

## **Appendix D      Biological Resources Supporting Information**

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**Appendix D-1 Special Status Plant Species Considered for Potential Occurrence on the Former NWS Concord**

Scientific Name	Common Name	Federal/State Listing Status	Habitat Description and Elevation	Potential to Occur
<i>Amsinckia grandiflora</i>	large-flowered fiddleneck	FE/SE	Found in cismontane woodland, valley and foothill grassland from 270-550m	<b>Unlikely.</b> Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Arctostaphylos pallida</i>	pallid manzanita	FT/SE	Found in broad-leaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub from 186-485m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Chloropyron molle</i> ssp. <i>molle</i> (formerly <i>Cordylanthus mollis</i> ssp. <i>mollis</i> -)	soft bird's-beak	FE/SR	Occurs in coastal marsh from 1-10m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	FE/None	Found in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub from 3-300m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Clarkia franciscana</i>	Presidio clarkia	FE/SE	Occurs in coastal scrub and valley and foothill grassland from 25-335m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Cordylanthus nidularius</i>	Mt. Diablo bird's-beak	None/SR	Found in chaparral from 600-800m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).

**Appendix D-1 Special Status Plant Species Considered for Potential Occurrence on the Former NWS Concord**

Scientific Name	Common Name	Federal/State Listing Status	Habitat Description and Elevation	Potential to Occur
<i>Erysimum capitatum</i> var. <i>angustatum</i>	Contra Costa wallflower	FE/SE	Occurs on inland dunes from 3-20m. Known only from the Antioch Dunes.	Absent. No suitable habitat present. Not identified during special status plant surveys.
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT/SE	Found in coastal prairie and valley and foothill grassland from 10-260m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2012).
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE/None	Found in open, grassy areas in valley-foothill grasslands, vernal pools, and cismontane woodland from 1-445m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	None/SR	Occurs in freshwater and brackish marshes and riparian scrub from 0-10m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Neostapfia colusana</i>	Colusa grass	FT/SE	Occurs in vernal pools in valley grassland, freshwater wetlands, and wetland-riparian communities. 5-215m.	Absent. No suitable habitat present. Not identified during special status plant and vernal pool surveys (City of Concord 2010 and 2012).
<i>Oenothera deltoides</i> ssp. <i>howellii</i>	Antioch Dunes evening-primrose	FE/SE	Occurs on inland dunes from 0-30m.	Absent. No suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).

**Appendix D-1 Special Status Plant Species Considered for Potential Occurrence on the Former NWS Concord**

Scientific Name	Common Name	Federal/State Listing Status	Habitat Description and Elevation	Potential to Occur
<i>Plagiobothrys diffusus</i>	San Francisco popcornflower	None/SE	Found in coastal prairie and valley and foothill grassland from 60-360m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Sanicula maritima</i>	adobe sanicle	None/SR	Found in chaparral, coastal prairie, meadows and seeps, valley and foothill grassland on clay soils and serpentinite from 30-240m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Sanicula saxatilis</i>	rock sanicle	None/SR	Occurs in broad-leaved upland forest, chaparral, and valley and foothill grassland on rocky soils from 620-1,175m.	Unlikely. Suitable habitat present. Not identified during special status plant surveys (City of Concord 2010 and 2012).
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE/None	Found in serpentine soils in valley grassland and foothill woodlands from 80-700m.	Absent. No suitable habitat present. Serpentine soils are not present within the former NWS Concord. Not identified during special status plant surveys.

Key:

FE = federal endangered

FT = federal threatened

SR = state rare

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**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
<b>Invertebrates</b>				
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT/None	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is primary host plant.	<b>Absent.</b> No suitable habitat present.
California freshwater shrimp	<i>Syncaris pacifica</i>	FE/SE	Found in perennial freshwater streams in Marin, Sonoma, and Napa counties.	<b>Absent.</b> Outside known range for this species.
Callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	FE/None	Restricted to the northern coastal scrub of the San Francisco peninsula.	<b>Absent.</b> Outside known range for this species.
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE/None	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools.	<b>Absent.</b> Outside known range for this species.
Delta green ground beetle	<i>Elaphrus viridis</i>	FT/None	Found along margins of vernal pools in Solano County.	<b>Absent.</b> Outside known range for this species.
Lange's metalmark butterfly	<i>Apodemia mormo langei</i>	FE/None	Inhabits stabilized dunes along the San Joaquin River. Endemic to Antioch Dunes, Contra Costa County.	<b>Absent.</b> Outside known range for this species.
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	FE/None	Found in grass-bottomed pools and clear-water sandstone vernal pools.	<b>Absent.</b> Not detected in protocol-level surveys.
San Bruno elfin butterfly	<i>Callophrys mossii bayensis</i>	FE/None	Found in coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain in San Mateo County.	<b>Unlikely.</b> No CNDDDB occurrences within 5 miles of the former NWS Concord. Unknown if host plants are present.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
Valley elderberry longhorn beetle	<i>Desmocercus californicus dimorphus</i>	FT/None	Found only on elderberry bushes in moist valley oak woodlands along the margins of rivers and streams in the lower Sacramento and lower San Joaquin River Valleys.	<b>Unlikely.</b> Outside known range for this species.
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT/None	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	<b>Absent.</b> Not detected in protocol-level surveys.
Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	FE/None	Found in grass or mud-bottomed swales in grasslands on alluvial soils underlain by hardpan.	<b>Absent.</b> Not detected in protocol-level surveys.
<b>Fish</b>				
Central California coast coho salmon	<i>Oncorhynchus kisutch</i>	FE/SE	Found in cool freshwater streams with adequate pool and riffle depths, moderate velocities, and clean spawning gravels. Prefer short, lower sections of larger coastal drainages.	<b>Absent.</b> No suitable habitat present.
Central California coast steelhead	<i>Oncorhynchus mykiss</i>	FT/None	Found in cool freshwater streams with adequate pool and riffle depths, moderate velocities, and clean spawning gravels.	<b>Absent.</b> No suitable habitat present.
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	FT/None	Found in cool freshwater streams with adequate pool and riffle depths, moderate velocities, and clean spawning gravels.	<b>Absent.</b> No suitable habitat present.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
Central Valley spring-run chinook salmon, winter-run chinook salmon (Sacramento River)	<i>Oncorhynchus tshawytscha</i>	FT/ST	Found in cool freshwater streams in the Sacramento Valley with adequate pool and riffle depths, moderate velocities, and clean spawning gravels.	<b>Absent.</b> No suitable habitat present.
Sacramento River winter-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	FE/SE	Found in brackish, shallow lagoons with slow-moving water and salinities between 0 and 10 parts per thousand.	<b>Absent.</b> No suitable habitat present.
Delta smelt	<i>Hypomesus transpacificus</i>	FT/SE	Found in euryhaline (mixed fresh and salt water) zone within the delta where salinity is approximately 2 parts per thousand.	<b>Absent.</b> No suitable habitat present.
Green sturgeon	<i>Acipenser medirostris</i>	FT/None	Found in large rivers with swift, deep water and clean sand and cobble substrates.	<b>Absent.</b> No suitable habitat present.
Longfin smelt	<i>Spirinchus thaleichthys</i>	None/ST	Spawn in fresh water in the upper San Francisco Bay and Sacramento-San Joaquin Delta.	<b>Absent.</b> No suitable habitat present.
Tidewater goby	<i>Eucyclogobius newberryi</i>	FE/None	Found in cool freshwater streams in the Sacramento River and tributaries with adequate pool and riffle depths, moderate velocities, and clean spawning gravels.	<b>Absent.</b> No suitable habitat present.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
<b>Amphibians</b>				
California red-legged frog	<i>Rana draytonii</i>	FT/None	This large, aquatic frog requires deep seasonal pools with riparian vegetation for breeding. Individuals are known to move long distances between water bodies. Lack of access to upland refugia, such as small mammal burrows, is considered a limiting factor for this species.	<b>Present.</b> Individuals were observed in Cistern Pond, upper Cistern Pond, and several locations along Mt. Diablo Creek.
California tiger salamander	<i>Ambystoma californiense</i>	FT/ST	Occurs primarily in grassland habitats. Requires seasonal pools, especially those that retain water until May or June, for breeding and egg-laying. This species spends most of its life underground in small mammal burrows.	<b>Present.</b> Individuals were observed in nine seasonal wetlands and ponds within the southeastern portion of the former NWS Concord, according to surveys conducted in 1999. No suitable habitat is present northwest of Willow Pass Road.
<b>Reptiles</b>				
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	FT/ST	Found in coastal scrub and chaparral communities but will forage in grasslands and open woodlands. Requires access to rock crevices or small mammal burrows for refuge.	<b>Unlikely.</b> No suitable breeding habitat exists within the former NWS Concord. However, small areas of suitable foraging habitat occur southeast and northwest of Bailey Road.
Giant garter snake	<i>Thamnophis gigas</i>	FT/ST	Highly aquatic snake found in freshwater marsh and low-gradient streams in the San Joaquin and Sacramento River Delta but has adapted to drainage canals and irrigation ditches.	<b>Unlikely.</b> Wetlands and drainages within the former NWS Concord are not extensive enough to provide suitable habitat for this species.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
<b>Birds</b>				
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA/SE	Large, distinctive eagle. Nests in mature and old-growth forest adjacent to large bodies of water.	<b>Unlikely.</b> A single juvenile bald eagle was observed during surveys in 1982. Individuals may forage over the former NWS Concord, but this species is not expected to breed onsite.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	None/ST	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depth of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	<b>Unlikely.</b> No suitable habitat exists within the former NWS Concord.
California clapper rail	<i>Rallus longirostris obsoletus</i>	FE/SE	Occurs only within the tidal salt and brackish marshes around San Francisco Bay.	<b>Absent.</b> No suitable habitat exists within the former NWS Concord.
California least tern	<i>Sternula antillarum browni</i> (formerly known as <i>Sterna antillarum browni</i> )	FE/SE	Nests along the coast from San Francisco Bay south to northern Baja, California. Colonial breeder on bare or sparsely vegetated, flat substrates such as sand beaches, alkali flats, landfills, or paved areas.	<b>Absent.</b> No suitable breeding habitat exists within the former NWS Concord.
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA/None	Found in rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons and large trees in open areas provide nesting habitat.	<b>Present.</b> A breeding pair nests annually along the eastern boundary of the former NWS Concord.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
Peregrine falcon	<i>Falco peregrinus anatum</i>	None/SE	A fairly rare perennial visitor throughout cismontane California. Nests on rocky outcrops and cliffs, or on tall buildings in urban areas. Foraging habitat typically includes a variety of coastal and interior wetland communities, as well as open areas such as airports and farmland.	<b>Unlikely.</b> The CRP FEIR lists this species as present within the proposed action area. However, while this species may forage occasionally within the former NWS Concord, no suitable nesting habitat for this species is onsite.
Swainson's hawk	<i>Buteo swainsoni</i>	None/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, grasslands, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields with abundant rodents.	<b>Unlikely.</b> Suitable habitat exists within the former NWS Concord, but this species is likely only to forage and not breed.
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT/None	Nests on sandy beaches and on the shores of salt ponds and alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	<b>Unlikely.</b> No suitable breeding habitat exists within the former NWS Concord.
<b>Mammals</b>				
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE/SE	Found only in tidal marsh of San Francisco Bay and its tributaries. Pickleweed is a primary habitat component.	<b>Unlikely.</b> No suitable habitat exists within the former NWS Concord.

