests to more grassland. In a few cases, however, they also built simple cabins for temporary shelter. One of these stood at the southern edge of Tuolumne Meadows as recently as 1956, when it was described in detail by Robert Uhte. William Colby remembered it being there as early as 1894 and thought it predated the creation of the park in 1890. It was Colby who attributed its construction to sheepherders. Uhte described the cabin from his first-hand account in the following from the *Sierra Club Bulletin*:

> "This small house is on the Elizabeth Lake Trail in Tuolumne Meadows and is in reasonably good condition. It was roughly and crudely constructed of unusually large lodgepole timbers, extending from the base log on the ground to a height of approximately nine feet at the ridgepole. Entrance is gained through a doorway about five feet in height at the left side of the facade. The manner in which the logs were joined at the corners produced a fairly tight cabin, thus minimizing the need for chinking. However, some chinking, in the form of small wedges placed parallel between the logs, was used in places. Although round logs were utilized, the corner joints were secured with a box corner. Only two courses of shakes were used on the roof, which produced a shabby appearance." [17]

The cabin has since disappeared, though when and how is not known. If any ruins remain to mark its location, they have not been discovered.

Early Development: 1885-1928

The first attempt to establish a permanent settlement in Tuolumne Meadows came around 1885, when New Yorker John Baptiste Lembert (or Lambert, as his name was frequently written) filed a homestead claim for 160 acres on the southwest quarter of Section 5, T1S, R24E. [18] He received patent on the land in 1895. Lembert came to Yosemite at an undetermined date some years before 1885. Initially, he worked in and around Yosemite Valley, taking such jobs as winter caretaker for Snow's Hotel at the foot of Nevada Falls. He eventually built a residence on the Merced River near Cascade Creek, where he continued to spend winters even after establishing his Tuolumne Meadows homestead. Lembert's homestead included a corner of Soda Springs, and he constructed a wooden exclosure around the springs to protect the water from contamination by the ubiquitous herds of sheep. This exclosure resembled a small log cabin without floor or windows. It had a single door and may have originally been roofed, though it has been open to the sky during most people's memory. The structure is the only improvement attributable to Lembert that still remains in the meadows. Not far from the springs, Lembert also built a small residential cabin at the approximate location of Parsons Lodge. It consisted of only one room with a stone foundation and fireplace and was built of round logs joined by a saddle notch and chinked with shakes. The roof was also clad with split shakes. [19] He later built a log fence around the perimeter of his property to protect it from sheep and other livestock. For a fee, he would allow passersby to graze their livestock within this enclosure.

Tuolumne Meadows was too high in altitude for subsistence farming, and Lembert experimented with many creative ideas to support himself here. These included raising Angora goats and bottling the water from the Soda Springs to sell in the valley. But the Angora goats were all killed in an early snow storm, and the bottled water never became popular. He even tried mining for gold on his property, though this had more to do with proving his claim than attaining wealth. Lembert finally happened on a profitable business after a government scientific expedition, visiting the meadows in the early 1890s, informed him that museums around the world would pay for plant and insect specimens. Lembert had considerable knowledge of both botany and entomology and knew the local populations intimately. Scientists and university students became regular guests at his homestead after his reputation began to circulate among their circles. At the same time rumors also began circulating about his conjectured wealth. The rumors were almost certainly false, but they had fatal consequences. John Lembert was found murdered in his lower Merced River cabin during the winter of 1896, presumably for his money but his murderer was never found. In the 1950s, a new species of butterfly was found and named Lembert's Green Hairstreak (*Callophrys sheridanii lemberti*) in honor of the work that Lembert had done in the field of lepidoptery.

Early Tourism

Lembert's interest in homesteading at Tuolumne Meadows may have been motivated by his reclusive nature, but he also played a very active part in the development of tourism in Tuolumne Meadows. As already noted, one of the several business ventures which Lembert undertook was leasing his land to visitors for grazing their animals. At the time he established his homestead, there were probably more sheepherders passing through Tuolumne Meadows than tourists, but the latter were on the increase. The earliest party known to have visited Tuolumne Meadows purely for pleasure came during the summer of 1858, having hiked up Bloody Canyon from Mono Lake. [20] The group included a woman carrying an infant. John Muir was himself more of a tourist than a sheepherder, and his well-documented sojourn during the summer of 1869 may be counted one of the early recreational visits to Tuolumne Meadows. Later visitors would have found Lembert's cabin at Soda Springs a natural place to stop and refresh themselves, and Lembert provided hospitality for all who came.

Such rustic hospitality was already becoming a tradition in the Yosemite high country. John L. Murphy, an early Yosemite guide, had preceded Lembert by several years with his own homestead on the north shore of Tenaya Lake, which he had established in 1878. While not exactly in Tuolumne Meadows, Murphy's homestead stood at the western approach to the area. His purpose in settling here appears to have been directly associated with tourism. The house was situated along the Mono Trail, which anyone traveling from Yosemite Valley to Tuolumne Meadows would have taken. Murphy designed his cabin to serve as a hospice for visitors traveling along this route, and it later became a popular roadhouse after the construction of the Great Sierra Wagon Road. An excerpt from Bodie's *Daily Free Press*, dated August 18, 1882, described it as follows:

> The ample meadows surrounding Lake Tenaya at its eastern and western extremity are now owned by J.L. Murphy, who settled there and fenced in the property years ago. This gentleman also stocked the lake some years ago with trout, which are now quite abundant in its waters. On the northern shore, at a point about half way between the two ends, he has built a comfortable log house for the accommodation of guests, all the board work for which, roofing, etc., has been turned out by the laborious process of whipsawing. [21]

The original cabin was crudely built of round logs, but Murphy later added a more sophisticated frame structure, twice again as large as the original cabin, and obviously designed to accommodate the increase in visitors after the Great Sierra Wagon Road was completed. In 1881 John Leonard began leading pack trains along the trail between Yosemite Valley and Lundy on the east side of the Sierra. He would have made Murphy's cabin a regular stop, and probably Lembert's place as well. [22]

After Lembert was murdered in 1896, his brother Jacob sold the property to James McCauley's two sons, John and Fred. James McCauley was already well-known among Yosemite tourists for the Mountain House Inn he managed at the top of Glacier Point, accessed by the dramatic four-mile trail, which McCauley had commissioned John Conway to build in 1872. McCauley was also the originator of the famous "firefall," which his sons would prepare while their father managed the inn. James McCauley homesteaded in Big Meadow (Foresta) about the same time that Lembert had established his homestead in Tuolumne Meadows (he arrived in Yosemite more than a decade earlier, however). He was killed in 1911 when he was thrown from a wagon as he drove down the Coulterville Road. James McCauley's sons continued the tradition of ranching which their father had begun at Big Meadow. The Tuolumne addition to their now-extensive holdings was obviously acquired to provide additional pasturage for their livestock. This would become a point of contention between the McCauley brothers and the Army administration who took responsibility for the management of Tuolumne Meadows after 1890, since the McCauleys had to drive their stock across federal land in order to reach their quarter section inholding at

Soda Springs. In 1902, the McCauleys built a one-story cabin, which they used as a seasonal bunkhouse. They also replaced Lembert's original boundary fence, which had collapsed by this date. [23] The McCauley cabin still stands and is maintained by the National Park Service, but Lembert's improvements have long since dissolved into the soil, with the sole exception of the exclosure around the soda springs at the southeast corner of his property. The structure is no longer needed to keep out thirsty livestock but is preserved nonetheless and helps mark the location of this natural water feature.

The Creation of The National Park, 1890

By the middle of the 1880s pressure began to build for the creation of a mountain park large enough to encompass all or most of the alpine regions surrounding Yosemite Valley. [24] The idea was first seriously proposed by state engineer William Hammond Hall following an official survey of Yosemite in 1881. At the time Yosemite was owned and managed by the state and comprised only the valley itself. Hall's recommendations were included as an appendix to the state commissioners' annual report for 1885-86. [25] Among several major threats to the park, Hall identified unmanaged grazing and timber harvests on the upper reaches of the water shed as among the gravest. These activities resulted in the denudation of forests and meadows at higher elevations and caused premature runoff, soil erosion, and unnaturally dry summer conditions further downstream. In order to mitigate these threats, Hall recommended that the park grant be enlarged by nearly 200,000 acres to include the entire Tuolumne and Merced River watersheds, so that the commissioners could have control over what happened upstream. Lacking this authority, Hall cautioned, the commissioners would lose the ability to effectively manage the valley itself. Not surprisingly, the commissioners agreed with Hall and began lobbying for an enlargement of the Yosemite Grant almost immediately after their report was published. Hall was not motivated by any interest in preserving natural beauty or pristine wilderness. He was concerned more with the proper management of potentially useful resources and simply did not want to see them squandered by selfish private interests. This practical view was evidenced a few years later when he prepared a survey of the upper reaches of the Tuolumne, Merced and Stanislaus River watersheds for a proposed system of seven High Sierra reservoirs. Included in his 1889 report were detailed drawings of these reservoirs, one of which would have flooded Tuolumne Meadows. [26]

Resentment against the way the commissioners had already managed Yosemite Valley resulted in strong opposition to Hall's proposal to give the commissioners even greater responsibilities. The opposition came primarily from business people with vested economic interests in the valley—innkeepers and liverymen, for example. They were not opposed to the enlargement of the park itself but to the continued authority of the state commissioners over the park, since, they believed, the commissioners had mismanaged the existing grant during the previous two decades. The chief complaint was against favoritism, but some of the commissioners' land management policies were also resented—for instance, their large-scale clearing of vegetation and pruning of large trees to improve vistas. The resulting debate may have helped the campaign to enlarge the park, however, since it drew widespread attention to the issue. One thing that all sides did agree on was that a larger park was needed. The disputants only disagreed on whose authority it should be created under and how it should be managed. Opponents of the state commissioners favored retracting the Yosemite Grant altogether and placing both the valley and the proposed enlargements under a federal military administration with responsibility for management given to a body of civilian experts. This, they believed, would better represent local private interests and result in a more equitable distribution of resources among the stakeholders and reduce the risk of corruption. [27]

In 1889 a third voice reflecting an entirely different perspective entered the debate. That summer John Muir had returned to Yosemite after an absence of many years. He was accompanied by his friend Robert Underwood Johnson, assistant editor of the popular literary magazine, *The Century*. Arriving in

Tuolumne Meadows, Muir was appalled to discover how intensive grazing had degraded the environment, leaving little but barren dirt and eroded stream banks. Discussing the problem over their campfire at Soda Springs, Johnson encouraged Muir to get involved in the campaign for an enlarged Yosemite Park in order to protect Tuolumne Meadows and the surrounding mountains from further depredations. Johnson convinced Muir to write two articles for *The Century* while he himself exercised his influence back east to promote the necessary legislation. [28] The views of these men, and the constituency they eventually galvanized, differed significantly from that of either the state park commissioners or their local critics. The latter were essentially pragmatists, concerned with how the park's natural resources should best be managed to realize their highest economic value. They disagreed over how this value should be distributed, but not over the value itself. Muir and Johnson, however, were idealists who believed that nature and natural beauty had an intrinsic value that should be preserved for its own right regardless of whether such preservation benefited anyone monetarily or not. As it happened, the two men believed that the goals of preservationism would be served best under federal management, and so they supported local interests against the state commissioners. They may also have been joined by the powerful railroad lobby, who saw the potential in the creation of a national park for increasing tourist travel over their passenger lines. The following year Representative William Vandever submitted a bill to establish Yosemite National Park. About the same time, Muir's articles also appeared, eloquently describing the beautiful lands that would be protected by the proposed park. It is impossible to know whether Muir's writing influenced the outcome in the legislature, but the bill quickly passed both houses of Congress and was signed into law on October 1, 1890. The question of the state grant was left alone for the time being, and Yosemite Valley remained under California's authority, while the new federal reservation surrounded it on all sides.

The Army Administration, 1891-1913

Lacking any more appropriate alternative, the new Yosemite National Park was placed under the administration of the U.S. Army. [29] Troop I of the Fourth Cavalry, under the command of Captain A.E. Wood, arrived in the spring of 1891 and set up camp near Wawona. The Army's chief responsibility during the subsequent twelve years of its tenure was the protection of the park's natural resources, and it fulfilled this mission primarily through fire suppression and the exclusion of illegal users. The latter included both shepherds and poachers. This resulted in several significant changes for Tuolumne Meadows. Though it took a few years to happen, the intense grazing which Muir and Johnson had witnessed only a few years earlier finally came to an end, and the meadow must have grown back soon after the removal of this impact. At the same time, the fires which the shepherds regularly set at the end of each grazing season were also curtailed. This practice had been done to prevent the encroachment of trees into the grassland. At Tuolumne Meadows, a natural barrier to the forest exists in the hydrology which defines the wetter portions of the meadow itself. But the shepherds may have created a much larger grassland which extended well beyond the perimeter of the natural meadow. If so, the cessation of seasonal burning might have resulted in the reversion of this anthropogenic grassland into today's lodgepole pine forest. [30]

Lying in the northeastern corner of the park, Tuolumne Meadows was strategically important for the Army in its attempt to exclude trespassing shepherds, since many of these shepherds came into the park from the eastern side of the mountains. In fact, so many of these intrusions originated in Bridgeport, that an Army commander once recommended that a garrison be established in that town. Tuolumne Meadows was not only an obvious destination for the shepherds, with its abundant grasslands and relatively easy accessibility, it also provided a natural staging area for Army patrols protecting that side of the park. In 1903 the Army established an auxiliary patrol station at Soda Springs. Six more stations were also established at other remote locations throughout the park, but Tuolumne Meadows was considered the most important of these. It was named "Post No. 4" and was staffed with as many as nine privates and

one non-commissioned officer (NCO), who was designated the commander of the eastern region. In 1904, the Army recommended making its Soda Springs auxiliary station a permanent post along with a similar station at Merced Lake. No mention was ever made of physical improvements in association with this post, nor was the McCauley cabin mentioned. And given the strained relations between the McCauley brothers and the Army, it is unlikely that the Army ever used the formers' cabin. It is far more likely that Tuolumne Meadows Post No. 4 consisted of a seasonal tent bivouac and contributed no permanent features or lasting modifications to the landscape. [31]

Another consequence of the Army's administration was the extension and maintenance of the trail system throughout the park. This was closely associated with the Army's mission of protection, since trails provided the necessary infrastructure to move patrols efficiently through the backcountry. The rudiments of Yosemite's entire backcountry trail system were established by the Army between 1891 and 1913. Tuolumne Meadows represented a natural hub in this system, and many of the Army's most important patrol routes radiated outward from this central location. A distinctive T-shaped blaze can still be seen on many of the trees along the routes which the Army regularly used. [32]

In 1916 the newly-created National Park Service inventoried the existing trails in Yosemite. Most of these had been constructed by the cavalry, though a few of them may have been older, originating as Indian paths. The following list represents those trails which were present in the Tuolumne Meadows area in 1916. [33] Most of these trails are still present today and are maintained by the National Park Service for recreational use, though minor realignments have occurred:

- The Sunrise Trail, extending from Clouds Rest to Soda Springs via Sunrise Mountain. This trail later became a segment of the historic John Muir Trail.

- The Mono Pass Trail, extending from Soda Springs to Mono Pass and continuing down Bloody Canyon to the Mono Basin below, following the route of the ancient Indian path. The Army's acting superintendent for Yosemite described this important trail in the following: "The most important trail through this park is known as the Mono trail, and commences at Wawona, and after winding up the side of the canyon of the South Fork of the Merced takes a northeasterly course, crossing the Merced River just above the Nevada Falls; thence, after heading many tributaries of this latter river, drops over the divide between it and the Tuolumne, crossing the latter at Tuolumne Meadows, and taking an easterly course, passes the summit through the Mono Pass or what is locally known as Bloody Canyon .... There are several other trails of less importance that I am searching out and blazing to preserve them. They facilitate communication between different points, and their preservation is necessary to aid more rapid policing of the park." [34]

- The Lyell Fork Trail, extending from Soda Springs up the Lyell Canyon to Donahue Pass. This trail is also a segment of the John Muir Trail.

- The Rafferty Creek Trail, extending from the mouth of Rafferty Creek on the Lyell Fork to Tuolumne Pass.

- The Soda Springs Trail, extending from Soda Springs to Glen Aulin along the Tuolumne River.

- The Dog Lake Trail, a short one mile segment extending from Soda Springs to Dog Lake. The cavalry reputedly kept a corral at Dog Lake for pasturing its stock. The Tuolumne Meadows Lodge later used this corral for its own pack stock until establishing a more convenient corral on the Dana Fork adjacent to the lodge. [35]

• The Mount Conness Trail, which continued from Dog Lake to the summit of Mount Conness. The latter part of this trail up to the summit is no longer maintained, but vestiges are still present and may be followed by the ambitious hiker.

Only two modern trails are not attributable to the Army period: the trail from Tenaya Lake to Soda Springs, which was built by the CCC in the late 1930s; and the Elizabeth Lake Trail along Unicorn Creek. The latter was built sometime between 1916 and 1934.

A final issue with which the army remained deeply concerned was the repair and maintenance of the Great Sierra Wagon Road. The Army's interest in this matter was closely related to its involvement in trail maintenance. The Great Sierra Wagon Road was the only route traversing the park from east to west. It made accessible some of the most important high country grazing destinations—principal of which was Tuolumne Meadows itself. Were the road maintained in good condition, it would have greatly facilitated the Army's movement of supplies and personnel to these backcountry locations. But the Swift family, who had inherited the Great Sierra Wagon Road (among other assets of the Great Sierra Consolidated Silver Company) had effectively abandoned the road and allowed it to decay during the entire Army tenure at Yosemite. The Army was extremely critical of this situation, all but accusing the Swift family of criminal actions. [36] Since it appeared obvious that the family no longer had any interest in the road, the Army recommended that the federal government purchase the right-of-way (or acquire it through condemnation) and assume responsibility for its proper improvement and maintenance. This recommendation was repeated regularly in the annual reports for years, but the suggestion was never acted upon. [37]

In 1913, with World War I looming on the horizon, the Army withdrew all of its staff from Yosemite. No provision had been made for the Army's replacement, though discussion had already begun within the Department of the Interior and among supporters of the parks for the creation of a new government agency dedicated exclusively to the management of the national park system. This idea would not bear fruit for another three years, however. In the interim, Yosemite National Park—which now included the valley after its recession to the federal government in 1905—was managed by only fifteen civilian rangers and their acting superintendent. [38] Given these limited resources, these years represented a holding period and saw no new development or significant changes within the park.

The Sierra Club at Soda Springs

Apart from the National Park Service itself, probably the most important organization associated with the conservation and recreational development of Tuolumne Meadows was the Sierra Club. The Sierra Club was established in 1892 by John Muir and a handful of other conservation-minded Californians. The idea for the club had originated in the campaign to create Yosemite National Park. Muir and his friends had been pleased with the outcome but were worried that opposing interests—especially from the resource extraction industries—would continue to agitate for rights that would compromise the new park. These conservationists founded the Sierra Club in order to protect the park and to lobby for the preservation of additional natural areas in the high mountains. John Muir was elected first president, a position he maintained until his death in 1914. [39]

The Sierra Club pursued its goal of natural preservation in two ways. One was through direct political action to influence legislation, as many of the founding members had done during the recent campaign to create Yosemite National Park. The other was through promoting wilderness recreation. The idea behind the latter was to get more people interested in natural preservation by cultivating their love for wild and natural places through direct exposure to them. To do this, the club published information about the mountains in its small journal, the *Sierra Club Bulletin*. It also provided maps and trip descriptions for interested hikers. By 1900 the club began discussing the idea of actually hosting outdoor excursions.

John Muir endorsed the idea and appointed club member William Colby chairman of the newly-created Outings Committee. The following summer, Colby organized the first Sierra Club Outing. He was assisted by Edward Parsons, an accomplished mountaineer who had just joined the club. The event consisted of rugged, day-long expeditions into the alpine backcountry from a base camp at Tuolumne Meadows. It proved to be very popular, and club members returned year after year for the annual trips, which came to include an active social program and serious nature study through reading assignments and natural history lectures given by Muir and other experts around the evening campfire. The trips provided necessary invigoration to the young club and attracted many new members to it. They provided not only a pleasant recreational experience, but instilled in club members an appreciation for the beauty of the mountains and an abiding commitment to protect them from all threats of spoliation. [40]

Given the prominent role that Tuolumne Meadows played in this history of the Sierra Club Outings, it was natural that the Club would be interested in acquiring the property at Soda Springs when the McCauleys' indicated their intention of selling it in 1912. [41] Club members were also concerned about preventing inappropriate development on the site, which they feared might result if the property passed into other hands. Almost immediately after purchasing it in June of that year, the Club began discussing plans to erect a small lodge to provide a more convenient base for the excursions it continued to organize from Tuolumne Meadows. Bernard Maybeck, a Berkeley architect renowned for his rustic bungalow style, was retained, and plans were prepared the following year. The attractive stone building was completed in 1915 and named Parsons Lodge in honor of Edward Parsons, who had died the year before. [42] The lodge was sited on a low rocky bluff overlooking the Tuolumne River where the old Great Sierra Wagon Road crosses it on a narrow bridge. Although the lodge was not a Park Service undertaking, its simple, straight-forward design and use of native materials would prove to be an important forerunner of the rustic style later adopted by the National Park Service. McCauley's cabin lies several yards west of Parsons Lodge within the verge of the lodgepole forest. The cabin was retained by the Sierra Club and used to house the lodge caretaker. The Sierra Club also established two small campgrounds in the relatively dry grassland west of Parsons Lodge.

The year 1915 proved to be important in the development of Tuolumne Meadows for two other events involving the Sierra Club, both of which would have enduring consequences for recreation in the area. The first was the passage of an appropriations bill by the state senate to establish the John Muir Trail. The idea for a trail to follow the crest of the Sierra Nevada began in 1884 with Theodore Solomons, then a young boy living on his father's ranch near Fresno. [43] The idea remained an obsession with Solomons for the next decade until he finally undertook a series of exploratory expeditions between 1892 and 1895. Hiking south along the Sierra ridge from Tuolumne Meadows, Solomons pioneered much of the route as far as the King's River in present Sequoia-Kings Canyon National Park. Inspired by his example, Joseph N. LeConte, a professor of engineering from Stanford University and active Sierra Club member, led the first expedition in 1908 to follow the entire route at one time. LeConte and his party hiked from Yosemite Valley to the Kern River near the base of Mt. Whitney—approximately 300 miles—in 27 days. In 1909 LeConte prepared a detailed map of this route based on measurements he had taken the previous year. Five years later, on the 1914 Sierra Club Outing, members proposed lobbying the state to appropriate money for trail development in the High Sierra, and in January the following year a bill was introduced to appropriate $10,000 for the construction of the trail which LeConte had surveyed in 1909. In honor of the Club's president and founder, who had died only a few weeks earlier, it would be called the John Muir Trail. The bill passed later that year and work began in August. All of the route within Yosemite National Park followed existing trails. The initial segment from Yosemite Valley to Tuolumne Meadows followed the Sunrise Trail, bringing hikers directly to Soda Springs. From here the trail followed the route of the Great Sierra Wagon Road to the Lyell Fork Trail and continued along this segment to the edge of the park at Donahue Pass. But the bulk of the trail south of here, which lay across

U.S. Forest Service land, had to be constructed from scratch. The arduous work continued for more than two decades, with additional appropriations eventually totaling $50,000. The John Muir Trail was finally completed in 1938.

The other major event of 1915 was the opening of the Tioga Road. [44] The Sierra Club played an important role in this event as well. One of the Club's Outings alumni, Stephen Mather, was appointed assistant to the Secretary of the Interior, with jurisdiction over the national parks, in January of 1915. Mather immediately became interested in repairing the Great Sierra Wagon Road and reopening it to public traffic, but he found that government funds could not be used to maintain private property. In frustration, he determined to buy the road and quickly raised $15,000 to this end. Using the Sierra Club as an intermediary, Mather had the road transferred as a gift to the national park in April that year. A government crew then made the necessary repairs and had the road open by July 28. No longer a toll road, it was now a public highway and was renamed the Tioga Road, though it remained unchanged in every other respect. In 1910 a state highway had been completed up the east side of the Sierra along Lee Vining Creek to Tioga Pass. Mather's road now connected with this segment, creating a through highway over the mountains for the first time.

The new Tioga Road immediately began to attract motorists to Tuolumne Meadows. Some 350 automobiles passed over the highway in its first year alone. With the Sierra Club's recent improvements, the opportunities for outdoor recreation in the area became significantly more accessible to more people than ever before. Tuolumne Meadows now entered a new period in its history, with its future identity characterized almost exclusively by recreational development. Mark Daniels, the acting superintendent of Yosemite National Park, noted these important changes in his annual report for that year,

> The Lambert Soda Springs at the Tuolumne Meadows, on the Tuolumne River, about 25 miles by trail from Yosemite Valley, have been of considerable interest to the visitors to the Yosemite National Park this year, owing to the fact that it has been the first time in the history of these springs that it has been practicable for tourists to make trips to this part and have fine service, such as was given them by the Sierra Club in connection with its camp located near the Soda Springs. There were registered at this camp this season 2,236 visitors. This was partially due to the Tioga Road, which has recently been opened and affords the tourist a convenient way of reaching that point by automobile. The Lambert Soda Springs have this year for the first time received any large extent of recognition, and it would be well for the Government to take the necessary steps to advertise these springs. [45]

Daniels also included the following description of the soda springs. It was excerpted from a recent report prepared by the U.S. Geological Survey and provides an interesting portrait of the area from that year:

> The springs rise at the northern edge of Tuolumne Meadows, about 125 yards north of the river's edge, at the upper border of a grassy slope. There is only one spring of appreciable flow, but water bubbles from numerous vents near by. The spring rises in a funnel-shaped pool about 14 inches in diameter in a little log cabin that protects it. In August, 1909, it yielded about 1 gallon a minute, but its discharge is said to vary somewhat. The water is clear, strongly carbonated, and effervescing, but considerable iron is deposited in the pool. Within the cabin are also two small vents of inappreciable discharge marked by bubbling. Six other similar pools, a few inches in diameter, lie on a low mound of iron-stained lime carbonate beside the cabin, and another group of eight small pools is located 15 to 25 yards northeast of the cabin. The water in all of the pools is carbonated and small amounts of iron and lime carbonate are deposited at nearly all of them. Efflorescent soda salts also appear in the adjoining grassy land.

> The following analysis shows the water to be primary and secondary alkaline in character:..." [46]

The report continues with a detailed chemical analysis of the water.

The National Park Service in Tuolumne Meadows.
One year after the opening of the Tioga Road, the Organic Act passed, creating the National Park Service. True to its mission of political action in support of the national parks, the Sierra Club had helped lobby for the passage of this act. Now the parks finally had a government agency dedicated exclusively to their support and management. Stephen Mather became the agency's first director. He appointed Washington B. Lewis as first superintendent of Yosemite.

The Tuolumne Meadows Lodge and High Sierra Camp
One of the first developments sponsored by the new agency in Tuolumne Meadows—if Mather's Tioga Road is not included—was the Tuolumne Soda Springs Lodge, located on the Dana Fork at the far eastern end of the meadow. The lodge was built by the D.J. Desmond Company in early 1916 and opened in time to accommodate visitors during that year's tourist season. Following Director Stephen Mather's idea that concession permits be granted only to one company for each park, D.J. Desmond had become Yosemite's sole concessionaire in 1916. Mather hoped to avoid what he considered the ill-effects of competition and ensure a higher level of service through a concessionaire monopoly overseen by the Park Service. The Desmond Company was given responsibility for managing numerous facilities throughout the park, including the Glacier Point Hotel and the old Sentinel Hotel in the valley. Wanting to attract more visitors to the back country, Superintendent Lewis asked the Company to open several backcountry lodges as well. The Tuolumne Soda Springs Lodge was one of these. Others were constructed at Tenaya Lake and Merced Lake during the same year. All three backcountry lodges were nearly identical in design, comprising a central lodge with kitchen, dining room and commissary surrounded by a cluster of tent cabins. Both lodge and cabins were single story wooden frame structures covered in canvas. At Tuolumne Meadows the main lodge building comprised two side-by-side tent cabins. A separate tent cabin was also set up to house a small general store and auto service station. It included a single gas pump out front and stood on the Tioga Road some distance from the lodge itself. [47]

Although the Tenaya and Merced Lake lodges proved immediately popular during their first season, Tuolumne Meadows attracted fewer patrons and closed early, leading the Desmond Company to consider moving it to another location. Before this could happen, however, the Desmond Company went bankrupt, and all three of the High Sierra Lodges closed in 1918 after only three seasons of business. The Company continued limited operations under receivership for another year before it was reorganized in 1920, becoming the Yosemite National Park Company. But the High Sierra Lodges remained closed.

In 1923 Superintendent Lewis recommended that the High Sierra Lodges be opened again and that several new ones also be established. He and Director Mather had developed the idea for a High Sierra Camp loop to attract visitors into the Yosemite backcountry. The Tuolumne Meadows Lodge reopened that year and served as a base for hikers setting out on this loop. A special hikers' camp was established next to the river near the lodge. It consisted of a canvas dining room with dirt floor and two one-storey, 18 feet by 24 feet canvas dormitories, one for men and one for women. A hot meal and a bed were available for weary hikers at 75 cents per night. Tenaya Lake Lodge also reopened in 1923, and Merced Lake reopened the following year. Four additional backcountry sites were selected by National Park Service naturalist Carl Russell and built by the Yosemite National Park Company. By the following season, the separate hikers' camp at Tuolumne Meadows had been incorporated into the lodge itself. Thereafter, the terms "Lodge" and "High Sierra Camp" were used interchangeably, or together, for the Tuolumne Meadows facility.

In 1924 the Yosemite National Park Company made an appraisal of its Yosemite properties. The lodge was no longer referred to as Tuolumne Soda Springs Lodge but simply as Tuolumne Meadows Lodge (or Tuolumne Meadows Lodge and High Sierra Camp), the name it carried up to the present day. This appraisal record gives one of the earliest detailed descriptions of the facility. It indicates that the following structures were present by that time: the main lodge, measuring 18 feet by 84 feet, and serving as combination lobby, dining room, commissary and kitchen; four dormitories, two each for men and women, all measuring 18 feet by 24 feet; two bathhouses, one each for men and women, measuring 18 feet by 24 feet; one storeroom measuring 10 feet by 16 feet and another measuring 18 feet by 24 feet; three toilet rooms of varying sizes; and 50 individual cabins, all measuring 12 feet by 14 feet. All of these buildings were canvas-covered, wood-frame structures on raised wood platforms. There were also two hard-walled structures: a one-story, peeled-log ice house, measuring 15 feet 6 inches by 18 feet 6 inches; and a one-story log frame storeroom with wood shake siding, measuring 20 feet by 38 feet. The latter may have been used to store the canvas from the tents during the winter. There was also a small store, built of canvas over wood frame and measuring 18 feet by 36 feet. It included a single, self-measuring gas pump for automobiles. Sewage was disposed in five wood-lined cesspools, each 10 feet by 10 feet by 4 feet deep. These were connected to the two bath houses and three toilets by 4 inch tile pipe, laid approximately 3 feet deep. The water supply was drawn from the river through 1-1/2 inch wrought iron pipe, much of which was simply laid on the surface. A 4 foot high wooden fence enclosed a small horse corral, while a much larger enclosure for pasturage was formed with twisted wire stapled to trees. The main lodge and at least some of the other structures had been present in 1916, but others may have been added in 1923 when the lodge reopened. [48]

Within a few years of this appraisal (c.1926), a new service station and general store were built to replace the original tent cabin on Tioga Road. This new building was a square, wood frame structure with windows on all sides above low, shake-clad walls. Simple provisions were sold inside, and a new gas pump was installed out front.

The Administrative Area (Ranger Camp)
1924 was an important year for the Park Service's development of Yosemite. That year witnessed the first fruits of Director Stephen Mather's vision for the new Yosemite Village, which would become the center of activity in the valley, both government and private, until the Mission 66 redevelopment more than three decades later. Both the main post office and the administration building were completed in 1924, firmly anchoring the new village and establishing a precedent for the dramatic rustic style that would characterize most of the park's major buildings for the next thirty years. Stephen Mather regarded Yosemite as a model for the rest of the park system and wished to establish a precedent that would help guide development throughout all the parks. Mather had indicated his intention when he funded the construction of the first major Park Service building in Yosemite, the Ranger’s Club, which was built in 1921 at the site of the proposed new village and headquarters area. It set an early standard for the style of rustic architecture the Park Service would later adopt. Central to the park planners' conception of this style was the idea that architecture should harmonize with its natural surroundings. Local materials were used wherever possible, and architectural idioms were chosen that seemed culturally appropriate to the location itself. For example, Swiss vernacular elements were often used in alpine regions like Yosemite. This was already apparent in Mather's Ranger’s Club. One of the most significant influences on the park rustic style, however, was the Arts and Crafts movement, with its emphasis on natural forms and manual craftsmanship. But the park rustic style was ultimately a synthesis of all these sources and necessarily varied from place to place depending upon the local environment and traditions. [49]

This early design aesthetic was apparent in the first group of structures to be laid out by the Park Service in Tuolumne Meadows. The administrative area was planned at about the same time as the new Yosemite Village. The earliest available document is a sketch plan from 1921, which indicates that the location and spatial organization of the area had already been loosely determined. Like the new Yosemite Village, the Tuolumne Meadows administrative area was conceived as an asymmetrical and relatively open aggregation of buildings. This reflected one of the important principles of the emerging design aesthetic of the Park Service, namely, that constructed features should be adapted to their environment in such a way that they harmonized with it, even disappearing into it as much as possible. Avoiding symmetry in the arrangement of structures allowed existing natural patterns to remain dominant and prevented drawing too much attention to the artificiality of the design. Leaving the aggregation relatively open also allowed constructed features to be interspersed with natural ones and avoided having a dense concentration of only artificial elements. These principles help to explain the apparently haphazard lay out of the Tuolumne Meadows administrative area. The same principles were guiding development occurring simultaneously at other parts of the park, especially in the valley, and relate the Tuolumne Meadows development to an overall design concept that was beginning to take shape throughout Yosemite.

