

1 **4.11 UTILITIES**

2 Utility services addressed in this section are potable water and fire protection distribution,  
3 wastewater collection and treatment, stormwater collection, electrical and natural gas,  
4 telecommunications, and solid waste systems. Factors considered in determining whether an  
5 alternative would have significant impacts on utilities included the extent or degree to which its  
6 implementation would:

- 7 1. Increase utility demand to a level in excess of current or planned capacity for major  
8 utility system components, such as reservoirs, wastewater treatment plants, or landfills;  
9 or  
10 2. Would cause the utility provider to violate applicable legal or regulatory environmental  
11 standards and requirements.

12 The impacts presented in this section have been evaluated against the baseline environmental  
13 conditions presented in Chapter 3. Navy recognizes that changes in the environmental  
14 conditions may have occurred in the period between the baseline years and the present.  
15 Although these changes may result in different, and in many cases, lesser impacts to certain  
16 resources, changes to the impact analysis based on any interim change in resource conditions is  
17 not appropriate.

18 Resolving utility issues related to ownership of certain portions of NSTI property and the utility  
19 infrastructure that crosses that property owned by Caltrans would be the responsibility of San  
20 Francisco.

21 **4.11.1 Alternative 1**

22 Under Alternative 1, a new wastewater treatment plant would be constructed, and a new utility  
23 corridor would be constructed around the perimeter of Treasure Island and under an east-west  
24 roadway in the center of the island. This utility corridor would carry storm and sanitary sewer  
25 mains, water mains, reclaimed water mains, and electricity, gas, and telecommunications lines.  
26 Because construction of these facilities is part of Alternative 1 reuse, impacts related to air  
27 quality, noise, and other environmental issues are described within various sections of chapters  
28 4 and 5.

29 ***Not Significant Impacts***

30 Impacts to utility systems, including potable water and fire protection distribution, wastewater  
31 collection and treatment, stormwater collection, electrical and natural gas, telecommunications,  
32 and solid waste, are considered not significant because they would not increase demand in  
33 excess of current or planned capacity nor would they cause utility providers to violate applicable  
34 regulations and standards or require unplanned construction of major additional infrastructure.  
35 These impacts are discussed in the sections below.

36 Potable water and fire protection distribution (Factors 1 and 2). Baseline domestic water usage was  
37 0.96 MGD (3.6 million liters per day) (see Table 4.11-1). The average daily domestic water  
38 demand was estimated by applying per capita average water demands to the number of  
39 employees, residents, theme park visitors, hotel guests, and acres of sports fields anticipated

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1 under this alternative. The projected average daily domestic water demand for the reuse plan  
 2 area at buildout is estimated to be 2.1 MGD (7.9 million liters per day). Thus, the total change  
 3 from baseline consumption under Alternative 1 would be an increase of approximately 1.04  
 4 MGD (3.9 million liters per day). Under this alternative, and in accordance with the Draft  
 5 Reuse Plan, the water supply system would be replaced with new pipes that could  
 6 accommodate the increase. With implementation of water conservation measures and a new  
 7 recycled wastewater system described in the Draft Reuse Plan (San Francisco 1996e), the potable  
 8 water demand would be reduced by an unknown amount.

9 **Table 4.11-1. Estimated Water and Wastewater Demand by Alternative**

	ESTIMATED DEMAND (MGD)	
	Potable Water	Wastewater
NSTI Capacity	2.0	2.0
Baseline Conditions <sup>1</sup>	0.96	0.77 <sup>2</sup>
Alternative 1	2.1	1.5
Alternative 2	1.6	0.49
Alternative 3	0.92	0.55
1	Source: DON 1997c	
2	Baseline wastewater demand was estimated by assuming that 80 percent of potable water consumed is discharged as wastewater.	

