
Request for Proposals:

RFP Name: Water and Power Enterprise
Land Mobile Radio System
Replacement Project

Version: 1.0

Agreement No: CS-1074

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San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

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1 Definitions and Acronyms

“**Agreement**” refers to the agreement or contract negotiated between the Consultant and the City pursuant to this RFP.

“**Consultant**” refers to the Proposer awarded the Agreement for services under this RFP.

“**Proposer**” refers to any legal entity (ies) submitting a proposal in response to this RFP.

Abbreviations and acronyms that may be used throughout this RFP include:

- AGMAssistant General Manager
- AESAdvanced Encryption Standard
- AMMS.....Asset Maintenance Management System
- ANSI.....American National Standards Institute
- AWSS.....Auxiliary Water Supply System
- CATPCoverage Acceptance Test Plan
- CDDCity Distribution Division
- CPUsCentral Processing Units
- CEQACalifornia Environmental Quality Act
- CMD.....Contract Monitoring Division
- COTS.....Commercial Off the Shelf
- CSSI.....Console Sub-System Interfaces
- DAQ.....Delivered Audio Quality
- EIAElectronics Industry Association
- ERPEffective Radiated Power
- GOS.....Grade of Service (GOS)
- FAAFederal Aviation Administration
- FATPFinal Acceptance Test Plan
- FCCFederal Communications Commission
- FRUsField Replaceable Units
- FSHPFirst Source Hiring Program
- GPSGlobal Positioning System
- HHRWHetch Hetchy Regional Water
- IEEE.....Institute of Electrical and Electronics Engineers
- IPInternet Protocol
- JVJoint Venture
- LBE.....Local Business Enterprise
- MCOMinimum Compensation Ordinance
- NEC.....National Electric Code
- NEMANational Electrical Manufacturer’s Association
- NEPA.....National Environmental Policy Act
- NFPA.....National Fire Protection Association

NMS.....	Network Management System
NMT.....	Network Management Terminal
NTP.....	Notice to Proceed
PE	Project Engineer
PIM	Passive Intermodulation
PM	Project Manager
QA/QC	Quality Assurance/Quality Control
RF	Radio Frequency
RFP	Request for Proposals
RPC	Regional Planning Committee
RTUs	Remote Terminal Units
SFPUC	San Francisco Public Utilities Commission
TDMM	Telecommunications Distribution Methods Manual
TIA	Telecommunications Industry Association
TSB	Telecommunications System Bulletin
TTA	Tower Top Amplifiers
UL	Underwriters Laboratories, Inc.

2 RFP Summary

2.1 Project Introduction

The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco (City). SFPUC provides retail drinking water and sewer services to San Francisco, wholesale water to three Bay Area Counties, and hydroelectric power to municipal and retail customers in San Francisco.

SFPUC currently uses two radio systems. The first system is a Motorola system which is being upgraded to a 700/800 MHz P-25 Phase 2 radio system. It is operated by the Department of Emergency Management (DEM). The second system is a low frequency radio system that spans seven counties but offers incomplete system hardware, incomplete coverage, lacks many features needed in today’s utility business, and is at its end of life. The purpose of this Request for Proposal (RFP) is to find a qualified Proposer to replace SFPUC’s low frequency radio system with one unified communications system that best meets the desired and mandatory requirements outlined in Section 4 of this RFP.

Contract Amount and Duration: The budgetary estimates for this project indicate a not to exceed value of approximately \$10,000,000.00 over a period of 10 years, *including complete system maintenance and radio repair and replacements*; however, proposals outside of this

range or term will also be considered. These amounts are inclusive of all reimbursable costs and tasks.

The City reserves the right to commence, terminate, reduce or extend Proposer’s services at any time in response to changing needs.

2.2 Tentative RFP Schedule

The SFPUC has established the following target dates for issuance, receipt and evaluation of proposals in addition to award of an Agreement in response to this RFP. The dates are tentative, non-binding, and are subject to change without prior notice:

Advertisement of RFP	1/3/2017
Mandatory Pre-Submittal Conference for Oral Questions.....	1/10/2017
Location: 525 Golden Gate Avenue, O'Shaughnessy Conference Room (2 nd Floor)	
Time: 2:00 PM - 4:00 PM	
Mandatory Site Visits*	
Submission of Proposer’s Proposed Attendees for each Mandatory Site Visit.....	1/11/2017
Site Visit Instructions Issued to Proposer’s Proposed Site Visit Attendees.....	1/12/2017
Mandatory Site Visits	1/18/2017 through /20/2017
Deadline for Proposers to Submit Written Questions	1/27/2017
Responses by SFPUC to Proposers’ Written Question	2/3/2017
Deadline for Proposers to Submit Proposals.....	3/3/2017 (5:00 PM)
Shortlisting and Notification for Oral Interviews.....	3/8/2017
Oral Interviews.....	3/15/2017
Posting of Proposer Ranking and Selection	3/20/2017
Deadline for Proposer to Execute Agreement.....	5/19/2017

*** Mandatory site visits will include multiple sites identified in Attachment 1C “Backbone Communication, Microwave, Radio Transceiver & Networked Repeater Sites”, led by SFPUC staff. No later than 1/11/17, Proposers must provide Taraneh Moayed by email to tmoayed@sfgwater.org the full names, email and mobile phone contact information of each individual that will be attending the mandatory site visits on the Proposer’s behalf. No more than 2 attendees may participate in each site visit on the Proposer’s behalf. Attendees will be provided with detailed site visit instructions, including departure and drop off locations and times, no later than 1/12/17.**

2.3 Pre-Submittal Conferences, Site Visits, and Proposer Questions

Section 2.2 of this RFP provides dates for all mandatory pre-submittal conferences and site visits required for this RFP. Questions submitted during the pre-submittal conferences and site visits may be oral or in writing. If any new and/or substantive information is provided in response to questions raised at the pre-submittal conferences or site visits, the information will

be memorialized in a written addenda to this RFP and posted on <http://sfwater.org/bids/bidDetail.aspx?bidid=3053> no later than one week after the date of each conference or site visit, as applicable.

All questions submitted *outside* of the pre-submittal conferences and site visits must be submitted in writing no later than the date identified in Section 2.2 of this RFP. Written question must be delivered by regular mail or email to:

Taraneh Moayed
Principal Administrative Analyst
SFPUC IT Services
525 Golden Gate Avenue, 5th Floor
San Francisco, CA 94102
Email: tmoayed@sfwater.org

Replies to written questions received *outside* of the pre-submittal conferences and site visits will be memorialized in written addenda to this RFP and will be posted on <http://sfwater.org/bids/bidDetail.aspx?bidid=3053> no later than one week after the written questions are received.

With the exception of inquiries related to issues identified below, no questions or requests for interpretation will be accepted after the deadline for questions as identified in Section 2.2 of this RFP.

- **City Vendor Inquiries:** To learn how to become eligible to do business with the City and County of San Francisco and obtain a vendor number, go to: <http://sfgov.org/oca/qualify-do-business>
- **City Business Tax Registration Inquiries:** For questions regarding business tax registration procedures and requirements, contact the Tax Collector's Office at (415) 554-4400.
- **Chapter 12(B) and 12(C) Inquiries:** For questions concerning the City's Chapter 12(B) and 12(C) Equal Benefits and Non Discrimination in Contracting requirements, go to www.sfgov.org/cmd.
- **Chapter 14(B) LBE Inquiries:** For questions concerning the City's Chapter 14(B) LBE certification and/or requirements, contact:
Marcus Lange
Contract Monitoring Division (CMD)
City and County of San Francisco
Tel: (415) 554-3106
Email: MLange@sfwater.org

3 Background

3.1 San Francisco Public Utilities Commission

The SFPUC provides customers with high quality, efficient and reliable water, power, and sewer services in a manner that is inclusive of environmental and community interests and sustains the resources entrusted to its care. Broadly speaking, the SFPUC is comprised of three systems: Water, Power and Wastewater, each of which is discussed in greater detail below.

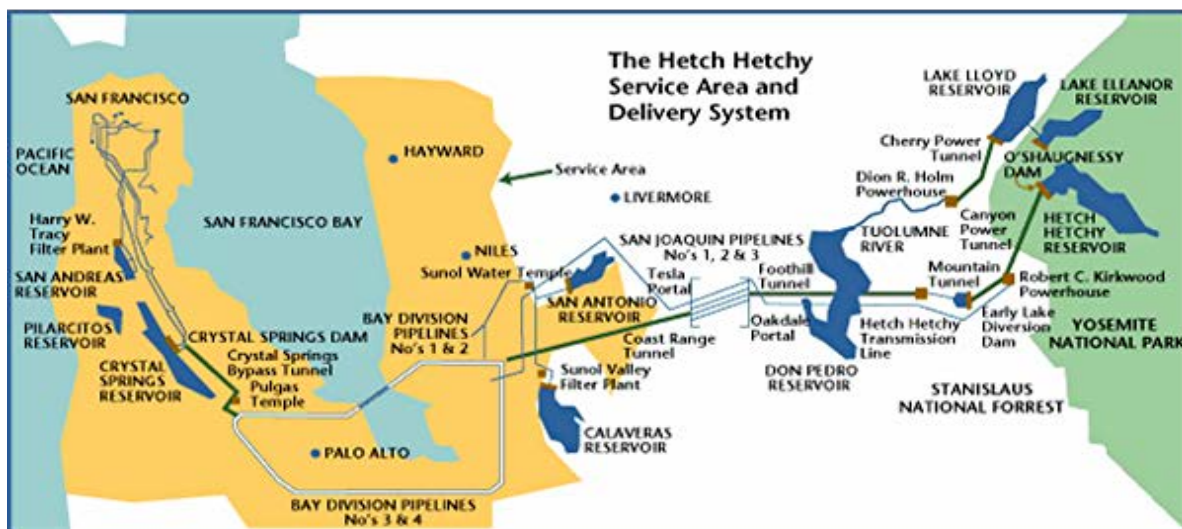
3.2 SFPUC Water, Power and Wastewater Systems

3.2.1 SFPUC Water System

The SFPUC Water system stretches from Yosemite National Park to the San Francisco Bay Area. The system provides high quality water to 2.6 million customers in the City and County of San Francisco, as well as southern regions of the Bay Area. SFPUC's water system is comprised of the Hetch Hetchy Regional Water System (HHRW System) and the Local City Water System.

3.2.1.1 Hetch Hetchy Regional Water System

The HHRW System consists of over 280 miles of pipelines, 60+ miles of tunnels, eleven reservoirs, five pump stations, and two water treatment plants. This gravity-fed system delivers over 200 million gallons of water from Hetch Hetchy Reservoir to San Francisco without the use of energy-consuming pumping. 85% of the system's drinking water comes from Hetch Hetchy Reservoir and 15% from the Alameda and Peninsula Watersheds.

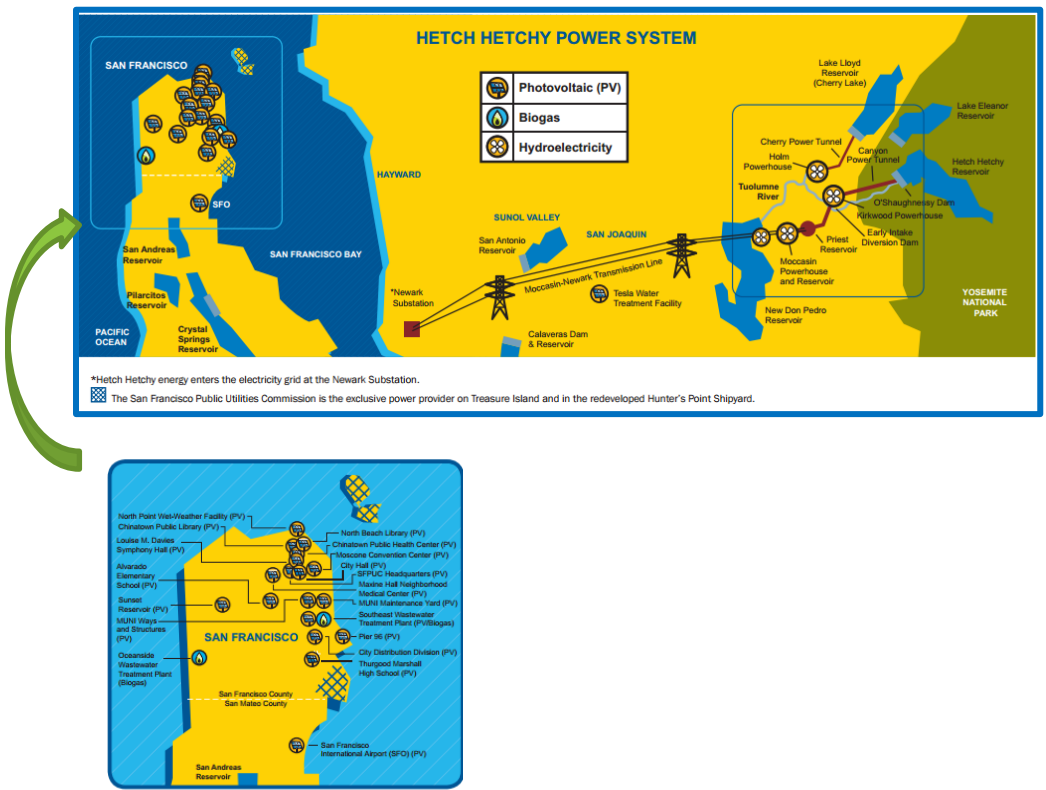


3.2.1.2 Local City Water System

The Local City Water System is managed by SFPUC’s City Distribution Division (CDD). This system distributes wholesale water received from the HHRW System to the residences and businesses located within San Francisco and consists of more than 1,250 miles of pipeline, twelve reservoirs, nine storage tanks, twelve pump stations, eight hydro pneumatic stations, and seventeen chlorination stations, all located within San Francisco. The CDD also manages the Auxiliary Water Supply System (AWSS), an independent high-pressure water supply system dedicated to fire protection. AWSS can deliver water at a much higher water pressure and use unlimited water from the Bay in case of emergency.

3.2.2 SFPUC Power System

SFPUC’s Power System produces green hydroelectric and solar power at many locations for the City’s municipal departments and retail customers. SFPUC generated power is transmitted through a networked grid to deliver power to the Turlock and Modesto Irrigation Districts and to the Pacific Gas and Electric Company, where power exchanges are made with the State of California power grid to serve municipal departments and retail customers. The SFPUC’s power transmission system includes 160 miles of power line, transmission towers that are each 97 feet tall (except at the San Joaquin River crossing where they are 208 feet tall), substations, substations, circuit breakers, transformers and automatic protective equipment.



3.2.3 SFPUC Wastewater System

The SFPUC Wastewater system is a combined sewer and storm water system that serves the City and adjacent areas of San Mateo County through various agreements with the North San Mateo County Sanitation District, the Bay Shore Sanitary District, and the City of Brisbane. The system also includes wastewater treatment facilities on Treasure Island.

The Wastewater collection and transport system includes 993 miles of sewer lines. The sewer system is divided into two zones: Bayside and Westside. Bayside collects wastewater and storm water in the eastern portion of the City for treatment at the Southeast Water Pollution Control Plant. Westside collects wastewater and storm water in the western portion of the City for treatment at the Oceanside Water Pollution Control Plant. When the Southeast Water Pollution Control Plant exceeds capacity during wet weather events, the North Point Wet Weather Facility is opened to increase treatment capacity.

The Wastewater system is also comprised of underground storage structures to capture the additional volume due to storm water. The largest of these structures, the Westside Transport structure, is 45 feet deep and 25 feet wide.



3.3 SFPUC's Existing Radio Systems

SFPUC currently uses two radio systems. The first system, operated by the DEM, is a Motorola system that is currently being upgraded to a 700/800 MHz P-25 Phase 2 radio system. The second system is a low frequency radio system ranging from 48.2 to 48.4 MHz spanning seven counties

The following SFPUC departments currently use, *and will continue to use*, DEM's Motorola 700/800 MHz P-25 Phase 2 radio system:

- i. SFPUC Wastewater Enterprise which manages the SFPUC Wastewater System;
- ii. The Solar, Streetlight, Power Distribution and Metering Divisions of the SFPUC Power Enterprise;
- iii. SFPUC's Customer Service Bureau, and
- iv. AWSS, which utilizes the system to communicate with the Fire Department during fires as part of a public utility and safety program.

SFPUC staff not part of the departments listed above use the 48.2 to 48.4 MHz low frequency radio system. This current system, which consists of approximately 540 radios, suffers from incomplete system hardware and coverage. It also lacks many features required in a utility business, has reached its end of life and must be replaced.

3.4 SFPUC's Existing and Potential Backbone Communication, Microwave, Radio Transceiver & Networked Repeater Sites

Attachment 1C identifies SFPUC's Existing and Potential Backbone Communication, Microwave, Radio Transceiver & Networked Repeater Sites. Proposals should integrate SFPUC's existing radio transmission towers and microwave backhaul, where possible, to efficiently use resources to develop the desired integrated seven county radio system.

4 Project Scope and Requirements

4.1 Project Summary

The SFPUC is requesting proposals to provide a secure, reliable, cost effective, fully turn-key, state-of-the-art radio system to replace its existing low frequency 48.2 to 48.4 MHz simplex and repeater radio system. The new system must be a robust, unified communications system that is able to cover both concentrated urban environments and remote, rugged, rural areas. The system should be able to handle everyday utility communications and major emergencies and/or natural disasters.

