Memorandum of Agreement
Between
City and County of San Francisco
San Francisco Public Utilities Commission
and
National Park Service
Yosemite National Park
for
Comprehensive Management of Watersheds within Yosemite National Park Supplying the San Francisco Regional Water System

This Memorandum of Agreement (MOA or Agreement) is hereby entered into by and between the National Park Service (NPS) and the San Francisco Public Utilities Commission (SFPUC), referred to collectively herein as "the Parties."

ARTICLE I – BACKGROUND AND OBJECTIVES

The Hetch Hetchy watershed is part of the Tuolumne River basin and is located entirely within Yosemite National Park (YNP). The headwaters of the Tuolumne River drain into Hetch Hetchy Reservoir. This watershed provides over 85% of the City and County of San Francisco's (CCSF) water needs, provides drinking water to 2.7 million residential, commercial and industrial customers served by the SFPUC in the San Francisco Bay Area and is managed by the National Park Service (NPS).

The Hetch Hetchy Supply consists of Hetch Hetchy Reservoir and its watershed. The SFPUC is not required to filter the Hetch Hetchy Supply in part due to:

- The exceptionally high-quality water produced by the Hetch Hetchy watershed.
- Ongoing and effective source water protection provided by NPS watershed management.

This combination meets the Federal and the California criteria for filtration avoidance under the Safe Drinking Water Act.

The "Upcountry Non-Hetch Hetchy Sources" (UNHHS) are approved water sources that require filtration for the San Francisco Regional Water System (SFRWS). They consist of:

- Cherry Lake and its watershed.
- Lake Eleanor and its watershed.

- Tuolumne River, and its watershed, between O'Shaughnessy Dam and Early Intake Dam.
- Cherry Creek and Eleanor Creek, and their watersheds, from Cherry Lake Dam and Lake Eleanor Dam to the Cherry Creek Diversion Dam.

This MOA includes the management of the Hetch Hetchy Supply watershed and the portions of the Upcountry Non-Hetch Hetchy Sources watersheds that are within YNP.

Under the Raker Act, the grantee (SFPUC) is required to reimburse the Department of Interior (NPS) for the cost of the inspection necessary to secure compliance with the sanitary regulations set forth in section 9(a) of the Act. The text of section 9(a) of the Raker Act is set forth in Appendix A. Per sections 9(q) and (r) of the Raker Act, the SFPUC is also required to reimburse the NPS for the costs of road and trail maintenance and to pay any expenses incurred by the NPS in making investigations or decisions respecting SFPUC's rights, benefits, and obligations under the Raker Act.

The SFPUC is required by Federal and State filtration avoidance regulations to demonstrate a "watershed control program" for the Hetch Hetchy watershed. The NPS is the landowner of the Hetch Hetchy watershed and has exclusive jurisdiction of the entire watershed. This agreement between SFPUC and the NPS fulfills in part the Safe Drinking Water Act's requirement to demonstrate the existence of a "watershed control program" under Title 40 Code of Federal Regulations (CFR), Part 141, Subpart H (40 CFR §141.71), and in the California Code of Regulations (CCR), Title 22, Section 64652.5(e)(3), (22 CCR § 64652.5). Relevant Title 22 sections are in Appendix B.

The SFPUC and the NPS have a long history of cooperation with the common goals of protecting water quality, and natural and cultural resources. Because NPS has exclusive jurisdiction within Yosemite National Park, NPS has the authority to enforce the Raker Act's sanitary provisions and provide security for facilities authorized by the Raker Act. This Agreement formalizes cooperative efforts and meets regulatory requirements in 40 CFR §141.71 and 22 CCR § 64652.5 for a "written agreement with the landowner." Another goal is to manage all the SFRWS supply watersheds within YNP to mitigate potential sanitary concerns and meet environmental stewardship objectives.

History of the Agreements include:

- 2005-2010: First agreement (5-years) developed to meet the Federal and State Safe Drinking Water Acts' requirement for a watershed control program through "written agreement with the landowner."
- 2010-2015: Second agreement (5-years) developed, expanded to recognize ongoing Environmental Stewardship and Security programs.
- 2015-2016: Second agreement extended one year to coincide with the SFPUC two-year budget process.
- 2016-2018: Third agreement (2-years) developed, core tasks restructured to align with NPS organizational structure; NPS program management identified as a MOA element. MOA term changed from 5 years to 2 years.

- 2018-2020: Third agreement modified to extend the MOA two years through 2020.
- 2020-2024 Fourth agreement (4-years) developed.
- Fourth agreement amendment 01; ARTICLE IV – STATEMENT OF WORK A.3 with Direct Services billing and ARTICLE V – Section B. Reconciliation.
- 2024-2028 Fifth agreement (4 years) developed.

This Agreement serves as the mechanism for:

1. SOURCE WATER PROTECTION (SWP) PROGRAM: The mission of the NPS is to preserve and protect resources for future generations. Additionally, Yosemite has Wilderness and Wild and Scenic River designations allowing for greater protections. These elements make up the fundamental components of the SWP program. By preventing the microbiological contamination of rivers, streams and lakes, the SWP Program demonstrates the watershed controls in place to preserve the SFRWS watersheds within YNP as a high-quality drinking water source while also protecting the public health of park visitors. This agreement provides for the enforcement of the Raker Act's sanitary provisions, along with other resource protection measures provided through NPS's management actions.

2. ENVIRONMENTAL STEWARDSHIP (ES) PROGRAM: Collaborative efforts to improve environmental stewardship of the Upper Tuolumne River ecosystem that affect, or are affected by, SFPUC facilities and operations within YNP, as well as collaborative efforts to avoid, minimize, and mitigate potential impacts on the environment that could arise from SFPUC operations in YNP. These efforts will incorporate policies described in the SFPUC Water Enterprise Environmental Stewardship Policy adopted in 2006 (Appendix C) and will also assist in carrying out stipulations entered into by the SFPUC with the U.S. Department of the Interior under provisions of the Raker Act.

3. SECURITY (S) PROGRAM: Providing security for facilities essential to SFPUC operations within the YNP. The Security Program in Appendix E is CONFIDENTIAL and relates to Homeland Security.

SFPUC coordination and funding for the Source Water Protection Program, Environmental Stewardship Program, and the Security Program are provided for through this Agreement.

ARTICLE II – LEGAL AUTHORITY AND POLICY COORDINATION

The Raker Act, 38 Stat. 242 (1913) authorizes the NPS to accept and retain funds to cover costs incurred in administering the Raker Act. NPS is authorized by 54 U.S.C. 101704 to carry out work under reimbursable agreements with any State, local, or tribal government and, without regard to any provision of law or a regulation, may record obligations against accounts receivable from those governments; and shall credit amounts received from those governments to the appropriate account.

Source Water Protection

Source water protection is integral to the SFPUC and is regulated by federal and state laws. This Agreement addresses the application of Raker Act section 9(a) related to recovery of costs for protection of water quality, and SFPUC compliance with Federal and California drinking water quality regulations through a watershed management agreement.

The Raker Act requires reimbursement to the NPS for the cost of the inspections necessary to secure compliance with the sanitary regulations set forth in section 9(a), as well as an annual payment of $30,000.

The NPS develops and implements additional park policies and regulations to protect natural and cultural resources enhance wilderness character and to protect the values of the Tuolumne Wild and Scenic River. These additional policies and regulations demonstrate, in combination with the Raker Act's sanitary provisions, NPS's ability to minimize the potential for microbiological contamination of rivers, streams and lakes within YNP while having the authority and jurisdiction to enforce said policies and regulations within its boundaries. These characteristics demonstrate a watershed control program that meets the requirements of 40 CFR §141.71 and 22 CCR §64652.5 for the Hetch Hetchy Supply and protects water quality for the SFRWS UNHHS. The watershed control program ensures that high water quality of the SFRWS sources is maintained.

Environmental Stewardship

In June 2006, the SFPUC adopted the Water Enterprise Environmental Stewardship Policy (Appendix C). The SFPUC has integrated this policy into the planning and operation of its water system, including its dams and diversions. The policy:

- Establishes a management directive to protect and rehabilitate ecosystems that affect or are affected by SFPUC water system operations, within the context of meeting water supply, power generation, water quality, and minimum instream flow requirements.

