

APPENDIX A CUMULATIVE PROJECTS LIST

Following is a list of projects that may have potential cumulative impact when considered along with the Hetch Hetchy Communication System Upgrade Project alternatives. The purpose of the cumulative impact analysis is to determine (1) whether the resources, ecosystems and human communities have already been affected by past or present activities, and (2) whether other agencies or the public have plans that may affect resources in the future. The cumulative project list includes major projects within Yosemite National Park and Stanislaus National Forest. The projects and their summaries were obtained from the National Park Service Park Planning website, recently completed Environmental Assessments (EAs), and the Stanislaus National Forest Schedule of Proposed Actions website (USDA 2007b).

CITY AND COUNTY OF SAN FRANCISCO PROJECTS

Project Name: Water System Improvement Program

Description: The San Francisco Public Utilities Commission (SFPUC) is proposing to adopt and implement the Water System Improvement Program (WSIP) to increase the reliability of the regional water system that serves 2.4 million people in San Francisco and the San Francisco Bay Area. The WSIP would improve the regional system with respect to water quality, seismic response, water delivery, and water supply to meet water delivery needs in the service area through the year 2030 and would establish level of service goals and system performance objectives. The WSIP would implement a proposed water supply option, modify system operations, and construct a series of facility improvement projects. The WSIP area spans seven counties—Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo, and San Francisco.

Project Name: Hetch Hetchy Repair and Rehabilitation Program

Description: The SFPUC has developed the Repair and Rehabilitation Program for its facilities in the Tuolumne River corridor. Several projects have been scheduled for implementation between 2008 and 2012. They include repairing Early Intake Dam, lining Moccasin Reservoir, improving and enlarging the Lower Cherry Aqueduct, and expanding the Moccasin Creek bypass. Likely future projects that have not yet been scheduled include repair of existing roads and bridges and implementation of a vegetation management program for water and power rights-of-way and areas surrounding Priest and Moccasin Reservoirs.

Project Name: Discretionary Fishery Releases from Hetch Hetchy Reservoir

Description: An agreement between the City and County of San Francisco (CCSF) and the U.S. Department of the Interior (DOI) provided for several supplemental releases of water from Hetch Hetchy Reservoir, in addition to the current required minimum releases, to support resident trout populations. As agreed, the SFPUC releases an extra 64 cubic feet per second (cfs) at Hetch Hetchy Reservoir on any day that flow in Canyon Tunnel exceeds 920 cfs. Also, the U.S. Fish and Wildlife Service (USFWS), an agency within the DOI, has the discretion to require this additional water to be released from Hetch

Hetchy Reservoir in an amount varying from 4,400 to 15,000 acre-feet, depending on hydrologic conditions, for the benefit of resident trout. If shown to be necessary for fish habitat, the USFWS may also seek to have additional water released in wetter hydrologic year types under certain conditions (CCSF 1987).

In March 1987, the CCSF and DOI agreed on the amounts and a procedure for determining whether supplemental flow releases were necessary. The agreement provided for a study of the relationship between the resident trout population and stream flow below O'Shaughnessy Dam. The study was intended to establish whether additional releases were actually needed and, if so, the appropriate timing of such releases. The draft study, published in 1992, called for the release of greater amounts of water, but did not provide guidance on the timing of releases. To date, the DOI has not exercised its discretion to require these supplemental releases, and the SFPUC has not implemented them. Recently, the SFPUC began working with the USFWS to bring the matter to a conclusion. In 2006, the SFPUC made supplemental releases as part of the experimental program to study the relationship between flow rate in the river, the depth of water in the channel, and the extent of trout habitat.

Project Name: Watershed and Environmental Improvement Program

Description: The SFPUC is developing this program to protect and restore lands and natural resources critical to the operation of the SFPUC regional water system. The program could include ecosystem and habitat protection, improvements, and restoration and would address such issues as fish passage, riparian habitat degradation, and sensitive species recovery in the Tuolumne, Alameda, and Peninsula watersheds. Program planning is in progress, and initial activities include field surveys and information gathering on current ecological and geomorphic conditions in the Tuolumne River from O'Shaughnessy Dam to Don Pedro Reservoir, Cherry Creek downstream of Cherry Dam, and Eleanor Creek downstream of Eleanor Dam (McBain & Trush 2006). However, no specific projects or actions affecting Hetch Hetchy Reservoir or the Tuolumne River below the reservoir have been identified.