10 The existing transmission pipeline attached to the SFOBB, with a capacity of approximately 2.5  
 11 MGD (9.5 million liters per day) (based on a pump rate of about 1,750 gallons [6,624 liters] per  
 12 minute), and water supply from the San Francisco Water Department are adequate to  
 13 accommodate the increase in demand (San Francisco Water Department 1998). This impact  
 14 would not be significant because it would not require the construction of major additional  
 15 infrastructure and all necessary infrastructure improvements would be implemented as part of  
 16 this alternative. No mitigation is proposed.

17 Wastewater collection and treatment (Factors 1 and 2). Assuming that 80 percent of potable water  
 18 consumed (not including sports field irrigation) is discharged as wastewater, sewage generation  
 19 with development of Alternative 1 would be approximately 1.5 MGD (5.7 million liters per  
 20 day). This amount of wastewater would be within the capacity of the existing wastewater  
 21 treatment plant on Treasure Island (approximately 2 MGD [9.5 million liters per day]) and also  
 22 would be within the capacity of the new wastewater treatment plant. The wastewater collection  
 23 system experiences inflow and infiltration problems (DON 1994b), and the increase may  
 24 periodically exceed the capacity of the existing collection system. A replacement sewer system  
 25 is planned under this alternative that could accommodate the new uses and would be required  
 26 to meet applicable discharge standards. Therefore, the increase in sewage generation would not  
 27 be significant, and no mitigation is proposed.

28 Stormwater collection (Factor 1). Development of the reuse plan area would replace undeveloped  
 29 areas and undeveloped parcels with urban-type development. While sports fields and other  
 30 open spaces would provide some pervious surfaces to absorb rainwater, the overall amount of

1 impervious surface would increase by 37 acres, thereby increasing the amount of surface water  
2 runoff.

3 In accordance with the Draft Reuse Plan, new stormwater collection infrastructure would be  
4 designed to accommodate projected increases in stormwater flow. Other systemwide  
5 improvements could include implementing alternative technologies, including use of wetlands  
6 to capture stormwater discharges. On-site storm drainage improvements would be required as  
7 part of development approvals. This impact would not be considered significant because  
8 infrastructure improvements implemented as part of this alternative would provide adequate  
9 capacity for the increased stormwater flow. No mitigation is proposed.

10 Electricity and natural gas (Factor 1). The steam system supplying heat to a number of buildings  
11 is dismantled, and buildings proposed for reuse that were previously heated by steam would  
12 require either the installation of individual boilers or connection to the natural gas  
13 infrastructure. Most of the electrical distribution system at NSTI was upgraded in the early  
14 1980s. With some exceptions, the system is in adequate condition and is capable of providing  
15 service to existing load demands (San Francisco 1995b). The natural gas distribution system is  
16 in adequate condition for current needs.

17 The electrical and natural gas infrastructure would be modified or expanded to serve the  
18 individual needs of the future users of NSTI. As of October 1, 1998, the San Francisco PUC is  
19 purchasing natural gas through California consolidated purchase. Replacement of the steam  
20 plant with individual building heating systems would result in a more efficient use of natural  
21 gas. The capacity of the existing transmission line is adequate to supply future uses of the  
22 property. No mitigation is proposed.

23 Telecommunications (Factor 1). This alternative would require expanding telecommunication  
24 switch capacity to serve those portions of NSTI that were served by Navy telecommunications  
25 systems and expanding service to the residential areas. The switch would be designed with  
26 adequate capacity, or with the capability to expand, to serve future demands at NSTI. These  
27 actions would be phased in with reuse and individual developments. This impact would be  
28 considered not significant because all necessary infrastructure improvements would be  
29 implemented as part of this alternative. No mitigation is proposed.

30 Solid waste (Factor 1). It is estimated that proposed development under Alternative 1 would  
31 generate approximately 9,549 tons (8,665 metric tons) of solid waste per year, an average of 26  
32 tons (29 metric tons) per day. This generation would be a decrease of about 5,691 tons (5,164  
33 metric tons) per year of solid waste from the baseline generation of 15,240 tons (13,829 metric  
34 tons) per year presented in section 3.11, which is equivalent to a decrease of 16 tons (18 metric  
35 tons) per day.