**Appendix D-2 Special Status Wildlife with Potential to Occur on the Former NWS Concord**

Species	Scientific Name	Federal/State Listing Status	Habitat	Potential to Occur
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE/SE	Found in annual grassland with scattered shrubs. Needs loosely textured, friable soil for burrowing and an adequate prey base of small mammals.	<b>Absent.</b> While suitable habitat is present within the former NWS Concord, the species has not been observed during extensive survey efforts.

Sources: CNDDDB 2014 and USFWS 2014.

**Status explanations:**

**Federal**

- FE = Listed as endangered under the federal Endangered Species Act.
- FT = Listed as threatened under the federal Endangered Species Act.
- BGEPA = Protected under the Bald and Golden Eagle Protection Act.

**State**

- SE = Listed as endangered under the California Endangered Species Act.
- ST = Listed as threatened under the California Endangered Species Act.
- SC = California Department of Fish and Wildlife species of special concern.

Potential to Occur:

Likely = Per CNDDDB and/or professional expertise specific to the former NWS Concord, individuals of the species are likely to colonize or use the area because data show that individuals of the species are known to occur within 5 miles of the former NWS Concord and ideal habitat is within the former NWS Concord.

Unlikely = Occurrence of this species has been identified in the CNDDDB records, but either the recorded observations are more than 10 years old, key habitat requirements are absent, or the habitat on the former NWS Concord is so degraded, small, or isolated that it would be very unlikely for individuals of the species to colonize or use the area.

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**Appendix E Hazards and Hazardous Substances Supporting Information**

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## Tables

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**Table E-1 Summary of Solid Waste Management Unit Sites**

Program Activity					
Site Number	Site Name	Key Activity	Date Completed	Description and Current Status	Constituents of Concern
<b>SWMUs Recommended for No Further Action in 1992</b>					
<ul style="list-style-type: none"> <li>• SWMU 3</li> <li>• SWMU 4</li> <li>• SWMU 6</li> <li>• SWMU 8</li> <li>• SWMU 9</li> <li>• SWMU 10</li> <li>• SWMU 11</li> <li>• SWMU 19</li> <li>• SWMU 21</li> <li>• SWMU 27</li> <li>• SWMU 28</li> <li>• SWMU 29</li> <li>• SWMU 31</li> <li>• SWMU 32</li> </ul>	<ul style="list-style-type: none"> <li>• Building IA-8, Explosives Ordnance Disposal Detachment</li> <li>• Building IA-10, Print Shop</li> <li>• Building IA-15, Automotive Vehicle Maintenance Division</li> <li>• Building IA-20, Chemical Laboratory</li> <li>• Building IA-21, Material Test Laboratory</li> <li>• Building IA-21A, Evaluation Laboratory</li> <li>• Building IA-22, Photography Laboratory</li> <li>• Building IA-54, Electric Substation</li> <li>• Building IA-58, X-Ray Building</li> <li>• Building 193, Auto Hobby Shop</li> <li>• Building 263, Ordnance Maintenance</li> <li>• Building 429, Hazardous Waste Accumulation Shed</li> <li>• Diesel Leak Near Main Entrance of Inland Area</li> <li>• UST 5AT</li> </ul>	<p>RFA</p> <hr/> <p>NFA recommended</p>	<p>1992</p> <hr/> <p>1992</p>	<p>Various site descriptions; see historical records.</p> <p>1992 RFA report recommended NFA, and no additional investigations were conducted under RCRA.</p> <p>Some sites received additional regulatory action under RCRA; e.g., for SWMU 11, the RCRA-permitted photographic silver recovery unit received DTSC closure in 1999.</p> <p>Some sites were later investigated under other programs; e.g., SWMU 8, Building IA-20 Chemical Laboratory, was later investigated as part of IRP Site 27 (see Table 3.8-1). SWMU 32, UST 5AT, was later investigated under the UST Program (see Table E-2).</p>	<p>Depending on the site, common constituents of concern included oil, petroleum hydrocarbons, metals, VOCs, chemicals from paints, solvents, acids, bases, coolant, and photographic chemicals</p>

**Table E-1 Summary of Solid Waste Management Unit Sites**

Site Number	Site Name	Program Activity		Description and Current Status	Constituents of Concern
		Key Activity	Date Completed		
<b>SWMUs Transferred to ER Program</b>					
• SWMU 2 • SWMU 5 • SWMU 7 • SWMU 18	• Building IA-7 Burn Pit near Fire Station • Building IA-12, Locomotive Repair Shop, and Building 269, Wash Station • Building IA-15, Public Works Shop and Automotive Vehicle Maintenance, and Building IA-16, Paint Shop • Building IA-51, Vehicle Maintenance Building	RFA	1992	See Table 3.8-1	See Table 3.8-1
		RFA Confirmation Study	1997		
		SWMUs transferred to ER Program	After 1997		
<b>Other SWMUs</b>					
SWMU 1	Building IA-6, Boiler House	RFA	1992	UST removed on 6/29/89. Petroleum-only site was transferred to UST program to complete the cleanup following the RFA Confirmation Study (see Table E-2). Boiler house demolished in 1997. RWQCB closure issued on 6/16/06.	Diesel fuel oil
		RFA Confirmation Study	1997		
		Transferred to UST program	After 1997		
		NFA; site closed	2006		
SWMU 12	Building IA-24, Forklift Maintenance and Storage (septic system)	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Metals, fuel and oil constituents
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended (septic system)	1997		
SWMU 13	Building IA-25, Missile Component Maintenance (septic system)	RFA	1992	Septic tank waste removed in 1997 under RCRA Corrective Action. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA.	Chlorinated hydrocarbons (especially TCE) and metals
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended (septic system)	1997		
				Remainder of site is being addressed as IRP Site 29 (see Table 3.8-1).	

**Table E-1 Summary of Solid Waste Management Unit Sites**

Site Number	Site Name	Program Activity		Description and Current Status	Constituents of Concern
		Key Activity	Date Completed		
SWMU 14	Building IA-27, Carpenter Shop	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Metals, chemicals from paints
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		
SWMU 15	Building IA-41, Paint Storage	RFA	1992	Building IA-41 has been demolished. RFA Confirmation Study report recommended NFA because the building was determined to not have had a septic system.	Metals
		RFA Confirmation Study	1997		
		NFA recommended	1997		
SWMU 16	Building IA-46, Public Works Maintenance Storage, and Building 150, storage shed	RFA	1992	Pesticide-contaminated (mostly DDT) soils removed under 1997 RCRA Corrective Action. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. RCRA Part B clean-closure issued by DTSC on 6/27/03 for past fluorescent-bulb-crushing operations in Building IA-46. Septic tank decommissioned in place in 2005.	Mercury, asbestos, pesticides
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		
		RCRA Part B clean-closure (fluorescent bulb crushing)	2003		
SWMU 17	Building IA-50, Rail/Truck Transfer Depot	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Metals, VOCs, chemicals from paints
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		
SWMU 20	Building IA-55, Ordnance Operations Building	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Metals, VOCs
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		
SWMU 22	Building 81, Ordnance Maintenance and Test Building (septic system)	RFA	1992	Septic system was the focus. RFA Confirmation Study report recommended NFA. Septic tank decommissioned in place in 2005.	Unspecified hazardous constituents (could include chemicals from paints)
		RFA Confirmation Study	1997		
		NFA recommended (septic system)	1997		

**Table E-1 Summary of Solid Waste Management Unit Sites**

Site Number	Site Name	Program Activity		Description and Current Status	Constituents of Concern
		Key Activity	Date Completed		
SWMU 23	Building 87, Storage Building	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Solvents, oil, chemicals from paints
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		
SWMU 24	Building 93, Guided Missile Division (septic system)	RFA	1992	Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Solvents, chemicals from paints
		RFA Confirmation Study	1997		
		RCRA Corrective Action Program activities	1997		
		NFA recommended (septic tank)	1997	Other portions of the site (e. g. leach field) were subsequently addressed for munitions constituents as an AOPI under a CERLCA SI, which recommended NFA.	
		NFA recommended (leach field)	2013		
SWMU 25	Building 97, Ordnance Assembly Building	RFA	1992	Septic system was the focus. RFA Confirmation Study report recommended NFA. Septic tank decommissioned in place in 2005. Four USTs removed in 1990 under UST program (see Table E-2).	Solvents, oil, chemicals from paints
		RFA Confirmation Study	1997		
		NFA recommended	1997		
SWMU 26	Building 178, Navy Exchange Gasoline Service Station	RFA	1992	Four USTs were removed in 1991 under UST program (see Table E-3). CCHS determination of NFA on 5/28/98. RWQCB closure issued on 12/23/99. Site also addressed under CERCLA Navy CLEAN program.	Petroleum constituents
		Transferred to UST program	1991		
		NFA	1998		
		Site closed	1999		

**Table E-1 Summary of Solid Waste Management Unit Sites**

Program Activity					
Site Number	Site Name	Key Activity	Date Completed	Description and Current Status	Constituents of Concern
SWMU 30	Unocal Corporation Oil Pipeline Site	Unocal submitted closure report	1991	1989 release of approximately 84 gallons of crude oil that affected soil and groundwater. 1,900 cubic yards of contaminated soil were removed. Unocal completed soil and groundwater investigation, removed contaminated soil under RWQCB direction, and submitted closure report. There is no verification of site closure. Site recently investigated for munitions and explosives of concern under ER Program (see Section 3.8.3.3.1).	Crude oil
		DTSC recommended RFI	1992		
SWMU 33	UST 6LC98, Magazine Boiler	RFA	1992	UST removed in 1993 under UST program (see Table E-2). CCHS determination of NFA on 6/1/95. RWQCB determination of NFA on 6/16/06.	Diesel fuel oil
		Transferred to UST program	After 1992		
		NFA	1995, 2006		
SWMU 51	Building IA-56	RFA Confirmation Study	1997	Septic system was the focus. RFA Confirmation Study report recommended NFA. Septic tank decommissioned in place in 2005.	Unspecified hazardous constituents
		NFA recommended	1997		
SWMU 52	Building 7SH5 (septic system)	RFA Confirmation Study	1997	Septic system was the focus. RFA Confirmation Study report recommended NFA. Septic tank decommissioned in place in 2005.  Remainder of site is being addressed as part of IRP Site 22 (see Table 3.8-1).	Solvents, metals
		NFA recommended (septic system)	1997		
SWMU 53	Building 7SH14	RFA Confirmation Study	1997	Septic system was the focus. RFA Confirmation Study report recommended NFA. Septic tank decommissioned in place in 2005.	Solvents, metals
		NFA recommended	1997		

**Table E-1 Summary of Solid Waste Management Unit Sites**

Site Number	Site Name	Program Activity		Description and Current Status	Constituents of Concern
		Key Activity	Date Completed		
SWMU 54	Building 79	RFA Confirmation Study	1997	Septic system was the focus. Septic tank waste removed in 1997. RFA Confirmation Study and RCRA Corrective Action Program reports recommended NFA. Septic tank decommissioned in place in 2005.	Unspecified hazardous constituents
		RCRA Corrective Action Program activities	1997		
		NFA recommended	1997		

CH2M Hill 1997; City of Concord 2010; DTSC 1992; Navy April 2006; Tetra Tech EM, Inc., 2013.