- Directs the SFPUC to develop, implement, and monitor instream flow releases such that they mimic, to the extent consistent with the SFPUC mission, existing agreements, and applicable state and federal laws, "…the variation of the seasonal hydrology (e.g., magnitude, timing, duration, and frequency) of their corresponding watersheds in order to sustain the aquatic and riparian ecosystems upon which native fish and wildlife species depend."

- Establishes long-term management direction for natural and cultural resources affected by the operation of the SFPUC water system within the Tuolumne River watershed, with a focus on collaborative environmental stewardship with partner agencies to improve ecosystem health and to guide the development of environmental review of SFPUC projects under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

In response to the adoption of the Water Enterprise Environmental Stewardship Policy, the SFPUC initiated the Upper Tuolumne River Ecosystem Program with the broad goal of conducting a set of long-term, collaborative, science-based investigations designed to (1) characterize historical and current river ecosystem conditions; (2) assess their relationship to SFPUC operations; and (3) provide recommendations for improving natural ecosystem conditions on a long-term, adaptively managed basis. The study area includes main stem reaches of the Upper Tuolumne River and major tributaries.

In addition to the broad stewardship efforts of the Upper Tuolumne River Ecosystem Program, the SFPUC regularly engages in interagency consultation with NPS to ensure YNP resources remain protected within the context of SFPUC operations and projects. YNP specialists provide technical expertise in park-specific resource-related issues, and occasionally prepare NEPA documentation in the event a federal action or decision by NPS is required.

Security

The Raker Act granted the CCSF lands and rights-of-way to construct, operate, and maintain water and power (Project) facilities in YNP. NPS has exclusive federal jurisdiction for law enforcement within YNP, including the protection of Project facilities. The State of California and the US Department of Homeland Security (DOHS) have determined that Project facilities are critical infrastructure.

Both the SFPUC and NPS recognize the recreational opportunities available to the public in the vicinity of Project facilities within YNP and the need to maintain reasonable public access. NPS implements a management strategy that provides reasonable security for Project facilities balanced with appropriate public access. The Security Program identifies measures to prevent and respond to attacks on Project facilities within YNP.

ARTICLE III – KEY OFFICIALS

A. Unless otherwise designated, the NPS and the SFPUC designate the following principal contacts for the work outlined in this Agreement:

1. For the NPS:

(a) Superintendent: All official correspondence (hardcopy or electronic) should be directed to the Superintendent of Yosemite National Park and copied to the Hetch Hetchy Program Manager.

Superintendent
Yosemite National Park
PO Box 577
Yosemite, CA 95389
YOSE_Superintendent@nps.gov

(b) Hetch Hetchy Program Manager: To facilitate implementation of this agreement, the SFPUC funds a full-time NPS Hetch Hetchy Program Manager (HHPM) position. The HHPM is the primary NPS liaison between the NPS and SFPUC for the Source Water Protection and Environmental Stewardship programs.

Hetch Hetchy Program Manager
Office of the Superintendent
Yosemite National Park
PO Box 577
Yosemite, CA 95389
Ed_Dunlavey@nps.gov

(c) Security Program Manager: To facilitate implementation of this agreement, NPS designates a Security Program Manager (SPM). The SPM is the primary NPS liaison between the NPS and SFPUC for the Security Program and is the Chief of YNP's Visitor and Resource Protection Division. The SPM shall have appropriate security clearance.

Security Program Manager
Chief Ranger, Division of Visitor and Resource Protection
Yosemite National Park
PO Box 577
Yosemite, CA 95389

2. For the SFPUC:

a) Hetch Hetchy Water and Power (HHWP) Division Manager and Operations and Maintenance Manager: to facilitate implementation of this agreement, the SFPUC designates the HHWP Division Manager as the manager of this Agreement.

HHWP Division Manager and/or Operations and Maintenance Manager
Hetch Hetchy Water and Power
PO Box 160
Moccasin, CA 95347

b) HHWP Operations and Maintenance Manager: to facilitate implementation of this agreement, the SFPUC designates this position as the operational contact for the Security Program.

HHWP Operations and Maintenance Manager
Hetch Hetchy Water and Power
PO Box 160
Moccasin, CA 95347

c) SFPUC Emergency Planning Director: To facilitate implementation of this agreement, the SFPUC designates this position to provide administrative oversight and program management for the Security Program.

SFPUC Emergency Planning Director
San Francisco Public Utilities Commission
525 Golden Gate, 10th Floor
San Francisco, CA 94102

d) Water Quality Division (WQD) Division Director: to facilitate implementation of this agreement, the SFPUC designates this position as the primary contact for the Source Water Quality Protection Program and Sanitary Surveys.

WQD Division Director
SFPUC Water Quality Division
1657 Rollins Rd.
Burlingame, CA 94010

e) Natural Resources and Lands Management Division (NRLMD) Division Manager: To facilitate implementation of this agreement, the SFPUC designates NRD Manager as the primary contact for the Environmental Stewardship Program.

NRLMD Division Manager
San Francisco Public Utilities Commission
525 Golden Gate, 10th Floor
San Francisco, CA 94102

B. **Coordination Meetings** – The HHWP Division Manager, NPS HHPM and SPM shall have quarterly coordination meetings with relevant SFPUC and NPS staff. Topics of discussion may include budget, security, source water protection, Annual Sanitary Survey Report, environmental stewardship, annual review and other relevant topics.

   Coordination meetings will cover work performed in the prior calendar year, work planned for the current calendar year, and work proposed for the following calendar year. If program managers or other key staff changes, new staff will attend the meeting and introductions will be made.

C. **Contact Information and Changes in Key Officials** – Upon execution of this Agreement, each party will provide the other party with contact information for the key officials identified herein this Agreement. If the NPS or the SFPUC change staff in the positions listed under Article III.A, written notice to the other party will be provided.

ARTICLE IV – STATEMENT OF WORK

A. **Program Elements** - Each of the three programs implemented under this MOA (Source Water Protection, Environmental Stewardship, and Security), as well as the overall Program Management element common to all three programs, shall include "Core Tasks" and, as required, "Special Projects" and "Direct Services," as described below.

   1. Core Tasks are continuing elements that are performed each year under this Agreement. Core Tasks constitute the principal elements for each program. Specific Core Tasks are described in further detail in Article IV.B, and their respective budgets during the four-year term of this MOA are specified in Appendix D.

   2. Special Projects may be performed based on the shared needs of both the SFPUC and NPS. Special Projects may be necessary to supplement Core Tasks to address new, or changed, conditions. Special Projects have limited time duration and may include, but are not limited to, studies, infrastructure improvements, contingency reserve funds, or funding for equipment. Special Projects are jointly developed and funded through the normal budget process outlined in Article V. Special Projects are described in further detail in Article IV.C.

   3. Direct Services are services provided directly by NPS at the SFPUC's request to address particular circumstances that arise during the term of this MOA, but which are not Core Tasks or Special Projects. Such services may include, but are not limited to, work to address immediate or imminent hazards on roads or trails within the watershed, sanitary concerns, natural or cultural resources analyses and environmental review document preparation, rentals during an emergency or for coordinated drills/joint training exercises to plan for future emergencies, and

security services to address immediate threats or needs. NPS can submit out-of-cycle funding requests to the SFPUC to support Direct Services requested by the SFPUC. Such requests shall be submitted by the NPS Hetch Hetchy Program Manager to the HHWP Division Manager and must be approved in writing. Funding will be by mutual agreement. Direct Services are described in further detail in Article IV.D.

B. **Core Tasks**

1. PROGRAM MANAGEMENT

Program Management is a MOA element, separate from the Source Water Protection, Environmental Stewardship, and Security Programs, which is necessary to achieve MOA program coordination, implementation, and administrative support.

a. Office of the Superintendent

i. Hetch Hetchy Program Management

Hetch Hetchy Program Manager
The HHPM serves as the primary NPS liaison to the SFPUC to ensure that the MOA programs are coordinated and successfully implemented and to ensure that the requirements of the Raker Act are being met. The HHPM also manages all aspects of the NPS relationship with the SFPUC. Together, this ensures oversight and management of the MOA programs. The HHPM serves as the single point of contact for the Source Water Protection and Environmental Stewardship programs to ensure effective, timely, ongoing communications and troubleshooting between the NPS and the SFPUC.