36 Solid waste from development under Alternative 1 would be delivered to the Davis Street  
37 Transfer Station and then transported to the Altamont Landfill. This landfill can accept a  
38 maximum of approximately 11,150 tons (10,117 metric tons) per day and will reach capacity in  
39 approximately 30 years. Based on an excess of approximately 5,000 tons in daily capacity, this  
40 solid waste disposal facility has ample capacity to accommodate the solid waste generated daily  
41 under Alternative 1. No new facilities would be required; therefore, the impact under  
42 Alternative 1 would not be significant. No mitigation is proposed.

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1 Construction and demolition activities would increase the amount of solid waste generated at  
2 NSTI. This alternative would involve demolishing approximately 3,059,959 square feet (284,279  
3 m<sup>2</sup>) of NSTI structures, or about 70.5 percent of the built space. Such demolition would  
4 generate approximately 801,097 cubic yards (612,482 m<sup>3</sup>) of solid waste, equivalent to  
5 approximately 657 percent of the solid waste generated at NSTI in 1993. Assuming that all the  
6 projected demolition occurs within two years after Navy disposal and that no reuse or recycling  
7 occurs, the increase in the average amount of demolition solid waste transported daily to the  
8 Altamont Landfill would be approximately 151 tons (137 metric tons). This amount would not  
9 significantly contribute to the daily tonnage received by the landfill. As development proceeds,  
10 the daily tonnage would decrease, due to the cessation of demolition activities and the lower  
11 waste generation rates for constructing buildings. No new solid waste disposal facilities would  
12 be required; therefore, the impact under Alternative 1 would not be significant, and no  
13 mitigation is proposed.

14 The solid waste generated under this alternative would need to be accommodated within San  
15 Francisco's effort to divert 50 percent of solid waste from landfills, as required by the California  
16 Integrated Waste Management Act, Cal. Pub. Res. Code § 40000 et seq. San Francisco would  
17 remain in compliance with this act by developing a solid waste management plan. This plan  
18 would contain programs and procedures to meet the requirements of this regulation and would  
19 emphasize reusing and recycling solid waste, particularly construction and demolition debris.  
20 At a minimum, the plan would include San Francisco's solid waste recycling and reuse  
21 programs. Construction and demolition contractors could be required to submit individual  
22 solid waste management plans consistent with the overall plan, detailing the types of waste to  
23 be generated, material handling procedures, and the methods of disposal. This is not  
24 considered a significant impact, and no mitigation is proposed.

#### 25 4.11.2 Alternative 2

26 Under Alternative 2, a new wastewater treatment plant would be constructed. A new utility  
27 corridor would be constructed around the perimeter of Treasure Island under Alternative 2, but  
28 it would not extend to the perimeter adjacent to the proposed golf course. Because construction  
29 of these facilities is part of Alternative 2 reuse, impacts related to air quality, noise, and other  
30 environmental issues are described within various sections of chapters 4 and 5.

#### 31 *Not Significant Impacts*

32 Potable water and fire protection distribution (Factor 1). The average daily demand for water under  
33 this alternative reuse development would be approximately 1.6 MGD (6.1 million liters per  
34 day), which would be an increase of approximately 0.64 MGD (2.4 million liters per day) over  
35 baseline demand at NSTI (Table 4.11-1). More than half of the projected potable water demand  
36 would be attributable to golf course development. As with Alternative 1, the water supply  
37 system would be replaced with new pipes that could accommodate the increased demand.  
38 Water supply capacity is available to meet demand for potable water and fire protection;  
39 therefore, the impact under Alternative 2 is not significant, and no mitigation is proposed.