The SFPUC is open to any frequency spectrum, technology (including multiple technologies), and own or lease option that offers maximum coverage and capabilities at the most competitive price. Proposals may include extending and/or integrating the system with the DEM’s new 700/800 MHz Motorola P-25 Phase 2 land mobile system or the San Francisco Metropolitan Transportation Agency (MTA) Harris P-25 land mobile system, both of which are currently being implemented within the City limits. Proposals that extend and/or integrate with DEM’s Motorola or MTA’s Harris P-25 land mobile systems should provide inherent interoperability throughout the SFPUC and the other City departments.

Although many of the requirements in this RFP are based on a typical P-25 Public Safety Radio system, the SFPUC will consider all alternatives, such as non P-25 systems commercial radio systems and/or industry solutions that do not qualify as land mobile systems but offer acceptable coverage and capabilities. As such, and unless noted as a mandatory requirement, the majority of the functionality and system requirements in this RFP – which can be found in Section 4.2 to 4.20 - have been characterized as desired functionality and system features.

The SFPUC will consider any of the options below based on their ability to meet the desired and mandatory requirements outlined in this RFP:

	P-25 Phase 1 Upgradeable to Phase 2 System	Non-P-25 Commercial System	Non Land Mobile Radio System
Lease	Yes, if SFPUC has priority in a disaster.	Yes, if SFPUC has priority in a disaster.	Yes, if SFPUC has priority in a disaster.
Lease to own	Yes.	Yes.	No.
Purchase	Yes.	Yes.	No.

4.2 Regulatory, Licensing and Permit Requirements

1. The SFPUC is requesting proposals to provide a fully turn-key radio system. As such, Proposals must identify all regulatory, licensing, and permitting requirements for the implementation and installation of the proposed system and must state in writing that Proposer shall be responsible for obtaining and meeting all such requirements including, but not limited to, those related to the following broad categories:

- a. **Federal Communications Commission (FCC) Licensing and Federal Aviation Administration (FAA) Permits:** Securing all infrastructure permits and licenses,

including, but not limited to, FAA permits and FCC licenses which shall be in the name of and belong to the SFPUC for all purchase or lease to own systems.

- b. **Building and Construction-Related Permits:** Preparing and obtaining approval for all building plans required by the appropriate county, state, or federal agency.
 - c. **Environmental Regulations:** Complying with applicable environmental, historical, and archeological regulations, including California Environmental Quality Act / National Environmental Policy Act (CEQA / NEPA) and developing all required Environmental Impact Reports, if needed.
2. All system designs must be deemed fully licensable with available frequency acquisition, acceptable co-channel/adjacent-channel interference, compliant tower heights and compliant Effective Radiated Power (ERP).

4.3 Spectrum Requirements

In preparation for this RFP, the SFPUC conducted system development studies in the seven county coverage areas to test the concept of a radio system based on 450MHz and one based on 800MHz. Preliminary field tests using digital repeaters indicate that the desired coverage can be achieved by either spectrum. The decision to use one over the other will depend on the infrastructure, cost and power required for each system. While a 450MHz or 800MHz radio spectrum is preferred, the SFPUC is open to a hybrid radio system that uses multiple frequency spectrums or entirely different frequency spectrums than those identified so long as the Proposer provides all licensing modifications and applicable forms to the SFPUC for review and approval.

As of the date of this RFP, the City's Department of Technology has acquired three 800MHz spectrum frequencies on behalf of SFPUC with which could be used to build a P-25 radio communications system. The details of these licenses are summarized below:

Date Granted: July 6, 2016, Renewal – July 6, 2026, Call Sign: WQXX451

Frequency Range: Public Safety 806–817 MHz/851-862 MHz, Trunked

Date on which Written Notice of Completion Due to FCC: July 6, 2017. No waivers will be granted for construction delays.

Specific Sites Licensed:

- 1) Sawyer Ridge
- 2) Mount Allison
- 3) Tesla

- 4) Moccasin Peak
- 5) Duckwall
- 6) Burnout Ridge

The SFPUC is also in the frequency search/coordination phase of acquiring frequencies in the 450MHz spectrum for the above locations. However, this option would require constructing an entirely new system based in San Francisco that can accommodate the 450 MHz frequency range.

4.4 System Reliability and Capacity Requirements

1. Because the system will support SFPUC's mission critical operations, it should have a high degree of redundancy and survivability and preferably designed to 99% availability.
2. The system should be designed, equipped and licensed for a minimum of 3 RF channels (including 1 control channel and a minimum of 2 talk paths), all active at the same time.
3. The system design should accommodate 25% busy hour traffic growth without requiring the addition of hardware.
4. The capacity of the system should be less than or equal to 5% Grade of Service (GOS).¹

4.5 Coverage and Voice Quality Requirements

SFPUC's desired coverage areas are based on parcel maps, travel routes, user interviews and emergency response history and are identified in *Attachment 1A ("Coverage Area Maps")*. Proposers must review the SFPUC backhaul links and identify any deficiencies preventing the achievement of the specified coverage.

1. **Covered Area Reliability Maps:** Proposals must include composite talk-in and composite talk-out coverage prediction maps showing Covered Area Reliability as defined by TSB²-

¹ System capacity shall be measured in GOS where call congestion is measured as the ratio of lost traffic over successful traffic. Lost radio traffic is defined as a radio call that does not reach the requested destination when push to talk is pressed. The count is made from each push to talk transmission. The loss of one call in one-hundred successful calls is one percent. The measurement of the GOS in a leased system shall be based on the call congestion of the subject lease or user system only, and at highest traffic period.

² Telecommunications System Bulletin.

88.1D (“Covered Area Reliability Maps”). Proposals should contain Covered Area Reliability Maps must clearly demonstrate Proposer’s proposed coverage levels and document the technical parameters used to produce the predicted radio coverage results, including but not limited to propagation model used, lognormal fading standard deviation factor, reserve gain on the tower top amplifier, antenna system loss/gain (infrastructure and subscriber), transmitter ERP, and inbound/outbound received signal levels in dBm.

2. **Coverage Requirements:** Proposer’s Covered Area Reliability Maps must clearly demonstrate how Proposer’s system will meet SFPUC’s desired coverage levels set forth below.

a. **Coverage for Portable Radios:**

i. **700/800 MHz System:**

- a) The system coverage design should meet a 90% reliability requirement and be configured in such a way that the loss or failure of any single site must not result in a loss of coverage greater than 10% of the service area for an 800 MHz system.
- b) If Proposer is proposing a P-25 system, these coverage requirements shall apply to both Phase 1 and Phase 2 modes.
- c) Proposers should clearly identify how SFPUC may realize cost savings by selecting coverage levels that are less than those listed in this section.
- d) All third party equipment and services such as power conditioning, networking equipment, antennas, combiners, duplexers, microwave links, etc. required to achieve a proposed coverage level must be identified and included in the total Proposal cost for each proposed coverage level.

ii. **450 MHz System:**

- a) The system coverage design should meet a 90% reliability requirement and be configured in such a way that the loss or failure of any single site does not result in a loss of coverage greater than 20% of the service area.
- b) Proposers should clearly identify how SFPUC may realize cost savings by selecting coverage levels that are less than those listed in this section.
- c) All additional third party equipment and services such as power conditioning, networking equipment, antennas, combiners, duplexers, microwave links, etc. required to achieve a proposed

coverage level must be identified and included in the total Proposal cost for each proposed coverage level.

iii. **Other Spectrums:**

- a) If Proposer proposes a spectrum or frequencies different from those listed above, Proposer must identify the system's coverage reliability levels.
- b) Proposers should clearly identify how SFPUC may realize cost savings by selecting from different coverage levels proposed by the Proposer.
- c) All third party equipment and services such as power conditioning, networking equipment, antennas, combiners, duplexers, microwave links, etc. required to achieve a proposed coverage level must be identified and included in the total Proposal cost for each proposed coverage level.

b. **Optional Coverage for In-Facility Portable Radios:**

- i. The system coverage design should include the option to provide 97% coverage in critical SFPUC watershed cottages and their grounds, as identified in *Attachment 1B ("Watershed Cottages")*, and *Section IV of Attachment 1C* relating to Network Repeater Sites.
- ii. The cost for this option must be separately identified in the event SFPUC determines to not select this option.
- iii. Proposers are encouraged to clearly identify how SFPUC may realize cost savings by selecting coverage levels that are less than those listed in this section.
- iv. Proposer may use native over-the-air coverage from system radio sites, bi-directional amplifiers (BDA) or networked repeaters to rebroadcast radio signals within these buildings to meet its proposed coverage requirements. All third party equipment and services such as power conditioning, networking equipment, antennas, combiners, duplexers, microwave links, etc. required to achieve a proposed coverage level must be identified and included in the total Proposal cost for each proposed coverage level.

3. **Voice Quality Requirements:**

- a. Talk-in and talk-out coverage in the covered areas must meet or exceed a Delivered Audio Quality (DAQ) of 3.4 or better. If Proposers propose an extension to either of the land-mobile radio systems being implemented by DEM or SFMTA, the Proposer

- may use simulcast signal processing or present another recommendation as required/needed to optimize voice quality in coverage overlap areas.
- b. Non-captured overlap areas with delay spreads in excess of those required to meet the required DAQ objective must be minimized inside the service area.
 - c. Any areas outside the acceptable delay spread must be indicated on coverage maps.
4. **Coverage Guarantee:** Proposers must provide a written guarantee that coverage will match or exceed their proposed coverage and DAQ levels and that coverage in areas of missing coverage during the term of the contract will be provided without any additional costs to SFPUC.
5. **Coverage Testing:** Proposer will be required to test the guaranteed coverage of the system, under SFPUC supervision, to demonstrate that the portable on-street, in-building, and in-vehicle (vehicle windows closed) talk-in coverage and talk-out coverage meet the above specified coverage requirements. Coverage testing methods and procedures must adhere to TSB-88.3C, and address the requirements of NFPA 1221, NFPA 72, and NFPA 5000, Annex F latest revision, where applicable. The San Joaquin Valley region will be tested with a 1-mile grid pattern on accessible areas. The SFPUC Watersheds will be tested with a ½-mile grid pattern on accessible areas. All other areas will be tested with a ¼-mile grid pattern.

4.6 Communication and Radio Microwave Backbone Site Requirements

1. Proposer must clearly identify in detail each site or facility required for its proposed system.³ SFPUC's existing and potential communication sites and potential microwave backbone paths is available in *Attachment 1C*. Proposers are encouraged to use existing SFPUC infrastructure to the greatest extent possible, including shelter (or equipment room); heating, ventilation, and air conditioning (HVAC); tower structures; physical security; battery power; backup power and utility connection to a commercial power source. Prior to submitting proposals, Proposers must survey existing and potential communications sites with SFPUC staff to confirm the suitability of existing facilities and locations for the installation of system equipment and components.

³ The SFPUC shall approve site locations for a proposed system.

2. For each proposed site (whether existing or new), Proposals must identify and quantify the total investment required to enable use of and access to each site, including but not limited to: system designs and engineering; site preparation; utilities (including power and emergency back-up power); site hardware (including antenna support structures); site optimization, site testing and site maintenance.
3. Where a proposed site will be owned by third party, Proposer must certify that it can deliver to the City a lease agreement for the site that contains the City's standard terms. In addition, the lease should include an option that would allow SFPUC continue to use the site beyond the term of the contract with Proposer.
4. For each proposed site (whether existing or new), Proposer must confirm in writing that it will comply with all applicable standards, rules, regulations, and industry guidelines, including, but not limited to, those from the following organizations:
 - a. American National Standards Institute (ANSI)
 - b. Electronics Industry Association (EIA)
 - c. Federal Aviation Administration (FAA)
 - d. Federal Communications Commission (FCC)
 - e. Institute of Electrical and Electronics Engineers (IEEE)
 - f. National Electrical Code (NEC)
 - g. National Electrical Manufacturer's Association (NEMA)
 - h. National Fire Protection Association (NFPA)
 - i. Telecommunications Distribution Methods Manual (TDMM)
 - j. Telecommunications Industry Association (TIA)
 - k. Underwriters Laboratories, Inc. (UL)
 - l. If applicable: 800 MHz Regional Planning Committee (RPC) 6 Regional Plan
 - m. If applicable: 700 MHz Regional Planning Committee (RPC) 6 Regional Plan
5. If applicable, the Proposer must identify the grounding standard it will utilize for each site. The selected standard must comply with industry best practices for system installation, grounding, bonding, and transient voltage surge suppression (TVSS).
6. For each proposed site (whether existing or new), the Proposer must confirm in writing that equipment mounting (e.g., racks, cabinets, and mounting methods) shall conform to full Zone 4 earthquake compliance in accordance with Telcordia (formerly Bellcore) GR-63-CORE Network Equipment Building System (NEBS) requirements. The Proposer shall provide certification that the racks and/or cabinets used meet the Telcordia GR-63-CORE NEBS requirements for Zone 4 in their as-built documentation package.

4.7 Radio Transmitter/Receiver Site Requirements

1. SFPUC's existing and potential Radio Transmitter/Receiver sites are identified in *Attachment 1C*. Prior to submitting proposals, Proposers must survey existing and potential transmitter/receiver radio sites with SFPUC staff to analyze all transmitters for intermodulation interference, taking into account existing transmitting equipment from tenants located at the sites as identified in FCC license information.⁴
2. If Proposer identifies site selections other than those in *Attachment 1C*, Proposers must clearly quantify the total investment required to enable those sites, including but not limited to any additional costs required for buildings, power, emergency back-up power, roads, and antenna support structures.
3. Where a proposed site will be owned by third party, Proposer must certify that it can deliver to the City a lease agreement for the site that contains the City's standard terms. In addition, the lease should include an option that would allow SFPUC continue to use the site beyond the term of the contract with Proposer.

4.8 Receiver Voting Requirements

1. If a purchase or lease to own system is proposed, the receiver voting equipment should monitor all receivers in the system and select the best signal for processing and rebroadcast through the network.
2. If a leased system is proposed, the receiver voting and receiver voting performance will the responsibility of the system owner. Proposer must describe how the commercial or leased system would select the best signal for rebroadcasting throughout the network.
3. Receiver voting equipment must continue to operate in the event of failure of, or lost connectivity to, the network core.

⁴ If Proposer identifies a potential or actual intermodulation problem prior to, during, or following implementation, the Proposer will be required to resolve the issue at no cost to SFPUC without degrading system coverage or performance within 12 months after system acceptance.

4. Receiver voting, if not a geographically distributed architecture, should be equipped with a hot standby comparator, geographically separated from the primary comparator to provide redundancy.

4.9 Tower Antenna Requirements

1. Newly installed tower antennas at SFPUC specific deployment locations should include new, low Passive Intermodulation (PIM), top tier, antenna system equipment, including antenna, transmission line and connectors, antenna combiners, receiver multi-couplers, and all other components between the antenna and radio, for a complete design.
2. New antennas should provide the required guaranteed coverage, match the antenna design used for all coverage modeling, and meet applicable FCC rules and regulations.
3. New antennas should be designed to perform in and endure the environmental conditions typically experienced in coastal areas, which are subject to the corrosive effects of salt air. Structural survivability of antennas should be a minimum wind rating of 125 mph and comply with MIL-STD-810E, Method 509.3, Procedure I environmental specifications for salt fog.
4. Transmission line type and length should be appropriate to provide the required coverage.
5. Tower Top Amplifiers (TTA) may be permissible in some areas. Several of the current sites have extremely high noise floors and SFPUC strongly recommends that the Proposer investigate site noise floors on any site where they intend to use a TTA. Should interference prevent the use of a Proposed-installed TTA, the Proposer shall be required to redesign the receiver system to rectify the deficiency and provide the required coverage to SFPUC, at no additional cost to the SFPUC, including the cost of additional equipment, site development, and site lease costs for the duration of the contract.

4.10 Security Requirements

1. Proposer should comply with industry best practices for cybersecurity by deploying hardware, software, and protocols that protect against cyber-attacks, minimize network vulnerabilities, and mitigate security breaches. Desired security features include, but are not limited to:
 - a. Security management tools that allow system managers to manage access to resources, maintain confidentiality, and ensure data integrity.

- b. Virtual private network (VPN) hardware and software to allow multiple levels of remote secure access of system RF and control infrastructure equipment.
 - c. Firewall protection system(s) and intrusion detection system(s).
 - d. Anti-virus and anti-malware software on all supplied servers and workstations, along with definition updates during the warranty period.
 - e. Operating system patches for all supplied commercial off the shelf products during the warranty period.
2. The system should be capable of providing talk groups with an end-to-end industry standard symmetric encryption algorithm, such as Advanced Encryption Standard (AES) encryption (including consoles and logging recorders).
3. The system should utilize secure protocols (SNMPv3, SSHv2 and HTTPS) for network management, configuration, alarms and events.
4. If a P-25 system is proposed, the proposed radio system must comply with the most current, applicable TIA-102 documents as adopted by TIA at the time of proposal submission.
5. If a non-P-25 system is proposed, Proposer must clearly demonstrate how its system achieves security that is comparable to current P-25 security requirements. If it is not comparable, Proposer should describe in detail how its security standards differ from current P-25 security requirements and address how Proposer would resolve any security issues such differences may cause.

4.11 Subscriber Location/GPS Requirements

Proposals should provide specifications and requirements for an interface between the proposed trunked system to one or more third party application and/or data servers to implement location aware applications such as dispatch mapping, closest unit dispatch, etc. The Proposer must define the full feature set provided by the proposed interface. The following are the minimum desired subscriber location/ Global Positioning System (GPS) requirements.