- Ensure the timely preparation and submission of annual reports, budgets, invoices, and quarterly reports.
- Work with project managers in the NPS and SFPUC to initiate, coordinate, and fulfill compliance requirements, and to monitor SFPUC's compliance with the Raker Act and associated stipulations.
- Coordinate quarterly, annual, and other meetings as needed.
- Coordinate Special Project completion.
- Coordinate Direct Services requests by the SFPUC.
- Interact frequently with SFPUC staff and NPS management and staff in all divisions.
- Ensure the timeliness and quality of work performed under each program.
- Provide annual and quarterly program reviews to the SFPUC.
- Coordinate responses to watershed sanitary survey concerns and recommendations.

b. Administrative Division

i. Multiple Branches

Administrative Support
Park level administrative overhead costs necessary to support overall functioning of programs are provided. Areas of administrative support include, but are not limited to, Human Resources, Information Technology, Budget and Finance, and Contracting, as well as other administrative activities. Administrative support will be calculated as 5% of the total core task and be included as its own line item to determine the total annual MOA budget.

2. SOURCE WATER PROTECTION

A goal of SFPUC's Source Water Protection Program is to prevent microbiological contamination of rivers, streams and lakes through NPS management of the affected watersheds (Hetch Hetchy Supply and UNHHS) within YNP. This includes the following SFPUC and NPS activities:

i. NPS Watershed Patrols and Enforcement of Regulations – Sufficient NPS patrols are conducted to enforce regulations designed to minimize and/or prevent water contamination.

ii. NPS Visitor Education – On site and off-site visitor education and information programs are conducted so that national park visitors to the Hetch Hetchy watershed understand applicable regulations and practice limited impact wilderness use techniques in order to prevent degradation of drinking water quality. Visitors are informed that the watershed is a source of drinking water for the San Francisco Bay Area and of their important role in protecting the drinking water supply from microbiological contamination.

iii. NPS Facilities – Facilities within the Hetch Hetchy watershed, including trails, are constructed, operated and maintained to mitigate and/or prevent water contamination.

iv. Sources of Contamination – Collaborative efforts between the NPS and the SFPUC to identify potential sources of drinking water contamination and actions to eliminate or mitigate the sources.

The following NPS core tasks are continuing elements of the Source Water Protection Program. These are listed by NPS Division and Branch assigned to complete each task.

a. Business and Revenue Management Division

i. Fee Management Branch

Hetch Hetchy Entrance Station
Visitor Contact – Depending on weather, the entrance station will be open and staffed from April through October. Staff at the Hetch Hetchy Entrance Station will conduct normal operations such as collecting fees, providing general information regarding the park, educating visitors on the park rules and regulations, and issuing Wilderness permits. In addition, NPS staff shall:

- Inform park visitors, especially hikers receiving a Wilderness permit, that the Hetch Hetchy Reservoir is part of the larger Hetch Hetchy watershed and serves as a drinking water source, and the importance of protecting water quality.
- Explain all Wilderness regulations and protocols when issuing Wilderness permits, especially those designed to protect water quality.

Hetch Hetchy Entrance Station Staff Patrol Coverage – NPS watershed patrols will concentrate on preventing microbiological contamination to water by conducting activities such as:

- Educating visitors to properly dispose of human waste, to not camp too close to water, that swimming and bathing are prohibited in Hetch Hetchy Reservoir and in tributaries within one mile of the reservoir (e.g., Rancheria), and about proper washing of dishes and clothing.
- Preventing stock users from tying or tethering stock too close to water.
- Preventing other unauthorized or illegal activities.

ii. Concessions Branch

Concessionaire facilities are constructed, operated and maintained to mitigate and/or prevent water contamination. Manure will be appropriately managed and removed from concessioner corrals during, and at the end of, each season.

b. Facilities Management Division

i. Buildings and Grounds Branch

Seasonal Building and Grounds Maintenance
The public restrooms at O'Shaughnessy Dam and the Hetch Hetchy Backpackers Campground will be cleaned, garbage and litter collected,

and horse manure removed from the top of O'Shaughnessy Dam daily during the heavy-use recreation season.

Adequate toilet facilities will be maintained along the CA-120 corridor within the Hetch Hetchy watershed to mitigate sanitary concerns. Toilet facilities may include temporary portable toilets, such as those provided at Cathedral Lakes and Mammoth View parking areas. Toilet facilities may change as the NPS implements the Tuolumne River Plan. Toilet facilities will be maintained and operated to prevent watershed contamination.

ii. Utilities Branch

Utilities
Wastewater Treatment – Costs will be shared for the collection, treatment, monitoring, and disposal of wastewater in the Hetch Hetchy watershed and for laboratory testing related to water quality. This will be achieved through the operation and maintenance of the Tuolumne Meadows Wastewater Treatment Plant and Wastewater Collection System, and wastewater collection and treatment at Glen Aulin High Sierra Camp. Wastewater facilities will be operated to prevent watershed contamination.

iii. Roads and Trails Branch

Trails
Trails are maintained in the watershed to minimize erosion and sedimentation. Water bars and other erosion control structures will be installed and maintained to NPS standards. Planning for trail work will consider sanitary survey recommendations.

Corrals will be managed to minimize contamination to watercourses. The O'Shaughnessy Corral will be maintained in coordination with Visitor and Resource Protection. Manure will be appropriately managed and removed from all corrals during, and at the end of, each season.

c. Interpretation Division

i. Interpretation

Interpretation
Water quality protection will be an integral part of internal and external programs designed to provide education to watershed visitors. Program examples include interpretive walks, ranger talks, informal ranger roving, school programs, campground contacts, and evening programs. Interpretive rangers at Tuolumne Meadows and Big Oak Flat Contact Stations will inform visitors that they are in, or will be entering, a

watershed. Where appropriate, water quality protection messaging for the Hetch Hetchy watershed will be included in exhibits, waysides, and publications.

Water quality protection education occurs during contacts with visitors. Appropriate signage, displays and brochures will contain current water quality protection messages targeting public use. Interpretative staff training will include watershed awareness and water quality protection components.

d. Resources Management and Science Division

i. Physical Science and Landscape Ecology Branch

Stream Gauging Stations
The NPS will work with the SFPUC to maintain a real-time river gauge on the Tuolumne River at the Tioga Road bridge in Tuolumne Meadows. Upon mutual agreement between the NPS and SFPUC, and based on funding availability, maintenance collaboration on additional gauges may also occur, such as gauges on Falls Creek above Wapama Falls and on the Lyell Fork below Maclure Creek. Components of the project include stream discharge measurements to maintain rating curves; annual reports of daily and hourly flow data as well as rating curve shifts; and, where feasible, real-time transmission of flow, temperature, and turbidity data via California Data Exchange Commission (CDEC) website.

Snow Pillow Monitoring Stations
The NPS will work with the SFPUC to upgrade and maintain hydrometeorological instrumentation to achieve the mutual goals of improved data quality and continuity as well as wilderness protection. Existing sites are Slide Canyon, Lower Kibbie Ridge, Paradise Meadow, Dana Meadow, Tuolumne Meadows, White Wolf, and Gin Flat. Components of the work include systematic station upgrades to a uniform operating platform, instrument repair/replacement, and quality assurance and control of data.

