Attachment A:
Factual Information Related to Select Findings and Declarations

This document provides factual clarifications of inaccurate or misleading information in the findings and declarations section of the proposed "Water and Environment Plan." The text from the ballot initiative appears in italicized blue font, and factual corrections appear in black font.

(a) Water is an essential natural resource that San Francisco depends on for its health, well-being, and public safety. San Francisco should develop a sustainable water system that will provide reliable supplies to meet needs throughout the city in anticipation of the effects of global warming and the probabilities of droughts and earthquakes, as well as other natural and unnatural disasters.

This finding is incorrect. **In fact, San Francisco has a long track record of planning for and developing a sustainable water system that provides residents and businesses reliable, affordable, and high quality water.** This includes planning and implementation of the $4.6 billion Water System Improvement Program (WSIP) that includes 81 projects across the Hetch Hetchy Regional Water System with the goal of improving seismic and drought reliability of the water system as well as water quality improvements.

The overall goals of the adopted WSIP for the regional water system are to:

- Maintain high-quality water and a gravity-driven system;
- Reduce vulnerability to earthquakes;
- Increase delivery reliability;
- Meet customer water supply needs;
- Enhance sustainability; and
- Achieve a cost-effective, fully operational system.

The SFPUC began development of the WSIP in the late 1990's through a series of studies, reports, and authorizations. In 1998, the SFPUC initiated a water supply planning effort, culminating in the Water Supply Master Plan (WSMP), issued in April 2000. The WSMP recommended a water resource strategy of demand management, facilities improvements, and development of additional supplies. Concurrent with the WSMP efforts, reliability studies of the water system facilities were performed to assess their vulnerability to earthquakes, landslides, fire, flood, and power outages.

These efforts led to the preparation of a Long-Term Strategic Plan for Capital Improvements, a Long-Range Financial Plan, and a Capital Improvement Program, approved and adopted by the San Francisco Public Utilities Commission (SFPUC) on May 28, 2002. San Francisco voters then approved Propositions A and E, which allowed for the financing of water system improvements and the long-term stewardship of public utilities.

A central component of the WSIP has been to develop local water projects. The adopted WSIP set a goal that San Francisco and its wholesale customers would collectively develop 20 million gallons per day (mgd) of new conservation, recycling and groundwater by 2018—half of this in San Francisco, half in the wholesale service area. In addition to these commitments, both San Francisco and the wholesale service area are planning for and developing additional sustainable supplies. By 2035, San Francisco and our regional customers plan to see water savings of 19.7 million gallons per day through active conservation. In addition, by 2035, San Francisco and our regional customers plan to use 41.4 million gallons per day of groundwater and 21.1 million gallons per day of recycled water.

(b) The primary source of water for the City of San Francisco is the Tuolumne River. Many people believe the city's primary water source is the Hetch Hetchy Reservoir in Yosemite National Park because the system is called the Hetch Hetchy system. In fact, Hetch Hetchy Reservoir is just one of nine reservoirs that store water for San Francisco.

This finding is misleading. San Francisco has nine reservoirs, only six of them store drinking water, which are summarized below. **Hetch Hetchy Reservoir is the largest drinking water reservoir in the system—larger than the combined capacity of the other five drinking water reservoirs.**

Reservoir	Volume acre-feet	Volume billion gallons
Hetch Hetchy	360,360 acre-feet	117 billion gallons
Calaveras	96,824 acre-feet	31.6 billion gallons
San Antonio	50,496 acre-feet	16.5 billion gallons
Crystal Springs	58,377 acre-feet	19 billion gallons
San Andreas	18,996 acre-feet	6.2 billion gallons
Pilarcitos	2,995 acre-feet	0.98 billion gallons

(c) San Francisco's rights to use Tuolumne River water were established in 1890 and exist independent of its storage facilities in the Tuolumne River watershed. Nothing in this ordinance shall weaken these rights.

This finding is factually inaccurate. **If the initiative ordinance is ratified and fully implemented, San Francisco's rights to divert stored water from the Tuolumne River will be significantly weakened.**

San Francisco and its agents made appropriative water rights filings and purchased appropriative water rights filings in the Tuolumne River watershed during the period from 1901 to 1911. California appropriative water rights are not established and perfected independent of the facilities and diversions that initiate such rights.

