

The Presidio Trust is proposing the construction and operation of a water recycling system at the Presidio to provide high-quality recycled water for landscape irrigation and other non-potable uses, reducing potable water demand, and reducing the amount of sanitary sewer flows to the City and County of San Francisco's combined sewer system. The proposed treatment plant would be located within an existing building in the Letterman Complex. The Presidio Trust (the Trust) is the project proponent and the Lead Agency under the National Environmental Policy Act (NEPA).

This document is an Environmental Assessment (EA), and has been prepared in accordance with the requirements of NEPA, the Council on Environmental Quality's NEPA Regulations, and the Trust's Environmental Quality Regulations (36 CFR Part 1010). This EA is being circulated for public review and comment. Following completion of the public comment period and review of the comments received, the Trust will determine what actions are needed to complete the required NEPA review. If a Finding of No Significant Impact (FONSI) is determined to be the appropriate document, its availability will be publicly noticed in the Presidio POST newsletter and on the Trust's website. Please submit comments to the Trust by May 7, 2002 by mail, fax, or e-mail, to:

Presidio Trust
c/o Allison Stone
34 Graham Street
San Francisco, CA 94129
fax: (415) 561-5315
e-mail: waterrecycling@presidiotrust.gov

CHAPTER 1

INTRODUCTION AND PURPOSE & NEED

1.1 INTRODUCTION

The Presidio Trust is proposing to construct and operate a water recycling system at the Presidio of San Francisco. Use of recycled water for landscape irrigation has long been discussed as a positive step towards sustainability at the Presidio, and was originally identified in the 1994 *Presidio General Management Plan Amendment (GMPA)*, prepared by the National Park Service (NPS). The GMPA and corresponding EIS assumed that up to 1 million gallons per day (MGD) of recycled water would be used at the Presidio for irrigation, with that recycled water provided by a plant constructed by the City and County of San Francisco (CCSF). Following establishment of the Presidio Trust by the U.S. Congress in 1996, the Trust wished to pursue the use of recycled water for irrigation purposes; however, it became clear that the City's planned water recycling plant would not be implemented for many years. During the environmental review of the Trust's Letterman Complex project, the City requested that the Trust consider developing an on-site water recycling system as a way to address concerns regarding cumulative impacts of wastewater generation and water demand. Specifically, the City expressed concern related to its Southeast Water Pollution Control Plant (SEWPCP) and combined sewer system overflows. In response, the Letterman Complex Final Environmental Impact Statement (EIS) included a measure requiring an on-site water recycling system to mitigate the cumulative effects of Presidio-wide projects. The measure specifically requires a plant capable of reclaiming and treating a minimum of 200,000 gallons per day (gpd) of sanitary sewage extracted from the Presidio Main sewer line (which flows to the SEWPCP). Implementation of the proposed water recycling project evaluated in this EA would fulfill this requirement, as well as the long-time vision for use of recycled water at the park.

1.2 PURPOSE & NEED

To adequately articulate the purpose and need of the proposed project, it is important to first understand the existing water and wastewater systems at the Presidio. Relevant background on these issues is provided below, followed by a description of the project's purpose and need, expressed in the form of project objectives.

1.2.1 BACKGROUND

WATER SUPPLY

The majority of the Presidio's water needs are met with on-site resources, specifically Lobos Creek. Water is diverted from the creek, treated at an on-site treatment facility, and conveyed through the local water distribution system. Lobos Creek flows vary from year to year, and have

historically ranged from 1.2 to 2.1 MGD. In order to protect the natural resource values along Lobos Creek (one of the last free-flowing creeks in San Francisco), a minimum creek flow of 0.5 MGD is maintained. As a result, roughly 0.7 to 1.2 MGD of Lobos Creek water is available for diversion, treatment, and use at the Presidio (Presidio Trust 2001). Supplemental water is purchased from the San Francisco Public Utilities Commission (SFPUC) on an as-needed basis. The majority of these purchases occur during the warmer months when irrigation demands are higher and the availability of on-site supply is lower. The amount of water purchased from the SFPUC varies by year, and last year the Trust purchased roughly 15 percent of the total water used at the Presidio. The SFPUC gets its water primarily from Yosemite National Park (Hetch Hetchy Reservoir), with supplemental water provided by local watersheds. Like the Presidio, these local supplies vary from year to year, and have historically met from six to 18 percent of the SFPUC's demand (SFPUC 2001).

Current average daily water consumption at the Presidio is approximately 0.8 MGD. Of this total, almost half of the water is used for landscape irrigation. In the past and in the future, when more Presidio buildings are occupied, total water demands will be higher.