1. The interface should provide access to all location data generated by the user units equipped and activated with GPS receivers.
2. The interface should allow the execution of commands related to the collection of location information.

3. The system should support on-demand GPS location request dispatcher and 100 active units reporting location once every 5 minutes.
4. The system should include any gateway and server equipment required to enable unit locations services based upon GPS location transferred over the trunked system.
5. If a P-25 purchased system is proposed, the P-25 Tier 2 GPS standard should be employed.

4.12 Dispatcher Console Requirements

1. The system should include 3 hardware-based dispatch operator consoles at each of the following locations (total of 9 consoles):
 - a. 1 Lakeshore Drive, Moccasin, CA, 95347
 - b. 1000 El Camino Real, Millbrae, CA, 94030
 - c. 1990 Newcomb Avenue, San Francisco, CA 94124
2. If a P-25 system is proposed, the consoles must meet all P-25 standards including Console Sub-System Interfaces (CSSI) as specified in the P-25 TIA specifications.
 - a. Any CSSI-compatible console product must be able to interface with the provided system.
 - b. All consoles must support all of the features requested in this section.
 - c. The console systems must be a mission critical, Internet Protocol (IP) based platform.
 - d. The system must be P-25 system compliant with all applicable TIA-102 Standards; latest published revision as of the date of the proposal response and brought up to the latest revision as of the date of start of Final System Acceptance testing.
 - e. All P-25 system equipment must be equipped, configured, and licensed to provide concurrent use of both Phase 1 and Phase 2 subscribers without user or dispatcher intervention at both the talkgroup and channel level. Proposer shall fully describe the technical and operational aspects of this capability in the proposed system as well as any associated cost effects.
 - f. The system core and all subsystems, as well as subscriber radios, must be capable of being programmed with any ID within the P-25 range. The system hardware and software must have the capability adding an Inter-RF Sub-system Interface (ISSI), compliant with the P-25 TIA standards.

3. Proposals must provide the functional and technical specifications for any proposed console. Functional and technical specifications should demonstrate the following desired functionalities and features:
- a. All consoles should be able to encrypt and decrypt secure voice communications using AES encryption or an industry standard symmetric encryption algorithm with the capability to handle multiple encryption keys. Channels should display a distinctive icon indicating whether a particular channel is using encryption.
 - b. The console system, inclusive of its supporting LAN/networking system, should provide appropriate management and priority of operations.
 - c. Voice and console operations traffic should have priority over background data traffic (i.e. system and software patches, security updates).
 - d. Console operator user interface operations should have priority over background task processing (i.e. system updates should be able to be delayed at the operators' discretion).
 - e. Console LAN should be designed such that minimal network retries occur while supporting both the mission critical audio traffic as well as network data traffic, including software, virus updates patches etc.
 - f. The console system alias database and the radio system alias database should be of a unified design. Systems requiring multiple entries of alias information will not be acceptable.
 - g. Each console should be stand-alone and not dependent on other consoles to maintain operations.
 - h. The console system should employ redundant hot standby cards, power supplies, controllers, routers, and switches to prevent a single point of failure.
 - i. The dispatch system management console terminals should have the following capabilities:
 - i. Be capable of performing all administrative functions, including the creation and deletion of user profiles.
 - ii. Be provisioned with limitations by management system user's profile.
 - iii. Provide console position management that is accessible from the console position with properly authorized access by user profile.
 - iv. Support management, supervisory, and user profiles.
 - v. Contain log-in profile/ID capabilities that can be segregated by discipline and location.
 - j. The console system should allow patching among any combination of telephone line, trunked talk group, and non-trunked channel resources in the system.
 - k. The console system should allow the selection of multiple talk groups and/or multiple conventional channels or any combination of these resources.

- I. The console system should allow for the console operator to hear field units while dispatch operators transmit on all trunked talk groups.
- m. Desired Operator Position Requirements:
 - i. All dispatch console equipment supplied should operate 24 hours a day, 7 days a week, 365 days a year.
 - ii. Each dispatch console should be equipped with:
 - 1. A 20" or larger high resolution display monitor.
 - 2. A standard 101-key keyboard compatible with industry standard USB interfaced keyboards.
 - 3. A mouse or other pointer control device (e.g., touchpad or trackball) compatible with industry standard USB interfaced pointer control equipment.
 - 4. A microphone.
 - iii. Each dispatch console should support a variety of headset options. Each position should have dual standard headset jacks, each with two volume controls (one for radio and one for telephone), allowing the operator to hear select audio via a headset or handset and allow the operator to respond via a microphone, headset, or handset. The headset should interface to both the telephone instrument and the backup control station at the dispatch position.
 - iv. Each dispatch console should contain a heavy-duty footswitch to allow the operator to transmit hands-free on the selected channel/talk group.
 - v. Each console computer should have current production Central Processing Units (CPUs) with computer platform(s) in accordance with the SFPUC standards and should be certified for the latest version of Windows operating system available prior to the start of acceptance testing.
 - vi. Each dispatch console should be equipped with local recall recorders allowing the operator to play back recent radio or telephone traffic. This feature will be independent of the external voice logging recorder. The recorder should record at least 20 minutes of the current radio and telephone communications, and it should "loop" with first-in, first-out overwriting. Controls should appear as soft-buttons selectable on the console display screen.
 - vii. For console configurations that have an integrated local recall recorder using the console hardware (i.e. not standalone), the console local recall recorder audio should go to a separate speaker with a manual volume control.

- viii. Each dispatch console user interface should provide sufficient system status information to allow operators to adjust for system events and errors.
- ix. Each dispatch console should have the following features:
 1. Selected audio with volume control
 2. Unselected audio with volume control
 3. Selected channel/talk group push to talk
 4. Console operator side tone in headset for telephone or radio operation
 5. Instant push to talk for each channel/talk group
 6. Priority channel marker
 7. Channel/talk group receive activity indicator
 8. Mute for each channel/talkgroup
 9. Unselected channels/talk groups mute with time out timer
 10. Channel/talk group multi-select
 11. Channel-to-channel, channel-to-talk group, and talk group-to-talk group patch
 12. Unit identification with alias display
 13. Paging and Call-Alert functions from aliased Unit ID
 14. Two headset jacks each with two volume controls (radio and phone)
 15. Instant recall recorder
 16. Receive "Call" indicator
 17. Channel/Talk group Busy
 18. Cross-Busy indication among consoles
 19. Cross-Mute among consoles on channels/talk groups as may be needed
 20. Console user interface with a context sensitive on-line function.
- x. Help elements should be customizable, such as providing specific procedures for channel resources.
- xi. Each dispatch console should be capable of over the network programming (i.e. configurable over the Local Area Network(LAN) or IP-based). Consoles should connect to the system infrastructure with a standard IP connection allowing a console connected anywhere to the radio system IP network to dispatch for any configured subset of the system users visible on the network without reliance on access to any equipment elsewhere on the network which might become unavailable in the case of partial network failure.

4. Proposals must provide the unit cost for consoles at different suggested volume options given Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations.

4.13 Site Control Equipment Requirements

1. It is preferred that routers, switches, and servers consist of "Commercial off the Shelf" (COTS) products to the greatest extent possible for site control equipment. Proposals should clearly call out exceptions to the use of COTS for site control equipment.
2. The site control equipment should be capable of operating independently in trunked mode in the event of failure of, or lost connectivity to, the network core.
3. All site control equipment should operate in the temperature range of 20°F - 110°F without degradation.
4. If a P-25 system is proposed, the site control equipment must fully support P-25 functionality including Phase 1 and Phase 2 dynamic operation.

4.14 Network Management System Requirements

For all proposed purchase or lease to own systems, a Network Management System (NMS) is requested for system monitoring, troubleshooting, and maintenance management. If a leased system is proposed, SFPUC must have access to the lessor's NMS. Remote Terminal Units (RTUs) will be located and connected to equipment to allow control and monitoring of their functions.

1. Proposals should provide detailed functionalities for the proposed NMS, taking into account Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations and existing Microwave NMS.
2. The Proposer should configure and price the NMS such that addition of any number of subscribers and/or talk groups at any point during the lifetime of the system can be accomplished by the SFPUC at no additional charge beyond the initial cost of system acquisition.

4.15 Network Management Terminal Requirements

For all proposed purchase or lease to own systems, a Network Management Terminal (NMT) is requested. The NMT must be installed at the SFPUC Moccasin, Sunol, and Millbrae locations.

1. Proposals must provide detailed functionalities for their proposed NMT, taking into account Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations.
2. The NMT should provide primary processing, display, and control of information to and from a variety of RTU locations and display system status and alarm conditions.
3. The NMT should provide remote access to the NMS to check its operational status and to view alarms.

4.16 Remote Terminal Units Requirements⁵

1. For all proposed purchase or lease to own systems, RTUs should allow the NMS to monitor the status of equipment not monitored via P-25 internal protocols (if applicable), SNMP traps, or the backhaul alarm system. Equipment to be monitored or controlled by RTUs may include the following radio network components:
 - a. Site facilities, including equipment shelters, towers, antennas and antenna systems, lighting, power, generators
 - b. Microwave radios
 - c. Data network equipment including routers, switches
 - d. Antenna System forward and reflected power as well as Voltage Standing Wave Ratio (VSWR)
2. RTUs should be fully compatible with the NMS and NMTs supplied and provide complementary functionality wherever necessary to provide complete control of the entire working system.
3. At least one RTU should be located at each radio site that serves either as a relay site for the microwave backhaul.

⁵ If Proposer is proposing a leased and/or commercial deployed system, many or all of the requirements of this section may not be applicable.

4. RTUs should support timestamp and system time synchronization.
5. Provision for terminations for all monitored points should be on suitable terminal blocks providing ease of installation, testing, and maintenance.
6. RTUs should be capable of monitoring, controlling, and tracking different alarm types (e.g., dry contact, sensor, environmental).
7. RTUs should support the following points:
 - a. Status/alarms – 48 minimum expandable to 256 points
 - b. Control outputs – 8 minimum expandable to 32
 - c. Analog inputs – 8 minimum expandable to 16

4.17 Asset Maintenance Management System Requirements (OPTIONAL)

Proposers may offer an Asset Maintenance Management System (AMMS) as an optional line item.

1. The AMMS should be capable of importing/exporting data that employs asset tracking, and report generation.
2. The AMMS should provide the ability to be hosted on the SFPUC's network and have sufficient flexibility to be modified by the SFPUC to meet its' specific needs.
3. Key AMMS attributes include inventory management of infrastructure and user equipment.
4. Proposers may also propose integration with the radio system database to push/pull individual radio data between the AMMS and the core radio network.

4.18 Radio Requirements

4.18.1 Voice Features Requirements

The system radios should include, at a minimum, the following public/personnel voice features:

1. Push-To-Talk Identification (PTT-ID)
2. Group Call
3. Private Call
4. Emergency Alert
5. Emergency Call
6. Selective Call

7. Selective Alert
8. Radio Inhibit
9. Status/Message
10. Talk Group Patch
11. Multi-group or Announcement Group Call
12. Digital Audio Recording
13. GPS Location and Monitoring (depending on the region or radio holder)
14. Texting (depending on the region or radio holder)

4.18.2 Subscriber Radio Requirements

1. Proposals must describe in detail the functional and technical specifications for any subscriber (user and/or field) radio equipment offered. Functional and technical specifications should demonstrate that all user radio equipment:
 - a. Is configured for use on the proposed radio system.
 - b. Complies with applicable requirements of Part 90 and Part 15 of the FCC Rules and Regulations, as well as appropriate TIA/EIA and similar standards and must be FCC type accepted in accordance with FCC Part 90 rules and regulations for the specific application.
 - c. Meets MIL-STD-810 C, D, E, and F and provides the options to operate 6.25KHz very narrow modulation.
 - d. Is software user configurable.
 - e. If a P-25 purchased system is proposed, has the following operating modes:
 - i. Trunked P-25 Phase 1 on-network
 - ii. Trunked P-25 Phase 2 on-network
 - f. Supports an industry standard symmetric encryption algorithm such as AES. Proposals shall state whether a specific hardware board/card must be ordered with the radio to support AES. If software only is required, Proposals shall state whether this feature can be added at any time after initial purchase and field deployment.
2. Proposals must provide the unit cost for each item below at different suggested volume options given Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations.
 - a. Portable radios and accessories
 - b. Mobile radios and accessories
 - c. Vehicular Extenders

- d. Desk sets⁶
- e. Control Stations - Local Controlled ⁷
- f. Control Stations – Remote Controlled
- g. Control stations – Console controlled

4.18.3 Portable Radio Requirements

1. Proposals must provide the functional and technical specifications for any portable radio equipment offered. Functional and technical specifications should demonstrate that all portable radio equipment:
 - a. Is of high quality and provide high reliability under heavy use in severe environments.
 - b. Complies with applicable requirements of Part 90 and Part 15 of the FCC Rules and Regulations, as well as appropriate TIA/EIA and similar standards and must be FCC type accepted in accordance with FCC Part 90 rules and regulations for the specific application.
 - c. Is three-watt at UHF (800 MHz) and five-watt at UHF (450 MHz).
 - d. Has flexible half wavelength dipole antennas.
 - e. Possesses the following desirable features:
 - i. If a P-25 system is proposed, full compliance with P-25 Phase 1 and Phase 2 features and operation.
 - ii. If a non P-25 system is proposed, compliance with the FCC stage goal of long term RF efficiency utilizing the 6.25 KHz vary narrow modulation.
2. Functional and technical specifications should provide the following minimum radio information:
 - a. Radio dimensions
 - b. Radio weight with battery
 - c. Antenna type with connector type
 - d. Channel/mode capacity
 - e. General features, transmit/receive parameters, and mechanical specs per EIA/TIA

⁶ Desk sets must have full digital remote control over the control station for which they are connected. Multiple desk sets must be capable of sharing the control station.

⁷ Local controlled stations will be limited to stations in Millbrae, San Francisco, and Moccasin.

3. Proposals must provide the unit cost for a standard model portable radio (including software, licenses, antenna, belt clip and battery) at different suggested volume options given Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations.

4.18.4 Battery Requirements

1. Proposals must include radio batteries that offer the following desired functionalities and features:
 - a. All batteries should be Lithium-ion and without cadmium.
 - b. Standard capacity batteries should provide a minimum operational use of 8 hours based on a 5-5-90 duty cycle (5% transmit, 5% receive, 90% standby).
 - c. High capacity batteries should provide a minimum operational use of 10 hours based on a 10-10-80 duty cycle (10% transmit, 10% receive, 80% standby).
2. Proposers must include the following technical specifications for each radio battery used:
 - a. Total battery life-cycle expectancy
 - b. Recharge time
 - c. Operational time
 - d. Dimensions
 - e. Weight
 - f. Warranty
 - g. Intelligence of the battery charger, whether single unit, or multi-unit to extend the life of the batteries.
 - h. Whether the battery chargers are capable of cycling the battery by application of load to condition batteries.
 - i. Whether the battery chargers are capable of gauging the capacity of the battery after recharge and indicate whether the battery failed the test.
3. Proposals must provide the unit cost for recommended batteries at different suggested volume options given Proposer's evaluation of SFPUC's business requirements upon evaluating SFPUC's sites and business operations.

4.19 Technical Services

The SFPUC is requesting proposals to provide a secure, reliable, cost effective, fully turn-key, state-of-the-art radio system. All Proposals must contain a detailed scope of work addressing each of the key subject matters discussed below.

1. Project Schedule. The Proposer shall develop and maintain an approved, resource-loaded, base-lined project schedule including tasks, milestones, start and end dates with task prerequisites. The project should be completed no later than fifteen (15) months from the project start date. The project schedule must address the following at a minimum:

- a. The detailed site surveys
- b. Preliminary design review
- c. Detailed design review
- d. Site preparation
- e. Equipment manufacturing
- f. Factory acceptance test
- g. Equipment delivery
- h. System installation
- i. System configuration
- j. System optimization
- k. Acceptance testing
- l. Coverage testing
- m. Technical training
- n. Fleet map development (talk group mapping)
- o. Construction completion
- p. User migration and Cutover
- q. System documentation development and delivery
- r. System and equipment warranty

2. Project Meetings: Bi-weekly project status meetings shall be scheduled following contract award and the initial kickoff meeting. The Proposer will be responsible for scheduling the meetings as well as preparing meeting agendas and minutes. Meeting agenda items must include, as a minimum, the following items:

- a. Schedule review
- b. Status of deliverables
- c. Risks and issues and the mitigation plans
- d. Changes
- e. Plans for the next period
- f. Action item assignments
- g. Punch list review

3. Project Punch List: When the project is 90% complete, the Proposer shall establish and maintain a punch list, as mutually agreed to with the SFPUC, for site facilities, equipment, and for acceptance tests. The punch list must be maintained in real time. If responsibility for

resolving an item transfers to another person or group, a new entry must be added to the punch list and the original entry must be appropriately noted. The Proposer will be responsible for reviewing each punch list item, and advising the SFPUC of any changes. The status of punch list items shall be reviewed and updated during each bi-weekly status meeting.