YOSEMITE NATIONAL PARK PROJECTS

Project Name: Parkwide Communications Data Network

Description: The proposed project is to update the communications data network for Yosemite National Park. The park serves more than 3.75 million visitors per year, and has over 1,100 square miles of Wilderness, 800 miles of foot trails and covers extensive remote terrain from 2,500 to 13,100 feet in elevation. Communication reliability is vital to having situational awareness and prompt emergency response. The current communications infrastructure at Yosemite relies on dated technology and equipment that is difficult to maintain, has limited compatibility between various independent communication systems that exist throughout the park, and limited potential for equipment upgrades. The park often experiences outages during storms, and park emergency staff are forced to rely on a variety of different communication systems across the park. A communications data network upgrade would significantly improve connectivity, reliability and speed of service. This project would provide the necessary infrastructure for a modern communications data network that may include microwave and fiber optics to transfer computer Local Area Network (LAN) data, radio communications, security and

safety video systems, telephony, alarm systems, traffic data, and telemetry. The upgraded network would also enhance narrowband and land mobile radio infrastructure and LAN connectivity for El Portal, Yosemite Valley, Wawona, Tuolumne, Crane Flat and Hetch Hetchy, and all the park entrances.

An Environmental Assessment has been initiated.

Project Name: Utilities Master Plan/East Yosemite Valley Utilities Improvement Plan

Description: The existing utility infrastructure serving Yosemite Valley was identified in the *Yosemite Valley Plan* as a potential problem due to its age, condition, inadequate capacity, inaccessibility to future facilities, and inappropriate location in environmentally sensitive areas. The National Park Service completed a *Utilities Master Plan* for the east Yosemite Valley in 2003. This plan incorporated information on existing utility conditions and required repairs identified in the *Yosemite Valley Sanitary Sewer Capital Improvement Plan*, completed in 2002. The *Utilities Master Plan* assessed the current condition of utilities (water, wastewater, electric, and communications) in the Valley and the future Valley utility needs based on facilities proposed in the *Yosemite Valley Plan*. The *Utilities Master Plan* was developed to allow efficient relocation and upgrading of utility systems to provide for utility needs while reducing long-term environmental impacts from utility repair and maintenance activities.

An Environmental Assessment on the *Utilities Master Plan* was completed in June 2003 and a Finding of No Significant Impact (FONSI) was signed in October 2003. Implementation of the utility improvements will occur in three phases over 10 years. Construction of phase 1 of the improvements began in 2005. The remaining phases of this project will commence following resolution of the Merced River Comprehensive Management Plan planning process.

Project Name: The Tunnel View Overlook Rehabilitation

Description: The Tunnel View scenic overlook is a historic site located adjacent to Wawona Road. This overlook affords expansive views of Yosemite Valley, El Capitan, Bridalveil Fall, and Half Dome that have captured the awe of visitors for nearly 75 years. Tour buses, tram tours, and single-family vehicles bring an estimated 5,000 to 7,000 people to the site per day during the height of the tourist season. The purpose of the Tunnel View Overlook Rehabilitation is to remedy long-standing vehicle-to-vehicle and vehicle-to-pedestrian safety issues, to correct drainage deficiencies, to provide clear circulation patterns for pedestrians and vehicles, to enhance and maintain viewing opportunities for visitors, to provide accessibility to viewing areas for visitors with disabilities, to correct safety problems associated with the Inspiration Point trailhead, and to address sanitation issues.

The environmental compliance process for the Tunnel View Rehabilitation is currently in progress.

Project Name: Comprehensive Transportation Plan

Description: This plan will study modern transportation solutions for the park. Many past park plans have studied transportation, both parkwide and in specific areas such as Yosemite Valley. However, many areas such as the Wawona and Tioga Road corridors have not been reexamined since the 1980 General Management Plan. Previous plans defined problems and solutions to deal with visitation and

demographic projections that reflected trends characteristic of that time period. Since then, the park has continued to update transportation and visitor information through a grant from the Federal Transit Administration. This new data indicates that many previous predictions and assumptions are not consistent with today's conditions, and thus a fresh examination of transportation systems and solutions is warranted. Park planners, social and natural scientists, and transportation managers will work together to prepare a new plan. They will compile past plans and decisions regarding visitor experience, access, and resource conditions relative to the transportation system, examine how the system is currently functioning, and, with public involvement, identify issues, develop alternatives, and present solutions in a comprehensive transportation management plan.