The desire to harmonize constructed features with their natural environment was expressed not only in the spatial organization and careful siting of groups of buildings, but in the architecture of the individual buildings themselves. The rustic style was intended to look appropriate in its forest setting. Wood was either oiled or painted neutral colors, and local materials were used as much as possible. When work began on the Tuolumne Meadows administrative area in July of 1924, the first task was the falling of over 120 large trees to use in building the structures. By season's end, a total of six major buildings had been finished (or nearly finished). These included a large barn (bldg. #3003), two residences (bldgs. #3001 and #3002), a comfort station (bldg. #3020), the ranger checking station (bldg. #3000), and a mess hall for the road maintenance crew. All of these buildings were wood frame with vertical board or board and batten siding and simple gable roofs. Peeled round logs were used in framing parts of all the buildings except the naturalist's residence (bldg. #3001). Logs were used for the roof rafters, purlins, and corner braces. Internal framing consisted of milled lumber, but round logs were applied to the outside of the walls to suggest post and lintel style framing. The mess hall was probably built in a similar fashion—logs are mentioned in a contemporary description—but no detailed evidence has survived (the building was demolished in 1933). The one building that did not share the same design characteristics was the naturalist's residence. Its walls were shingled and had no applied logs or corner bracing. [50]

A very simple water supply and sewer system was also installed by the end of the season. This consisted of 3,880 feet of 2 inch water main and 1 inch connecting lines for the water supply. Water was drawn directly from the river, but the location of the intake is unknown. Sewage was drained into nearby cesspools. Two inch galvanized pipe was used for shower and sink waste, while 4 inch vitrified pipe was used for toilet waste from the comfort station. In 1930 a small saddle room (bldg. #3004) was also constructed near the barn. This was a simple gable-roofed structure, measuring 12 feet by 10 feet, with vertical board siding and a shingle roof. [51]

With increased visitation to Tuolumne Meadows made possible by Tioga Road, the Park Service became concerned about controlling negative impacts on the meadow ecosystem. This concern was driven by two further considerations. First, the City of San Francisco was nearing completion of its Hetch Hetchy water supply system downstream from Tuolumne Meadows and would begin delivering water to city users by 1933. The Raker Act of 1913, which allowed this development to occur, stipulated that campers within the watershed would not be allowed to contaminate the water supply. Fulfilling this obligation required greater regulation of campgrounds within Tuolumne Meadows and the construction of adequate sewage

disposal systems. As camping became more popular, the need for these measures became proportionately greater.

A second consideration was driven by Emilio Meinicke's research into soil compaction and the resulting damage to park forests and meadows. Meinicke was a plant pathologist with the U.S. Forest Service who was contracted by Stephen Mather in 1926 to investigate damage to the giant sequoias in Sequoia National Park. [52] In July of 1927, Meinicke also came to Yosemite to study similar problems suffered by the Grizzly Giant in the Mariposa Grove. [53] As a result of these and related studies in the state parks, Meinicke recommended confining campers to designated camp sites and limiting vehicular access within natural areas. He proposed a set of principles for campground design that would help achieve these goals. These recommendations first appeared in the Forest Service publication *A Camp Ground Policy* in 1932, while an expanded version of the report appeared in 1934, titled *Camp Planning and Camp Reconstruction*. The Park Service concurred with Meinicke's findings and decided to apply his recommendations to alleviate the degradation of natural systems in Tuolumne Meadows. Planning began about that time for the construction of a campground designed according to Meinicke's principles. Up to then, campers at Tuolumne Meadows regularly drove their vehicles through the meadows and set up camp wherever they liked. Meinicke's advice would not only help protect the fragile vegetation but would also address San Francisco's concerns about maintaining water quality by moving campgrounds and campground privies away from the river and tributary streams. Meinicke himself would help supervise the construction of the new campground.

The Tuolumne Meadows Development Plan: 1929-1940

The camping situation represented only one part of the problem, however. With rapidly increasing visitation at Tuolumne Meadows, it became apparent to park managers that a plan was needed to coordinate development throughout the region in order to mitigate its negative effects as much as possible. The idea for creating master development plans had already been conceived with the first such plan at Mount Rainier National Park in 1926. [54] Park Service Director Stephen Mather had been so impressed with this precedent that he requested Thomas Vint, the chief landscape architect in the Branch of Plans and Design, to prepare similar plans for all the park units. These were not actually called master plans until 1932. Prior to that, they were simply referred to as development plans. In 1929, the preparation of these comprehensive development plans became required for each park. In response, Yosemite's resident landscape architect John Wosky began that year to prepare a detailed development plan for the park which included specific recommendations for Tuolumne Meadows. [55] Wosky worked in consultation with Superintendent C.G. Thomson, various Park Service officials, and representatives of the Yosemite Park and Curry Company. A "Park Development Outline" of approximately 160 pages was submitted in November, 1931. [56] The plan was complete by 1934, though like all master plans it would continue to be modified over the years. [57]

The recommendations of the final master plan remained largely the same as those which Wosky had already outlined in 1929. Both plans proposed that development in Tuolumne Meadows be confined to the line of timber along the southern edge of the meadow grassland between the Company lodge on the east and the point where the proposed Tioga Road realignment would leave the Great Sierra Wagon Road on the west. A minimum frontage of 1,000 feet from the river for all development was also proposed. The main features of this development plan included a government utility camp, a public campground, the concessionaire's lodge and associated housekeeping section. Don Tresidder, president of the Yosemite Park and Curry Company, wanted to build an entirely new lodge at the base of Poppy Dome, and later versions of the plan show the Park's acceptance of this location as the site of future Company development. [58] The original plan also envisioned consolidating all government functions in a single facility at the western edge of the development zone and eliminating the existing administrative area. The

intention of this plan was to reduce human impact on the natural environment of Tuolumne Meadows as much as possible without seriously compromising visitor access or government services. The long term solution that planners like Wosky envisioned was the concentration of human activities within distinct areas according to function or use. This would limit human intrusions on the surrounding environment. The end result would be a constellation of small, well-defined developments surrounded by undeveloped open space or wilderness. [59]

This proposal was consistent with the master plan format which had been developed at Mount Rainier a few years earlier. Mount Rainier's plan had established a precedent for concentrating development within specific areas defined according to function. At Mount Rainier, eight categories of development areas were defined: an administrative area, residential area, utility area, public auto camp, water supply, sewage disposal, garbage disposal, and a concessionaire unit. At Tuolumne Meadows, these categories were compressed and simplified into four units. All government facilities—administration, residence, and utility—were combined into a single administrative area, which would be located at the future Road Crew Camp. Sewage, water supply, and garbage were combined within a single utility plan. And plans for the concessionaire's facilities were treated separately. Although Wosky's plan was always referred to as the Tuolumne Meadows development plan, it is clear from its purpose and date that it belongs to the early stages of the National Park Service's master planning process. Later versions of the Yosemite National Park Master Plan contained most or all of Wosky's original proposals for Tuolumne Meadows.

In June of 1930 Superintendent Thomson visited Tuolumne Meadows with the park engineer and Don Tresidder to discuss the development plan. During this visit, the men agreed that the most important component of the proposed plan was the installation of adequate utilities—above all, the water supply system—and they determined to begin with this project. The system was surveyed the following month and an intake was located on the Dana Fork. On August 1, E.B. Hommon, sanitary engineer with the U.S. Public Health Service, inspected the proposed system and approved the design. On August 6 a small work crew arrived to establish camp. They erected a tent dining room adjacent to the existing cook house in the administrative area just north of the ranger station. The dining tent was large enough to seat thirty men. The crew also erected several more tents in the same area to serve as sleeping quarters. On August 9 the remainder of the crew arrived and work began on the utility system. Approximately 6,000 feet of pipe were installed before operations had to be shut down for the winter on October 11th. [60]

The following season began with the construction of a much larger and more substantial work camp during the last two weeks of June. This camp included a 16 foot by 40 foot dining room of wood frame construction with walls of vertical planking and a canvas roof. It was designed to accommodate sixty men and was built adjacent to the existing cook house. The new camp also included 15 tent cabins on wood platforms, each measuring 12 feet by 14 feet and equipped with a stove; one pit toilet; a bath house with three showers and a heating compartment (probably of wood frame construction); and a water-cooled meat house, measuring 7 feet by 8 feet. [61] This complex was sited in the administration area (Ranger Camp) between the ranger station and the barn, although the bath house stood just west of the barn (the exact location of the tent cabins is not known). Work continued on the utility system where it had left off the previous year. Except for a few details, the entire system was completed by early September up to—but not including—the individual lines for the proposed public campground.

The water system began with a rubble masonry diversion dam on the Dana Fork. [62] The dam was 4 feet high by 16 feet long. Water entered through a vertical 1 inch screened intake pipe and then traveled through 450 feet of 8 inch cast iron pipe to a reinforced concrete settling tank. This tank measured 21 feet long by 6 feet wide by 6 feet 10 inches deep and was excavated 5 feet into the ground. A small wood frame chlorinating house (bldg. #3006) was built directly over the tank. [63] Water continued from the

settling tank through 4 inch cast iron pipe and followed the Great Sierra Wagon Road through the old administrative area, with a valve and hydrant at the ranger station. From here the line passed beneath both forks of the river and continued west along the proposed new alignment of the Tioga Road, terminating just beyond the intersection where the new alignment diverged from the original road. This brought the water supply through the entire length of the proposed Tuolumne Meadows development area. The line was laid an average of 3 feet 6 inches deep. Freezing winter temperatures required that the entire line be drained thoroughly every fall. To accomplish this, valved extensions were cut into the main line at various increments. These extensions were made of 2 inch pipe salvaged from the previous water supply system. [64]

Work on the public campground also commenced during the 1931 season. This included surveying and staking out the roads and water lines; installation of twenty wood garbage can holders; and the construction of one wood frame comfort station (bldg. #3024). [65] This building was constructed during July and early August and completed August 14. It was sited at the far western end of the proposed campground not far off the new alignment of the Tioga Road. [66]

An adequate sewage system remained an unresolved challenge for the Tuolumne Meadows Development Plan. The previous year, sanitary engineer E.B. Hommon had made an initial investigation of the problem and determined that the preferred solution—a gravity-fed system that would transport sewage out of the watershed entirely—was rendered impossible by the natural topography. He proposed that such a system be constructed with a pumping station at some date in the future but that in the meantime each comfort station should be connected by a short sewer line to its own cesspool. [67] This was done for building #3024, the comfort station built in August, 1931. Elsewhere, pit toilets continued to be used.

In 1932 a portion of President Hoover's destitute relief funds advanced to Yosemite was used to implement the next phase of the campground development. These funds permitted the employment of 35 laborers on a full-time basis throughout most of the short High Sierra work season. Following the survey which had been staked out the previous year, this crew constructed roads and camping sites according to a Meinicke-inspired design. Meinicke himself had visited Tuolumne Meadows on several occasions during the previous few years and contributed directly to the development of the design. He may have been present at one point or another during its implementation as well. The completion report filed in November of this year described the initial development as follows: "The main loop road, 3,658 feet in length and 15 feet wide, was built enclosing an area of 16.9 acres which is divided almost equally into four smaller areas by three cross roads, each approximately 600 feet long and 9 feet wide." As this portion of the campground was nearing completion during the middle of October, Superintendent Thomson visited the work site for a routine inspection and expressed his opinion that the development was not large enough. He insisted that an additional loop be added, extending the developed area into the meadow east of the original site. "The eastern loop, 3,126 lineal feet, 8 feet wide, was constructed appending the main loop road, and without cross roads provides a supplementary area, if a strip 100 feet surrounding is included, of 18.7 acres." This resulted in a total developed area of 35.6 acres by the end of 1932. [68]

Construction required the falling of nearly 300 trees. All but 70 of these were dead lodgepole snags, killed by an earlier infestation of the needleminer larvae. The felled trees were limbed and bucked into three-foot sections and stacked. Stumps were removed with dynamite. Boulders were also blasted, depressions filled with rock fragments, and the developed areas graded level. Final surfacing was accomplished by laying coarse gravel to a depth of just under 4 inches. This surface treatment was applied only to the main loop road. The gravel was obtained from the Tuolumne River. In several places where the road would impede the natural hydrology, ditches were excavated by hand and culverts laid.

Head walls were constructed of dry laid stone to an average height of 4 feet. Miscellaneous woody debris was burned on site. [69]

Reconstruction of the Tioga Road

Since its reopening in 1915, the Tioga Road had been difficult to maintain. Not only were fallen trees a constant problem, the road itself was built of aging materials and, in many places, followed an alignment that was less than ideal. Severe storms in 1922 washed out many sections and required the Park Service to make extensive repairs. In 1924, maintenance crews began systematically replacing the original wood-lined culverts with corrugated iron. This work continued for the next five years. New culverts were installed at Tuolumne Meadows in 1927 at Gaylor Creek, Budd Creek and in side channels along the Dana Fork. [70] But by this time interest was growing in a major upgrading of the entire road. In 1928 Acting Superintendent E.P. Leavitt discussed a possible realignment of the road through Tuolumne Meadows with Park Service engineers. The following year some initial widening of the road was done but no serious work undertaken. Then in 1931 Superintendent C.G. Thomson renewed this discussion with engineers from the Bureau of Public Roads (BPR), a division of the U.S. Department of Agriculture which had responsibility for major road projects in the National Parks. They decided that the Tioga Road would be reconstructed in three phases, with the first phase covering the section extending in an easterly direction from Cathedral Creek through Tuolumne Meadows to Tioga Pass. [71]

A survey was conducted during the 1931 field season by BPR engineer K.E. Nissi, and designs were prepared the following winter. The 1932 federal highway standard was used, stipulating a width of 26 feet. The minimum curve radius was 500 feet and the maximum grade 6 percent. Corrugated metal pipe culverts ranging in diameter from 18 to 48 inches were used throughout the section except in the following instances where reinforced concrete box culverts were installed: at Budd Creek (4 foot by 5 foot), Unicorn Creek (double 6 foot by 3 foot), Moraine Creek (5 foot by 4 foot), and at Gaylor Creek (5 foot by 4 foot). An 87-foot bridge was planned for a new crossing over the Tuolumne River. The entire project would be financed by the City of San Francisco, which was obligated to pay the federal government $1.25 million in $250,000 annual increments for failure to develop recreational infrastructure around its Hetch Hetchy reservoir as required by the 1913 Raker Act. [72] The payments had to be used for road construction, while much of the labor was provided through federal reemployment programs which had been set up in response to the Depression.

The contract was awarded in September of the following year (1932) to C.G. Willis and Sons of Los Angeles. Although it was too late in the season to start road work, Willis and Sons began moving equipment to Tuolumne Meadows that fall and set up a labor camp at the foot of Budd Creek before snows forced all work to cease. The contractor's camp was built of modular houses which had been salvaged from the Olympic Village in Los Angeles earlier that year. Road construction began the following July and continued for the next two seasons, with all work complete by October 1, 1934. The road was open to traffic during the last few weeks of the season, although it remained unpaved. [73]

One of the most striking features of the new road was the bridge over the Tuolumne River. Its broad deck was constructed of reinforced concrete beams resting solidly on two piers. Both the piers and abutments were constructed of large, uncut granite rubble, which visually contrasted with the unadorned concrete surfaces of the bridge's deck and handrailing. This combination of material and techniques resulted in an unusual synthesis of sparse modernism with the more classic rustic style. The bridge took two seasons to complete and required a considerable amount of aggregate to mix the quantity of concrete needed for its massive deck. 35,000 cubic yards of borrow was taken from a sand bar at the junction of the Dana and Lyell forks just upstream from the construction site. This transformed the bar into a lake, 4 to 20 feet deep and about 300 feet square. The bureau engineers were pleased with the solution, as they believed

that an unsightly feature—the sand bar—had been removed to create a scenic attraction—the lake. The Park Service expressed no opinion on the matter and apparently approved of the contractor's method. [74]

The alignment of the new Tioga Road diverged from the original Great Sierra Wagon Road just east of Budd Creek, staying south of the Tuolumne River and skirting the edge of the meadow until it crossed the river on its new concrete bridge just below the confluence of the Dana and Lyell Forks. Shortly after crossing the river, the new alignment intersected the old wagon road once again, crossing it to the north and paralleling the old road until well beyond the eastern edge of the meadows. This new alignment left several segments of the original road stranded. Two of these segments have survived as important circulation features in their own right, though their original relationship to the Tioga Road is no longer obvious. One of these segments begins just east of Budd Creek, striking off from the new Tioga Road in a northerly direction. This section of the old Great Sierra Wagon Road has become both an important hiking trail—a section of the historically-significant John Muir Trail—as well as the main pedestrian access leading to Parsons Lodge. After turning eastward below the lodge, this road segment returns in a southeasterly direction back to the new Tioga Road. This part of the road is still maintained for Park Service vehicles while the eastern portion of the road is open for use by the general public.

Just upstream of the Tuolumne River Bridge, the old road from Parsons Lodge crossed the new Tioga Road and continued along its original alignment past the government's administrative area (Ranger Camp) and the Tuolumne Meadows Lodge. This segment was maintained as an access route for both these facilities, but now they no longer lay on the main route entering Tuolumne Meadows. [75] This isolation forced several changes on both sites. The Park Service was no longer able to operate its ranger station in the old administrative area as the principal entrance station for Yosemite's eastern side. Anticipating this change, the Park Service had already built a new entrance station at Tioga Pass in 1931. The old ranger station remained a visitor contact station, but even this abbreviated role was considered inappropriate for its now-isolated location, particularly as the construction of the new public campground—which was nearing completion at this time—would soon shift the preponderance of visitors further west. In response, the Park Service began planning a new visitor contact station, which would be sited on the new road alignment in front of the public campground. This structure would not be completed until 1936. When the new station entered service, the original ranger station ceased to have any public function and became an employee residence.

Another consequence of the Tioga Road realignment was the isolation of the Tuolumne Meadows Lodge. Company president Don Tresidder worried that this would negatively affect business, especially for the Company's store and service station. These were situated along the Great Sierra Wagon Road in front of the old administrative area (Ranger Camp), not far from the original ranger station. When all traffic entering Tuolumne Meadows passed this way, the ranger station, service station and the store all functioned as a unit, catering to the needs of each motorist for information, fuel and provisions all in one stop. Now an inconvenient detour was required to find these services, and many visitors may have passed them by altogether. In response, the Company began to consider relocating its facilities at about this time.

The Civilian Conservation Corps

The Tuolumne Meadows development plan received an enormous boost in 1933 when the new president, Franklin Roosevelt, took office at the nadir of the Great Depression. Roosevelt immediately began working to introduce a number of legislative acts designed to rejuvenate the ailing economy and provide relief to the unemployed and financially destitute. Two of these acts had direct consequences for the National Park Service. The National Industrial Recovery Act created the Public Works Administration (PWA), which provided fiscal allotments to agencies like the National Park Service to purchase necessary supplies and to employ skilled labor on federal contracts. It was hoped that the government would

thereby stimulate private business and contractors by increasing the market for their services. [76] The other important legislation was the Federal Unemployment Relief Act, which created a corps of young men to work on federal and state administered forestry conservation projects. This extremely popular program was officially called the Emergency Conservation Work but was usually referred to as the Civilian Conservation Corps (CCC). Its purpose was not simply to create employment but to "apply social values more noble than mere monetary profit," as the president had announced in his inaugural address earlier that year. [77] Park Service historian John Paige wrote that,

> Roosevelt's primary goal for the [Civilian Conservation Corps] was to take unemployed youths out of the cities and build up their health and morale while contributing to the economic recovery of the country ... The work was to restore the enrollees to physical health and increase their confidence in themselves and the nation. A secondary goal of the program was to affect needed conservation measures on forest, park, and farm lands. [78]

Roosevelt had already experimented successfully with a similar program while governor of New York in 1931. In its federal manifestation, the Civilian Conservation Corps was jointly administered by the Departments of War, Labor, Interior, and Agriculture with each department responsible for a different aspect of the program. The Department of Labor recruited enrollees, while the Army was responsible for providing them with rudimentary training and with transportation to the camps. This role was later expanded to include supervision of the camps themselves. The National Park Service and the U.S. Forest Service hosted the camps on their units and were responsible for developing and supervising work assignments. The National Park Service also administered the program within the state parks through its Branch of Planning. The state parks were a major beneficiary of the CCC program, eventually accounting for more camps and work assignments than anywhere else in the program. [79]

The initial enrollment goal was 250,000 men, which was achieved within a few months of the program's start. With the exception of World War I veterans, all of the enrollees were single men between the ages of 18 and 25. They received room, board and thirty dollars each month, of which twenty-five dollars had to be remitted to their families. The men were enrolled for a period of six months but could re-enroll for up to two years. Enrollees lived in camps of approximately 200 each. These camps were organized and constructed after a military model, with the men living in barracks and eating in a common mess hall. The work varied from place to place but the emphasis was on forestry management, including such tasks as fuel-load reduction, fire suppression, clearing of hazard trees and insect control. But the enrollees soon came to be used for a variety of labor-intensive construction projects as well and would eventually help produce some of the finest examples of rustic landscape architecture in the nation. Since the purpose of the program was to provide maximum employment and to cultivate habits of discipline through hard work, manual labor was always preferred over mechanized techniques. Manual labor was also considered more appropriate for the tasks in which the CCC was generally engaged, because it had less impact on the parks' natural and scenic resources. A small number of enrollees also acted as technical advisors. These young men worked as historians, landscape architects, biological scientists, and so forth, assisting Park Service staff in designing and managing projects. [80]

The Civilian Conservation Corps proved to be one of the most popular social programs implemented by the Roosevelt administration. By the time it was terminated in 1942, a total of two million enrollees had participated. This represented five percent of the male population in the United States at that time. During the nine years of its existence, 895 camps were established throughout the country, 198 of these in national parks and 697 in state parks. After the war there was discussion of renewing the CCC and establishing it as a permanent agency, but the Cold War and the growth of private business with a rejuvenated national economy distracted Congress from seriously considering these proposals. [81]

Five CCC camps were established at Yosemite by August of the first year of the program. Two of these were at Wawona. The others were in Yosemite Valley, Crane Flat and Eleven Mile Meadow. The location and number of camps often changed from one year to the next during the nine years that the CCC were active in the park, but the average number of main camps was usually five with outlying seasonal bivouacs, called "stub camps," which were usually located at a temporary project site and represented a detail of enrollees from one of the main camps. [82] Nearly all of the work done in Tuolumne Meadows by the CCC was done by a detail from the Crane Flat crew working out of a small stub camp on the east side of the meadows which was established in 1934 or 1935. [83]

The Public Campground

In 1933, Superintendent Thomson obtained funding from the Public Works Administration (PWA) for the construction of three comfort stations and additional improvements to complete the campground plan at Tuolumne Meadows. Occasionally, the PWA and CCC were used in tandem, with the former providing financing and the latter labor for a federal project. [84] The Park Service used this model successfully on a number of jobs over the next few years. Designs were prepared for the campground comfort stations in 1933 and preliminary construction commenced on the foundations and utility hook-ups, but work on the buildings themselves was not actually started until the following year.

The development of the public campground represented a dramatic change in habit for many people and would permanently alter the local recreational culture. Prior to this date, people had been accustomed to camp wherever they liked in the meadows, and many individuals and families had staked out traditional spots where they would return year after year. The Park Service now insisted that campers stay only in designated areas within the established campground south of the meadow. Camping would no longer be allowed in the meadow itself, except within the Sierra Club inholding at Soda Springs, where the Park Service had no authority to regulate. Superintendent Thomson was aware that many strong feelings were associated with these changes, as he noted in his monthly report for July of 1933:

> Some time was spent at Tuolumne Meadows, and on two evenings I spoke at the campfire meetings and met all campers who wished to discuss the camping situation in that area with me. This has been a delicate job to handle since many old-timers have returned to this area year after year and now resent the fact they will not in the future be permitted to camp unrestrictedly; this due to the fact the water supply for the City of San Francisco must be protected, and Hetch Hetchy water will flow in the mains of the City early in the year. However, after a frank discussion with the men and women camped there, I was able to ease this situation entirely, and they all went away with a fuller understanding of the problems. [85]

The 1934 Work Season

1934 proved to be one of the busiest years to date in Tuolumne Meadows. Willis and Sons began clearing and grading the new Tioga Road alignment as well as laying the foundations for the new bridge over the Tuolumne River. In August a detail from the Crane Flat stub camp, which had been doing insect control work in Illilouette Canyon, moved to Tuolumne Meadows. [86] A stub camp was established just east of the old administrative area (Ranger Camp) at approximately the same location where the Insect Research Laboratory (Bug Camp) would later be built. [87] It included a central mess hall with individual tents for the crew.

The Crane Flat detail began working immediately on the public campground, falling hazard trees and clearing slash and brush within the proposed camp sites. The NPS supervising advisor summed up their work in the following:

> Public camp ground clearing at Tuolumne Meadows was done by a crew from the stub-camp of YNP-3 [Crane Flat]. This was one of the most successful and beneficial projects of either camp. 155 new camp sites were cleared and over a mile of new roadways built or rather cut through this area. Hundreds of thousands of small Lodgepole Pines are encroaching on these meadows. The camp sites were literally carved from this small growth. Many snags, stumps, and boulders were also removed from the 85 acres over which the men worked. This stub-camp was in operation from August 1st until October 5th. Approximately twenty men were on this project. [88]

At the same time that the CCC crew was engaged in clearing vegetation for roads and campsites, a utility crew installed water supply and sewage collection systems. Branch water lines were cut into the main water supply and distributed throughout the campground. A total of 4,607 lineal feet of 2 inch pipe was laid, 2,722 lineal feet of 1 inch pipe, and 124 lineal feet of 1/2 inch pipe. These lines served a total of 30 hydrants (hose bibs) spaced at convenient intervals. Two additional sections were also added to the original campground platt, so that the entire development now comprised approximately 90 acres divided into a total of four sections. Each section was numbered, starting with the earliest developed area on the west and culminating with section four, which lay alongside the Lyell Fork opposite the old administrative area (Ranger Camp) on the east. Sewer connections were installed for the proposed three new comfort stations. Following sanitary engineer Hommon's suggestion from 1931, these were temporary systems consisting of a short collection line leading from the comfort station to a redwood-lined cesspool. Separate systems were built for each facility. Other projects completed this year included the installation of wood campground tables, which had been assembled during the winter, and the construction of forty additional garbage can holders. [89]

The CCC enrollees also engaged this year in two of the most ambitious construction projects yet undertaken in Tuolumne Meadows. The first of these was a group of three rustic comfort stations, which had been laid out the previous year. The other was a new government complex, which was constructed just west of the campground. [90]

Work commenced on the campground comfort stations in May and continued through October. All three facilities were identical in design and modeled after a similar structure completed at Hetch Hetchy in May of the same year. Another comfort station, slightly smaller in plan but otherwise identical in design, was also built this season at Tioga Pass. All three campground facilities (bldgs. #3021, #3022, and #3023) were built with CCC labor under the supervision of National Park Service engineers and represent a significant achievement in the development of the classic park rustic style. [91] Their architectural and historical significance was acknowledged by their listing on the National Register in 1978. [92]

The Road Crew Camp

The other major construction project undertaken by the CCC enrollees in Tuolumne Meadows during the 1934 season was the construction of a new government laborers' camp, later known as the Road Crew Camp. This would replace the original laborers' camp in the old administrative area (Ranger Camp), which the CCC crew would demolish in 1935. Following the Tuolumne Meadows development plan, the Park Service planned to upgrade and consolidate all of its support facilities and employee residences in a single location west of the public campground. The construction of the new Road Crew Camp would represent the first stage in this plan. It would include bunk houses and a mess hall for seasonal utility crews and permanent residences for a park naturalist and patrol ranger. A new visitor contact station

would also be constructed nearby, but this facility would be sited closer to the public campground to make it more convenient for the majority of visitors who would be concentrated in the camping area. Once these proposed improvements were completed, the original administrative area would be abandoned and its aging structures demolished.

The CCC crew began construction of the Road Crew Camp in June and continued into early October of 1934. The complex consisted of a single large building and five smaller ones. The latter included four residential bunkhouses (bldgs. #11, #3012, #3013, and #3014) and a shower house (bldg. #3015). The bunkhouses were all wood-frame, gable-roofed structures set on rubble foundations with a combination of horizontal plank and board and batten siding. Each measured approximately 13 feet by 17 feet and accommodated four persons in bunk beds. The shower house was nearly identical in design but measured approximately 11 feet by 20 feet and included a rubble stone chimney. All of these buildings were rendered in a simplified rustic style and were clearly intended to blend as unobtrusively into their environment as possible. The buildings were arranged in a curving row that followed the contour of the hillside rather than being cut into it, while the combination of a wood structure over a low foundation of native stone mimicked the surrounding environment of open lodgepole forest and boulder-strewn ground. This harmonization of materials was further enhanced by preserving the natural color and texture of all exterior wooden surfaces, which were treated with boiled linseed oil rather than being painted. [93]

The largest structure in the Road Crew Camp aggregation was the mess hall (bldg. #3010). This building combined dining room, kitchen and private apartment for a resident cook. Like the bunk houses, it was a wood frame structure on an elevated rubble masonry foundation, and it also combined horizontal plank with vertical board-and batten-siding. But the most striking feature of the mess hall was its roof, which was so steeply pitched, at an 8 to 12 ratio, that it accounted for more than twice the height of the entire building when measured from eave ends to ridge line. A simple gable extended the full 60 foot length of the main axis, intersected at either end by slightly lower through gables, creating an "H" in plan. While considerably more imposing than the other structures in appearance, the mess hall still embodied the same rustic design strategies through the use of local materials that intentionally harmonized with its environment and by the preservation of natural colors and textures in all its exterior surfaces. But the mess hall also invoked traditions of alpine architecture with its steeply-pitched roof, peeled-log pillars and exposed purlins. These details made it appear culturally appropriate to its setting, at least to visitors of European descent. This was another aspect of harmonization that was consistent with the rustic philosophy. [94]

Spatial organization and circulation at the Road Crew Camp reflected an intentional but very simple design. Access was gained along a short serpentine drive connecting Tioga Road to the front of the mess hall. Access to the cabins was by another road or broad path leading from the side of the mess hall past the front of each residence. This created two areas separated by distinct functions. The public—or at least social—quality of the mess hall was reinforced by its direct connection to the main route of entry and further emphasized by its visual dominance in the landscape. The more private character of the residential area, on the other hand, was ensured by making it accessible only by a more indirect route. The proposed ranger residences would have extended this private area below the foot of the hillside and out toward the meadow, but these residences were never built. Instead, more cabins were eventually added in a second tier behind the original row of bunk houses, creating an even denser residential aggregation and perhaps compromising the rustic character of the original setting. The date of these later additions is unknown but probably came after the 1960s. Other later additions included maintenance and storage facilities located west of the mess hall. This created a third distinct area functionally defined by work. The unique architectural character and historic significance of the original complex of buildings at the Road Crew Camp was acknowledged by their listing on the National Historic Register in 1978. [95]

An open log structure with gabled roof (bldg. #3016) originally stood along the east side of the entrance drive at the foot of the hill. This small building measured only 14 feet by 6 feet and sheltered a gas pump. It was constructed in 1934 with the original complex and rebuilt in 1950. It is no longer extant and was probably demolished in the early 1960s. [96] Another small structure (bldg. #3019)—a washroom with showers—was also built this year. It stood southeast of building #3015 (the rustic-style shower house). Its simple construction suggests that it may never have been intended to be permanent. By 1950 it was being used for storage, and in 1968 it was demolished. [97]

Work ended this year with the completion of a sewer system to drain waste from the new facilities at the Road Crew Camp. This was intended as a temporary measure only, just like the individual systems of local cesspools which drained each comfort station in the campground. Like the campground systems, a wood-lined cesspool was excavated about one hundred feet distant from the building complex and connected by short lengths of sewer pipe to each facility needing drainage. [98] Park Service engineers recognized that these local cesspool systems were inadequate to meet long term needs and were already considering a more effective and comprehensive system. Preliminary plans for a permanent system were drawn up that winter after the field season had ended, but these would not be implemented for several years. [99]

The 1935 Work Season

In July, 1935, the CCC reactivated its Tuolumne Meadows stub camp, and crews immediately working on hazard tree removal, fuel load reduction, and insect control. [100] The first two tasks involved falling lodgepole snags that had been killed by an earlier infestation of the needleminer larvae (*Coleotechnites milleri*, at that time known as *Recurvaria milleri*). The latter addressed an active infestation of the bark beetle that was affecting lodgepole forests around Tuolumne Meadows that year, especially those trees already weakened by the needleminer. Affected trees were felled, limbed and peeled, and the beetle-infested bark was treated through solarization or burned in open pits on site. 264 trees were treated in this fashion during the 1935 season. The CCC stub crew also engaged in a few minor construction projects, placing the logs they had felled along the Tioga Road or within the newly-established public campground to act as traffic barriers. Some of these logs were also used to make benches for the campfire circle. The utility crew's old cook house and dining room at Ranger Camp (the old administrative area) was demolished now that it had been made redundant with the completion of the new Road Crew Camp. About fifty pit toilets were also removed from the campground area. [101]

The only substantial construction project that the CCC undertook in 1935 was a fish storage tank and house for the wildlife division (bldg. #3018). [102] This facility was probably used in association with the fish-stocking program, which had been in effect for some years already. [103] An earlier storage tank had been constructed in 1930 at an unspecified location. [104] The new structure was located just east of the new Road Crew Camp. The nature and dimensions of the storage tank itself remain unknown, but the house which enclosed it was a single-story, wood frame structure with a steeply-pitched gable roof clad in shingles. The walls were also clad in shingles up to about three feet in height, while the remaining distance to the roof eaves was left open. The building measured 12 feet 6 inches by 20 feet 4 inches with a wood platform extending an additional 8 feet from one end. This platform was raised on rough masonry piers. The building was moved to a site opposite the barn in the old administrative area in 1961 and used as a tack room by NPS mule packers. It was entirely enclosed at this time with shingle siding that matched the original materials. The masonry piers that supported the porch platform are still present at the structure's original location near the Road Crew Camp.