40 Wastewater collection and treatment (Factor 1). The average daily wastewater flow generated by  
41 Alternative 2 would be approximately 0.49 MGD (1.8 million liters per day). This average daily  
42 flow would result in an increase of approximately 0.45 MGD (1.7 million liters per day) over

1 baseline average daily flows. As with Alternative 1, a new wastewater treatment plant would  
2 be designed to accommodate reuse development. The wastewater collection system  
3 experiences inflow and infiltration problems. However, a replacement sewer system is planned  
4 under this alternative that could accommodate the new uses, and it would be required to meet  
5 applicable discharge standards. This impact would not be significant because all necessary  
6 infrastructure improvements would be implemented as part of this alternative. No mitigation is  
7 proposed.

8 Stormwater collection (Factor 1). Although stormwater runoff in the northwest portion of  
9 Treasure Island (where the golf course is proposed) would decrease, the overall amount of  
10 paved surfaces at NSTI could increase by 12 acres under this alternative, so the volume of  
11 stormwater discharges also would increase. On-site storm drainage improvements would be  
12 required as part of development approvals, and the new stormwater collection infrastructure  
13 would be designed to accommodate projected increases in stormwater flow. This impact would  
14 not be considered significant, and no mitigation is proposed.

15 Electricity and natural gas (Factor 1). Under Alternative 2, the electrical and natural gas  
16 infrastructure would be modified or expanded to serve the individual needs of the future users  
17 of NSTI. Therefore, this would not be a significant impact. No mitigation is proposed.

18 Telecommunications (Factor 1). Alternative 2 would require expanding telecommunication switch  
19 capacity to serve those portions of NSTI that were served by Navy telecommunications systems  
20 and expanding service to the residential areas. As described under Alternative 1, these actions  
21 would be phased in with reuse and individual developments. This would not be a significant  
22 impact. No mitigation is proposed.

23 Solid waste (Factor 1). Alternative 2 would generate approximately 4,062 tons (3,686 metric tons)  
24 of solid waste per year, which is 11,178 tons (10,142 metric tons) per year less than baseline.  
25 These rates represent an average of 11 tons (10 metric tons) of solid waste generated per day, a  
26 decrease of 31 tons (28 metric tons) per day. This waste would be disposed of at the Altamont  
27 Landfill. This landfill could adequately accommodate solid waste generated under Alternative  
28 2. No additional solid waste facilities would be required to be constructed. Impacts would not  
29 be significant, and no mitigation is proposed.

30 This alternative would have a greater impact on demolition waste management than  
31 Alternative 1 due to greater demolition of existing residential units on the northern part of  
32 Treasure Island. Demolition would create approximately 939,598 cubic yards (718,374 m<sup>3</sup>) of  
33 solid waste, equal to about 771 percent of baseline generation. This alternative envisions the  
34 demolition of approximately 3,588,991 square feet (333,428 square m) of existing facilities, or  
35 about 82.7 percent of the built space. Under this alternative, there would be fewer facilities  
36 constructed than under Alternative 1 and less construction debris. As described for Alternative  
37 1, San Francisco would remain in compliance with the California Integrated Waste Management  
38 Act by developing a solid waste management plan. No mitigation is proposed.

#### 39 4.11.3 Alternative 3

40 Under Alternative 3, the new utility corridor would be limited to the south end of Treasure  
41 Island. Because construction of the corridor is part of Alternative 3 reuse, impacts related to air

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1 quality, noise, and other environmental issues are described within various sections of chapters  
2 4 and 5. Where significant impact would occur, mitigation measures are identified.

#### 3 *Not Significant Impacts*

4 Potable water and fire protection distribution (Factor 1). The average daily demand for water under  
5 this alternative reuse development would be approximately 0.92 MGD (3.5 million liters per  
6 day), which would be a decrease of approximately 0.04 MGD (0.15 million liters per day) over  
7 baseline demand at NSTI (Table 4.11-1). As with Alternative 1, system capacity could  
8 accommodate reuse development under Alternative 3; therefore, the impact under Alternative 3  
9 would not be significant, and no mitigation is proposed.