- 4. Project Staffing:** The Proposer shall manage project staffing based on workload and the level of effort throughout the implementation process; however, the Proposer shall staff a project manager (PM) and project engineer (PE) throughout the duration of the project. The personnel assigned to these positions may not change without prior approval by the SFPUC. The SFPUC reserves the right to accept or reject any proposed staffing changes throughout the duration of the project. The SFPUC reserves the right to have the Proposer replace project staff during the project.
 - a. PM:** The Proposer's PM shall bear full responsibility for: (i) supervising and coordinating the installation and deployment of the communications system; (ii) developing and accepting the Project Management Plan; (iii) managing the execution of the project against that plan; (iv) overseeing the day- to-day project activities, deliverables, and milestone completion; and (v) conducting the bi-weekly status meetings.
 - b. PE:** The Proposer's PE shall have the primary responsibility for: (i) managing the system design and ensuring installation of the system in accordance with the approved system design; (ii) supervising the development of block diagrams, system level diagrams, and rack diagrams; (iii) assisting the installation team in completing the system installation; (iv) supervising the development and execution of the Coverage Acceptance Test Plan (CATP) and the Final Acceptance Test Plan (FATP); and (v) guiding the project team through the processes and procedures necessary to prove that the system performs as specified in the proposal.

- 5. Quality Assurance/Quality Control Plan:** Proposals must contain a Quality Assurance/Quality Control (QA/QC) plan that specifically describes the plans and procedures that will ensure the proposed system design complies with the standards and requirements described in this RFP. The proposed QA/QC plan must address the following minimum project areas:
 - a. Design analysis and verification
 - b. Radio Frequency (RF) coverage analysis and verification
 - c. Design changes and document control
 - d. Material shipping, receiving, and storage

- e. Site preparation (if required)
- f. Field installation and inspection
- g. Equipment inventory and tracking
- h. System testing and validation
- i. Software regression testing
- j. Deficiency reporting and correction
- k. Implementation and cutover
- l. Training and certification

6. Change Order Plan. Proposals must contain a Change Order Plan that outlines the change order process. The Change Order Plan must outline how the parties can document and formally approve all changes, including but not limited to, changes to the scope of work, contract price, implementation plan, and project schedule.

7. System Implementation, Testing, and Acceptance. Proposals must detail and define each item below related to system implementation, testing, and acceptance:

- a. Radio Rollout Plan
- b. Standard Operating Procedures
- c. Systems Staging
- d. System Installation
- e. System Inspection
- f. Subscriber Installation
- g. Coverage Area Test Plan
- h. Final Acceptance Test Plan
- i. As-Built Documentation
- j. 180-Day Burn-In Period
- k. System Acceptance
- l. Train the Trainer User Training⁸
- m. Technical and System Management Training⁹

⁸ The Proposer must agree to provide computer-based customizable training materials for use by SFPUC trainers in subsequent training to train SFPUC user personnel.

⁹ The Proposer must train the SFPUC employees or designated individuals. The quantity of trainees expected for technical training includes 12 technicians and 2 engineers over 2 separate sessions. One class will be held in Millbrae, CA and one in Moccasin, CA. The Proposer shall provide comprehensive technical training for the SFPUC and other SFPUC technical staff charged with managing the system. This training must include, but will not be limited to: (a) planning and configuring the new system; (b) developing and implementing system and network

- n. System Management Training¹⁰

4.20 System Warranty and Post Implementation Support

Proposals must clearly identify choices between available warranty options, including extended warranty options. For each option, Proposers must clearly identify what is covered and the duration of said coverage. Proposals should include a minimum of an initial 5-year warranty, 24/7 support, software and firmware upgrade support, and spare parts and equipment. System performance, installation, and all hardware, parts, software, and materials (including third-party equipment) must be warranted for a period of five years, including all related return and delivery fees.

- a. **Lifecycle Support.** The Proposer must provide spare parts and equipment, technical support and engineering services at a discounted rate for the life of the contract. Proposer shall specify all discount rates in their proposal.
- b. **System Spare Equipment.** The Proposer must include recommended initial spare parts and equipment to be procured as part of the initial contract for the system, subsystems, and individual equipment, including but not limited to all Proposer identified Field Replaceable Units (FRUs), infrastructure components having no FRUs but that can cause a critical failure (e.g., antenna systems, other non-modular components).

profiles and configurations; (c) performing database management functions; (d) monitoring and managing the system's performance, system maintenance, repair, component upgrades and troubleshooting; (e) writing and printing system reports; and (g) using the Proposer provided coverage modeling tool.

¹⁰ The quantity of trainees expected for system management training includes 12 technicians and 2 engineers over 2 separate sessions. One class will be held in Millbrae, CA and one in Moccasin, CA. The Proposer shall provide system management training including fleet mapping and radio programming and dispatch console system administration.

5 Qualifications

The minimum qualifications set forth below are required for a Proposer to be eligible to submit a proposal in response to the RFP. Proposals must clearly demonstrate compliance with the specified minimum qualifications. Proposals that do not clearly demonstrate compliance with the minimum qualifications may be rejected by the City without further consideration. SFPUC reserves the right to request clarification from Proposers who fail to meet any minimum qualification requirements prior to rejecting a Proposal for failure to demonstrate compliance.

5.1 Prime Proposer and Joint Venture (JV) Partners Minimum Requirements

Any Joint Venture (“JV”) responding to this RFP must clearly identify the lead Proposer (“Lead JV Partner”) and non-leading partner (“Non-Leading JV Partner”). A firm cannot be a Prime Proposer on more than one (1) proposing team. In addition, if a designated Prime Proposer intends to be listed as a subconsultant on another competing proposal, the Prime Proposer must fully disclose such intent to the affected parties 30 days prior to the due date for Proposal submittal. Failure to comply with these restrictions may result in the rejection of one or more affected Proposals. A Prime Proposer or JV Partner cannot participate in more than one interview. A subconsultant or individual on more than one (1) proposing team cannot participate in the interview.

To qualify as a *Prime Proposer or Lead JV Partner* for this RFP, a Prime Proposer or Lead JV Partner must have been in business for a minimum of 10 years providing IT consulting services to utilities similar in size and complexity as the SFPUC.

5.2 Non-Leading JV Partner Qualifications

To qualify as a *Non-Leading JV Partner* for this RFP, the Non-Leading JV Partner must have been in business for a minimum of 5 years providing IT consulting services to utilities similar in size and complexity as the SFPUC.

5.3 Project Team Minimum Qualifications

In addition to meeting the qualifications listed under Section 5.1, the Prime Proposer, JV and/or subconsultants must demonstrate the following minimum qualifications either individually, or as a team:

1. In possession of all applicable and current licenses, certifications, etc.

2. A demonstrable portfolio consisting of at least two past radio communications system projects of similar size and nature as the project outlined in this RFP. Qualifying radio communications system projects are defined as the installation of radio equipment, configuration of trunking technologies, communication tower preparation, installing antenna mounting structures, transmission cabling, site power, connectivity, and other supporting equipment. For at least two projects completed by Prime Proposer or JV, the Proposal must contain the following information:
 - a. Brief description of the project
 - b. Number of sites
 - c. Number of subscribers
 - d. Contract value
 - e. Number of subscribers
 - f. Contact Name
 - g. Contact Email Address
 - h. Contact Telephone Number

3. A PM that possesses at least five years' experience and a demonstrable portfolio consisting of at least one radio communications system projects of similar size and scope to this RFP. Qualifying radio communications system project is defined as the installation of radio equipment, configuration of trunking technologies, communication tower preparation, installing antenna mounting structures, transmission cabling, site power, connectivity, and other supporting equipment. For at least one project managed by the PM, the Proposal must contain the following information:
 - a. Brief description of the project
 - b. Number of sites
 - c. Number of subscribers
 - d. Contract value
 - e. Number of subscribers
 - f. Contact Name
 - g. Contact Email Address
 - h. Contact Telephone Number

4. A PE that possesses at least five years' experience and a demonstrable portfolio consisting of at least one radio communications system projects of similar size and scope to this RFP. Qualifying radio communications system project is defined as the installation of radio equipment, configuration of trunking technologies,

communication tower preparation, installing antenna mounting structures, transmission cabling, site power, connectivity, and other supporting equipment. For at least one project engineered by the PE, the Proposal must contain the following information:

- a. Brief description of the project
- b. Number of sites
- c. Number of subscribers
- d. Contract value
- e. Number of subscribers
- f. Contact Name
- g. Contact Email Address
- h. Contact Telephone Number

6 Evaluation and Selection Criteria

6.1 Initial Screening

SFPUC and CMD staff will review each Proposal for initial determinations on responsiveness and acceptability in an Initial Screening process. Elements reviewed during the Initial Screening include, without limitation: Proposal completeness, compliance with format requirements, compliance with minimum qualification requirements, verifiable references, and compliance with LBE requirements.

Proposals will not be scored during the Initial Screening process. Initial Screening is simply a pass/fail determination as to whether a Proposal meets the threshold requirements described above. A Proposal that fails to meet these requirements will not be eligible for consideration in the Evaluation Process described in Section 7.2 below. The City reserves the right to request clarification from Proposers prior to rejecting a Proposal for failure to meet the Initial Screening requirements. Clarifications are limited exchanges between the City and a Proposer for the purpose of clarifying certain aspects of the Proposal, and will not provide a Proposer the opportunity to revise or modify its Proposal. Proposals that meet the Initial Screening requirements shall proceed to the Evaluation Process.

6.2 Selection Panel and Evaluation Process

The Selection Panel will be comprised of individuals who are knowledgeable on the subject matter, and may include staff from the SFPUC, other City agencies, and/or other utilities or organizations. City staff closely involved with the preparation of this RFP and the development of the scope of services will not be allowed to be part of the Selection Panel. During the

Evaluation Process, the Selection Panel will evaluate each written proposal and each Proposer’s performance during the oral interview. Points will be allocated as follows:

Evaluation Section	Max. Points
Phase 1: Written Proposal Evaluation	100
Executive Summary	5
Team Structure and Work Approach	5
Project Team Profiles and Resumes	10
Functional, Technical and System Requirements	40
Cost	40
Phase 2: Oral Interview Evaluation	50
Total	150

The CMD Contract Compliance Officer will assess proposal compliance with LBE requirements and assign a rating bonus to the written proposal score, if applicable. The written proposal scores, or CMD-adjusted written proposal scores (if applicable), will then be tabulated and Proposers will be ranked starting with the Proposer receiving the highest score, then continuing with the Proposer receiving the second highest score, and so on.

Proposers must obtain a minimum score of 50 points on their written Proposal (first phase of the evaluation process) to be considered for a panel interview (second phase of the evaluation process).

6.3 Written Proposal Evaluation (100 Points)

6.3.1 Cover Page, Commitments and Release of Liability

All proposals require a signed cover letter that clearly provides the contact information for all Proposers, JVs and/or subconsultants participating in this RFP. If responding as a JV, clearly identify the Lead JV Partner and the Non-Leading JV Partner.

Please copy and paste the commitments listed below in your cover letter:

- A. Proposer’s contact person is authorized to make the below commitments on behalf of his or her company;
- B. Proposer has reviewed the Conflict of Interest Section of this RFP, and agrees to comply with all conflict of interest rules and restrictions;
- C. Proposer has the ability and qualifications to conduct the work described in this RFP;

- D. Proposer has read and agrees to the applicable Standard Terms and Conditions for the Purchase of Equipment (P-250), Equipment Lease Agreement (P-530), Equipment Maintenance Agreement (P-540), Software License Agreement (P-545), Software Maintenance Agreement (P-540); Professional Services Agreement (P-600), all attached hereto as Attachments 2A through 2F, except as noted in the Proposal;
- E. Proposer agrees to fully comply with all applicable laws, including San Francisco laws.

As part of the submittal package, Proposers must also sign and return the Release of Liability attached here to as Attachment 3.

6.3.2 Executive Summary (5 Points)

Proposer must provide an executive summary that describes each item below:

- A. The strengths of the bidding team;
- B. Your understanding of the services, facilities, and equipment required to meet SFPUC's needs as described in the RFP; and
- C. Your general approach for meeting the SFPUC's needs for services, facilities, and equipment as described in the RFP.

6.3.3 Team Structure and Work Approach (5 Points)

Proposer must describe the overall project approach, including but not limited to the following:

- A. Describe and provide a diagram of your team organization and reporting relationships both internally (within consulting team) and externally (including City);
- B. Clearly identify each team member's availability through the term of this Agreement. Explain how you will resolve the absence of any team member during the term of this project;
- C. Describe your general processes for coordinating and managing work activities to ensure the quality and accuracy of your deliverables. Include your general processes for resolution and/or notification of technical conflicts and variances in deliverables;
- D. Describe your general processes for coordinating and managing work activities to ensure meeting project schedules, including milestones and deliverable due dates. Include your general processes for resolution and/or notification of schedule variances; and
- E. Describe your general processes for controlling, tracking and reporting costs. Include your general processes for resolution and/or notification of cost variances.

6.3.4 Project Team Profiles and Resumes (10 Points)

For each Proposer, Lead JV Partner, Non-Leading JV Partner (if applicable), and subconsultant assigned to this project, submit detailed profiles and/or resumes to demonstrate that the project team meets all of the qualification requirements outlined in Sections 5.1, 5.2 (if applicable) and 5.3 of this RFP.

6.3.5 Functional, Technical and System Requirements (40 Points)

Each proposal must include a detailed response related to the mandatory and desired requirements outlined in Section 4 of this RFP, clearly identifying those that are met, and those that are not. If significant cost savings can be achieved by foregoing any of the requirements in this RFP, Proposers should provide an explanation and possible alternatives.

6.3.6 Cost (40 Points)

Each proposal must provide detailed and itemized pricing. At a minimum, cost proposals should provide pricing for each of the following items, both upfront and over a period of ten years:

- Permitting and Regulatory Fees and Services (Section 4.2)
- Spectrum Related Fees and Services (Section 4.3)
- Site Development and Maintenance Costs for all Communication, Microwave Backbone and Transmitter/Receiver Sites (Section 4.6, Section 4.7)
- Equipment and Software, including:
 - Receiver Voting Equipment (Section 4.8)
 - Tower Antennas (Section 4.9)
 - Security Equipment and Software (Section 4.10)
 - GPS Software (Section 4.11)
 - Dispatcher Console Equipment (Section 4.12)
 - Site Control Equipment (Section 4.13)
 - NMS and NMT Systems(Sections 4.14 and 4.15)
 - RTUs (Section 4.16)
 - Asset Maintenance Management System (Section 4.17)
 - Radios and Peripherals (Section 4.18)
- Technical Services (Section 4.19), including:
 - Design-Build Services
 - Installation Services
 - Configuration Services
 - Coverage Testing
 - Other

- System Warranty, Maintenance and Post Implementation Support (Section 4.20)
- Taxes
- Interest
- Shipping/Freight
- Etc...

All pricing proposals must clearly indicate what is STANDARD and what is OPTIONAL.

Where applicable, Proposers should group cost centers (Example: “Total cost per site”, “Total cost at a specific coverage level”, etc.).

Where applicable, optional volume discounts should also be noted.

In addition, Proposers are encouraged to present a range of financing options for the SFPUC to consider. Financial and financing proposals may be developed for the system infrastructure, subscriber products, or both. If providing financing options, please provide a full explanation of each financial option to include:

- Concise statement of the terms of the financial proposal including which financing option is being proposed.
- Annual cost for each financial option presented.
- Effective interest rates and other factors to aid in evaluation of each financial option, as applicable.

The Total System Cost of a proposed system will equal the proposed cost over a period of ten years for all standard items plus any optional items offered by the Proposer *and* selected by the SFPUC. The Total System Cost will be assigned a maximum of 40 points using the matrix below:

Total Points	Total System Cost over Ten Years	
	Low	High
40	\$8,500,000	\$9,749,999
35	\$9,750,000	\$10,999,999
30	\$11,000,000	\$12,249,999
25	\$12,250,000	\$13,499,999
20	\$13,500,000	\$14,749,999
15	\$14,750,000	\$15,999,999
10	\$16,000,000	\$17,249,999
5	\$17,250,000	\$18,499,999
0	Greater than:	\$18,500,000

6.3.1 Proposal Submission

Please submit four hard copies of your proposal by regular mail or in person to the address provided below:

Taraneh Moayed
Principal Administrative Analyst
SFPUC IT Services
525 Golden Gate Avenue, 5th Floor
San Francisco, CA 94102
Tel: 415-551-4377

6.4 Oral Interview Evaluation (50 Points)

The Selection Panel will hold oral interviews with each Proposer whose written proposal scored a minimum of 50 points. The Department will send a letter to all each Proposer regarding the format of the interview, the scoring criteria to be used during the interview, and the composition of the Proposer team to participate in the interview. The Department reserves the right to limit participation in the panel interviews to Proposers' key/lead team members and to exclude, for example, sub-consultants on multiple teams. After receipt of the letter, Proposer may request that SFPUC allow the Proposer to bring other participants, but SFPUC may deny this request.

The interview evaluation process shall include a presentation by the Proposer and/or interview questions from the Selection Panel. Those questions may include and be related to Proposer's and key/lead team members' qualifications, their work approach, project task descriptions, team organization, and any questions that seek to clarify proposal components. Proposers may also be scored on follow-up questions if clarification of Proposer's responses is necessary. The same set of interview questions will be used for all Proposers.

The Selection Panel will proceed to evaluate each Proposer based on each Proposer's presentation and responses. The CMD Contract Compliance Officer will assess proposal compliance with LBE requirements and assign a rating bonus to the oral interview score, if applicable. The oral interview scores, or CMD-adjusted oral interview scores (if applicable), will then be tabulated. Oral interviews will be worth a maximum total of 50 points.