Plans were also prepared this year for the two permanent residences to be built near the Road Crew Camp. These plans were assigned a CCC project number, indicating that the buildings were meant to be constructed with CCC labor, but there is no evidence of any work being done on them. [105]

Toward the end of the 1935 field season, the Peninsula Paving Company was awarded a contract to pave the 11.6 mile section of Tioga Road which had just been reconstructed through Tuolumne Meadows. Work started in September and would continue for the next two years. The same borrow pit established in 1933 by Willis and Sons at the confluence of the Dana and Lyell Forks continued to be used, and an additional 60,000 cubic yards of aggregate was quarried from the river. [106] The resulting depression in the river bed has come to be known as "Wosky Pond." Work was completed in September of 1937 and the road segment officially opened in July of the following year. By that time, a new 14.4 mile section between Crane Flat and White Wolf on the western end of the road was also nearing completion. This new section would replace the original, much longer alignment that ran from Carl Inn to White Wolf through Aspen Valley. The long middle section of the Tioga Road, stretching 34.4 miles between White Wolf and Cathedral Creek just west of Tuolumne Meadows, would remain unpaved until 1961.

By the end of 1935 most of Wosky's 1929 development plan had been at least partially realized. Development was gradually being consolidated in a single, well-defined corridor along the southern edge of the meadows. The most important steps in achieving this goal had all been taken. These included the realignment of the Tioga Road and the establishment of a public campground with designated sites. Visitors could still camp within the meadow only on the Sierra Club inholding at Soda Springs, where the Park Service had no authority. The plan to concentrate all Park Service facilities in a new government area was well-underway with the construction of the Road Crew Camp just west of the campground, but permanent residences and a new visitor contact station still had to be built. Several other pieces of the development plan also remained unrealized. Only a small part of the old administrative area (Ranger Camp) had yet been demolished, and the remainder would have to be retained until development was complete in the new government area. The Tuolumne Meadows Lodge and High Sierra Camp still had to be relocated, and a comprehensive sewer system needed to be constructed that was capable of serving all development in the area. This would be much easier once development had been concentrated south of the Tioga Road.

The 1936 Work Season

In the spring of 1936, plans were finally accepted for a new visitor contact station (bldg. #3005) to replace the original station in the old administrative area. [107] The plans called for siting this facility just east of the Tuolumne River bridge where the new road crossed the old road alignment. It was also proposed to move the Company's store and service station to the same location, creating a small cluster of visitor services here and replicating the original cluster in front of the old administrative area. But this plan changed at the last minute, and the contact station was instead built further west near the entrance to the public campground. This location made it more convenient for campers in the campground but diminished its historically-close association with the concessionaire's facilities. Construction began on the new contact station in August using CCC labor and carried on through the middle of October. The building was completed on October 15. It was a classic expression of park rustic architecture as the style had evolved by this date. Following the precedent set a few years earlier with the Tioga Pass entrance station, the new building had a relatively low profile with a shallowly-pitched, side gable roof. It measured just a little over 30 feet by 17 feet. The walls on either end and in the rear up to the window sills were constructed of battered native stone with infill of rough horizontal boards. A low chimney was incorporated into the stone wall on the western end, rising only a few feet above the ridge of the roof. Two massive pillars of battered stone supported a deep front porch. The low profile, battered walls, and prolific use of native stone gave one a strong impression that the building rose naturally from the ground

on which it stood. It harmonized well with the surrounding natural environment and also appeared relatively consistent with the architecture of the campground comfort stations, which utilized a similar combination of native stone and rough wood. The architectural and historic significance of this building was acknowledged by its listing on the National Register in 1978. [108]

Improvements to the Tuolumne Meadows Lodge
Sometime around 1937—but possibly earlier—Company President Don Tresidder and Acting Superintendent Lawrence Merriam started negotiations for upgrading the Tuolumne Meadows Lodge. Tresidder had complained that year of the dilapidated condition of the existing facility and formally appealed to the superintendent for permission to build a new one. [109] Tresidder also wanted to move the lodge to a location closer to the new Tioga Road. The Park Service seemed to accept his proposal at first, and designated 31 acres of land for development at the foot of Puppy Dome, west of the administrative area. This proposed site was indicated on a utility map drawn by the Park Service in 1938. [110] For some reason, however, Tresidder and Merriam never seemed to be able to agree on details, and the relocation never occurred. In 1939, after two years of unsuccessful talks, the Tuolumne Meadows Lodge was finally upgraded but was not moved from its original location. [111] The two side-by-side canvas tents which had comprised the original lodge were removed and a new structure was built slightly to the east of the old one. The new building consisted of a canvas main section with two wood frame structures attached in a stairstep configuration to the southwest of the canvas structure. The old storeroom and ice house, which stood to the southeast of the original lodge, were later moved and incorporated into the interior of the new lodge. The finished building served as office, dining room, kitchen, store room and ice house. [112]

Further improvements made at this time included the construction of a small, wood-frame tack enclosure next to the corral, and a new bath house built northwest of the lodge among the guest tent cabins. By 1940, there were 46 of these guest cabins listed by the Company (numbered 1 through 47 with number 13 omitted, a practice that continues today). Several cabins were also used for employee housing. [113]

The store and service station were the only Company assets in Tuolumne Meadows to be moved at this time. The Park Service had supported their relocation ever since the 1934 road realignment had isolated them from the main flow of traffic. Park Service maps from as early as 1936 show the store and service station in a proposed new location at the intersection of the Tioga Road and the original Great Sierra Wagon Road just east of the Tuolumne River bridge. In 1940 a new store was built along the south side of Tioga Road west of the visitor contact station. The same design and materials were used as in the original—canvas fabric over a wood frame—and the existing structure may simply have been moved from the old location. This is the same store that currently exists. A small service island with gas pumps was built in the parking lot just to the east of the store. [114] The original service station and garage near Ranger Camp was demolished. [115]

The Culmination of the Development Plan
The final important piece of Wosky's 1929 development plan to be constructed was the comprehensive sewer system. It was funded through a PWA allotment and finally completed in September of 1939. It began operation on June 6, 1940. [116] The system connected the administrative area (Ranger Camp), the campground and the Road Crew Camp on a single sewer line that drained by gravity to a holding tank and pump house at the foot of the hill below the Road Crew Camp. From here sewage was pumped upgrade approximately 2000 feet north to a settling tank and spray field on the further side of a low rise in the meadow west of Parsons Lodge. The pump house (bldg. #3017) is a wood frame structure measuring 20 feet by 17 feet with a steeply-pitched gable roof clad in shingles. The walls are clad in rough 1 by 10

boards laid both horizontally and vertically. The building was remodeled in 1975 after the sewer system was replaced and is now an employee residence. [117]

The only important proposal in Wosky's plan that was never realized was the consolidation of government facilities in the Road Crew Camp area and the demolition of Ranger Camp. The failure to construct the proposed new residences forced the park to retain its existing residences in the old administrative area. With the intervention of the war, the impetus for following Wosky's plan was lost, and Ranger Camp (the old administrative area) continued to be occupied and even grew in size with the addition of tent cabins and other small structures. Instead of consolidating its resources, the Park Service ended up dividing them between two locations and seeing them proliferate in both places, contrary to the principles expressed in the 1929 development plan. Master plans from as late as 1950 still indicated the park's intention to remove all development from the old administrative area and relocate residential quarters to the new developments further west. [118] To date, this has not happened.

The End of the CCC

The CCC played only a marginal role in these later developments. By 1937, enrollment in the program had diminished significantly, leaving fewer enrollees available for detail work in places like Tuolumne Meadows and limiting the park's ability to undertake new projects. 1935 had been the high-water mark for the Civilian Conservation Corps program, with some 600,000 young men enrolled and distributed throughout the country in state and national parks. [119] To help administer these vast numbers, the National Park Service had more than doubled its regular staff and was growing increasingly dependent on the program to fulfill many of its essential construction and maintenance tasks. But by 1936, President Roosevelt was forced to reduce the enrollment quotas by half, and every year thereafter saw at least some additional reduction of enrollment and funding until the cessation of the program in 1942. This steady reduction was in response to both fiscal constraints and political pressure. Despite its broad popularity, the CCC program had always had powerful critics who feared that it hurt business by making labor scarce and driving up wages. These interests prevented Roosevelt from making the program permanent, as he desired. They also insisted that the program be cut back as the economy began to recover during the latter half of the thirties. By 1940 the problem was further exacerbated when the United States began mobilizing its military forces in response to the war in Europe. Many of the reserve Army officers who helped administer the program were reassigned to active duty positions elsewhere, while increased military enlistment created competition for the CCC enrollees themselves.

Most of the work done by the CCC in Tuolumne Meadows after 1936 was limited to vegetation maintenance or insect control. The diminished resources of the program made it impossible to undertake any major new construction after this date, which is the likeliest explanation for the failure to build the two residences planned for the Road Crew Camp. At the time, it may have been assumed that the delays were only temporary, since at least one more project was also planned and assigned to the CCC. This was a proposal for a ranger's residence to be located behind the visitor contact station. It was ambitiously designed in the same rustic style as the contact station, with deep front porch and battered foundation walls of native stone. But the plan was dated 1941 and had no hope of being realized before the United States entered the war six months later. [120]

At the end of the 1938 work season the CCC stub camp in Tuolumne Meadows was dismantled. [121] Small details of CCC enrollees continued to do odd jobs in Tuolumne Meadows through 1940—when, for example, they installed guardrails at the public campground—but there is no record of any further activity after this date. [122] In August of 1942 the last CCC camp in Yosemite was abandoned, and by early the following year the entire program was formally ended. [123]

World War II and Post-War Hiatus: 1941-1954

World War II represented a long hiatus both for development and visitation in the National Parks. With the entry of America into the war at the end of 1941, most of the federal budget was devoted to military escalation. Rationing was introduced and resources became scarce. Nearly all major construction in the parks was halted. Staffing also dwindled as many employees left the Park Service to take up active duty positions in the military. In many cases park facilities and resources were converted to war-related functions. At Yosemite, for instance, the Ahwahnee Hotel was taken over by the Navy and used as a recuperative hospital for returning servicemen. Stock was driven through the park for the first time since the 1890s, and even prospecting was allowed for war-essential minerals like tungsten. [124]

Despite the reductions in staff and resources, the parks remained open and continued to serve their core mission. Dramatic declines in visitation may have made it easier for park staff to maintain their facilities with such limited means, but it was a serious problem for the concessionaires, who were forced to close many of their businesses. The Yosemite Park and Curry Company closed nearly all of its outlying facilities during the war, keeping only the Merced Lake and Tuolumne Meadows lodges open on a limited basis. The store and service station at Tuolumne Meadows benefited from their location on the Tioga Road and remained open throughout the war. The only work that continued on the unfinished development at Tuolumne Meadows was limited to plans drawn up in the office. No further construction occurred until long after the war had ended.

Mission 66 Upgrading: 1955-1961

Almost as soon as the war ended in 1945 and rationing was lifted, visitation at all the parks rebounded dramatically. The relative prosperity of the country and increased leisure time for most Americans made travel popular, and the post-war tourist made far greater use of the automobile than ever before. This placed a new burden on the parks, as demand for better roads and more automobile-related services increased. But even though the economy was strong, the federal budget remained focused on military expenditures, as the Cold War soon took the place of the recent European war. As a result, the Park Service budget actually declined relative to its 1930s levels when adjusted for inflation. At the same time, Depression-era programs like the CCC and the PWA were no longer available to compensate. Staffing was inadequate to meet the needs of the increased numbers of people visiting the parks, and new infrastructure needed to accommodate them could not be built. Even the existing buildings and utilities began to deteriorate without adequate funds to maintain them. [125]

This situation continued into the early 1950s, until the declining condition of the parks had reached crisis proportions. Growing public attention combined with the inauguration of a new president in 1953 finally inspired Park Service director Conrad Wirth to propose major changes. Wirth assembled special committees to develop a prospectus of what was needed most by the parks. The result was an ambitious plan of upgrading and modernization that he called Mission 66, after the target date for the plan's completion in 1966, the Park Service's fiftieth anniversary. Wirth presented the Mission 66 prospectus to President Eisenhower in January of 1956 and received the president's personal endorsement. Congress followed shortly afterward and voted an increase in the Park Service budget that would ultimately total nearly $1 billion. The funds made it possible to implement the most ambitious and comprehensive development project ever undertaken by the Park Service.

While the focus of Mission 66 was not exclusively on construction, the official summary of the program stated clearly that "construction is an important element." [126] Most of the new infrastructure that was built under Mission 66 possessed a distinct character and gave the program its most memorable legacy. Mission 66 designers largely abandoned the old style of rustic architecture that had dominated development in the 1930s and instead adopted the new principles of European modernism. They also

gave special attention to the automobile. Much of the Mission 66 infrastructure improvement was specifically designed to facilitate automobile access in the parks.

In response to the Mission 66 initiative, Yosemite prepared a prospectus for development in 1956. It noted that annual visitation had increased from about 500,000 to more than 1.1 million over the previous decade and was expected to reach nearly 2 million by 1966. These large numbers of people were placing greater strain on both the natural environment and park infrastructure, and existing facilities were no longer adequate to meet the expectations of these new visitors. In response to these challenges, the park identified five key goals: the preservation of Yosemite Valley, the completion of the park's road and trail system, the enlargement and upgrading of visitor use facilities, the expansion and modernization of concessionaire services, and the acquisition of private inholdings. All but one of these goals—the first—would directly effect Tuolumne Meadows.

The most significant development to occur in Tuolumne Meadows as a result of Mission 66 was the enlargement and upgrading of the public campground. This fulfilled the prospectus' third goal of enlarging and upgrading visitor use facilities. Work began in 1957 with the construction of a new campfire circle. This structure was an amphitheater consisting of steel-pole and wood-plank benches surrounding a fire pit in a large semicircle. The benches were permanently mounted on a gentle slope so that they overlooked the central area. [127]

Work on the campground resumed in May of 1960 and continued to October of 1961. This second more intense stage of development consisted of improving 250 existing campsites in the original campground area and the construction of a new organization (or group) campground area with 100 sites on a short spur off the southeast corner of the main campground loop. Improvement work involved the installation of new fixtures, including pre-fabricated steel-pole picnic benches, cast-iron cooking grills, and corrugated steel garbage can holders. [128] The latter two fixtures were permanently mounted on poured concrete slabs. Four new comfort stations were also built (bldgs. #3076, #3077, #3078 & #3079), three in the original campground area and one in the new organization area. [129] Existing sewer and utility lines were extended to accommodate the new comfort stations in the old campground area, while a new septic tank and leach field were constructed to accommodate the comfort station in the organization campground.

One of the most important—and controversial—Mission 66 projects undertaken in Yosemite was the reconstruction of the Tioga Road. Up to this date, the majority of the road extending 34 miles between White Wolf and Cathedral Creek remained unpaved. Yosemite's Mission 66 prospectus proposed improving the grade and alignment of the Tioga Road where necessary and paving its entire length. The segment which passed through Tuolumne Meadows was relatively unaffected by this project, since the most significant improvements here had already been made in 1934. However, as part of the overall Tioga Road improvement project, the Tuolumne Meadows segment was repaved and parts of the road were also widened. There is no evidence that the culverts and associated small scale features introduced in the 1930s were replaced or significantly modified, though this may have occurred in a few places. All new construction on the Tioga Road was complete by 1961. This project answered the Mission 66 prospectus' second goal of completing the park's road and trail system. [130]

By 1959 the Yosemite Park and Curry Company had finalized a contract with the Standard Oil Company, with the apparent approval of the National Park Service, and construction was underway that year on a new service station. It would occupy an independent location along the Tioga Road just west of the Yosemite Park and Curry Company's store, where the original gasoline pumps had been located. This improvement accorded well with the Park Service's Mission 66 objective for modernization of all

automobile-related facilities and complemented the pending reconstruction of Tioga Road. The parking lot at the Company store had been enlarged six years earlier "because the site was too small to accommodate the number of cars." [131] By the end of the 1959 season, the new service station was in place, and the following year, the Park Service presented a plan for the grading and surfacing of the access road to this facility. This plan was made in conjunction with the resurfacing of the Tioga Road on which the service station was located. [132]

A final goal of the Mission 66 prospectus for Tuolumne Meadows remained unrealized for the time being. This was the acquisition of all private inholdings in the park. The Sierra Club was the sole private owner in Tuolumne Meadows and still maintained its quarter section around Soda Springs. By now the Sierra Club's use of its property conflicted with the Park Service's own management policies, which recommended removal of all development from within meadows and wetland environments, following the advice of Emilio Meinicke. The Sierra Club still maintained its campgrounds behind the Parsons Lodge. This contradiction was somewhat ironic, given the Club's past role as an advocate of preservation on national park lands. There is no evidence suggesting that relations between the Sierra Club and the National Park Service soured as a result of this discrepancy, or that the Sierra Club ever tried to defend its inholding on principle. Any justification by that time would have been untenable. What is likely, but not certain, is that the National Park Service and the Sierra Club probably initiated a conversation on the abandonment of the latter's inholding at about this time. The consequences would not manifest themselves for another seventeen years, when The Sierra Club finally sold its Soda Springs property to the Park Service in 1973. The group campground that the Club maintained was immediately closed and the family campground was closed three years later. By 1976, all of the campgrounds had been obliterated, and the land was restored to natural conditions. Only Parsons Lodge, McCauley's cabin and a few smaller structures remain to mark where the Sierra Club had been for over sixty years. [133]

The Insect Research Station (Bug Camp)
Unrelated to Mission 66 but occurring within the same time frame was the establishment of the Insect Research Station (popularly known as Bug Camp) just east of Ranger Camp. This facility operated from 1955 to 1963. It was constructed in response to the recent outbreak of the needleminer larvae (*Coleotechnites milleri*), which had been observed within the Tenaya Creek watershed just below Tuolumne Meadows since 1954. It was suspected that the larvae had been active for at least eight years prior to their discovery in the area, and it was feared—with justification—that the infestation would spread throughout the lodgepole forest surrounding Tuolumne Meadows. The needleminer in its larval state is a small, worm-like creature that bores into the needles of the lodgepole pine (*Pinus murrayana*), feeding off the plant's tissue until it metamorphosizes into its mature stage as a small, winged insect and leaves its vegetative host. Unfortunately, by that time the conifer which sustained the insect is often compromised to such a degree that it either dies outright or becomes susceptible to other hosts like the mountain bark beetle (*Dendroctonus monticolae*) and is killed by that pest's depredations. Both the needleminer and the bark beetle are native species which have coexisted with the lodgepole pine since long before humans intervened in the local ecology. Scientific observation has noted the cyclical nature of the needleminer infestations—they seem to recur in approximately ten to twenty year intervals—and some observers have speculated that the dramatic mortality which accompanies each recurrence may be natural and even necessary for the preservation of the ecological conditions which define this landscape in its healthy state. But this has not been ascertained. At the time of the establishment of Insect Research Station, it was assumed that the needleminer infestation was entirely negative, even though the reasons for its occurrence remained unknown. In response, a coalition of government agencies led by the U.S. Forest Service initiated an aggressive program to exterminate the pest. Integral to the success of this program was the accumulation of knowledge about the life stages and characteristics of the needleminer in order to learn its weaknesses. [134]

In 1954 a research laboratory was established in the ranger station at Tenaya Lake, close to the center of the infestation. The isolation and confined space of this shared facility, however, quickly made it apparent that a better site was needed. The following year a new laboratory was established by the Park Service to host the Forest Service's scientists. This facility was located on the site of the old CCC stub camp just east of the government Administrative Area (Ranger Camp) in Tuolumne Meadows. It consisted of a laboratory and mess hall, a comfort station, and six tent cabins. [135] The camp was intended to be temporary, utilized only until the needleminer infestation had run its course or the scientists had found a way to control the problem. But by 1957 the longevity of the problem and the continued value of the research station had both begun to impress themselves on the minds of the park managers. That year a permanent structure was erected to replace the original tent laboratory. The comfort station may have been constructed of permanent materials from the beginning. The tent cabins remained ephemeral.

By 1963, the Insect Research Station had essentially fulfilled its purpose, as successful treatment methods had been developed and utilized, resulting in the suppression of the needleminer infestation throughout the region. Despite this success, however, the station was not dismantled as original plans prescribed. It remains to this day and has even accumulated multiple additions. Moreover, its identification with natural resource management has become traditional, and it continues to be used primarily by this division of the National Park Service and associated agencies, providing residence and a convenient staging area for scientists conducting research in the Tuolumne Meadows area. This tradition extends all the way back to the site's original utilization by the CCC as a stub camp. The CCC was primarily a forestry work force, and most of the labor undertaken by the crew of the Tuolumne Meadows stub camp—despite the occasional construction project—related to pest control and vegetation management. [136] These projects included removal of hazard snags killed by the needleminer infestation and treatment of beetle-infested trees. It also included gooseberry (*Ribes spp*.) removal throughout the upland forests surrounding Tuolumne Meadows in order to control the spread of the blister rust, an exotic fungus which had been introduced to the Sierran white pine forests during the first few decades of the twentieth century. [137] Little if any physical evidence remains to attest to the heroic and labor-intensive work that the CCC crews accomplished in pursuit of these objectives. But Bug Camp itself remains to carry on the tradition of natural resource management in Tuolumne Meadows. Its location on the site of the CCC stub camp preserves this legacy even though nothing remains of the original CCC camp itself.

Recent Development and Ongoing Maintenance: 1962-Present

A number of physical developments have occurred during the nearly half-century following the period of significance. Some of these have been significant, judged according to their impact on the natural and built environment, but none of these have substantially altered the principles embodied in the original development plan conceived by John Wosky in 1929. Most have been implemented to upgrade and modernize already existing facilities. Given this characterization, it is not surprising that the majority of changes which have occurred within the built environment of Tuolumne Meadows since 1961 have involved utility systems.

Between 1966 and 1968 the entire sewage disposal system was upgraded. This included enlargement of the existing sewage oxidation pond, the easternmost of the present two ponds. This pond had been constructed sometime between 1953 and 1966 after the forced main system had been installed to replaced the temporary systems of local cesspools. [138] In 1974 work began on a much more comprehensive modernization of the Tuolumne Meadows sewage system. This included installation of manholes on the existing sewer lines to facilitate access for maintenance; construction of a new lined oxidation pond just west of the original pond, and construction of a new pumphouse (bldg. #3009) and sprayfield associated

with this pond; construction of a new sewage receiving station, which replaced the original cesspool and pumpstation at building #3017; and construction of a sanitary dump station for recreational vehicles. The original oxidation pond was also relined at this time. Work on this project was completed in 1976. [139] In the late 1990s the system was scheduled for upgrading once again, when plans were made to replace the sewage collection lines running through Tuolumne Meadows. [140] The work was done by the City of San Francisco and completed in 1998.

A few other important changes have occurred since 1961 which should be noted. These included the relocation of the private pack station managed by the Yosemite Park and Curry Company (which was later assumed by the Delaware North Company, the current proprietor). This pack station was historically located within the original Tuolumne Meadows Lodge Complex. In 1969 a new facility was constructed on the north edge of the meadow just off the eastern approach to Parsons Lodge and named the Tuolumne Meadows Stables. [141] A large barn and corral, several tent cabins, a comfort station and an office were constructed here. The store room was probably one of the permanent structures built in 1924 or 1939 in the Tuolumne Meadows Lodge area and later transported to its present site. This relocation has rendered it ineligible for listing by National Register standards.

In 1970, several secondary roads were realigned and improved, and several parking lots built. This work included the construction of a parking lot just outside the new Tuolumne Meadows Stables; and the construction of two trailhead parking lots on the Tuolumne Meadows Lodge road, one just opposite the old administrative area, and the other just east of Bug Camp. The lodge road was also realigned, with a new entrance accessing Ranger Camp from the Tioga Road just north of the barn. The original alignment extending 0.5 mile west of Ranger Camp was obliterated, though the route continues to be used by horses (this was a segment of the original Great Sierra Wagon Road). [142]

A number of changes and improvements also occurred at the Tuolumne Meadows Lodge during this latter period. In the 1950s an additional 18 tent cabins and a new tack room were constructed. In 1973, the main lodge building was wired for electricity (the guest cabins remain without electricity to the present). In 1983, a severe winter storm demolished the fragile wood frames and platforms supporting the tent cabins, and that summer every one of them had to be rebuilt. Three new cabins were added, bringing the number to its present total of 69. Steel pole frames and concrete foundations were used during this reconstruction to replace the original wood structural materials. Many of the guest cabins were also repositioned at this time, modifying the entire residential cluster to its present configuration, in which the cabins are clustered in small groups and oriented in varying directions. Prior to 1983, all of the cabins were oriented uniformly downslope, facing the lodge. This change was made to increase privacy and create a more picturesque effect.

No attempt has been made to realize the unfinished goals of the Wosky plan, the most important elements of which would include demolition of the original administrative area at Ranger Camp and construction of permanent employee housing at the Road Crew Camp. The Wosky plan did not include any objectives for the Bug Camp area, since at the time it was conceived this area was undeveloped (and subsequent CCC development was understood to be temporary). It is clear that the intention of the original 1929 development plan envisioned the obliteration of all physical development from the area comprising Ranger Camp, Bug Camp and possibly even the Tuolumne Meadows Lodge and High Sierra Camp, with the ultimate restoration of these areas to natural conditions. But many contingencies have intervened to prevent the realization of these goals. In the interim, both Ranger Camp and Bug Camp have evolved both physical characteristics and cultural traditions that merit consideration as significant historic features worthy of being retained.

References

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2. William E. Colby, "Jean (John) Baptiste Lembert--Personal Memories." *Yosemite Nature Notes* 28.9 (September, 1949): 114.
3. Two of the most commonly-sited histories of these events are Carl Parcher Russell, *One Hundred Years in Yosemite: The Story of a Great Park and Its Friends* (Yosemite National Park: Yosemite Association, 1992 [1959]): 9-48; and Lafayette H. Bunnell, *The Discovery of the Yosemite, and the Indian War of 1851 Which Led to That Event* (Chicago: Fleming H. Revell, 1880). The latter is a first-hand account by an Army participant in the campaign. A more recent account that gives greater attention to the Native American context is George Harwood Phillips, *Indians and Indian Agents: The Origins of the Reservation System in California, 1849-1852* (Norman: University of Oklahoma Press, 1997). Much of this history is summarized in Linda Greene, *Yosemite: The Park and its Resources—A History of the Discovery, Management, and Physical Development of Yosemite National Park.* 3 vols. (Washington, DC: National Park Service, 1987).
4. Joseph Reddeford Walker passed near Tuolumne Meadows on his 1833 expedition but did not explore the area and may never have seen the meadows themselves. (See Russell, *One Hundred Years*, pp. 2-9; and Greene, *Yosemite*, 13-15).
5. Douglas Hubbard, *Ghost Mines of Yosemite* (Fresno, CA: Awani Press, 1971); and Greene, *Yosemite*, 243-58 for mining in the Tioga District.
6. Elizabeth Stone O'Neill, *Meadow in the Sky: A History of Yosemite's Tuolumne Meadows Region* (Fresno, CA: Panorama West Books, 1983), pp.16-21.
7. Not to be confused with Tioga Peak. Tioga Hill is a large pile of boulders rising just east of Granite Lakes at the top of the Gaylor Creek watershed.
8. National Register of Historic Places Nomination, "Great Sierra Mine (Dana Village) Historic Site" Listed May 24, 1978.
9. Richard H. Quin, "Tioga Road" Historic American Engineering Record (HAER), No. CA-149, 1991; and Keith A. Trexler, "The Tioga Road, 1883-1961" *Yosemite* 40.3 (1961).
10. Report of the Commission on Roads in Yosemite N.P., 8 Feb., 1900. Reproduced in Trexler, "The Tioga Road," 38. The 'sea wall' along Tenaya Lake was demolished by 1961 when this section of the road was realigned.
11. In 1933 one last attempt was made by the remaining heir to the company, and the Great Sierra Tunnel was driven several hundred feet further into Tioga Hill before the operation was abandoned for good.
12. See *Report of the Acting Superintendent of the Yosemite National Park to the Secretary of the Interior*, 1891-1913. Research Library, Yosemite National Park.
13. Greene, *Yosemite*, 368ff.
14. On the effects of this drought, see Robert Glass Cleland, *The Cattle on a Thousand Hills: Southern California, 1850-1870* (San Marino, CA: The Huntington Library, 1975).
15. On Muir himself, see Linnie Marsh Wolfe, *Son of the Wilderness: The Life of John Muir* (New York: A.A. Knopf, 1945). On Muir's place in the Sierra Club, see Holway Jones, *John Muir and the Sierra Club: The Battle for Yosemite* (San Francisco: Sierra Club, 1964); and Stephen Fox, *John Muir and His Legacy: The American Conservation Movement* (Boston: Little, Brown and Co., 1981).
16. Muir expresses this negative opinion about sheep and their detrimental impact on the environment in many places throughout his writings. One of his strongest statements can be found in *My First Summer in*

the Sierra, which is based on his journal from 1869—quite early in his career—but was not actually written until near the end of his life.
17. Robert F. Uhte, "Yosemite's Pioneer Cabins" *Sierra Club Bulletin* 36.5 (May, 1951): 49-71. Uhte supplies an excellent drawing as well.
18. On Lembert, see William E. Colby, "Jean (John) Baptiste Lembert—Personal Memories," *Yosemite Nature Notes* 28.9 (September, 1949); and Joseph N. LeConte, "The Soda Springs Property in the Tuolumne Meadows," *Sierra Club Bulletin* 9.1 (January, 1913): 34-39.
19. Uhte, "Pioneer Cabins," 54.
20. O'Neill, *Meadow in the Sky*, 14.
21. Quoted in Uhte, "Pioneer Cabins," 57.
22. Trexler, "Tioga Road," 42-46.
23. LeConte, "The Soda Springs Property," 38.
24. Greene, *Yosemite*, 258-288.
25. *Biennial Report of the Commissioners to Manage the Yosemite Valley and the Mariposa Big Tree Grove, 1885-1886* (Sacramento: State Printing Office, 1888).
26. J.W. Powell, *Eleventh Annual Report of the United States Geological Survey to the Secretary of the Interior, 1889-'90: Part II—Irrigation*" (Washington, DC: Government Printing Office, 1892).
27. Greene, *Yosemite*, 289-305.
28. John Muir, "The Treasures of the Yosemite," *The Century* 40.4 (August, 1890): 483-500; and "Features of the Proposed Yosemite National Park," *The Century* 40.5 (September, 1890): 656-67. The latter article is an eloquent description of Tuolumne Meadows itself and of the trails that can be taken from this location.
29. Greene, *Yosemite*, 311-320. For a recent history of the Army's administration of Yosemite, see Harvey Meyerson, *Nature's Army: When Soldiers Fought for Yosemite* (Lawrence: University Press of Kansas, 2001).
30. Some have speculated that grazing pressure also favored grassland over forest and pushed the perimeter of the latter vegetation back. Others have noted that shepherds were not the only source of fire in this environment, and that lightning-ignited burns were common before the pastoralists entered the scene. If that is true, then the most significant alteration of the natural regime may have been the effective suppression of fire after 1891. But the abundance of contrasting opinions on this subject only illustrates the absence of conclusive knowledge (Many of these interpretations are summarized in Stephen F. Cunha, "Invasion of Tuolumne Meadows by *Pinus murrayana*." MA Thesis, University of California, Davis, 1985).
31. "Report of the Acting Superintendent of the Yosemite National Park to the Secretary of the Interior, 1903." Yosemite National Park Research Library. (Hereafter referenced as "Acting-Superintendent's Annual Report").
32. Greene, *Yosemite*, 321-25.
33. This inventory is summarized in Greene, *Yosemite*, 531-37.
34. "Acting-Superintendent's Annual Report for 1891," Yosemite National Park Research Library.
35. Bob Barrett, Yosemite: Where Mules Wear Diamonds (Los Banos, CA: Loose Change Publications, 1989), 25.
36. For example, "Acting-Superintendent's Annual Report for 1906," pg. 12, Yosemite National Park Research Library.
37. Ibid.
38. The superintendent was Gabriel Sovulewski.
39. For a general overview of the Sierra Club, see Michael P. Cohen, *The History of the Sierra Club, 1892-1970* (San Francisco: Sierra Club Books, 1988).
40. This passage adapted from Greene, *Yosemite*, 356.
41. LeConte, "The Soda Springs Property."