WASTEWATER SYSTEM

The Presidio has two separate sewer systems: one for sanitary sewage (wastewater) and one for stormwater. Stormwater is collected and conveyed to the Pacific Ocean, San Francisco Bay and Crissy Marsh.¹ Wastewater is collected and conveyed to the CCSF combined sewer system (which combines storm and wastewater). The CCSF and Trust meter the Presidio wastewater flows entering the CCSF system, and the Trust reimburses the City for the cost of treatment and disposal, which averages about \$100,000 per month.

There are a total of five locations at the Presidio where wastewater is discharged to the CCSF's system. The majority of these flows (approximately 85 percent) are transported via the "Presidio Main," which is located at the park's northeastern corner near the Gorgas/Lyon Gate within the Letterman Complex. At this time, current wastewater flows in the Gorgas/Lyon Gate area are roughly 250,000 to 300,000 gpd. These flows are conveyed to the City's Southeast Water Pollution Control Plant (SEWPCP) for treatment and disposal. Over time, as vacant buildings are occupied, it anticipated that these flows could increase to more than 500,000 gpd. For planning purposes, available wastewater flows are assumed to be roughly 500,000 gpd.

¹ Stormwater flows within the Presidio are not the subject of the analysis contained herein. The Trust, in coordination with the NPS, is finalizing an interim Stormwater Pollution Prevention Plan (SPPP) that will include the sampling design and protocol, threshold requirements for constituents monitored, and a reporting mechanism. This is an interim plan that adheres to the general guidelines for storm water management as established under the National Pollutant Discharge Elimination System (NPDES), and will remain in effect until the Trust obtains an NPDES permit. Additionally, the plan will include Best Management Practices (BMPs), consistent with the California Stormwater Best Management Practices Handbook, including the use of oil-water separators (several are already in use at Crissy Field), street sweeping, and other actions to improve stormwater quality at the park.

Historically, flows entering the CCSF system from the Presidio were much higher. Before leaving the Presidio, the Army implemented a large-scale infrastructure repair program. This program, as well as infrastructure repairs made by the Trust (i.e., slip-lining existing pipelines to minimize stormwater infiltration), have resulted in a substantial reduction in Presidio flows entering the CCSF combined sewer system. Although it is difficult to make a direct comparison between annual flow data from before and after these various improvements were made (as occupancy rates have also varied), there is clearly a noticeable reduction. For example, metering data indicates that total Presidio wastewater flows entering the CCSF system in 1990 were roughly 475 million gallons. In 2000, total annual flows were approximately 120 million gallons – or roughly one-quarter of the 1990 flows. By the year 2020, once vacant buildings are rehabilitated and reused, projected flows will increase but are never anticipated to reach 1990 levels. In fact, even without implementation of an on-site water recycling system, 2020 flows are still projected to be less than half of the 1990 flows.

As previously mentioned, the CCSF has identified concerns related to combined sewer overflows (CSOs) which occur during major storm events when partially-treated sanitary sewage from the SEWPCP is released to the Bay. During a CSO event, the SEWPCP can receive upwards of 300 million gallons of storm/wastewater. The CCSF asked the Trust to look specifically at three options to help off-set the Presidio's contribution to these flows, as well as long-term water supply issues: 1) consider an on-site water recycling system; 2) consider on-site storage of flows during wet weather events; and 3) consider redirecting flows from the SEWPCP to the Oceanside plant (which does not experience the same wet weather capacity problems). The two action alternatives evaluated in this EA were designed to be responsive to these requests.

Although the Presidio's contribution to CCSF wastewater flows is very small (less than one half of one percent of the dry- and wet-weather capacity of either the SEWPCP or Oceanside Plant), the SEWPCP has generated concerns because of the wet-weather overflows, and because of odors affecting the surrounding Bayview-Hunters Point neighborhoods. The Trust is committed to reducing the Presidio's contribution to these effects. Implementation of the proposed water recycling system, in combination with aggressive water conservation, are critical to achieving this reduction.

1.2.2 PROJECT OBJECTIVES

The purpose of the proposed project is to reduce potable water demand, and the amount of potable water consumed for non-potable uses (i.e., landscape irrigation) at the Presidio, and to provide a reliable and drought-proof source of recycled water for the Presidio that meets or exceeds Title 22 standards for Disinfected Tertiary Recycled Water. These are the principal objectives of the project, which is also intended to reduce Presidio wastewater flows entering the CCSF's combined sewer system, and in particular reduce the Presidio's contribution to cumulative flows affecting the operation and proximity of the SEWPCP.

To be successful, the project must meet these objectives and must also avoid or minimize adverse environmental and cultural resource effects to the greatest extent practical, be financially

feasible, and serve as a demonstration project for other land managers and interested members of the public.