7 Award of an Agreement

7.1 Agreement Preparation and Approval

The SFPUC will select the highest scoring Proposer with whom staff will commence contract negotiations. The selection of any Proposer for contract negotiations shall not imply acceptance by the City of all terms of the proposal, which may be subject to further negotiation and approvals before the City may be legally bound thereby.

If a satisfactory contract cannot be negotiated in a reasonable time with the selected Proposer, then the City, in its sole discretion, may terminate negotiations and begin contract negotiations with the next highest scoring Proposer it deems qualified. The City, in its sole discretion, has the right to approve or disapprove any staff person assigned to its projects, and any staff substitutions, before and throughout the contract term. The City reserves the right at any time to approve, disapprove, or modify proposed project plans, timelines and deliverables, provided that all modifications are within the scope of services sought by this RFP.

After the terms and conditions of the agreement between the winning Proposer and SFPUC have been finalized, the SFPUC General Manager (“GM”) will make a recommendation to the SFPUC Commissioners that the agreement be approved. If the agreement contains a do not exceed amount of more than \$10,000,000, or is for a term of more than 10 years, approval from the Board of Supervisors will be required.

Once the Agreement is complete and all the necessary City approvals, the Agreement will be executed and certified, and a Notice of Agreement Award will be issued.

7.2 Standard Agreement Language

By submitting a proposal, Proposers acknowledge that they are willing and able to meet all of the City’s terms and conditions as stated in the applicable City form Agreements (Attachments 2A through 2E), unless otherwise noted by Proposer and proposed modifications are submitted in response to this RFP.

7.3 Agreement Administration

Performance of under the agreement may be executed in phases. City staff will determine the work to be conducted under each phase and authorize the start of each phase in accordance with the overall agreed upon project schedule.

The successful Proposer is hereby notified that work cannot commence until it receives a written Notice to Proceed (NTP). Any work performed without a NTP will be at the Proposer's own commercial risk.

8 Terms and Conditions

8.1 Errors and Omissions in RFP

Proposers are responsible for reviewing all portions of this RFP, including all Attachments. Proposers are to promptly notify SFPUC, in writing, upon discovery of any ambiguity, discrepancy, omission, or other error in the RFP. Modifications and clarifications will be made by addenda as specified in this RFP.

8.2 Objections to RFP Terms

Should a prospective Proposer object on any ground to any provision or legal requirement set forth in the RFP (including all Attachments and Addenda), including but not limited to Objections based on allegations that: (i) the RFP is unlawful in whole or in part; (ii) one or more of the requirements of the RFP is onerous, unfair or unclear; (iii) the structure of the RFP does not provide a correct or optimal process for the solicitation of the Services; (iv) the RFP contains one or more ambiguity, conflict, discrepancy or other error; or (v) the RFP unnecessarily precludes alternative solutions to the Services or project at issue, the prospective Proposer must provide timely written notice of Objection as set forth below.

a) An Objection must be in writing and must be received by the City no later than 5:00 p.m. on the 10th working date prior to the deadline for proposal submittal (as that deadline may be adjusted by Addenda). If an Objection is mailed, the prospective Bidder bears the risk of non-delivery within the required time period. Objections should be transmitted by a means that will objectively establish the date of receipt by the City. Objections or notices of Objections delivered orally (e.g., by telephone) will not be considered.

b) Objections must be delivered to:

Taraneh Moayed
SFPUC – IT Services
525 Golden Gate Avenue, 5th Floor
San Francisco, CA 94102

c) The Objection shall state the basis for the Objection, refer to the specific requirement or portion of the RFP at issue, and shall describe the modification to the RFP sought by the

prospective Proposer. The Objection shall also include the name, address, telephone number, and email address of the person representing the prospective Proposer.

d) The City, at its discretion, may make a determination regarding an Objection without requesting further documents or information from the prospective Proposer who submitted the Objection. Accordingly, the initial Objection must include all grounds of objection and all supporting documentation or evidence reasonably available to the prospective Proposer at the time the Objection is submitted. If the prospective Proposer later raises new grounds or evidence that were not included in the initial Objection, but which could have been raised at that time, then the City may not consider such new grounds or new evidence.

e) Upon receipt of a timely and proper Objection, the City will review the Objection and conduct an investigation as it deems appropriate. As part of its investigation, the City may consider information provided by sources other than prospective Proposer. At the completion of its investigation, the City will provide a written determination to the prospective Proposer who submitted the Objection. If required, the City may extend the proposal submittal deadline to allow sufficient time to review and investigate the Objection, and issue Addenda to incorporate any necessary changes to the RFP.

f) Objections not received within the time and manner specified will not be considered. A Proposer's failure to provide the City with a written Objection as specified above on or before the time specified above shall constitute a complete and irrevocable waiver of the ground(s) of objection and forfeit the Proposer's right to raise such ground(s) of objection later in the procurement process, in a Government Code Claim, or in other legal proceedings.

g) A Proposer may not rely on an Objection submitted by another Proposer, but must timely pursue its own Objection.

8.3 Interpretations, Addenda and Change Notices

Any interpretation of, or change in, the RFP will be made by addendum and shall become a part of the RFP and of any Agreement awarded. Change Notices in the form of Addenda will be posted at <http://sfwater.org/bids/bidDetail.aspx?bidid=3053>.

The Department will make reasonable efforts to post in a timely manner any modifications to the RFP. Notwithstanding this provision, the Proposer shall be responsible for ensuring that its proposal reflects any and all addenda posted by the Department prior to the proposal due date regardless of when the proposal is submitted. Therefore, the City recommends that the Proposer check the on <http://sfwater.org/bids/bidDetail.aspx?bidid=3053> before submitting its proposal to determine if the Proposer has read all posted addenda. The Department will not be responsible for any other explanation or interpretation.

8.4 Term of Proposal

By submitting a proposal for consideration, the Proposer agrees that the proposed services and prices are valid for 120 calendar days from the proposal due date, and that the quoted prices are genuine and not the result of collusion or any other anti-competitive activity.

8.5 Revision of Proposal

Notwithstanding the forgoing, a Proposer may withdraw or revise a proposal on the Proposer's own initiative at any time before the deadline for submission of proposals. The Proposer must submit the revised proposal in the same manner as the original proposal. A revised proposal must be received on or before the proposal due date.

In no case will a statement of intent to submit a revised proposal or the commencement of a revision process extend the proposal due date for any Proposer.

At any time during the proposal evaluation process, the Department may require a Proposer to provide oral or written clarification of its proposal. The Department reserves the right to make an award without receiving or accepting any clarifications of proposals received.

8.6 Errors and Omissions in Proposal

Failure by the Department to object to an error, omission, or deviation in the proposal will in no way modify the RFP or excuse the Proposer from full compliance with the specifications of the RFP or any Agreement awarded pursuant to the RFP.

8.7 Financial Responsibility

The Department accepts no financial responsibility for any costs incurred by a Proposer in responding to this RFP, participating in oral presentations, or negotiating an Agreement with the Department. The proposals in response to the RFP will become the property of the Department and may be used by the Department in any way it deems appropriate.

8.8 Proposer's Obligations under the Campaign Reform Ordinance

Proposers must comply with Section 1.126 of the San Francisco Campaign and Governmental Code, which states:

No person who contracts with the City and County of San Francisco for the rendition of personal services, for the furnishing of any material, supplies or equipment to the City, or for selling any land or building to the City, whenever such transaction would require approval by a

City elective officer, or the board on which that City elective officer serves, shall make any contribution to such an officer, or candidates for such an office, or committee controlled by such officer or candidate at any time between commencement of negotiations for such contract until (1) the termination of negotiations for such contract; or (2) three months have elapsed from the date the contract is approved by the City elective officer, or the board on which that City elective officer serves.

If a Proposer is negotiating for a contract that must be approved by an elected local officer or the board on which that officer serves, during the negotiation period the Proposer is prohibited from making contributions to:

- The officer's re-election campaign;
- A candidate for that officer's office; and
- A committee controlled by the officer or candidate.

The negotiation period begins with the first point of contact, either by telephone, in person, or in writing, when a Proposer approaches any city officer or employee about a particular contract, or a city officer or employee initiates communication with a potential Proposer about a contract. The negotiation period ends when a contract is awarded or not awarded to the Proposer. Examples of initial contacts include: (i) a vendor contacts a city officer or employee to promote himself or herself as a candidate for a contract; and (ii) a city officer or employee contacts a Proposer to propose that the Proposer apply for a contract. Inquiries for information about a particular contract, requests for documents relating to a RFP, and requests to be placed on a mailing list do not constitute negotiations.

Violation of Section 1.126 may result in the following criminal, civil, or administrative penalties:

1. Criminal: Any person who knowingly or willfully violates Section 1.126 is subject to a fine of up to \$5,000 and a jail term of not more than six months, or both.
2. Civil: Any person who intentionally or negligently violates Section 1.126 may be held liable in a civil action brought by the civil prosecutor for an amount up to \$5,000.
3. Administrative: Any person who intentionally or negligently violates section 1.126 may be held liable in an administrative proceeding before the Ethics Commission held pursuant to the Charter for an amount up to \$5,000 for each violation.

8.9 Sunshine Ordinance

In accordance with San Francisco Administrative Code Section 67.24(e), Proposers' bids, responses to RFP's and all other records of communications between the City and persons or firms seeking contracts shall be open to inspection immediately after a contract has been

awarded. Nothing in this provision requires the disclosure of a private person's or entity's net worth or other proprietary financial data submitted for qualification for a contract or other benefits until and unless that person or organization is awarded the contract or benefit. Information provided which is covered by this paragraph will be made available to the public upon request.

8.10 Public Access to Meetings and Records

If a Proposer is a non-profit entity that receives a cumulative total per year of at least \$250,000 in City-funds or City-administered funds and is a non-profit organization as defined in Chapter 12L of the San Francisco Administrative Code, the Proposer must comply with Chapter 12L. The Proposer must include in its proposal: (1) a statement describing its efforts to comply with the Chapter 12L provisions regarding public access to Proposer's meetings and records, and (2) a summary of all complaints concerning the Proposer's compliance with Chapter 12L that were filed with the City in the last two years and deemed by the City to be substantiated. The summary shall also describe the disposition of each complaint. If no such complaints were filed, the Proposer shall include a statement to that effect. Failure to comply with the reporting requirements of Chapter 12L or material misrepresentation in Proposer's Chapter 12L submissions shall be grounds for rejection of the proposal and/or termination of any subsequent Agreement reached on the basis of the proposal.

8.11 Reservations of Rights by the City

The issuance of this RFP does not constitute an agreement by the City that any contract will actually be entered into by the City. The City expressly reserves the right at any time to:

- A. Waive or correct any defect or informality in any response, proposal, or proposal procedure;
- B. Reject any or all proposals;
- C. Reissue an RFP;
- D. Prior to submission deadline for proposals, modify all or any portion of the selection procedures, including deadlines for accepting responses, the specifications or requirements for any materials, equipment or services to be provided under this RFP, or the requirements for contents or format of the proposals;
- E. Procure any materials, equipment or services specified in this RFP by any other means;
or
- F. Determine that no project will be pursued.

8.12 No Waiver

No waiver by the City of any provision of this RFP shall be implied from any failure by the City to recognize or take action on account of any failure by a Proposer to observe any provision of this RFP.

9 Contract Monitoring Division Requirements

9.1 Local Business Enterprise Goals and Outreach – Chapter 14B Requirements

The requirements of the Local Business Enterprise and Non-Discrimination in Contracting Ordinance, administered by the San Francisco Contract Monitoring Division (CMD) and set forth in Chapter 14B of the San Francisco Administrative Code as it now exists or as it may be amended in the future (collectively the “LBE Ordinance”), shall apply to this RFP.

9.2 LBE Subconsultant Participation Goals

The LBE subconsulting requirement for this project is 3%.

Pursuant to Sec. 14B.9 of the Administrative Code, bidders are hereby advised that the availability of Minority Business Enterprises (MBE), Women Business Enterprises (WBE) and Other Business Enterprises (OBE) to perform subcontract work on this project is as follows:

1.4% MBE 0.4% WBE 1.2% OBE

This requirement is calculated as a percentage of the total value of the goods and/or services to be provided. **The LBE subconsulting requirement can only be met with CMD-certified Small or Micro-LBEs located in San Francisco.**

Proposers are further advised that they may not discriminate in the selection of subconsultants on the basis of race, gender, or other basis prohibited by law, and that they shall undertake all required good faith outreach steps in such a manner as to ensure that neither MBEs nor WBEs nor OBEs are unfairly or arbitrarily excluded from the required outreach. Each firm responding to this solicitation shall demonstrate in its response that it has used good-faith outreach to select LBE subconsultants as set forth in S.F. Administrative Code §§14B.8 and 14B.9, and shall identify the particular LBE subconsultants solicited and selected to be used in performing the contract. For each LBE identified as a subconsultant, the response must specify the value of the participation as a percentage of the total value of the goods and/or services to be procured, the type of work to be performed, and such information as may reasonably be required to

determine the responsiveness of the proposal. LBEs identified as subconsultants must be certified with CMD at the time the proposal is submitted, and must be contacted by the Prime Proposer prior to listing them as subconsultant in the proposal. Any proposal that does not meet the requirements of this paragraph may be non-responsive.

In addition to demonstrating that it will achieve the level of subconsulting participation required by the contract, a Proposer shall also undertake and document in its submittal the good faith efforts required by Chapter 14B.8(D) & (E) and “CMD Attachment 2: Requirements for Architecture, Engineering and Professional Services Contracts”, all set forth in Attachment 4 to this RFP. However, pursuant to 1B.8 (B), if a Proposer submits a proposal that demonstrates LBE participation that exceeds by 35% of the established LBE subconsulting participation requirement for the project, the proposer will not be required to conduct good faith efforts or to file evidence of good faith efforts as required in Sections 14B. (D) and (E).

Proposals which fail to comply with the material requirements of S.F. Administrative Code §§14B.8 and 14B.9 and “CMD Attachment 2” attached hereto as Attachment 4 will be deemed non-responsive and will be rejected.

During the term of the contract, any failure to comply with the level of LBE subconsultant participation specified in the contract shall be deemed a material breach of contract. Subconsulting requirements can only be met with CMD-certified Micro and Small LBEs located in San Francisco, unless the RFP allows for SBA-LBE subconsultants to count towards the LBE participation requirement. Proposers should note that the LBE subconsulting percentage listed on its CMD Form 2A (the CMD Contract Participation Form) will be incorporated into the final Agreement.

9.3 LBE Prime/JV Participation

9.3.1 Micro LBE and Small-LBE Bid Discount/Rating Bonus

Rating bonuses apply to the procurement of services under this RFP because the anticipated Agreement amount is under \$10 Million.

The City strongly encourages response packages from qualified Micro and Small-LBEs. Pursuant to Chapter 14B, the following rating bonus will be in effect for the award of this project for any proposers who are certified by CMD as a Micro or Small- LBE, or joint ventures where the joint venture partners are in the same discipline and have the specific levels of participation as identified below. Certification applications may be obtained by calling CMD at (415) 581-2310. The rating bonus applies at each phase of the selection process. The application of the rating bonus is as follows:

- a) A 10% discount to a Micro or Small -LBE; or a joint venture between or among Micro or Small LBEs; or
- b) A 5% discount to a joint venture with Micro and/or Small-LBE participation that equals or exceeds 35%, but is under 40%; or
- c) A 7.5% discount to a joint venture with Micro and /or Small -LBE participation that equals or exceeds 40%; or
- d) A 10% discount to a certified non-profit entity.

If applying for a rating discount as a joint venture: The Micro and /or Small-LBE must be an active partner in the joint venture and perform work, manage the job and take financial risks in proportion to the required level of participation stated in the proposal, and must be responsible for a clearly defined portion of the work to be performed and share in the ownership, control, management responsibilities, risks, and profits of the joint venture. The portion of the Micro and/or Small-LBE joint venture's work shall be set forth in detail separately from the work to be performed by the non-LBE joint venture partner. The Micro and/or Small-LBE joint venture's portion of the contract must be assigned a commercially useful function.

9.3.2 SBA-LBE Bid Discount/Rating Bonus

SBA-LBE rating bonuses do apply to this Agreement because the anticipated agreement amount is under \$20 million.

Pursuant to Chapter 14B, the following rating bonus will be in effect for the selection process for this contractor any proposers who are certified by CMD as a SBA-LBE. A 5% rating bonus will be applied to any proposal from an SBA-LBE except that the 5% rating bonus shall not be applied at any stage if it would adversely affect a Micro or Small LBE proposer or a JV with LBE participation.

9.3.3 Required CMD Forms

All response packages submitted must include the following required CMD forms attached here to as Attachment 4 to this RFP:

- Form 2A – CMD Contract Participation
- Form 3 – CMD Non-Discrimination Affidavit
- Form 4 – CMD Joint Venture Form (if applicable)
- Form 5 – CMD Employment Form

If these forms are not returned with the response package, the response package may be determined to be non-responsive and may be rejected.

Failure to complete, sign and submit each of the required CMD/LBE forms may result in the response package being deemed non-responsive and rejected. This CMD Compliance Officer (CCO) for this project is:

Marcus Lange
Contract Monitoring Division
City and County of San Francisco
Tel: (415) 554-3106
Email: MLange@sfgwater.org

The City strongly encourages proposals from qualified LBEs. Certification applications may be obtained by calling CMD at (415) 581-2310 or by visiting the CMD website at www.sfgov.org/cmd.