42. National Register of Historic Places Nomination, "Parsons Memorial Lodge." Listed April 30, 1979. The Parsons Lodge was later designated a National Historic Landmark in 1987.
43. Hal Roth, *Pathway in the Sky: The Story of the John Muir Trail* (Berkeley: Hal-North Books, 1965).
44. The most important sources on the history of the Tioga Road are Richard H. Quin, "Tioga Road," Historic American Engineering Record (HAER), No. CA-149, 1991; and Keith A. Trexler, "The Tioga Road, 1883-1961" *Yosemite* 40.3 (1961).
45. "Acting-Superintendent's Annual Report for 1915," Yosemite National Park Research Library. Daniels was a civilian superintendent.
46. Gerald A. Waring, "Springs of California," Water-Supply Paper 338 (Washington, DC: United States Geological Survey, 1915), p. 237.
47. Greene, *Yosemite*, 612-23, 626-27; Shirley Sargent, *Yosemite's High Sierra Camps* (Yosemite: Flying Spur Press, 1977); Yosemite Park and Curry Company Annual Reports, Archives, Yosemite National Park.
48. Yosemite Park and Curry Company, Annual Report for 1924. Acc. #5000. Archives, Yosemite National Park.
49. William C. Tweed, *National Park Service Rustic Architecture: 1916-1942* (Washington, DC: National Park Service, 1977). See also Linda McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: The Johns Hopkins University Press, 1998), especially pp. 123ff.
50. Superintendents Monthly Reports, August-September, 1924. Yosemite National Park Research Library; and "Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA..
51. "Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA..
52. Linda McClelland, *Presenting Nature: The Historic Landscape Design of the National Park Service, 1916-1942* (Washington, DC: National Park Service, 1993), pp. 161-66.
53. "Superintendent's Monthly Report," July, 1927. Research Library, Yosemite National Park.
54. On the origins and place of master planning in the National Park Service, see Linda McClelland, *Presenting Nature*, pp. 173-81. For a more personal account of the idea's inception and development, see Director Conrad Wirth's autobiography, *Parks, Politics and People* (Norman: University of Oklahoma Press, 1980), pp. 58-60.
55. John Wosky was resident landscape architect at Yosemite from 1928 to 1933.
56. "Superintendent's Monthly Report," November, 1931, Yosemite National Park Research Library.
57. "Final Report: Tuolumne Meadows Camp Road Construction (Account No. 507.3)", November, 1932. "Report to the Chief Architect Through the Superintendent of Yosemite National Park by John B. Wosky, Assistant Landscape Architect." Branch of Plans and Design, San Francisco, CA, 1930.
58. For example, "Sewer System, Tuolumne Meadows," 1938. TIC archives #5351.
59. Most of the details of Wosky's plan for Tuolumne Meadows are illustrated in the "Existing and Proposed Development Master Plan," November 1, 1934 (TIC File #8077). Little has changed by 1950, as illustrated in the "Tuolumne Meadows Area Part of the Master Plan, Yosemite National Park," December, 1950 (TIC File #2105). This latter indicates that the park still planned to restore the area around Ranger Camp to natural conditions and to construct a staff residential area adjacent to the Road Crew Camp. These last few modifications would realize all of the main objectives of the original Wosky development plan. Only by 1959 were these goals finally relaxed, and development in the area around Ranger Camp was at last accepted. A master plan from that year shows a large residential area proposed for Ranger Camp, with the original 1924 structures demolished. A barn, corral and horse pasture were also proposed along the north bank of the Dana Fork just south of this new development. No further development, residential or otherwise, was proposed for the area around the Road Crew Camp at the west end of the campground. See "Tuolumne Meadows Vicinity, Part of the Master Plan, Yosemite National Park," July, 1959 (TIC File #2105).
60. "Preliminary Report, Job No. 499: Campground Development, Tuolumne Meadows," February,

1931. Yosemite National Park Facilities and Maintenance Archives.
61. "Superintendent's Monthly Report," June, 1931. Research Library, Yosemite National Park.
62. It was located at an elevation contour of 8806.6 feet above sea level. "Final Report: Water, Sewer and Sanitary Systems—Tuolumne Meadows (Account No. 484)," May, 1932. Facilities and Maintenance Archives, Yosemite National Park.
63. The building was a single-story gable roofed structure measuring 9 feet by 7 feet. Both walls and roof were shingled. It was demolished in the 1960s.
64. Full description of utility system in "Final Report: Water, Sewer and Sanitation Systems—Tuolumne Meadows (Account No. 484)," May, 1932, Facilities and Maintenance Archives, Yosemite National Park. This report includes a map of the water supply system showing the location of the work crew's camp and the new comfort station (bldg. #3024). It also includes a detailed schematic of the settling tank and several photographs.
65. This building is 26 feet by 13 feet with a simple gable roof and shiplap siding of one-by-ten redwood plank. The exterior was originally left unpainted but treated with boiled linseed oil, while the roof shakes were stained light green. It was later painted in Yosemite's typical "Wosky Brown." Men's and women's sections are entered from either end and were painted light gray on the interior. They are separated by a central utility space, which included a vented cabinet for gas cylinders used for heating and lighting. The floor is a concrete slab ("Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA.).
66. "Final Report: Tuolumne Meadows Comfort Station (Account No. 425)," March, 1932, Facilities and Maintenance Archives, Yosemite National Park. This report includes photographs.
67. "Final Report: Water, Sewer and Sanitation Systems—Tuolumne Meadows (Account No. 484)," May, 1932, Facilities and Maintenance Archives, Yosemite National Park.
68. "Final Report: Tuolumne Meadows Camp Road Construction (Account No. 507.3)," November, 1932, Facilities and Maintenance Archives, Yosemite National Park. This report contains good photos of many of the details of the construction. See also "Superintendent's Monthly Reports," August-October, 1932. Research Library, Yosemite National Park.
69. Ibid.
70. "Superintendent's Monthly Report," October, 1927. Research Library, Yosemite National Park.
71. Quin, "Tioga Road" (HAER); Trexler, "Tioga Road;" and "Final Construction Report: Tuolumne Meadows-Tioga Pass Section of the Tioga Road, Yosemite Park Project E4-C1, Grading," 1936, Facilities and Maintenance Archives, Yosemite National Park.
72. The Raker Act had granted the City of San Francisco permission to build its dam and reservoir on federal property. One of the concessions made by the City in return was a promise to develop recreational infrastructure around the reservoir. This promise went largely unfulfilled, and the City was later sued. The settlement resulted in the payments here mentioned.
73. "Superintendent's Monthly Reports," August-October, 1934.
74. Richard A. Quin, "Tuolumne Meadows Bridge," Historic American Engineering Record (HAER) No. CA-109, 1991.
75. In the 1970 the half mile segment of this road between the Administrative Area and the point where it originally crossed the Tioga Road was obliterated, and a new entrance was created by connecting more directly to the Tioga Road just north of the Administrative Area.
76. T.C. Vint and Edward A. Nickel, "Report on the Building Program from Allotments of the Public Works Administration, 1933-1937," YOSE Park Files, Pacific West Regional Archives, Oakland, CA.
77. In *Inaugural Addresses of the Presidents of the United States: From George Washington, 1789, to George Bush, 1989* (Washington, DC: U.S. Government Printing Office, 1989).
78. John C. Paige, *The Civilian Conservation Corps and the National Park Service, 1933 - 1942: An Administrative History* (Washington, DC: National Park Service, 1985), 126.
79. A good overview of the CCC program is given by John A. Salmond, *The Civilian Conservation*

Corps, 1933-1942: A New Deal Case Study (Durham, NC: Duke University Press, 1967). On the CCC and the National Park Service, the best general study is Paige, *The Civilian Conservation Corps and the National Park Serv*ice, but see also Conrad Wirth, *Parks, Politics and People*, for a more intimate insider's perspective. During the CCC years, Wirth was chief of the National Park Service's Bureau of Planning, which directed the CCC state parks programs. Works on Roosevelt and the New Deal are numerous, but a good, if dated, source is Arthur Schlesinger, Jr., *The Age of Roosevelt*, 3 vols. (Boston: Houghton Mifflin, 1957-60). See especially volume 2, *The Coming of the New Deal*. A more recent and impartial study is David M. Kennedy, *Freedom From Fear: The American People in Depression and War, 1929-1945* (New York: Oxford University Press, 1999).
80. Paige, *Civilian Conservation Corps*, 7-37.
81. Ibid., 132.
82. "Superintendent's Monthly Report," April, 1933.
83. "Superintendent's Monthly Report," June, 1935. See note 96.
84. Linda McClelland, *Presenting Nature*, 180.
85. "Superintendent's Monthly Report," July, 1933, Yosemite National Park Research Library.
86. "Superintendent's Monthly Report," July, 1934, Yosemite National Park Research Library.
87. "Existing and Proposed Development Master Plan," November 1, 1934 (TIC File #8077).
88. Fred Barlow, Jr., "Narrative Report. Third Enrollment Period, May-October, 1934, Camps YNP-3 and YNP-5." Western Division Branch of Planning and Design Collection (no accession number), Yosemite National Park Archives.
89. "Final Report: Tuolumne Meadows Campground Development, F.P. 302 (Acct. No. 443)," September, 1934, Yosemite National Park Facilities and Maintenance Archive; and "Superintendent's Monthly Reports," Sept.-Oct., 1933, Yosemite National Park Research Library.
90. "Monthly Reports of the Acting Resident Landscape Architect, Yosemite National Park, to the Chief Architect, for 1934." Western Division Branch of Planning and Design Collection (no accession number), Yosemite National Park Archives.
91. The buildings measured 17 feet 4 inches by 30 feet 4 inches on the exterior. They were wood frame structures with heavy, battered stone veneers up to the window sills and to the roof at the corners. The masonry was more than 5 feet thick at the base, tapering to about 16 inches at the top. Above this stone veneer and on each gable end, the walls were constructed of exposed redwood timbers with horizontal one-by-ten redwood shiplap planking. The steeply-sloped, shingle roofs had jerkenhead, or clipped-gable, ends. Men's and women's compartments were entered from either end through heavy, vertical-planked doors with wrought-iron hinges and were separated by a utility space in the middle. Fenestration consisted of two pairs of three-by-three lite windows on either side with a two-by-three lite window over the utility space in between. Two three-by-three lite windows of the same style flanked the doors on either end. The original plans called for amber ripple glass in all but the utility room windows.
92. "Tuolumne Meadows Ranger Stations and Rest Rooms..." National Register of Historic Places Nomination (PH0683779), Listed June 30, 1978; "Final Report: Four Comfort Stations (Account No. 428)" October, 1934, Yosemite National Park Facilities and Maintenance Archives.
93. "Final Report: Bunkhouses, Tuolumne Meadows, F.P. 285 (Acct. No. 426)," 1934, Yosemite National Park Facilities and Maintenance Archives.
94. "Final Report: Mess Hall, Kitchen, Tuolumne Meadows, F.P. 286 (Acct. No. 427)," February, 1935, Yosemite National Park Facilities and Maintenance Archives.
95. "Mess Hall and Kitchen, Bunk Houses, Toilet & Shower Room, Tuolumne Meadows" (PH0683787) National Register of Historic Places Inventory, November 30, 1978.
96. "Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA.
97. The building was wood frame construction with wood siding and a shed-style roof. It measured 14 feet by 13 feet and contained three showers on the interior and an outdoor wash room on one side. "Building Files: Yosemite National Park," Pacific West Regional Office, Oakland, CA; and "Maintenance

Files—Removed Buildings," Yosemite National Park Archives.
98. "Final Report: Sewer System, Tuolumne Meadow Utility Area, F.P. 290A (Acct. No. 450)," 1934, Yosemite National Park Facilities and Maintenance Archives.
99. "Final Report: Sewerage System Extension, Tuolumne Meadows (Acct. No. 455 - PWA-O.P. 752-05-200)," October, 1940, Yosemite National Park, Facilities and Maintenance Archives.
100. "Superintendent's Monthly Reports," June-August, 1935, Yosemite National Park Research Library.
101. Fred Barlow, "Report to the Chief Architect Through the Superintendent of Yosemite National Park on Emergency Conservation Work, Camps YNP-3, YNP-5, YNP-6, April through October, 1935," Western Division Branch of Plans and Design Collection (no accession number), Yosemite National Park Archives.
102. "Report to the Chief Architect Through the Superintendent of Yosemite National Park on Emergency Conservation Work. Camps YNP-3, YNP-5, YNP-6. April through October, 1935." Fred Barlow, Jr., Asst. Landscape Architect (ECW).
103. Fish stocking in the high country formally began in 1894, when the Wawona Hotel Company built a hatchery on its patented land at the southern boundary of the park. The hatchery was operated by the California Board of Fish Commissioners, and cavalrymen with the U.S. Army regularly assisted in the distribution of fish throughout the park. In 1894 5,500 rainbow trout were stocked in Budd Creek; 5000 cutthroat in Unicorn Creek; and 4,500 rainbow in Dingley Creek. This may be the first instance of fish being introduced to Tuolumne Meadows, where they do not naturally occur. A few year later in 1897, the cavalry introduced 270 eastern brook trout into the Lyell Fork of the Tuolumne. Stocking continued over the subsequent years, though it is not clear from the evidence how regularly it was done ("Acting-Superintendent's Annual Report for 1896," Yosemite National Park Research Library).
104. "Superintendent's Monthly Report," August, 1930, Yosemite National Park Research Library.
105. "Preliminary Sketch for Ranger's Residence [and] Naturalist's Residence, Yosemite National Park (Tuolumne Meadows)," Branch of Plans and Design, April 30, 1935 (TIC File #3188).
106. "Report to the Chief Architect through the Superintendent of Yosemite National Park, Road Contracts and Public Works Projects, Season of 1935" R.L. McKown, Resident Landscape Architect. Office of Deputy Chief Architect, Branch of Plans and Design, Western Division, San Francisco, California, December 10, 1935, Yosemite National Park Archives (no accession number).
107. "Yosemite National Park Contact Station, Tuolumne Meadows" National Park Service, Branch of Plans and Designs, May 13, 1936 (TIC File #3183).
108. "Tuolumne Meadows Ranger Stations and Rest Rooms..." (PH0683779) National Register of Historic Places Nomination, Listed December 18, 1978.
109. Correspondence of John Wosky to Park Superintendent, September 4, 1937, in Old Central Files Collection, Tuolumne Meadows Development (Accession #5121), Yosemite National Park Archives.
110. "Sewer System, Tuolumne Meadows," 1938 (TIC File #5351).
111. The present Tuolumne Meadows Lodge and High Sierra Camp complex largely reflects this stage of development, with a few exceptions. The original tent cabins were constructed on wooden frame foundations, which were later replaced with concrete. In the late 1960s or early 1970s approximately twenty concrete and stone foundations were built. In 1983, after an especially severe winter damaged most of the cabins, the remainder of the foundations were replaced with poured concrete. Most of the cabins have also been repositioned or reoriented since 1939. (telephone conversation, Timothy Babalis, NPS historian, with Marth Miller, on-site manager for Delaware North Company at Tuolumne Meadows Lodge, August 31, 2006).
112. Yosemite Park and Curry Company Annual Reports, Archives, Yosemite National Park.
113. Ibid.
114. "Superintendent's Monthly Report," July, 1940, Yosemite National Park Research Library.
115. Historic photos from the Yosemite National Park Archives, Yosemite Park and Curry Company Collection, show that this was a single story, wood frame structure, about 10 feet square with a side gable

roof. A long, sloping porch roof covered the drive in front of the station and two gas pumps. Large three-by-three lite windows made a continuous band around all four sides of the building, while the exterior walls above and below the windows were shingled.
116. "Final Report: Sewerage System Extension, Tuolumne Meadows (Account No. 455 - PWA-O.P. 752-05-200," October, 1940, Yosemite National Park Facilities and Maintenance Archives.
117. "Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA.
118. "Tuolumne Meadows Area Part of the Master Plan, Yosemite National Park," December, 1950 (TIC File #2105).
119. Paige, *The Civilian Conservation* Corps, 19-37.
120. "Ranger's Residence, Tuolumne Meadows, Yosemite National Park," Branch of Plans and Design, August, 1941 (TIC File #2125A).
121. A utility map titled "Sewer System, Tuolumne Meadows," and dated October, 1938 (TIC file #5351) shows the location of the stub camp with the comment "Abandoned & Dismantled" written beside it.
122. "Superintendent's Monthly Report," July, 1940, Yosemite National Park Research Library.
123. "Superintendent's Monthly Report," August, 1942, Yosemite National Park Research Library.
124. See "Superintendent's Monthly Reports" for the period 1942-1945, Yosemite National Park Research Library.
125. Ethan Carr and Elaine Jackson-Retondo, "National Park Service Mission 66 Resources," National Register of Historic Places Multiple Properties Document, Draft—January, 2006; Wirth, *Parks, Politics and People*, 237ff; *Mission 66 for Yosemite National Park* (Washington, DC: National Park Service, n.d.); and "Mission 66 Prospectus, Yosemite National Park," July, 1956, Yosemite National Park Research Library.
126. "Mission 66 for Yosemite National Park." This summary was included with every park's Mission 66 outline.
127. "Superintendent's Monthly Report," September, 1957, Yosemite National Park Research Library.
128. "Completion Report of Construction Project: Campground Development, Tuolumne Meadows," December 14, 1961, Yosemite National Park Facilities and Maintenance Archives.
129. All four structures were identical in design, consisting of a simple concrete block building, measuring 16 feet 4-1/2 inches by 24 feet 4-1/2 inches. The roof was a very shallowly-sloped gable with gravel and tar surface. Men's and women's compartments were separated by a central utility space, which was accessed through a separate door in the long side of the building. A continuous row of operable, single lite windows extended along either side of the building directly beneath the deep roof eaves. All of the buildings sat on poured concrete slab foundations ("Building Files: Yosemite National Park," Pacific West Region Archives, Oakland, CA.).
130. Quin, "Tioga Road" (HAER); Trexler, "Tioga Road."
131. "Completion Report: Enlarge Parking Area, Tuolumne Meadows Store," November 17, 1953, Yosemite National Park Facilities and Maintenance Archives. The parking pavement was extended 110 feet to the west and 67 feet to the north of the store front. This allowed an additional 24 cars.
132. "Superintendent's Monthly Report," August, 1959, Yosemite National Park Research Library; "Plan and Elevations, Company Operated SS, Tuolumne Meadows, Yos. Nat. Park, Cal. for Standard Oil Company of California," February 11, 1960 (TIC File #8419A & B).
133. Greene, *Yosemite*, 939.
134. J.E. Patterson, "Life History of Recurvaria milleri, the Lodgepole Needle Miner in Yosemite National Park, California." *Journal of Agricultural Research* 21.3 (1921): 127-143; J.S. Yuill, "Preliminary Studies of the Control of the Lodgepole Needle Miner." *Journal of Economic Entomology* 35.1 (1941): 16-20; Gordon E. Moore and John R. Pierce; *Entomological Phases of the 1963 Lodgepole Needle Miner Control Project in Yosemite and Sequoia & Kings Canyon National Parks* (San Francisco: U.S. Dept. of Agriculture, Forest Service, 1964); George R. Struble, "Biology, Ecology and Control of the

Lodgepole Needleminer," U.S. Dept. of Agriculture Technical Bulletin 1458, 1972. These and other documents relating to insect control at Yosemite are collected in "Resource Management: Forestry," Box #9, Yosemite National Park Archives. For a brief overview of the history of insect control at Yosemite National Park, see Jeri E. Hall, "Vegetation Management Plan, Yosemite National Park," June, 1997, pp. 198-209, Yosemite National Park Research Library.
135. Struble, "Biology, Ecology and Control."
136. A history of the CCC's role in needleminer control efforts at Yosemite is given in K.A. Salman, "Control of the Lodgepole Needleminer: An ECW Project of the Yosemite National Park in 1935," U.S. Dept of Agriculture, Bureau of Entomology, Forest Insect Investigations, in "Resource Management: Forestry," Yosemite National Park Archives.
137. The blister rust fungus had been introduced from Europe on white pine saplings sometime between 1890 and 1909. In Europe it was well-known that the fungus used bushes in the genus *ribes* as a host to transmit itself. When American foresters learned this, they decided that the ribes vector was the weak link in the spread of the disease and could be used to suppress it. Following this observation, foresters began eradicating all species in the genus *ribes* within or near white pine forests. This included several species of gooseberry and currant endemic to the central Sierra Nevada mountains. The CCC crews became the primary labor force to undertake this difficult task during the 1930s. Their work was continued by contract crews under the supervision of USFS and NPS specialists during the decades after World War II. The *ribes* eradication program was finally discontinued by the late 1960s when it was determined to be ineffectual. The blister rust remains a threat to white pine forests to this day.
138. "Narrative Statement, Completion Report: Construction of Sewage Treatment Facility, Work Order No. 104-211776," October 20, 1970, Yosemite National Park Facilities and Maintenance Archives.
139. "Completion Report Narrative, Contract No. CX 8000-4-9017: Wastewater Treatment and Disposal Improvements—Tuolumne Meadows, Yosemite National Park, California," November, 1976, Yosemite National Park Facilities and Maintenance Archives.
140. Kathleen L. Hull, et al., "Archeological Site Subsurface Survey, Test Excavations, and Date-Recovery Excavations for the Tuolumne Meadows Sewer Replacement Project in Tuolumne Meadows, Yosemite National Park, California." Dames & Moore, Chico, CA. June 30, 1995.
141. See "Tuolumne Meadows Vicinity Part of Master Plan, Yosemite National Park," September, 1968 (TIC File #2105A).
142. "Roads and Parking Areas, Tuolumne Meadows, Yosemite National Park," April, 1972 (TIC File #41019B).

Analysis and Evaluation

Summary

The landscape characteristics contributing to the Tuolumne Meadows Historic District as they relate to the 1885-1961 period of significance include: natural systems and features, land use, cluster arrangement, buildings and structures, circulation, views and vistas, and archeological sites. The natural systems and features of Tuolumne Meadows comprise a dramatic scenic environment which was the initial reason for the recreational development of the area. These features helped define the character of physical development throughout the period of significance and have been retained in their original state. Land use for all development within the historic district is oriented around the recreational enjoyment and aesthetic appreciation of the surrounding natural environment. Development was systematically concentrated in clustered developments along the periphery of the meadow in order to minimize ecological impacts but also to preserve the most important scenic viewsheds from built intrusions. Most buildings and structures are sited within the forest canopy and out of sight. Individual buildings were also designed to be visually unobtrusive by keeping them as small and simple as possible. In a few instances, where a more substantial structure was needed, a rustic architectural style was utilized to ensure that the buildings harmonize with their natural surroundings. Many of these buildings represent significant examples of the park rustic style.

Circulation patterns have been aligned according to similar principles. In the 1930s, the Tioga Road was reconstructed to mitigate its impact on the meadow and to take greater advantage of the panoramic views available to the motorist traveling along the meadow's edge. Attention to views and vistas has been an important guiding principle for much of the development in the district, with vantage points carefully selected to maximize the aesthetically-varied effect of broad open meadows, dark forests, and a distant background of sublime mountain crags. Numerous archeological sites scattered about the district preserve a record of how development practices have changed and evolved in response to these landscape characteristics throughout the historic period.

Integrity

Although many additions have been introduced within the district since the period of significance, these have generally been made in accordance with the principals established in the historic master planning process. As a result, landscape characteristics like cluster arrangement, land use, and circulation have all remained compatible with the historic period. Most historic buildings and structures have been preserved, and new additions have generally been made to harmonize with the rustic style characteristic of the period of significance. Simplicity and unobtrusiveness have remained the norm in both architecture and landscape design up to the present day in order to cause as little impact as possible on the natural systems and features and the views and vistas which are the principal character-defining features of Tuolumne Meadows.

This continuity in the character of development and the careful maintenance of existing historic features have allowed the district as a whole to retain all seven aspects of integrity to a relatively high degree. The natural setting of Tuolumne Meadows and its surrounding alpine landscape continues to dominate the district and to convey much the same feeling of sublime wonder it always has. The design principles introduced by the historic master planning process and the rustic architectural style, both of which sought to integrate and harmonize development within this natural setting, are still followed and are reflected in the materials and workmanship of both ongoing maintenance and new construction. They are also reflected in the associations which the primitive character of these developments evoke. Finally, the pattern of clustered developments introduced during the period of significance as well as the spatial arrangement of features within these clusters still largely retain the integrity of their original locations.

Natural Systems and Features

Natural systems and features are defined as the natural conditions which have influenced or defined the development and resulting form of the cultural landscape. As one of the largest subalpine meadow complexes in the Sierra Nevada, the natural systems and features associated with the Tuolumne Meadows Historic District have contributed significantly to the cultural development of the landscape. The meandering streams, wildflower meadows, subalpine forests, glacially-polished domes, and expansive vistas have all influenced the processes and patterns of settlement and landscape interaction. The native landscape remains the dominant influence on development within the district. Its main features are essentially the same as those first encountered by Anglo-Europeans settlers during the nineteenth century. This observation is supported by John Muir's eloquent description of the landscape from 1890:

> Along the river are a series of beautiful glacier meadows stretching, with but little interruption, from the lower end of the valley to its head, a distance of about twelve miles. These form charming sauntering grounds from which the glorious mountains may be enjoyed as they look down in divine serenity over the majestic swaths of forest that clothe their bases. Narrow strips of pine woods cross the meadow-carpet from side to side, and it is somewhat roughened here and there by groves, moraine boulders, and dead trees brought down from the heights by avalanches; but for mile and miles it is so smooth and level that a hundred horsemen may ride abreast over it. [John Muir, "Features of the Proposed Yosemite National Park," *The Century* 40.5 (September, 1890): 656.]

Muir, always sensitive to the aesthetic possibilities of a landscape, notes the relationship between the distant backdrop of sublime mountains and the gentle, picturesque foreground of meadow, with a middleground of shadowy and nondescript forest separating the two. This well-balanced combination of contrasting natural qualities perfectly corresponds with the classic landscape aesthetic and marks this place almost inevitably for the attention it will eventually receive.

Geomorphology
Three fundamental processes have formed the present geomorphic setting of Tuolumne Meadows and its surrounding region. The first of these was the formation and uplift of the Sierra Nevada batholith. The granitic rocks of the batholith formed deep underground as a result of subduction of the Farallon tectonic plate beneath the North American plate. Subsequent erosion and uplift of the mountain range exposed the granitic rocks and lifted them kilometers above sea level. Tuolumne Meadows originated as a plateau on the high western slopes of the range.

The second important process was the deep scouring of this plateau by glaciers during the ice ages of the Pleistocene era. Erosion by these moving bodies of ice created a broad, roughly U-shaped valley, still evident in the shape of the encircling mountains.

The final process occurred after warming melted most of the Sierra glaciers, leaving rivers and lakes to fill the wide depressions they had cut into the landscape. The Tuolumne River flowed through the level valley where the meadows now exist. The gentle gradient of this valley slowed the current of the river, which was laden with glacial sediment after its energetic descent out of the higher reaches of its watershed. The sudden diminishment of energy caused this sediment to fall out of the river and gradually accumulate on the floor of the valley. Over time, this process of sediment deposition built up a broad alluvial plain which now constitutes the foundation of the meadows. Early successional vegetation which colonized this alluvial plain contributed organic material, eventually producing a thin, humic layer of topsoil on which the present meadow grasses grow.

Hydrology
Tuolumne Meadows lies within the upper reaches of the Tuolumne River watershed. Its hydrology is dominated by the processes associated with the river. At the upper end of the meadow, on its eastern edge, two forks of the river come together. The northern-most is the Dana Fork; the southern is the Lyell Fork. Both tributaries descend from high gradient areas at the crest of the Sierra Nevada through an alternating series of low gradient meadow systems separated by dramatic cascades. The confluence is characterized by a marked decrease in slope and the suddenly slowed waters enlarge themselves in a broad pond, surrounded on every side with willows and deep deposits of bright granitic sand. Below this lazy confluence, the combined waters of the Tuolumne River descend through one more set of rapids before emerging in the main portion of Tuolumne Meadows. Here the river meanders through the long expanse of the meadow until it spills through a narrow bedrock notch, the beginning of the "Grand Canyon of the Tuolumne". From this point to Hetch Hetchy Reservoir the river is characterized by a number of spectacular waterfalls and intervening lower gradient reaches.

Native Vegetation
Native species remain the dominant vegetation in and around Tuolumne Meadows. Though some exotics have intruded, none have been purposely introduced. The developed landscape and architectural features of the historic district have been consciously designed with reference to this native vegetation, utilizing the open vistas of broad meadows and distant backgrounds, the repoussoir framing of forest vegetation, and the interrelationship of shadowed overstory and sunlit openings to focus and condition the aesthetic experience of visitors.

The most prominent vegetation types—in relation to the cultural landscape—are those which characterize the meadows, namely, subalpine grassland and riparian woodland. Both these types comprise relatively low growth, allowing for uninterrupted sightlines and expansive vistas. Many of the built features within the district were oriented to take advantage of these scenic opportunities by directing the visitor's eye across a wide expanse of the meadow from the edge, thereby increasing the sense of space experienced by the viewer. This visual experience is enhanced by the distant backdrop of mountains visible from nearly every perspective in Tuolumne Meadows.

The meadow vegetation is limited in its extent by the contours of the land and its associated hydrology. As the land rises above the level of the Tuolumne River's alluvial plain, the soils dry out and conifer woodland replaces grassland as the dominant vegetation type. This transition occurs abruptly, creating a sharp border completely surrounding the meadow. The woodland, dominated by lodgepole pine, continues for a mile or more on either side of Tuolumne Meadows, rising steadily up the sloping topography, until it reaches its ecological limit at an elevation of approximately 10,000 feet in the encircling mountain crags. Above this timberline, diminutive alpine species constitute the dominant vegetation. The latter play only an indirect role in the Tuolumne Meadows cultural landscape, contributing to the character of its scenery by leaving the distant mountains unconcealed in their sublime hardness.

These native vegetation patterns have played an important role in determining where development would be sited throughout the district. Most of the designed clusters are located just within the boundary between meadow and forest. The abruptness of this boundary allows structures to be built within the more ecologically resilient forest while remaining close enough to the meadows to still feel part of them. The forest also conceals much of this development from sight while still allowing views beyond its shadowy margins into the open sunlight. In a few instances, park planners have utilized the intervening screen of trees to frame sightlines and even enhance the drama of the scenery by limiting views of the meadows and distant mountains to occasional glimpses.

The close relationship between native vegetation and the recreational value of Tuolumne Meadows has always been acknowledged by the Park Service, and park planners have actively managed the forests and meadows of the district to support recreation since the early 1930s. When the existing vegetation appeared to be threatened by infestations of pests like the needle miner, the Park Service responded with vigorous control initiatives. These treatment measures have also affected cultural development and land use with the introduction of the CCC for vegetation management during the 1930s and the establishment of the Insect Research Station in the 1950s. Another land use practice which has strongly affected the character of the district is the removal of encroaching lodgepole pine from within the meadow. This practice began as early as 1931 and continues to the present day. Its intent is to conserve the scenic views and vistas as well as to preserve the meadow ecology in its current state.

Climate

Climate variability in Tuolumne Meadows is extreme, ranging from a temperate but short summer to long winters characterized by harsh storms and subzero temperatures. Snow and avalanche danger require winter closure of the Tioga Road and the cessation of all visitor services. All park personnel except two winter rangers leave the Tuolumne Meadows area as well. The season typically ends in October and does not resume until June, when the Tioga Road reopens. These climatic conditions have influenced development in the district in several noticeable ways. For instance, the seasonal nature of land use has inclined residents and park planners over the years to prefer simple, often temporary structures over more substantial ones, because the structures are occupied for only a few months out of every year. The most prominent example of this preference is the tent cabin, which is disassembled at the end of each season to avoid being crushed by the weight of winter snows. Prominent exceptions to this tendency for simplicity are the heavy rustic buildings constructed during the 1930s. But these, too, reflect the climatic conditions of their environment in noticeable ways, requiring heavy reinforcement and steeply-pitched gables to shed winter snow. All permanent buildings in the area are also equipped with shutters to allow closure during the winter months.

Summary

Geomorphology, hydrology, native vegetation and climate have all contributed significantly to the character of the Tuolumne Meadows Historic District. Their influence remains relatively unchanged since the period of significance and continues to affect development, use and management of the landscape. The continuity of this influence helps convey the original significance of the historic district.

Natural Systems and Features #1: Contemporary view of seasonal wetland and meadow grassland with forest, granite dome, and mountain peaks in background.

Land Use

Land use is defined as the salient human activities which have formed, shaped or organized the landscape. The earliest land use associated with the period of significance in this historic district includes the hospitality provided by homesteaders like John Lembert and associated development (e.g., construction of fencing to segregate visitor livestock). This pattern of use was expanded following the acquisition of the Soda Springs property in 1912 by the Sierra Club, who combined both recreation and conservation in their utilization of the site. The Sierra Club's mission combined both recreational and conservation values and treated them as complementary. The Club sought to gain people's interest in the conservation of natural resources—specifically wilderness—by cultivating a love for these resources through their aesthetic contemplation and recreational involvement in them. In turn, its interest in conserving natural resources was motivated by its desire to create opportunities for recreational and aesthetic use of those resources. This strategy of mutually supporting goals was evidenced in the Club's use of the Soda Springs parcel in Tuolumne Meadows. As early as 1901, the Sierra Club began organizing recreational Outings in the High Sierra, often basing these activities in or around Tuolumne Meadows. In 1915, the club began developing the Soda Springs parcel specifically to support these activities, and the Soda Springs area remained an important center for both outdoor recreation and wilderness conservation throughout the Club's tenure in Tuolumne Meadows, a period which lasted to 1973, well beyond the historic period of significance.