San Francisco has several water rights filings tied specifically to storing and diverting water at Hetch Hetchy Valley. San Francisco has no right or means to store water that is now diverted and stored in Hetch Hetchy Reservoir at any other location on the Tuolumne River.

For several reasons, abandoning storage at Hetch Hetchy Reservoir poses serious risks to San Francisco's water supply. San Francisco has no right to construct storage on the main stem of the Tuolumne River at any location other than Hetch Hetchy Valley. Federal laws restrict San Francisco from developing new reservoirs on the Tuolumne River in the Sierra Nevada.[1]

San Francisco has no right to store or divert water from, or otherwise operate, Don Pedro Reservoir, which is downstream of Hetch Hetchy Reservoir, and below that portion of the river protected by federal law. Don Pedro is solely owned and operated by Turlock and Modesto Irrigation Districts, who have exclusive rights to all of the water in Don Pedro. If San Francisco attempted to divert water at a new location on the Tuolumne River below Don Pedro Reservoir, its right to do so would require the agreement by the Modesto and Turlock Irrigation Districts and would also be exposed to challenge by junior water right holders in the San Joaquin Delta watershed.

[1] The Wild and Scenic Rivers Act, the Wilderness Act, and the Yosemite National Park Expansion of Reservoir Capacity Act all restrict construction of new facilities on the Tuolumne River above Don Pedro Reservoir.

(d) San Francisco does not recycle any water; comparatively, the Municipal Water District of Orange County recycles 92 million gallons a day.

This finding is factually inaccurate and misleading.

The Municipal Water District of Orange County (MWDOC) does not produce or manage recycled water. However in 2010, approximately 35 mgd of direct non-potable recycled water was pumped into injection wells to serve as a barrier to seawater intrusion or pumped into deep groundwater aquifers for replenishment in its service area.

San Francisco has two new recycled water projects coming on-line in 2012 to irrigate golf courses which will offset surface water diversions. San Francisco's wholesale customers use approximately 6 mgd of recycled water. The SFPUC has also undertaken initial feasibility and planning studies for a number of other recycled water projects, including those for Menlo Country Club, South San Francisco, and a Daly City Recycled Water Expansion.

Even after adjusting for the amount of water recycled, MWDOC customers still use two times more water per day as compared with San Francisco customers.

(e) In 1930, San Francisco used 14.5 million gallons a day from its groundwater wells; today, San Francisco uses only 2.2 million gallons a day as it has failed to maintain and manage its groundwater basin.

Increasing groundwater usage to pre-1930 levels within San Francisco is infeasible and would not be environmentally sustainable. In a built-out, urban environment like San Francisco, there is limited land to construct the wells, pumping facilities and pipelines needed for groundwater extraction and distribution. Nonetheless, San Francisco currently utilizes 1.5 mgd of groundwater for irrigation and other non-potable purposes in Golden Gate Park and the San Francisco Zoo.

The proposed San Francisco Groundwater Supply Project—which is currently in the environmental review process and projected for completion in 2015—would increase groundwater usage to 4.3 mgd through the establishment of 6 wells in San Francisco. Additionally, San Francisco has partnered with the cities of San Bruno and Daly City, and the California Water Service Company, to implement the proposed Regional Groundwater Storage and Recovery Project. This project, currently in the environmental review process and projected for completion in 2016, would store groundwater in wet years for use in dry years. The groundwater would be stored in Northern San Mateo County, and provide 7.2 mgd to all of SFPUC's wholesale and retail customers during drought years. **By 2035, San Francisco and our regional customers plan to use 41.4 million gallons per day of groundwater**

It should be noted that the groundwater in San Francisco is not the same quality as SFPUC's existing water supplies. Groundwater needs to be treated and blended in limited amounts into the existing higher quality supplies before it reaches retail customers. The SFPUC recently hired a consultant who engaged an expert panel to help develop water quality criteria for future groundwater supply. The results of this study indicated there is a maximum amount of groundwater that could be blended into the existing supply before we experience water quality problems.

(g) Increased development of water resources within San Francisco and the Bay Area would diversify San Francisco's regional water system, and improve system reliability in the event of drought or outages caused by earthquake or other events.

San Francisco residential and business demands for water are among the lowest in California. The SFPUC and its wholesale customers have set a goal of developing 20 million gallons per day of new conservation, groundwater, and recycling by 2018. Many projects are already underway to achieve this goal, including the ones summarized below.