Water Quality Monitoring
The water quality impacts of potential pollution sources in the Hetch Hetchy watershed will be monitored and evaluated. Depending on location and monitoring interest, potential analytes may include, but are not limited to, nutrients (total dissolved nitrogen, nitrate + nitrite, total phosphorous and total dissolved phosphorous), *E. coli* (plus total coliform bacteria), total petroleum hydrocarbons, total organic carbon and UV254. Results will guide development and implementation of measures to improve and protect water quality

ii. Vegetation and Ecological Restoration Branch

Wilderness Restoration
Monitoring and restoration activities will be undertaken to prevent contaminants and erosion-generated materials from entering Hetch Hetchy watershed water courses. Examples include removing inappropriate campsites, mitigating stock use impacts, removing trash and charcoal near water sources, restoring rutted meadows and braided trails, and restoring natural hydrological processes**.**

iii. Visitor Use and Social Sciences Branch

Resource Condition Assessment Project (RCAP)
Yosemite's RCAP supports Tuolumne River water quality protection through long-term monitoring of indicators of watershed condition. When the condition of the indicators drop below established thresholds, the RCAP program is triggered to contact management about the need to take action. Indicators of watershed condition include streambank stability, percentage of bare meadow soil, and extent of habitat fragmentation. The condition of archeological resources is also included as an index of disturbance. Work consists of field sampling, data analysis, and reporting. As necessary, results help guide proactive management decisions that protect meadow integrity, reduce soil loss and limit further compaction, erosion and sloughing of riverbanks.

e. Visitor and Resource Protection Division

i. Operations Branch - Mather District

Upper Watershed Protection – Tuolumne Sub-district and Crane Flat Sub-district (White Wolf Area)
Patrol and enforcement in White Wolf, Tuolumne Meadows, and Wilderness areas. Patrols and visitor contacts emphasize watershed water quality protection through the prevention of:

- Improper disposal of human waste
- Camping too close to water
- Stock groups tying or tethering too close to water
- Improper washing of dishes, clothes, etc.
- Other unauthorized or illegal activities

Lower Watershed Protection – Canyon Ranch Sub-district
Patrol and enforcement in Canyon Ranch (Hetch Hetchy and Lake Eleanor) front country and Wilderness areas. Patrols and visitor contacts emphasize watershed water quality protection through the prevention of:

- Improper disposal of human waste
- Camping too close to water
- Swimming and bathing in Hetch Hetchy Reservoir and the tributaries within one mile of the reservoir (e.g., Rancheria)
- Stock groups tying or tethering too close to water
- Improper washing of dishes, clothes, etc.
- Other unauthorized or illegal activities

Responsibilities also include staffing of the Hetch Hetchy Entrance Station from November through March. Additionally, the O'Shaughnessy Corral, in coordination with Roads and Trails, is managed to minimize contamination to watercourses. Manure is appropriately managed and removed from all corrals during, and at the end of each season.

The Canyon Ranch Sub-district provides a commissioned Lake Eleanor ranger. This ranger supervises the seasonal operation in the Lake Eleanor/Cherry Lake area of the district. with support from the SFPUC and the Stanislaus National Forest. The seasonal staff provides Wilderness and watershed educational contacts during projected peak periods during the summer months.

ii. Fire and Aviation Management Branch

Fire Management

The program reduces hazardous fuels, reduces risks to infrastructure and human communities, increases safety for employees and visitors, and improves the health of the watershed by creating fire-resilient landscapes and restoring fire-adapted ecosystems. When appropriate and feasible, fuel reduction will be undertaken to help protect infrastructure around the O'Shaughnessy compound, the access road from the entrance station, and other SFPUC assets within YNP. Adhering to the YNP Fire Management Plan, wildland fire will be managed to uphold wilderness character and improve ecosystem health in order to reduce potential severity of future wildland fire events and promote natural, fire-adapted ecosystems, which in turn supports long-term watershed water quality through long-term reduction of potential sediment runoff.

Aviation Manager

A dedicated Park Aviation Manager provides for a significantly enhanced degree of safety for NPS personnel, a reduction in airspace conflicts, and a greater degree of protection of the Hetch Hetchy Watershed. SFPUC provides up to 38% of the position's funding based on the percentage of total YNP acreage that comprises the Hetch Hetchy Watershed.

The Aviation Manager serves as the single point of contact for all aviation

planning, resolves aviation issues, and provides communication between managers and aviation assets. This includes daily interaction and communication with all NPS divisions and partners that utilize aviation resources. The Aviation Officer significantly reduces potential for aviation mishaps and resulting hazardous material contamination of the watershed.

iii. Wilderness Management Branch

Wilderness Operations

Commissioned Wilderness rangers protect water quality within the Yosemite Wilderness Area by educating visitors and enforcing compliance with YNP regulations. Similar to the Operations Branch, patrols emphasize watershed water quality protection through the prevention of:

- Improper disposal of human waste
- Camping too close to water
- Stock groups tying or tethering too close to water
- Improper washing of dishes, clothes, etc.
- Other unauthorized or illegal activities
- Swimming and bathing in Hetch Hetchy Reservoir and the tributaries within one mile of the reservoir (e.g., Rancheria)

Additional water quality protection responsibilities include:

- Monitoring of group camping size limits
- Monitor and report on use and impacts to park resources
- Contact and educate overnight visitors

Wilderness ranger training includes a water quality protection component.

Wilderness Education

Water quality protection will be an integral part of all internal and external programs designed to provide education to Wilderness users. Water quality protection education occurs during contacts with visitors in the field, at Wilderness Centers, during interpretive programs, and during outreach programs (e.g., WildLink). Appropriate signage, displays, and brochures will contain current water quality protection messages targeting public use. Wilderness Education staff training will include a water quality protection component.

NPS implements a Wilderness Permit system to:

- Provide a required point of contact for visitor education.
- Control numbers of people in the watershed.
- Enforce trailhead quotas to keep overnight usage within appropriate limits.
- Collect and analyze data to track types of use and trends within the Wilderness.

The permit system includes a reservation component which is used to send pre-trip information to watershed users. Day hikers also use Wilderness Centers for trip planning and information and receive water quality messages. Signs at trailheads leading into the Hetch Hetchy watershed will inform visitors that they are entering a drinking water supply watershed and provide water quality protection messaging.

When obtaining the mandatory Wilderness Permit, at least one group member must sign the permit acknowledging that they will be responsible for their party's behavior. This group member is presented with watershed and water quality literature, briefed on regulations pertinent to campsite selection, human waste disposal, proper campfire use, pack stock regulations, and protection of vegetation and soils through proper trail and campsite use.

Non-commissioned Wilderness rangers protect water quality within YNP Wilderness by educating visitors on YNP regulations and water quality protection. Patrols protect watershed water quality by monitoring activities similar to those emphasized by Wilderness Operations (but without enforcement capabilities).

3. ENVIRONMENTAL STEWARDSHIP

The Environmental Stewardship Program encompasses collaborative and cooperative efforts of the SFPUC and NPS to manage water quality and the environmental resources for the Tuolumne River watershed within the YNP boundary to protect these resources for future generations. The goal of the Environmental Stewardship Program is to implement and support regulatory and policy requirements and initiatives. The NPS and SFPUC will collaborate to work within the Upper Tuolumne River watershed in areas that affect or are affected by the Hetch Hetchy Project. Basic work includes efforts to describe management goals for the Poopenaut Valley ecosystem and assistance with inventory and monitoring of species in the Tuolumne River corridor.

Raker Act Stipulations

Stipulations entered into by the U.S. Department of the Interior (DOI) and the CCSF under the Raker Act include provisions for minimum instream flows for the two

primary Hetch Hetchy Project dams (Eleanor and O'Shaughnessy). The 1987 stipulation relating to Kirkwood Powerhouse Unit No. 3 includes provisions on volumes of water to be released in addition to minimum flows. The specific schedules for releasing these volumes of water (over and above the minimum flows) were to be based on recommendations from US Fish and Wildlife Service (USFWS). However, final resolution was not reached with USFWS on these specific schedules.

NPS and SFPUC started river research and an ecosystem-based instream flow study in 2006. This was done as part of the Upper Tuolumne River Ecosystem Project, in collaboration with work conducted by the NPS. SFPUC has funded the NPS portion of the work through Hetch Hetchy Watershed Agreements from 2005 through 2023. The NPS portion of this work may continue to be funded via the 2024-2028 Agreement, as needed and determined by the SFPUC.

The following core tasks are continuing elements of the Environmental Stewardship Program.