The National Park Service also combined recreation and conservation in its management of Tuolumne Meadows. Its involvement in the district began in 1916 with the organization of the Park Service under the Organic Act which was passed that year. The Park Service, however, was guided by reasons substantially different from those driving the Sierra Club. The Park Service's mission, as stated in its enabling legislation, obligated it to conserve the resources it managed as well as to make them available for public recreation. These goals were not at first understood as being complementary in the same way as the Sierra Club understood them, but they resulted in a pattern of land use which was essentially the same. The Park Service tried to integrate the dual objectives mandated by its mission, and where possible promoted recreational use that complemented the conservation of natural and scenic resources. For example, the reconstruction of the Tioga Road during the period of significance was undertaken to facilitate public access and increase the recreational opportunities for visitors coming to Yosemite. At the same time, its physical alignment was carefully chosen to reduce negative impacts on the natural environment and to avoid intruding into the scenic viewscape. The master planning process promoted a similar integration of these two objectives. The Park Service introduced and expanded many recreational facilities during the period of significance, but concentrated this development within clusters on the periphery of the meadow in order to minimize harm to the fragile ecology and to conserve both its natural and scenic values.

Another result of this concentration of facilities was the development of residential areas which have inadvertently produced strong feelings of community and a sense of loyalty among their occupants. This has occurred, for instance, at the Tuolumne Meadows Lodge and High Sierra Camp, in the government's Administrative Area and Road Crew Camp, and at the old Insect Research Station, where village-like aggregations of tent cabins and similarly ephemeral structures were introduced to accommodate short-term residence. In a rather ironic contrast to the temporary nature of the architecture of these places, these developments have inspired enduring loyalties among their seasonal residents, many of whom return year after year. Their feelings have grown in tandem with informal but lasting traditions, which have been perpetuated by the occupants. These cultural traditions and associated feelings of loyalty represent a significant part of the history of these residential clusters and contribute as much or more to their significance as their architectural or landscape design.

At the same time, the use which has developed with these residential clusters is closely related to their unique physical characteristics. Their cluster arrangement, spatial organization and even their sparse simplicity and ephemeral nature have all contributed to the cultural traditions and communal loyalties which make them significant. In the Tuolumne Meadows Lodge and High Sierra Camp, for instance, tent cabins have been utilized for seasonal visitor residence since 1916. This use and the primitive character of the accommodations have remained essentially unchanged up to the present time and continue to contribute to the significance of the district. In the Road Crew Camp and government Administrative Area (Ranger Camp), a similar pattern exists. Many of the tent cabins which were introduced to accommodate seasonal park employees, have suffered loss of integrity through repeated alterations, but the land use associated with these structures and their appurtenant landscapes remains compatible with historic patterns. Land use is, therefore, an important character-defining feature of the overall historic district (see related discussions under Cluster Arrangement and Buildings and Structures, especially for elaboration on the typology of ephemeral architectural structures like tent cabins).

Cluster Arrangement

Cluster arrangement is defined as the location and patterns of buildings, structures, and associated spaces in the landscape, the meaningful groupings or aggregations of these features, and the spatial relationships between those aggregations. Most of the development in the Tuolumne Meadows Historic District is concentrated in distinct clusters with well-defined physical boundaries. Though expressed spatially, these clusters are determined to a great extent by their purpose and the types of use associated with them. The Tuolumne Meadows Lodge and High Sierra Camp, for example, represents the business activities of a private concession within the park and serves the purpose of providing primitive but comfortable, full-service accommodations for non-camping visitors. It originated with the desire of early Park Service managers to attract more visitors to Tuolumne Meadows and to encourage them to stay longer by providing better services. It is the only such facility which the Park Service allowed in Tuolumne Meadows and thus represents the concentration of these purposes within a single location. The lodge was developed at its current site on the Dana Fork in 1916 and has remained here ever since. It has always comprised a spatially coherent and relatively dense cluster of buildings, structures and associated landscape features organized according to the purposes of the business concession.

The lodge cluster is divisible into several component parts or sub-clusters. These are distinguished by their differences in use and structure-type. The most obvious of these component clusters is the aggregation of tent cabins which provide residence for visitors and staff. These tent cabins are the most numerous class of structure in the Tuolumne Meadows Lodge and High Sierra Camp. Not only do they share a common type of use, but they also share a relatively uniform architectural typology. Although the configuration of cabins within this cluster was altered in 1983 from a symmetrical grid to a more varied and picturesque pattern, the cluster itself still occupies the same area and still possesses relatively the same density of structures as it did during its period of significance.

Other significant clusters within the Tuolumne Meadows Historic District include the government Administrative Area (Ranger Camp), the Road Crew Camp, and the Tuolumne Meadows Campground. These two Park Service facilities are meant to provide support and administrative services for the entire district. Both clusters were intentionally sited on elevated ground under the surrounding forest canopy, outside the meadow, in order to minimize both visual and ecological impacts. Ranger Camp was built prior to the formulation of a master plan for the district and developed into a concentrated cluster as a matter of practical necessity rather than explicit design. The Road Crew Camp, on the other hand, was a

direct result of the first master planning effort. This plan proposed concentrating all development throughout the district into individual clusters according to purpose and function. The Road Crew Camp was meant to include all government administrative and support facilities and would replace the original administrative cluster at Ranger Camp. The Tuolumne Meadows Campground, just east of the Road Crew Camp, was another expression of this master plan and was meant to concentrate all visitor camping in one place.

The failure to fully implement the master plan has not diminished the predominance of cluster arrangements within the district, though it has resulted in their unintended proliferation. Park Service administrative functions are now divided between two well-defined clusters. The Road Crew Camp has developed into a nexus of service facilities associated with maintenance, while the Ranger Camp has retained its concentration of administrative and protection facilities. Habit now ensures that this arrangement will endure despite the intentions of the original planning effort. This is not necessarily a problem, because the existing arrangement actually fulfills many of the goals which the Park Service planners envisioned while at the same time accommodating growth which they did not anticipate. In short, the fundamental principles of the master plan have continued to guide development throughout the area even if the details have been modified. This has remained true up to the present day, and even the construction initiated during the Mission 66 program—which represents the most ambitious and original development to occur within the district since the 1930s—remained loyal to the intentions of the original planners.

The Insect Research Station, or Bug Camp, is another cluster arrangement that demonstrates important development patterns worth noting. Originally developed as the site of a Civilian Conservation Corps stub camp, the location has been associated with natural resource management during every period of its use. After the CCC stub camp was dismantled following its abandonment in 1938, the area remained unused until 1955. It then became the site of the next major resource management facility—the Insect Research Station. Development of the Insect Research Station followed both the function and physical pattern of development implemented by the CCC. The original purpose of the Insect Research Station ended in 1963, but the site and its surviving buildings and structures have continued to be used in a compatible way—as a residential cluster and seasonal field station for biological science technicians and researchers—up to the present time. This continuity illustrates the close relationship which can develop between a particular use and a distinct and well-defined cluster arrangement. The latter creates a physical context for the formation of often strong community loyalties, even in the formal environment of government service. These loyalties in turn foster traditions and patterns of use which become associated with the place and give it a unique cultural character. This process has occurred with greater or less feeling in all of the developed clusters of the Tuolumne Meadows Historic District and contributes to the significance of each one.

Buildings and Structures

The contributing buildings and structures of Tuolumne Meadows Historic District collectively convey the recreational, utilitarian and aesthetic significance of development in the area from 1885 through 1961. Building styles ranged from the complex, with the park rustic architecture evidenced in the Road Crew Camp mess hall and bunkhouses, the campground reservation station and the campground comfort stations; to the simplest, evidenced in the canvas-roofed structures characteristic of the Tuolumne Meadows Lodge and High Sierra Camp. Relatively simple but otherwise permanent wood frame structures are also common throughout the district and comprise a third architectural style. Most of these buildings are rustic, meant to blend unobtrusively into their natural surroundings, but they lack the careful craftsmanship and architectural detailing of the typical park rustic style. Examples of this type are common at Ranger Camp. Descriptions of buildings and structures in the following are organized into groups based on cluster arrangements within the historic district. These clusters include the Tuolumne Meadows Lodge and High Sierra Camp, the Administrative Area (Ranger Camp), the Insect Research Station (Bug Camp), the Public Campground, the Tuolumne Meadows Store and Gas Station, the Tuolumne Meadows Stable and Pack Station, the Road Crew Camp, Tuolumne Meadows Soda Springs, and miscellaneous buildings and structures.

Tuolumne Meadows Lodge and High Sierra Camp

The Tuolumne Meadows Lodge and High Sierra Camp Historic District is located along the Dana Fork at the western most edge of the Tuolumne Meadows Historic District. Most of the buildings are constructed of canvas stretched over permanent wood or metal frames. All of the buildings and structures are designed to be a simple as possible with no architectural ornamentation. The most distinctive feature of the entire development is its village-like clustering, which contributes substantially to its historic character. Originally developed by a park concessionaire in 1916 to promote and develop recreational opportunities in the Sierra Nevada's high country, the site continues to be managed by the current park concessionaire, the Delaware North Company (DNC). Contributing structures include the Kitchen/Dining Hall and Bath House, to which only modest alterations have been made since the period of significance. Tent cabins constitute the majority of structures at the Tuolumne Meadows High Sierra Camp and give the district its most distinctive character. The cluster arrangement and land use associated with these cabins are also contributing landscape features. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Contributing Features

Tuolumne Meadows High Sierra Camp Bath House
LCS: 055863
Structure No: TMV002
Constructed in 1938, this one-story wood frame structure was sited so that the length of the building follows the natural contours of the landscape. It is centrally located amid the historic tent cabin cluster. the 19 by 48 foot structure was constructed on a poured concrete foundation and floor. The walls and roof are sheathed in corrugated metal tinted with brown paint. The roof line has shallow eaves and exposed rafter tails. The single paned wooden awning windows are located just below the eaves to provide light and ventilation to the structure. Entrance and egress is located along two openings found on the southwest side of the structure. Ell-shaped visual screens were constructed in place of doors to block views into the interior of the structure. Extensive nail holes located around the windows and doors provide evidence of their yearly covering for weather protection.

Tuolumne Meadows Lodge
LCS: 055866
Structure No: TMS003
Originally sited along the Dana Fork in 1916, the Tuolumne Meadows High Sierra Camp Lodge was constructed in 1916 using a log frame to support canvas walls. In 1939 a new structure was built slightly to the south and closer to the river to take its place. This structure was designed using the same ephemeral concept as the original. Although the entire building was designed at the same time, it has two distinct types of construction divided between three areas of use. These consist of a dining/reception area, kitchen, and storage areas, all of which are interconnected to form a tee-shaped structure.

The dining and reception hall area is constructed on a slightly elevated concrete slab which has been painted red. Upon this a dimensional timber frame supports the canvas walls and roof. The dimensional timbers have been painted white and are similar in color to that of the canvas. One-over-one double hung windows are located in banks along each wall to provide ventilation and light. Along the western facade of the structure there is an awning that is approximately 6 feet wide which extends from the building to provide a shaded outdoor seating area. Each year, the canvas roofs and windows are removed and put into storage. This leaves the floor and timber skeleton exposed to the elements during the winter months while the camp is not in use.

Off the canvas dining area, permanent kitchen and storage areas are built of timber frame construction. The hipped roof was designed to extend into the frame of the convertible dining hall. Slightly elevated due to a crawl space, this section of the structure is different from the dining hall in both color and texture. The roof line is covered in dark, three-tabbed asphalt shingles. Along the upper edge of the walls there are a series of windows that wrap around the outside of the building. In the kitchen area, these are true divided light wooden awning windows. Along the storage area, the windows are in sliding aluminum frames. The building is sheathed in board and batten siding that is painted brown.

Tuolumne Meadows High Sierra Camp Tent Cabins
LCS: 055867
Structure Nos: 4-12, 14-70
There are currently 69 guest tent cabins at the Tuolumne Meadows Lodge and High Sierra Camp. Of these, 66 are contributing structures and 3 are recent additions located in an area not historically used for this purpose. The contributing structures are clustered around the lodge in the area which has been used for tent cabins since the period of significance. The 66 cabins determined to be eligible as contributing resources by this CLI represent an addition and modification of the List of Classified Structures (LCS) record, which recognizes only 20 cabins (nos. 1-20) as eligible. Cabins 1-3 are not eligible and should be removed from the record, while cabins 21 through 70 should be added to the record. No cabin 13 exists, and this number should also be removed from the record.

Tent cabins are common throughout Yosemite National Park and have been present in Tuolumne Meadows since 1916, when they were first installed at the Tuolumne Soda Springs Lodge, predecessor of the present Tuolumne Meadows Lodge and High Sierra Camp. Most share a common design, materials, and function. The typical cabin measures 12 by 14 feet, and is constructed by stretching heavy duck canvas over an open framework of wood or metal to create a simple, one-story, end-gable building. The attractions of this design are simplicity and low cost, but the design also reflects local environmental conditions and the specific way in which the cabins are used. Tent cabins are meant exclusively for seasonal occupancy and are vacated at the end of summer. They are winterized during the off-season by

removing their canvas skin. This leaves only an open framework and the floor platform, reducing the exposed surface area of the building and preventing its collapse under the accumulation of winter snow.

The tent cabins at the Tuolumne Meadows Lodge were originally laid out in a loosely symmetrical pattern, with every cabin facing the lodge at the bottom of the slope below the cluster. All of the cabins were constructed of wood framing and stood on raised wood platforms. By about 1960, the total number of cabins in the historic tent cabin cluster had reached 66. All subsequent additions were made in other locations. In the late 1960s or early 1970s, 20 of the original cabins were altered with the addition of concrete slab floors poured over a rubble foundation, and the wood framing was replaced with steel poles. These poles were inserted directly into the concrete. In 1983, a major flood required the maintenance of the entire historic complex, and all of the wood platforms were replaced with concrete slabs. At the same time, many of the cabins were reoriented or moved a short distance in order to break up the previously regular pattern of the spatial arrangement. The cabins now faced in varying directions rather than uniformly toward the lodge. This was done to give a more picturesque effect. All of the wood framing was also replaced at this time with steel poles.

The cabins within the historic tent cabin cluster are still determined to be eligible as contributing resources despite these changes, because they continue to convey the significance of the historic period during which they were introduced. Although individual structures have been moved or reoriented, they are still located within the same zone originally designated by the concessionaire for guest tent cabins and by the National Park Service's master plans for Tuolumne Meadows. The present tent cabins also continue to convey the significance of their historic architectural typology despite material changes made after 1983. The most significant character-defining material—the canvas skin—is still used; the cabins retain their original rustic feeling and associations of a primitive lifestyle in a communal, village-like setting; and the simple, end-gable design of the structure with a floor dimension of 12 by 14 feet has remained essentially unchanged. The replacement of structural material from time to time is characteristic rather than exceptional with ephemeral architecture like this. The canvas cladding is regularly removed at the end of each season in preparation for winter, and the canvas itself is periodically replaced altogether as the material breaks down naturally. The floods of 1983 amplified but did not substantially change this historic pattern.

These building remain a relatively faithful expression of their type and possess important character-defining features which convey the significance of this type in the history of the Tuolumne Meadows Historic District. That type is defined by the relatively standardized design described above, but also by its use and spatial organization within a cluster arrangement. These three characteristics—design, use and cluster arrangement—are closely related. The design of the tent cabin is adapted to seasonal use in the harsh climate of the high mountains. Its simplicity is a reflection of the primitive lifestyle cultivated by its occupants (at least temporarily). And its spatial organization within concentrated clusters of similar buildings creates an association of informal community life in a village-like setting. Strong loyalties frequently develop among residents of these clusters and have produced distinctive local traditions which further contribute to the clusters' historic significance.

Tuolumne Meadows High Sierra Camp Storage Shed
LCS: TBD
Structure No: TME030
This small 14 by 14 foot storage shed is the last remaining structure built for the original concessionaire stables that were located at the western end of the property. The structure’s wood frame rests on a concrete slab floor and is covered with ship-lap wood siding. The low-pitched roof is made of corrugated metal and has narrow eaves. A large opening with chamfered corners leaves most of the front of the

building exposed to the elements. Corner boards and trim details are located at the edges of the structure and along the opening.

Tuolumne Meadows High Sierra Camp Fire Circle
LCS: TBD
Structure No: HSC-6
This simple fire circle is comprised of an oval ring delineated by large granite stones. It is roughly 10 feet across. The feature first appears on maps in 1951, though it probably dates from much earlier. Though not a major structure, it embodies a significant aspect of the historic character of the Tuolumne Meadows Lodge and High Sierra Camp and represents an important gathering place.

Non-Contributing Features

Tuolumne Meadows High Sierra Camp Tent Cabins 1-3
Structure No: 1, 2, 3
These three structures are compatible with the historic tent cabin typology, comprising a simple, end-gable canvas structure measuring 12 by 14 feet. The stand on poured concrete foundations and are framed with steel pipe. They are determined to be noncontributing, however, because they were introduced during the mid-1980s to an area which is not historically associated with tent cabin use. Prior to 1969, this area was the site of the original concessionaire stables and pack station. They are currently used as guest cabins for visitors to the Tuolumne Meadows Lodge and High Sierra Camp.

Tuolumne Meadows High Sierra Camp Employee Tent Cabins
Structure No: E, E1-E12, E14-E25
These 25 structures are compatible with the historic tent cabin typology, comprising a simple, end-gable canvas structure measuring 12 by 14 feet. They stand on poured concrete foundations and are framed with steel pipe. They are determined to be noncontributing, however, because they were introduced during the mid-1980s to an area which is not historically associated with tent cabin use. They are currently used for seasonal residence of Yosemite Park and Curry Company employees.

Tuolumne Meadows High Sierra Camp Pump House
Structure No: 3098
This small structure is used to house a portion of the chlorination system for the lodge water supply. Its exterior dimensions are roughly 5 by 8 feet. It has a side facing gabled roof with wood board roofing. The exterior board and batten wood siding has been finished with a dark wood preservative. It has a tall, concrete foundation. There is a small doorway along the front façade of the building which is used to access the interior chlorination system. It was constructed sometime after 1970.

Buildings and Structures #1 & #2: Typical tent cabins at Tuolumne Meadows Lodge and High Sierra Camp. Stone rubble foundation beneath concrete slab is illustrated in second photo. (YOSE, 2006)

Administrative Area (Ranger Camp)

Developed along the Old Tioga Road (Great Sierra Wagon Road) toward the eastern end of Tuolumne Meadows, the Administrative Area was constructed to provide maintenance and administrative services for the general area. Contributing features include the original five buildings built in 1924—the Ranger Station, Naturalist Cabin, Patrol Cabin, Barn and Shower House. Over the years, other buildings and structures have been added and include tent cabins used for park housing. Although non-contributing, because they were built after the period of significance, most of these structures are compatible with the historic character of the landscape cluster and do not detract from its significance. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Ranger Camp was historically known as the government Administrative Area, or simply the Administrative Area, but it has since become known more commonly as Ranger Camp. Both names are used here.

Contributing Features

Ranger Camp Ranger Station
LCS ID: 005788
Structure No: 3000
This building was the original entrance station/ranger station on the Tioga Road. It was erected in 1924 at a cost of $1,500. It is a single story structure enclosing 525 square feet. The building is ell-shaped, although the foot of the ell extends only 3 feet in the back. Not counting that extension, the building is 14 by 39 feet in size, including an open porch that is 6 feet deep. The building has a peeled log frame with vertical plank infilling and a number of double width horizontal six lite windows. It has a gable roof with a long ridgepole and rafters, and angular log pole roof braces rather than vertical posts. The current roofing material is corrugated metal. The original exterior finish was a dark brown stain. However, the building is currently painted "Wosky Brown," a color devised by Landscape Architect John Wosky and used widely throughout the park.

The ranger station stands on the north edge of the old Great Sierra Wagon Road. This old road alignment is currently used to access the Tuolumne Meadows High Sierra Camp and does not receive a high volume of traffic. After the Tioga Road realignment in 1934, the park built building #3005 (the Visitor Contact station) along its new alignment. The Visitor Contact station has replaced some of the functions of the original ranger station. For many years this building was used as the district ranger's residence, but in 1980 it was converted to use as the district ranger's office.

Ranger Camp Naturalist's Cabin
LCS ID: TBD
Structure No: 3001
The naturalist cabin was built in 1924 at a cost of $650. It was one of the five original structures at the Administrative Area. As its name suggests, this cabin was intended to house an NPS naturalist or interpretive ranger. The cabin's exterior measures 12 by 28 feet. The original configuration included a mudroom entry along the southern façade. The present day configuration has replaced the doorway with a window and converted the mudroom into extra interior space. The cabin has a side-sloping gabled roof that is sheathed in wood shingles. The exterior walls are finished with wood shake shingles that have been painted Wosky Brown. This building has an assortment of different windows. The historic windows are along the sides of the building and have three lites each. On the southern façade, where the porch used to be, there is now a double-hung wood window. On the northern façade, there is an aluminum-framed sliding window. All of the windows have operable exterior shutters. A non-historic wood porch has been added to the northern end of the building.

Ranger Camp Patrol Cabin
LCS ID: TBD
Structure No: 3002
The patrol cabin was built in 1924 at a cost of $1,100. It was one of the original structures at the Administrative Area. This timber framed building features structural peeled log posts (8 inches diameter), log purlins (8 inches diameter) and log rafters (4 inches diameter). The log posts are set atop large granite stones. Several post bottoms have been sawn off (due to their wicking moisture and subsequently rotting) and replaced with milled timber. This structure has a peeled log knee brace on its northwest corner. It is presumed that all corners of this structure once featured this rustic detail. This building's forward facing gabled roof is sheathed in wood shingles. Historically, there were eight windows that swung open on hinges. One window, however, has been replaced by an aluminum sliding window. All of the windows are coupled with exterior operable shutters. The building's one-by-twelve board and batten siding has been painted Wosky Brown. There are small covered awnings associated with the main and west entries and there is a small wood deck along the west side of the house.

Ranger Camp Barn
LCS ID: TBD
Structure No: 3003
The Administrative Area barn measures roughly 25 by 35 feet and was built in 1924. The barn consists of four tie stalls on each side with an alley down the center and a hay loft overhead. Historically, the horses and mules were allowed to graze in the Tuolumne Meadows. Because of increased auto traffic in 1956, a fenced pasture was built on the river across from the ranger station and barn. Today livestock are kept confined within a corral and are fed hay trucked in from outside of the park. The barn has one-by-twelve vertical board siding and is painted Wosky Brown. The dimension and orientation of the siding is historically accurate, however the siding was not originally painted brown. The corners of the structure are supported by peeled log posts. There are three log rafters that run the length of the barn. The log raftertails have been left exposed and extend approximately 2 feet beyond the plane of the building. The

gabled roof is currently sheathed with corrugated metal; however, the historic roofing material was wood shingles. The three doors along the western facade of the barn provide it with its main points of entry. The barn has a dirt floor. Its only foundation is the natural stone piers that the log posts rest on. The barn has a loft that can be accessed by an exterior wood ladder. The loft space is currently being used as a gym and storage area.

Ranger Camp Tack Shed
LCS ID: TBD
Structure No: 3004
This structure, also known as the Saddle Room, was built in 1930 to serve as a storage area for equestrian related equipment. Its exterior measures only 8 by 12 feet. This structure has no true windows although the front door has a four lite window in its upper third. It has unfinished plywood walls that have been painted Wosky Brown. The forward facing gabled roof is finished in wood shingles. The three heavy timber steps that lead to the front entry measure 3 by 11 inches. This structure is supported by four-by-four posts that are fastened into concrete pier blocks. Tools associated with corral maintenance hang from the building's western façade, and the camp's historic phone box hangs from the building's southern façade.

Up until the 1970s, there was only one telephone for personal use in the entire Administrative Area. This telephone was fastened at chest height to a tree in the center of camp. When the phone rang, whoever happened to be near it would answer. The phone box is still used by Search and Rescue teams and by mule packers. It measures 34 inches tall, 17 inches wide and 22 inches across. The wood tongue-in-groove sidewalls are 3 by 0.5 inches and have been painted Wosky Brown. The top is made of solid wood boards covered in sheet metal. The front door of the box swings open and reveals a push button telephone. The door has a latch and padlock, although it is usually left unlocked. A routed wood sign reading "telephone" is mounted on the door of the box.

Ranger Camp Showerhouse
LCS: TBD
Structure No: 3020
This structure was built in 1924. It was originally used as a shower house and comfort station. The water for the showers was heated by a wood-burning furnace. Today the shower portion of the building is used as a storage area. The building measures roughly 11 by 21 feet. It has peeled log purlins (roughly 10 inches diameter) and rafters (roughly 6 inches diameter) that extend beyond the roof plane by roughly 18 inches. It has wood one-by-twelve vertical siding that is painted Wosky Brown. This building has a gabled roof that is finished in wood shingles. The building also has two windows that open out from the bottom. However, these are currently sealed shut by plywood. This building has a concrete pad foundation that was poured over a rubble masonry platform. There is a peeled log baseboard that runs along the entire perimeter of the buildings exterior.

Ranger Camp Tent Cabins
LCS: TBD
Structure Nos: 3030, 3032
These two tent cabins are part of a group of five cabins that were constructed within the Administrative Area sometime between 1930 and 1950 and still stand in their original location. Both buildings have concrete foundations and measure 12 by 28 feet. They have plywood sidewalls and are painted Wosky Brown. Their gabled canvas roofs are anchored into the plywood with metal nails. Both of the cabins have wood fire stoves with metal stovepipe chimneys that exit through the front façade. Originally, the cabins had two layers of canvas along the roofs. The outermost layer served as a rain fly and was

attached to wood outriggers that ran along the side of the cabin. The original design also had a transparent mesh screen that served as the upper exterior wall along the front of the cabins. Today, the mesh screen has been replaced by vertical wood siding. There are operable windows at either end of the cabins. The buildings retain integrity with respect to their historic workmanship and design. Materials have been replaced over time through routine maintenance, but historically compatible materials have been used. The buildings' setting remains essentially unchanged since the period of significance, and the buildings retain their historic feeling and association.

Ranger Camp Tent Cabins (1960)
LCS: TBD
Structure Nos: 3037, 3038, 3039, 3040, 3041
These five tent cabins were built in 1960 as an addition to the Administrative Area. (Date of construction attributed by Fred Koegler in personal interview with Daniel Schaible, August 2006). They are all in their original locations and measure roughly 12 by 28 feet. They have plywood sidewalls with canvas roofs. They all have wood fire stoves with stovepipe chimneys that project through the front façade of the structures. The structures are on an east-west axis, and four of the five structures have their entries facing to the east. They have three sliding aluminum windows; one in the front and two in the rear. Most of the buildings are supported by wood posts which rest on tamped earth or small wood stands. However, building #3040 has a rubble masonry foundation. Downward shifting is evident on several of the structures as the weight of the winters snow pack often pushes the buildings downhill, sometimes knocking them off of their supports. The buildings retain integrity with respect to their historic workmanship and design. Materials have been replaced over time through routine maintenance, but historically compatible materials have been used. The buildings' setting remains essentially unchanged since the period of significance, and the buildings retain their historic feeling and association.

Ranger Camp Weather Station
LCS: TBD
Structure No: AA-7
The weather station at Ranger Camp has been used to record temperature and rainfall since at least 1956. It is a wood structure that stands seven feet off of the ground. It is supported by four two-by-two posts that are approximately 4 feet tall. There is cross-bracing that runs between the posts. Atop the posts, there is a box that houses all of the weather equipment. The equipment is accessed through a small swinging door. The box has inoperable wood blinds along all of its sides that provide ventilation without exposing the equipment to direct sunlight. Next to this weather box is a vertical metal post with a small bucket fixed to its top. This ensemble is used to measure rainfall.

Non-Contributing Features

Ranger Camp Storage Building and Tack Shed
Structure No: 3018
This structure was built in 1933 and was originally located east of Road Crew Camp. The building was then known as the “fish tank house” and used as a fish hatchery. In 1969, the building was relocated to the administrative area and now stands near the barn. It is currently used as a tack room for the pack mules. The building has been significantly altered and is no longer considered a historic structure.

The storage building is timber-framed and finished in cedar shake siding painted Wosky Brown. The original structure was open along the upper half of its walls. This would have allowed ventilation throughout the building. The exterior dimensions are 12 by 20 feet. There is an 8 by 18 foot wood deck

on the north end of the building. This deck is supported by concrete pier blocks and wood posts. The original wood deck was only 8 by 12 feet and was supported on rubble masonry piers rather than wood posts. (These may still be present in the original location near the Road Crew Camp. See the archaeology section). The gabled roof is covered in corrugated metal but was originally shingled in wood. There is one inoperable window located on the south façade.

Ranger Camp "Hard Top" Cabins
Structure Nos: 3031, 3033, 3034
These three cabins are contemporary with buildings #3030 and #3032 and were part of the original ensemble of five tent cabins constructed between 1930 and 1960 within the Administrative Area. These structures are classified as non-contributing, because their integrity is severely degraded by the many alterations that they have undergone over the years. None of these cabins retain their original canvas roofs. They have all been given metal "hard top" roofs since the period of significance. Furthermore, buildings #3033 and #3034 have been enlarged with the addition of private bathrooms. All that remains of the original historic structures are their location, their general massing and possibly portions of their concrete foundations.

Ranger Camp Tent Cabins
Structure Nos: 3042, 3043, 3046, 3047, 3048, 3058, 3059, 3060, 3061, 3063, 3307,
These structures were all built outside of the period of significance between 1980 and 2006. Their design and construction are compatible with the basic typology of historic tent cabins and the historic character of the district, but they are not themselves contributing features. All of these cabins have plywood walls and a simple end-gabled canvas roof. They measure approximately 12 by 28 feet.

Ranger Camp "Hard Top" Cabins
Structure Nos: 3035, 3045, 3308, 3309, 3310,
Many of these "hard top" cabins were once tent cabins but were later retrofitted with rigid metal roofs. They are basic rectangular structures with simple end-gabled roofs. They are all 12 feet wide but range in length from 16 to 32 feet.

Ranger Camp Storage Sheds
Structure Nos: 3027, 3028, 3084, 3090, 3099, AA-5
There are numerous non-contributing sheds within the Administrative Area. They vary in size from 6 by 6 feet to 8 by 10 feet. All were constructed or altered after the period of significance.

Ranger Camp Year-Round Residence
Structure No: 3007
This hard-top cabin was built in 1983 to serve as a year-round ranger cabin. It has some rustic-inspired architectural details, including a stone veneer on the concrete foundation. The building measures approximately 21 by 29 feet.

Ranger Camp Shower House and Comfort Station
Structure No: 3008
This shower house was built in 1985 and was intended to relieve some of the congestion caused by increasing use of the area, which exceeded the capacity of the historic shower house (bldg. #3020). This structure is approximately 24 by 38 feet.

Ranger Camp Shower House
Structure No: 3019
This structure was built in 1964 and is located due north of the historic shower house (bldg. #3020). It is presumed that the showers in this building replaced the wood-fired showers that were decommissioned in building #3020. This structure is approximately 23 by 18 feet.

Ranger Camp Search and Rescue Cache
Structure No: 3029
This structure was built in 1984 to be used as a storage cache for Tuolumne Meadows Search and Rescue equipment. The office is also used as a dispatch center while conducting searches and rescues. It measures 14 by 23 feet and has a forward facing gabled roof with standing seam metal roofing. It has one-by-eleven wood siding and is painted Wosky Brown. Its two windows are inoperable and are partially covered with wood slats for additional security. There are 12 steps leading up to the building.

Ranger Camp Gas Pump Shelter
Structure No: AA-1
These gas pumps and their associated gas pump shelter were added in the 1980s. The gas pump shelter has a metal roof and measures 4 by 18 feet. Only diesel fuel is currently stored here. The facility is used primarily by DNC shuttle buses.

Ranger Camp Soil Remediation Shed
Structure No: AA-2
This shed and its associated soil remediator were installed about 1993 to help cleanse an underground plume of gasoline that was discovered after the removal of gasoline storage tanks. This simple shed measures 8 by 10 feet and contains soil remediation equipment.

Ranger Camp Picnic Table
Structure No: AA-4
This custom-built picnic table outside of the Naturalist Cabin was originally at Soda Springs just west of Parsons Lodge. It was built by the Sierra Club and used for many outdoor meetings by the founding members. The table was relocated from Soda Springs to the Administrative Area after Jack Kinney built a replica table which now occupies the original location. This table was partially reconstructed, because it had been worn out by frequent use and exposure to the elements. The table top currently measures 42 by 84 inches but was originally 51 by 105 inches. The table's length and width were reduced to remove rotten wood. The table's surface and structural components appear to be original but the benches have been replaced with new wood. The structure is embedded in the earth and fixed in place.

Ranger Camp Cellular Communications Tower
Structure No: AA-6
The ranger camp cellular tower was installed in 1994. It is 45 feet tall. There are several associated transmission boxes located just northwest of the tower. The tower also houses the radio relay for the park's five High Sierra Camps.

Ranger Camp Fire Pit
Structure No: AA-8
This central fire pit dates back to the 1950's and originally consisted of a simple circle of small river cobbles surrounded by wicker seats. The fire pit was expanded in 1985 in honor of a visit to Ranger Camp by Secretary of the Interior Donald Hodel and NPS Director William Mott. The fire pit is approximately 4 feet in diameter and is now comprised of large, informally arranged granite boulders. There are many

moveable picnic tables around the pit, and it appears to be a well used space. Due to its informal design and impermanent nature, the fire pit is not eligible as a contributing structure. Its significance is related more as a tradition of land use associated with the site than to the physical structure itself. There are no construction documents for this feature, and it is not labeled on maps.