Project Name: Multi-Use Trail to West Yosemite Valley

Description: Approximately 80 percent of Yosemite's 4 million visitors per year stop at Yosemite Valley destinations. Bicyclists, hikers, visitors using wheelchairs, and those with strollers find that the multi-use paved trail in the east Valley ends abruptly near Swinging Bridge. To continue the trail to west Valley destinations (such as El Capitan or Bridalveil Fall), users must either confront automobile traffic by traveling along the edge of a busy roadway—a potentially life-threatening safety hazard—or return to private vehicles, ending an important aspect of their recreational experience and adding to traffic noise, emissions and congestion. This project would provide an accessible trail, separate from automobile traffic, to allow convenient, safe, accessible, and enjoyable access to destinations in the west Valley. The project would be accomplished as a shared cost partnership between the National Park Service and the nonprofit Yosemite Fund cooperating association.

Project Name: Tuolumne Wild and Scenic River Comprehensive Management Plan

Description: The development of the Tuolumne Wild and Scenic River Comprehensive Management Plan will bring the park into compliance with the Wild and Scenic Rivers Act, and can be used to guide actions and evaluate the potential impacts of proposed improvement projects within the river corridor. In addition, the watershed on the Tuolumne Wild and Scenic River covers over 50 percent of Yosemite's backcountry areas and wilderness. This plan would be a comprehensive tool for watershed planning and management of sensitive areas within the Tuolumne River watershed. In addition, this plan would include much needed natural and cultural data that have not been previously compiled for the river corridor and its watershed. These data would be used to create effective and modern management tools such as river protection overlays and much needed compliance necessary for managing resources and visitor use in the entire Tuolumne Meadows area as well as the Tuolumne River corridor. The plan would also be an important tool to examine many outstanding issues with the complicated management of the Hetch Hetchy Reservoir, including water quality management and watershed issues with the City and County of San Francisco.

The development of the Tuolumne Wild and Scenic River Comprehensive Management Plan Environmental Impact Statement is currently in progress.

Project Name: Tuolumne Meadows Concept Plan

Description: The Tuolumne Meadows, at an elevation of 8,600 feet, is the Sierra's largest subalpine meadow. Current facilities in the Tuolumne Meadows area include a 304-site campground, a visitor center, a service station, a 104-bed lodge, food services, government and concession stable operations, employee housing, a wastewater treatment plant, and several administrative buildings. These facilities support approximately 5,000 park visitors and 200 park staff daily from May through October. Although improvement or relocation has been considered for many of these facilities, there is no comprehensive plan that looks at the entire Tuolumne Meadows area as a whole and determines the desired extent and location of development. A Concept Plan will define management objectives, including resource protection goals for the entire area, and it will identify boundaries for specific types of development. This will allow implementation of management objectives and appropriate facility construction as incremental funding becomes available.

The environmental compliance process for the Tuolumne Meadows Concept Plan is currently in progress.

Project Name: Environmental Education Campus Project

Description: Since 1972, Yosemite Institute (YI) has partnered with the National Park Service (NPS) to fulfill a shared mission of providing environmental educational opportunities for youth from diverse backgrounds, in Yosemite. YI's immersive environmental educational programs cover field science, arts, backpacking, and leadership, and are designed to complement California State Educational Content Standards. YI programs inspire a personal connection to the natural world and foster future generations of environmental stewards. Each year, YI's non-profit Yosemite programs serve over 13,000 students annually, and generate over 480,000 hours of visitor activities.

Yosemite Institute is a non-profit organization, and currently operates its environmental education campus at Crane Flat under a cooperative agreement with the park. The campus facilities are comprised of older buildings and structures that have been assembled over time and were not originally designed for educational purposes. These old buildings are deteriorating, in need of extensive repairs, and are barely adequate in terms of modern design standards for teaching, residential accommodations, or accessibility. NPS and YI are planning to create a new campus with upgraded/improved, sustainable facilities that will provide a more optimal learning environment and serve a greater number and diversity of students, for generations to come. The campus will be designed as an example of environmental sustainability, according to Leadership in Energy and Environmental Design (LEED) Green Building standards.

The goals of this project are to:

- Provide an environmental education campus location and program that serves the combined missions of Yosemite National Park and Yosemite Institute
- Facilitate multi-day educational programs that complement California State Standards and offer opportunities for research and study of the natural world

- Provide a campus facility that is sustainable in design and enables high quality, immersive, and safe educational experiences for students
- Promote development of future stewards of the environment and the National Park system

An Environmental Impact Statement is currently being prepared.