1. Resource Management and Science Division

    i. Physical Sciences and Landscape Ecology Branch

    Looking Downstream
    The NPS Looking Downstream Project focuses on understanding and developing ecosystem management guidance for the Poopenaut Valley area, three miles downstream from O'Shaughnessy Dam on the Tuolumne River in YNP. The project supports the goals and/or requirements of the Water System Improvement Program's Programmatic Environmental Impact Report, the Water Enterprise Environmental Stewardship Policy, and the 1987 Stipulation associated with the approval of the SFPUC's third unit at the Kirkwood Powerhouse by the Department of the Interior under the Raker Act.

    ii. Vegetation and Ecological Restoration Branch

    Invasive Plant Management
    Invasive non-native plant species in the Hetch Hetchy and Lake Eleanor watersheds (e.g., Himalayan Blackberry, velvet grass, dandelions, etc.) have infested the riparian areas and meadows along the Tuolumne River and Eleanor Creek. Invasive non-native plant species can exclude virtually all native plants and associated wildlife. YNP, using appropriate herbicides and techniques, can spray herbicide to treat invasive species. Reduction and potential elimination of invasive plant species protects the ecosystem health of hundreds of valuable meadow and riparian habitat acres.

iii. Wildlife Management Branch

Aquatic Species Monitoring

The NPS Amphibian Survey project directly assists the SFPUC and U.S. Forest Service in conducting ongoing monitoring of amphibian and reptile populations within the reaches of the Tuolumne River between O'Shaughnessy Dam and Cherry Creek. NPS provides knowledgeable biologists to assist with field surveys, habitat mapping, and report writing and review. The results from this project will be used in implementing the Water Enterprise Environmental Stewardship Policy and the 1987 Stipulation.

iv. Vegetation and Ecological Restoration Branch

Pack stock Management

The Wilderness Stock Use Framework is a science-based adaptive management program that results in tangible management actions that protect water quality and meadow function while allowing pack stock use in Wilderness of the Tuolumne Watershed. The Framework consists of a suite of park-wide and site-specific best management practices (BMPs) designed to avoid, reduce, or mitigate impacts to water quality and the ecological integrity of meadows in wilderness areas by guiding the primary components of pack stock use, including where use occurs (stock site evaluation for site suitability), when use occurs (meadow opening dates), how stock use occurs (handling practices), and how much use occurs (site grazing capacity).

4. SECURITY

Operational and program management aspects and core tasks for the Security program are in CONFIDENTIAL Appendix E. The initial Security Program budget is in Appendix D. Appendix E and the following listed documents are not available for public review for Homeland Security reasons and are exempt from disclosure under the Freedom of Information Act.

- Security Program Annual Work Plan
- Security Program Quarterly reports

C. **Special Projects**

One time projects may be designated in the future, based on the shared needs of both the SFPUC and NPS for any of the programs and the availability of SFPUC funding for such programs.

1. Source Water Protection: Special projects are intended to address or mitigate specific issues. Generally, these issues are identified in the SFPUC watershed sanitary survey updates.

2. Environmental Stewardship: One-time projects may be designated based on the shared needs of both the SFPUC and NPS, and recommendations from current studies.

3. Security: Special projects for the Security Program are CONFIDENTIAL. Details for Security Program special projects are not available for public review for Homeland Security reasons and are exempt from disclosure under the Freedom of Information Act.

D. Direct Services

Direct Services are services provided by NPS to the SFPUC, at the SFPUC's request, to address particular circumstances that arise during the term of this MOA. Direct Services are distinct from Core Tasks or Special Projects because they are neither ongoing projects nor one-time projects that are planned in advance. Rather, Direct Services allow the SFPUC to leverage NPS resources and subject matter expertise for unanticipated needs. In addition to the examples of Direct Services provided in Article IV.A.3 above, such services may include archeological site protection and monitoring during removal of imminent hazard trees discovered along a power distribution line; rental of mobile communication devices during a wildfire; design review for repairs to existing SFPUC infrastructure in YNP; facilitating tribal consultation or monitoring for an operational activity that has the potential to impact a tribal cultural resource; and preparing and reviewing documentation for compliance with applicable federal statutes, including but not limited to the National Environmental Policy Act, National Historic Preservation Act, Wilderness Act, and the Federal Endangered Species Act.

Where an SFPUC proposed action requires a federal approval or permit implicating compliance with the National Environmental Policy Act of 1969 (Public Law 91-190 and 42 U.S.C. § 4321 et seq.), NPS will ensure the adequacy of the environmental review and technical documentation in accordance with the requirements established by the Council on Environmental Quality ("CEQ") Regulations Implementing NEPA (40 CFR 1500-1508) and the NPS Director's Order 12. The NPS will independently evaluate information and analysis submitted by SFPUC and their consultants regarding environmental compliance obligations associated with the NPS decision. The Regional Director of the NPS, Interior Regions 8, 9, 10, and 12 or their approved designee will be the Responsible Official (decision-maker) for the NEPA review related to NPS decisions.

Pursuant to Section 9(r) of the Raker Act, the SFPUC shall fund the preparation of environmental review documentation arising from investigations or decisions regarding the rights, benefits, or obligations under the Act that involve expense to the Department of Interior.

The SFPUC may request that the NPS provide Direct Services to support the Source Water Protection, Environmental Stewardship, or Security Programs implemented under this MOA. Based on the scope of the SFPUC request for Direct Services, NPS may submit out-of-cycle funding requests to the SFPUC. Funding will be by mutual agreement and approved in writing by the HHWP Division Manager. Invoicing for approved funds will occur upon the approval from the HHWP Division Manager.

E. **Reports** - The HHPM and SPM submit quarterly reports for each program to the SFPUC. The Security report may be forwarded to the Department of Homeland Security (DHS) by the SFPUC. These quarterly reports track annual work plan implementation, spending, and coordination for each program.

NPS Annual Reports for the Source Water Protection and Environmental Stewardship programs contain the following sections:

Summary	Highlights from the current reporting year and recommendations for the following year.
Program Description	• Mission • Description of the program and its objectives. • Policy changes or issues unique to the reporting year. • List of the year's Core Tasks, Special Projects, and Direct Services.
Implementation	The work actually performed including results as they relate to stated objectives.
Analysis	An evaluation of overall program effectiveness including work performed and major deviations from work plans (what and why).

Each program is reported separately. All reports for the Security Program shall be CONFIDENTIAL, Homeland Security related, and shall not be available for public review. The Security Program reports are exempt from disclosure under the Freedom of Information Act.

The SFPUC understands it may have access to non-public security-related information that NPS determines is confidential. The SFPUC agrees that all such information potentially confidential shall be held in confidence, subject to all state and federal freedom of information laws and the San Francisco Administrative Code section 67.24(e), and except as required to perform and fulfill the requirements of this agreement. In the event that any third party seeks information from the CCSF, the SFPUC shall promptly notify NPS of such request. NPS may then approve release of information in writing or seek any appropriate relief in refusing such request.

F. **Calendar** - Each program (Source Water Protection, Environmental Stewardship, and Security), as well as the program management element, shall be planned, reported, reviewed, budgeted, and invoiced separately.

Date	Task
January 31	HHPM and SPM provide combined Q4 and annual program reports to the SFPUC. The reports cover the work performed during the prior calendar year.
February 7	Quarter 4 coordination meeting in YNP to discuss the Source Water Protection program, Environmental Stewardship program, and the sanitary survey which occurs in Yosemite.
April 30	HHPM and SPM provide quarter 1 program reports to the SFPUC.
May	Quarter 1 coordination meeting and the annual SFPUC-NPS communication meeting in Moccasin. HHPM coordinates the program reviews; SFPUC coordinates the Sanitary Survey Review.
July 1 July 10	NPS invoices the SFPUC for the current (i.e. new) fiscal year for each of the three programs plus the program management element outlined in this Agreement. This is for the final work plan funded by the SFPUC. Each Core Task and Special Project will be invoiced annually, at the start of the SFPUC fiscal year, for the full year work plan as a lump sum. Invoicing for direct services may occur at the start of the SFPUC fiscal year as needed. Invoicing for unforeseen events or for SFPUC specific needs will be invoiced as needed and after written concurrence from the HHWP Division Manager. SFPUC payment is due to the NPS for the current fiscal year by . August 10 or within 30 days of any invoicing for direct services request.
July 31	HHPM and SPM provide quarter 2 program reports to the SFPUC.
August	Quarter 2 coordination meeting and, on odd-numbered years, budget review meeting in Moccasin.
September 1 (odd-numbered years)	The HHPM and SPM provide the preliminary budget proposal for each program for the following two SFPUC fiscal years by September 1.
September 30 (odd-numbered years)	NPS and SFPUC meet as required in September to review proposed new core tasks or special projects, review changes to existing Core Tasks or Special Projects, and agree on the final NPS budget proposals to SFPUC. SFPUC provides final comments on preliminary budget proposals for each program to NPS by September 30.

October 15 (odd-numbered years)	The NPS provides the final budget for the following two fiscal years for each program to the SFPUC by October 15.
October 31	HHPM and SPM provide quarter 3 program reports to the SFPUC.
November	Quarter 3 coordination meeting and Security meeting in Yosemite.