Buildings and Structures #3: View of the front entry to the ranger station (bldg. #3000), facing northwest, in the Administrative Area. (YOSE, 2006)

Buildings and Structures #4: View of the front entry to the patrol cabin (bldg. #3002), facing north, in the Administrative Area. (YOSE, 2006)

Buildings and Structures #5: View of the barn (bldg. #3003), facing north, in the Administrative Area. (YOSE, 2006)

Buildings and Structures #6: View of the pack shed (bldg. #3004) and telephone box, facing northwest, in the Administrative Area. (YOSE, 2006)

Buildings and Structures #7: View of the comfort station (bldg. #3018), facing southeast, in the Administrative Area. (YOSE, 2006)

Buildings and Structures #8: View of one of the 5 original tent cabins (bldg. #3032), facing southwest, in the Administrative Area. (YOSE, 2006)

Insect Research Station (Bug Camp)

Sited along the Old Tioga Road east of the Administrative Area, the Insect Research Station was constructed in response to a needle miner infestation that occurred during the 1950s. Of the original camp, the mess hall, comfort station and research sheds date back to the period of significance. Several tent cabins are also located in the development. Although they are not individually contributing, their current use and general location are compatible with the historic character of the research station. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Contributing Features

Bug Camp Comfort Station
LCS: TBD
Structure No: 3049
This building was built in 1955. It was the first shower house/comfort station at Bug Camp. Although it is still in use, a much larger, contemporary comfort station on the east side of the cluster has replaced much of its original function. This comfort station contains two toilets and one shower. It has a simple gabled roof with oxidized green corrugated metal roofing. The building has horizontal 7 inch wide shiplap board siding painted Wosky Brown. It has double hung windows that open from the top. The windows are tinted yellow for additional privacy. The building has three doors, one for each toilet and one for the shower. The building has a concrete foundation that extends out as a platform along its southern façade. There is a non-historic addition along the eastern façade that houses a hot water heater.

Bug Camp Mess Hall
LCS: TBD
Structure No: 3083
This building was the public cooking area in the original insect research station and was built between 1955 and 1957. The structure has suffered some damage over the years from the weight of winter snow, which has moved it off its original foundation. The building is currently supported by four-by-four wood posts that sit on concrete pier blocks. The mess hall has a forward facing oxidized green corrugated metal roof. The two-by-four raftertails overhang the exterior plane by roughly 1 foot. The siding is horizontal shiplap boards that are 7 inches wide. The exterior is painted Wosky Brown. The structure has four sets of six lite double hung wood windows. There were originally five sets of windows, but one set has been boarded over with plywood. There are operable shutters on either side of the windows. There is a large wood deck with a built in bench along the eastern entry of the building and a smaller wood deck along the southern façade. The building is still being used as a mess hall.

Bug Camp Storage Shed/Office
LCS: TBD
Structure No: 3085
This structure was built between 1955 and 1957 and was part of the original insect research station and measures 12 by 14 feet. It appears to have been built in conjunction with building #3086, which is located immediately northwest of this structure. This building was originally used as a storage shed and research laboratory and is still used for these purposes as well as providing informal office space. The building is timber framed with a side-sloping gabled roof and wood shingle roofing. The wood shingles are 2 feet long. The siding is comprised of horizontal one-by-seven shiplap wood siding that has been painted Wosky Brown. There are three sets of double-hung four lite windows that open from the bottom. The windows have operable shutters which are sealed closed during the winter months. The 3 foot wide front door on the northern face of the building is sheathed in vertical one-by-seven shiplap wood siding. The building is supported on wood four-by-four posts that are fastened into concrete pier blocks. The foundation has shifted noticeably downhill towards the south. There is a 5 by 12 foot wood deck outside of the main entry on the north side of the building.

Bug Camp Storage Shed/Office
LCS: TBD
Structure No: 3086
This structure was built between 1955 and 1957 and measures 12 by 16 feet. It was originally used as a storage shed and research laboratory for the original insect research station. It is still used for these purposes as well as providing an informal office space. The timber framed structure has a side-sloping gabled roof with wood shingle roofing. The roof overhangs the plane of the house by 8 inches on all sides, and there are exposed two-by-four raftertails. The siding is comprised of horizontally stacked one-by-eleven wood siding and painted Wosky Brown. There are three sets of six lite windows. The windows are operable and swing open on hinges. They have operable shutters which are sealed closed during the winter months. There were originally four windows but one set has been boarded over with plywood. The front entry is on the northern face of the building and is comprised of a set of double doors that have a combined width of 5 feet. The building is supported on wood four-by-four posts that are have been fastened into concrete pier blocks.

Non-Contributing Features

Bug Camp Tent Cabins
Structure Nos: 3054, 3055, 3056 3057, 3064, 3065, 3066, 3087, 3088, 3089, IS-1
The original insect research station built in 1955 included six tent cabins, all measuring 12 by 14 feet with wood frames and simple, end-gable roofs covered in heavy duck canvas. At least parts of the existing cabins probably date back to these structures, and some of the original materials and design are still evident. But the structures have been moved, modified and recombined to such an extent that none of them individually retains historic integrity. However, the use and spatial organization of these cabins remain combatable with the historic character of the original setting and continue to contribute to the significance of the Bug Camp landscape cluster, even though the buildings themselves do not.

The existing cabins are all rectangular structures on raised wood platforms with plywood siding and simple, end-gabled canvas roofs. Their dimensions vary from 12 by 14 feet to 14 by 32 feet.

Bug Camp "Hard Top" Cabins
Structure No: 3052, 3053
Both of these cabin measure 12 by 28 feet and have metal roofs. They represent a trend common throughout Tuolumne Meadows of replacing canvas topped cabins with more substantial metal topped structures. The latter do not have to be broken down for the winter and can be occupied year round if necessary.

Bug Camp Storage Sheds
Structure No: 4086
There are numerous non-contributing sheds within Bug Camp. They vary in size from 3 by 5 feet to 12 by 14 feet.

Bug Camp Comfort Station/Showerhouse
Structure No: 3311
This large modern facility houses showers, toilets and washing machines. It was built in c.1980 to relieve overcrowding caused by excessive use of the historic shower house (bldg. #3049). This large structure measures approximately 45 by 26 feet and includes a 6 foot wide wrap-around deck

Buildings and Structures #9: View of the historic comfort station (bldg. #3049), facing south, located at the Insect Research Station. (YOSE, 2006)

Buildings and Structures #10: View of the mess hall (bldg. #3083), facing west, located at the Insect Research Station. (YOSE, 2006)

Buildings and Structures #11: View of the storage shed/office (bldg. #3085), facing south, located at the Insect Research Station. (YOSE, 2006)

Buildings and Structures #12: View of the storage shed/office (bldg. #3086), located at the Insect Research Station. (YOSE, 2006)

Tuolumne Meadows Public Campground

The Tuolumne Meadows Campground covers approximately 140 acres and is located just south of the Tioga Road and west of the confluence of the Lyle and Dana Forks. Set back from the corridor of the Tioga Road, a natural buffer of trees provides a visual barrier between the main arterial circulation and campground areas. Developed between 1931 and 1934 in response to increasing recreational needs in the Tuolumne Meadows area, the design incorporated E.P. Meinicke's principles of campground planning and landscape protection. A series of one-way roads and individual spurs define vehicular and camping use while reducing soil compaction and trampling of vegetation. Contributing features include the original Meinicke campground circulation; the four original comfort stations built in the rustic architectural style, the four Mission 66 comfort stations, and the Dana Campfire Circle. Since the end of the period of significance, alterations to the campground have included cyclical maintenance and minor improvements that are compatible with its historic design and use. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Contributing Features

Public Campground Rustic Comfort Stations
LCS ID: 005791, 005792, 005793
Structure Nos: 3021, 3022, 3023
These three comfort stations are identical in design and were all built in 1934. They are classic examples of park rustic architecture. The natural color and texture of the native stone and wood used in their construction harmonize with the surrounding natural landscape. Each building measures 17 feet 4 inches by 30 feet 4 inches on the exterior. They are wood frame structures with heavy, battered stone veneers up to the window sills and to the roof at the corners. The masonry is more than 5 feet thick at the base, tapering to about 16 inches at the top. Above this stone veneer and on each gable end, the walls are constructed of exposed redwood timbers with horizontal one-by-ten redwood shiplap planking. The steeply-sloped, shingle roofs have jerkinhead, or clipped-gable, ends. Men's and women's compartments are entered from either end through heavy, vertical-planked doors with wrought-iron hinges and are separated by a utility space in the middle. Fenestration consists of two pairs of three-by-three lite windows on either side with a two-by-three lite window over the utility space in between. Two three-by-three lite windows of the same style flank the doors on either end. Amber ripple glass is installed in all but the utility room windows for privacy.

Public Campground Rustic Comfort Station
LCS ID: TBD
Structure No: 3024
This building was constructed in 1931 and is the westernmost comfort station within the public campground. Unlike the other two public campground comfort station typologies, this structure's design was not duplicated. It is a timber framed structure that measures 13 by 26 feet. It has separate men's and women's restrooms on the opposing east and west sides. There are three toilets, one urinal and two sinks on the men's side and four toilets and two sinks on the women's side. The building has a gabled roof that was recently reshingled with sugar pine. The eve of the roof line extends 1 foot beyond the structure, with exposed two-by-six raftertails. The west and east rooflines of the building expose six-by-six purlins with chamfered lower edges. The building has twelve windows; four each on the north and south sides and two each on the east and west sides. These "hopper" windows have six lites that are tinted yellow. The building is sheathed in horizontal one-by-nine shiplap siding. There is two-by-six trim around the

foundation, windows and corners of the structure. All of the siding has been painted Wosky Brown. The building sits on a concrete slab foundation. There are small macadam landings outside of both the women's and men's entries.

Public Campground Mission 66 Comfort Stations
LCS ID: TBD
Structure No: 3076, 3077, 3078, 3079
Constructed in 1961, these four comfort stations were designed according to Mission 66 guidelines. The floor and footings are concrete. The stem walls are approximately 6 inches high with a slight batter sloping toward the outside perimeter to shed water away from the building. Concrete blocks were used as the main construction material for the wall and are exposed on the inside and outside. Along the top of the wall, a series of metal awning windows with single privacy lites provide natural lighting within the structure. The low pitched roof is supported by large joists and 2 inch thick decking which allows for an awning of approximately 2 feet around the perimeter of the building. The roof is covered in composition and gravel shingles. The entire building is painted a light tan color. The 24 by 16 foot structure is divided into three separate areas. Each end includes separate entries for men and women, and a central area between the two is used as a utility space.

Public Campground Contact Station
LCS ID: 005789
Structure No: 3005
This contact station was built in 1936 as a functional replacement to the older ranger station in the Administrative Area. The building stands near the entrance to the Tuolumne Meadows Campground on the south side of the current Tioga Road. It was constructed of large stones with wood frame infill in the front and rear. It has a gently sloping gabled roof with a wood shingle finish. It is roughly 18 by 31 feet, including the 6 foot deep porch that runs the full length of the front façade. The porch roof is supported by a pair of battered stone piers at the outside corners with two square, wood posts between them. There are deeply inset four lite windows along either side of the building. The top of a massive stone chimney rises just above the building's eastern end. Over the years, this versatile building has been used as a visitor center and a fee collection station. Eight bunk beds are also installed in the building during winter months to accommodate cross-country skiers.

Public Campground Campfire Circle (Dana)
LCS ID: TBD
This large campfire circle was constructed in 1957 and is comprised of a central fire pit surrounded by a half circle of 365 benches spaced at regular intervals. These benches were originally constructed using three-by-six pieces of Port Orford cedar mounted on a galvanized iron frame. Although the galvanized iron frames remain, the cedar was replaced sometime after 1990 with recycled plastic lumber of similar form and appearance. This modification degraded the integrity of the structure's historic material, but no other aspect of integrity has been substantially impacted, and the structure still conveys its historic significance.

The fire pit measures roughly 8 feet in diameter. There are four distinct groupings of benches, which are separated from each other by aisles that radiate out from the fire pit. There is a large wood box directly behind the fire pit for storage. The ground within the campfire circle is composed primarily of older macadam, although substantial portions of the circle have been resurfaced with newer asphalt. This campfire circle is larger and more formal that the Conness Campfire Circle.

Tuolumne River Bridge
LCS ID: TBD
The Tuolumne River Bridge, completed in 1937, was built as part of the construction of the new Tioga Road segment between Crane Flat and McSwain Meadows. This bridge was one of the last to be built in the rustic style popularized by the National Park Service. The single span measures 124 feet in length from the ends of the supporting abutments. The deck is 24 feet 11 inches wide, bearing a roadway with a clear width of 24 feet. The bridge is constructed of steel beams resting on rubble masonry abutments with reinforced concrete back walls. Concrete curbs support a redwood guardwall on either side of the bridge. The wood guard walls are attached to the concrete deck by galvanized steel bolts.

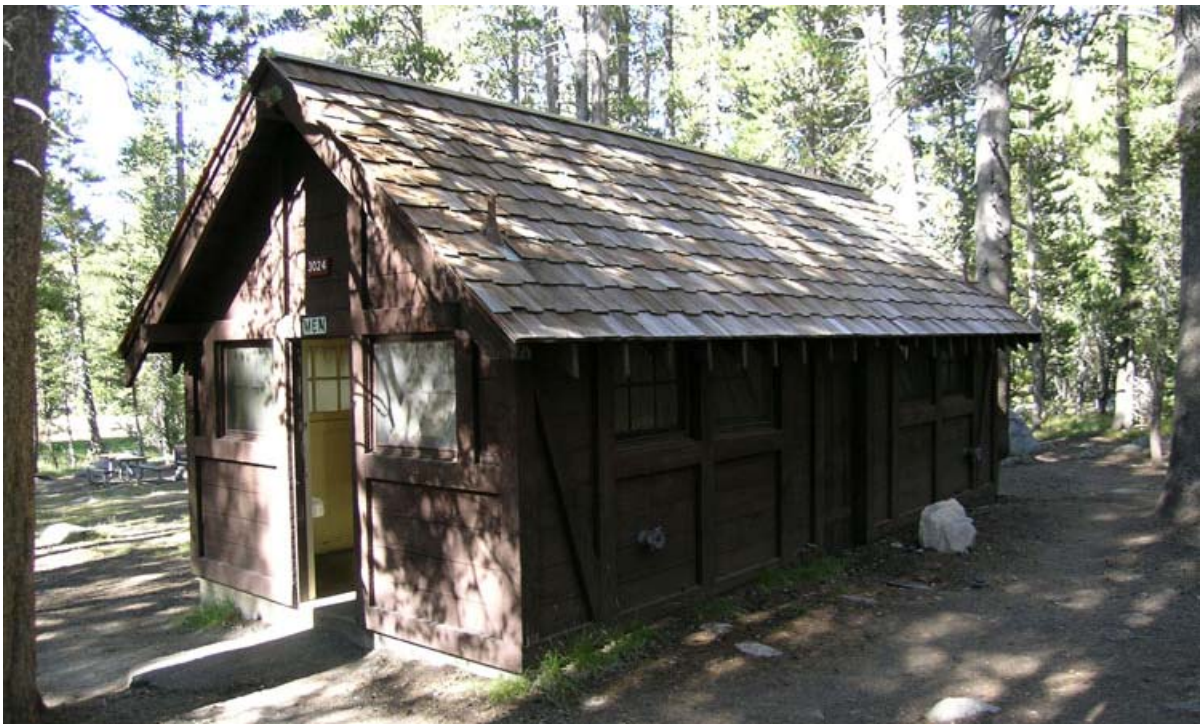
Non-Contributing Features

Public Campground Fee Collection Kiosk
Structure No: 3026
The small building measures 5 by 11 feet and serves as a point of contact for visitors to the Tuolumne Meadows Public Campground. The kiosk is situated in the center of the road, which enables attendants to assist visitors when they enter and leave the campground. Its exterior is composed of plywood siding painted Wosky Brown with wood trim along the windows and corners painted beige. It has large sliding aluminum windows on either side. It was built after the period of significance.

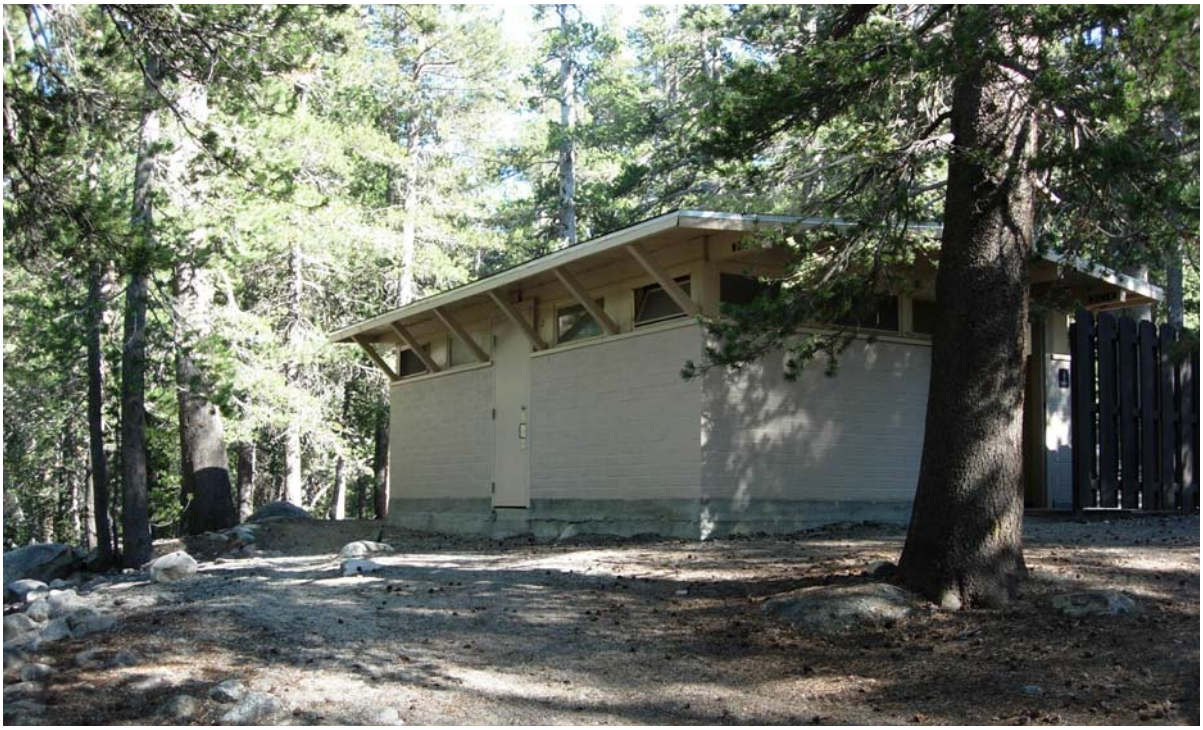
Public Campground Campfire Circle (Conness)
This informal campfire circle was built between 1931 and 1934. In 1935, the CCC constructed log benches for the circle, but none of these remain today. The campfire circle comprises a central fire pit surrounded by irregularly spaced log benches. The fire pit measures roughly 6 feet in diameter. Unmilled log benches are between 1.5 and 2.5 feet in diameter and are roughly 15 feet in length. The ground within the campfire circle is surfaced with decomposed granite. This campfire circle is smaller and more informal that the Dana Campfire Circle. Due to its informal design and impermanent nature, the Conness Campfire Circle is not eligible as a contributing structure. There are no construction documents for it feature, and it rarely appears on maps.

Buildings and Structures #13: View of the contact station located along the Tioga Road at the entrance to the Tuolumne Meadows Public Campground. (YOSE, 2006)

Buildings and Structures #14: View of a 1934 rustic comfort station (bldg. #3022), located at the Tuolumne Meadows Public Campground. (YOSE, 2006)



Buildings and Structures #15: View of the 1931 comfort station (bldg. #3024), located at the Tuolumne Meadows Public Campground. (YOSE, 2006)



Buildings and Structures #16: View of a Mission 66 comfort station and typical setting in the Tuolumne Meadows Campground. (YOSE, 2006)

Buildings and Structures #17: View of the Dana Campfire Circle, facing west, located at the Tuolumne Meadows Public Campground. (YOSE, 2006)

Tuolumne Meadows Store and Gas Station

Located in the forested buffer between the Tioga Road and the Campground, the Tuolumne Meadows Store and Gas Station provide food, supplies, outdoor equipment and services to visitors. Although other structures have been added behind the two contributing buildings, the store, gas station and associated parking areas have changed little since the date of their construction. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Contributing Features

Tuolumne Meadows Store
LCS: TBD
The current Tuolumne Meadows Store was constructed in 1940 shortly after the realignment of the Tioga Road. The original store was located on the old Great Sierra Wagon Road near the government Administrative Area (Ranger Camp). The store is a large wood frame covered with canvas and plywood. The canvas roof is removed during the winter, allowing the entire structure to fill up with snow. The store measures 50 by 80 feet and includes a grocery store, a post office and a restaurant known as "The Grill." The store takes up the largest portion of the structure. It caters to local residents and visitors, offering dry and frozen goods and fresh produce. The Grill is essentially a fast food restaurant selling breakfast in the morning and lunch in the afternoon. Prior to 1982, the Grill interior was more of a traditional diner lunch counter.

The canvas roofed portion of the structure measures 28 by 80 feet. An additional 22 feet in the rear of the building is non-historic and was added for additional office and storage space. This rear addition has rigid plywood walls and a standing seam metal roof. There is also a walk-in refrigerator and freezer in the rear of the building. The entire structure was built on a concrete slab foundation. Along the front of the structure, there is a 5 by 40 foot canvas awning. There are screen mesh windows with canvas drapes along the upper portion of the east and west facades.

Except for the addition to the rear, the store is essentially unchanged from the time of its construction in 1940 and still conveys the significance of its history.

Tuolumne Meadows Gas Station
LCS: TBD
This 1959 structure was the third gas station to have been built in the Tuolumne Meadows area. The first gas station was located near the Administrative Area (Ranger Camp) along the old Great Sierra Wagon Road. The second gas station was located next to the current Tuolumne Meadows store. Both of these stations were razed. The current gas station is located along the Tioga Road west of the store. It measures 30 by 51 feet. The forward facing gabled roof has a hipped flange that extends out at a gentle slope from the lower portion of the roof. There are eight large windows along the northern façade that are used primarily as display cases for mountaineering equipment. The building sits on a concrete slab foundation. It is sheathed with board and batten siding painted light brown. There are separate men's and women's restrooms accessed from the eastern side of the structure. There are six gas pumps in front of the station.

Originally, this building was a full-service gas station with a garage occupying what is now the Sports Shop and Mountaineering School. The Mountaineering School, which is operated by DNC, was forced to relocate to this building from the Road Crew Camp mess hall in 1979 when the mess hall was remodeled into the current visitor center. Inside the building, vestiges of the original garage can still be seen, including a below-grade car jack and the original merchandise display shelves. The gas station is owned by Chevron, but leased and operated by the DNC.

Non-Contributing Features

Tuolumne Meadows Store Comfort Station
Structure No: 3051
This non-contributing structure was built around 1982. It measures 11 by 36 feet and has a metal standing seam gabled roof. It has a concrete foundation, and the exterior is sheathed in board and batten siding. The building has three skylights.

Tuolumne Meadows Store Laundry
Structure No: N/A
This building measures 9 by 12 feet. This structure originally housed a back-up generator that was used by the store but was remodeled in 1991 to function as a laundry facility for employees of the store, post office and restaurant. It houses three dryers, three washers and a refrigerator. It has a gabled, metal standing seam roof and a plywood exterior.

Tuolumne Meadows Store Showerhouse/Comfort Station
Structure No: N/A
This structure was built in 1982 and is used by DNC employees and tent cabin residents as a washroom and comfort station. It measures 12 by 32 feet and has three showers and three toilets. It is constructed of

concrete masonry units, and its exterior is painted white. It has a forward facing gabled roof with asphalt composite shingles.

Tuolumne Meadows Store Tent Cabins (15)
Structure Nos: 1-16
Erected on wood platforms, these 12 by 14 foot tent cabins are made of steel-post frames with canvas roof and walls. Out of the back of each tent, a stove pipes extends out the back of each cabin and rises above the roof line. The front of each cabin has a wood door with screen. These tent cabins are used by store, post office and restaurant employees. Built after 1960, these cabins lie outside the period of significance and are considered to be non-contributing for this reason.

Gas Station Utility/Telephone Shed
This small structure is used to hold various telephone and utility equipment. It measures 11 by 15 feet and has a concrete foundation. It has a forward facing gabled roof with standing seam metal roofing. It has board and batten wood siding that is painted Wosky Brown. There is a metal double door entry facing the west. The building has no windows. It was built after the period of significance.

Gas Station Soil and Groundwater Remediation Shed
Constructed in 2002, this 10 by 20 foot structure and its associated equipment are designed to remove hydrocarbons from the soil and groundwater. It was built using locally felled ponderosa pine and red fir. It has pine board and batten siding that has been left unpainted and with a natural finish. It has a gabled, side sloping roof with asphalt composite shingles.

Gas Station Tent Cabins (5)
Structure No: 1-5
Erected on wood platforms, these 12 by 14 foot tent cabins are made of steel-post frames with canvas roof and walls. A stove pipe extends out the back of each cabin and rises above the roof line. The front of each cabin has a wood door with screen. These tent cabins are used by store, post office and restaurant employees. Although consistent with the historic typology used throughout Tuolumne Meadows for tent cabins, these structures were built after 1961 and lie outside the period of significance. They are determined to be non-contributing for this reason.

Buildings and Structures #18: View of the Tuolumne Meadows Store, facing southeast. (YOSE, 2006)

Buildings and Structures #19: View of the Tuolumne Meadows Gas Station, facing southwest. (YOSE, 2006)

Tuolumne Meadows Stables and Pack Station

The Tuolumne Meadows Stables and Pack Station were established in their present location northeast of the Soda Springs area in 1969. Prior to that date, pack operations were conducted out of the Tuolumne Meadows Lodge. The only structure surviving from the earlier operation is the pack station dock, which was moved from its original location in 1969 when the new stables and pack station were built.

Non-Contributing Features

Stables and Pack Station Dock
This structure was relocated in 1969 from the original concessionaire stables at the Tuolumne Meadows Lodge and High Sierra Camp to the present Tuolumne Meadows Stables and Pack Station. It was originally built in 1951. The pack dock is currently used for loading cargo onto mules which are used to transport supplies to the back country High Sierra Camps. The pack dock has an interior refrigerated storage space and two dry storage lockers. The gabled, forward facing roof is sheathed in wood shingles. The exterior board and batten siding has been painted an umber red. The structure is supported on four-by-four posts anchored in concrete block piers. As a result of its relocation in 1969, it is no longer considered a contributing historic structure.

Stables and Pack Station Barn
This barn was built in 1969 or 1970 after the stables were relocated from the Tuolumne Meadows Lodge to its present location. The barn consists of tie stalls on each side with an alley down the center which is used for storing hay. The barn has a canvas roof that is removed during the winter months. The permanent components of the barn are made from milled lumber. The board and batten siding is painted umber red. There are storage closets on either side of the large double door entry. Corrals are attached to the north and south sides of the barn.

Stables and Pack Station Office/Management Building
This building was constructed in the late 1970s to serve as an office space and sleeping quarters for the resident manager. (The original office was in the double-long tent cabin near the pack dock). The front portion of this building is an office that is open to the public but the back part is private. The building has a double-gabled roof with asphalt composite shingles.

Stables and Pack Station Tent Cabins (10)
There are ten tent cabins at the Tuolumne Meadows Stables and Pack Station. Nine of the tent cabins are identical and measure 12 by 14 feet. The remaining tent cabin is double-long and measures 12 by 28 feet (created by attaching two of the smaller cabins end-to-end). It was the original location of the manager's office. These tent cabins have side-sloping gabled roofs that are removed during the winter months. All of the tent cabins have aluminum outriggers that elevate a canvas rain-fly above the main roof. Some of the tent cabins are on rubble masonry and concrete foundations, while others are supported on four-by-four posts. None of the cabins were built prior to 1970 and thus do not contribute to the historic district, though their design is consistent with the historic tent cabin typology used throughout Tuolumne Meadows.

Stables and Pack Station Resident Comfort Station/Shower House
This comfort station is located near the cluster of six tent cabins on the eastern periphery of the Tuolumne Meadows Stables area and is used exclusively by residents of this area. This structure has some rustic architectural details, including peeled log structural members and granite steps leading up to the bathroom. This building has a side-sloping gabled roof with asphalt composite roofing.

Stables and Pack Station Visitor Comfort Station
This visitor comfort station faces the public parking lot along the western edge of the Tuolumne Meadows Stables area. The timber-framed structure has a forward facing, gabled, composite roof. The entire structure is painted light grey. The numerous hopper windows along the upper portion of the exterior walls are tinted yellow.

Stables and Pack Station Ferrier Shop
This simple open-air structure consists of an aluminum frame with a canvas roof draped over it. The frame is anchored into a weather-worn wood platform. The structure is used by the ferrier and contains many metal-working tools.

Road Crew Camp

The Road Crew Camp is located on a natural bench 400 feet south of Tioga Road on the western side of Tuolumne Meadows Historic District. Built in 1934 by the Civilian Conservation Corps to provide maintenance and administrative services for the higher elevations of the Sierra Nevada, the development cluster still retains its original six structures. These include the Tuolumne Meadows Visitor Center, the shower house and four bunk houses. The Visitor Center has been altered from its original use as a mess hall. The other structures still retain their original use. The cluster has been modified with the addition of other structures, but the original six structures have experienced few alterations and retain most aspects of their integrity. All structures listed as contributing have been assessed and found to retain the majority of their original materials and character-defining features.

Contributing Features

Road Crew Camp Visitor Center
LCS ID: 005790
Structure No: 3010
The Tuolumne Meadows Visitor Center was originally a mess hall. Historically, it served as the kitchen, dining room and social hub for the many laborers who resided at the Road Crew Camp. It was not until 1980 that the mess hall became the primary visitor center in Tuolumne Meadows. This structure was listed on the National Register in 1978.

The Visitor Center is an excellent example of park rustic architecture from the 1930s. This 1934 wood frame structure measures roughly 33 by 60 feet. The foundation, main fireplace chimney and the front porch floor and steps were constructed out of rubble stone masonry. The basement storage room and kitchen chimney were constructed of reinforced concrete. The cross gabled roof is set at a steep 8 to 12 pitch and is sheathed in wood shingles. This roof was reshingled in 1997. Log purlins and log rafter tails extend beyond the plane of the roof. The lower portion of the structure features horizontal lap redwood siding while the upper portion is comprised of vertical redwood board and batten siding. The siding was originally finished with a coat of unpigmented linseed oil. The open front porch measures roughly 7 by 18 feet and has eight 15 inch diameter log posts. The interior space originally comprised a 19 by 32 foot grand dining room, an 8 by 19 foot lounge with fireplace, a 16 by 16 foot kitchen, a 4 by 6 foot bathroom and a 10 by 12 foot bedroom with a private bath where the cook washed. The structure also features a 15 by 19 foot basement storage room which is accessed through an exterior hatch along its western side.

The structure retains integrity and has been maintained in keeping with its historic character. However, there is a non-historic A/C shed that was added along the rear of the building and many of the interior spaces have been reconfigured, presumably when the building was converted from a mess hall to a visitor center. A wheelchair ramp was also added along the eastern façade in 2000.

Road Crew Camp CCC Era Bunkhouses (4)
LCS ID: 055953, 055954, 055955, 055956
Structure Nos: 3011, 3012, 3013, 3014
The four bunkhouses and the showerhouse were the first structures to be built in the Road Crew Camp area and are fine examples of park rustic architecture. They were built by a crew of 28 Civilian Conservation Corps enrollees over a period of two and a half months.

The four bunkhouses are identical in design. These wood frame structures were built to house four people each. They have stone rubble foundations that extend 10 inches away from the frame of the house. Their exterior dimensions are 13 by 17 feet. The front entrance to each building is accessed by a short flight of steps. The simple forward facing gabled roofs are sheathed by cedar shingles. Each house was provided with a patent flue chimney built on a solid foundation. The siding is comprised of a mix of horizontal redwood lap siding along the base of the house and redwood board and batten siding along the upper portion of the house. The wood side-hinged windows have eight lites each and open outward. There are sets of exterior operable shutters that abut the front windows. The original exterior finish of the buildings was 2 coats of boiled linseed oil; however, the finish today is a heavy coat of Wosky Brown paint.

The bunkhouses are still used as housing for seasonal NPS employees and retain most of their original materials and details of workmanship. They were listed on the National Register in 1978.

Road Crew Camp Toilet and Showerhouse
LCS ID: 055957
Structure No: 3015
This shower house was a part of the original collection of structures that were built at the Road Crew Camp in 1934. It was built in the park rustic style by CCC laborers. This structure met the washing and cleaning needs of the Park Service staff that lived here.

The shower house is similar to the bunkhouses. All are wood frame structures that have simple forward facing gabled roofs, rubble masonry foundations, and redwood lap and board and batten siding. The primary exterior feature that distinguishes this building from the other structures is the large exterior rubble masonry chimney that rises up along the western portion of the building. Other differences include its exterior dimensions (11 by 20 feet compared with 13 by 17 feet) and the windows (hopper rather than side-hinged). The original interior featured three lavatories, three water closets, a 4 foot urinal, two showers and an 80 gallon hot water tank. Today's interior retains the lavatories and showers. However, the urinal and waterclosets have been replaced by sinks and a washer and dryer.