9.4 Chapters 12B and 12C Requirements (Equal Benefits)

Effective June 1, 1997, Chapter 12B of the San Francisco Administrative Code was amended to prohibit the City from entering into contracts or leases with any entity that discriminates in the provision of benefits between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of employees. All proposing firms should be in the process of becoming compliant with Chapter 12B, if not already compliant. The Contract Monitoring Division (CMD) has developed rules of procedure and various resource materials explaining the equal benefits program. These materials are available by calling the CMD Equal Benefits Section at (415) 581-2310 or by visiting the CMD website at www.sfgov.org/cmd.

If you have any questions concerning the CMD Forms, you may call the CMD Equal Benefits Unit at (415) 581-2310.

10 Additional City Requirements

10.1 Insurance Requirements

Without in any way limiting Proposer's liability pursuant to the "Indemnification" section of the Agreements (Attachments 2A through 2E), Proposer(s) will be required to maintain in force, during the full term of any Agreement, insurance in the following amounts and coverage:

1) Required Coverages. Contractor must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages:

(a) Commercial General Liability Insurance with limits not less than \$1,000,000 each occurrence and \$2,000,000 general aggregate for Bodily Injury and Property

Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and

(b) Commercial Automobile Liability Insurance with limits not less than \$1,000,000 each occurrence, "Combined Single Limit" for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable; and

(c) Workers' Compensation, in statutory amounts, with Employers' Liability Limits not less than \$1,000,000 each accident, injury, or illness; and

(d) Technology Errors and Omissions Liability coverage, with limits of \$1,000,000 each occurrence and each loss, and \$2,000,000 general aggregate. The policy shall at a minimum cover professional misconduct or lack of the requisite skill required for the performance of services defined in the contract and shall also provide coverage for the following risks:

(i) Liability arising from theft, dissemination, and/or use of confidential information, including but not limited to, bank and credit card account information or personal information, such as name, address, social security numbers, protected health information or other personally identifying information, stored or transmitted in electronic form;

(ii) Network security liability arising from the unauthorized access to, use of, or tampering with computers or computer systems, including hacker attacks; and

(iii) Liability arising from the introduction of any form of malicious software including computer viruses into, or otherwise causing damage to the City's or third person's computer, computer system, network, or similar computer related property and the data, software, and programs thereon.

2) Commercial General Liability Insurance and Commercial Auto Liability policies must be endorsed to provide:

(e) Name as Additional Insured the City and County of San Francisco, its Officers, Agents, and Employees.

(f) That such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of the Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

3) The Workers' Compensation policy(ies) shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.

4) If Contractor will use any subcontractor(s) to provide Services, Contractor shall require the subcontractor(s) to provide all necessary insurance and to name the City and County of San Francisco, its officers, agents and employees and the Contractor as additional insureds.

5) All policies shall be endorsed to provide thirty (30) days' advance written notice to the City of cancellation for any reason, intended non-renewal, or reduction in coverages. Notices shall be sent to the City address set forth in the Section entitled "Notices to the Parties."

6) Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of the Agreement and, without lapse, for a period of three years beyond the expiration of the Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

7) Should any required insurance lapse during the term of the Agreement, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by the Agreement, effective as of the lapse date. If insurance is not reinstated, the City may, at its sole option, terminate the Agreement effective on the date of such lapse of insurance.

8) Before commencing any Services, Contractor shall furnish to City certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to City, in form evidencing all coverages set forth above. Approval of the insurance by City shall not relieve or decrease Contractor's liability hereunder.

10.2 Standard Agreement

The selected Proposer will be required to enter into an Agreement, substantially in the form of the Agreements attached hereto as Attachments 2A through 2E.

Proposers are urged to pay special attention to the requirements of Administrative Code Chapters 12B and 12C, Nondiscrimination in Contracts and Benefits, (Section 11.3 of this RFP); the Minimum Compensation Ordinance (Section 11.4 of this RFP); the Health Care Accountability Ordinance (Section 11.5 of this RFP); the First Source Hiring Program (Section 11.6 of this RFP); and applicable Conflict of Interest laws (Section 13 of this RFP).

10.3 Chapter 12(B) and 12(C): Nondiscrimination in Contracts and Benefits

As outlined above, the successful proposer will be required to agree to comply fully with and be bound by the provisions of Chapters 12(B) and 12(C) of the San Francisco Administrative Code. Generally, Chapter 12(B), also referred to as the Equal Benefits Ordinance, prohibits the City and County of San Francisco from entering into contracts or leases with any entity that discriminates in the provision of benefits between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of employees. Additional information related to Chapter 12(B) can be found in Attachment 5. The Chapter 12C requires nondiscrimination in contracts in public accommodation. Additional information on Chapters 12B and 12C is available on the CMD's website at www.sfgov.org/cmd.

10.4 Minimum Compensation Ordinance for Employees (MCO)

The successful proposer will be required to agree to comply fully with and be bound by the provisions of the Minimum Compensation Ordinance (MCO), as set forth in S.F. Administrative Code Chapter 12P by completing the attached MCO Declaration Form attached hereto as Attachment 7. Generally, this Ordinance requires contractors to provide employees covered by the Ordinance who do work funded under the contract with hourly gross compensation and paid and unpaid time off that meet certain minimum requirements. For the contractual requirements of the MCO, see ¶43 "Requiring Minimum Compensation for Covered Employees" in the Agreement.

For the amount of hourly gross compensation currently required under the MCO, see <http://sfgov.org/olse/mco>. Note that this hourly rate may increase on January 1 of each year and that contractors will be required to pay any such increases to covered employees during the term of the contract.

Additional information regarding the MCO is available on the City website at <http://sfgov.org/olse/mco>.

10.5 Health Care Accountability Ordinance (HCAO)

The successful proposer will be required to agree to comply fully with and be bound by the provisions of the Health Care Accountability Ordinance (HCAO), as set forth in Administrative Code Chapter 12Q by completing the attached HCAO Declaration Form attached hereto as Attachment 8. Contractors should consult the Administrative Code to determine their

compliance obligations under this chapter. Additional information regarding the HCAO is available on the web at www.sfgov.org/olse/hcao.

10.6 First Source Hiring Program (FSHP)

If the contract is for more than \$50,000, the First Source Hiring Program (Admin. Code Chapter 83) may apply. Generally, this ordinance requires contractors to notify the First Source Hiring Program of available entry-level jobs and provide the Workforce Development System with the first opportunity to refer qualified individuals for employment.

Contractors should consult the San Francisco Administrative Code to determine their compliance obligations under this chapter. Additional information regarding the FSHP is available on the web at http://www.workforcedevelopmentsf.org/businessservices/index.php?option=com_content&view=article&id=80&Itemid=85 and from the First Source Hiring Administrator, (415)701-4848.

10.7 Signature Requirements

An unsigned or improperly signed proposal will be rejected. A proposal may be signed by an agent of the Proposer if he/she is properly authorized by a power of attorney or equivalent document submitted to the City prior to the submission of the proposal or with the proposal to bind the Proposer to the proposal.

The proposal may be modified after its submission by withdrawing and resubmitting the proposal prior to the time and date specified for offer submission. Modification offered in any other manner, oral or written, will not be considered.

A Proposer may withdraw his/her offer by submitting a written request for its withdrawal to the City, signed by the Proposer in accordance with the first paragraph above. The Proposer may, therefore, submit a new proposal prior to the proposal submission time.

All proposals submitted may be subject to negotiation by the City prior to an award of contract.

10.8 Business Tax Registration and City Vendor ID

Business Tax Registration

In accordance with San Francisco City Ordinance 345-88, all vendors conducting business with the City are required to maintain a valid business tax registration number. Vendors who do not have a current business tax registration number must complete the Business Tax Declaration Form attached hereto as Attachment 6. Agreements will not be awarded to the selected Proposer unless business tax registration fees are paid in full by the time the Agreement is

awarded. Proposer may contact the Tax Collector's office at 415-554-4470 to confirm that business tax registrations fees have been paid in full.

City Vendor ID

Each selected Proposer must also provide obtain a vendor ID from the City and County of San Francisco. To obtain a vendor ID, vendors must submit an IRS Form W-9 by fax or mail to:

Purchasing Department
City Hall, Room 430
San Francisco, CA 94102-4685
415-554-6718

10.9 Administrative Code 14B Reporting Requirements

Pursuant to Administrative Code Sections 14B.13(A)(7) and 14B.11(A), prime contractors and all subcontractors who are awarded contracts as a result of the bid process are required to use the Elation secure web-based Local Business Enterprise Utilization Tracking System (LBEUTS) to submit payment information including invoices and other related information. The Contract Monitoring Division (CMD) will use this information to monitor compliance with the 14B LBE Ordinance. For more information, please visit: www.sfgov.org/LBEUTS

11 Protest Procedures

11.1 Protest of Non-Responsiveness Determination

After receipt of proposals, the SFPUC, with the assistance of CMD, will conduct an Initial Screening of submitted proposals as set forth in Section 7.1 of this RFP. If staff determines that a proposal should be rejected because it is either non-responsive to RFP requirements or is otherwise unacceptable (i.e., fails to meet Minimum Qualifications Requirements set forth in the RFP), then the City will issue a Preliminary Notice of Proposal Rejection to the applicable Proposer(s).

If a Proposer believes that the City has unfairly determined that its proposal should be rejected, Proposer may submit a written notice of protest within five (5) working days of the SFPUC's issuance of a Preliminary Notice of Proposal Rejection. Such notice of protest must be received by the SFPUC on or before the fifth (5th) working day following the SFPUC's issuance of the Preliminary Notice of Proposal Rejection. The notice of protest must include a written statement specifying in detail each and every one of the grounds asserted for the protest. The protest must be signed by an individual authorized to represent the Proposer, and must cite the law, rule, local ordinance, procedure or RFP provision on which the protest is based. In

addition, the Proposer must specify facts and evidence sufficient for the SFPUC to determine the validity of the protest.

The City, at its discretion, may make a determination regarding a protest without requesting further documents or information from the Proposer who submitted the protest. Accordingly, the initial protest must include all grounds of protest and all supporting documentation or evidence reasonably available to the prospective Proposer at the time the protest is submitted. If the Proposer later raises new grounds or evidence that were not included in the initial protest, but which could have been raised at that time, then the City may not consider such new grounds or new evidence.

Upon receipt of a timely and proper protest, the City will review the protest and conduct an investigation, as it deems appropriate. As part of its investigation, the City may consider information provided by sources other than Proposer. The City may also consider supplemental correspondence or other information relating to the original ground(s) of Protest submitted by a protesting Proposer to the extent the City determines that such information will assist it in resolving the Protest. At the completion of its investigation, the City will provide a written determination to the Proposer who submitted the protest.

Protests not received within the time and manner specified will not be considered.

If a Proposer does not protest a Preliminary Notice of Proposal Rejection within the time and in the manner specified, above, then the City's determination set forth in the Preliminary Notice will become final. A Proposer's failure to protest as specified above on or before the time specified above shall constitute a complete and irrevocable waiver of the ground(s) of protest and forfeit the Proposer's right to raise such ground(s) of protest later in the procurement process, in a Government Code Claim, or in other legal proceedings.

11.2 Protest of Agreement Award

As soon as the Proposer rankings are finalized, the Department will directly notify all Proposers with said rankings.

Within five (5) working days of the Department's notification of the Proposers' ranking, any Proposer that has submitted a responsive proposal and believes that the City has unfairly selected another Proposer for award may submit a written notice of protest.

The notice of protest must include a written statement specifying in detail each and every one of the grounds asserted for the protest. The protest must be signed by an individual authorized to represent the Proposer, and must cite the law, rule, local ordinance, procedure or RFP provision on which the protest is based. In addition, the Proposer must specify facts and

evidence sufficient for the City to determine the validity of the protest. All protests must be received by the Department on or before the fifth (5th) working day following the Department's posting of the Proposer's ranking.

11.3 Delivery of Protests

If a protest is mailed, the protestor bears the risk of non-delivery within the deadlines specified herein. Protests should be transmitted by a means that will objectively establish the date the City received the protest. Protests or notice of protests made orally (e.g., by telephone) will not be considered. Protests must be delivered to:

Taraneh Moayed
Principal Administrative Analyst
SFPUC IT Services
525 Golden Gate Avenue, 5th Floor
San Francisco, CA 94102
Email tmoayed@sfgov.org

12 Conflict of Interest

The successful proposer will be required to agree to comply fully with and be bound by the applicable provisions of state and local laws related to conflicts of interest, including Section 15.103 of the City's Charter, Article III, Chapter 2 of City's Campaign and Governmental Conduct Code, and Section 87100 et seq. and Section 1090 et seq. of the Government Code of the State of California. The successful proposer will be required to acknowledge that it is familiar with these laws; certify that it does not know of any facts that constitute a violation of said provisions; and agree to immediately notify the City if it becomes aware of any such fact during the term of the Agreement.

Individuals who will perform work for the City on behalf of the successful proposer might be deemed consultants under state and local conflict of interest laws. If so, such individuals will be required to submit a Statement of Economic Interests, California Fair Political Practices Commission Form 700, to the City within ten calendar days of the City notifying the successful proposer that the City has selected the proposer.

12.1 Obligations

It is the obligation of the Proposer as well as its subconsultants to determine if participation in that contract constitutes a conflict of interest. While city staff maintains records regarding award and execution of contracts, it does not have access to specific information concerning

which entities, partners, sub-consultants or team members perform specific work on these contracts. A conflict of interest or an unfair advantage may exist without any knowledge of the Department. The database of our records concerning work performed by various sub-consultants is available for reference to consultants making their own determination of potential conflicts. This information should not be relied upon as either comprehensive or indisputable. Final determination of the potential for conflict must be made by the Proposers. A court makes the final determination of whether an actual conflict exists. The guidelines below address conflicts under the aforementioned laws but there are other laws that affect qualifications for a contract.

12.2 Work

There are many phases of work pertaining to city contracts. Potential conflicts arise out of progressive participation in various phases of that work. Set forth below are general guidelines regarding when participation in a specific phase of work may create a conflict. Because an actual determination regarding whether a conflict exists depends upon the specific facts of each situation, the general guidelines set forth below should be treated only as a starting point. A Proposer should consult with their legal counsel to determine whether a potential conflict exists.

- A. **RFI/RFQ/RFP/Bid Documents.** Any entity that participates in the development of any of these documents has participated in “making the contract” for the work. For these purposes “participating in making” has the same meaning as under Government Code Section 1090 and the term “entity” includes any parent, subsidiary or other related business.
- B. **General Program Management Services.** Since these advisory services necessarily assist in general definitions of the program and projects, conflict would likely exist in participation in the design or construction management phase of any project.
- C. **Preplanning.** Participation in preplanning work, which may include the needs assessment report, since it is an initial phase, would likely be limited only by previous participation in preparation of RFI/RFQ/RFP or bid documents.
- D. **Planning.** The planning phase of any project establishes the facts pertaining to the project and possible options for consideration.
 - i. **Alternative Analysis Report.** This phase proposes to decision-makers the various alternatives in project scope, cost, schedule and environmental impact necessary to make a determination of the proper project. Firms may have a conflict of interest in subsequent design work if they participated in the decision-making process of selecting an alternative.

- ii. **Conceptual Engineering Report.** This document defines the project and shapes the design contract. Participation in this phase may likely be in conflict with any future design services.
- E. **Environmental Review.** Similar to the planning phase, this phase of work gathers information from other sources resulting in a definition of the project for the purposes of reviewing the environmental effects of the work. Firms participating in environmental review would likely not have a conflict in participating in subsequent phases.
- F. **Final Engineering Design.** Documents produced under this phase constitute the definition of the construction contract. Participation in this phase would likely be in conflict with participation in any subsequent phases, such as construction management or general construction.
- G. **Construction Management.** This work consists of review, assessment and recommendation for actions based on interpretation of contract documents. No firm under one contract can review any of its own work performed under another contract. Conflicts would likely arise had any firm participated in either preparation of final engineering design or any documents enumerated in a contract for construction or documents the Department requires a Proposer to rely on in the preparation of their bid.
- H. **Construction.** It is unlikely that participation in construction contracts would result in conflicts on subsequent contracts. Restrictions on participation in construction contracts may be stipulated in other federal, state or local laws.
- I. **General.** Work associated with gathering, assessing, or reviewing technical data such as geotechnical investigations, site surveys, condition assessments, or cost estimating would likely have conflicts with other work only if the firms were in a position to review their own work.
- J. **Administrative Services.** Any subconsultant or vendor providing general administrative services such as communications, reprographic, janitorial or security services during one phase of a project will not be precluded from providing similar services during later phases of the same project.