- **Conservation.** By 2035, San Francisco and our wholesale customers plan to see water savings of **19.7 million gallons per day through active conservation**. Successful local water supply programs start by minimizing customer use. San Francisco and its wholesale customers have made significant investments in the area of conservation. The gross per capita water usage for SFPUC retail customers is approximately 85 gallons per day, far lower than the statewide average water use of 160 gallons per day. The City continues to promote conservation through residential and commercial rebates for water-saving devices, and through landscape grant programs to update irrigation in parks and public rights-of-way. The proposed ballot measure compares San Francisco to Orange County. Even accounting for the laudable water recycling in Orange County, their gross per capita water usage of 173 gallons per day is twice as much as what SFPUC customers use.

- **Recycled Water.** By 2035, San Francisco and our regional customers plan to use **21.1 million gallons per day of recycled water**. Within the SFPUC service area, 6 mgd of water is currently recycled for non-potable purposes. By the summer of 2012, there will be an additional 0.3 mgd of recycled water used to irrigate Sharp Park, Harding Park, and Jack Fleming Golf Courses. The SFPUC also recycles water at its wastewater treatment facilities for plant operations. Additionally, there are two projects under development that will increase in-city recycled water by 4 mgd—the Westside and Eastside recycled water projects. The Westside project would provide water to Golden Gate Park, and other parks in the City's western neighborhoods, and the Eastside project will produce and deliver up to 2 mgd for irrigation and other non-drinking purposes in the Eastern Neighborhoods.

- **Groundwater**. By 2035, San Francisco and our wholesale customers plan to use **41.4 million gallons per day of groundwater**. San Francisco's sustainable groundwater program, developed through careful planning and analysis, avoids historical groundwater problems caused by over-pumping and seawater intrusion. For more information, see the above section.

(h) San Francisco does not currently filter most of its drinking water supply. The San Francisco Department of Public Health warns consumers with compromised immune systems such as HIV to consult a doctor prior to drinking tap water.

This is a misleading statement—any public health agency would provide such a recommendation. In fact, the U.S. Environmental Protection Agency requires all drinking water utilities to post this same warning in their annual consumer confidence reports. [2]

San Francisco's drinking water is high quality and safe to drink.

[2] U.S. EPA's Consumer Confidence Rule, Sec. 141.154 - Required health information

The Hetch Hetchy Reservoir collects and stores pristine snowmelt and precipitation in a protective granite basin. This high quality water source meets or exceeds all federal and state criteria for drinking water quality. The SFPUC Water Quality Division regularly collects and tests over 100,000 water samples per year from throughout the Hetch Hetchy Water System to ensure the water meets or exceeds federal and state drinking water standards.

The SFPUC maintains stringent disinfection treatment practices, extensive bacteriological quality monitoring, and high operational standards. In recognition of the exceptional quality of San Francisco's source water and watershed protection efforts, the U.S. Environmental Protection Agency and the State of California Department of Public Health have granted a filtration waiver for the Hetch Hetchy water supply. In other words, the SFPUC is not required to filter water from the Hetch Hetchy Reservoir because it is held to the highest standards of water quality and protection. There has never been a waterborne disease outbreak in the history of the operations of the Hetch Hetchy Regional Water System.

In 2011, the SFPUC started operation of its new ultraviolet disinfection facility for the Hetch Hetchy supply in order to comply with new treatment regulations that became effective April 2012. The regulations allowed the SFPUC to choose between filtration and disinfection (ozone or ultraviolet light). After various studies, the SFPUC chose ultraviolet light disinfection. The new ultraviolet disinfection facility ensures over 99% reduction of *Cryptosporidium* and *Giardia*; the same level of treatment as filtration. The SFPUC decided to use ultraviolet light over filtration as it: was far more cost effective while providing the same level of required treatment, was easier to operate and maintain, didn't require the use of chemicals or the need to address treatment residuals, and maintained overall system reliability through continued use of gravity flow. In addition, UV is a closed system so it does not result in the water loss that can occur with filtration.

(i) In 2010, the incident rate of giardia, a pathogen commonly found in rivers and reservoirs, among residents of San Francisco was 370% higher than the state average. The incident rate of giardia in San Mateo County, where almost all water service is provided by San Francisco, was 65% higher than the state average.