The shower house is still used by seasonal NPS employees and retains most of its original materials and details of workmanship. This structure was listed on the National Register in 1978.

Road Crew Camp Tent Cabins
LCS: TBD
Structure Nos: 3071, 3072, 3073, 3074
These tent cabins were built sometime after WWII but no later than 1957. All four cabins are of identical design and are situated between two "hardtop" cabins. The simple structures have concrete foundations,

plywood exterior walls and a simple, end-gable canvas roof. They are typical of the tent cabin design frequently used throughout the park for employee housing and have not changed substantially since their introduction, except for the addition of aluminum sliding windows and exterior-mounted utilities. Like other tent cabins, the canvas roofing is removed during the winter to prevent damage from the snow load. There are no bathrooms in the tent cabins. They are currently used for single occupancy residence by Park Service employees.

Road Crew Camp Explosives Cache
LCS ID: TBD
This small structure was built c.1934 and historically used for storing explosives. It is constructed of board-formed concrete roughly 4 inches thick. Its exterior measures approximately 6 by 5 feet, and it is about 4 feet tall. The structure is partially submerged in soil. Its door, which has fallen off its hinges and lies in the dirt a few feet away, is 2.5 inches thick and comprised of wood planks wrapped in sheet metal.

Road Crew Camp Stone Masonry Water Fountain
LCS ID: TBD
This water fountain is the most substantial of the contributing small scale feature within the Road Crew Camp area. It was built in 1934 and was used as a source of drinking water for the residents of the camp. The water fountain is made of stone masonry with mortared joints. There is a flagstone landing around its base that measures approximately 6 feet 6 inches in diameter. The top portion of the fountain has an inset concrete basin that is 13 inches in diameter. The water fountain is roughly 2 feet 6 inches tall and 1 foot 9 inches wide at its base.

Non-Contributing Features

Road Crew Camp Storage Building
Structure No: 3016
This simple timber framed structure serves as a storage area for janitorial supplies. Its exterior measures approximately 6 by 16 feet. It has a back sloping shed roof. The northern façade of the structure is faced in plywood siding while the other three sides have corrugated metal siding. The entire structure is painted Wosky Brown.

Originally, building #3016 was an open air gas pump shelter located in the parking area below the mess hall. The historic structure was razed at an undetermined date and its building number recycled for the present structure.

Road Crew Camp Cabins A & B
Structure Nos: 3068A, 3068B, 3069A
These structures were constructed sometime after c.1970 as seasonal housing for park employees. Built in the Mission 66 style, they lack the rustic details of the CCC cabins. All three cabins are identical. Their exterior measures roughly 12 by 14 feet, and they have side sloping gable roofs with standing seam metal roofing. They have no foundations but were built upon concrete pier blocks supported by wood four-by-four posts.

Road Crew Camp Cabin B
Structure No: 3069B

This cabin is actually two of the aforementioned cabin types that have been joined together. Similar to the other cabins, the exterior of each joined cabin measures roughly 12 by 14 feet, and have side sloping gable roofs with standing seam metal roofing.

Road Crew Camp Hard Top Cabins
Structure Nos: 3070, 3075
These two "hard-top" cabins stand like bookends on either side of the four tent cabins (bldgs. #3071-3074). They are actually modifications of the latter typology and were probably originally constructed at the same time; that is, between 1945 and 1957. The original tent cabin foundations were preserved, but the timber structure of these cabins was built taller and given a standing seam metal roof. These cabins measure roughly 12 by 14 feet and are clad in T1-11 plywood siding that is painted Wosky Brown. They feature a loft for sleeping and a full kitchen downstairs. They have two aluminum sliding windows in the front and the rear of each building. Because the addition of a rigid roof degrades the most important character-defining feature of the tent cabin architectural typology—its removable canvas cladding—the buildings are determined to be no longer eligible as contributing historic resources.

Road Crew Camp Building and Grounds Shop
Structure No: 3093
This rectangular timber framed structure is used as a storage locker for park maintenance workers. It has a forward facing gabled roof with corrugated metal roofing. The front facade of the building is faced with board and batten siding, with a similar finish and appearance as the siding on the mess hall. However, the other three sides of the structure are faced with corrugated metal siding. The structure has a concrete foundation, and there is a sign that reads "Maintenance Shop" above the front entry. There is an auxiliary open-air wood storage shed attached to the western facade of the building.

Road Crew Camp Storage Building
Structure No: 3095
This square timber frame structure is used as a storage space. Its exterior measures roughly 10 by 10 feet, and it has a back sloping corrugated metal shed roof. Its simple plywood side walls are painted Wosky Brown. It has a concrete foundation. There is a large pile of cord wood stacked along its eastern face.

Road Crew Camp Auxiliary Office
Structure No: N/A
This small rectangular structure is used as a small office space by NPS employees. Although the building is non-contributing, the siding on its north and west faces (the sides that are visible to the general public) were designed to match the siding of the Visitor Center (vertical redwood board and batten siding with a natural boiled linseed oil finish). The other two sides of the building have simple plywood siding. The side sloping gabled roof is covered in corrugated metal. The building's exterior dimensions are roughly 10 by 8 feet. The windows are aluminum and slide open.

Road Crew Camp Visitor Center Comfort Station
Structure No: N/A
This non-contributing comfort station dates back to the conversion of the mess hall into a visitor center in 1980. It has a low pitched gabled roof with standing seam metal roofing. It has a large covered wood deck that is ADA accessible. It was built on a concrete foundation. The siding is T1-11 plywood painted Wosky Brown.

Road Crew Camp Hydrant Shed
Structure No: N/A

This small structure is used to store the camp fire hose and also provides access to a fire hydrant. Its exterior measures roughly 3 by 4 feet, and it is approximately 6 feet tall. The structure is on a platform supported by four-by-four posts. The entire structure is covered in wood shingles that are painted Wosky Brown.

Road Crew Camp Stone Rubble Retaining Wall
This non-contributing stone retaining wall measures roughly 100 feet across and is 4 feet tall. It is constructed of crudely arranged dry stacked granite stones that are battered back into the earth. It is located along the fill side of the roadbed outside of the non-contributing cabins (#3068 and #3069) and probably dates to their construction sometime after c.1970.

Road Crew Camp Stone Patio Retaining Wall
This non-contributing wood retaining wall measures roughly 82 feet across and is 2 feet tall. It was constructed of four-by-four posts and two-by-ten cross boards. The retaining wall is built of both treated and untreated wood and delineates the upper tent cabin access from the stone patio below. According to a road camp informant, this retaining wall was constructed in the 1980s to replace a rotten unmilled lodgepole pine retaining wall.

Road Crew Camp Cargo Area Retaining Wall
This non-contributing wood retaining wall measures roughly 50 feet across and is 2.5 feet tall. It was constructed of six-by-six and four-by-six posts with two-by-ten cross boards. The wall is built of both treated and untreated wood and was designed to provide access to the elevated cargo storage units for loading and unloading.

Granite Patio and Fire Circle
This patio and accompanying fire circle were built by Road Crew Camp resident's c.1995 as a memorial to Barry Hance, a Road Crew Camp resident who was killed by an avalanche while on duty. The patio is located behind cabins #3011 and #3012 and is roughly 48 feet long and 18 feet wide. It serves as the camp's outdoor social hub during lunch breaks and after work. The substantial structure was built with coarse pieces of granite, some weighing more than one thousand pounds. There are seatwalls along most of the perimeter of the patio. On the western edge is an inset fire circle that is 1 foot deep and 5 feet in diameter. Although the patio is non-contributing, its rustic details are compatible with the historic design characteristics of the area.

CCC Recognition Day Sign
This sign, which was dedicated in 1988, serves as a memorial to the Civilian Conservation Corps and outlines a brief history of their contributions to Yosemite National Park. The sign features two stout log posts (roughly 10 inches in diameter) and a wood sign with routed letters. It is painted Wosky Brown.

Horse Shoe Pit
This horseshoe pit was built in the 1990s by Road Crew Camp residents for recreational use. The pit is roughly 50 by 6 feet and is surfaced in sand. There are wood backstops built at either end of the pit. Small stone retaining walls have been built along either side.

Buildings and Structures #20: CCC-constructed Mess Hall (bldg. #3014), now Tuolumne Meadows Visitor Center. (YOSE, 2006)

Buildings and Structures #21: CCC-constructed bunkhouse (bldg. #3014). (YOSE, 2006)

Tuolumne Meadows Soda Springs

The Tuolumne Meadows Soda Springs is a component district within the parent Tuolumne Meadows Historic District and is documented in a separate Cultural Landscapes Inventory record. The reader is directed to the CLI entitled, "Tuolumne Meadows Soda Springs Historic District" for further details.

Miscellaneous Buildings and Structures

These are buildings that are not located near any other structures or developed areas. Most of these buildings are associated with the Tuolumne Meadows sewage system which, although underground and generally out of sight, occupies a large proportion of the landscape and represents some of the most prodigious development that has occurred in the historic district.

Contributing Features

Tuolumne Meadows Pump House and Sump
LCS ID: TBA
Structure No: 3017
This structure was originally built under a WPA allotment in 1940 as a pump house with concrete sump for a wastewater treatment system. Waste water was delivered to the below-grade sump by gravity sewer lines from points of origin in all of the developed areas of the district. From here it was pumped upgrade to an oxidation pond and spray fields on the north side of the meadow. This was the first comprehensive waste water treatment system to be implemented at Tuolumne Meadows, and the pump house and sump are the most significant surviving features associated with it.

The pump house is a wood frame structure, measuring approximately 17 by 20 feet, with a steeply-pitched end gable roof. The interior floor is submerged 6 feet below grade, so that the exterior walls are relatively low, with the roof eaves ending approximately 4 feet above grade. The two windows on either side sit directly on the mud sill. The lower portion of the exterior siding is horizontal lapped redwood board while the upper portion is vertical board and batten. The sump is an underground concrete tank, attached to the pump house at the far end. It measures approximately 12 by 22 feet. The tank's concrete slab roof is flush with ground level.

In 1975, following the introduction of a new waste water treatment system, the pump plant was taken out of service and the structure converted to residential use. The pumps and associated equipment were removed and the interior of the pump house was remodeled. The concrete sump was left intact but filled with sand. The original wood shingle roof was replaced with a raised-seam metal roof, and the center-pivot steel frame windows were replaced with sliding aluminum frame windows. There is no bathroom in the building, and a detached, non-historic bathroom has been constructed off the northwest corner.

Despite its change in use and the removal of the mechanical plant, this structure retains most aspects of its integrity. It remains in good condition and is maintained in a manner compatible with its historic appearance. As one of the few surviving features associated with the first comprehensive waste water treatment system in Tuolumne Meadows, the pump house and sump are significant and should be managed as historic resources.

Non-Contributing Features

Tuolumne Meadows Water Storage Tank and Shed
Structure No: 3006
This large water storage tank and associated shed provide all of the potable water within Tuolumne Meadows. They were constructed around 1984. The water storage tank is a large steel cylinder that is roughly 20 feet tall and 20 feet in diameter. The storage tank has a maximum capacity of 100,000 gallons. The shed is located immediately next to but does not adjoin the storage tank. It is a small utilitarian structure that is constructed almost entirely of concrete; it has CMU walls, a concrete foundation and a concrete roof.

Tuolumne Meadows Drinking Water Treatment Plant
Structure No: 3009
This 18 by 25 foot water treatment plant was constructed around 1984. The facility treats all of the drinking water for Tuolumne Meadows. It draws its water from the Dana Fork of the Tuolumne River. This building replaced an older water treatment plant that was located closer to the Tuolumne Meadows High Sierra Camp. It has CMU walls, a concrete foundation and a corrugated metal roof.

Tuolumne Meadows Waste Water Treatment Plant
Structure No: 3025
This building was constructed in 1976 as a replacement for the 1940 waste water treatment plant, which is located just west of this structure. It measures 20 by 30 feet and has a flat shed roof with eaves that overhang the building by about 32 inches. It is sheathed in board and batten siding that has been painted Wosky Brown. There is a 6 foot tall wood fence that surrounds the western, eastern and southern facades. There is an associated trailer sewage disposal hookup directly north of the facility.

Tuolumne Meadows Waste Water Ponds Pumphouse
Structure No: 3096
This concrete masonry building was completed in 1976 and houses chemicals and pumps associated with the oxidation ponds. It measures 11 by 16 feet and has a gabled roof with asphalt composite sheet roofing. It is located just west of the larger of the two ponds.

Tuolumne Meadows Wilderness Permit Office
Structure No: 3091
This non-contributing structure was built in 2001 and is used by visitors to obtain permits and information on backcountry hiking and camping. It is a timber frame structure that measures 20 by 36 feet. It has a forward-facing gabled roof with standing-seam metal roofing. It has aluminum-framed sliding and hinged windows. The structure sits on a tall concrete foundation. There is an attached unisex bathroom accessible from the eastern side of the building.

Buildings and Structures #22: View of historic pump house (bldg. #3017), facing northwest. Sump is behind the building. (YOSE, 2006)

Summary of Buildings and Structures

Tuolumne Meadows Lodge and High Sierra Camp

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Camp Bath House	**Contributing**	**TMV002**	**055863**	**1939**
Kitchen/Dining Hall	**Contributing**	**TMS003**	**055866**	**1939**
Storage Shed	**Contributing**	**E030**	**TBD**	**c.1940**
Fire Circle	**Contributing**	**HSC-6**	**TBD**	**before 1951**
Guest Tent Cabins	**Contributing**	**4-12, 14-70**	**055867**	**1916-1960**
Pumphouse	Noncontributing	3098	NA	
Guest Tent Cabins	Noncontributing	1-3	NA	c.1984
Employee Tent Cabins	Noncontributing	E, E1-E12, E14-E25	NA	c.1984

Insect Research Station (Bug Camp)

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Comfort Station	**Contributing**	**3049**	**TBD**	**1955**
Kitchen & Mess hall	**Contributing**	**3083**	**TBD**	**1955-57**

Storage/Office	**Contributing**	**3085**	**TBD**	**1955-57**
Storage/Office	**Contributing**	**3086**	**TBD**	**1955-57**
Hard Top Cabin	Noncontributing	3052	NA	
Hard Top Cabin	Noncontributing	3053	NA	
Tent Cabin	Noncontributing	3054	NA	
Tent Cabin	Noncontributing	3055	NA	
Tent Cabin	Noncontributing	3056	NA	
Tent Cabin	Noncontributing	3057	NA	
Tent Cabin	Noncontributing	3064	NA	
Tent Cabin	Noncontributing	3065	NA	
Tent Cabin	Noncontributing	3066	NA	
Tent Cabin	Noncontributing	3087	NA	
Tent Cabin	Noncontributing	3088	NA	
Tent Cabin	Noncontributing	3089	NA	
Shower House	Noncontributing	3311	NA	c.1980
Shed	Noncontributing	4086	NA	
Tent cabin	Noncontributing	IS-1	NA	
Tent cabin	Noncontributing	IS-1	NA	

Road Crew Camp

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Mess Hall	**Contributing**	**3010**	**005790**	**1934**
Bunk House	**Contributing**	**3011**	**055953**	**1934**
Bunk House	**Contributing**	**3012**	**055954**	**1934**
Bunk House	**Contributing**	**3013**	**055955**	**1934**
Bunk House	**Contributing**	**3014**	**055956**	**1934**
Shower House	**Contributing**	**3015**	**055957**	**1934**
Tent Cabin	**Contributing**	**3071**	**TBD**	**1945-1957**
Tent Cabin	**Contributing**	**3072**	**TBD**	**1945-1957**
Tent Cabin	**Contributing**	**3073**	**TBD**	**1945-1957**
Tent Cabin	**Contributing**	**3074**	**TBD**	**1945-1957**
Explosives Cache	**Contributing**	**RC1**	**TBD**	**c.1930**
Water Fountain	**Contributing**	**RC6**	**TBD**	**1934**
Building & Grounds Storage	Noncontributing	3016	NA	
Hard Top Cabin	Noncontributing	3068A	NA	
Hard Top Cabin	Noncontributing	3068B	NA	
Hard Top Cabin	Noncontributing	3069A	NA	
Hard Top Cabin	Noncontributing	3069B	NA	
Hard Top Cabin	Noncontributing	3070	NA	1945-1957
Hard Top Cabin	Noncontributing	3075	NA	1945-1957
Office	Noncontributing	3093	NA	
Shed	Noncontributing	3095	NA	
Cargo Container	Noncontributing	RC2	NA	
Office/Storage	Noncontributing	RC3	NA	
Hose House	Noncontributing	RC4	NA	
Patio and Fire Pit	Noncontributing	RC5	NA	

Comfort Station	Noncontributing	RC7	NA	

Administrative Area (Ranger Camp)

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Ranger Station	**Contributing**	**3000**	**005788**	**1924**
Naturalist Cabin	**Contributing**	**3001**	**TBD**	**1924**
Patrol Cabin	**Contributing**	**3002**	**TBD**	**1924**
Barn	**Contributing**	**3003**	**TBD**	**1924**
Tack Shed	**Contributing**	**3004**	**TBD**	**1930**
Storage Building	**Contributing**	**3018**	**TBD**	**1933**
Shower House	**Contributing**	**3020**	**TBD**	**1924**
Tent cabin	**Contributing**	**3030**	**TBD**	**c.1930**
Tent Cabin	**Contributing**	**3032**	**TBD**	**c.1930**
Tent Cabin	**Contributing**	**3037**	**TBD**	**1960**
Tent Cabin	**Contributing**	**3038**	**TBD**	**1960**
Tent Cabin	**Contributing**	**3039**	**TBD**	**1960**
Tent Cabin	**Contributing**	**3040**	**TBD**	**1960**
Tent Cabin	**Contributing**	**3041**	**TBD**	**1960**
Weather Station	**Contributing**	**AA7**	**TBD**	**c.1950**
Year-Round Residence	Noncontributing	3007	NA	1983
Showerhouse	Noncontributing	3008	NA	1985
Shower House	Noncontributing	3019	NA	1964
Storage Shed	Noncontributing	3027	NA	
Storage Shed	Noncontributing	3028	NA	
SAR Cache	Noncontributing	3029	NA	
Hard Top Cabin	Noncontributing	3031	NA	
Hard Top Cabin	Noncontributing	3033	NA	
Hard Top Cabin	Noncontributing	3034	NA	
Hard Top Cabin	Noncontributing	3035	NA	
Tent Cabin	Noncontributing	3042	NA	
Tent Cabin	Noncontributing	3043	NA	
Hard Top Cabin	Noncontributing	3045	NA	
Tent Cabin	Noncontributing	3046	NA	
Tent Cabin	Noncontributing	3047	NA	
Tent Cabin	Noncontributing	3048	NA	
Tent Cabin	Noncontributing	3058	NA	
Tent Cabin	Noncontributing	3059	NA	
Tent Cabin	Noncontributing	3060	NA	
Tent Cabin	Noncontributing	3061	NA	
Tent Cabin	Noncontributing	3063	NA	
Storage Shed	Noncontributing	3084	NA	
Storage Shed	Noncontributing	3090	NA	
Storage Shed	Noncontributing	3099	NA	
Hard Top Cabin	Noncontributing	3305	NA	
Tent Cabin	Noncontributing	3307	NA	
Tent Cabin	Noncontributing	3308	NA	

Tent Cabin	Noncontributing	3309	NA	
Hard Top Cabin	Noncontributing	3310	NA	
Gas Pump Shelter	Noncontributing	AA1	NA	
Soil Remediation Shed	Noncontributing	AA2	NA	
Picnic Table (Fixed)	Noncontributing	AA4	NA	
Shed	Noncontributing	AA5	NA	
Communication Tower	Noncontributing	AA6	NA	1994
Fire Pit	Noncontributing	AA8	NA	1984

Tuolumne Meadows Campground

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Contact Station	**Contributing**	**3005**	**005789**	**1936**
Comfort Station	**Contributing**	**3021**	**005791**	**1934**
Comfort Station	**Contributing**	**3022**	**005792**	**1934**
Comfort Station	**Contributing**	**3023**	**005793**	**1934**
Comfort Station	**Contributing**	**3024**	**TBD**	**1931**
Comfort Station	**Contributing**	**3076**	**TBD**	**1961**
Comfort Station	**Contributing**	**3077**	**TBD**	**1961**
Comfort Station	**Contributing**	**3078**	**TBD**	**1961**
Comfort Station	**Contributing**	**3079**	**TBD**	**1961**
Tuolumne River Bridge	**Contributing**	**TC2**	**TBD**	**1937**
Dana Campfire Circle	**Contributing**	**TC3**	**TBD**	**1957**
Entrance Kiosk	Noncontributing	3026	NA	
Conness Campfire Circle	**Noncontributing**	**TC1**	**NA**	**c.1934**

Tuolumne Meadows Store and Gas Station

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Gas Station/Sports Shop	**Contributing**	**SG2**	**TBD**	**1959**
Store	**Contributing**	**SG5**	**TBD**	**1940**
Remediation Shed	Noncontributing	SG1	NA	2002
Utility Shed	Noncontributing	SG3	NA	
Gas Station Tent Cabins (5)	Noncontributing	SG4	NA	
Laundry	Noncontributing	SG6	NA	
Shower House	Noncontributing	SG7	NA	
Store Tent Cabins (15)	Noncontributing	SG8	NA	
Comfort Station	Noncontributing	3051	NA	

Tuolumne Meadows Stables and Pack Station

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Pack Dock	Noncontributing	NA	NA	1951
Barn	Noncontributing	NA	NA	1969
Office	Noncontributing	NA	NA	c.1979

Tent Cabins (10)	Noncontributing	NA	NA	c.1970
Comfort Station/Shower House	Noncontributing	NA	NA	c.1970
Comfort Station	Noncontributing	NA	NA	c.1970
Ferrier Shop	Noncontributing	NA	NA	c.1970

Tuolumne Meadows Miscellaneous Structures

Building Name	Type of Contribution	Building Number	LCS Number	Year of Construction
Pump House and Sump (Residence)	**Contributing**	**3017**	**TBD**	**1940**
Water Storage Tank & Shed	Noncontributing	3006	NA	1984
Drinking Water Treatment Plant	Noncontributing	3009	NA	1984
Waste Water Treatment Plant	Noncontributing	3025	NA	1976
Wilderness Permit Station	Noncontributing	3091	NA	2001
Waste Water Pump House	Noncontributing	3096	NA	1976

Circulation

Circulation is defined as the system of roads, trails and associated physical structures which conduct movement through a landscape. The Tuolumne Meadows Historic District developed along one of the major circulation corridors traversing the Sierra Nevada mountain range. It also represents a historic nexus within an extensive system of trails which radiate in every direction through these mountains. Many of these trails represent routes used in precontact times by native Miwok and Paiute peoples. The current Tioga Road follows the most important of these routes for much, though not all, of its present alignment. The Sunrise Trail [trail segment #91] follows another, and other trails originating or passing through the Tuolumne Meadows Historic District may also date back to precontact times. Nearly all of the trails now extant in the district were present during the period of significance, and most were used, if not actually constructed, by the cavalry sometime between 1891 and 1913 and probably during the years of its most intensive patrol activity in and around Tuolumne Meadows between 1903 and 1906.

The Tioga Road is the most visible and significant circulation corridor within the district. It is currently a highway which connects from U.S. Highway 395 at Lee Vining on the east side of the Sierra to the Big Oak Flat Road (State Highway 120) on the west side. Most development which has occurred in the district since the 1930s has been consciously oriented in reference to this highway. The present alignment was introduced between 1932 and 1934. Subsequent construction has modified the road in incidental ways—e.g., resurfacing, widening of shoulders and insertion of turnouts—but has never substantially altered the actual alignment through the historic district. Prior to 1932, however, the Tioga Road followed a completely different alignment for much of its route through the Tuolumne Meadows Historic District. This route had been established in 1882 by the surveyors of the Great Sierra Consolidated Silver Company and implemented the following year with the construction of the Great Sierra Wagon Road. Most of the original Great Sierra Wagon Road is still extant within the historic district, but those segments of it which deviate from the post-1934 realignment of the Tioga Road are used for a variety of purposes other than through motor traffic. These range from hiking and bridle paths to secondary motor

access roads. The diversity of uses now associated with the vestiges of this old alignment has made it helpful to break the old road down into distinct segments. These are lettered from A to F in the following description. The Tioga Road is treated as a separate feature, though it should be noted that the present highway follows the original alignment of the Great Sierra Wagon Road from the western edge of the historic district to a point just east of the Road Crew Camp where the John Muir Trail veers north to Parsons Lodge. The Great Sierra Wagon Road does not rejoin the present Tioga Road alignment until after it leaves the eastern edge of the historic district, and then only briefly.

The original alignment of the Great Sierra Wagon Road headed north from the Tioga Road alignment and crossed the Tuolumne River on a ford a few hundred feet upstream of Dog Creek, veering east again approximately where the rock circle marks the location of the dry soda springs. Originally, this segment skirted the southeast corner of the Sierra Club's private inholding, but in 1915 the road was straightened so that it now approaches Parsons Lodge directly from the south along the alignment followed by the John Muir Trail (Segment A on the attached map). The older alignment was abandoned and is no longer used for circulation, though traces of it remain in isolated places. After crossing the Tuolumne River, the Great Sierra Wagon Road turns east and slightly south toward the base of the present drive into the Tuolumne Meadows Stables (Segment B on the map). Prior to the 1915 realignment, the portion of this segment extending west of Dog Creek comprised part of the Mount Conness Trail. After the stables drive, the Great Sierra Wagon Road continues in a southeasterly direction until it meets the 1934 Tioga Road alignment just northeast of the Tuolumne River Bridge (Segment C on the map). From here it continues on the southeast side of the Tioga Road as an informal bridle path between the Tioga Road and Ranger Camp (Segment D on the map). This segment was formally obliterated by the Park Service in 1970 but continues to be used by equestrians and survives as an informal, unmaintained path connecting the Tuolumne Meadows Lodge and High Sierra Camp with the Tuolumne Meadows Stables. From Ranger Camp the Great Sierra Wagon Road once more follows an improved secondary road which provides access to Ranger Camp, Bug Camp and the Tuolumne Meadows Lodge and High Sierra Camp, where it culminates (Segment E on the map). Beyond the lodge, the Great Sierra Wagon Road continues in an easterly direction for a short distance just south of the present Tioga Road alignment before it terminates (Segment F on the map *Circulation #3*).

Contributing Roads

The Tioga Road
LCS Number: TBD
Originally constructed in 1883 by the Great Sierra Consolidated Silver Company and called the Great Sierra Wagon Road, the Tioga Road is the primary means of vehicular circulation through the Tuolumne Meadows Historic District. Its current route was established in 1934, when a new alignment was constructed along the southern edge of the meadow, leaving the original 1883 alignment just east of the Road Crew Camp and not returning to this alignment until well past the eastern boundary of the historic district. The Tioga Road is classified in this CLI as a contributing feature, but only that segment of the road which lies within the historic district is explicitly documented. The Tioga Road has already been documented in its entirety by a HAER survey [Quin, 1991], and that report should be consulted for any additional information not covered in the present inventory. The eligibility of the Tioga Road should not be determined without consideration of its entire history and physical extent, a task which lies beyond the scope of this CLI. At some future date, a separate Determination of Eligibility should be prepared to answer this need, but for the immediate purposes of this study, the road's significance will be considered only as a component feature contributing to the landscape characteristic of circulation within the Tuolumne Meadows Historic District.

The Tioga Road enters the Tuolumne Meadows Historic District from the west through a narrow saddle on the southern shoulder of Pothole Dome. From here it follows the southern edge of the meadow, staying just within the transitional ecotone between meadow grassland and lodgepole pine forest until it leaves the meadow altogether shortly after crossing the Tuolumne River Bridge. From here the road follows the Dana Fork along its northern shore, rising steadily in elevation through the lodgepole pine forest, exiting the historic district just west of Gaylor Creek. Its total length within the historic district is just over three miles.

The 1934 realignment of the Tioga Road within Tuolumne Meadows followed the 1932 federal highway standards, which stipulated a minimum width of 26 feet. This would have included 2 feet of shoulder on either side, leaving two travel lanes of 11 feet each. A minimum curve radius of 500 feet and a maximum grade of 6 percent were established. Corrugated metal pipe culverts ranging in diameter from 18 to 48 inches were used throughout the section except in the following instances where reinforced concrete box culverts were installed: at Budd Creek (4 by 5 foot), Unicorn Creek (double 6 by 3 foot), Moraine Creek (5 by 4 foot), and at Gaylor Creek (5 by 4 foot). Both the inlet and outlet headwalls are constructed of large, roughly-hewn (or unhewn) granite masonry with wide, slightly raked, mortar joints. An 87 foot, reinforced concrete bridge carries the road across the Tuolumne River just west of the confluence of the Dana and Lyell Forks. The entire road was originally surfaced with a macadam composed of local granitic aggregate taken from a borrow pit in the Tuolumne River. The local granite gave the road a distinctive lighter-than-usual appearance and contrasted pleasingly with the darker hue of the asphaltum which bound it. Subsequently, a denser, blacker asphalt composition has been laid over the original macadam, but some of the former material is still evident along the margins of the road..

The horizontal alignment of the Tioga Road contains large sweeping curves. For the first two miles it includes little cut or fill. In situations where a cut slope was required, this was kept rugged in nature to provide for angular pockets of naturalized vegetation. Fill slopes in most locations are gentle at approximately a 3 to 1 slope. The exception is along the Tuolumne River near the bridge. Here, extensive fill was required to cross the floodplain before and after the bridge. In most places the shoulders include native vegetation. The exceptions are the vehicle turnouts, where the vegetation is kept clear.

Except for resurfacing, no substantial modifications have been made since the 1930s, and the road remains a significant contributing structure within the historic district.

The Great Sierra Wagon Road

Originally constructed in 1883 by the Great Sierra Consolidated Silver Company to provide access to the company's mines on Tioga Hill east of the historic district, this road has remained the principal route accessing Tuolumne Meadows. In 1915 it was acquired by Stephen Mather and donated to the Department of the Interior as a public highway serving motor tourism to the area. At that time the road was renamed the Tioga Road. In 1934, a major reconstruction was completed, realigning the Tioga Road along its present route. The original alignment of the Great Sierra Wagon Road, however, was never entirely obliterated. Those sections within Tuolumne Meadows that were no longer used for the principal transportation corridor were converted to secondary purposes and maintained or improved in distinct ways according to several different types of use. Each type of use defines a different segment in the following treatment. The pre-1934 road alignment is often referred to as the "Old Tioga Road," but it will be called the Great Sierra Wagon Road throughout this document to avoid confusion.

Old Tioga Road Segment A

A segment of the original 1915 alignment of the Tioga Road (sometimes referred to as the "Old Tioga Road") leaves the present Tioga Road a little east of the Road Crew Camp and traverses the meadow in a northeasterly direction, entering the Soda Springs Historic District just south of Unicorn Creek near the creek's confluence with the Tuolumne River. The road crosses several small channels associated with Unicorn Creek over corrugated steel culverts before crossing the Tuolumne River over the Soda Springs Bridge and curving eastward to join Segment B. Masonry headwalls and other stonework associated with these culverts appear to have been repaired or otherwise modified over the years and may no longer be eligible as contributing features.

This alignment was established in 1915, replacing the original 1883 alignment of the Great Sierra Wagon Road, which lay further to the east and crossed the Tuolumne River at a ford near the confluence of Dog Creek, just outside the east boundary of the Soda Springs Historic District. Some vestigial traces of this 1883 alignment can still be seen in the meadow and near the old crossing at the Tuolumne River. The 1915 road alignment rejoins the 1883 alignment at Dog Creek, just outside the boundary of the Soda Springs Historic District.

When the Tioga Road was altered to follow its present alignment in 1934, the Tioga Road, the 1915 alignment comprising Segment A reverted to a foot path. It does not appear to have changed substantially since that date. The surface remains compacted dirt with gravel in isolated patches. Low earthen berms are present on either side of the road where it crosses the meadow. Several lodgepole pine have taken advantage of the drier soil created by these earthworks and established themselves in a row alongside the old road near the southern edge of the meadow.

Great Sierra Wagon Road Segment B
This segment of the road extends in a southeasterly direction from Parsons Lodge to the intersection of the Tuolumne Meadows Stable and Pack Station driveway. It resumes the original 1883 alignment of the Great Sierra Wagon Road after the 1915 realignment represent by Segment A. Segment B is currently used by equestrians and hikers. It also provides access for official vehicles to the Parsons Lodge area. It coincides with segments of the John Muir, Glen Aulin and Pacific Crest Trails. Its horizontal alignment follows the toe of the uphill slope along the northern edge of the meadow. Although the road is similar in physical characteristics to segment A, it has regular use by vehicular traffic which has kept vegetation from naturalizing on the roadbed. The surface consists of native soils and follows the natural grade of the landscape. In some locations it is lower than the meadow due to erosion. Half-buried boulders were spaced at intervals to keep cars from pulling out into the meadows.

Great Sierra Wagon Road Segment C
This segment begins at the foot of the Tuolumne Meadows Stables drive and extends in a southeasterly direction to the Tioga Road, meeting the Tioga Road just east of the Tuolumne River Bridge. In 1970, this section of the road was altered significantly to provide access to the stables. These improvements included widening the road to 25 feet, addition of culverts, and a substantial vertical realignment. The present surface is crushed serpentine, a mineral endemic to the Sierra foothills. The horizontal alignment of the road remains consistent with the historic alignment of the Great Sierra Wagon Road.