Key:

- |   |   |
|---|---|
| AOPI = area of potential interest   | RCRA = Resource Conservation and Recovery Act |
| CERCLA = Comprehensive Environmental Response, Compensation and Liability Act | RFI = RCRA Facility Investigation             |
| CLEAN = Comprehensive Long-Term Environmental Action Navy                     | RWQCB = Regional Water Quality Control Board  |
| DTSC = Department of Toxic Substances Control                                 | SI = site inspection or site investigation.   |
| ER = Environmental Restoration  | SWMU = solid waste management unit            |
| IRP = Installation Restoration Program  | TCE = trichloroethylene                       |
| NFA = no further action   | UST = underground storage tank                |
|   | VOC = volatile organic compound               |

**Table E-2 Summary of Underground and Aboveground Storage Tanks**

Location	Tank ID	Tank Capacity (Gallons)	Tank Contents	Date Removed	Current Status	Regulatory Determination
Building 79	UST 79	550	Diesel	11/8/90	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 2/21/95.
Building 83	UST 83	6,500	Diesel	3/19/97	RWQCB NFA; no additional approvals necessary.	RWQCB determination of NFA on 10/4/06.
Building 86	UST 86A	2,500	Diesel	3/19/97	RWQCB NFA; no additional approvals necessary.	RWQCB determination of NFA on 10/4/06.
	UST 86B	2,500	Diesel			
Building 87	UST 87	6,500	Diesel	3/19/97	Closed.	CCHS determination of NFA on 2/13/98. RWQCB closure on 10/6/05.
	AST 87	Unknown	Unknown	2004	Closed.	Closed; date unknown.
Building 96	UST 96	6,500	Diesel	2/10/97	Closed.	CCHS determination of NFA on 2/13/98. RWQCB closure on 10/24/05.
	AST 96	Unknown	Unknown	2004	Closed.	Closed; date unknown.
Building 97	UST 97A	2,000	Diesel	12/9/90	(Also formerly known as IRP Site 21, Building 97 Fuel Tanks.) CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 9/18/94, 2/21/95, 7/19/02, and 10/10/06.
	UST 97B	2,000	JP-5 Fuel			
	UST 97C	2,000	JP-5 Fuel			
	UST 97D	2,000	JP-5 Fuel			
	AST 97	1,000	Diesel	Date unknown	Closed.	Closed; date unknown.
Building 178	UST 178A	12,000	Gasoline	10/31/91	Closed.	CCHS determination of NFA on 5/28/98. RWQCB closure on 12/23/99.
	UST 178B	12,000	Gasoline			
	UST 178C	12,000	Gasoline			
	UST 178D	280	Waste Oil			
Building 262	AST 262	500	Propane	Building is on property that was transferred to the Army; current AST status is not relevant to the EIS.		
Building 395	UST 395	3,000	Diesel	2/21/97	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 3/18/97.

**Table E-2 Summary of Underground and Aboveground Storage Tanks**

Location	Tank ID	Tank Capacity (Gallons)	Tank Contents	Date Removed	Current Status	Regulatory Determination
Building 522	UST 523 T-1	12,000	Gasoline	6/1/11	CCHS NFA.	CCHS determination of NFA on 12/27/11.
	UST 524 T-2	12,000	Gasoline			
	UST 525 T-3	12,000	Diesel			
	UST 526 T-4	12,000	Diesel			
	UST 527 T-5	12,000	Diesel			
Building 5AT	UST 5AT	280	Diesel	11/5/90 to 3/1/91	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 9/19/94.
Building 6LC98	UST 6LC98	1,000	Diesel	3/8/93	CCHS NFA and RWQCB NFA.	CCHS determination of NFA on 6/1/95 and RWQCB determination of NFA on 6/16/06.
Building 7SH4	UST 7SH4	1,000	Diesel	1/27/97	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 4/9/97.
	AST 7SH4	1,000	Unknown	2004	Closed.	Closed; date unknown.
Building 7SH5	UST 7SH5	1,000	Diesel	1/28/97	Closed.	CCHS determination of NFA on 4/8/97. RWQCB closure on 10/26/05.
	AST 7SH5	1,000	Unknown	2004	Closed.	Closed; date unknown.
Building 7SH14	UST 7SH14	3,500	Diesel	1/28/97	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 4/17/97.
	AST 7SH14	1,000	Unknown	2004	Closed.	Closed; date unknown.
Building IA-1	UST IA-1A	300	Diesel	2/26/97	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 3/18/97.
	UST IA-1B	280	Gasoline	11/8/90	CCHS NFA and RWQCB NFA.	CCHS determination of NFA on 2/21/95. RWQCB determination of NFA on 12/4/06.
	AST IA-1C	500	Diesel	Date unknown	Closed.	Closed; date unknown.
	AST IA-1	1,000	Propane	Date unknown	Closed.	Closed; date unknown.
Building IA-4	AST IA-4B	500	Diesel	Date unknown	Closed.	Closed; date unknown.

**Table E-2 Summary of Underground and Aboveground Storage Tanks**

Location	Tank ID	Tank Capacity (Gallons)	Tank Contents	Date Removed	Current Status	Regulatory Determination
Building IA-6	UST IA-6	10,000	Diesel	6/29/89	RWQCB NFA; no additional approvals necessary.	RWQCB determination of NFA on 6/16/06.
Building IA-7	AST IA-7	1,000	Propane	Date unknown	Closed.	Closed; date unknown.
Building IA-10	UST IA-10	2,100	Diesel	2/21/97	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 3/18/97.
Building IA-12	UST IA-12A	6,000	Waste Oil	11/4/93	Closed.	DTSC acknowledgement of RCRA closure on 3/21/95.
	AST IA-12B	550	Engine Oil	2004	Closed.	Closed; date unknown.
	AST IA-12C	550	Engine Oil			
	AST IA-12D	550	Engine Oil			
	AST IA-12E	2,000	Hydraulic Oil			
	AST IA-12F	600	Used Oil			
Building IA-15	AST IA-15B	1,000	Used Oil	2004	Closed.	Closed; date unknown.
Building IA-17	UST IA-17A	10,000 (total)	Gasoline	1/19/99	Closed.	RWQCB determination of NFA and RWQCB closure on 7/11/11.
	UST IA-17B		Gasoline			
	UST IA-17C		Gasoline			
	UST IA-17D		Diesel			
Building IA-18	UST IA-18	500	Diesel	11/8/90	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 9/19/94.
Building IA-19	UST IA-19	1,417	Diesel	2/4/93	CCHS NFA and RWQCB NFA.	CCHS determination of NFA on 11/30/93 and RWQCB determination of NFA on 6/16/06.
	UST IA-19A	1,850	Diesel	7/28/04	CCHS NFA; no additional approvals necessary.	CCHS determination of NFA on 9/7/05.
Building IA-24	UST IA-24A	2,000	Diesel	2/10/97	RWQCB NFA; no additional approvals necessary.	RWQCB determination of NFA on 10/4/06.
	AST IA-24	1,000	Diesel	2004	Closed.	Closed; date unknown.
Building IA-35	UST IA-35	1,000	Diesel	11/8/90	Closed.	RWQCB closure on 12/23/99.

**Table E-2 Summary of Underground and Aboveground Storage Tanks**

Location	Tank ID	Tank Capacity (Gallons)	Tank Contents	Date Removed	Current Status	Regulatory Determination
Building IA-36	UST IA-36	10,000	Diesel	4/15/97	CCHS NFA and RWQCB NFA.	CCHS determination of NFA on 2/13/98 and RWQCB determination of NFA on 6/16/06.
Building IA-55	UST IA-55	550	Diesel	2/10/97	Closed.	CCHS determination of NFA on 4/17/97. RWQCB closure on 11/18/05.
	AST IA-55	Unknown	Unknown	2004	Closed.	Closed; date unknown.
Building IA-56	AST IA-56B	275	Diesel	2004	Closed.	Closed; date unknown.
Building IA-58	UST IA-58	1,000	Diesel	4/15/97	Closed.	CCHS determination of NFA on 2/13/98. RWQCB closure on 11/7/05.

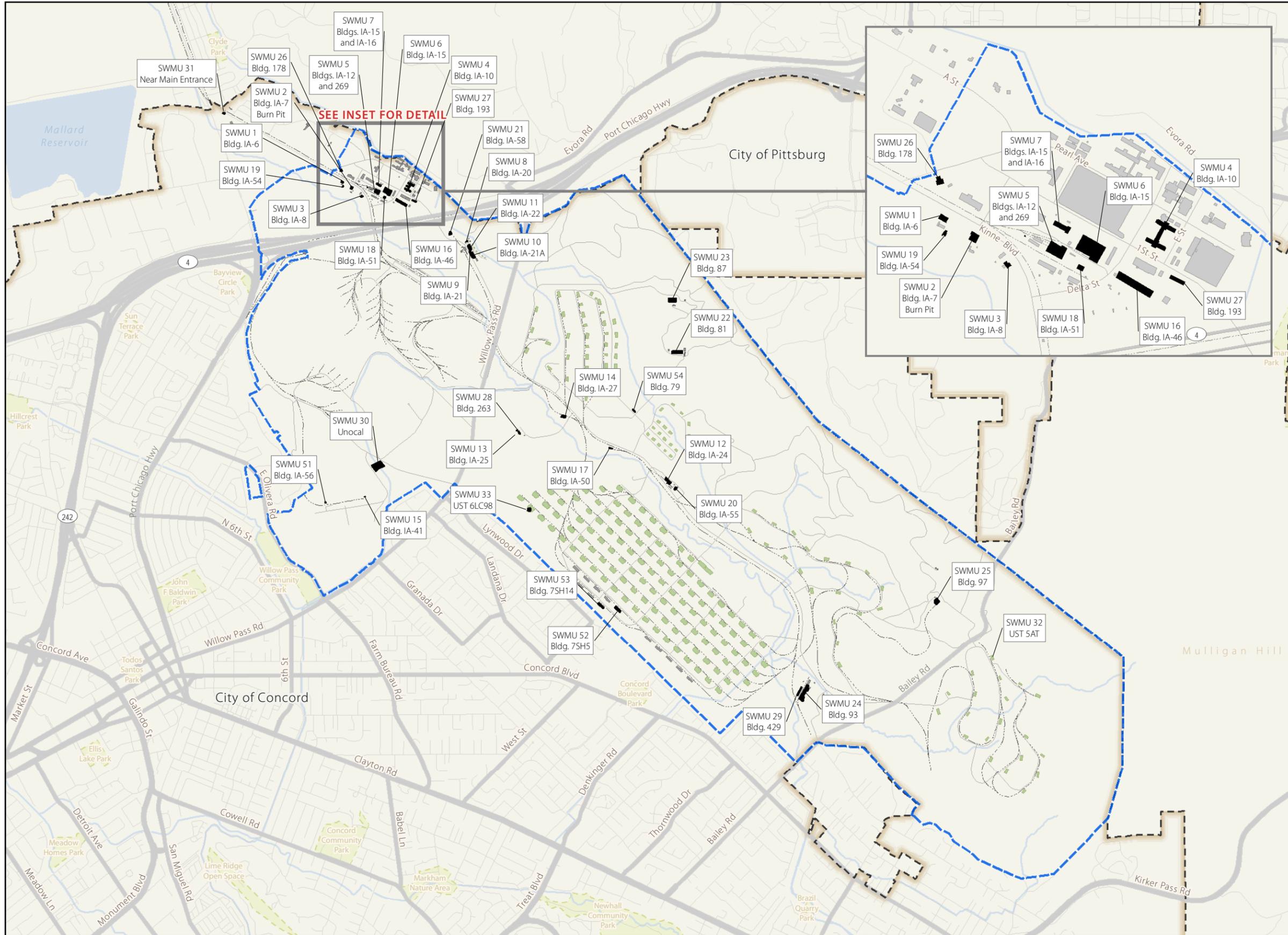
Source: California Regional Water Quality Control Board 2011; Concord Community Reuse Project Office January 2010; Navy April 2006, July 2014; Shaw Environmental and Infrastructure Group 2012.