Calendar years (January 1 to December 31) shall be used for implementation and reporting. This coincides with regulatory reporting requirements. Annual budget requests, work plans, budgeting, and payments on invoices shall be based on the SFPUC's fiscal year (July 1 through June 30).

Quarterly reports for each program are due to the SFPUC April 30 (Q1), July 31(Q2), and October 31(Q3) of each year. The combined Q4 and Annual Report shall be due on January 31of each year. The NPS Program Managers and HHWP Division Manager (or designee) meet quarterly for program coordination – usually in Yosemite National Park in November and March, and in Moccasin in May and August.

ARTICLE V – NPS BUDGET REQUEST,REALLOCATION AND RECONCILIATION

A. Budget Request

The biennial NPS budget requests cover work to be performed during the following two SFPUC fiscal years. The SFPUC fiscal year starts July 1 and ends June 30. Each request shall contain individual submittals for each program element (core task or special project). Typical submittal components include:

1. Description
    - SFPUC Program Identification (i.e. SWP, ES, S, or All)
    - Type of proposal: core task or special project
    - Title of core task or special project
    - Division & Branch
    - Start and finish date
    - Program Manager
    - Requester
2. Statement of Work
3. Justification
4. NPS Personnel Services
5. NPS Contract Services
6. Equipment, Material, and Other Costs
7. Listing of complementary NPS activities supported by other funding sources
8. Total Funding Requested

9. YNP Superintendent Approval

Additional information and justification may also be included, such as changes in or more detailed scope, objective(s), and existing and desired equipment and staffing levels, which may help in determining funding priorities.

NPS submits a preliminary budget request for each core task or special project to the SFPUC for review and comment. After resolving comments, the NPS then submits a final budget request for each program (refer to Article IV section F-Calendar September 1 - October 15). The approximate first and second year baseline budgets for Core Tasks under this Agreement are in Appendix D, which lists the estimated Fiscal Years 2025-2026 based on a 4% escalation of costs from the approved 2023-2024 budget. Each two-year budget requires approval by the SFPUC as outlined in Article IV.F, Article IX, and this Section. The 2024-2025 and 2025-2026 budgets will be finalized via this budget process, with proposals developed in fall 2023 and 2025, respectively. NPS may submit out-of-cycle funding requests to the SFPUC for Direct Services that it will provide based on SFPUC needs. Funding will be by mutual agreement and approved in writing by the HHWP Division Manager.
The total agreement cost shall not exceed $40,958,727 (forty million, nine hundred fifty eight thousand, seven hundred twenty seven dollars) for the four-year term. Significant capital improvement projects, unanticipated projects, or other incurred costs may also be developed and entered into during this time period under separate written agreements.

Each of the three programs, as well as program management element, is budgeted separately. The Security Program activities are CONFIDENTIAL, Homeland Security related, and shall not be available for public review. Consequently, Appendix E shall not be available for public review and is exempt from the Freedom of Information Act.

B. Reallocation of Funds Between Line Items- No Change to Overall Agreement Not-To-Exceed (NTE) Amount

Reallocation of funds between individual line items, with no change to the overall agreement NTE amount, may occur yearly if necessary. Such reallocations should be finalized by the end of May each year to ensure changes are reflected in line item NTE amounts going into the next full year of the agreement at the beginning of July.

Proposed reallocations must be mutually agreed upon by the Yosemite National Park Superintendent and Hetch Hetchy Water and Power Division Manager. This concurrence will be documented via email and an amended budget table showing the adjusted yearly line item NTE amounts. Both the email string and amended budget table will be provided

to the NPS Accounting Operations Center as necessary supporting documentation for them to update the line item NTE amounts within the NPS financial system.

C. Budget Reconciliation

The NPS shall have six months beyond the MOA end date of July 1, 2028, to reconcile all expenditures incurred on or before June 30, 2028. All obligations must be made prior to June 30, 2028. No new obligations can be incurred after this date. Delivery of material ordered or completion of projects contracted prior to June 30, 2028 are acceptable, but they must be received or completed and the final invoice must be submitted prior to September 30, 2028. The six-month reconciliation period allows for full reconciliation of expenditures and financial closeout of the Agreement.

The SFPUC and the NPS have agreed to work jointly on periodic budget reporting with the goal of increasing transparency regarding actual expenditures. The budget reporting process will be developed cooperatively between SFPUC and NPS.

ARTICLE VI - INDEMNIFICATION

A. The NPS Agrees:

To cooperate in the submission of claims pursuant to Title 28 of the United States Code, the Federal Tort Claims Act, against the United States for personal injuries or property damage resulting from the negligent or wrongful act or omission of any employee of the United States that results from, arises out of, or relates to the activities of the NPS or its employees under this MOA.

B. The SFPUC Agrees:

The CCSF shall indemnify, defend, and hold harmless the United States and the National Park Service, and their officers, employees, and agents from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses that result from, arise out of, or relate to the activities of the SFPUC or its employees, contractors, or subcontractors under this MOA.

ARTICLE VII – TERM OF AGREEMENT

This MOA shall become effective on July 1, 2024. If signed after July 1, 2024, the agreement will be retroactive to July 1, 2024.

The NPS shall have six months beyond the end date of July 1, 2028 of the MOA to reconcile all

expenditures incurred on or before June 30, 2028. No additional funds are authorized to be spent or received, nor expenses incurred, after June 30, 2028. The six month reconciliation grace period, with an end date of December 31, 2028, allows for full reconciliation of expenditures incurred before July 1, 2028.

ARTICLE VIII – MODIFICATION AND TERMINATION

As mutually agreed upon in writing, this Agreement may be revised to address new or changed conditions; the addition or modification of core tasks and special projects; status changes for special projects; regulatory considerations; and funding changes. Any core tasks that are discontinued during this Agreement will be funded through the end of the current SFPUC fiscal year plus one (1) additional SFPUC fiscal year, except as the SFPUC and NPS mutually agree.

ARTICLE IX – GENERAL PROVISIONS

A. Nothing herein shall or shall be construed to obligate the National Park Service to expend or involve the United States of America in any contract or other obligation for the future payment of money in excess of appropriations authorized by law and administratively allotted and allocated for the purposes contemplated in this MOA.

B. **Fiscal Limitations:** THIS SECTION SUPERSEDES ANY CONFLICTING PROVISION OF THIS MOA. The SFPUC is subject to the fiscal provisions of the San Francisco charter and the budget decisions of its Mayor and Board of Supervisors. No SFPUC funds will be available hereunder until prior written authorization certified by the CCSF's Controller. The Controller cannot authorize payments unless funds have been certified as available in the budget or in a supplemental appropriation. This MOA shall automatically terminate, without liability to the CCSF, if funds are not properly appropriated by the Mayor and Board of Supervisors or certified by the Controller. The SFPUC's obligations hereunder shall never exceed the amount certified by the Controller for the purpose and period stated in such certification. The SFPUC, its employees and officers are not authorized to request services, materials, equipment or supplies that are beyond the scope of those expressly described herein, unless this MOA is amended in writing and approved as required by law. The SFPUC, its employees and officers are not authorized to offer or promise any additional funding that would exceed the maximum amount that may be appropriated for FY 2024-26 through 2026-28 specified in Appendix D. Such additional funding requires lawful approval and certification by the Controller. Without such lawful approval and certification, the SFPUC shall not be required to provide such additional funding. The foregoing fiscal limitations do not relieve the CCSF of its obligations under the Raker Act to pay all costs that the CCSF is required to pay under Section 9 of the Raker Act.

C. No member of or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of the MOA or to any benefit that may arise out of it.

D. This Agreement was not executed for the benefit of any entity or person who is not a party hereto, and neither this agreement, nor any interest therein, may be assigned without the prior consent of the non-assigning party.

E. This Agreement does not give rise to third party contract rights and cannot be enforced by third parties.

F. This Agreement shall not be construed or implied that either the SFPUC or the NPS, by entering into this Agreement, intends to abrogate their obligations and duties to comply with all applicable provisions of the regulations promulgated under the National Environmental Policy Act of 1969, the California Environmental Quality Act, or any other applicable law.