Great Sierra Wagon Road Segment D
This segment begins at a point on the Tioga Road just east of the Tuolumne River Bridge and extends in an easterly direction toward the wilderness office (bldg. #3091), where it rejoins the paved road below Ranger Camp. Currently used as a trail, this segment of the road was closed to vehicular use with the completion of the new alignment of the Tioga Road in 1934. The road follows the natural grade of the landscape. However, erosion has lowered the grade approximately 12 to 14 inches. The trail surface

consists of native soil and varies in width depending on the soil and vegetation type. In the meadow it is approximately 11 feet wide, whereas in the forested areas the width ranges between 6 and 8 feet.

Great Sierra Wagon Road Segment E
This paved section of the road begins at the wilderness office (bldg. #3091) and continues along the Dana Fork, passing the Administrative Area (Ranger Camp) and the Insect Research Station (Bug Camp) and culminating at the Tuolumne Meadows Lodge and High Sierra Camp. Although the asphalt pavement is periodically replaced, little has changed since the period of significance. The road width is approximately 15 feet and both the horizontal and vertical alignments follow the natural grade of the landscape.

Great Sierra Wagon Road Segment F
This segment continues east of the Tuolumne Meadows Lodge and High Sierra Camp along the Dana Fork, culminating at a water tank which supplies the entire Tuolumne Meadows area with drinking water. It is the first segment of the old Great Sierra Wagon Road to climb sharply out of the lower valley on its way to the Tioga Pass. The current surface contains newly placed road base; however, the cross-section, and horizontal and vertical alignments have changed little since the period of significance.

Tuolumne Meadows Campground Loop Road
Constructed in 1934 to provide a public camping area for visitors, the loop starts along the east side of the campground contact station and proceeds along the Lyell Fork. The campground road has changed very little since its original construction; however, an additional segment of road was added in 1961 to support the needs of campers with pack animals. The road's horizontal alignment is crude with sharp bends that follow the landscape. The vertical alignment also follows the landscape with little cut and fill. The narrow road width varies between 9 and 12 feet. At one time covered with macadam, only small areas of pavement remain after years of use and erosion. In many areas the road is indistinguishable from the surrounding camping locations. The one exception is the newer loop from 1961 which still has its original asphalt layer.

Non-Contributing Roads

Sewer Line Road
Approximately 11 feet in width, this road alignment follows the toe of the slope between the upland and the edge of the meadow. The existing grade and alignment of the sewage line road was constructed when the Tuolumne Meadows sewage system was upgraded in the early 1970s. However, an earlier iteration of the road that largely followed the same alignment existed as early as 1957. It is currently surfaced in gravel and follows an alignment just north of the river through the Soda Springs Historic District. It terminates at the sewage oxidation ponds about a mile west of Soda Springs.

Corral and Stable Road
This short road begins on the old Great Sierra Wagon Road alignment midway between Parsons Lodge and the Tioga Road. Constructed in 1970 to access the new corral and stables, the road is approximately 25 feet wide and is only 1000 feet long. The road is unpaved and finished with crushed serpentine.

Tuolumne Meadows Lodge and High Sierra Camp Road
Built in 1970 in conjunction with a new parking lot, the road is approximately 15 feet wide and 750 feet long. The surface is asphalt pavement.

Contributing Trails

Tuolumne Meadows Historic District is a crossroads for many trails passing through the high mountains. Most of these trails were established by the cavalry between 1891 and 1913 and are not carefully documented. Army reports usually noted when a trail was built, but rarely gave details of construction or exact locations. After the Park Service inherited these trails, it eventually improved them and occasionally introduced minor realignments. Most of these changes occurred during the period of significance and do not compromise the historic integrity of the trails. Two important trails were constructed after the cavalry period: the John Muir Trail between 1915 and 1938 (much of this trail incorporated existing trail alignments), and the Tenaya Lake Trail between 1957 and 1959. The following discussion includes trail numbers, which are used by the National Park Service to identify individual segments of each trail.

John Muir Trail
LCS ID: 55748
The John Muir Trail was the first effort by the state of California to provide trail access to the High Sierra crest. It was named for John Muir, president of Sierra Club and a staunch wilderness proponent for many years. Completed in 1938, the trail comprises just over 33 miles within the Yosemite National Park boundaries. It passes though Tuolumne Meadows, forming part of the Pacific Crest and Sunrise Trails The route follows the Sunrise and Tuolumne Meadows Trail across Cathedral Pass and west of Cathedral Peak to the Tioga Road, paralleling that road on the south side for about a mile. The trail crosses the road and then the Tuolumne River near Parsons Memorial Lodge, turns east about two miles, recrossing the road and the river, then heads southeast along the Lyell Fork, and eventually passes outside the park. In undeveloped areas the trail is approximately 2 feet wide constructed with native material.

The following trail segments comprising the John Muir Trail lay either within or partly within the Tuolumne Meadows Historic District and are considered a historic circulation feature: 256, 257, 276, 129, 216 and 214.

Glen Aulin-Pacific Crest Trail
This trail originates at Soda Springs on the north side of the district and follows the Tuolumne River downstream to the Glen Aulin High Sierra Camp. This was one of the most important routes used by cavalry patrols during the Army period and was probably constructed by the Army sometime before 1906. The current alignment is also shared by the Pacific Crest Trail, which continues south from Soda Springs on the John Muir Trail. The only segment of the Glen Aulin Trail which lies within the Tuolumne Meadows Historic District is 93. The trail is maintained to a width which varies from a minimum of 2 feet to a maximum of 4 feet. The surface is constructed of native material.

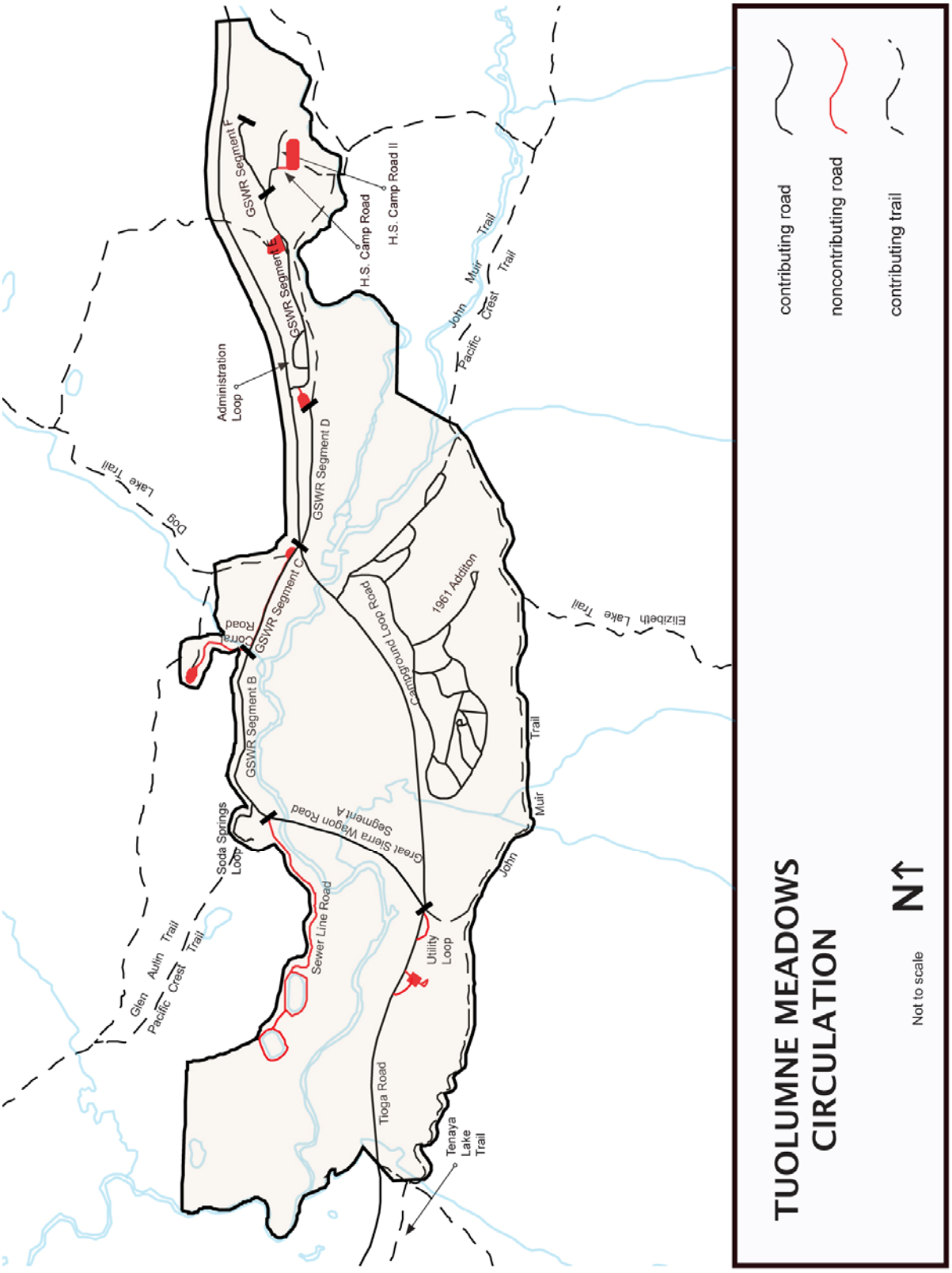
Dog Lake Trail (two segments within the district)
The two ends of Dog Lake Trail lead from Tuolumne Meadows to Dog Lake. One skirts Lembert Dome on the west, the other on the east. Both date back to the Army period, and cavalry blazes are visible on many of the trees along these alignments. The cavalry corralled its livestock near Dog Lake just outside the northern boundary of the historic district. The segments of the Dog Lake Trail which lie within the Tuolumne Meadows Historic District are 90 and 85. The trail is maintained to a width which varies from a minimum of 2 feet to a maximum of 4 feet. The surface is constructed of native material.

Elizabeth Lake Trail
This trail originates in the public campground and follows Unicorn Creek on its east shore up to Elizabeth Lake. The original date of construction is unknown, but the trail appears in documentation as early as

1934. Only its lower end passes through the historic district. This is segment number 89. The trail is maintained to a width which varies from a minimum of 2 feet to a maximum of 4 feet. The surface is constructed of native material.

Tenaya Lake Trail
This trail, which connects Tenaya Lake and Tuolumne Meadows Soda Springs, was originally planned as a CCC project in 1940 but never implemented. It was finally constructed as a Park Service project between 1957 and 1959. It comprises segment numbers 255, 256, 257, 274 and 267. Segment 257 is shared with the John Muir Trail. The trail is maintained to a width which varies from a minimum of 2 feet to a maximum of 4 feet. The surface is constructed of native material.


Circulation #1 and #2: Two photos of the Tioga Road illustrating its orientation to natural systems and features and to views and vistas. (HAER, 1991)



Circulation #3: Map showing existing roads and trails within the historic district.

Views and Vistas

Views and vistas are defined as an expansive prospect or a broad range of vision, which may be naturally occurring or deliberately created or enhanced. The opportunity for expansive views was enabled by the natural vegetation patterns of Tuolumne Meadows. Views into the meadow have been maintained and even expanded over the years by mechanical removal of encroaching lodgepole pines. Additionally, the siting of all post-1920s development was guided by the principle of not obstructing or competing with the naturally-occurring views and vistas. Reducing human visual impacts on the environment was a key reason for realigning the Tioga Road and eliminating all camping inside the meadow. Building locations and circulation patterns have subsequently been designed to take advantage of the scenic opportunities of this landscape while remaining as unobtrusive as possible.

Contributing Views

High Panoramic Views of Tuolumne Meadows
Along the periphery of Tuolumne Meadows, there are several trails that lead to the summits of granite domes. These lofty vantages afford visitors with breathtaking views of the meadows below and of the surrounding landscape. Popular viewing points include Lembert Dome, Pothole Dome, and Puppy Dome. Even though these vantage points lie outside the boundaries of the historic district, they are important aspects of the visitor experience and contribute strongly to the overall impression which visitors form of the place.

The tallest and most dramatic dome in the vicinity of Tuolumne Meadows is Lembert Dome.
This dome is on the eastern edge of Tuolumne Meadows and can be accessed from the Dog Lake parking lot. The trail is approximately 4 miles round trip and gains 850 feet in elevation before reaching the summit. The dome's polished granite and abundant glacial erratics convey the geologic history of the Sierra Nevada landscape. From this vantage point, hikers can view the lazy meander of the Tuolumne River far below them. The developed areas are largely screened from view by natural partitions of native conifers.

Pothole Dome lies along the western boundary of Tuolumne Meadows. This dome rises from the meadow at a gentle slope and is much easier to climb than Lembert Dome. Most of the hike is unmarked and visitors are allowed to choose their own route to the summit. The vantage point offers many of the same views as Lembert Dome but from a different perspective.

Views Into and From Within Tuolumne Meadows
The natural features of this landscape create numerous scenic opportunities at ground level as well. The meadows allow extended views along their length and width with a dramatic backdrop of alpine peaks in nearly every direction. This panorama is visible at almost any point within the meadow and provides the viewer with an exhilarating sense of open space. Even from the periphery of the meadow, where denser vegetation obstructs the panoramic views, this sense of openness is still apparent and greets the visitor in occasional glimpses of the meadows and distant peaks snatched from between the trees. Most development has been sited just within the surrounding forest to take advantage of these visual surprises and to prevent any development that might obstruct the views into and across the meadows themselves. These views have been actively maintained since at least the middle 1930s, and possibly earlier, by trimming and thinning of mature trees and the removal of saplings encroaching into the meadows. Lodgepole pines have been volunteering within the meadows, particularly along their southern edge, throughout much of the historic period. The reasons are not fully understood but are probably related to changing hydrologic processes in this area. The vigorous and ongoing response to this issue testifies to

the value of the open meadow landscape both for the natural communities it supports and for its scenic qualities.

Motorists and pedestrians can appreciate this scenery while passing through the landscape. Views into the meadow are available from the segment of the Tioga Road running along the southern edge of the meadow. Likewise, hikers on trails that bisect the meadow, including the Pacific Crest Trail, the Glen Aulin Trail and the Soda Springs Trail, are rewarded with countless views into and across the open space.

Views from Tioga Road
The views along this lineal corridor are usually experienced from within a vehicle. In some locations the road grants open and expansive views into the meadow and surrounding landscape while in other locations the trees along the road create a more intimate visual experience. This change in structural composition of the vegetation creates a "hide and reveal" phenomenon within the visual landscape that has changed little since the Tioga Roads construction.

Summary
The important visual relationships between natural features of Tuolumne Meadows and its adjacent developed areas remain largely intact. Although lodgepole pine encroachment has negatively impacted the open character of some of the views into the meadows, most of the original scenic opportunities remain unobstructed. The views and vistas landscape characteristic contributes significantly to the setting and feel of the Tuolumne Meadows Historic District.

Views and Vistas #1: View from the summit of Lembert Dome, facing west.. (YOSE, 2006)

Views and Vistas #2: View from the summit of Pothole Dome, facing east. (YOSE, 2006)

Views and Vistas #3: View into Tuolumne Meadow from the Tioga Road, facing north. (YOSE, 2006)

Archeological Sites

Archeological features that are associated with the period of significance include a debris scatter, foundation pillars, remnants of structures, tree blazes, pit privies and landscape manipulation. These features include surface and subsurface material and when considered collectively, help reveal how the district was spatially organized during the period of significance. Archeological site inventories by the CLI include the location of ruins, traces, or deposited artifacts in the landscape that are associated with the period of significance and are evidenced by the presence of either surface or subsurface features. The CLI takes every precaution not to disclose the location of sensitive archeological sites to preserve the resources.

"Benner" ("Brenner") Oven Ruin
The "Benner" oven is located about one mile west of the Soda Springs area. The oven was built sometime before 1934 by Joe Brenner. It was constructed of hand-poured cement and measures 24 inches wide by 28 inches long and is 30 inches tall. The word "Benner" is carved into the front face of the oven, though the owner spelled his name "Brenner." The cement was molded to accept a 6 inch wide stovepipe out the back end and held a metal grate or plate for cooking on top. Joe Brenner, a frequent visitor to the Tuolumne Meadows area, built the oven as part of his seasonal camp. At some point in the 1950s, the National Park Service began to organize and limit camping to specific areas, which rendered Mr. Brenner's seasonal camp out of bounds. Mr. Brenner subsequently moved his camp to one of the designated camping areas, but his oven remained at his original site. In 1968, the National Park Service began to enforce a rule that limited campers to a maximum stay of fourteen days. After forty summers in Tuolumne Meadows, Joe Brenner was the first to be escorted by Park Rangers from his campsite.

Carved Stone Basin with Natural Spring
There is a small, low volume natural spring located about ¼ mile northwest of the western waste water oxidation pond. The spring emerges from the center of a large granite boulder. In the top of the boulder a small basin has been carved which allows the water to pool before spilling over the edge. The water emerges from a small fissure near the bottom of the basin. The feature is undated but thought to be historic. It may be associated with an early recreational camping area, though this is not known for certain.

Inactive Soda Spring Marker
Originally, there were at least two soda springs in the Tuolumne Meadows area. The spring that is located just east of Parsons Lodge still flows and has an interpretive sign posted near it. The other spring has gone dry. It is marked by a ring of stones approximately 6 feet in diameter encircling the spot where the waters once welled up. It is not clear exactly when the spring ceased flowing, but it is thought to have been active until at least the mid 1950s. The remnants of the spring are located along a segment of the old Great Sierra Wagon Road between the Dog Lake trailhead parking lot and Parsons Lodge.

Remnant Steps of the Original Store
Three steps and a small clearing between two rows of lodgepole pines are all that remain of the original Tuolumne Meadows store. This store was located just a short distance west of the Administrative Area and only 15 feet off the old Great Sierra Wagon Road. Beginning at the old road, there is a faint trail that leads to three large granite steps. The steps can be difficult to locate because they are usually covered by forest duff. The steps have approximately 1 foot of tread and rise approximately 3 inches. They are approximately 3 feet wide. There are granite cheek walls on either side of the stairs extending beyond the plane of the bottom step.

The original store was a small tent cabin. It was closed in 1939 following the realignment of the Tioga Road.

Stone Masonry Piers
Just east of the Road Crew Camp is a group of stone masonry piers. These piers are close to where the historic fish tank house (bldg. #3018) originally stood, and it is possible they supported its porch. Historic photos seem to corroborate this theory. There are currently ten piers in various states of disrepair. The piers are comprised of rubble granite fragments with mortar joints crudely stacked on top of each other. The group forms an ell shape, and each pier rises approximately 2 feet off the ground.

Abandoned Structure/Heap of Milled Timber
There is a collection of milled lumber on the hillside just south of building #3069A. It is unclear whether this is simply a forgotten pile of salvaged scrap wood or the ruins of an abandoned structure. The wood has been divided into discreet piles according to width. One pile consists of 1 inch lumber and the other of 2 inch lumber. There are also the remnants of stairs within the sorted wood scraps. Much of the wood contains rusted nails. The wood is extremely weatherworn and generally rotten. This pile is close to the location of a historic wash room (bldg. #3019), and the debris may be associated with that structure.

Historic Pit Privies
There are remnants of two historic pit privies in the vicinity of the Tuolumne Meadows High Sierra Camp. The larger of the features consists of two separate depressions. One depression measures 5 feet by 8 feet and has a two seat privy. The second depression measures 3 feet by 6 feet and has the remains of a privacy wall with round nails. The second feature is smaller and consists of two two-by-four beams nailed between two trees with a plywood seat. The plywood seat has a diamond shape cut into it. These pit privies were probably associated with the early development of the Tuolumne Meadows High Sierra Camp.

Corral Fence and Boundary Marker Ruins
Until 1968, there was a concessionaire-operated stable and pasture area at the Tuolumne Meadows High Sierra Camp. The horses and mules that were kept at the stables were used by visitors for leisurely horseback riding and as pack animals to supply the more remote High Sierra Camps. In 1968, the stables were relocated to the northwest of the Tuolumne Meadows High Sierra Camp near the Dog Lake parking area. Today, the historic pasture area is evidenced by numerous scars and wire fragments that remain on trees. These tree scars mark the location of the fence that defined the pasture area. The wire pieces are not barbed and consist of three strands twisted together. The fence originally comprised three rows of this wire. Close to this fence line are several historic property boundary markers. These markers consist of upright metal pipes filled with concrete. The markers stand approximately 6 to 9 inches off the ground.

Historic Cavalry Blazes
There are several cavalry blazes still visible in the Tuolumne Meadows area. Blazes are symbols carved into mature trees to mark a trail or territorial boundary. The cavalry used a distinctive cross and sometimes included a date. One such blaze on the Dog Lake Trail is dated 1906.

Summary
For the purposes of the CLI, no archeological research design was formulated and no evaluation or testing was conducted on these archeological features. Consequently, it is unknown whether any of these features possess further data potential, but their presence helps to understand better the history of the meadows and the original location of moved or demolished buildings and the location of earlier areas of land use.

Management Information

Descriptive and Geographic Information

Historic Name: Tuolumne Meadows
Current Name: Tuolumne Meadows
State and County: Tuolumne, California
Size (acres): Approximately 1,000 acres

Boundary UTM

Source	Type	Datum	Zone	Easting	Northing
A	Area	NAD 27	11	290571	4194307
B	Area	NAD 27	11	290200	4194654
C	Area	NAD 27	11	290317	4195084
D	Area	NAD 27	11	290930	4195065
E	Area	NAD 27	11	291513	4194564
F	Area	NAD 27	11	291907	4194877
G	Area	NAD 27	11	292696	4195080
H	Area	NAD 27	11	293165	4194627
I	Area	NAD 27	11	294603	4194983
J	Area	NAD 27	11	295295	4194924
K	Area	NAD 27	11	295303	4194795
L	Area	NAD 27	11	294372	4194576
M	Area	NAD 27	11	293775	4194170
N	Area	NAD 27	11	292919	4193634
O	Area	NAD 27	11	291951	4193588
P	Area	NAD 27	11	290439	4194127

National Register Information

National Register Documentation: Undocumented

Explanatory Narrative:
Tuolumne Meadows Historic District is not listed on the National Register of Historic Places. However, several buildings within the proposed district are listed on the National Register. The Parsons Memorial Lodge has been designated a National Historic Landmark.

NRIS Number: 77000359
Primary Certification Date: 3/8/1977
Name in National Register: McCauley Cabin
Other Names: Caretaker's Cabin

NRIS Number: 79000282
Primary Certification Date: 4/19/1979
Name in National Register: Soda Spring's Cabin
Other Names: John Lembert Homestead; Soda Springs Enclosure

NRIS Number: 78000371
Primary Certification Date: 11/30/1978
Name in National Register: Mess Hall and Kitchen, Toilet and Shower Room, Tuolumne Meadows
Other Names: Buildings 3010; 3011; 3012; 3013; 3014; 3015

NRIS Number: 78000370
Primary Certification Date: 12/18/1978
Name in National Register: Tuolumne Meadows Ranger Stations and Comfort Stations
Other Names: Buildings 3000; 3005; 3021; 3023

NRIS Number: 79000283
Primary Certification Date: 4/30/1979
Name in National Register: Parsons Memorial Lodge

National Register Eligibility:

Explanatory Narrative:
Two properties within the Soda Springs component landscape of the Tuolumne Meadows Historic District are listed on the National Register—the McCauley Cabin and the Lembert Homestead. Another property within the same landscape—the Parsons Memorial Lodge—is listed on the National Register and designated a National Historic Landmark. Within the Road Crew Camp cluster of the Tuolumne Meadows Historic District there are six buildings listed as a single nomination on the National Register—the Mess Hall, four bunkhouses, and a shower room (bldgs. #3010, #3011, #3012, #3013, #3014 and #3015). In the public campground cluster of the historic district there are four buildings listed as a single nomination on the National Register—the Ranger Station, or Visitor Contact Station, and three rustic comfort stations (bldgs. #3000, #3005, #3021 and #3023). An additional nomination has been submitted for the Tuolumne Meadows High Sierra Camp under the framework of the 2004 Yosemite National Park Multiple Properties Document and received consensus determination by the SHPO in March, 2004 but has not yet been listed on the Register.

This CLI contributes to these National Register and National Historic Landmark nominations by providing additional information which documents historically significant landscape characteristics and other buildings and structures not already documented. It proposes that all of these features be considered part of a single historic district sharing common contextual themes.

Date of Eligibility Determination: TBD

National Register Classification: District

Significance Level: Local

Contributing/Individual: Individual

Significance Criteria: A and C

Period of Significance

Time Period:	1885-1961
Historic Context Theme:	Creating Social Institutions and Movements
Historic Context Subtheme:	Recreation
Historic Context Facet:	Tourism

Time Period:	1885-1961
Historic Context Theme:	Expressing Cultural Values
Historic Context Subtheme:	Architecture
Historic Context Facet:	Rustic Architecture

Time Period:	1885-1961
Historic Context Theme:	Expressing Cultural Values
Historic Context Subtheme:	Landscape Architecture
Historic Context Facet:	The 1930's: Era of Public Works

Area of Significance

Category:	Entertainment/Recreation
Priority:	1

Category:	Landscape Architecture
Priority:	2

Category:	Architecture
Priority:	3

Category:	Conservation
Priority:	4

Category:	Community Planning and Development
Priority:	5

National Historic Landmark Information

National Historic Landmark Status:	No
National Historic Landmark Date:	NA
National Historic Landmark Theme:	The Parsons Memorial Lodge was designated an NHL on May 28, 1987 and associated with the theme Recreation and Culture-Outdoor.

World Heritage Site Information

World Heritage Site Status:	Yes
World Heritage Site Date:	1/1/1984
World Heritage Category:	Natural
Statement of Significance:	Significant under Criteria N (i), (ii), (iii)

Cultural Landscape Type and Use

Cultural Landscape Type: Historic Designed Landscape

Current and Historic Use/Function:

Primary Historic Function-major category:	Recreation/Culture
Primary Historic Function-category:	Outdoor Recreation
Primary Historic Function:	Outdoor Recreation- Other
Other Historic Function-major category:	Agriculture/Subsistence
Other Historic Function-category:	Livestock
Other Historic Function:	Livestock
Primary Current Use-major category:	Recreation/Culture
Primary Current Use-category:	Outdoor Recreation
Primary Current Use:	Outdoor Recreation- Other
Other Historic/Current Function-major category:	Domestic (Residential)
Other Historic/Current Function-:	Camp
Other Historic/Current Function:	Camp
Other Historic/Current Function-major category:	Government
Other Historic/Current Function-category:	Government Office
Other Historic/Current Function:	Government Office
Other Historic/Current Function-major category:	Landscape
Other Historic/Current Function-category:	Natural Area
Other Historic/Current Function:	Alpine Meadow
Other Historic/Current Function-major category:	Transportation
Other Historic/Current Function-category:	Pedestrian Related
Other Historic/Current Function:	Hiking Trail

Ethnographic Information

Ethnographic Survey Conducted?: No

Ethnographic Survey Explanatory Narrative:

Adjacent Lands Information

Do Adjacent Lands Contribute: No

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date:

Explanatory Narrative:
The Management Category for the proposed Tuolumne Meadows Historic District is B: Should be Preserved and Maintained, because it meets all of the following criteria: the inventory unit meets National Register criteria, is compatible with the park's legislated significance, and has a continuing or potential purpose that is appropriate to its traditional use or function.

Condition Assessment and Impacts

The criteria for determining the condition of landscapes is consistent with the Resource Management Plan Guideline definitions (1994) and is decided with the concurrence of park management. Cultural landscape conditions are defined as follows:

Good: indicates the landscape shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The landscape's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the landscape shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character-defining elements will cause the landscape to degrade to a poor condition.

Poor: indicates the landscape shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

Undetermined: not enough information available to make an evaluation.

Condition Assessment: Good
Assessment Date: October 24, 2006
Park Management Concurrence: TBD
Level of Impact Severity: Low

Stabilization Measures:
Overall, the district is in good condition. There are currently no signs of any major historic resource deterioration and no immediate corrective actions are required to maintain the district's current condition. However, a significant threat to the ecology and aesthetics of the historic district is posed by the recent widespread intrusion of lodgepole pines into the meadow. Contributing to this process are human disruptions to the natural hydrology of the area. Long term stabilization of the meadow/forest ecotone may require restoration of the hydrological regime of the area to a more natural state. In the short term, lodgepole pine recruitment within the meadow can be controlled through manual removal of the saplings. Stabilization of the historic meadow ecology also requires ongoing monitoring and treatment of invasive exotic vegetation.

Projected increases in visitation and related development poses another threat to the historic resources of the district. The most immediate impact is trampled vegetation, soil compaction in ecologically fragile habitat, and erosion from the cutting of new social paths. These resources

could be effectively stabilized with the erection of physical barriers and revegetation of denuded areas. These measures are especially needed in and around the public campground.

Impact:

Type of Impact:	Improper Drainage
Explanation of Impact:	Tioga Road impedes the natural drainage from the hills south of Tuolumne Meadows into the Meadows. This landscape alteration is allowing lodgepole pines to encroach into the meadows thereby changing natural and historic vegetation patterns.
Type of Impact:	Soil Compaction
Explanation of Impact:	Soil in the meadow is compacted around the Tioga Road corridor and the Great Sierra Wagon Road segment that travels from Tioga Road towards Soda Springs. This compaction creates drier than normal conditions and has allowed lodgepole pines to encroach into the meadow.
Type of Impact:	Impending Development
Explanation of Impact:	Yosemite National Park is undergoing a comprehensive planning effort for Tuolumne Meadows. New development and/or restoration have the potential to impact the historic district.
Type of Impact:	Visitation
Explanation of Impact:	Currently visitors park alongside Tioga Road causing extensive vegetation loss. Additionally, dozens of social trails exist throughout Tuolumne Meadows causing vegetation loss and erosion. Increased visitation within the area has led to numerous social trails and unsanctioned vehicular parking along the road
Type of Impact:	Deferred Maintenance
Explanation of Impact:	The campground roads are in disrepair; the surface is degraded and the routes are difficult to follow.

Agreements, Legal Interest, and Access

Management Agreement: Concession Contract/Permit

Management Agreement Expiration Date: 09/30/2011

Management Agreement Explanatory Narrative:
Concessionaire services within the Tuolumne Meadows Historic District are provided by the for profit Delaware North Company (DNC). Within Tuolumne Meadows, the DNC operates the Tuolumne Meadows High Sierra Camp, the Store and Grill, the Gas Station and Mountaineering School and the stables.

NPS Legal Interest: Fee Simple

Public Access: Unrestricted

Treatment

Approved Treatment: Improve wastewater treatment infrastructure and initiate studies to inform future projects in the area.

Approved Treatment Document: PMIS # 979, 25769, 49265, 84469,110268 and 125992

Document Date: 1997-2006

Approved Treatment Completed: No

Approved Treatment Cost

Landscape Approved Treatment Cost: The NPS has not yet identified ultimate approved treatment costs for this project. When estimates of probable cost are determined they will be incorporated into the CLI.

Cost Date:

Level of Estimate:

Cost Estimator:

Explanatory Description:

The wastewater systems within Tuolumne Meadows are currently slated for improvement. The improvement is aimed to end the discharge of raw sewage into the environment and mitigate the adverse affects to the Tuolumne River. Work will include construction of a new wastewater treatment plant, modification of an existing pump station to transport raw sewage to the new plant location, elimination of sewage lagoons, and demolition of the existing plant. Work has been put on hold until the Tuolumne Wild and Scenic River Plan is completed.

The park is currently working on completing a Tuolumne Meadows Development Concept Plan and a Tuolumne Wild and Scenic River Plan. The Development Concept Plan will clarify management intent and guide future development within the Tuolumne Meadows area. The Wild and Scenic River plan will, direct visitor use, development, resource preservation and all other management actions within the Tuolumne Wild and Scenic River corridor. The projected costs of these plans are yet to be determined.

The park is planning on retrofitting many of the historic bathrooms in the Tuolumne Meadows area. This will include relocating fixtures, repairing roofs, improving ADA accessibility. The estimated cost for this project is yet to be determined.

The Visitor Experience and Resource Protection (VERP) branch of Yosemite National Park is currently working on a study that will address user capacity issues within Tuolumne Meadows. Funds requested in this proposal will provide the necessary resources to develop and implement a

program for the Tuolumne Wild and Scenic River and its environs. The estimated cost of this project is yet to be determined.

Stabilization Costs

Landscape Stabilization Costs: The NPS has not yet identified ultimate approved stabilization costs for this project. When estimates of probable cost are determined they will be incorporated into the CLI.

Cost Date:

Level of Estimate:

Cost Estimator:

Explanatory Description:

Explanatory Description:

The Vegetation and Ecological Restoration branch within the Resources Management and Science Division at Yosemite National Park is undergoing a three-year lodgepole pine removal project to restore the natural and historic vegetation patterns at the edge of the meadows. The project is to be completed the summer of 2007. After the project is completed, Vegetation and Ecological Restoration will initiate an annual maintenance program to maintain control over the lodgepole pines.

Campgrounds: A draft PMIS package (no. 25731) is awaiting park review to rehabilitate the Tuolumne Meadows campground. This package needs to be updated to better reflect the existing issues. Stabilization of the road system, the parking areas, and individual campground sites is needed so the campground layout is not further degraded.

Appendix
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Supplemental Information

Title: List of Acronyms

CLI: Cultural Landscape Inventory
LCS: List of Classified Structures
GPRA: Government Performance and Results Act
CLR: Cultural Landscape Report
SHPO/TPO: State Historic Preservation Officer/Tribal Preservation Officer
YOSE: Yosemite National Park