Key:

- AST = aboveground storage tank
- CCHS = Contra Costa Health Services
- DTSC = Department of Toxic Substances Control
- NFA= no further action
- RWQCB= Regional Water Quality Control Board
- UST = underground storage tank

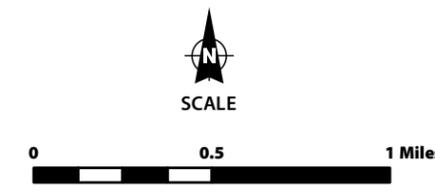
## Figures

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**Figure E-1**  
**Solid Waste Management Unit Sites**  
 Former NWS Concord  
 Concord, California

- Legend**
- Major Highway
  - Street
  - - - Railroad
  - Stream/Canal
  - Former NWS Concord
  - City Limit
  - Waterbody
  - Local Park
  - Solid Waste Management Unit (SWMU)
  - Building
  - Magazine



SOURCE: Navy 2006; ESRI 2010.

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## **Appendix F      Infrastructure and Utilities Supporting Information**

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## Appendix F

### Solid Waste Supplemental Information

This appendix contains the assumptions, calculations, and supporting information for evaluating potential impacts on the environment from generating and managing C&D waste and non-C&D solid waste for Alternatives 1 and 2. For simplicity, it is assumed that the construction portion of the proposed action will be dominated by the generation and management of C&D waste, and the operational portion of the proposed action will be dominated by the generation and management of non-C&D waste.

#### Pertaining to Section 4.12, Other Utilities and Infrastructure, Solid Waste and Recycling Management Alternative 1 — Preferred Alternative

##### C&D Waste

Calculations of estimated C&D waste to be generated during demolition and construction activities of Alternative 1 are shown in Table F-1. Assume that 50% of the 123,000 tons generated by demolition activities and the 58,000 tons generated by construction activities would be diverted from landfilling in accordance with state law (California Integrated Waste Management Act of 1989 [AB 939]). Assume that on-site reuse of C&D waste on former NWS Concord property as hard fill or for other purposes is included in the 50% diversion.

$$0.5 \times (123,000 \text{ tons} + 58,000 \text{ tons}) = 90,500 \text{ tons would require landfilling during buildout period}$$

Demolition and construction likely will not be spread evenly throughout the buildout period and would tend to be concentrated in earlier years, when large portions of the former NWS Concord property would be demolished and cleared for redevelopment. Assume that, conservatively, 75% of the 90,500 tons would require landfilling in the first 10 years of the 25-year buildout period.

$$0.75 \times 90,500 \text{ tons} = 68,000 \text{ tons total would require landfilling in first 10 years of 25-year buildout period}$$

Assuming 260 days of work per year in each year of the first 10 years:

$$68,000 \text{ tons} \div 10 \text{ years} \div 260 \text{ days/year} = 26 \text{ tons/day C\&D waste would require landfilling in the first 10 years of the 25-year buildout period}$$

Assuming that 73% of the waste goes to Potrero Hills Landfill (PHL) and 27% to Keller Canyon Landfill (KCL), which are the percentages used by the City of Concord:

$0.73 \times 26 \text{ tons/day} = 19 \text{ tons/day}$  C&D waste would go to PHL during the first 10 years of the buildout period

$0.27 \times 26 \text{ tons/day} = 7 \text{ tons/day}$  C&D waste would go to KCL during the first 10 years of the buildout period

#### Non-C&D Waste

During operation of Alternative 1, the FEIR estimated that 49,884 tons per year of non-C&D solid waste would be generated (City of Concord 2010). Assume that means by the time of full buildout. Assuming the same 50% diversion rate, about 25,000 tons of non-C&D solid waste would be landfilled each year once full buildout has been achieved. Assume that, conservatively, non-C&D waste is generated at full buildout rates during the last 10 years of development of the 25-year buildout period.

$25,000 \text{ tons/year} \div 365 \text{ days/year} = 68 \text{ tons/day}$  non-C&D waste would require landfilling in the last 10 years of the 25-year buildout period

Assuming that 73% of the waste goes to PHL and 27% to KCL:

$0.73 \times 68 \text{ tons/day} = 50 \text{ tons/day}$  non-C&D waste would go to PHL during the last 10 years of the buildout period

$0.27 \times 68 \text{ tons/day} = 18 \text{ tons/day}$  non-C&D waste would go to KCL during the last 10 years of the buildout period

#### Solid Waste Disposal Relative to Landfill Permits and Quantities Typically Received by the Landfills

PHL is permitted for 3,400 tons per day (a maximum of 4,330 tons per day is allowed as long as an average of 3,400 tons per day averaged over a 7-day week is not exceeded) and KCL is permitted for 3,500 tons per day (Solano County Department of Resource Management 2012; Contra Costa Environmental Health 2009). In 2012, PHL received about 1,075 tons of waste per day (CalRecycle 2014c), and KCL received about 2,000 tons of waste per day (CalRecycle 2014d), well below what each landfill may accommodate by permit.

Assume that solid waste landfilling for the first 10 years of the 25-year buildout is dominated by C&D waste at 26 tons/day:

$26 \text{ tons/day C\&D waste to be landfilled} \div 1,075 \text{ tons/day waste received by PHL (2012)} \times 100\% = 2.4\% \text{ increase}$

OR

$26 \text{ tons/day C\&D waste to be landfilled} \div 2,000 \text{ tons/day waste received by KCL (2012)} \times 100\% = 1.3\% \text{ increase}$

Assume that solid waste landfilling for the last 10 years of the 25-year buildout is dominated by operational non-C&D waste at 68 tons/day:

68 tons/day non-C&D waste to be landfilled  $\div$  1,075 tons/day waste received by PHL (2012)  $\times$  100% = 6.3% increase

OR

68 tons/day non-C&D waste to be landfilled  $\div$  2,000 tons/day waste received by KCL (2012)  $\times$  100% = 3.4% increase

The above assumes that the relative waste quantities received by each landfill in 2012 will hold true throughout the buildout period.

**Pertaining to Section 4.12, Other Utilities and Infrastructure, Solid Waste and Recycling Management**  
**Alternative 2 — Intensified Reuse**

C&D Waste

Calculations of estimated C&D waste to be generated during demolition and construction activities of Alternative 2 are shown in Table F-1. General assumptions are the same as Alternative 1. Alternative 2 differs slightly from Alternative 1 in the estimates of C&D waste generated from construction, which is greater for the intensified reuse alternative.

$0.5 \times (123,000 \text{ tons} + 71,000 \text{ tons}) = 97,000 \text{ tons}$  would require landfilling during buildout period

$0.75 \times 97,000 \text{ tons} = 73,000$  (rounded) tons total would require landfilling in first 10 years of 25-year buildout period

$73,000 \text{ tons} \div 10 \text{ years} \div 260 \text{ days/year} = 28 \text{ tons/day}$  C&D waste would require landfilling in the first 10 years of the 25-year buildout period

$0.73 \times 28 \text{ tons/day} = 20 \text{ tons/day}$  C&D waste would go to PHL during the first 10 years of the buildout period

$0.27 \times 28 \text{ tons/day} = 8 \text{ tons/day}$  C&D waste would go to KCL during the first 10 years of the buildout period

Non-C&D Waste

Under Alternative 2, the additional residential population is estimated to be about 30% greater than under Alternative 1. Commercial contributions to non-C&D waste would remain unchanged. Accordingly, 56,000 tons per year were estimated to be generated. Assume that means by the time of full buildout. Assuming the same 50% diversion rate, about 28,000 tons of non-C&D solid waste would be landfilled each year once full

buildout has been achieved. Assume that, conservatively, non-C&D waste is generated at full buildout rates during the last 10 years of development of the 25-year buildout period.

$28,000 \text{ tons/year} \div 365 \text{ days/year} = 77 \text{ tons/day}$  non-C&D waste would require landfilling in the last 10 years of the 25-year buildout period

Assuming that 73% of the waste goes to PHL and 27% to KCL:

$0.73 \times 77 \text{ tons/day} = 56 \text{ tons/day}$  non-C&D waste would go to PHL during the last 10 years of the buildout period

$0.27 \times 77 \text{ tons/day} = 21 \text{ tons/day}$  non-C&D waste would go to KCL during the last 10 years of the buildout period

#### Solid Waste Disposal Relative to Landfill Permits and Quantities Typically Received by the Landfills

The permit requirements and 2012 disposal data for PHL and KCL are described under Alternative 1 — 1,075 tons/day received at PHL and 2,000 tons/day received at KCL in 2012, well below what each landfill can accommodate by permit.

Assume that solid waste landfilling for the first 10 years of the 25-year buildout is dominated by C&D waste at 28 tons/day:

$28 \text{ tons/day C\&D waste to be landfilled} \div 1,075 \text{ tons/day waste received by PHL (2012)} \times 100\% = 2.6\% \text{ increase}$

OR

$28 \text{ tons/day C\&D waste to be landfilled} \div 2,000 \text{ tons/day waste received by KCL (2012)} \times 100\% = 1.4\% \text{ increase}$

Assume that solid waste landfilling for the last 10 years of the 25-year buildout is dominated by operational solid waste at 77 tons/day:

$77 \text{ tons/day solid waste to be landfilled} \div 1,075 \text{ tons/day waste received by PHL (2012)} \times 100\% = 7.2\% \text{ increase}$

OR

$77 \text{ tons/day solid waste to be landfilled} \div 2,000 \text{ tons/day waste received by KCL (2012)} \times 100\% = 3.9\% \text{ increase}$

The above assumes that the relative waste quantities received by each landfill in 2012 will hold true throughout the buildout period.

**Table F-1 C&D Waste Estimates**

**Demolition C&D Waste Estimates**

**Demolition C&D Waste Estimates -- Weapons magazines**

Feature	Description	Material	Dimensions	Sq Ft	Other notes	calc'd vol of material of construction (cu yd)	Estimated volume of ACM (cu yd)	C&D Waste (cu yd)	C&D Waste (tons)
Site 22 magazine	weapons magazine	assume reinforced concrete; some steel	- 170 ft x 82 ft at bottom of trapezoid as measured with ArcMap tool. [Google map observation shows about 130 ft x 75 ft at bottom of trapezoid and 80 ft x 40 ft at top of trapezoid. ALH 2013 says 170 ft x 120 ft.]. Trapezoidal above surface; assume rectangular below surface. Due to discrepancies in dimensions and irregular shape, assume ave of 130 ft L x 60 ft W x 15 ft H if the bunker were a rectangle. - There are 118 magazines.	920,400	- Assume wall thickness of 0.5 feet (ALH 2013). - Assume height of 15 feet (unknown). - Internal walls and other components not known and not taken into account. - Aboveground divisions in bunkers not taken into account (some aboveground portions are not continuous). - Assume 25% load factor.	46,544		58,181	14,080
Site 22A magazine	weapons magazine	assume reinforced concrete; some steel	- 90 ft x 53 ft at bottom of a common magazine shape as measured with ArcMap tool. [Google map observation shows about 80 ft x 50 ft at bottom of shape, with a very narrow top to the trapezoid.] Trapezoidal above surface; assume rectangular below surface. Due to discrepancies in dimensions and irregular shape, assume ave of 70 ft L x 40 ft W x 15 ft H if the bunker were a rectangle. - There are 103 magazines.	288,400	- Not all magazines are the same dimensions across Site 22A. The larger, more-common magazine shape was used. - Assume wall thickness of 0.5 feet (ALH 2013). - Assume height of 15 feet (unknown). - Internal walls and other components not known and not taken into account. - Assume 25% load factor.	16,976		21,220	5,135
<b>Subtotal</b>								<b>79,400</b>	<b>19,215</b>