10 Wastewater collection and treatment (Factor 1). The average daily wastewater flow generated by  
11 Alternative 3 would be approximately 0.55 MGD (2.1 million liters per day). This average daily  
12 flow would result in an increase of approximately 0.51 MGD (1.9 million liters per day) over  
13 baseline average daily flows. As with Alternative 1, system capacity could accommodate reuse  
14 development under Alternative 3. The wastewater collection system experiences inflow and  
15 infiltration problems. However, under this alternative a replacement sewer system is planned  
16 that could accommodate the new uses and would be required to meet applicable discharge  
17 standards. This impact would not be significant, and no mitigation is proposed.

18 Stormwater collection (Factor 1). The overall amount of paved surfaces at NSTI would remain  
19 roughly the same under this alternative because minimal new development is proposed, so the  
20 volume of stormwater discharges would remain roughly the same. San Francisco's assessment  
21 of the capacity and condition of the stormwater system found several potential problems.  
22 However, on-site storm drainage improvements would be required as part of development  
23 approvals, and any new stormwater collection infrastructure would be designed to  
24 accommodate projected stormwater flows. This impact would not be considered significant,  
25 and no mitigation is proposed.

26 Electricity and natural gas (Factor 1). Under Alternative 3, the increase in development and  
27 increase in energy efficiency likely would result in an increase in the annual amount of energy  
28 consumed. The electrical and natural gas infrastructure would be modified or expanded to  
29 serve the individual needs of the future users of NSTI. This would not be considered a  
30 significant impact. No mitigation is proposed.

31 Telecommunications (Factor 1). Alternative 3 would require expanding telecommunication  
32 switch capacity to serve those portions of NSTI that were served by Navy telecommunications  
33 systems and expanding service to the residential areas. As described under Alternative 1, these  
34 actions would be phased in with reuse and individual developments. This would not be  
35 considered a significant impact. No mitigation is proposed.

36 Solid waste (Factor 1). Solid waste generation under Alternative 3 would be approximately 4,050  
37 tons (3,675 metric tons) of solid waste per year, or approximately 11 tons (10 metric tons) per  
38 day. This amount of solid waste would be about 11,190 tons (10,154 metric tons) of solid waste  
39 per year less than baseline generation, an average daily decrease of 31 tons (28 metric tons).  
40 Solid waste generated under Alternative 3 would be disposed of at the Altamont Landfill.  
41 Landfill space at the Altamont Landfill could adequately accommodate solid waste generated

1 under this alternative. No additional solid waste facilities would be required to be constructed.  
2 Impacts would not be significant, and no mitigation is proposed.

3 Under Alternative 3, approximately 1,359,874 square feet (126,336 square m), or about 31  
4 percent, of facilities would be demolished, yielding approximately 356,015 cubic yards (272,193  
5 m<sup>3</sup>) of solid waste. Such an amount would be equivalent to almost three times the amount of  
6 solid waste generated under baseline conditions. However, as described for under Alternative  
7 1, San Francisco would remain in compliance with the California Integrated Waste Management  
8 Act by developing a solid waste management plan. This would not be a significant impact, and  
9 no mitigation is proposed.

#### 10 4.11.4 No Action Alternative

11 Under the No Action Alternative, the utility systems would continue to be operated and  
12 maintained by the San Francisco PUC. Due to the reduction in employment and activity, the  
13 No Action Alternative would result in reduction in demand for all utilities over baseline  
14 conditions. Demand for potable water, sewage, electricity, telecommunications, and solid waste  
15 disposal would be reduced to levels necessary for caretaker status. Storm drain conditions  
16 would not change. The No Action Alternative would have no impact on either the capacity or  
17 function of on-site utility systems. No construction of any on-site utility systems would be  
18 required.

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