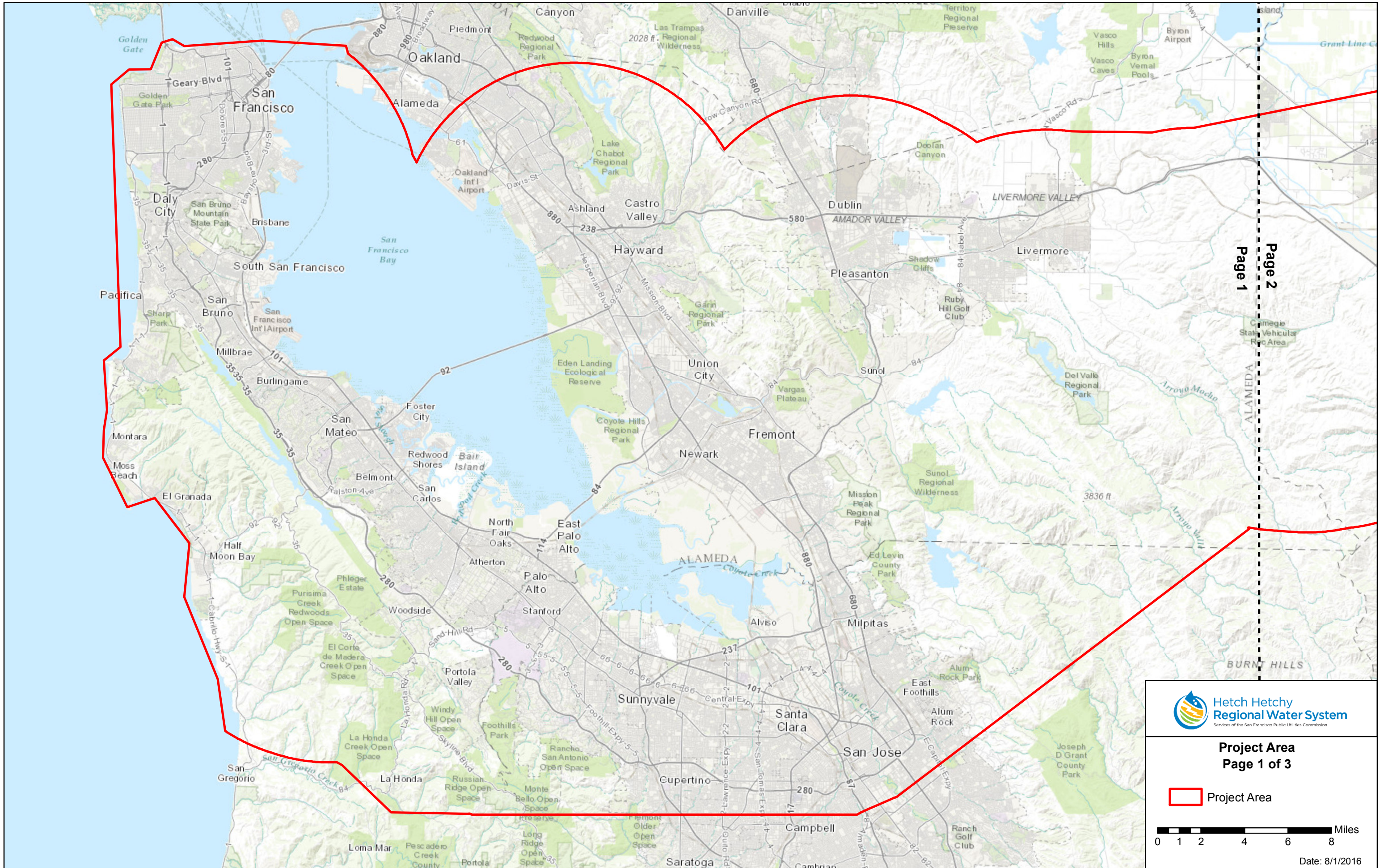
12.3 Consultation with Counsel

The Department strongly advises any proposing/bidding firm to consult with their legal counsel to determine whether or not a conflict of interest exists. It is the responsibility of the proposing/bidding firm to make that determination. The Department will not advise consultants on conflict of interest matters.

13 List of Attachments to this RFP

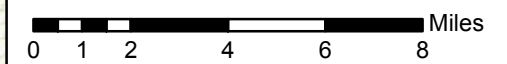
Attachment Number	Description
1A	Coverage Maps for the SFPUC Land Mobile Radio System
1B	Coverage Maps for Optional, In-Facility Watershed Cottages
1C	Backbone Communication, Microwave, Radio Transceiver & Networked Repeater Sites
2A-2F	<p>Sample CCSF Terms and Conditions:</p> <p>A. P-250: Standard Terms and Conditions B. P-520: Equipment Lease Agreement and Appendices C. P-530: Equipment Maintenance Agreement and Appendices D. P-545: Software License Agreement and Appendices E. P-540: Software Maintenance Agreement and Appendices F. P-600: Professional Services Agreement and Appendices</p> <p><i>If Proposer seeks to revise this agreement, please submit revisions in accordance with instructions outlined in the RFP.</i></p>
3	<p>Release of Liability Form</p> <p><i>Required for all Proposers</i></p>
4	<p>CMD Forms:</p> <ul style="list-style-type: none"> • Form 2A – CMD Contract Participation <i>(Required for all Proposals)</i> • Form 3 – CMD Non-Discrimination Affidavit <i>(Required for all Proposals)</i> • Form 4 – CMD Joint Venture Form <i>(Required for Joint Venture submissions)</i> • Form 5 – CMD Employment Form <i>(Required for all Proposals)</i> <p>Also available at: http://sfgov.org/cmd/sites/default/files/Documents/CMD%20Attachment%20%20-%208.01.16.pdf</p>
5	<p>Chapters 12(B) and 12(C) Reference Guide and Forms</p> <p>Also available at: http://sfgov.org/cmd/forms-resources</p> <p><i>Required for all Proposers not currently deemed 12(B) and (C) Compliant.</i></p>
6	<p>Business Registration Certificate Requirement and Declaration Form</p> <p>Also available at: http://sftreasurer.org/registration</p> <p><i>Required for all Proposers who do not currently have a valid, unexpired Business Tax Registration ID.</i></p>
7	<p>Minimum Compensation Ordinance (MCO) Declaration Form</p> <p>Also available at: http://sfgov.org/olse/sites/default/files/Document/HCAO Declaration 6 16 0.pdf</p> <p><i>Required for all Proposers who have not previously submitted an MCO Declaration Form.</i></p>
8	<p>Health Care Accountability Ordinance (HCAO) Declaration Form</p> <p>Also available at: http://sfgov.org/olse/sites/default/files/Document/MCO Declaration 6 16.pdf</p> <p><i>Required for all Proposers who have not previously submitted an HCAO Declaration Form.</i></p>

Attachment 1A - Coverage Area Maps

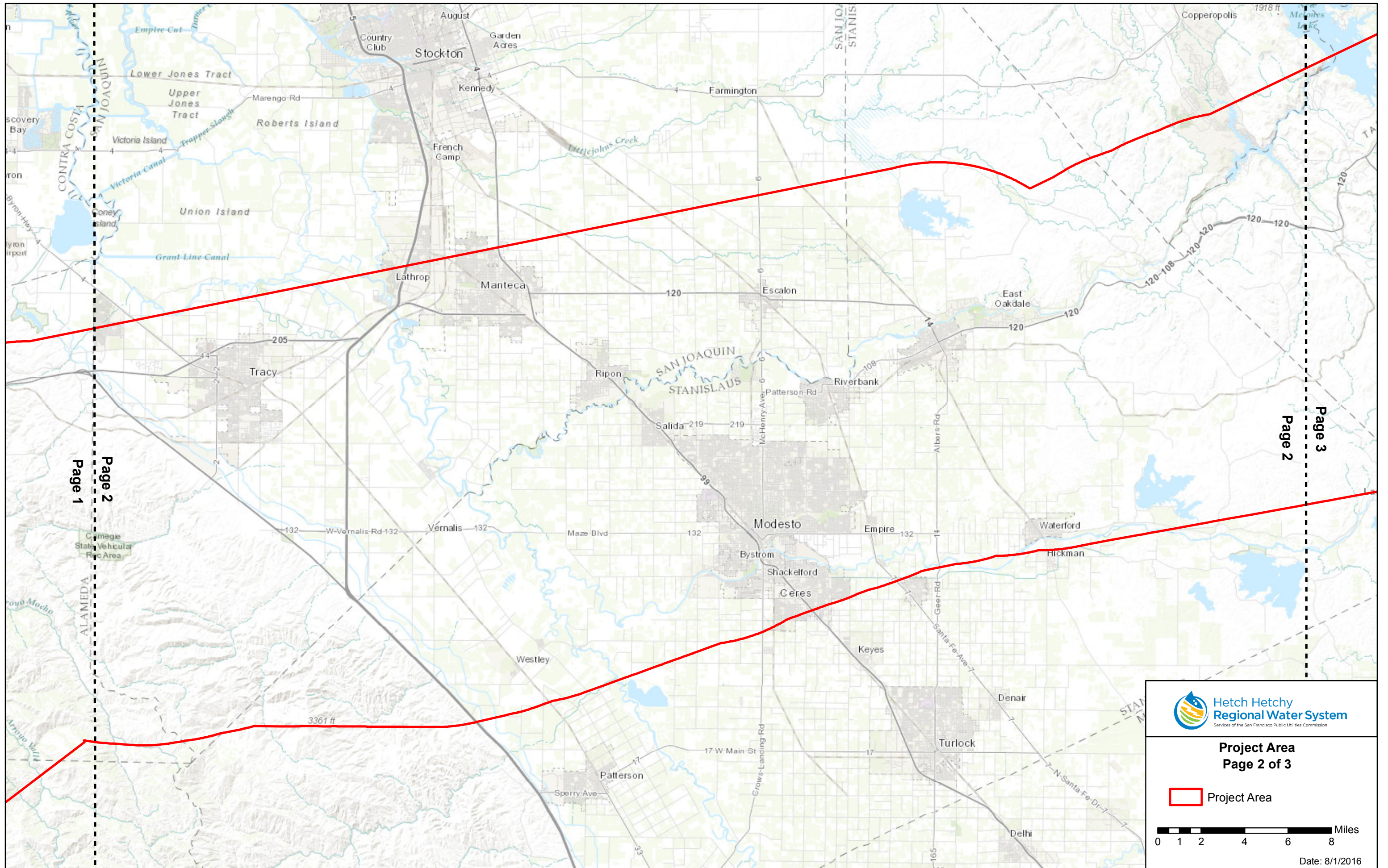


Project Area
Page 1 of 3

 Project Area

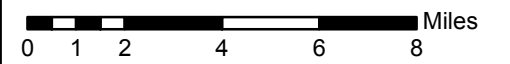


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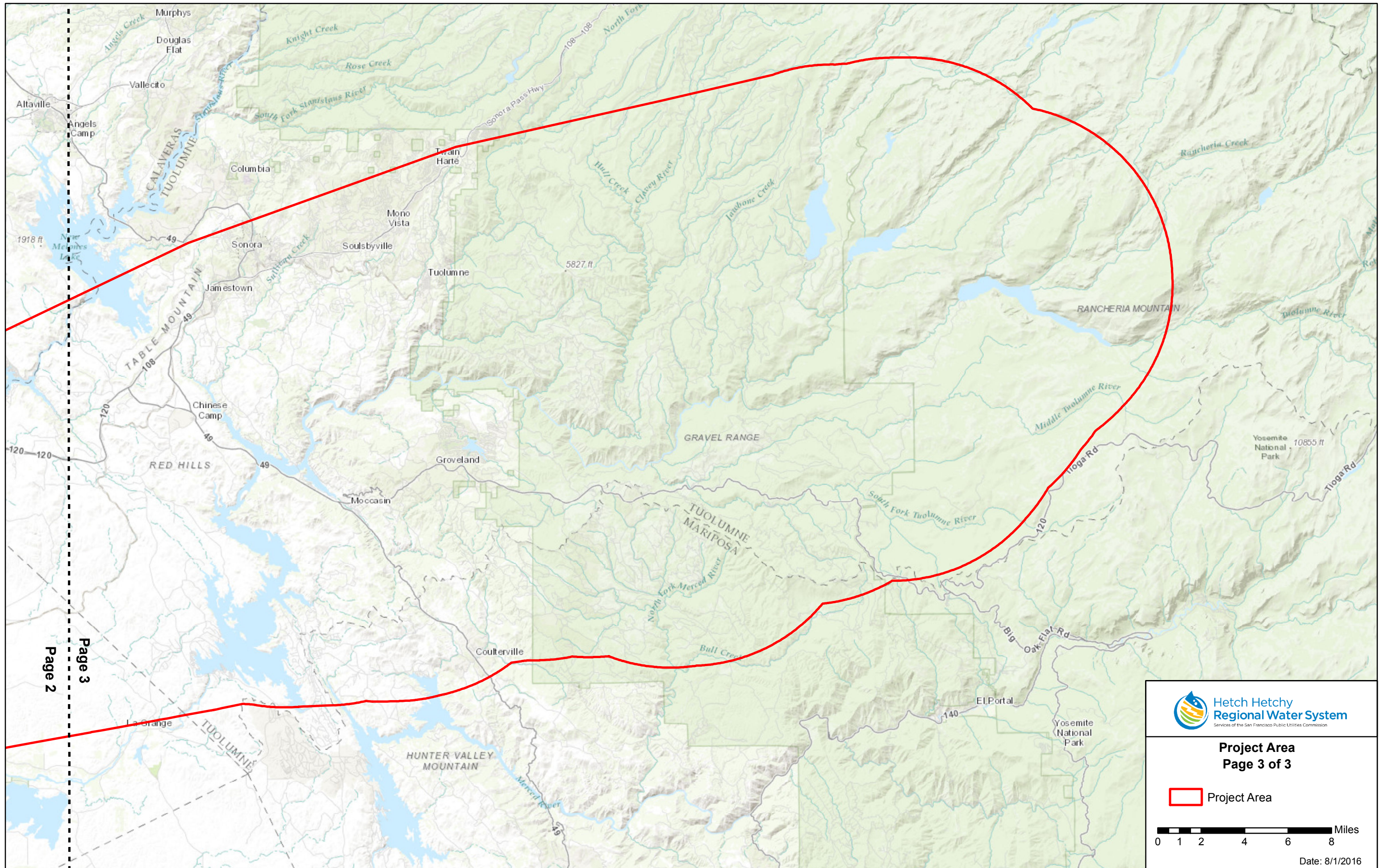


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Page 2 of 3

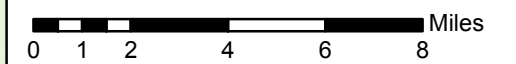
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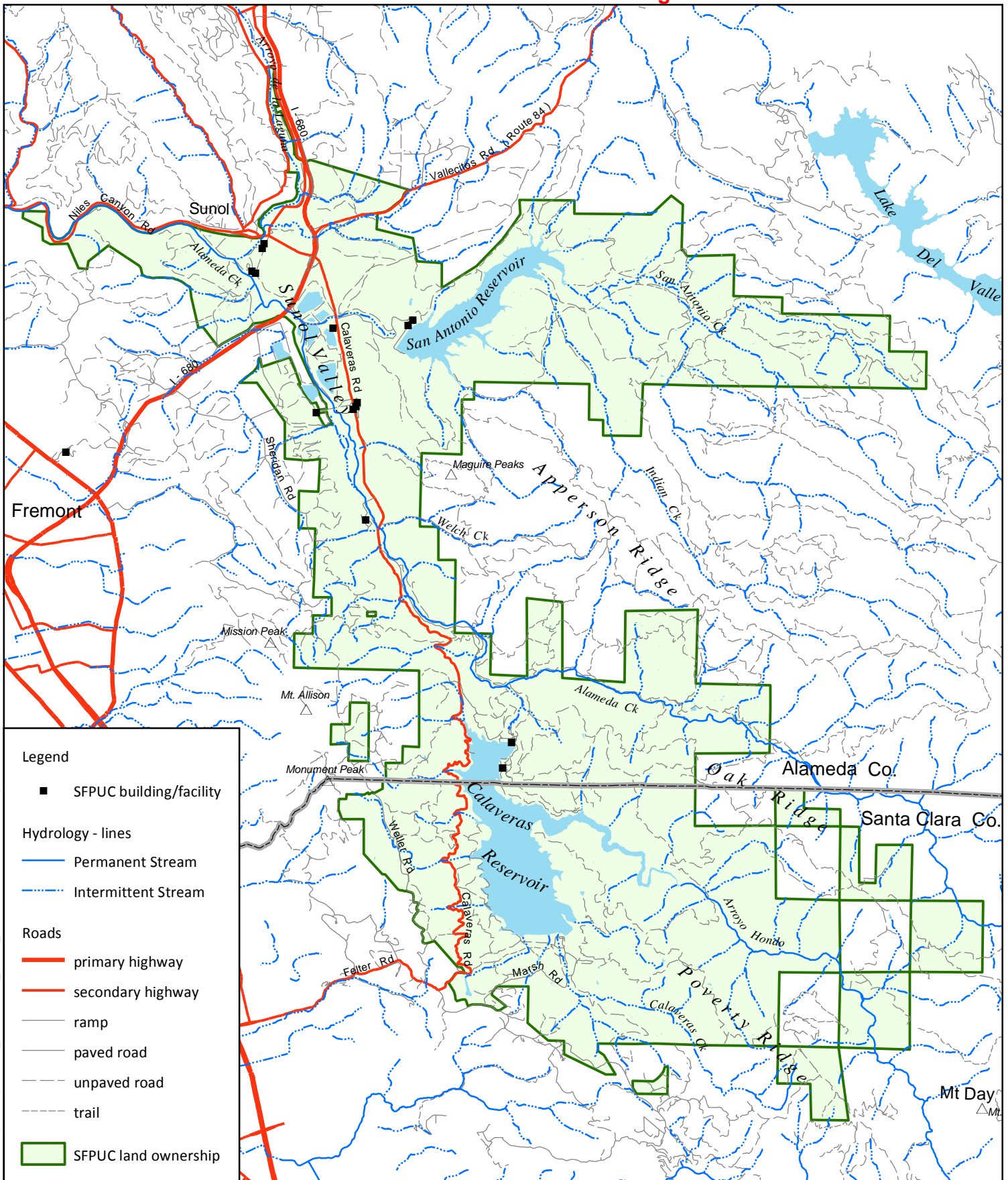