**Demolition C&D Waste Estimates -- Other on-site inventory**

Feature	Description	Material	Dimensions	Sq Ft	Other notes	calc'd vol of material of construction (cu yd)	Estimated volume of ACM (cu yd)	C&D Waste (cu yd)	C&D Waste (tons)
Buildings	mostly industrial	brick, masonry, other		709,000	- 709,000 sq ft from ALH 2013. - Assume square footage value applies to all building stories and is not just a footprint value.		46,290	231,450	56,011
Railroad track		metal, wood	55 miles; 290,400 linear feet		- 55 miles figure from EIS Table 1-1. - Assume 3,000 ties/mile; 7"x9"x8.5' ties at 0.01205 cy/ft; rails 0.0025 cy/foot (each). - Assume ballast quantity of 1.78 cy/foot. - Assume 25% load factor.	24,306		31,598	7,647
Airfield runway and other paved areas (roads, parking lots, etc.)		asphalt, concrete, other		7,033,671	- Area from EIS Table 1-1 (781,519 sq yd). - Assume avg thickness 0.5 feet. - Assume 25% load factor.	130,253		169,329	40,978
<b>Subtotal</b>								<b>432,377</b>	<b>104,635</b>
<b>Total</b>								<b>511,778</b>	<b>123,850</b>
						total C&D waste		511,778	123,850
						contingency (5%)		25,589	6,193
						grand total		<b>537,367</b>	<b>130,043</b>

Notes:

- Demolition estimates and formulas do not account for the weight of heavy mechanical components in buildings.
- These are order-of-magnitude estimates only, based on information at hand.
- Total C&D waste estimates were not commensurately reduced by asbestos-containing material (ACM) waste estimates.

## Construction C&D Waste Estimates

### Alt 1 Construction C&D Waste Estimates

Feature	Approx. Acreage	Approx Commercial Floor Space (or Parking/ road area) (Sq Ft)	Approx Residential Floor Space (Sq Ft)	Other notes	C&D Waste (cu yd)	C&D Waste (tons)
North Concord TOD Core	55.00	3,000,000	-	commercial floor space: EIS Table 2-2	26,901	6,510
North Concord TOD Neighborhoods	90.00	150,000	see below	commercial floor space: EIS Table 2-2	1,345	326
Central Neighborhoods	180.00	100,000	see below	commercial floor space: EIS Table 2-2	897	217
Village Centers	70.00	350,000	-	commercial floor space: EIS Table 2-2	3,138	760
Village Neighborhoods	740.00	not applicable	see below	EIS Table 2-2		0
Commercial Flex	210.00	1,700,000	-	commercial floor space: EIS Table 2-2	15,244	3,689
Campus	120.00	800,000	-	commercial floor space: EIS Table 2-2	7,174	1,736
First Responder Training Center	80.00	<i>[still need]</i>	-	EIS Table 2-2		0
Greenways, Citywide Parks, and Tournament Facilities	786.00	not applicable	not applicable	EIS Table 2-2		0
Conservation Open Space	2,715.00	not applicable	not applicable	EIS Table 2-2		0
(residential floor space total)	-	-	19,028,900	ALH 2013	172,597	41,768
<b>Subtotal</b>	<b>5,046.00</b>	<b>6,100,000.00</b>			<b>227,295</b>	<b>55,005</b>
Parking space -- residential		8,407,000		ALH 2013	7,539	1,824
Parking space -- commercial		5,654,250		ALH 2013	5,070	1,227
Roadways		<i>[still need]</i>				0
Other		<i>[still need]</i>				0
<b>Subtotal</b>					<b>12,609</b>	<b>3,051</b>
<b>Total</b>					<b>239,904</b>	<b>58,057</b>
				total C&D waste	239,904	58,057
				contingency (5%)	11,995	2,903
				grand total	<b>251,899</b>	<b>60,960</b>

**Alt 2 Construction C&D Waste Estimates**

Feature	Approx. Acreage	Approx Commercial Floor Space (or Parking/ road area) (Sq Ft)	Approx Residential Floor Space (Sq Ft)	Other notes	C&D Waste (cu yd)	C&D Waste (tons)
North Concord TOD Core	80.00	3,000,000	-	commercial floor space: EIS Table 2-2	26,901	6,510
North Concord TOD Neighborhoods	85.00	150,000	see below	commercial floor space: EIS Table 2-2	1,345	326
Central Neighborhoods	200.00	100,000	see below	commercial floor space: EIS Table 2-2	897	217
Village Centers	50.00	350,000	-	commercial floor space: EIS Table 2-2	3,138	760
Village Neighborhoods	730.00	not applicable	see below	EIS Table 2-2		0
Commercial Flex	210.00	1,700,000	-	commercial floor space: EIS Table 2-2	15,244	3,689
Campus	80.00	800,000	-	commercial floor space: EIS Table 2-2	7,174	1,736
First Responder Training Center	-	-	-	EIS Table 2-2		0
Greenways, Citywide Parks, and Tournament Facilities	786.00	not applicable	not applicable	EIS Table 2-2		0
Conservation Open Space	2,825.00	not applicable	not applicable	EIS Table 2-2		0
(residential floor space total)	-	-	24,756,287	scaled up for 15,872 housing units from ALH 2013 value for Alt 1 for 12,200 housing units	224,546	54,340
<b>Subtotal</b>	<b>5,046.00</b>	<b>6,100,000.00</b>			<b>279,244</b>	<b>67,577</b>
Parking space -- residential		8,407,000		assume same for now as Alt 1	7,539	1,824
Parking space -- commercial		5,654,250		assume same for now as Alt 1	5,070	1,227
Roadways		<i>[still need]</i>				0
Other		<i>[still need]</i>				0
<b>Subtotal</b>					<b>12,609</b>	<b>3,051</b>
<b>Total</b>					<b>291,853</b>	<b>70,628</b>
				total C&D waste	291,853	70,628
				contingency (5%)	14,593	3,531
				grand total	<b>306,446</b>	<b>74,159</b>

Notes:

1. These are order-of-magnitude estimates only, based on information at hand.

Sources:

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Townsend, Timothy, Ph.D. 2000. Converting C&D Debris from Volume to Weight. A Fact Sheet for C&D Debris Facility Operators. Florida Department of Environmental Protection. Hinkley Center for Solid and Hazardous Waste Management. March 2000.

Formulas and Factors -- Demolition					
Feature	Description	Material	Formula	SF or Vol Multiplier	Notes
General buildings	Industrial type	Brick/Masonry, other	$sf \times (158 \text{ lbs/sf} / 484 \text{ lbs/cy}) = cy$	0.326446281	Nonresidential demolition from EPA 2009 table 2-4 and weight to cy conversion from Townsend 2000
Concrete magazine	munitions magazines	concrete	(material volume / .8 for loaded waste volume)	1.25	calculated volume / 80% factor for loaded waste volume based upon Engineer's experience.
Railroad	Rail line	Steel rails; wooden ties	Rails + ties: $feet \times ((2 \times 0.0675 \text{ cf/ft}) + (0.5833 \text{ ft} \times 0.75 \text{ ft} \times 8.5 \text{ ft}) / 1.75 \text{ ft})) / 27 \text{ cy/ft} = cy$	0.1088	calculated volume plus 30% factor for loaded waste volume based upon Engineer's experience.
Roads and pavements	Runway, roads, parking lots, etc.	Asphalt, concrete	(material area $sf \times 0.5 \text{ ft} \times 1.30 \text{ load factor} \times (1 \text{ cy}/27 \text{ cf})$ )	0.024074074	calculated volume / 80% factor for loaded waste volume based upon Engineer's experience.
General buildings	Buildings - commercial and residential	Asbestos-containing building materials	$sf \times (158 \text{ lbs/sf} / 484 \text{ lbs/cy}) \times 0.20 = cy$	0.065289256	Estimate that 20% of building material is ACM (by volume). Reference: ALH ECON, Technical Memorandum, January 28, 2013.

Formulas and Factors -- New Construction				
Feature	Formula	SF or Vol Multiplier	Notes	
Commercial Building	$\text{sf} \times 4.34 \text{ lbs/sf} / 484 \text{ lbs/cy} = \text{cy}$	0.00896694	Nonresidential construction	
Asphalt parking area with concrete curbs - commercial and residential	cy	0.00089669	Engineer's estimate: 10% of commercial building generation rate	
Residential building	$\text{sf} \times 4.39 \text{ lbs/sf} / 484 \text{ lbs/cy} = \text{cy}$	0.00907025	Residential construction	



Alternative 1 (Preferred Alternative): Projected Water Demand

Dev District	Land Uses	Unit of Measure	Demand per Unit	Water Demand (gpd)	Notes
North Concord TOD Core	Commercial Office (Class A)	2,550,000 sq ft	125 per 1,000 sq ft	318,750	
	Commercial Retail (Town Center)	50,000 sq ft	60 per 1,000 sq ft	3,000	
	Commercial Hotel (Mid-Rise)	Unit with restaurant (900 units or rooms)	125	112,500	Assumed with restaurant for most conservative estimate. Assumed hotel will be 4 floors, each with 100,000 sq ft. First floor would also include lobby, restaurant, meeting rooms, etc. and therefore would have only 75,000 sq ft for rooms. Average hotel room size of 400 sq ft. Given that along with 300,000 sq ft in room space on remaining floors, a total of 937 rooms would result; total has been rounded down to 900 to account for some hallway space.
	Res - Hi Density Multi-unit Hsng	Unit (total of 700)	180 per unit of < 3 bedrooms	126,000	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>560,250</b>	
North Concord TOD Neighborhoods	Res – Mod Density Townhomes	Unit (total of 490)	180 per unit of < 3 bedrooms	88,200	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to Hi Density Multi-unit Hsng	Unit (total of 860)	180 per unit of < 3 bedrooms	154,800	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Hsg	Unit (total of 450)	180 per unit of < 3 bedrooms	81,000	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Hi Density Multi-unit Housing	Unit (total of 400)	180 per unit of < 3 bedrooms	72,000	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	150,000 square feet	60 per 1,000 sq ft	9,000	
<b>DISTRICT TOTAL</b>				<b>405,000</b>	
Central Neighborhoods	Res – Mod to Lo Density SF Attach Hsng	Unit (total of 260)	280 per unit	72,800	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mod Density Townhomes	Unit (total of 1,950)	180 per unit of < 3 bedrooms	351,000	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to High Density Multi-unit Hsng	Unit (total of 400)	180 per unit of < 3 bedrooms	72,000	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 250)	180 per unit of < 3 bedrooms	45,000	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	100,000 square feet	60 per 1,000 sq ft	600	
<b>DISTRICT TOTAL</b>				<b>541,400</b>	
Village Centers	Commercial Retail (Neighborhood and Mixed Use)	350,000 square feet	60 per 1,000 sq ft	21,000	
	Res – Moderate Density Townhomes	Unit (total of 18)	180 per unit of < 3 bedrooms	3,240	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 300)	180 per unit of < 3 bedrooms	54,000	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>78,240</b>	
Village Neighborhoods	Res – Lo Density SF Detached Hsng	Unit (total of 1,100)	280 per unit	308,000	
	Res - Mod to Lo Dens SF Attach Hsng	Unit (total of 3,040)	280 per unit	851,200	
	Res – Moderate Density Townhomes	Unit (total of 2,060)	180 per unit of < 3 bedrooms	370,800	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>1,530,000</b>	