ARTICLE X – AUTHORIZING SIGNATURES

_____ _____

David Szymanski Date
Regional Director, Interior Regions 8, 9, 10 and 12
National Park Service

_____ _____

Dennis J. Herrera Date
General Manager
San Francisco Public Utilities Commission

Authorized by SFPUC Resolution No. _____ _____
Date

Approved as to form:

Deputy City Attorney

APPENDIX A

Raker Act Water Quality Provisions

The passage of the Raker Act by the US Congress on December 19, 1913 established the Hetch Hetchy Water and Power Project. The Raker Act granted water and power resource rights-of-way over federal lands in YNP and Stanislaus National Forest to the CCSF. Since construction of O'Shaughnessy Dam at Hetch Hetchy and completion of the 149-mile Hetch Hetchy water delivery system in 1934, Sierra Nevada water has been providing a year-round supply of high quality potable water to San Francisco and neighboring communities.

Section 9 (a) of the Raker Act requires the following water quality protections:

> *…the following sanitary regulations shall be made effective within the watershed above and around said reservoir sites so used by said grantee:*
>
> *First. No human excrement, garbage, or other refuse shall be placed in the waters of any reservoir or stream or within three hundred feet thereof.*
>
> *Second. All sewage from permanent camps and hotels within the watershed shall be filtered by natural percolation through porous earth or otherwise adequately purified or destroyed.*
>
> *Third. No person shall bathe, wash clothes or cooking utensils, or water stock in, or in any way pollute, the water within the limits of the Hetch Hetchy Reservoir or any reservoir constructed by the said grantee under the provisions of this grant, or in the streams leading thereto, within one mile of said reservoir; or, with reference to the Hetch Hetchy Reservoir, in the waters from the reservoir or waters entering the river between it and the "Early intake" of the aqueduct, pending the completion of the aqueduct between "Early intake" and the Hetch Hetchy Dam site.*
>
> *Fourth. The cost of the inspection necessary to secure compliance with the sanitary regulations made a part of these conditions, which inspection shall be under the direction of the Secretary of the Interior, shall be defrayed by the said grantee.*
>
> *Fifth. If at any time the sanitary regulations provided for herein shall be deemed by said grantee insufficient to protect the purity of the water supply, then the said grantee shall install a filtration plant or provide other means to guard the purity of the water. No other sanitary rules or restrictions shall be demanded by or granted to the said grantee as to the use of the watershed by campers, tourists, or the occupants of hotels and cottages…*

Since the passage of the Raker Act, other watershed protection criteria have been established for drinking water by state and federal agencies. This Agreement encompasses implementation of the water quality provisions of the Raker Act, pursuant to the fourth item (above), along with additional water quality, resource protection and security initiatives by YNP that will be funded by the SFPUC.

APPENDIX B

Filtration Avoidance Regulations

Source Water Protection – Selected Filtration Avoidance Regulatory Requirements

Source water protection requirements of the following CFR and CCR sections are met by demonstrating an effective watershed control program that minimizes the potential for contamination by microbial pathogens. The NPS and SFPUC cooperate to maintain an effective management program for water source, and standby water source, watersheds within the YNP. This is documented through sanitary survey updates performed by the SFPUC.

The SFPUC was granted filtration avoidance for the Hetch Hetchy water supply by the Environmental Protection Agency on October 29, 1993. This is covered under Title 40 Code of Federal Regulations (CFR), Part 141, Subpart H, Section 141.71.

The San Francisco Regional Water System (SFRWS) is permitted under Title 22 of the California Code of Regulations (CCR): System No. 3810001, Permit Number 02-04-04P-3810001. The California Department of Health Services (CDPH) regulations pertaining to filtration avoidance criteria are listed in Title 22 Sections 64652.5.

> *Section 64652.5. Criteria for Avoiding Filtration.*
>
> *(a) A supplier that uses an approved surface water shall meet all of the requirements of this section to avoid the necessity of providing filtration. …*
>
> *(c) The approved surface water quality monitored pursuant to subsection (b) shall meet the following criteria:*
>
> > *(1) The fecal coliform concentration shall be equal to or less than 20/100 ml, or the total coliform concentration shall be equal to or less than 100/100 ml, in representative samples of the approved surface water in at least 90 percent of the measurements made for the six previous months that the system served unfiltered approved surface water to the public on an ongoing basis. If a system measures both fecal and total coliforms, the fecal coliform criterion, not the total coliform criterion, in this paragraph shall be met.*
> >
> > *(2) The turbidity level shall not exceed 5 NTU in representative samples …*

(e) The supplier shall maintain a watershed control program which minimizes the potential for contamination by Giardia lamblia cysts and viruses in the source water. The adequacy of a program to limit potential contamination by Giardia lamblia cysts and viruses shall be determined by: the comprehensiveness of the watershed review; the effectiveness of the supplier's program to monitor and control detrimental activities occurring in the watershed; and the extent to which the water system has maximized land ownership and/or controlled land use within the watershed. At a minimum, the watershed control program shall: (1) Characterize the watershed hydrology and land ownership; (2) Identify watershed characteristics and activities which may have an adverse effect on water quality; (3) Monitor the occurrence of activities which may have an adverse effect on water quality. The supplier shall demonstrate through ownership and/or written agreements with landowners within the watershed that it can control all human activities which may have an adverse impact on the microbiological quality of the water. The supplier shall submit an annual report to the Department that identifies any special concerns about the watershed and how they are being handled; describes activities in the watershed that affect water quality; and projects what adverse activities are expected to occur in the future and how the public water system expects to address them; and (4) Monitor the presence of Giardia lamblia cysts in the approved surface water whenever agricultural grazing, water oriented recreation, or point source domestic wastewater discharges occur on the watershed. ….

(f) The water system shall be subject to an annual on-site inspection to assess the watershed control program and disinfection treatment process. Either the Department or a party approved by the Department shall conduct the on-site inspection. The inspection shall be conducted by competent individuals who have a sound understanding of public health principles and waterborne diseases, such as sanitary engineers, civil engineers, environmental health specialists, or technicians who have experience and knowledge about the operation and maintenance of a public water system. A report of the on-site inspection summarizing all findings shall be prepared every calendar year and submitted to the Department, if not conducted by the Department, by December 31 of that year. The on-site inspection shall be comprehensive to enable the Department to determine whether the watershed control program and disinfection treatment process are adequately designed and maintained. The on-site inspection shall include:

(1) A review of the effectiveness of the watershed control program;
(2) A review of the physical condition of the source intake and how well it is protected;
(3) A review of the supplier's equipment maintenance program to ensure there is low probability for failure of the disinfection process;
(4) An inspection of the disinfection equipment for physical deterioration;
(5) A review of operating procedures;
(6) A review of data records to ensure that all required tests are being conducted and recorded and disinfection is effectively practiced; and
(7) Identification of any improvements which are needed in the equipment, system maintenance and operation, or data collection…

APPENDIX C

SFPUC Water Enterprise Environmental Stewardship Policy

The mission of the San Francisco Public Utilities Commission (SFPUC) is to serve San Francisco and its Bay Area customers with reliable, high quality, and affordable water and wastewater treatment while maximizing benefits from power operations and responsibly managing the resources—human, physical, and natural—entrusted to its care.

The purpose of the Water Enterprise Environmental Stewardship Policy is to establish long-term management direction for SFPUC-owned lands and natural resources affected by operation of the SFPUC water system within the Tuolumne River, Alameda Creek (Bay Area), and Peninsula (Bay Area) watersheds. Environmental stewardship is a fundamental component of the Water Enterprise mission, and a responsibility of all Water Enterprise employees.

The SFPUC is committed to responsible natural resources management that protects and restores viable populations of native species and maintains the integrity of the ecosystems that support them for current and future generations. The SFPUC strives to become a leader in science-based and collaborative environmental stewardship in order to continue providing high-quality and reliable water supplies to San Francisco residents and SFPUC customers.

Watershed Management

The SFPUC will proactively manage the watersheds under its responsibility in a manner that maintains the integrity of the natural resources, restores habitats for native species, and enhances ecosystem function. The SFPUC believes that partnership and collaboration with agencies, communities and other stakeholders in the watersheds are the best way to maximize investment in environmental stewardship.