On June 18, 2010, the San Francisco Department of Public Health (SFDPH) wrote about San Francisco's comparatively higher crude rates of *cryptosporidiosis* and *giardiasis,* stating that "**These differences in reported case rates are well known among public health professionals, and in our professional judgment should be attributed to several factors aside from drinking water quality.** These include: 1) more active public health surveillance systems, 2) better access to and utilization of health care, and/or 3) immune status and exposure to non-drinking water risk factors." This finding by the SFDPH emphasizes the many other causes of *cryptosporidiosis* and *giardiasis* beyond drinking water quality.

(j) Federal law requires San Francisco to develop and utilize all local water resources before importing water from its existing facilities that store its Tuolumne River supplies.

The federal Raker Act granted San Francisco rights to use federal lands to develop reservoirs for water supply, including the Hetch Hetchy Valley. The Raker Act requires San Francisco to comply with several conditions in exercising those rights. Contrary to the assertion, the U.S. Department of the Interior, which is responsible for enforcing the Raker Act, has determined that "the Raker Act does not require that San Francisco develop and use other available water resources as a precondition to accessing water from the Tuolumne." The Department of the Interior was responding to a request by Congressman Dan

Lungren to investigate whether San Francisco is violating the Raker Act. San Francisco's water use is the lowest in the State, and San Francisco and its customers continue to develop and maximize use of local water sources including conservation, groundwater, and reclaimed water.

(k) The San Francisco water system as it is currently configured requires significant, on-going habitat destruction within Yosemite National Park.

The SFPUC has a commitment to improving our watersheds and we invest millions of dollars annually in environmental improvements.

The SFPUC—in partnership with the National Park and U.S. Forest Services—protects over 652 square miles of High Sierra wilderness, which surround the Hetch Hetchy, Lake Eleanor, and Cherry Creek watersheds. These highly protected lands support unique, diverse wilderness ecosystems. The SFPUC contributes more than $5 million annually to the National Park Service to protect these lands and maintain trails and roads, as well as to provide ongoing wilderness and watershed education to park visitors.

San Francisco is also implementing the Upper Tuolumne River Ecosystem Restoration Project (UTREP). The UTREP is a long-term, science-based effort to: (1) understand historical and current ecosystem conditions on the upper Tuolumne River, (2) assess the relationship of current ecosystem conditions to Hetch Hetchy regional water system operations, and (3) provide recommendations for environmental water releases and other river management measures that support broad ecosystem values while meeting water supply and power generation needs. The UTREP is being coordinated by the SFPUC in coordination with Yosemite National Park staff of the National Park Service, the U.S. Fish and Wildlife Service, and Stanislaus National Forest.

San Francisco is also contributes to the Turlock and Modesto Irrigation Districts' (Districts) obligations to provide flows below Don Pedro reservoir for salmon and steelhead. San Francisco is currently participating in and financing studies with the Districts through the Federal Energy Regulatory Commission Don Pedro Re-licensing process to determine if additional flow is necessary for improving salmon and steelhead populations in the lower Tuolumne River.

(o) The San Francisco water system can be changed to improve public health, ensure reliability of essential water supplies, and restore the environmental damage caused by the existing water system, and these changes can take place without adversely affecting ratepayers, water rights, or energy supply.

In 2005, a California Department of Water Resources independent study estimated that the costs to build new infrastructure and restore Hetch Hetchy valley would be approximately $3 to 10 billion (in 2005 dollars). The study also estimated that a planning study for the removal of Hetch Hetchy Reservoir would cost $65 million.

The impact of these costs could dramatically impact ratepayers and affordability. The average customer **would pay $709 to $2,777 more each year**. Over a 30-year period of bond repayment, the average San Francisco customer would end up paying $21,300 to $83,300 in higher water bills.

Removing the Hetch Hetchy Reservoir would reduce the system's clean hydropower generation capacity by 42%, which equates to a loss of 726 million kilowatt hours annually. This is enough energy to power 178,000 San Francisco homes for a year.

The 42% loss in hydropower generation would result in lost revenues for the San Francisco Public Utilities Commission. Additionally, the SFPUC would need to purchase power on the open market in order to meet the power needs of its customers. The additional expenditures for energy combined with the loss of revenue will cost the City approximately $41 million annually. City General Fund customers such as the SF Unified School District, and the Fire and Police Departments would see their electricity rates increase by almost 200%.