Commercial Flex	Commercial Office (Office Park/R&D)	730,000 sq ft	60 per 1,000 sq ft	43,800	
	Commercial Retail (Regional Retail)	850,000 sq ft	60 per 1,000 sq ft	51,000	
	Commercial Hotel (Business/Ltd Hotel)	Unit with restaurant (225 units or rooms)	125	28,125	Assumed with restaurant for most conservative estimate. First floor would also include lobby, restaurant, meeting rooms, etc., comprising a total of approximately 20,000 sq ft. Average hotel room size of 400 sq ft. Given that along with 100,000 sq ft in room space yields a total of 250 rooms total has been rounded down to 225 to account for some hallway space.
<b>DISTRICT TOTAL</b>				<b>122,925</b>	
Campus	Commercial Office (Campus Cluster)	800,000 sq ft	60 per 1,000 sq ft	48,000	
<b>DISTRICT TOTAL</b>				<b>48,000</b>	
First Responders Training Center	First Responder Training Center Facilities	Space (total of 2)	180	360	Due to the composition off the training center as predominantly outdoor training areas, a park-like restroom has been assumed using the campground per space estimate. Assumed due to the space, that it is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space equates to approximately 4 restroom stalls and sinks. Two spaces have been assumed for this use.
<b>DISTRICT TOTAL</b>				<b>360</b>	
Greenways, Citywide Parks, and Tournament Facilities	Citywide Park – Willow Pass Park Extension	Space (total of 4)	180	720	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 45 acres so assumed a total of 2 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Citywide Park – Tournament Facility	Space (total of 8)	180	1,440	Based on campground - per space due to lack of other similar land uses Nelson 2004. Assumed that one campground space is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space can be assumed to be approx. 4 restroom stalls and sinks. For the tournament facility which is largely comprised of ball fields and similar, assumed a total of 8 spaces.
	Citywide Park – Adj to Tournament Facility	Space (total of 8)	180	1440	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 100 acres so assumed a total of 4 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Mt. Diablo Golf Course	Space (total of 2)	180	360	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Assumed golf course club house would have the equivalent of two campground spaces.
	Central Greenway	N/A	N/A	--	
	Neighborhood Frame	N/A	N/A	--	
<b>DISTRICT TOTAL</b>				<b>3,960</b>	
Conservation Open Space	Mt. Diablo Creek Corridor	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
	Regional Park	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
<b>DISTRICT TOTAL</b>				<b>N/A</b>	
<b>TOTAL</b>				<b>3,290,135</b>	<b>0</b>

Notes:

The estimates above have been based on guidance included in Nelson 2004. Land uses and associated water consumption estimates were taken from Table 8-1 Water Consumption by Land Use.

Alternative 1 (Preferred Alternative): Projected Wastewater Generation

Dev District	Land Uses	Unit of Measure	Demand per Unit	Wastewater Flow (gpd)	Notes
North Concord TOD Core	Commercial Office (Class A)	2,550,000 sq ft	119 per 1,000 sq ft	303,450	
	Commercial Retail (Town Center)	50,000 sq ft	572 per 1,000 sq ft	28,600	
	Commercial Hotel (Mid-Rise)	Unit with restaurant (900 units or rooms)	119	107,100	Assumed with restaurant for most conservative estimate. Assumed hotel will be 4 floors, each with 100,000 sq ft. First floor would also include lobby, restaurant, meeting rooms, etc. and therefore would have only 75,000 sq ft for rooms. Average hotel room size of 400 sq ft. Given that along with 300,000 sq ft in room space on remaining floors, a total of 937 rooms would result; total has been rounded down to 900 to account for some hallway space.
	Res - Hi Density Multi-unit Hsng	Unit (total of 700)	162 per unit of < 3 bedrooms	113,400	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>552,550</b>	
North Concord TOD Neighborhoods	Res – Mod Density Townhomes	Unit (total of 490)	162 per unit of < 3 bedrooms	79,380	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to Hi Density Multi-unit Hsng	Unit (total of 860)	162 per unit of < 3 bedrooms	139,320	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Hsg	Unit (total of 450)	162 per unit of < 3 bedrooms	72,900	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Hi Density Multi-unit Housing	Unit (total of 400)	162 per unit of < 3 bedrooms	64,800	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	150,000 square feet	572 per 1,000 sq ft	85,800	
<b>DISTRICT TOTAL</b>				<b>442,200</b>	
Central Neighborhoods	Res – Mod to Lo Density SF Attach Hsng	Unit (total of 260)	224 per unit	58,240	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mod Density Townhomes	Unit (total of 1,950)	162 per unit of < 3 bedrooms	315,900	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to High Density Multi-unit Hsng	Unit (total of 400)	162 per unit of < 3 bedrooms	64,800	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 250)	162 per unit of < 3 bedrooms	40,500	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	100,000 square feet	572 per 1,000 sq ft	57,200	
<b>DISTRICT TOTAL</b>				<b>536,640</b>	
Village Centers	Commercial Retail (Neighborhood and Mixed Use)	350,000 square feet	572 per 1,000 sq ft	200,200	
	Res – Moderate Density Townhomes	Unit (total of 18)	162 per unit of < 3 bedrooms	2,916	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 300)	162 per unit of < 3 bedrooms	48,600	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>251,716</b>	
Village Neighborhoods	Res – Lo Density SF Detached Hsng	Unit (total of 1,100)	224 per unit	246,400	
	Res - Mod to Lo Dens SF Attach Hsng	Unit (total of 3,040)	224 per unit	680,960	
	Res – Moderate Density Townhomes	Unit (total of 2,060)	162 per unit of < 3 bedrooms	333,720	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>1,261,080</b>	

Commercial Flex	Commercial Office (Office Park/R&D)	730,000 sq ft	119 per 1,000 sq ft	86,870	
	Commercial Retail (Regional Retail)	850,000 sq ft	572 per 1,000 sq ft	486,200	
	Commercial Hotel (Business/Ltd Hotel)	Unit with restaurant (225 units or rooms)	119	26,775	Assumed with restaurant for most conservative estimate. First floor would also include lobby, restaurant, meeting rooms, etc., comprising a total of approximately 20,000 sq ft. Average hotel room size of 400 sq ft. Given that along with 100,000 sq ft in room space yields a total of 250 rooms total has been rounded down to 225 to account for some hallway space.
DISTRICT TOTAL				599,845	
Campus	Commercial Office (Campus Cluster)	800,000 sq ft	119 per 1,000 sq ft	95,200	
DISTRICT TOTAL				95,200	
First Responders Training Center	First Responder Training Center Facilities	Space (total of 2)	144	288	Due to the composition off the training center as predominantly outdoor training areas, a park-like restroom has been assumed using the campground per space estimate. Assumed due to the space, that it is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space equates to approximately 4 restroom stalls and sinks. Two spaces have been assumed for this use.
DISTRICT TOTAL				288	
Greenways, Citywide Parks, and Tournament Facilities	Citywide Park – Willow Pass Park Extension	Space (total of 4)	144	576	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 45 acres so assumed a total of 2 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Citywide Park – Tournament Facility	Space (total of 8)	144	1,152	Based on campground - per space due to lack of other similar land uses Nelson 2004. Assumed that one campground space is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space can be assumed to be approx. 4 restroom stalls and sinks. For the tournament facility which is largely comprised of ball fields and similar, assumed a total of 8 spaces.
	Citywide Park – Adj to Tournament Facility	Space (total of 8)	144	1152	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 100 acres so assumed a total of 4 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Mt. Diablo Golf Course	Space (total of 2)	144	288	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Assumed golf course club house would have the equivalent of two campground spaces.
	Central Greenway	N/A	N/A	--	
	Neighborhood Frame	N/A	N/A	--	
DISTRICT TOTAL				3,168	
Conservation Open Space	Mt. Diablo Creek Corridor	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
	Regional Park	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
				N/A	
TOTAL				3,742,687	0

Notes:

The estimates above have been based on guidance included in Nelson 2004. Land uses and associated wastewater flow estimates were taken from Table 8-2 Wastewater Treatment by Land Use.

Alternative 2: Projected Water Demand

Dev District	Land Uses	Unit of Measure	Demand per Unit	Water Demand (gpd)	Notes
North Concord TOD Core	Commercial Office (Class A)	2,550,000 sq ft	125 per 1,000 sq ft	318,750	
	Commercial Retail (Town Center)	50,000 sq ft	60 per 1,000 sq ft	3,000	
	Commercial Hotel (Mid-Rise)	Unit with restaurant (900 units or rooms)	125	112,500	Assumed with restaurant for most conservative estimate. Assumed hotel will be 4 floors, each with 100,000 sq ft. First floor would also include lobby, restaurant, meeting rooms, etc. and therefore would have only 75,000 sq ft for rooms. Average hotel room size of 400 sq ft. Given that along with 300,000 sq ft in room space on remaining floors, a total of 937 rooms would result; total has been rounded down to 900 to account for some hallway space.
	Res - Hi Density Multi-unit Hsng	N/A	N/A	N/A	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>434,250</b>	
North Concord TOD Neighborhoods	Res – Mod Density Townhomes	N/A	N/A	N/A	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to Hi Density Multi-unit Hsng	Unit (total of 100)	180 per unit of < 3 bedrooms	18,000	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Hsg	Unit (total of 109)	180 per unit of < 3 bedrooms	19,620	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Hi Density Multi-unit Housing	Unit (total of 4,000)	180 per unit of < 3 bedrooms	720,000	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	150,000 sq ft	60 per 1,000 sq ft	9,000	
<b>DISTRICT TOTAL</b>				<b>766,620</b>	
Central Neighborhoods	Res – Mod to Lo Density SF Attach Hsng	Unit (total of 333)	280 per unit	72,800	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mod Density Townhomes	Unit (total of 2,000)	180 per unit of < 3 bedrooms	351,000	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to High Density Multi-unit Hsng	Unit (total of 150)	180 per unit of < 3 bedrooms	72,000	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 425)	180 per unit of < 3 bedrooms	45,000	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	100,000 sq ft	60 per 1,000 sq ft	6,000	
<b>DISTRICT TOTAL</b>				<b>546,800</b>	
Village Centers	Commercial Retail (Neighborhood and Mixed Use)	350,000 square feet	60 per 1,000 sq ft	21,000	
	Res – Moderate Density Townhomes	Unit (total of 100)	180 per unit of < 3 bedrooms	18,000	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 400)	180 per unit of < 3 bedrooms	72,000	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>111,000</b>	
Village Neighborhoods	Res – Lo Density SF Detached Hsng	Unit (total of 1,043)	280 per unit	292,040	
	Res - Mod to Lo Dens SF Attach Hsng	Unit (total of 3,040)	280 per unit	851,200	
	Res – Moderate Density Townhomes	Unit (total of 2,060)	180 per unit of < 3 bedrooms	370,800	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>1,514,040</b>	

Commercial Flex	Commercial Office (Office Park/R&D)	730,000 sq ft	60 per 1,000 sq ft	43,800	
	Commercial Retail (Regional Retail)	850,000 sq ft	60 per 1,000 sq ft	51,000	
	Commercial Hotel (Business/Ltd Hotel)	Unit with restaurant (225 units or rooms)	125	28,125	Assumed with restaurant for most conservative estimate. First floor would also include lobby, restaurant, meeting rooms, etc., comprising a total of approximately 20,000 sq ft. Average hotel room size of 400 sq ft. Given that along with 100,000 sq ft in room space yields a total of 250 rooms total has been rounded down to 225 to account for some hallway space.
<b>DISTRICT TOTAL</b>				<b>122,925</b>	
Campus	Commercial Office (Campus Cluster)	800,000 sq ft	60 per 1,000 sq ft	48,000	
<b>DISTRICT TOTAL</b>				<b>48,000</b>	
First Responders Training Center	First Responder Training Center Facilities	N/A	N/A	N/A	Due to the composition off the training center as predominantly outdoor training areas, a park-like restroom has been assumed using the campground per space estimate. Assumed due to the space, that it is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space equates to approximately 4 restroom stalls and sinks. Two spaces have been assumed for this use.
<b>DISTRICT TOTAL</b>				<b>0</b>	
Greenways, Citywide Parks, and Tournament Facilities	Citywide Park – Willow Pass Park Extension	Space (total of 4)	180	720	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 45 acres so assumed a total of 2 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Citywide Park – Tournament Facility	Space (total of 8)	180	1,440	Assumed retail use for these estimates due to the arena-type tournament facility and lack of other similar uses in the guidance.
	Citywide Park – Ad to Tournament Facility	Space (total of 8)	180	1440	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 100 acres so assumed a total of 4 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Mt. Diablo Golf Course	Space (total of 2)	180	360	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Assumed golf course club house would have the equivalent of two campground spaces.
	Central Greenway	N/A	N/A	--	
	Neighborhood Frame	N/A	N/A	--	
<b>DISTRICT TOTAL</b>				<b>3,960</b>	
Conservation Open Space	Mt. Diablo Creek Corridor	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
	Regional Park	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
				<b>N/A</b>	
<b>TOTAL</b>				<b>3,547,595</b>	<b>0</b>

**Notes:**

The estimates above have been based on guidance included in Nelson 2004. Land uses and associated water consumption estimates were taken from Table 8-1 Water Consumption by Land Use.