To the extent practicable, the SFPUC will ensure that all operations of the SFPUC water system (including water diversion, storage and transport), construction and maintenance of infrastructure, land management policies and practices, purchase and sale of watershed lands, and lease agreements for watershed lands protect and restore native species and the ecosystems that support them. In cases where the SFPUC has limited control, but where impacts of its operations exist, the SFPUC will work with responsible parties to improve ecosystem health.

It is the policy of the SFPUC to operate the SFPUC water system in a manner that protects and restores native fish and wildlife downstream of SFPUC dams and water diversions, within SFPUC reservoirs, and on SFPUC watershed lands. Releases from SFPUC reservoirs will (consistent with the SFPUC mission described above, existing agreements, and applicable state and federal laws), mimic the variation of the seasonal hydrology (e.g., magnitude, timing, duration, and frequency) of their corresponding watersheds in order to sustain the aquatic and riparian ecosystems upon which these native fish and wildlife species depend.

The SFPUC will actively monitor the health of the terrestrial and aquatic habitats both under SFPUC ownership and affected by SFPUC operations in order to continually improve ecosystem health. Relevant performance measures and indicators will be used to evaluate the effectiveness of implementation efforts under this policy.

Other SFPUC Lands

Rights of way and properties in urban surroundings under SFPUC management will be managed in a manner that protects and restores habitat value where available and encourages community participation in decisions that significantly interrupt or alter current land use in these parcels.

Public Involvement

The SFPUC believes that public engagement is key to ensuring successful environmental stewardship. To that end, SFPUC will:

- Solicit input and collaboration on its plans and implementation from all interested and affected parties, including local, state, and federal agencies, non-governmental organizations, and members of the public.
- Encourage development of recreational uses that are compatible with protection and restoration of natural resources, and water quality and water supply reliability goals.
- Include communities and stakeholders in monitoring, restoration and other stewardship activities to the extent possible.
- Provide information and reports to the public that track activities related to implementation of this policy.

Implementation Strategy

The Environmental Stewardship Policy will be integrated into SFPUC Water Enterprise planning and decision-making processes and also directly implemented through a number of efforts. Below are examples of areas for integration and specific activities that will further the goals of this policy.

- Implementation and updating of the existing Alameda and Peninsula Watershed Management Plans.
- Development of Habitat Conservation Plans for the Alameda and Peninsula Watersheds.
- Development and implementation of the Watershed and Environmental Improvement Program, which will cover the Tuolumne River, Alameda Creek, and Peninsula watersheds.
- Development of the Lake Merced Watershed Plan.
- Active participation in local forums, including coordination with Yosemite National Park and Stanislaus National Forest in the Tuolumne River watershed, the Tuolumne River Technical Advisory Committee, the Alameda Creek Fisheries Restoration Workgroup, the Pilarcitos Creek Restoration Workgroup, and the Lake Merced Task Force.
- Integration of the policy into the Water System Improvement Program and individual infrastructure projects (i.e., repair and replacement programs).

- Ensure that the policy guides development of project descriptions, alternatives and mitigation for all SFPUC projects during the environmental review process under CEQA and/or NEPA.
- Seek support for and encourage all employees to integrate environmental stewardship into daily operations through communication and training.

APPENDIX D

Hetch Hetchy Memorandum of Agreement Four-year Core Task Funding

Program	YNP	MOA Section	Core Task	2023-2024 YR 4 Current MOA	2024-2025 4% ADJUSTMENT	2024-2025 (Year 1)	2025-2026 (Year 2)	2026-2027 (Year 3)	2027-2028 (Year 4)	Totals
Source Water Protection	BRM	IV.B.2.a.i	HH Entrance Station	$218,236	$226,965	$229,813	$239,184	$248,942	$259,107	$977,046
Source Water Protection	FM	IV.B.2.b.i	Seasonal B&G Maintenance	$132,320	$137,613	$138,168	$144,293	$150,708	$157,430	$590,599
Source Water Protection	FM	IV.B.2.b.ii	Utilities	$260,562	$270,984	$271,530	$282,391	$293,687	$305,435	$1,153,042
Source Water Protection	FM	IV.B.2.b.i	Portable Toilets in Tuolumne Meadows	$54,137	$97,452	$97,637	$101,742	$106,026	$110,498	$415,903
Source Water Protection	FM	IV.B.2.b.iii	Trails	$1,010,276	$1,050,687	$1,053,054	$1,096,709	$1,142,228	$1,189,695	$4,481,685
Source Water Protection	INTERP	IV.B.2.c.i	Interpretation	$372,912	$417,556	$423,009	$440,389	$458,499	$477,374	$1,799,271
Source Water Protection	RMS	IV.B.2.d.i	Stream Gauging Stations	$12,680	$13,187	$13,352	$13,901	$14,473	$15,070	$56,796
Source Water Protection	RMS	IV.B.2.d.i	Snow Pillow Monitoring Stations	$68,378	$71,113	$71,944	$74,895	$77,967	$81,168	$305,973
Source Water Protection	RMS	IV.B.2.d.i	Water Quality Monitoring	$71,123	$73,968	$74,690	$77,803	$81,049	$84,435	$317,977
Source Water Protection	RMS	IV.B.2.d.ii	Wilderness Restoration	$147,329	$159,222	$160,521	$167,230	$174,228	$181,530	$683,509
Source Water Protection	RMS	IV.B.2.d.iii	Resource Condition Assessment Project (RCAP)	$160,718	$167,147	$169,334	$176,303	$183,565	$191,134	$720,336
Source Water Protection	PROT	IV.B.2.e.i	Upper Watershed Protection	$1,242,603	$1,292,308	$1,309,153	$1,364,664	$1,422,639	$1,483,193	$5,579,648
Source Water Protection	PROT	IV.B.2.e.i	Lower Watershed Protection	$994,612	$1,034,397	$1,048,180	$1,093,255	$1,140,370	$1,189,634	$4,471,439
Source Water Protection	PROT	IV.B.2.e.ii	Fire Management	$29,621	$30,806	$31,192	$32,507	$33,879	$35,313	$132,890
Source Water Protection	PROT	IV.B.2.e.ii	Aviation Officer	$69,962	$72,760	$73,712	$76,958	$80,358	$83,919	$314,946
Source Water Protection	PROT	IV.B.2.e.iii	Wilderness Operations	$837,238	$870,728	$882,112	$919,089	$957,676	$997,948	$3,756,826
Source Water Protection	PROT	IV.B.2.e.iii	Wilderness Education	$529,574	$550,757	$557,041	$579,661	$603,212	$627,733	$2,367,647
Environmental Stewardship	RMS	IV.B.3.a.i	Looking Downstream	$186,681	$194,148	$195,696	$203,582	$211,789	$220,330	$831,397
Environmental Stewardship	RMS	IV.B.3.a.ii	Invasive Plant Management	$101,831	$105,904	$107,348	$111,892	$116,635	$121,589	$457,464
Environmental Stewardship	RMS	IV.B.3.a.iii	Aquatic Species Monitoring	$67,792	$70,504	$71,397	$74,253	$77,223	$80,312	$303,184
Environmental Stewardship	RMS	IV.B.3.a.iv	Packstock Management	$81,077	$84,320	$85,413	$88,893	$92,518	$96,292	$363,116
Security	PROT	IV.B.4	Security	$937,088	$974,571	$984,083	$1,023,447	$1,064,385	$1,106,960	$4,178,875
All	SUPT	IV.B.1.a.i	Program Manager	$163,641	$170,187	$171,939	$178,816	$185,968	$193,407	$730,130
All	ADMIN	IV.B.1.b.i	Administrative Support	$405,152	$421,359	$426,622	$443,688	$461,435	$479,892	$1,811,636
			Core Task Total		$8,558,643	$8,646,938	$9,005,542	$9,379,459	$9,769,398	$36,801,336
			5% Locality Pay			$0	$0	$242,779	$252,492	$495,271
			Direct Services			$150,000	$174,000	$125,000	$125,000	$574,000
			Raker Act			$30,000	$30,000	$30,000	$30,000	$120,000
			Special Project Total	$542,595	$692,633	$569,161	$870,689	$749,152	$779,118	$2,968,120
Core Task and Special Projects (Not to Exceed)						$9,396,099	$10,080,231	$10,526,390	$10,956,008	$40,958,727
Agreement Not To Exceed Amount										**$40,958,727**

APPENDIX E - CONFIDENTIAL

Security Program