Project Name: Hodgdon Meadow Housing Area Trailer Replacement Project

Description: The proposed project is to construct a duplex in the Hodgdon Meadow Housing Area. This project would replace two obsolete trailers that were previously removed from the housing area. The new duplex, which would house up to eight park employees or two park employees and their families, will be located on a previously impacted site formerly occupied by one of the two trailers. This project is part of an agency-wide effort to replace trailers and other substandard housing with new, cost-effective, energy-efficient structures. Upgrades to the well water disinfection system will accompany the duplex construction.

An Environmental Assessment and Finding of No Significant Impact (FONSI) for this project have been completed.

Project Name: Parkwide Invasive Plant Management Plan

Description: Today there are over 150 non-native plant species in Yosemite National Park, which is about 10 percent of the park's flora. Of these, 28 species are listed for control by the U.S. Department of Agriculture, California Department of Food and Agriculture, or California Exotic Pest Plant Council. Species targeted for control in Yosemite include bull thistle, mullein, yellow star thistle, spotted knapweed, perennial pepperweed, purple vetch, rose and burr clovers, Himalayan blackberry, white and yellow sweet clover, non-native wildflowers, and escaped landscaping plants such as foxglove, ox-eye daisy, pink mullein, French broom, tree-of-heaven, and black locust.

The current control program includes using Global Positioning System (GPS) technology to map plant populations. Crews then remove plants using a variety of techniques, including hand-pulling. Treated areas are photographed and re-visited each year to assess the results and provide follow-up treatment.

The proposed Parkwide Invasive Plant Management Plan will define a set of comprehensive programs, including the following:

- Education and focused research.
- Prioritized prevention and control efforts using a variety of techniques and appropriate mitigation measures.
- Systematic monitoring and documentation of invasive plant status and the results of management efforts.
- Restoration of ecosystems altered by invasive plants.

Control methods being considered include some combination of the following: hand-pulling or using various machines to remove plants; releasing predatory insects or fungus to attack plants; educating users and staff about preventative measures; and using chemical treatments derived from natural products like vinegar, or manufactured chemicals like glyphosate. Program goals include eradicating (or at least controlling) invasive plant species; preventing new invasions; restoring and maintaining desirable plant communities and healthy ecosystems; enhancing the visitor experience; and educating park staff, partners, and users.

An Environmental Assessment is currently being prepared for this plan.

Agency Name: Counties—Mariposa, Merced, Mono; National Park Service; U.S. Forest Service; California Department of Transportation; U.S. Department of Transportation.

Project Name: Yosemite Area Regional Transportation System

Description: The Yosemite Area Regional Transportation System is a collaborative, inter-agency effort begun in 1992 to evaluate the feasibility of a regional transportation system and to identify the best options for initial implementation and upkeep of such a system. The Yosemite Area Regional Transportation System Mission Statement is as follows:

Yosemite Area Regional Transportation System provides a positive alternative choice for access to Yosemite National Park for visitors, employees and residents. Yosemite Area Regional Transportation System service is not intended to replace auto access or trans-Sierra travel, but is intended to provide a viable alternative that offers a positive experience, maximizing comfort and convenience for riders while guaranteeing access into the park (Yosemite Area Regional Transportation Strategy 1999).

Project: Parkwide Campground Study

Description: The goal of the Parkwide Campground Study is to examine current campgrounds and their potential for expansion, as well as locate areas for possible new campgrounds. The study will be guided by the General Management Plan, the Merced Wild and Scenic River Comprehensive Management Plan, and the Yosemite Valley Plan, as well as scientific data on natural and cultural resources.

This plan development is currently pending congressional action.

STANISLAUS NATIONAL FOREST PROJECTS

Project: Forest Roads Analysis

Description: The Forest Roads Analysis (FRA) identifies issues, guidelines, and opportunities related to Forest roads management. The FRA will guide future management of Stanislaus National Forest roads and will not produce decisions on specific roads management actions. National Forest Roads Analyses are required by the USFS Chief's January 12, 2001 published roads policy, and as such, are not designed to address Off-Highway Vehicle (OHV) or Roadless Area issues (USFS 2003).

Project: Groveland Roadside Hazard Trees Decision Memo

Description: This project is for the cutting and removal of hazardous trees within administrative sites, adjacent to maintenance level 3-5 USFS system roads on the Groveland Ranger District. For each specific area, hazardous trees will be cut and removed, or cut and left in place. Implementation is expected in mid-2007.