**Alternative 2: Projected Wastewater Generation**

Dev District	Land Uses	Unit of Measure	Demand per Unit	Wastewater Flow (gpd)	Notes
North Concord TOD Core	Commercial Office (Class A)	2,550,000 sq ft	119 per 1,000 sq ft	303,450	
	Commercial Retail (Town Center)	50,000 sq ft	572 per 1,000 sq ft	28,600	
	Commercial Hotel (Mid-Rise)	Unit with restaurant (900 units or rooms)	119	107,100	Assumed with restaurant for most conservative estimate. Assumed hotel will be 4 floors, each with 100,000 sq ft. First floor would also include lobby, restaurant, meeting rooms, etc. and therefore would have only 75,000 sq ft for rooms. Average hotel room size of 400 sq ft. Given that along with 300,000 sq ft in room space on remaining floors, a total of 937 rooms would result; total has been rounded down to 900 to account for some hallway space.
	Res - Hi Density Multi-unit Hsng	N/A	N/A	N/A	Based on apartments; assumed that these units would be less than three bedrooms

<b>DISTRICT TOTAL</b>				<b>439,150</b>	
North Concord TOD Neighborhoods	Res – Mod Density Townhomes	N/A	N/A	N/A	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to Hi Density Multi-unit Hsng	Unit (total of 100)	162 per unit of < 3 bedrooms	16,200	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Hsg	Unit (total of 109)	162 per unit of < 3 bedrooms	1,530,900	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Hi Density Multi-unit Housing	Unit (total of 4,000)	162 per unit of < 3 bedrooms	648,000	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	150,000 sq ft	572 per 1,000 sq ft	85,800	
<b>DISTRICT TOTAL</b>				<b>2,280,900</b>	
Central Neighborhoods	Res – Mod to Lo Density SF Attach Hsng	Unit (total of 333)	224 per unit	74,592	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mod Density Townhomes	Unit (total of 2,000)	162 per unit of < 3 bedrooms	324,000	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mod to High Density Multi-unit Hsng	Unit (total of 150)	162 per unit of < 3 bedrooms	24,300	Based on apartments; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 425)	162 per unit of < 3 bedrooms	68,850	Based on apartments; assumed that these units would be less than three bedrooms
	Commercial Retail (Town Center)	100,000 sq ft	572 per 1,000 sq ft	57,200	
<b>DISTRICT TOTAL</b>				<b>548,942</b>	
Village Centers	Commercial Retail (Neighborhood and Mixed Use)	350,000 square feet	572 per 1,000 sq ft	200,200	
	Res – Moderate Density Townhomes	Unit (total of 100)	162 per unit of < 3 bedrooms	16,200	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
	Res – Mixed-Use Multi-unit Housing	Unit (total of 400)	162 per unit of < 3 bedrooms	64,800	Based on apartments; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>281,200</b>	
Village Neighborhoods	Res – Lo Density SF Detached Hsng	Unit (total of 1,043)	224 per unit	233,632	
	Res - Mod to Lo Dens SF Attach Hsng	Unit (total of 3,040)	224 per unit	680,960	
	Res – Moderate Density Townhomes	Unit (total of 2,060)	162 per unit of < 3 bedrooms	333,720	Based on apartments as there is no specific land use for townhomes; assumed that these units would be less than three bedrooms
<b>DISTRICT TOTAL</b>				<b>1,248,312</b>	
Commercial Flex	Commercial Office (Office Park/R&D)	730,000 sq ft	119 per 1,000 sq ft	86,870	
	Commercial Retail (Regional Retail)	850,000 sq ft	572 per 1,000 sq ft	486,200	
	Commercial Hotel (Business/Ltd Hotel)	Unit with restaurant (225 units or rooms)	119	26,775	Assumed with restaurant for most conservative estimate. First floor would also include lobby, restaurant, meeting rooms, etc., comprising a total of approximately 20,000 sq ft. Average hotel room size of 400 sq ft. Given that along with 100,000 sq ft in room space yields a total of 250 rooms total has been rounded down to 225 to account for some hallway space.
<b>DISTRICT TOTAL</b>				<b>599,845</b>	
Campus	Commercial Office (Campus Cluster)	800,000 sq ft	119 per 1,000 sq ft	95,200	
<b>DISTRICT TOTAL</b>				<b>95,200</b>	
First Responders Training Center	First Responder Training Center Facilities	N/A	N/A	N/A	Due to the composition off the training center as predominantly outdoor training areas, a park-like restroom has been assumed using the campground per space estimate. Assumed due to the space, that it is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space equates to approximately 4 restroom stalls and sinks. Two spaces have been assumed for this use.
<b>DISTRICT TOTAL</b>				<b>0</b>	

Greenways, Citywide Parks, and Tournament Facilities	Citywide Park – Willow Pass Park Extension	Space (total of 4)	144	576	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 45 acres so assumed a total of 2 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Citywide Park – Tournament Facility	Space (total of 8)	144	1,152	Based on campground - per space due to lack of other similar land uses Nelson 2004. Assumed that one campground space is inclusive of at least 3 people for multiple uses per day. Therefore, one campground space can be assumed to be approx. 4 restroom stalls and sinks. For the tournament facility which is largely comprised of ball fields and similar, assumed a total of 8 spaces.
	Citywide Park – Ad to Tournament Facility	Space (total of 8)	144	1152	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Size of this park is 100 acres so assumed a total of 4 restroom facilities for the park. Each facility would be comprised of the equivalent of 2 stalls for both men/women.
	Mt. Diablo Golf Course	Space (total of 2)	144	288	Based on campground - per space; assumed due to the space, it is inclusive of at least 3 people for multiple uses per day. Therefore, only one campground space for approx.. 4 restroom stalls and sinks. Assumed golf course club house would have the equivalent of two campground spaces.
	Central Greenway	N/A	N/A	--	
	Neighborhood Frame	N/A	N/A	--	
<b>DISTRICT TOTAL</b>				<b>3,168</b>	
Conservation Open Space	Mt. Diablo Creek Corridor	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
	Regional Park	N/A	N/A	N/A	Assumed due to conservation open space that there would be no restrooms.
				<b>N/A</b>	
<b>TOTAL</b>				<b>5,496,717</b>	<b>0</b>

*Notes:*

*The estimates above have been based on guidance included in Nelson 2004. Land uses and associated wastewater flow estimates were taken from Table 8-2 Wastewater Treatment by Land Use.*

Alternative 1 (Preferred Alternative): Summary of Impervious Site Coverage

Dev District	Tot Appx Acres	Land Uses	Appx Acres	Appx Comm SF	Avg FAR	Site Cov %	Site Cov Acreage
North Concord TOD Core	55	Commercial	38	2,550,000	2.5	0.9	34.2
		Residential - High Density Multi-Unit Housing	14	N/A	N/A	0.8	11.2
		Commercial Office (Class A)	29	2,550,000	3	0.9	26.1
		Commercial Retail (Town Center)	2	50,000	1	0.9	1.8
		Commercial Hotel (Mid-Rise)	7	400,000	2	0.9	6.3
		Res - Hi Density Multi-unit Hsng	14	N/A	N/A	0.8	11.2
		Balance: City Parks and Streets	3	N/A	N/A	0.8	2.4
<b>DISTRICT TOTAL</b>							<b>47.8</b>
North Concord TOD Neighborhoods	90	Commercial Retail (Town Center)	5	150,000	1	0.8	4
		Residential - Moderate, High Density and Mixed Use	79	N/A	N/A	0.8	63.2
		Res - Mod Density Townhomes	27	N/A	N/A	0.8	21.6
		Res - Mod to Hi Density Multi-unit Hsng	29	N/A	N/A	0.8	23.2
		Res - Mixed-Use Multi-unit Hsg	15	N/A	N/A	0.8	12
		Res - Hi Density Multi-unit Housing	8	N/A	N/A	0.8	6.4
		Commercial Retail (Town Center)	5	150,000	1	0.8	4
		Balance: City Parks and Streets	6	N/A	N/A	0.7	4.2
<b>DISTRICT TOTAL</b>							<b>71.4</b>
Central Neighborhoods	180	Commercial Retail (Town Center)	7	100,000	1	0.9	6.3
		Residential - Low, Mod, High Density and Mixed Use	147	N/A	N/A	0.75	112.4
		Res - Mod to Lo Density SF Attach Hsng	26	N/A	N/A	0.6	15.6
		Res - Mod Density Townhomes	108	N/A	N/A	0.8	86.4
		Res - Mod to High Density Multi-unit Hsng	5	N/A	N/A	0.8	4
		Res - Mixed-Use Multi-unit Housing	8	N/A	N/A	0.8	6.4
		Commercial Retail (Town Center)	7	100,000	1	0.9	6.3
		Balance: City Parks and Streets	26	N/A	N/A	0.7	18.2
<b>DISTRICT TOTAL</b>							<b>136.9</b>
Village Centers	70	Commercial Retail (Neighborhood and Mixed Use)	24	350,000	1	0.8	19.2
		Residential - Moderate and Mixed Use	21	N/A	N/A	0.75	16.8
		Commercial Retail (Neighborhood and Mixed Use)	24	350,000	1	0.8	19.2
		Res - Moderate Density Townhomes	11	N/A	N/A	0.8	8.8
		Res - Mixed-Use Multi-unit Housing	10	N/A	N/A	0.8	8
		Balance: City Parks and Streets	45	N/A	N/A	0.7	31.5
<b>DISTRICT TOTAL</b>							<b>67.5</b>