 Project Area



Page 2
 Page 3

Attachment 1B - Watershed Cottages



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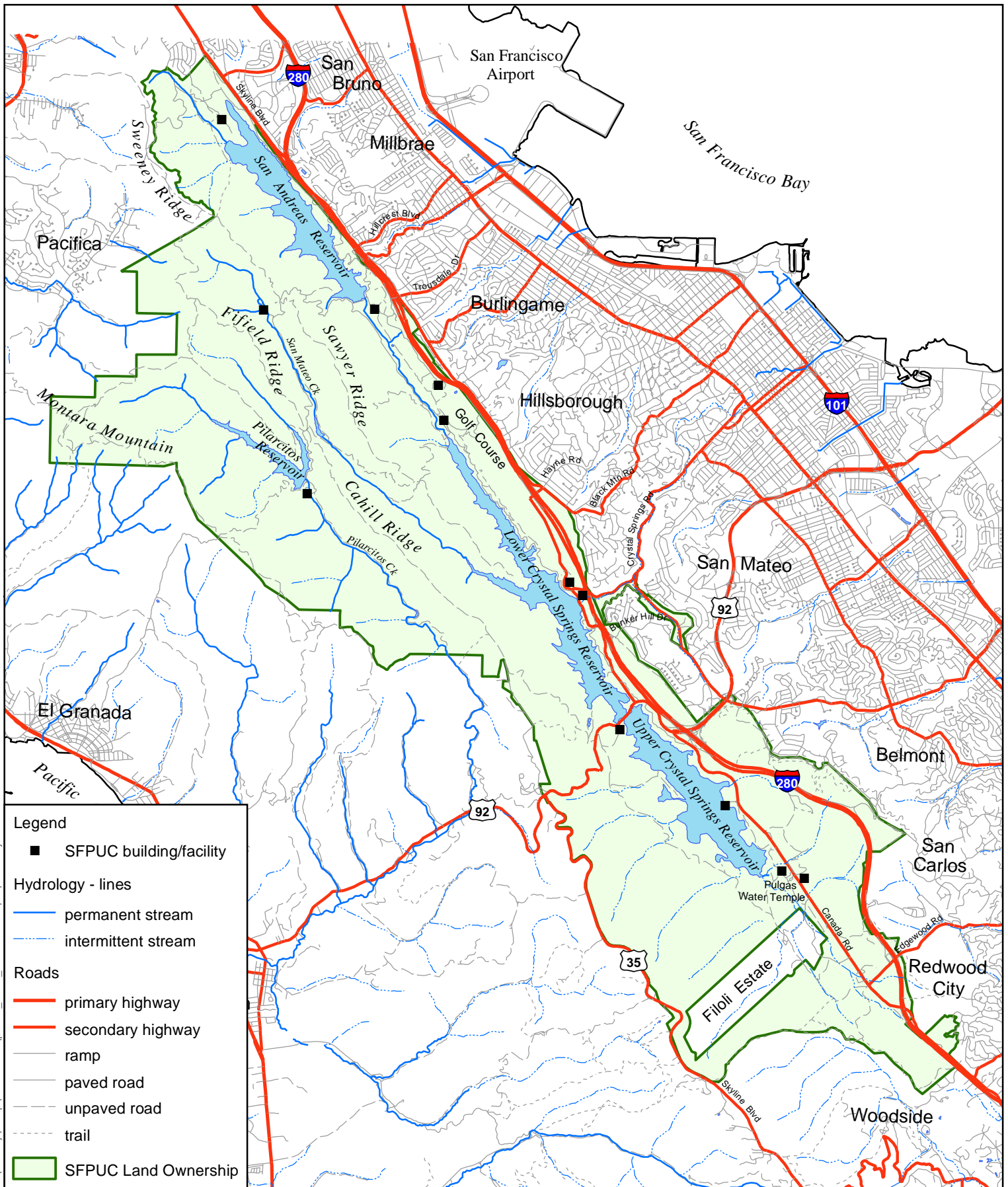
Hetch Hetchy Regional Water System
 Services of the San Francisco Public Utilities Commission
 Natural Resources and Lands Management Division



0 1 2 Miles

Alameda Watershed


Orientation Map




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Legend

- SFPUC building/facility
- Hydrology - lines**
- permanent stream
- - - intermittent stream
- Roads**
- primary highway
- secondary highway
- ramp
- paved road
- - - unpaved road
- - - trail
- SFPUC Land Ownership




**Hetch Hetchy
Regional Water System**
Services of the San Francisco Public Utilities Commission
Natural Resources and Lands Management Division



N

Peninsula Watershed
Orientation Map



0 1 2 Miles

Author: JGL Date: 11-16-16

ATTACHMENT 1C

Backbone Communication, Microwave, Radio Transceiver & Networked Repeater Sites

I. EXISTING AND POTENTIAL COMMUNICATION SITES

Site locations have been pursued in advance of this RFP to resolve coverage area deficiencies and develop system requirements for this RFP to thoroughly define the project scope. Coverage areas have been defined through parcel maps, travel routes, user interviews and emergency response history. Several of the suggested site locations are new site acquisitions that must be acquired by the Proposer if deemed necessary.

EXISTING AND POTENTIAL COMMUNICATION SITES				
Site Name	Site Owner	Site Elevation (Ft.)	Tower Height (Ft.)	Site Information
Burnout Ridge	US Forest Service	5500	120	Existing communication facility with fenced compound developed for interagency interoperability for Hetch Hetchy, U.S. Forest Service, and Tuolumne County. This site links Moccasin Peak, Poopenaut Peak, Intake Radio Site, and Cherry Reservoir. Rack, tower, and generator capacity are available. This site requires application to the U.S. Forest Service for use permit adjustments.
Duckwall Mountain	US Forest Service	5825	60	Retired fire lookout tower with existing off-grid solar power communications facility. This site location is good for resolving coverage deficiencies for any selected spectrum. The site also provides shortest-path requirement for trunking technology. Site improvements anticipated are the proposed radio system, solar power, backup power, shelter improvements, site grading and fencing. This site requires application to the U.S. Forest Service for use permit adjustments. Winter snows make it difficult to access this site.
Moccasin Peak	SFPUC	2950	100 and 60	Existing site provides coverage from Big Oak Flat to Tracy. There is adequate room in the shelter to accommodate additional equipment. This site is connected to Burnout Ridge and Moccasin Camp via 6 GHz Microwave. The fenced site is on SFPUC property.
San Joaquin Valley MW Sites	SFPUC	Various	Various	The following sites are MW nodes used in the HH MW Backbone but may or may not be used for radio transmission other than pass through points: Oakdale Portal, Throttle 2, MP56, Emery Crossover, Warnerville Substation, Roselle Crossover, Modesto 2, San Joaquin Valve House, Pelican, and Tesla Portal. Site information will be presented if requested.
Contra Costa Water District	SFPUC	1070	100	If acquired, this site could be a critical point of transmission to provide San Joaquin Valley overlap, Tesla Road power line alignment and water treatment facility coverage. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on behalf of the SFPUC.
Marcial's Peak	SFPUC	2270	40	If acquired, this site could be a critical microwave and radio transceiver location for coverage of the Tesla Road electric power line alignment and several Coast Range Water Tunnel Shafts. Power is nearby but a tower and structure must be installed. Privately owned, the owner has agreed to negotiate a lease with the SFPUC. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on

EXISTING AND POTENTIAL COMMUNICATION SITES				
Site Name	Site Owner	Site Elevation (Ft.)	Tower Height (Ft.)	Site Information
				behalf of the SFPUC.
Alameda County IT Dept.	SFPUC	2945	60	If acquired, this site could be an alternate to Marcial's Peak (above) to cover the Tesla Road power line alignment and several Coast Range Tunnel Shafts. Power is onsite and a tower exists, but is full. Privately owned, the site is leased by Alameda County with whom the Proposer would need to negotiate a lease to cohabitate or build a separate facility where the old Cal-Fire lookout tower once stood. It would be the Proposer's responsibility to negotiate and enter into an agreement with the owner on behalf of the SFPUC.
Alameda Creek Peak	SFPUC	2300	40	If acquired, this site could provide coverage to Diversion Dam and is a microwave repeater between Mt. Allison and Marcial's Peak. This site also covers several Coast Range Water Tunnel Shafts. Tower, structure, and power assessments must be performed. The site is on SFPUC property.
Mount Allison	SFPUC	2635	40, 125, and 300	This existing site currently provides primary and backup coverage. Several towers provide microwave transmission to East and West Bay facilities. This site is also a point of transmission to several Tunnel Portals. The towers and structures on this site are currently leased to the SFPUC. It would be the Proposer's responsibility to assist the SFPUC in augmenting our current 25 year lease.
Calaveras Reservoir	SFPUC	1125	20	This existing site provides radio coverage and business connectivity to the Calaveras Dam reconstruction project. The site is not at an optimum location to provide coverage to biologists and rangers protecting the reservoir. The location was chosen to gain some height, retain access to power, and provide services to the Calaveras Dam project. Site relocation would improve Calaveras Watershed and Sunol Valley Water Treatment Plant coverage. The site could serve as a critical redundant microwave path to the Sunol Water Treatment Plant. The site is on SFPUC property.
San Antonio Reservoir	SFPUC	750	190	This site was the location of Radio station KTRB 860 AM built in 2006. Four 190-foot Model 1800 SRWD Guyed Sabre Towers and support structures remain in place. If this site is acquired, one tower can support the transmit antenna and another can support the receive antenna. The radio station building, UPS, and Cummins 30KW Generator have low usage and are available. Utility power from the PG&E service at the State Water Aqueduct Vallecitos Turnout source would have to be constructed. The microwave backbone could be supplied from the first power utility pole site and fiber optic cable to the radio transmitter building. The site is on private property and the owner has agreed to negotiate a lease with the SFPUC. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on behalf of the SFPUC
Ravenswood Valve Lot	SFPUC	7	20	If acquired, this site would provide South San Francisco Bay transmission to all the SFPUC Bay Division Water Pipelines and Tunnels and is a microwave repeater between Mt. Allison and Kings Mountain. There is adequate room in the shelter to accommodate additional equipment and this site has existing utility and back-up power. The site

EXISTING AND POTENTIAL COMMUNICATION SITES				
Site Name	Site Owner	Site Elevation (Ft.)	Tower Height (Ft.)	Site Information
				is in a marine environment. A 20-foot Rohn self-supporting tower section has been purchased. The site is on SFPUC property.
Kings Mountain Tower	SFPUC	2045	125	If acquired, this site would provide West Bay transmission to SFPUC Bay Division Water Pipelines and would be a microwave repeater between Ravenswood and Sawyer Ridge Radio Station. This site is a critical point of transmission to a critical Valve Lot and the associated pipeline alignment on Edgewood Road. This site has existing utility and back-up power. There are two possible 125-foot towers at this site, the Kings Mountain Fire Brigade guyed tower and the Verizon Wireless monopole. The site is in a marine environment. The Fire Brigade has offered to rent tower and equipment space. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on behalf of the SFPUC.
Sawyer Ridge Radio Station	SFPUC	1160	40	This existing site provides West Bay transmission to Reservoirs and Watershed and would be a microwave repeater between Kings Mountain and the City of San Bruno Radio Site. The site is in a marine environment. This site is a critical point of transmission to several pipeline flow meters, public trails, and pipeline alignments. This site is solar only with back-up power. If this site is needed for the proposers solution, it would be the proposers responsibility to connect utility power, automatic transfer switch, generator, add antenna equipment and any other associated equipment.
San Bruno City Radio Station	SFPUC	1260	40	This site is owned by the City of San Bruno. If acquired, the tower is approximately 30-feet and may be at capacity. The site provides West Bay transmission to the North San Andreas Watershed, South San Francisco Pipelines, and Peninsula Water Wells and would be a microwave repeater between Sawyer Ridge and the Forest Hill Radio Site. This site has utility power with back-up power. The site is in a marine environment and sustains frequent high winds. A proposal for a tower and shelter may be needed. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on behalf of the SFPUC.
San Bruno Mountain Radio Site	SFPUC	1250	100	If acquired, this site can be a possible alternate to the San Bruno City Radio Station for microwave backbone and radio coverage. This site can provide West Bay transmission to South San Francisco, Brisbane, peninsula water wells and pipelines. The site can be a microwave repeater between Sawyer Ridge and the South Hill Radio Site in San Francisco. This site has utility power with back-up power. The site is in a marine environment. This facility is owned by America Tower Corporation who has been negotiating a lease agreement with the City. It would be the Proposer's responsibility to negotiate and enter agreement with the owner on behalf of the SFPUC.
Forest Hill Radio Site	SFPUC	775	40	This existing Forest Hill Radio Site is a Water Department Reservoir site in the City of San Francisco. Forest Hill provides entry into the San Francisco microwave backbone and is an option to work around the obstruction of San Bruno Mountain. Research must be conducted to determine the feasibility and availability of utilizing the Forest Hill tank

EXISTING AND POTENTIAL COMMUNICATION SITES				
Site Name	Site Owner	Site Elevation (Ft.)	Tower Height (Ft.)	Site Information
				and facility. The site is on SFPUC property.
South Hill Radio Site	SFPUC	765	60	This existing South Hill Radio Site is a San Francisco Department of Technology site in the City of San Francisco. South Hill provides entry into the San Francisco microwave backbone and is an option if transmitting via San Bruno Mountain. Research must be conducted to determine the availability of utilizing the South Hill Radio Site tower and facility. The site is on City property.

II. POTENTIAL TWO-WAY RADIO MICROWAVE BACKBONE PATHS

Below is a list of potential microwave backbone paths that may be used in developing proposals. The path selection is based on the most demanding proposition of 800MHz simulcast design requiring 16-miles or less paths. Spectrum and technology selection may require less than the potential paths listed. The SFPUC makes no representations regarding the licensing feasibility of these paths.

POTENTIAL TWO-WAY RADIO MICROWAVE BACKBONE PATHS			
NAME	DISTANCE (Miles)	Existing (E) or New (N)	Freq. (GHz)
Moccasin HDQTRS – Moccasin Pk	1.6	E	6
Moccasin Pk. – Duckwall Pk.	16	E	5.8
Duckwall Pk. – Burnout Ridge	11.3	N	TBD
Moccasin Pk. – Oakdale Portal	14.8	E	11
Oakdale Portal – Throttle 2	5.44	E	11
Throttle 2 – MP 56.51	3.8	E	11
MP 56.51 – Emery Crossover	2.6	E	11
Emery Crossover – Warnerville Sub	2.9	N	TBD
Warnerville Sub – Roselle Crossover	7.7	E	11
Roselle Crossover – Modesto 2	6.2	E	11
Modesto 2 – San Joaquin Valvehouse	9.87	E	11
San Joaquin Valvehouse – Pelican	1.31	E	11
Pelican – CCWD	13.6	N	TBD
CCWD – Marcial’s Pk.	8.1	N	TBD
Marcial’s Pk. – Alameda Creek	12	N	TBD
Alameda Creek – Mt. Allison	5.1	N	TBD
Mt. Allison – Calaveras Res.	3.15	E	18
Mt. Allison – San Antonio Res.	8.3	N	TBD
Mt. Allison – Sunol Maint. Yard	6.26	E	18
Sunol Maint. Yard – SVWTP	4	E	18
Mt. Allison – Ravenswood	14.4	N	TBD
Ravenswood – Kings Mountain	10.8	N	TBD
Kings Mountain – Sawyer Ridge	11.1	N	TBD
OPT1 Sawyer Ridge – San Bruno Comm	4.1	N	TBD
OPT1 San Bruno Comm – Forest Hill	9.6	N	TBD
OPT2 Sawyer Ridge – San Bruno MTN	7.7	N	TBD

OPT2 San Bruno MTN – South Hill RS	1.3	N	TBD
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III. RADIO TRANSMITTER/RECEIVER SITES

The locations listed below may serve as potential transmitter/receiver radio sites on the path lengths required for an 800 MHz radio system. It is understood that a 450MHz system would require fewer sites. If a leased or lease to own option is proposed, the specified backbone and transmission sites must be equal or better.

RADIO TRANSMITTER/RECEIVER SITES	
Burnout Ridge	Alameda Creek Pk.
Duckwall Pk.	Mt. Allison
Moccasin Pk.	Calaveras Res.
Oakdale Portal	San Antonio Res.
Emery Crossover	Ravenswood
Modesto 2	Kings Mountain
Pelican	Sawyer Ridge
CCWD	OPT1 San Bruno COMM
Marcial Pk.	OPT2 San Bruno MTN

IV. POTENTIAL NETWORKED REPEATER SITES

Below is a list of facilities that may require networked repeaters to develop a strong backbone and radio network. This list may be reduced depending on the proposed spectrum. Due to funding limitations, proposals should identify and quantify the equipment and implementation costs associated with each site so that SFPUC may select and prioritize sites for implementation.

NETWORKED REPEATER SITES	
O'Shaughnessy Dam	Sunol Valley Water Treatment Plant
Kirkwood Powerhouse	Harry Tracy Water Treatment Plant
Holm Powerhouse	Millbrae Corporation Yard
Moccasin Powerhouse and Yard	City Distribution Division / Local Water Yard
Warnerville Substation	Lake Merced Pump Station
Tesla Water Treatment Facility	SFPUC Headquarters
Thomas Shaft Water Treatment Facility	