Alternative 1 (Preferred Alternative): Summary of Impervious Site Coverage

Dev District	Tot Appx Acres	Land Uses	Appx Acres	Appx Comm SF	Avg FAR	Site Cov %	Site Cov Acreage
Village Neighborhoods	740	Residential - Low, Moderate	602	N/A	N/A	0.6	365.1
		Res - Lo Density SF Detached Hsng	183	N/A	N/A	0.5	91.5
		Res - Mod to Lo Dens SF Attach Hsng	304	N/A	N/A	0.6	182.4
		Res - Moderate Density Townhomes	114	N/A	N/A	0.8	91.2
		Balance: City Parks and Streets	139	N/A	N/A	0.7	97.3
<b>DISTRICT TOTAL</b>							462.4
Commercial Flex	210	Commercial Office, Retail, Hotel	166	1,700,000	0.2	0.8	148.2
Commercial Flex		Commercial Office (Office Park/R&D)	71	730,000	0.2	0.9	63.9
		Commercial Retail (Regional Retail)	83	850,000	0.2	0.9	74.7
		Commercial Hotel (Business/Ltd Hotel)	12	120,000	0.2	0.8	9.6
		Balance: Streets	44	N/A	N/A	1	44
<b>DISTRICT TOTAL</b>							192.2
Campus	120	Commercial Office (Campus Cluster)	110	800,000	0.2	0.5	55
		Balance: Streets	10	N/A	N/A	1	10
<b>DISTRICT TOTAL</b>							65
First Responders Training Center	80	First Responder Training Center Facilities	80	N/A	N/A	0.6	48
<b>DISTRICT TOTAL</b>							48
Greenways, Citywide Parks, and Tournament Facilities	786	Parks, Mt. Diablo Golf Course, Greenways, Frames	786	N/A	N/A	0.25	215.25
		Citywide Park - Willow Pass Park Extension	45	N/A	N/A	0.25	11.25
		Citywide Park - Tournament Facility	75	N/A	N/A	0.5	37.5
		Citywide Park - Adj to Tournament Facility	100	N/A	N/A	0.25	25
		Mt. Diablo Golf Course	88	N/A	N/A	0.25	22
		Central Greenway	380	N/A	N/A	0.25	95
		Neighborhood Frame	98	N/A	N/A	0.25	24.5
<b>DISTRICT TOTAL</b>							215.25
Conservation Open Space	2,715	Mt. Diablo Creek Corridor and Regional Park	2715	N/A	N/A	0.05	135.75
	2,715	Mt. Diablo Creek Corridor	178	N/A	N/A	0.05	8.9
		Regional Park	2,537	N/A	N/A	0.05	126.85
<b>DISTRICT TOTAL</b>							135.75
<b>TOTAL</b>	<b>5,046</b>		<b>5,046</b>	<b>6,100,000</b>	<b>N/A</b>	<b>N/A</b>	<b>1442.2</b>

Alternative 2: Summary of Impervious Site Coverage

Dev District	Tot Appx Acres	Land Uses	Appx Acres	Appx Comm SF	Avg FAR	Site Cov %	Site Cov Acreage
North Concord TOD Core	80	Commercial	38	2,550,000	2.5	0.9	34.2
		Residential - High Density Multi-Unit Housing	36	N/A	N/A	0.8	28.8
		Commercial Office (Class A)	29	2,550,000	3	0.9	26.1
		Commercial Retail (Town Center)	2	50,000	1	0.9	1.8
		Commercial Hotel (Mid-Rise)	7	400,000	2	0.9	6.3
		Res - Hi Density Multi-unit Hsng	36	N/A	N/A	0.8	28.8
		Balance: City Parks and Streets	6	N/A	N/A	0.8	4.8
<b>DISTRICT TOTAL</b>							<b>67.8</b>
North Concord TOD Neighborhoods	85	Commercial Retail (Town Center)	5	150,000	1	0.8	4
		Residential - Moderate, High Density and Mixed Use	76	N/A	N/A	0.8	60.8
		Res – Mod Density Townhomes	0	N/A	N/A	0.8	0
		Res – Mod to Hi Density Multi-unit Hsng	3	N/A	N/A	0.8	2.4
		Res – Mixed-Use Multi-unit Hsg	4	N/A	N/A	0.8	3.2
		Res – Hi Density Multi-unit Housing	69	N/A	N/A	0.8	55.2
		Commercial Retail (Town Center)	5	150,000	1	0.8	4
		Balance: City Parks and Streets	4	N/A	N/A	0.7	2.8
<b>DISTRICT TOTAL</b>							<b>67.6</b>
Central Neighborhoods	200	Commercial Retail (Town Center)	7	100,000	1	0.9	6.3
		Residential - Low, Mod, High Density and Mixed Use	163	N/A	N/A	0.75	123.8
		Res – Mod to Lo Density SF Attach Hsng	33	N/A	N/A	0.6	19.8
		Res – Mod Density Townhomes	111	N/A	N/A	0.8	88.8
		Res – Mod to High Density Multi-unit Hsng	5	N/A	N/A	0.8	4
		Res – Mixed-Use Multi-unit Housing	14	N/A	N/A	0.8	11.2
		Commercial Retail (Town Center)	7	100,000	1	0.9	6.3
		Balance: City Parks and Streets	26	N/A	N/A	0.7	18.2
<b>DISTRICT TOTAL</b>							<b>148.3</b>
Village Centers	50	Commercial Retail (Neighborhood and Mixed Use)	24	350,000	1	0.8	19.2
		Residential - Moderate and Mixed Use	19	N/A	N/A	0.75	15.2
		Commercial Retail (Neighborhood and Mixed Use)	24	350,000	1	0.8	19.2
		Res – Moderate Density Townhomes	6	N/A	N/A	0.8	4.8
		Res – Mixed-Use Multi-unit Housing	13	N/A	N/A	0.8	10.4

Alternative 2: Summary of Impervious Site Coverage

		Balance: City Parks and Streets	7	N/A	N/A	0.7	4.9
DISTRICT TOTAL							39.3
Village Neighborhoods	730	Residential - Low, Moderate	602	N/A	N/A	0.6	360.6
		Res - Lo Density SF Detached Hsng	174	N/A	N/A	0.5	87
		Res - Mod to Lo Dens SF Attach Hsng	304	N/A	N/A	0.6	182.4
		Res - Moderate Density Townhomes	114	N/A	N/A	0.8	91.2
		Balance: City Parks and Streets	138	N/A	N/A	0.7	96.6
DISTRICT TOTAL							457.2
Commercial Flex	210	Commercial Office, Retail, Hotel	166	1,700,000	0.2	0.8	148.2
Commercial Flex		Commercial Office (Office Park/R&D)	71	730,000	0.2	0.9	63.9
		Commercial Retail (Regional Retail)	83	850,000	0.2	0.9	74.7
		Commercial Hotel (Business/Ltd Hotel)	12	120,000	0.2	0.8	9.6
		Balance: Streets	44	N/A	N/A	1	44
DISTRICT TOTAL							192.2
Campus	80	Commercial Office (Campus Cluster)	80	800,000	0.2	0.5	40
		Balance: Streets	0	N/A	N/A	1	0
DISTRICT TOTAL							40
First Responders Training Center	0	First Responder Training Center Facilities	0	N/A	N/A	0.6	0
DISTRICT TOTAL							0
Greenways, Citywide Parks, and Tournament Facilities	786	Parks, Mt. Diablo Golf Course, Greenways, Frames	786	N/A	N/A	0.25	215.25
		Citywide Park - Willow Pass Park Extension	45	N/A	N/A	0.25	11.25
		Citywide Park - Tournament Facility	75	N/A	N/A	0.5	37.5
		Citywide Park - Adj to Tournament Facility	100	N/A	N/A	0.25	25
		Mt. Diablo Golf Course	88	N/A	N/A	0.25	22
		Central Greenway	380	N/A	N/A	0.25	95
		Neighborhood Frame	98	N/A	N/A	0.25	24.5
DISTRICT TOTAL							215.25
Conservation Open Space	2,825	Mt. Diablo Creek Corridor and Regional Park	2825	N/A	N/A	0.05	141.25
		Mt. Diablo Creek Corridor	178	N/A	N/A	0.05	8.9
		Regional Park	2,647	N/A	N/A	0.05	132.35
							141.25
TOTAL	5,046		5,046	6,100,000	N/A	N/A	1368.9

**Appendix G      Record of Non-Applicability (RONA) for Clean Air Act  
(CAA) Conformity**

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# **RECORD OF NON-APPLICABILITY (RONA) FOR CLEAN AIR ACT CONFORMITY FOR THE DISPOSAL AND REUSE OF THE NAVAL WEAPONS STATION SEAL BEACH DETACHMENT, CONCORD, CALIFORNIA**

This Record of Non-Applicability (RONA) documents the Navy's determination that the requirement to make a Clean Air Act conformity determination does not apply to the proposed action.

## **BACKGROUND**

The U.S. Environmental Protection Agency (EPA) published Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule, in the November 30, 1993, *Federal Register* (40 CFR Parts 6, 51, and 93) and amended 40 CFR Parts 51 and 93 in 2010. The Navy published Clean Air Act Conformity Guidance in July 2013, which is referenced in OPNAVINST 5090.1D (Environmental Readiness Program) and the associated Manual (OPNAV M-5090.1). These publications provide implementing guidance to document Clean Air Act Conformity Determination requirements.

Federal regulations state that no department, agency, or instrumentality of the federal government shall engage in, support in any way, or provide financial assistance for, license or permit, or approve any activity that does not conform to an applicable implementation plan. It is the responsibility of the federal agency to determine whether a federal action conforms to the applicable implementation plan before the action is taken (40 CFR Part 93.150[b]). A federal action is exempt from the requirement to make a conformity determination if the action fits within one of the categories of actions identified at 40 CFR 93.153(c)(2) that have been deemed to result in no emissions increase or an increase in emissions that is clearly *de minimis*. The Navy's proposed action is to transfer former Naval Weapons Station (NWS) Concord lands to the City of Concord.

The requirement to prepare a conformity determination does not apply to a federal action if the action fits within one or more of the exemption categories at 40 CFR 93.153(c)(2). The proposed action fits within the exemption categories described below:

(xiv) *Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of transfer*

and

(xix) *Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of CERCLA, and where the Federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties.*

The Navy closed the former NWS Concord on September 30, 2008, in accordance with Public Law (P. L.) 101-510, the Defense Base Closure and Realignment Act of 1990, as amended in 2005 (DBCRA), and declared 5,028 acres of the Inland Area surplus to the needs of the federal government. In accordance with the DBCRA, the Navy is preparing for disposal or transfer of the surplus property from federal ownership.

More generally, in the preamble to the General Conformity Rule, the EPA stated, “Under the exclusive definition of indirect emissions, Federal land transfers are unlikely to be covered since the Federal agency will not maintain authority over reuse activities on that land. Consequently, Federal land transfers are included in the regulatory list of actions that will not exceed the *de minimis* levels and are thus exempt from the conformity rules.” 58 FR 63231 (1993). The proposed action fits squarely within the actions the EPA intended to exempt from the conformity requirement.

## **PROPOSED ACTION**

Action Proponent: U.S. Department of Navy

Location: Former Naval Weapons Station, Seal Beach Detachment (NWS Concord), Concord, California

Proposed Action Name: Disposal and Reuse of the former NWS Concord, Concord, California

Proposed Action Description: The proposed action is disposal of surplus property at the former NWS Concord, and the subsequent redevelopment of the property by the local community. Reuse of the property would result in indirect air impacts from the construction and operation of the redevelopment plan; however, the Navy will not maintain authority over reuse activities.

Therefore, on the basis of the foregoing, the Navy concludes that the Clean Air Act Conformity Determination requirements do not apply to the proposed action, resulting in this Record of Non Applicability.

## **RONA APPROVAL**

Date RONA Prepared: INSERT DATE

Prepared By: United States Navy Base Realignment and Program Management Office, West.

Signature:

\_\_\_\_\_  
Kimberly Ostrowski, Director, BRAC PMO West